ABSTRACT

The Relationship between Spiritual Well-Being
and Burnout in Collegiate Athletic Trainers

Leslie W. Oglesby, Ph.D.

Mentor: Andrew R. Gallucci, Ph.D.

The purpose of this study was to examine the effects of spiritual well-being and religious coping on burnout, its causes, and its effects in collegiate athletic trainers (ATs). An online survey was completed by 793 collegiate ATs that inquired about current perceptions of burnout, social support, workload, work-family conflict, spiritual well-being and use of religious coping methods as well as previous month substance use and current intention to leave the profession. Multiple regressions were performed to examine relationships between these variables using Smith's Cognitive-Affective Model of Athletic Burnout. Low social support, high workload and high work-family conflict were all related to increases in burnout. Increases in burnout were related to an increased intention to leave the profession and an increased risk of binge drinking. Increases in existential well-being were linked to increases in social support and decreases in workload, work-family conflict, burnout, intention to leave the profession, and binge drinking. Existential well-being mediated the relationship between social support and burnout as well as the relationship between burnout and binge drinking. Existential well-being also moderated the relationship between the two burnout subscales of personal

accomplishment and emotional exhaustion. This study demonstrates the importance of spiritual well-being in the lives of collegiate ATs and warrants further research.

The Relationship between Spiritual Well-Being and Burnout in Collegiate Athletic Trainers

by

Leslie W. Oglesby, B.S., M.S.

A Dissertation

Approved by the Department of Health, Human Performance and Recreation

_____

Paul Gordon, Ph.D., Chairperson

Submitted to the Graduate Faculty of
Baylor University in Partial Fulfillment of the
Requirements for the Degree
of

Doctor of Philosophy

Approved by the Dissertation Committee

_____

Andrew Gallucci, Ph.D., Chairperson

_____

Christopher Wynveen, Ph.D.

_____

Kelly Ylitalo, Ph.D.

_____

Nicholas Benson, Ph.D.

_____

Jeff Levin, Ph.D.

Accepted by the Graduate School

August 2018

_____

J. Larry Lyon, Ph.D., Dean

Page bearing signatures is kept on file in the Graduate School.

TABLE OF CONTENTS

List of Figures vii

List of Tables viii

Acknowledgments ix

Dedication x

Chapter One 1
- Background 1
- Statement of the Problem 7
- Statement of Purpose 7
- Statement of Significance 7
- Research Questions 8
- Hypotheses 8
- Limitations of the Study 9
- Delimitations of the Study 9
- Terminology 10
- Journal Selection 10

Chapter Two 12
- Description of Burnout 12
- Burnout in Helping Professions 13
- Burnout in Athletic Trainers 15
- Measurement of Burnout 25
- Spirituality 26
- Conceptual Framework 30

Chapter Three 32
- Study Purpose and Design 32
- Subjects 32
- Instrumentation 33
- Data Processing and Analysis 39

Chapter Four 41
- Abstract 41
- Introduction 42
- Methods 46
- Results 51
- Discussion 54
- Limitations and Future Directions 59

Conclusions 60
Tables and Figures 62
References 68

Chapter Five 73
Abstract 73
Introduction 74
Methods 78
Results 85
Discussion 89
Limitations and Future Directions 94
Conclusions 96
References 98
Tables and Figures 103

Chapter Six 114
Hypothesis One: Spiritual Well-Being and Burnout 114
Hypothesis Two: Spiritual Well-Being and Intention to Leave 115
Hypothesis Three: Religious Coping and Burnout 115
Hypothesis Four: Burnout and Substance Use 116
Hypothesis Five: Spiritual Well-Being and Substance Use 116
Hypothesis Six: Religious Coping and Substance Use 117
Conclusions 117

Appendix 120

References 130

LIST OF FIGURES

Figure 4.1. Smith's Cognitive-Affective Model of Athletic Burnout..... 65
Figure 4.2. Variables mapped onto Smith's model..... 66
Figure 4.3 Situational variables significantly associated with personal accomplishment. 66
Figure 4.4 Situational variables significantly associated with emotional exhaustion. 66
Figure 4.5 Personal accomplishment's relationship with emotional exhaustion..... 67
Figure 4.6 Associations between personal accomplishment, emotional exhaustion and depersonalization. 67
Figure 4.7 Associations between personal accomplishment, emotional exhaustion and substance use. 67
Figure 5.1 Smith's Cognitive-Affective Model of Athletic Burnout..... 111
Figure 5.2 Variables mapped onto Smith's model..... 111
Figure 5.3 Significant associations between existential well-being and situational variables. 112
Figure 5.4 Significant associations between existential well-being, burnout subscales, and intention to leave the profession of athletic training. 112
Figure 5.5 Significant associations between spiritual variables and substance use..... 113

LIST OF TABLES

Table 4.1. Demographics of the Sample 62
Table 4.2. Participant Scores on Survey Scales 63
Table 4.3. Substance Use Demographics 63
Table 4.4. Summary of Regression Analyses 64
Table 4.5 Summary of Substance Use Regression Analyses 65
Table 5.1. Demographics 103
Table 5.2. Survey instrument results 104
Table 5.3 Substance Use and Intention to Leave Demographics 105
Table 5.4. Spiritual Well-Being and Religious Coping Predicting Situational Variables 106
Table 5.5. Spiritual Well-Being and Religious Coping Predicting Burnout Subscale ... 107
Table 5.6. Spiritual Well-Being and Religious Coping Predicting Intention to Leave and Binge Drinking 107
Table 5.7 Spiritual Well-Being and Religious Coping Predicting Other Substance Use 108
Table 5.8. Mediation Analyses 109
Table 5.9. Moderation Analysis 109
Table 5.10. Summary of Significant Direct Effects and Indirect Effects 110

ACKNOWLEDGMENTS

An endeavor of this magnitude could never be completed without help. I would like to begin by acknowledging that none of this would be possible without my Lord and Savior, Jesus Christ. The decision to move to Waco was hard, but You have made it abundantly clear that it was correct and good. May I always seek to bring glory only to You and never to myself. John 3:30

My dissertation committee has gone above and beyond my expectations of service. Drs. Chris Wynveen, Kelly Ylitalo, Nicolas Benson, and Jeff Levin: Thank you all for the hard work and dedication each of you have put forth in making my dissertation a success.

The Department of Health, Human Performance and Recreation at Baylor University provided the funding necessary to complete my dissertation. Thank you to Dr. Paul Gordon and the other members of the dissertational funding committee for believing that my research was worthy of funding.

I would like to thank my parents for their love and support. No matter how far apart we are, I always know that you are there for me and want to see me succeed. I hope that I always make you proud.

I would not be at Baylor if it were not for my mentor, Dr. Andrew Gallucci. You took a big chance on me four years ago, and I hope you still think that it was worth it. You have made me a better teacher, researcher, and athletic trainer. Thank you for welcoming me and Anna-Kate to Waco with open arms, and for getting me through this process.

To my wife, Anna-Kate: We did it

CHAPTER ONE

Introduction

Causes and effects of occupational burnout in collegiate athletic trainers (ATs) have been well documented in the literature (Goodman et al., 2010; Hendrix & Acevedo, 2000; Henning & Weidner, 2008; Kania, Meyer, & Ebersole, 2009). However, methods for prevention or reduction of burnout have received much less attention. Specifically, the relationship between spiritual well-being, use of religious coping methods, and burnout is unknown. Smith's Cognitive-Affective Model for Athletic Burnout (Smith, 1986) suggests that personality factors such as spiritual well-being and the use of religious coping methods can influence the perception of burnout, its causes, and its outcomes. However, this has not been examined in collegiate athletic trainers.

Background

Burnout

Burnout is defined as a mental state of physical and emotional exhaustion or a stress reaction to a person's inability to cope with the demands of their occupation (Black's Medical Dictionary, 2010). Burnout was first described in the literature in 1974 (Freudenberger, 1974) as a psychological syndrome that includes emotional exhaustion (EE), a decreased perception of personal accomplishment (PA), and depersonalization of patients (DP) (C. Maslach, 1982). Research has found that burnout exists in a multitude of occupations and work settings, including engineering (Hall, Schmader, & Croft, 2015; Ronen & Malach Pines, 2008), sport coaching (Caccese & Mayerberg, 1984; Pastore &

Kuga, 1993), school administration (Sari, 2005), flight attendants (Liang & Hsieh, 2007), logistics workers (Yener, Oskaybaş, & Dursun, 2014), and hotel employees (Karatepe, Babakus, & Yavas, 2012).

Most of the existing research has examined burnout in helping professions, which are professions that seek to aid other people such as clergy, social workers, counselors, and teachers. Helping professionals that suffer from burnout include prison guards (Carlson, Anson, & Thomas, 2003), police officers (Burke, Shearer, & Deszca, 1984), teachers (Antoniou, Polychroni, & Vlachakis, 2006; Luk, Chan, Cheong, & Stanley, 2010), university faculty (Lackritz, 2004), social workers (Himle, Jayaratne, & Thyness, 1993), and ministers (Chandler, 2009; Chandler, 2010). It has been speculated that members of helping professions are more prone to burnout due to the giving nature of those professionals (Freudenberger, 1974), high workload (Lackritz, 2004) and work-family conflict (Innstrand, Langballe, & Falkum, 2011). Physical signs such as exhaustion, fatigue, and sleeplessness and emotional signs such as increased irritability and frustration have been associated with burnout in helping professions (Freudenberger, 1974). Other effects of burnout in these professionals include a decrease in job satisfaction (Charoensukmongkol, Moqbel, & Gutierrez-Wirsching, 2016), decrease in work quality (Kumar, 2015; Lackritz, 2004), and an increased risk of engaging in substance use (Dale & Weinberg, 1990; Freudenberger, 1974).

A particular group of helping professions that suffer from higher rates of burnout are healthcare professions. Research indicates that burnout occurs in a variety of healthcare professionals including physicians (Oreskovich et al., 2015), medical students (Dyrbye et al., 2006), psychiatrists (Braun et al., 2008), dentists (Brake, Bouman, Gorter,

Hoogstraten, & Eijkman, 2008; Winwood & Winefield, 2004), paramedics (Nirel, Goldwag, Feigenberg, Abadi, & Halpern, 2008; Stassen, Van Nugteren, & Stein, 2013), nurses (Edwards et al., 2006; Halbesleben, Wakefield, Wakefield, & Cooper, 2008), and psychologists (Ackerley, Burnell, Holder, & Kurdek, 1988; Rupert & Morgan, 2005; Rupert, Stevanovic, & Hunley, 2009). In a study of over 7,000 physicians, nearly 31% (n=2182) reported high EE, 25.3% (n=1802) reported high DP, and 12.3% (n=873) reported low PA (Dyrbye, 2010). In a study of 212 nurses, 36% (n=77) reported high EE, 12% (n=27) reported high DP, and 10% (n=22) reported low PA (Edwards et al., 2006). Samples of more than 550 psychologists found that 44% (n=252) of psychologists have reported high EE, 34.3% (n=193) have reported high DP, and only 0.9% (n=5) have reported low PA (Ackerley et al., 1988; Rupert & Morgan, 2005).

Similar to other helping professionals, healthcare professionals suffering from burnout are at an increased risk of engaging in substance use. Physicians (Oreskovich et al., 2015), medical students (Dyrbye et al., 2006), and psychiatrists (Braun et al., 2008) suffering from burnout are more likely to engage in heavy episodic drinking. Nurses suffering from burnout are more likely to use tobacco (Losa Iglesias, Vallejo, & Fuentes, 2010). Suggested methods for preventing or reducing burnout in these professionals include social support, increasing staff size, and decreasing the number of working hours for individuals (Freudenberger, 1974).

Athletic trainers (ATs) are a subsection of healthcare professionals that suffer from burnout (Campbell, 1985; Capel, 1990; Fender, 1989; Goodman et al., 2010; Terranova & Henning, 2011). Research has found that burnout exists in collegiate ATs (Goodman et al., 2010; Hendrix & Acevedo, 2000; Henning & Weidner, 2008; Kania et

al., 2009; Mazerolle, Bruening, & Casa, 2008; Mazerolle, Bruening, Casa, & Burton, 2008; Mazerolle, Faghri, Marcinick, & Milazzo, 2010; Mazerolle, Pitney, Casa, & Pagnotta, 2011; Pitney, Ilsley, & Rintala, 2002; Pitney, 2006; Terranova & Henning, 2011), athletic training program directors (Walter, Van Lunen, Walker, Ismaeli, & Oñate, 2009), graduate assistant ATs (Mazerolle, Monsma, Dixon, & Mensch, 2012), and athletic training students (Mazerolle & Pagnotta, 2011; Riter et al., 2008). Twenty percent of ATs have reported high EE, 23.3% have reported high DP, and 15.5% have reported low PA (Kania et al., 2009). Research suggests that rates of burnout in ATs are associated with an increase in work-family conflict (WFC) (Mazerolle, Bruening, Casa, & Burton, 2008), role strain issues (e.g., work overload, low salary) (Gaffney, Hardin, Fitzhugh, & Gi-Yong Koo, 2012), and professional socialization issues (Pitney et al., 2002).

ATs suffering from burnout often report suffering from fatigue, sleeplessness, irritability, and depression (Campbell, 1985; Fender, 1989). Multiple studies have identified that factors leading to increases in burnout (e.g. WFC, role strain) also result in an increase of intention to leave the profession (Capel, 1990; Goodman et al., 2010; Terranova & Henning, 2011). Campbell (1985), in the only published study of substance abuse in ATs, found that ATs who reported burnout symptoms were more likely to engage in excessive drinking.

Research suggest that ATs suffering from burnout can reduce the symptoms or avoid the condition by learning to set boundaries in the workplace (Mazerolle & Pitney, 2011; Mazerolle et al., 2011) and having a strong social support system (Eberman, Kahanov, Kahanov, & Yoder, 2011; Fender, 1989; Freudenberger, 1974; J. Gieck,

Brown, & Shank, 1982; Mazerolle & Pagnotta, 2011; Mazerolle et al., 2011; Reed & Giacobbi Jr, 2004). Setting boundaries includes learning to say "no" when necessary and sharing athletic training facility coverage responsibilities to allow for designated time away from work. Social support involves seeking advice from friends, parents, mentors, or coaches on how to handle stressful situations (Reed & Giacobbi Jr, 2004).

Spirituality

A person's spirituality has the potential to reduce burnout as it provides a source of social support and an alternative method of coping with stressors (Hardiman & Simmonds, 2013; Shaddock, Hill, & van Limbeek, 1998). Spirituality refers to the relationship or connection an individual has with everything outside of themselves (Reed & Reed, 1986). This can include other people, nature, the universe and higher power(s). Religion is a set of organized practices and beliefs that can be used to express one's spirituality (Reed & Reed, 1986). Examples of organized religious practices that contribute to religiosity include prayer/meditation, attendance of religious services, and reading of sacred texts.

Although historical trends indicate a decrease in religious practices in the United States, an estimated 91% of people still believe in God or some other higher power compared to 96% in 1994 (Gallup, 2011). Research has found many positive connections between religion and health. In a systematic review of the literature, Levin and Schiller (1987) concluded that religious affiliation plays a role in physical health. A meta-analysis of 42 studies found that individuals that reported high religious involvement were more likely to be alive at time of follow-up (McCullough, Hoyt, Larson, Koenig, & Thoresen, 2000). Another meta-analysis found positive relationships between religiosity and

multiple components of mental health such as life satisfaction, hope, and optimism (Koenig, 2001). This same study also found an inverse relationship between religiosity and substance use (Koenig, 2001).

Spiritual Well-Being

One way to measure the expression of one's spirituality is by measuring spiritual well-being (Ellison, 1983). The relationship between spiritual well-being and burnout in healthcare professionals has received little attention in the literature. Higher levels of spiritual well-being are associated with a decreased perception of burnout in counselors & psychotherapists (Hardiman & Simmonds, 2013). Those who use religious coping methods to handle stressors are also at a decreased risk of substance use (Unterrainer, Lewis, Collicutt, & Fink, 2013). However, the relationship between use of religious coping methods and substance use has not been examined in healthcare professionals suffering from burnout.

Religious Coping

Religious coping refers to utilizing one's religion as a method of dealing with stressors in everyday life (Pargament, Smith, Koenig, & Perez, 1998). This can occur in positive methods (e.g. praying or relying on God in times of trouble) and negative methods (e.g. blaming God or the devil for one's problems). Studies have found that use of positive religious coping techniques is inversely associated with substance use (Parenteau, 2017; Unterrainer et al., 2013). A meta-analysis also found an inverse relationship between religious coping and all three subscales of burnout (Shin et al.,

2014). The utilization of religious coping techniques by ATs is unknown. Therefore, the effects that religious coping may have on burnout in ATs is also unknown.

There is little research that investigates spiritual well-being and burnout in ATs. Qualitative studies exploring burnout identified cases in which ATs worked with a minister (Gieck, 1986) and utilized religion as a method to reduce stress (Reed & Giacobbi Jr, 2004). However, neither of these studies examined the effectiveness of the participants' spiritual well-being in resolving their problems or coping with stressors. To date, there is no research that quantitatively examines the relationships between spiritual well-being, burnout, and effects of burnout in ATs.

Statement of the Problem

The relationship between spiritual well-being, religious coping and burnout in ATs is not clearly understood. The relationship between burnout and substance use in ATs is also unclear, along with the possible effects of spiritual well-being and religious coping on substance use and other negative outcomes associated with burnout.

Statement of Purpose

The purpose of this study is to determine if spiritual well-being plays a role in the presence and negative consequences of burnout in ATs.

Statement of Significance

Results of the present study would inform the importance of spiritual well-being of healthcare professionals, specifically as a protective factor for burnout.

Research Questions

1. Do collegiate ATs with greater spiritual well-being report less symptoms of burnout?
2. Do collegiate ATs with greater spiritual well-being report less intention to leave the profession of athletic training?
3. Do collegiate ATs who report greater use of religious coping techniques also report less symptoms of burnout?
4. Are collegiate ATs that report higher levels of burnout at a greater risk of substance use?
5. Do collegiate ATs with greater spiritual well-being report less substance use?
6. Do collegiate ATs who report greater use of religious coping techniques also report less substance use?

Hypotheses

H_1: There will be no association between reported spiritual well-being and burnout in collegiate ATs.

H_2: There will be no association between reported spiritual well-being and intention to leave the profession of athletic training in collegiate ATs.

H_3: There will be no association between reported use of religious coping techniques and burnout in collegiate ATs.

H_4: As burnout in collegiate ATs increases, so will their risk of substance use.

H_5: There will be an inverse association between reported spiritual well-being and substance use in collegiate ATs.

H_6: There will be no association between the reported use of religious coping techniques and substance use in collegiate ATs.

Limitations of the Study

The study was subject to the following limitations:

1. As some of the survey items asked about the participants' use of certain illegal substances, participants may underreport their engagement in this behavior and provide more socially desirable responses.

2. Due to data collection occurring in the form of a one-time online survey, the data was cross-sectional and only evaluated the spiritual well-being and burnout of participants at one moment in time. Therefore, causality cannot be determined from this study.

3. The survey was sent to those who are currently members of the NATA. Because membership is renewed every year, this survey may have excluded individuals who have been ATs but have already left the profession. As burnout is associated with attrition, this survey may not have been accessed by those who were suffering from burnout and left the profession as a result.

Delimitations of the Study

The study was subject to the following delimitations:

1. Each participant was a Board of Certification (BOC) certified athletic trainer working in the collegiate setting.

2. Each participant was employed full-time in the collegiate setting. Individuals that are employed part-time, such as graduate assistants or interns, will be excluded from the study.

3. Each participant was a member of the National Athletic Trainers' Association.

Terminology

Burnout: a mental state of physical and emotional exhaustion or a stress reaction to a person's inability to cope with the demands of their occupation (Burnout, 2010).

Spirituality: the relationship or connection an individual has with everything outside of themselves. This can include other people, nature, the universe and higher power(s) (Reed & Reed, 1986).

Religiosity: a set of organized practices in which someone may express their spirituality. This can include but is not limited to attendance of worship services, prayer, or reading sacred texts (Reed & Reed, 1986).

Work-Family Conflict: any disruption that is a result of the amount of time spent performing work responsibilities interfering with time spent with family (Netemeyer, Boles, & McMurrian, 1996).

Role Strain: an individual's inability to complete the requirements of their job role (Pitney, Stuart, & Parker, 2008).

Role Ambiguity: a situation where a worker's role is unclear (Hall et al., 2015).

Role Conflict: a situation where a worker's role is unable to be completed due to incompatibility of multiple roles (Hall et al., 2015).

Journal Selection

Two manuscripts will be prepared from the contents of this research project for satisfaction of the manuscript dissertation format. The first manuscript will evaluate substance use and any associations between burnout and substance use in collegiate ATs. The second manuscript will examine the effect of spiritual well-being and religious coping on burnout, substance use, and intention to leave the profession in collegiate ATs.

Both manuscripts will yield information important to the profession of athletic training. Therefore, both will be prepared for submission to the Journal of Athletic Training (JAT). JAT is a journal published monthly with a 2016 JCR impact factor of 2.341.

CHAPTER TWO

Review of Literature

Description of Burnout

Burnout was first described in the literature in 1974 (Freudenberger, 1974) and is defined as a mental state of physical and emotional exhaustion or a stress reaction to a person's inability to cope with the demands of their occupation (Burnout. 2010). Maslach (Maslach, 1982) theorized that burnout is a psychological syndrome that consists of three components: depersonalization (DP), a decreased perception of personal accomplishment (PA), and emotional exhaustion (EE). DP involves the objectification of one's patients. This may include behaviors such as referring to patients by their injury rather than their name. DP makes it easier for clinicians to manage and perhaps ignore the needs of their patients. PA, also known as inefficacy, occurs when a person believes they are not accomplishing as much as normal (Maslach, Schaufeli, & Leiter, 2001). Although one's accomplishments have not actually diminished in a measurable way, those suffering from burnout may perceive it as such. This may include healthcare professionals perceiving that their patients are not recovering as quickly as they should due to a perceived error by the provider. EE occurs when occupational stress eventually wears on a person until they can no longer manage it effectively. An example is feeling fatigued after a normal night of sleep (Maslach, 1982).

Burnout can occur in any occupation. Burnout exists in occupations such as engineering (Hall et al., 2015; Ronen & Malach Pines, 2008), sport coaching (Caccese & Mayerberg, 1984; Pastore & Kuga, 1993), school administration (Sari, 2005), flight

attendants (Liang & Hsieh, 2007), logistics workers (Yener et al., 2014); and hotel employees (Karatepe et al., 2012). Examining occupational burnout without limiting the review to a smaller subset of occupations would result in an unnecessarily broad review of the literature. Freudenberger's (1974) seminal work on burnout was based on his observations while working in a free clinic for substance abuse patients. He noted that helping professionals tend to have a giving nature, which may cause them to give beyond what they are able and make them susceptible to burnout (Freudenberger, 1974). Because of this, most of the existing research has examined burnout in helping professions. Therefore, the rest of the literature review will focus specifically on helping professions.

Burnout in Helping Professions

Helping professionals that suffer from burnout include prison guards (Carlson et al., 2003), police officers (Burke et al., 1984), teachers (Antoniou et al., 2006; Luk et al., 2010), university faculty (Lackritz, 2004), social workers (Himle et al., 1993), and ministers (Chandler, 2009; Chandler, 2010). Of these works, only Luk (2010) and Lackritz (2004) reported a categorization of participants based upon burnout scores. Thirty-four percent of teachers reported high EE, 12.3% reported high DP, and 44.2% reported low PA. Only 4.3% of those participants reported all three (Luk et al., 2010). Twenty-seven percent of university faculty members reported high EE, 9.8% reported high DP, and 18.6% reported low PA (Lackritz, 2004).

Research suggests that burnout occurs in a variety of healthcare professionals including physicians (Dyrbye, 2010; Oreskovich et al., 2015), psychiatrists (Braun et al., 2008), dentists (Brake et al., 2008; Winwood & Winefield, 2004), paramedics (Nirel et al., 2008; Stassen et al., 2013), nurses (Edwards et al., 2006; Halbesleben et al., 2008),

and psychologists (Ackerley et al., 1988; Rupert & Morgan, 2005; Rupert et al., 2009). Thirty-one percent of physicians have reported high EE, 25.3% have reported high DP, and 12.3% have reported low PA (Dyrbye, 2010). Thirty-six percent of nurses have reported high EE, 12% have reported high DP, and 10% have reported low PA (Edwards et al., 2006). Forty-four percent of psychologists have reported high EE, 34.3% have reported high DP, and only 0.9% have reported low PA (Ackerley et al., 1988; Rupert & Morgan, 2005).

Effects of Burnout

Physical signs such as exhaustion, fatigue, and sleeplessness and emotional signs such as increased irritability and frustration have been associated with burnout in helping professions (Freudenberger, 1974). Individuals suffering from burnout also report a decrease in work quality (Kumar, 2015; Lackritz, 2004; Oreskovich et al., 2015). In these professions, a decrease in work quality means decreased quality of care of patients, which can have a lasting impact on patient and provider alike.

Substance use is also of concern (Freudenberger, 1974), as investigations among healthcare professions has identified a relationship between professionals suffering from burnout and higher rates of substance abuse. Physicians (Oreskovich et al., 2015) and psychiatrists (Braun et al., 2008) suffering from burnout were found to be more likely to engage in heavy episodic drinking. Burnout has also been linked to increased use of tobacco in nurses (Losa Iglesias et al., 2010).

Those suffering from burnout are also more likely to report depressive symptoms (Campbell, 1985; Oreskovich et al., 2015). However, it is unclear if burnout and depression are the same thing or if there is a cause/effect relationship between the two. A

systematic review of the literature concluded that the two concepts are very similar in nature, but are different (Bianchi, Schonfeld, & Laurent, 2015). Maslach (2016) maintains that burnout describes a crisis between a person and their work, while depression is a clinically-diagnosable syndrome that pervades every aspect of a person's life.

Causes of Burnout

Causes of burnout in healthcare professions include increased workload (Lackritz, 2004) and work-family conflict (Dyrbye et al., 2011; Dyrbye, 2010; Innstrand et al., 2011). The term "work-family conflict" (WFC) refers to any disruption in work-family balance that is caused by work (Netemeyer et al., 1996). An example of WFC would be a surgeon missing a family dinner or a child's sporting event because the professional had to perform emergency surgery. It is important to realize that family can also create a disruption in this balance; in those cases, it would be referred to as "family-work conflict". An example of family-work conflict may be an individual taking too much work leave in order to care for a sick/injured family member. Exploratory work suggests that younger healthcare professionals who are more susceptible to burnout (Francis, Hills, & Kaldor, 2009).

Burnout in Athletic Trainers

ATs are healthcare professionals that also suffer from burnout (Campbell, 1985; Capel, 1990; Fender, 1989; Goodman et al., 2010; Terranova & Henning, 2011). Burnout exists in collegiate ATs (Goodman et al., 2010; Hendrix & Acevedo, 2000; Henning & Weidner, 2008; Kania et al., 2009; Mazerolle, Bruening, & Casa, 2008; Mazerolle,

Bruening, Casa, & Burton, 2008; Mazerolle et al., 2010; Mazerolle et al., 2011; Pitney et al., 2002; Pitney, 2006; Terranova & Henning, 2011), athletic training program directors (Walter et al., 2009), graduate assistant ATs (S. M. Mazerolle et al., 2012), and athletic training students (S. M. Mazerolle & Pagnotta, 2011; Riter et al., 2008).

Effects of Burnout in Athletic Trainers

The effects of burnout in ATs have been understudied in comparison to causes of burnout, but classic burnout literature describes physical, emotional, and behavioral results similar to what was described by Freudenberger (1974). Physical signs and symptoms of burnout include fatigue, inability to fight off infections, constant headaches, digestive issues, and sleeplessness (Fender, 1989; Freudenberger, 1974). The AT burnout literature supports these findings, with one study finding that ATs suffering from burnout were more likely to report headaches, high blood pressure, weight issues, indigestion, fatigue, and sleeplessness (Campbell, 1985). A case study of burnout from the AT literature also described many of these same physical symptoms (Gieck, 1986). The classic burnout literature also describes emotional issues such as increased anger, frustration, and paranoia (Freudenberger, 1974). While the aforementioned emotional issues have not been identified in the AT literature, ATs suffering from burnout are more likely to experience emotional issues such as irritability and depression (Campbell, 1985).

Several behavioral effects have been associated with burnout. The classic burnout literature describes those suffering from burnout as willing to spend more time at work than what is necessary, and overachievers are more likely to suffer from burnout (Fender, 1989; Freudenberger, 1974). An overall change in attitude has also been noticed, with

extroverted individuals acting more introverted and vice versa (Vergamini, 1981). Attrition of ATs from the profession has also been noted as an effect of burnout. A study on ATs that left the profession listed several causes of burnout as reasons for leaving the profession (Capel, 1990). These reasons included hours worked, salary, and overall lack of job satisfaction (Capel, 1990). Other studies have supported this, finding that nature of work, life balance issues (e.g. WFC) and role strain are all reasons for ATs to leave the profession (Goodman et al., 2010; Terranova & Henning, 2011).

Although similar research has been conducted on other healthcare professionals, little is known about substance use in ATs and its relationship with burnout. One study found that 5% of participants self-reported excessive drinking (Campbell, 1985). This same study also found that those suffering from burnout were significantly more likely to report excessive drinking than those not suffering from burnout. However, the researcher failed to define "excessive drinking", such as using the standard definition of heavy episodic drinking (National Institute on Drug Abuse, 2016). Another study found that nearly 69% of AT participants reported consumption of alcohol (Giacobbi Jr., 2009), but the relationship between alcohol use and burnout was not examined.

Causes of Burnout in Athletic Trainers

The causes of burnout in ATs have received much attention in the literature. Specifically, work-family conflict and role strain have both been identified as causes of burnout in this population and therefore require further description. The following sections will examine each of these causes as they pertain to ATs.

Work-family conflict. Similar to other healthcare professionals (Dyrbye et al., 2011; Dyrbye, 2010; Innstrand et al., 2011), ATs also suffer from WFC (Mazerolle, Bruening, & Casa, 2008; Mazerolle, Bruening, Casa, & Burton, 2008; Mazerolle et al., 2011). One study of 587 collegiate ATs found that over 60% of respondents agreed with statements such as "I often have to miss important family activities because of my job" and "The demands of my work interfere with my home and family life" (Mazerolle, Bruening, & Casa, 2008), with other studies producing similar results (Mazerolle, Pitney, & Eason, 2015; Pitney, Mazerolle, & Pagnotta, 2011).

Multiple causes of WFC in ATs have been identified. The number of hours worked and travel requirements associated with work are associated with an increase in WFC in ATs (Mazerolle, Bruening, & Casa, 2008; Mazerolle et al., 2011; Pitney et al., 2011). Staffing patterns can also contribute to WFC, as having fewer ATs requires more medical coverage per AT and can therefore cause WFC (Mazerolle & Bruening, 2006; Mazerolle, Bruening, & Casa, 2008). A lack of work flexibility also contributes to WFC. When practices or games are rescheduled/delayed, it could interfere with family plans for ATs and therefore increase WFC (Mazerolle, Bruening, & Casa, 2008).

The experience of WFC in ATs is different for males and females. Female ATs believe that motherhood presents an additional challenge to maintaining work-family balance because they feel that must take a greater responsibility in caring for their children compared to their husbands (Kahanov, Loebsack, Masucci, & Roberts, 2010; Mazerolle & Eason, 2016). Female ATs have also expressed a belief that their gender plays a role in whether they can maintain a career as an AT (Mazerolle & Eason, 2015). Mazerolle (Mazerolle & Eason, 2015) posited that this is possibly due to the beliefs that

many participants held regarding the traditional role of females in the family. Specifically, participants believed that the primary focus of females should be child-rearing rather than pursuing a career (Mazerolle & Eason, 2015). Studies examining male ATs found that time of year and occupational demands have an effect on WFC (Mazerolle, Eason, & Trisdale, 2015; S. Mazerolle & Eason, 2016). Due to the seasonal nature of work for many ATs, there are times of the year when an AT may spend more hours at work to cover practice or games for their team. It is during these times that WFC may reach a peak, only to taper off during the "off-season" (Mazerolle et al., 2015; S. Mazerolle & Eason, 2016). Those same participants also believed that personal time, separating work from life, and utilizing a support network can also prove beneficial in decreasing WFC (Mazerolle et al., 2015; Mazerolle & Eason, 2016). Male and female ATs are also concerned about work-life balance while having children, specifically that children make this balance harder to maintain (Eberman & Kahanov, 2013). Due to this perception, ATs also believe that child-bearing decisions are strongly affected by their work setting (Eberman & Kahanov, 2013).

The impact of various work settings on WFC in ATs has also been examined. High school and collegiate ATs report greater levels of WFC in comparison to clinical, industrial, and professional settings (Mazerolle, Eason, Pitney, & Mueller, 2015). Although this study mentioned criterion scores for categorizing participants as low, moderate, or high WFC, there was no data to show what percentage of participants fell into each category. While most research on WFC in collegiate settings occurs in the NCAA Division I setting, one study confirmed that WFC is also prevalent in other collegiate settings (i.e. Divisions II and III, NAIA, NJCAA) (Mazerolle et al., 2015).

Role strain. This term refers to an individual's inability to complete the requirements of their job role. The reasons for this inability can be due to a lack of specificity in their job description, the role being impossible to fulfill, or having to split time between multiple roles (Pitney et al., 2008). Role strain has been observed in high school ATs (Pitney et al., 2008) and college ATs that serve as preceptors for athletic training students (Henning & Weidner, 2008). Female ATs in the college setting have also mentioned role strain as a reason for wanting to leave their job (Goodman et al., 2010).

Like other helping professions (Lackritz, 2004), excessive workload has been connected to both role strain and burnout in ATs. Collegiate ATs have reported hours worked per week as a cause of role strain (Dorrel, Symonds, & Lammert, 2014) and excessive workload has also been mentioned in numerous studies as a reason for ATs wanting to leave the profession altogether (Capel, 1990; Goodman et al., 2010; Mazerolle, Pitney, & Goodman, 2013; Terranova & Henning, 2011). Several studies have also found a positive relationship between one's perception of excessive workload and burnout in ATs (Capel, 1986; DeFreese & Mihalik, 2016; Gaffney et al., 2012). It is possible that insufficient staffing may contribute to the perception of excessive workload, as one study found that nearly 67% of participating NCAA Division I FBS institutions did not meet the recommended AT staff size for football (Aparicio et al., 2015). Insufficient staffing could lead to more hours worked per person or additional responsibilities, which may lead to burnout.

Professional socialization. Issues with professional socialization are an identified cause of burnout in ATs that has not been studied in other healthcare professionals. Professional socialization has been defined as one's growth and development as a professional in their chosen field (Colucciello, 1990). ATs undergo professional socialization in five phases: envisioning the role, formal preparation, organizational entry, role revolution, and gaining stability (Pitney et al., 2002). These phases have been divided into the categories of anticipatory socialization (envisioning the role and formal preparation) and organizational socialization (Pitney et al., 2002). Any time that an AT has difficulty with any of these phases of professional socialization is a potential cause for burnout. One study found that NCAA Division I ATs are concerned about the bureaucracy of Division I athletics, specifically their assumed place in the hierarchy and the politics that surround many administrative decisions (Pitney, 2006). The same study found that ATs were concerned about their quality of life because of high workload and low administrative support. Difficulties such as these can create a fear of burnout in ATs and possibly lead to it, as well (Pitney, 2006).

Experience of Burnout in Athletic Trainers

Burnout in ATs has been examined in multiple settings and under different types of employment. It has been studied in staff ATs (mostly at the NCAA Division I level) and graduate assistant ATs (GAATs). One of the earliest studies that examined burnout in ATs failed to find demographic variables that can predict one's risk for burnout (Campbell, 1985). However, recent research has not supported this finding.

Female ATs experience greater burnout than males (Giacobbi Jr., 2009; Naugle, Behar-Horenstein, Dodd, Tillman, & Borsa, 2013). This could be a partial explanation for

why female ATs tend to leave the profession around the age of 28 (Kahanov & Eberman, 2011) as opposed to males who tend to work longer and then shift to the high school setting in their mid to late 40s (Kahanov et al., 2010). Both men and women have stated that their main reasons for considering leaving their NCAA Division I job include life balance issues and role strain, two major causes of burnout in this same population (Goodman et al., 2010; Mazerolle et al., 2013).

Burnout research in ATs has been mostly conducted on ATs that serve in a staff role, usually at an NCAA institution (Goodman et al., 2010; Hendrix & Acevedo, 2000; Henning & Weidner, 2008; Kania et al., 2009; Mazerolle, Bruening, & Casa, 2008; Mazerolle, Bruening, Casa, & Burton, 2008; Mazerolle et al., 2010; Mazerolle et al., 2011; Pitney et al., 2002; Pitney, 2006; Terranova & Henning, 2011). An early study found that ATs suffer from lower amounts of burnout when compared to other helping professions, and was comparable to that of coaches (Capel, 1986). However, this study failed to report the percentages of ATs that were categorized as low, moderate, and high burnout. A later study supported Capel's conclusion but also failed to report percentages (Giacobbi Jr., 2009). It has been speculated that because ATs in most sports settings have an "off-season", they have an opportunity to work less hours for a period of time and recover (Capel, 1986). However, this study was published over 30 years ago and the work requirements of ATs have since changed. As NCAA rule changes have allowed more practice time in the summer that requires medical coverage by an AT, the workload of collegiate ATs has steadily increased and their "off-season" of recovery is diminishing (Mazerolle, Eason, & Goodman, 2016).

A group of ATs similar to staff members that have been examined in the literature are GAATs. An examination of GAATs found six major stressors in their lives which can contribute to burnout (Reed & Giacobbi Jr, 2004). The first is the workload associated with being a new AT. The second stressor comes from comparing one's workload to other GAATs, as some may work more hours than their colleagues and believe that it is unfair. The third stressor is attempting to balance newfound AT responsibilities with the academic requirements of being a graduate student. The fourth stressor is time management between student, work, and life responsibilities. The fifth stressor is social evaluation, which was described by GAATs as feeling like their coaches did not respect them because they were not a fulltime staff member or newly certified (Reed & Giacobbi Jr, 2004). The sixth and last stressor identified by GAATs was concerns about the future such as graduation and obtaining fulltime employment.

It has been observed that GAATs that work at NCAA Division I institutions are at a greater risk of burnout than those working in Division III or high schools due to more hours worked (Mazerolle et al., 2012). Another study examined former GAATs that all completed post-professional athletic training programs but no longer work primarily at ATs. Most participants stated that they intended to stay in the profession upon graduation but low salary, excessive workload and WFC all contributed to their respective decisions to leave the profession (Bowman, Mazerolle, & Goodman, 2015).

The experience of professional socialization of GAATs in the collegiate setting has been examined recently. This study found that GAATs experienced initial stress due to being immersed into their clinical responsibilities immediately and without much formal orientation or preparation from their organization (Thrasher, Walker, Hankemeier,

& Mulvihill, 2016a). These same GAATs also stated that they relied on staff ATs who served in a supervisory role for socialization into the profession (Thrasher, Walker, Hankemeier, & Mulvihill, 2016b).

Alleviating Burnout in Athletic Trainers

While there is no single cure for burnout in ATs, it is important to identify the factors that are causing burnout in the individual and modify these factors if possible. Some studies have recommended establishing boundaries, determining priorities, and learning to say "no" as ways to modify risk factors for burnout (Mazerolle & Pitney, 2011; Mazerolle et al., 2011). Establishing a social support system has the potential for managing burnout in ATs (Eberman et al., 2011; Fender, 1989; Freudenberger, 1974; J. Gieck et al., 1982; Mazerolle & Pagnotta, 2011; Mazerolle et al., 2011; Reed & Giacobbi Jr, 2004). This social support system can include friends, family, coworkers, and others. One study also examined the role that head ATs play in promoting appropriate work-life balance for their assistants (Mazerolle, Goodman, & Pitney, 2015). The study speculated that WFC of employees can be decreased if head ATs model work-life balance, promote appropriate disengagement from one's role, encourage cooperation among staff members, and provide administrative support for employees as needed. ATs also believe that organizational adherence to adequate staffing patterns and formalized work schedules could decrease WFC, which may lead to a decrease in burnout (Mazerolle, Eason, & Eberman, 2017).

Measurement of Burnout

The most commonly used instrument for measuring burnout is the Maslach Burnout Inventory (MBI) (Maslach, Jackson, & Leiter, 1997). The MBI has multiple versions that can each be used to assess burnout in various occupational settings (e.g. healthcare professionals, educators) and it measures each of the three components of burnout (EE, DP, and PA). EE is measured on a scale from 0 to 54, with higher scores indicative of greater levels of burnout in this subscale. DP is measured on a scale from 0 to 30, with higher scores indicative of greater levels of burnout in this subscale. PA is measured on a scale from 0 to 48, with lower scores indicating greater levels of burnout in this subscale. Prevalence of individuals suffering from burnout is difficult to measure and therefore rarely reported. This is because the creators of the MBI have explicitly stated that there is no definitive score that can diagnose a person as "burned out" (Maslach, Jackson, & Leiter, 2016). Rather, burnout is measured along a spectrum and classifies individuals as low, moderate or high burnout in the subscales of EE, DP, and PA (Maslach, Jackson, & Leiter, 2016). Normative mean scores for each subscale have been established for several subgroups of helping professions including social services, medicine, and mental health (Maslach et al., 2016). These mean scores can be used to compare a sample against the larger population. Mean scores for social service workers are 21.35 (EE), 7.46 (DP), and 32.75 (PA). Mean scores for mental health workers are 16.89 (EE), 5.72 (DP), and 30.87 (PA). For medical workers, mean scores are 22.19 (EE), 7.12 (DP), and 36.53 (PA) (Maslach et al., 2016).

The Athletic Training Burnout Inventory (Clapper & Harris, 2008) is a modified version of MBI written specifically for ATs. Although the creators of this instrument

stated that it was a good instrument that needed some alterations, it has been only been used one other time in the published literature since its creation in 2008 (Mazerolle et al., 2012).

Previous research has examined burnout and its relationship to several variables in collegiate ATs. However, the relationship between burnout and spiritual variables (i.e. spiritual well-being, use of religious coping methods) has not been examined in collegiate ATs. The following section will define spirituality within the context of this study and then examine previous literature pertaining to spiritual well-being and use of religious coping methods.

Spirituality

Spirituality and Religiosity

A person's spirituality has the potential to reduce burnout as it provides a source of social support and an alternative method of coping with stressors (Hardiman & Simmonds, 2013; Shaddock et al., 1998). While it is difficult to track the origins of the term "spirituality" in the literature, the concept of spirituality may have originated in the 1950s in the works of Gordon Allport (Levin & Schiller, 1987). Allport (1958) made a distinction between institutionalized and interiorized religiosity. Institutionalized religiosity consists of the outward practices that religious individuals engage in such as worship service attendance, while interiorized religiosity is more concerned with personal feelings and connections. While there are many definitions for spirituality used today, many seem to have been inspired by this concept of interiorized religiosity. Furthermore,

the concept of spirituality has become a larger term that envelopes the concept of religiosity.

Spirituality refers to the relationship or connection an individual has with everything outside of themselves (Reed & Reed, 1986). This can include other people, nature, the universe and higher power(s). Spirituality is an umbrella term that includes the concept of religiosity, which is considered a set of organized practices that may be used to express one's spirituality.

For many years, researchers have examined religiosity and its relationship with various components of health such as physical and mental health (Levin & Schiller, 1987; Mazerolle, Bowman, & Fister, 2015; Winkelstein Jr & Rerate, 1964). This was usually conducted in the form of measuring religious affiliation or adherence to certain religious practices such as attendance of worship services, prayer, or reading of sacred texts (Levin & Schiller, 1987).

Meta-analyses have found that religiosity has a positive impact on many aspects of health. Religiosity has an inverse relationship with mortality rate (McCullough et al., 2000) and a positive relationship with life satisfaction, hope, and optimism (Koenig, 2001). A meta-analysis also concluded that there is an inverse relationship between religiosity and substance use (Koenig, 2001).

Levin and Schiller (1987) believed that religious affiliation itself cannot be the cause of better physical and mental health, but perhaps religious affiliation affects one's lifestyle choices and therefore affects their overall health. For example, the dietary restrictions of Judaism, specifically the elimination of pork from the diet, may reduce the

risk of Jews contracting trichinosis. Another example is the avoidance of stimulants by Mormons, which may lead to a longer and healthier life (Levin & Schiller, 1987).

Spiritual Well-Being

While spirituality itself is a broad concept that is difficult to measure, the expression of one's spirituality can be measured via spiritual well-being. The National Interfaith Coalition on Aging (1975) defines spiritual well-being as "the affirmation of life in a relationship with God, self, community and environment that nurtures and celebrates wholeness." Building on the work of Allport (1958), other researchers have stated that to measure spiritual well-being requires a measurement of two dimensions (Ellison, 1983; Moberg & Brusek, 1978). Ellison (1983) viewed these dimensions as being vertical and horizontal in nature. The vertical dimension, known as religious well-being, refers to an individual's relationship with God or some other higher power, which would incorporate a sense of religiosity. The horizontal dimension, known as existential well-being, refers to one's sense of purpose and satisfaction in life (Ellison, 1983).

The relationship between spiritual well-being and other aspects of health has been examined in the literature. For example, it has been found that a higher sense of spiritual well-being can significantly predict lower ambulatory blood pressure, inflammation, and fasting glucose levels in a healthy sample (Holt-Lunstad, Steffen, Sandberg, & Jensen, 2011). A similar study found that an increased spiritual well-being significantly predicts lower levels of perceived stress, lower heart rate, and less medication use (Edmondson et al., 2005). Other studies have found that spiritual well-being is negatively correlated with depressive symptoms (Coleman, 2004; Cotton, Larkin, Hoopes, Cromer, & Rosenthal, 2005; Dunn, Hundley, & Shelton, 2007; Safiya, Marcia, Colleen, & Laderman, 2009;

Whelan-Gales, Quinn Griffin, Maloni, & Fitzpatrick, 2009) and anxiety (Dunn et al., 2007; Mela et al., 2008), with these studies being conducted in samples from varying populations.

Research examining the effects of spiritual well-being on burnout in healthcare professionals is sparse. Much of this literature exists in the form of dissertations, but peer-reviewed literature has demonstrated that spiritual well-being is a significant protective factor for burnout in counselors & psychotherapists (Hardiman & Simmonds, 2013).

There is little research that investigates spiritual well-being and burnout in ATs. A case study that investigated burnout in an AT stated that the subject worked with a minister as a part of the recovery process (Gieck, 1986). However, this study did not describe how the minister was utilized nor did it attempt to examine the relationship between spiritual well-being and burnout. This study also did not examine the utilization of religious coping techniques to manage stressors. To date, there is no research that quantitatively examines the relationships between spiritual well-being, burnout, and effects of burnout in collegiate ATs.

Religious Coping

A particular aspect of spirituality that pertains to burnout is religious coping. Religious coping refers to utilizing one's religion as a method of dealing with stressors in everyday life (Pargament et al., 1998). This can occur in both positive methods (e.g. praying or relying on God in times of trouble) and negative methods (e.g. blaming God or the devil for one's problems) (Pargament et al., 1998). Studies have found that use of religious coping techniques is inversely associated with burnout (Shaddock et al., 1998)

and substance use (Unterrainer et al., 2013). A meta-analysis also found an inverse relationship between religious coping and all three subscales of burnout, especially depersonalization (Shin et al., 2014). However, these studies did not distinguish between the use of positive and negative religious coping methods. Recent studies that have done this found that greater use of positive religious coping methods is associated with less substance use (Martin, Ellingsen, Tzilos, & Rohsenow, 2015; Parenteau, 2017) while greater use of negative religious coping methods is associated with more substance use (Parenteau, 2017).

One qualitative study found that some ATs utilize religion as a method to reduce stress (Reed & Giacobbi Jr, 2004). However, the religious coping methods used by these individuals were not recorded. The utilization of religious coping techniques by ATs is unknown. Therefore, the effects that religious coping may have on burnout in ATs is also unknown.

Conceptual Framework

The conceptual framework for this study is Smith's Cognitive-Affective Model of Athletic Burnout (Smith, 1986). This model for burnout was developed to show the relationships that exists between situational, cognitive, physiological and behavioral components of stress and burnout. Although Smith (1986) designed this model to describe burnout in athletes, he also thought that it may be applicable to ATs. This model has seen support in AT burnout research, with multiple studies affirming its utility and encouraging future use (Hendrix & Acevedo, 2000; Kania et al., 2009).

Smith's model illustrates proposed relationships between situational, cognitive, physiological, and behavioral components of burnout (Smith, 1986). The situational

component is the relationship between demands of one's job and the resources available to fulfill those demands. Burnout can occur when there is an imbalance between demands and resources. High demand (e.g. hours worked per week) with low resources can lead to overload. A high demand can also lead to work-family conflict (Mazerolle, Bruening, Casa, & Burton, 2008). Resources can include social support, autonomy and rewards such as salary.

The next component of the model is one's cognitive appraisal of their situation. If an individual determines that an imbalance exists, they may develop a perception of overload, boredom, helplessness, or even a decreased sense of personal accomplishment (Smith, 1986). This leads to physiological responses such as tension, anger, anxiety, depression, or fatigue (Smith, 1986). Cognitive appraisal of and physiological responses to the situation will inform the behavioral component of the model. These are the changes in behavior an individual will undergo to cope with burnout (Smith, 1986). This can include decreased work performance, interpersonal difficulties, substance use, even withdrawal from work altogether (Losa Iglesias et al., 2010; Oreskovich et al., 2015; Smith, 1986).

Finally, Smith also believed that personal differences in motivation and personality would affect all aforementioned components (Smith, 1986). These differences may cause an individual to perceive and react to their situation in different ways. While Smith mentioned several variables that fit into this component of the model such as self-concept and locus of control (Smith, 1986), spiritual well-being and religious coping have not been examined as a part of this model in collegiate ATs.

CHAPTER THREE

Methods

Study Purpose and Design

This study explored possible relationships between spiritual well-being and the prevalence, causes, and effects of burnout in ATs. As many ATs struggle with burnout, identifying a factor that may positively influence their struggle has the potential to greatly improve quality of life. This study used a cross-sectional study design using an online Qualtrics survey. This survey contained several scales that measure spiritual well-being; use of religious coping techniques; and intensity, causes, and effects of burnout. Demographic data were also collected in order to compare our data to previous findings.

Subjects

The survey was distributed using the NATA's membership directory emailing service. This service allows an NATA member to send an email to a previously determined number of NATA members based upon certain selection criteria (e.g. fulltime AT in the collegiate setting). Once these selection criteria are set, NATA will randomly choose email addresses for members that meet the criteria until the chosen number is satisfied. The email contained a description of the study and a hyperlink to the survey. The email also explained that accessing and completing the survey is an act of consent. To improve participant response rate, reminder emails were sent to email addresses from the original mailing list at one and two weeks after initial contact.

An initial request to the membership directory requested the email be sent to 7000 NATA members that work fulltime in the collegiate setting. To maintain homogeneity of the sample and create a clearer image of the collegiate AT experience, graduate assistants and interns were excluded from the mailing list. Part-time AT employees (i.e. graduate assistants, interns) may have unique experiences that either contribute to or alleviate their experience of burnout. Examples may include the academic requirements of graduate assistants or supplemental employment of interns.

We were informed that there are only 6867 ATs in the directory that meet these criteria. Therefore, we requested the survey be sent to all 6867 ATs. Survey data were collected from 1211 BOC certified ATs in all 10 NATA districts. Eight hundred fifty-seven surveys were completed, but 74 participants did not meet inclusion criteria. This resulted in a sample size of 783 (11.4% response rate).

Instrumentation

Demographics

The first section of the questionnaire included 16 demographic questions. These questions inquired about the participant's age, gender, race, religious affiliation, marital status, and child status (if so, how many). This section also asked work-related questions that gather information about primary work setting, sports responsible for, total workforce, hours worked per week, and salary earned for athletic training services.

The Spiritual Well-Being Scale

The Spiritual Well-Being Scale (SWBS) (Ellison, 1983) is an instrument used to measure spiritual well-being. SWBS is a 20-item instrument divided into two 10-item

subscales. These two subscales measure religious well-being (RWB), which examines the relationship an individual has with God, and existential well-being (EWB), which examines one's view of their purpose and overall view on life. Response sets for each item are presented on a 6-point Likert scale from "Strongly Agree" to "Strongly Disagree" with no neutral option. Each item is then scored from 1 to 6, with a higher score indicating more well-being. Some items are worded negatively, and these items are reverse-scored. The two subscale scores are combined to create a spiritual well-being (SWB) score.

The SWBS has undergone a relatively extensive validation process in comparison to other measures of spirituality/spiritual well-being (Monod et al., 2011). Factor analysis has shown that all 10 items in the RWB subscale load on the same factor, while the EWB items loaded onto two sub-factors of life direction and life satisfaction (Bufford, Paloutzian, & Ellison, 1991). A more recent study agreed with these findings and concluded that EWB and RWB are two distinct constructs (Genia, 2001). The two subscales have shown correlation with each other (r=.32), and each is correlated with SWB (RWB, r=.90; EWB, r=.59) (Ellison, 1983). In an assessment of internal consistency, coefficient alphas were .78 (EWB), .87 (RWB) and .89 (SWB) (Paloutzian & Ellison, 1982). The same study found test-retest reliability coefficients of .86 (EWB), .96 (RWB) and .93 (SWB) after one week had passed.

Maslach Burnout Inventory – Health Human Services Edition

The Maslach Burnout Inventory – Health Human Services edition (MBI-HHS) (Maslach & Jackson, 1986) is the most widely used scale for measuring burnout in healthcare professionals (DeFreese & Mihalik, 2016; Gaffney et al., 2012; Kania et al.,

2009). It is divided into three subscales that measure emotional exhaustion (EE), depersonalization (DP), and decreased sense of personal accomplishment (PA). The scale consists of 22 items, with the subscales containing nine items pertaining to EE, eight to PA, and five to DP. Each item is answered on a 7-point Likert scale from "Never" to "Every day". Each item is then scored from 0 ("Never") to 6 ("Every day") and all subscale items are scored together to create a subscale total. A higher subscale score in EE and DP indicates a higher level of burnout, while a higher score in PA indicates less burnout. Each subscale stands alone as a separate measure of burnout, and the subscale scores cannot be combined with each other.

A meta-analysis of exploratory and confirmatory factor-analytic studies on the MBI-HHS demonstrated support for the current three-factor model used to measure burnout (Worley, Vassar, Wheeler, & Barnes, 2008). The three subscales have reported internal consistency coefficients of .89 (EE), .77 (DP) and .74 (PA) (Maslach & Jackson, 1981). In a study that included an eight-month interval, there were reported test-retest reliability coefficients of .74 (EE), .72 (DP) and .65 (PA) (Lee & Ashforth, 1993). Evidence of discriminant validity has been found by comparing the MBI-HHS to scales that measure the constructs of job satisfaction (Leiter, 1988; Zedeck, Maslach, Mosier, & Skitka, 1988) and depression (Firth, McKeown, McIntee, & Britton, 1987) and finding that the subscales of the MBI-HHS have relatively low correlation with those scales.

Work-Family Conflict

A scale created by Netemeyer et al. (1996) was used to measure work-family conflict (WFC). It consists of five items that speak to different forms of WFC. Each item is answered on a 7-point Likert scale from "Strongly Disagree" to "Strongly Agree". A

higher score indicates a higher degree of WFC. When the scale has been used recently in AT research, it has been administered twice in the same survey with different definitions of "family" (Mazerolle et al., 2015; Pitney et al., 2011). The first version defines "family" as having a partner or spouse with or without children. The second scale defines "family" as close relatives, including parents, siblings, and grandparents, involved in one's life (Mazerolle et al., 2015; Pitney et al., 2011). In a study that utilized ATs as a sample, the two scales had reported Cronbach α levels of .95 and .94, respectively (Pitney et al., 2011). Additional evidence to support the interpretation and use of this scale, aside from it being the only WFC scale used in the AT literature to date, does not exist.

Religious Coping

The participant's use of religious coping techniques was assessed using the Brief RCOPE (Pargament, Feuille, & Burdzy, 2011). The Brief RCOPE is a 14-item measure that assesses one's use of positive (PRC) and negative (NRC) religious coping techniques in dealing with major life stressors. The scale is divided into two 7-item subscales which measure positive and negative techniques, respectively. Each item was answered on a 4-point Likert scale from "Not at all" to "A great deal". Each item was then scored from 0 ("Not at all") to 3 ("A great deal"). The scores for all item responses in a subscale were then totaled together to generate a subscale total. The subscales are meant to separately assess an individual's use of positive and negative religious coping techniques and therefore were not aggregated.

In a study that assessed internal consistency of the subscales across different populations, the PRC subscale was found to have a median alpha of .92 and the NRC subscale had a median alpha of .81 (Pargament et al., 2011). PRC consistently positively

correlates to measures of positive constructs such as self-esteem (Bradley, Schwartz, & Kaslow, 2005), life satisfaction (Cotton et al., 2009) and optimism (Cotton et al., 2009) as well as spiritual well-being (Piderman, Schneekloth, Pankratz, Maloney, & Altchuler, 2007). PRC rarely has a significant correlation with negative psychological constructs, but it is usually a negative correlation when it does occur (Pargament et al., 2011). NRC tends to positively correlate with negative constructs such as anxiety (Ai, Pargament, Kronfol, Tice, & Appel, 2010; Cole, 2005) and depression (Cole, 2005).

The predictive validity of the Brief RCOPE has been examined briefly. Studies have found that increases in PRC can predict improvements in quality of life (Tsevat et al., 2009) while NRC can positively predict hostility (Ai, Seymour, Tice, Kronfol, & Bolling, 2009). Exploration of the incremental validity of this instrument found that PRC still predicted well-being after controlling for gender and age (Lewis, Maltby, & Day, 2005) and that NRC still predicted lower quality of life after controlling for history of depression and self-efficacy (Tarakeshwar et al., 2006).

Social Support

Perceived social support of participants was measured using the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988). This scale consists of 12 items that measure the perceived support an individual receives from family, friends, and significant others. Each item is answered on a 7-point Likert scale ranging from 1 (“Very Strongly Disagree”) to 7 (“Very Strongly Agree”). All item responses are summed together to create an overall score with a higher score indicating a greater degree of perceived social support.

Analysis of the construct validity of this scale confirmed the three factor structure of family, friends, and significant others (Kazarian & McCabe, 1991). It was also found to have satisfactory concurrent validity with a similar social support scale (Kazarian & McCabe, 1991). The internal consistency of this scale has also been examined, finding a coefficient of $\alpha = .87$.

Intention to Leave

The Intention to Leave Survey (Terranova & Henning, 2011) was designed and utilized to assess the intention of collegiate athletic trainers to quit their current job or leave the profession altogether. For the purposes of this study, one question from the Intention to Leave Survey that assessed an individual's current desire to leave the profession of athletic training was included in the questionnaire. The question read "I am actively searching for a job outside the profession of athletic training" and was answered on a 5-point Likert scale from "Strongly Disagree" to "Strongly Agree". The question was then scored from 1 ("Strongly Disagree") to 5 ("Strongly Agree").

The one study to use this scale reported an internal consistency coefficient of α=.86 (Terranova & Henning, 2011). Aside from the internal consistency coefficient and a panel review to establish face and content validity, no further evaluation of the psychometric properties of this survey are evident in the literature. The singular question was chosen for this study due to its temporal nature and because it specifically addressed departure from the profession altogether, which was the specific variable of interest for this study.

Substance Use

The last section assessed the participant's use of several substances. The substances in question are alcohol, cigarettes, smokeless tobacco, marijuana and energy drinks. Because prevalence of use of several of these substances (e.g. marijuana, energy drinks) has never been researched in ATs, collection of data on these substances may prove useful. The questions were derived from the Monitoring the Future Study (National Institute on Drug Abuse, 2016). Each question asks about frequency of use in the past 30 days. Each question has 7 possible answers ("Never", "1-2", "3-5", "6-9", "10-19", "20-39", "40+"). For the purposes of this study, each question was scored from 0 ("Never") to 6 ("40+").

Data Processing and Analysis

All data from the survey were collected by Qualtrics and exported to an Excel spreadsheet, which was then saved on a portable storage device and stored in the principal investigator's office. The only individuals with access to the data are the principal investigator, the dissertation committee chair and an additional member of the committee that assisted with statistical analysis.

All statistical analyses were performed using SPSS 24.0. Descriptive statistics (e.g. mean, SD, range, skewness, kurtosis) were used to examine the distribution and central tendency of responses. All six hypotheses were analyzed using multiple regression models. All independent and dependent variables were mapped onto Smith's Cognitive-Affective Model of Athletic Burnout and regression was utilized to determine which independent variables increased or decreased the odds that a participant reported symptoms or effects of burnout.

Multiple regression was used to test all hypotheses. Hypotheses 4-6 all utilized substance use as a dependent variable. Several of these substance use patterns (i.e. cigarettes, marijuana, energy drinks) presented with a Poisson distribution rather than a normal distribution. Due to this, Poisson regression was used for these analyses. Smokeless tobacco use presented with a bimodal curve that matched neither a normal nor Poisson distribution. Therefore, this variable was dichotomized (0 = no use, 1 = use) and a binary logistic regression was used for this analysis.

CHAPTER FOUR

Manuscript One

Abstract

Context: Smith's Cognitive-Affective Model of Athletic Burnout suggests that athletic trainers (ATs) suffering from burnout may engage in substance use as a coping behavior. Increases in self-reported burnout symptoms are often associated with increases in heavy episodic drinking and tobacco use among various healthcare providers. However, this relationship has not been examined thoroughly.
Objective: To investigate the prevalence of substance use in ATs and identify relationships between symptoms of burnout and substance use among ATs.
Design: Cross-sectional study.
Setting: Web-based survey.
Participants: 783 certified ATs working fulltime in the college/university setting were sampled for this study. Graduate assistants, interns, and other part-time employees were excluded. The survey was distributed via the National Athletic Trainers' Association (NATA) membership directory email broadcast service.
Interventions: A 100-item online questionnaire consisting of items from previously used scales was utilized for this study. The survey included the Maslach Burnout Inventory (MBI) and substance use questions from the Monitoring the Future study. The survey took approximately 10-15 minutes to complete.
Main Outcome Measures: Path analyses were used to analyze survey data. All independent (MBI subscales) and dependent variables (use of alcohol, tobacco and marijuana) were mapped onto Smith's Cognitive-Affective Model of Athletic Burnout to determine which dimensions of burnout alter the odds of self-reported substance use.
Results: Almost half (46.6%) of the participants admitted to at least one binge drinking episode. However, the use of cigarettes, smokeless tobacco, marijuana and energy drinks during the last month was less pronounced in the sample. Emotional exhaustion and personal accomplishment were found to be associated with binge drinking. Emotional exhaustion was also found to be positively correlated with energy drink consumption.
Conclusions: Many ATs engage in heavy episodic drinking. Subscales of burnout (i.e. emotional exhaustion and a decreased sense of personal accomplishment) are significantly correlated with this behavior.

Introduction

Burnout has been defined as a mental state of emotional and physical exhaustion or a stress reaction to a person's inability to cope with the demands of their profession (Burnout, 2010). As a psychological syndrome, burnout consists of three components: emotional exhaustion, a decreased sense of personal accomplishment, and depersonalization of one's patients (Maslach, 1982). The bulk of research on burnout has been conducted in helping professionals, with studies finding that many suffer from high rates of burnout (Brake, Bouman, Gorter, Hoogstraten, & Eijkman, 2008; Braun et al., 2008; Halbesleben, Wakefield, Wakefield, & Cooper, 2008; Nirel, Goldwag, Feigenberg, Abadi, & Halpern, 2008; Oreskovich et al., 2015). Survey research in healthcare professionals has discovered particularly high levels of burnout. In one study, 31% (n=2181) of physicians reported high emotional exhaustion, 25.3% (n=1802) reported high depersonalization, and 12.3% (n=873) reported low personal accomplishment (Dyrbye, 2010). Thirty-six percent (n=77) of nurses have reported high emotional exhaustion, 12% (n=27) have reported high depersonalization, and 10% (n=22) have reported low personal accomplishment (Edwards et al., 2006). Forty-four percent (n=252) of psychologists have reported high emotional exhaustion, 34.3% (n=193) have reported high depersonalization, and only 0.9% (n=5) have reported low personal accomplishment (Ackerley, Burnell, Holder, & Kurdek, 1988; Rupert & Morgan, 2005).

The effects of burnout in healthcare professionals have also been examined, with one study finding that fatigue, sleeplessness, increased irritability and frustration are all associated with burnout (Freudenberger, 1974). The association between burnout and substance use has also been examined. Healthcare professionals suffering from burnout

are more likely to engage in binge drinking (Braun et al., 2008; Oreskovich et al., 2015). Nurses suffering from burnout are more likely to use tobacco (Losa Iglesias, Vallejo, & Fuentes, 2010).

Athletic trainers (ATs) also suffer from burnout (Capel, 1990; Giacobbi Jr., 2009), but at lower rates than other healthcare professionals. One study found that 20% of ATs reported high emotional exhaustion, 23.3% reported high depersonalization, and 15.5% reported low personal accomplishment (Kania, Meyer, & Ebersole, 2009). Some have speculated the reason for lower rates is because ATs, especially those in the collegiate setting, have an off-season for recovery (Campbell, 1985; Giacobbi Jr., 2009). However, recent rule changes in the National Collegiate Athletic Association now allow many sports much more practice time in their traditional off-season (Mazerolle, Eason, & Goodman, 2016). Because these practices require medical coverage, collegiate ATs are now working more than ever.

Similar to other healthcare professionals, ATs suffering from burnout have also reported suffering from fatigue, sleeplessness, irritability, and depression (Campbell, 1985; Fender, 1989). Although increases in burnout have been associated with an increased risk of substance use in other healthcare professionals (Losa Iglesias et al., 2010; Oreskovich et al., 2015), rates of substance use in ATs have not been examined thoroughly and have provided mixed results. One study found that 5% of ATs self-reported “excessive drinking” (Campbell, 1985). However, this study failed to provide the level to which drinking was considered “excessive” within the context of the study. Another study found that 80% of ATs reported the consumption of alcohol, and 4% of ATs consume more than 0 to 1 drinks per day for females and 1 to 2 drinks per day for

males (Groth, Ayers, Miller, & Arbogast, 2008). This study also found that 0.8% of participants smoke cigarettes and 4.1% reported use of smokeless tobacco (Groth et al., 2008). A third study found that approximately 67% of ATs consume alcohol and 2.2% smoke cigarettes (Giacobbi Jr., 2009). Both Groth et al. (2008) and Giacobbi (2009) measured alcohol consumption based upon average number of drinks per week, but did not report providing a timeframe such as previous 4 weeks or previous year. Likewise, both studies reported percentages of smokers but did not use a timeframe to determine smoker status. While Campbell (1985) found that suffering from burnout increased an AT's risk of excessive drinking, binge drinking (consuming five or more drinks in a row for males and four in a row for females (National Institute on Alcohol Abuse and Alcoholism, 2016) was not explored in this study.

Although alcohol consumption and tobacco use in ATs have been previously examined, the use of other substances such as marijuana and energy drinks has not been observed. With approximately 4.8% of physicians (Hughes et al., 1999) and 3.6% of nurses (Trinkoff & Storr, 1998) reporting use of marijuana in the past year, comparing these rates to those of collegiate ATs would be beneficial. While the use of energy drinks by the general population has received attention in the literature recently, consumption by healthcare professionals has not been examined. Those suffering from emotional exhaustion may use energy drinks to cope with fatigue, as over 60% of energy drink consumers do so to gain energy (Oglesby, Amrani, Wynveen, & Gallucci, 2018). The current prevalence of binge drinking and other substance use in collegiate ATs remains unclear, as does the potential relationship between burnout and these behaviors.

Smith's Cognitive-Affective Model of Athletic Burnout (Figure 1) (Smith, 1986) has been proposed as a possible theoretical model to explain the process of burnout in athletes and ATs. This model has found support within the AT literature and has been recommended for use to identify ATs suffering from burnout (Hendrix & Acevedo, 2000; Kania et al., 2009). The model suggests that burnout follows a similar process to other stress reactions: situational issues such as work-family conflict (Mazerolle, Bruening, Casa, & Burton, 2008), high workload (Kania et al., 2009), and low social support (Mazerolle & Pagnotta, 2011) affect both cognitive appraisal (e.g. sense of personal accomplishment) and physiological responses (e.g. emotional exhaustion). Cognitive appraisal and physiological response then lead to coping behaviors such as depersonalization of patients and substance use. While this model has been used to investigate burnout in ATs, it has not been used to determine if substance use is a coping behavior associated with burnout in this population. It is also unknown if the model is still applicable to collegiate ATs due to the aforementioned changes in working patterns.

The purpose of this study was to investigate the proportion of substance use (i.e. cigarettes, smokeless tobacco, marijuana, and energy drinks) and substance abuse (binge drinking) in collegiate ATs as well as possible relationships between these behaviors and burnout. We hypothesized that there will be a significant positive relationship between burnout and substance use/abuse in our sample.

Methods

Participants

All participants in this study (n=783) were certified ATs working fulltime in the collegiate setting at various levels of competition (i.e. National Collegiate Athletic Association (NCAA) Division I, II, and III; National Association of Intercollegiate Athletics (NAIA); National Junior College Athletic Association (NJCAA)). All participants were also active members of the National Athletic Trainers' Association (NATA). To be included in data analysis, participants had to be employed as an athletic trainer in the collegiate setting. Participants that indicated they no longer worked in the collegiate setting, or were not a fulltime employee (e.g. graduate assistants; interns) were excluded from data analysis. Any participant that identified themselves as working academically full-time was also excluded.

Procedures

A cross-sectional, web-based survey design was used to collect data for this study. Survey instruments were uploaded to Qualtrics (Provo, UT) and a hyperlink to the survey was generated. After receiving approval from the institutional review board, a request was made to the NATA Membership Directory to have a recruitment email sent to 7000 collegiate athletic trainers. We were notified by the membership directory that less than 7000 NATA members met our criteria, so it was sent to all 6867 applicable members. The initial recruitment e-mail contained a description of the study and a hyperlink to the survey. The e-mail also explained that accessing and completing the survey is an act of consent. To protect confidentiality, participants were not asked to provide any identifying

information. A reminder was sent one week and two weeks after the initial recruitment e-mail which encouraged recipients to complete the survey if they had not yet done so. The online survey consisted of demographic questions and Likert-scale surveys.

Questionnaire

The questionnaire was composed of multiple previously-used scales that measured each of the variables of interest for our study. The variables of interest that were measured for our study were:

Work-family conflict. Netemeyer et al. (1996) developed a survey to measure WFC that has been used multiple times in AT research (Mazerolle, Pitney, & Eason, 2015; Pitney, Mazerolle, & Pagnotta, 2011). The scale consists of 5 items that assess different forms of WFC. Each item is answered on a 7-point Likert scale ranging from "Strongly Disagree" to "Strongly Agree". Higher scores indicate that a participant has a higher degree of WFC.

When used in AT research, the work-family conflict scale is administered twice within the same questionnaire, each with a different definition for "family". One version defines family as having a partner or spouse with or without children, while the other defines it as close relatives, including parents, siblings, and grandparents, involved in one's life (Mazerolle et al., 2015; Pitney et al., 2011). In the present study, the WFC scale was administered in a manner consistent with previous literature (Mazerolle et al., 2015; Pitney et al., 2011). These two scales have reported internal consistency coefficients of $\alpha = .95$ and $\alpha = .94$, respectively (Pitney et al., 2011).

Social support. The Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet, Dahlem, Zimet, & Farley, 1988) was used to measure social support of participants. It consists of 12 items that measure the perceived support one receives from significant others, family, and friends. Each item is answered on a 7-point Likert scale ranging from "Very Strongly Disagree" to "Very Strongly Agree". Item scores are totaled together to create a social support score. A higher score indicates a higher degree of perceived social support. The scale has a reported Cronbach's alpha of .79 (Kazarian & McCabe, 1991).

Workload. Participants were asked to provide an estimate of how many hours they work per week on average. This was divided into three times of year to mirror the typical college semester system by inquiring about time spent working as an AT in the fall (August-December), spring (January-May) and summer (June-July).

Burnout. We included the Maslach Burnout Inventory – Health Human Services edition (MBI-HHS) (Maslach & Jackson, 1986) because it is the most widely used measure of burnout in healthcare professionals (DeFreese & Mihalik, 2016; Gaffney, Hardin, Fitzhugh, & Gi-Yong Koo, 2012; Kania et al., 2009). It is divided into three subscales that measure emotional exhaustion, depersonalization and sense of personal accomplishment. It consists of 22 items, with nine items pertaining to emotional exhaustion, five to depersonalization, and eight to personal accomplishment. Each item is answered on a 7-point Likert scale from "Never" to "Every day". All items in a particular subscale are summed to create a subscale total. The three subscales cannot be totaled together to create an overall "burnout score" (Maslach & Jackson, 1986). Rather, every

subscale measures a separate aspect of burnout. For the emotional exhaustion and depersonalization subscales, a higher score indicates a higher level of burnout. Because a sense of personal accomplishment is considered a positive attribute, lower scores on this subscale indicate a higher level of burnout. The three subscales have reported internal consistency coefficients of .89 (emotional exhaustion), 74 (personal accomplishment) and .77 (depersonalization) (Maslach & Jackson, 1981).

Substance use. To assess the use or abuse of certain substances within the last 30 days, we utilized questions from the Monitoring the Future Study (National Institute on Drug Abuse, 2016). Participants were asked to respond to items assessing his or her use of cigarettes, smokeless tobacco, marijuana and energy drinks. We also asked about binge drinking ("How many times (if any) have you had five or more drinks in a row (4 or more for females) over the last 30 days?"). Each question had seven possible answers ("Never", "1-2", "3-5", "6-9", "10-19", "20-39", "40+") and each was scored from 0 ("Never") to 6 ("40+").

Statistical Analysis

All statistical analyses were performed using SPSS (version 24; IBM Corp, Armonk, NY). All participant data were downloaded from Qualtrics into an SPSS worksheet. The variables that were used for analysis were work-family conflict, perceived social support, salary, average hours of work per week, burnout subscales, and use of various substances within the last 30 days.

Descriptive statistics (e.g. mean, SD, range) were used to examine the distribution and central tendency of responses. The assumptions of normality and homoscedasticity

were checked using normal P-P plots and scatterplots. All hypotheses were tested using multiple regression models.

The variables were all mapped onto Smith's Cognitive-Affective Model of Athletic Burnout (Figure 2) (Smith, 1986). All situational variables (i.e. work-family conflict, perceived social support, salary, and workload for fall, spring & summer) were utilized as independent variables in two multiple regressions, one with personal accomplishment and the other with emotional exhaustion as the outcome variable. All situation variables were continuous except for salary, which was coded in $10,000 per year intervals from 1 = less than $20,000 per year to 10 = greater than $100,000 per year. Then personal accomplishment was used as an independent variable with emotional exhaustion as a dependent variable.

Finally, emotional exhaustion and personal accomplishment were used as independent variables in several multiple regressions, one to predict depersonalization and then five others to predict each substance use outcome (i.e. binge drinking, cigarettes, smokeless tobacco, marijuana, energy drinks). All three burnout subscales were continuous variables, and substance use was coded based on number of times used in the previous month (0 = "Never", 1 = "1-2", 2 = "3-5", 3 = "6-9", 4 = "10-19", 5 = "20-39", 6 = "40+"). Then a multiple or simple regression (depending upon the number of independent variables) was utilized to determine the extent to which variables altered the odds that a participant reported the symptoms or effects of burnout. For all multiple regression analyses, multicollinearity was checked using variance inflation factors.

Results

Demographics

Of the 6867 e-mails that were sent to participants, 1211 surveys were started and 857 were completed (29.2% dropout rate). Of those who completed the survey, 74 did not meet inclusion criteria. This resulted in a sample size of 783 (11.4% response rate). Participants were 36.4 ± 11.1 years old (range 22-79 years), with 12.6 ± 9.8 years (range 0-45 years) of AT experience. Participants worked an average of 57 ± 11.6 (range 30-100) hours per week during the fall semester (i.e. August-December) and 53.6 ± 11.2 (range 30-100) hours per week during the spring semester (i.e. January-May). The participants also reported working an average of 23.3 ± 17.8 (range 0-80) hours per week during the months of June and July. The majority of participants identified as white, non-Hispanic (n=713, 91.1%). Our sample was predominantly single (n=409, 52.2%) and most participants did not have children (n=484, 61.8%), but those who did have children had an average of 2.05 ± .86 children (range 1-6). Additional demographic information can be found in Table 1. By comparing our demographics to information collected by the NATA (National Athletic Trainers' Association, 2018), we found that our sample is representative of the overall collegiate AT population in terms of gender, ethnicity, and NATA district.

Means, standard deviations and ranges of results for the MBI subscales, MSPSS and work-family conflict scales can be found in Table 2. Approximately 38.9% (n=297) of participants scored 27 or higher on the emotional exhaustion subscale, which indicates a high level of burnout (Kania et al., 2009). Similarly, 33.6% (n=259) of participants had a high level of burnout in the depersonalization subscale by having a subscale total of 10

or higher. Additionally, 17.7% (n=135) had a high level of burnout in the personal accomplishment subscale by scoring 33 or less.

An examination of substance abuse behaviors in collegiate ATs found that 46.3% (n=363) reported binge drinking at least once in the last 30 days. 22.9% (n=179) of participants reporting use of energy drinks in the last 30 days. Other behaviors were not as pronounced with 3.5% (n=28) admitting to marijuana use in the 30 days preceding survey completion. Additionally, few participants (n=40, 5.2%) reported smokeless tobacco use and 1.4% (n=11) of participants admitted to smoking at least one cigarette. A full report of substance use in our sample can be found in Table 3.

Multiple Regression Analyses

After mapping all variables of interest (i.e. work-family conflict, perceived social support, salary, average hours of work per week, burnout subscales, and substance use) to Smith's Cognitive-Affective Model of Athletic Burnout (Smith, 1986) (Figure 2), multiple regression analyses were completed. Summaries for all analyses that found significant results can be found in Table 4. Situational factors that were significantly associated with personal accomplishment scores included social support ($B = .113$, $p < .001$; 95% CI = 0.08, 0.15), salary ($B = .468$, $p < .001$; 95% CI = 0.22, 0.72), and work-family conflict with family being spouse and/or children ($B = -.239$, $p < .001$; 95% CI = -0.33, -0.15). Similarly, social support ($B = -.172$, $p < .001$; 95% CI = -0.23, -.012), salary ($B = -.630$, $p = .002$; 95% CI = -1.03, -0.24), average hours worked in the spring semester ($B = .084$, $p = .029$; 95% CI = 0.01, 0.16), work-family conflict with family being spouse and/or children ($B = .475$, $p < .001$; 95% CI = 0.33, 0.62) and work-family conflict with family being other close relatives ($B = .416$, $p < .001$; 95% CI = 0.27, 0.56) were all

correlated with emotional exhaustion. These two models explained 13.3% and 37.5% of the variance in personal accomplishment and emotional exhaustion for our sample, respectively. A simple regression also revealed that personal accomplishment was significantly associated with emotional exhaustion (B = -.796, $p < .001$; 95% CI = -0.92, -0.67, $R^2 = .178$).

When using cognitive appraisal and physiological response variables to predict coping and task behaviors, we found that emotional exhaustion (B = .288, $p < .001$; 95% CI = 0.26, 0.32) and personal accomplishment (B = -.174, $p < .001$; 95% CI = -0.23, -0.12) were both significantly associated with depersonalization ($R^2 = .460$). Emotional exhaustion (B = .008, p = .023; 95% CI = 0.001, 0.015) and personal accomplishment (B = -.016, p = .02; 95% CI = -0.029, -0.003) were correlated with number of binge drinking episodes in the past 30 days ($R^2 = .022$).

While checking the assumption of normality, we found that several substance use variables (i.e. cigarettes, marijuana, energy drinks) followed a Poisson distribution. Because of this, we used Poisson regressions for models that included these substances as dependent variables. Because smokeless tobacco use followed neither of these distributions, we dichotomized this variable (0 = no use, 1 = use) and a binomial logistic regression was used. Emotional exhaustion was found to be correlated with energy drink use (Exp[B] = 1.017, $p < .001$, 95% CI = 1.009, 1.026). Neither emotional exhaustion nor personal accomplishment was found to be significantly associated with cigarette, smokeless tobacco or marijuana use.

Discussion

The purpose of our study was twofold: (1) explore substance use behaviors of ATs in the collegiate setting, and (2) to explore possible relationships between burnout and substance use. We found that approximately 46% of participants engaged in at least one reported episode of binge drinking in the last 30 days. This rate was much higher than previous findings of 5% in ATs (Campbell, 1985) and 16% in nurses (Trinkoff & Storr, 1998). It is also double the national average of adults age 26 and older, with 22.5% of respondents from the general population engaging in at least one binge drinking episode in the past month (Hedden, 2015). Campbell's (1985) previous study of AT drinking behaviors did not define "excessive drinking", which may have allowed participants to determine for themselves if their alcohol consumption was excessive. We explicitly defined the behavior (5 or more drinks for males, 4 or more drinks for females) without labeling it as a negative behavior (e.g. excessive drinking, binge drinking). This could result in self-reporting that is more honest. To our knowledge, ours is the first published study to examine binge drinking with an appropriate definition in an AT sample.

Additionally, we identified that 1.4% of participants had smoked at least one cigarette in the last 30 days, which is similar to findings from previous studies (Giacobbi Jr., 2009; Groth et al., 2008). These findings are lower than that of other healthcare professions, with studies finding that over 14% of nurses (Trinkoff & Storr, 1998) and 14% of physicians (Hughes et al., 1999) have smoked cigarettes in the past year. Although both of those studies examined past year use instead of past month use, the proportions are remarkably different. Comparing our results to studies that are 20 years

old presents some issues, as current trends of cigarette use in physicians and nurses may differ. More recent research on these professions is not evident in the literature. Regardless, the proportion of cigarette smoking among these professions is lower than the 20.8% of US population who reported smoking a cigarette in the previous 30 days (Hedden et al., 2015).

To our knowledge, ours is the first published study that examined marijuana, smokeless tobacco and energy drink use among collegiate ATs. Approximately 3.5% of our sample reported marijuana use in the previous month. This result is similar to other healthcare professions, with 4.75% of physicians (Hughes et al., 1999) and 3.6% of nurses (Trinkoff & Storr, 1998) reporting the use of marijuana. This shows that the proportion of marijuana use in healthcare professionals is less than half of the 8.4% reported use in the general population (Hedden, 2015). We identified that 5.2% of our sample have used smokeless tobacco in the previous 30 days. Because smokeless tobacco use has not been assessed in other healthcare professionals, a comparison is not possible. However, it is approximately 1.5 times higher than the 3.3% of the general population that reports smokeless tobacco use (Hedden, 2015). In the sample, 22.9% of participants reported the consumption of energy drinks in the previous month. Current literature rarely explores energy drink consumption in individuals that are not adolescents or college students. As collegiate ATs spend many hours working and traveling with their respective teams, both physical and emotional exhaustion could cause them to resort to energy drinks to meet the demands of their day.

Approximately 38.9% of our sample reported high levels of emotional exhaustion, 33.6% reported high levels of depersonalization, and 17.7% reported a low perception of

personal accomplishment. High levels of emotional exhaustion were almost twice as common in our sample than a study conducted in collegiate ATs in 2009, and high levels of depersonalization were 44% more common (Kania et al., 2009). Meanwhile, the occurrence of low personal accomplishment was comparable to previous findings (Kania et al., 2009). Our findings are also similar to burnout statistics found in physicians (Dyrbye, 2010), nurses (Edwards et al., 2006), and psychiatrists (Rupert & Morgan, 2005). These findings suggest that burnout symptoms in collegiate ATs are more prevalent than before. The constant decrease in the off-season time of recovery for collegiate ATs could be contributing to this and should be examined further in future studies.

Smith's Cognitive-Affective Model of Athlete Burnout has been applied to ATs in the past and recommended for future use (Hendrix & Acevedo, 2000; Kania et al., 2009). We found that this model was appropriate for use in our sample. Using a multiple regression model, we found that the situational issues of salary, social support, and work-family conflict were all significantly associated with cognitive appraisal (personal accomplishment) and physiological response (emotional exhaustion). The associations between social support, work-family conflict and burnout are in agreement with previous studies (DeFreese & Mihalik, 2016; Mazerolle et al., 2008; Mazerolle & Pagnotta, 2011). However, our results disagree with a previous study which found no relationship between salary and symptoms of burnout (Gaffney et al., 2012). We recommend that salary remains a situational variable in Smith's model for future studies due to this contradiction in results.

The model found that average number of hours worked per week in the spring semester was significantly associated with emotional exhaustion but not personal accomplishment. A longitudinal study of work-life balance in collegiate ATs found that they suffer from increased conflict during their competitive season (Mazerolle & Eason, 2016). It is possible that more sports are actively competing during the winter and spring months, which would lead to increased work-family conflict. As increased work-family conflict led to increased symptoms of burnout in our sample, this is a reasonable explanation for the association between hours worked in the spring semester and burnout. Studies that examine ATs who work in specific college sports and how they experience burnout throughout the year should be conducted in the future.

Further examination of the model found that emotional exhaustion and personal accomplishment are correlated. These findings agree with previous research examining relationships between the MBI subscales in helping professionals such as physicians, psychologists, nurses, and social workers (Maslach & Jackson, 1981). Our study also found that both emotional exhaustion and personal accomplishment are associated with depersonalization. This finding also agrees with previous research (Maslach & Jackson, 1981) and further demonstrates that Smith's model is appropriate for the examination of burnout in collegiate ATs. We recommend that future researchers continue to use this model.

The final portion of the model examined how emotional exhaustion and personal accomplishment were associated with substance use. We found that emotional exhaustion and personal accomplishment are positively and negatively correlated with binge drinking, respectively. These results agree with previous studies of other healthcare

professionals (Braun et al., 2008; Oreskovich et al., 2015). While ATs use many positive (e.g. exercise, seek social support) and negative (e.g. ignore/avoid the situation) methods to manage stress that may lead to burnout (Reed & Giacobbi Jr, 2004), the use of binge drinking by collegiate ATs as a coping method has not been examined previously in the literature. We acknowledge that other factors that significantly influence binge drinking in collegiate ATs must exist, as the explained variance in this model was small (R^2 = .022). Future research should continue to explore this relationship.

We did not find emotional exhaustion or personal accomplishment to be correlated with cigarette use, although previous research has found that nurses suffering from burnout are more likely to smoke cigarettes (Losa Iglesias et al., 2010). This difference may be due to many college campuses now being tobacco-free zones, which prohibits cigarette use on campus. Even for ATs employed by colleges that allow tobacco use, the busy nature of collegiate ATs may prevent the time needed to smoke cigarettes. This inability to smoke cigarettes for a large portion of their day may also discourage use when away from work.

Another significant relationship we found was that emotional exhaustion is positively associated with energy drink consumption. This is a unique finding that has not been previously examined in the literature. Because a desire for increased energy is a common motivation for use of energy drinks (Oglesby et al., 2018), collegiate ATs may be using energy drinks as a stimulus to start their day and/or continue their day. Future studies should further examine usage patterns of energy drinks as well as motivations for use in collegiate ATs to better understand this relationship.

Limitations and Future Directions

There are several limitations of the study that should be noted. The response rate for our survey was 11.4%, which is below the average for online surveys (Manfreda, Bosnjak, Berzelak, Haas, & Vehovar, 2008). This increases the risk of selection bias in our study. The overall length of the survey as well as a lack of incentive for completion may have diminished the response rate. Despite the low response rate, our sample size was larger than previous studies that utilized Smith's model (Hendrix & Acevedo, 2000; Kania et al., 2009) and was representative of collegiate ATs in terms of gender, ethnicity and geographical location. Because we utilized a membership database for e-mail addresses, it is possible that the database was not updated. This could result in some of the 6867 not having a valid email address or no longer being employed in the collegiate setting, therefore resulting in some respondents either not receiving the survey or ignoring it altogether because they did not meet the criteria for inclusion. While our study focused on the condition of those who are currently in the profession, this survey was largely unable to reach those who have already left the profession due to burnout which may have resulted in an under-estimate of burnout symptomatology in our sample. This is supported by the fact that the mean age of our sample was 36 years while many ATs leave the profession by the age of 30 (Kahanov & Eberman, 2011). Because our survey asked questions about substance use, social desirability may have influenced some responses. We attempted to control for social desirability by not collecting information such as name, email address, or mailing address of respondents. Due to the cross-sectional nature of our study, we were not able to infer causality from our analyses. Because our data were collected only from collegiate ATs, our findings may not be

generalizable to ATs in other work settings. It is also important to note that many participants did not have a spouse or children, possibly making their perception of work-family conflict different from others. By dividing the sample into three groups (i.e. no spouse or children, both spouse and children, either spouse or child) and comparing the mean score for the work-family conflict scale of each group to the overall average, we found that none of the group means differed from the overall average by more than 5%. Furthermore, work-family conflict was still significantly associated with emotional exhaustion and personal accomplishment regardless of group.

Future research should continue to examine substance use in collegiate ATs and possible contributing factors to substance abuse behaviors such as binge drinking. Future studies should also examine variables that may influence the various components of Smith's Cognitive Affective Model of Athletic Burnout in order to alleviate symptoms of burnout and/or its potential causes and outcomes. We also encourage further research into the use of energy drinks by ATs.

Conclusions

We found that binge drinking behaviors and use of smokeless tobacco were more common in our sample of collegiate ATs than other studies that examined other healthcare professionals (Trinkoff & Storr, 1998) and the general population (Hedden, 2015). While marijuana use in our sample was similar to other healthcare professionals (Hughes et al., 1999; Trinkoff & Storr, 1998), it was less common than that of the general population (Hedden, 2015). Prevalence of cigarette use in our sample was lower than other healthcare professionals (Hughes et al., 1999; Trinkoff & Storr, 1998) and the general population (Hedden, 2015). By using Smith's Cognitive Affective Model of

Athletic Burnout, we found that emotional exhaustion and diminished personal accomplishment were both associated with increases in binge drinking behaviors in our sample. We also found that emotional exhaustion was positively associated with energy drink use. The goal of this research was to illuminate substance use patterns in collegiate ATs and point to potential causes in order to hopefully improve the overall well-being of members of the profession.

Table 4.1. Demographics of the Sample

	n	%
Gender		
Male	326	41.6
Female	453	57.9
Ethnicity		
White	713	91.1
Black	23	2.9
Hispanic	29	3.7
Native American	5	0.6
Asian	13	1.7
Multiracial	15	1.9
Other	6	0.8
Marital Status		
Single	409	52.2
Married	333	45.5
Divorced	37	4.7
Widowed	3	0.4
NATA District		
1 (CT, ME, MA, NH, RI, VT)	62	7.9
2 (DE, NJ, NY, PA)	91	11.6
3 (DC, MD, NC, SC, VA, WV)	100	12.8
4 (IL, IN, MI, MN, OH, WI)	157	20.1
5 (IA, KS, MO, NE, ND, OK, SD)	96	12.3
6 (AR, TX)	51	6.5
7 (AZ, CO, NM, UT, WY)	36	4.6
8 (CA, HI, NV, Guam, American Samoa)	68	8.7
9 (AL, FL, GA, KY, LA, MS, TN, Puerto Rico, Virgin Islands)	87	11.1
10 (AK, ID, MT, OR, WA)	32	4.1
Level of Competition		
NCAA Division I	296	37.8
NCAA Division II	143	18.3
NCAA Division III	189	24.1
NAIA	70	8.9
NJCAA	63	8.0
Other	21	2.7
Salary		
Less than $20,000	38	4.9

$20,000 - $29,999	25	3.2
$30,000 - $39,999	147	18.8
$40,000 - $49,999	236	30.1
$50,000 - $59,999	167	21.3
$60,000 - $69,999	65	8.3
$70,000 - $79,999	51	6.5
$80,000 - $89,999	23	2.9
$90,000 - $99,999	13	1.7
Greater than $100,000	14	1.8

Table 4.2. Participant Scores on Survey Scales

Questionnaire Component	**Scale Range**	**Participant's Scores, Mean ± SD (Range)**
Emotional Exhaustion MBI subscale	0-54	23.7 ± 11.9 (0-53)
Depersonalization MBI subscale	0-30	7.7 ± 5.9 (0-27)
Personal Accomplishment MBI subscale	0-48	38.9 ± 6.3 (13-48)
Work-Family Conflict Scale A	5-35	25.5 ± 7.1 (5-35)
Work-Family Conflict Scale B	5-35	25.8 ± 7.2 (5-35)
Multidimensional Scale of Perceived Social Support	12-84	67.1 ± 13.2 (12-84)

Table 4.3. Substance Use Demographics

	Binge Drinking n (%)	**Marijuana n (%)**	**Smokeless Tobacco n (%)**	**Energy Drink n (%)**
Never	418 (53.4)	750 (95.8)	741 (94.6)	602 (76.9)
1-2	208 (26.6)	12 (1.5)	6 (0.8)	76 (9.7)
3-5	92 (11.7)	4 (0.5)	6 (0.8)	38 (4.9)
6-9	37 (4.7)	1 (0.1)	3 (0.4)	18 (2.3)
10-19	21 (2.7)	4 (0.5)	0 (0.0)	24 (3.1)
20-39	4 (0.5)	2 (0.3)	7 (0.9)	18 (2.3)
40+	1 (0.1)	5 (0.6)	18 (2.3)	5 (0.6)

	Cigarettes n (%)
Not at all	769 (98.2)
Less than one cigarette per day	6 (0.8)
1-5 cigarettes per day	4 (0.5)
About one-half pack per day	1 (0.1)

Table 4.4. Summary of Regression Analyses

Variable	B	95% CI Lower	95% CI Upper	β	t	R	R^2
Personal Accomplishment						0.376	0.133
Workload Fall	0.012	-0.033	0.058	0.023	0.532		
Workload Spring	0.015	-0.032	0.062	0.026	0.619		
Workload Summer	-0.012	-0.039	0.014	-0.035	-0.905		
Salary	0.468	0.218	0.719	0.133	3.670[a]		
Social Support	0.113	0.080	0.146	0.238	6.723[a]		
Work-Family Conflict A	-0.239	-0.329	-0.148	-0.269	-5.183[a]		
Work-Family Conflict B	0.022	-0.068	0.112	0.026	0.488		
Emotional Exhaustion						0.617	0.375
Workload Fall	0.066	-0.007	0.139	0.065	1.783		
Workload Spring	0.084	0.009	0.159	0.079	2.194[b]		
Workload Summer	-0.016	-0.058	0.027	-0.024	-0.735		
Salary	-0.630	-1.025	-0.235	-0.096	-3.130[c]		
Social Support	-0.172	-0.225	-0.118	-0.190	-6.330[a]		
Work-Family Conflict A	0.475	0.330	0.620	0.284	6.418[a]		
Work-Family Conflict B	0.416	0.271	0.561	0.253	5.639[a]		
Emotional Exhaustion						0.424	0.178
Personal Accomplishment	-0.796	-0.918	-0.674	-0.424	-12.783[a]		
Depersonalization						0.679	0.460
Personal Accomplishment	-0.174	-0.228	-0.120	-0.187	-6.286[a]		
Emotional Exhaustion	0.288	0.259	0.317	0.579	19.479[a]		
Binge Drinking						0.156	0.022
Personal Accomplishment	-0.016	-0.029	-0.003	-0.093	-2.340[c]		
Emotional Exhaustion	0.008	0.001	0.015	0.091	2.282[c]		

[a] $P < .001$
[b] $P < .01$
[c] $P < .05$

Table 4.5 Summary of Substance Use Regression Analyses[a]

Variable	B	S.E.	Exp(B)	95% CI Lower	95% CI Upper	Wald Chi-Square
Cigarette Use						
Personal Accomplishment	-0.054	0.035	0.948	0.885	1.015	2.375
Emotional Exhaustion	0.002	0.022	1.002	0.960	1.046	0.010
Smokeless Tobacco Use						
Personal Accomplishment	-0.010	0.034	0.990	0.926	1.059	0.080
Emotional Exhaustion	-0.037	0.020	0.9763	0.927	1.001	3.628
Marijuana Use						
Personal Accomplishment	-0.020	0.019	0.980	0.944	1.017	1.112
Emotional Exhaustion	-0.019	0.011	0.981	0.960	1.003	2.957
Energy Drink Use						
Personal Accomplishment	-0.011	0.008	0.989	0.973	1.004	1.983
Emotional Exhaustion	0.017	0.004	1.017	1.009	1.026	15.315[b]

[a] Cigarette, marijuana and energy drink use are Poisson regressions. Smokeless tobacco use is a binomial logistic regression.
[b] $P < .001$

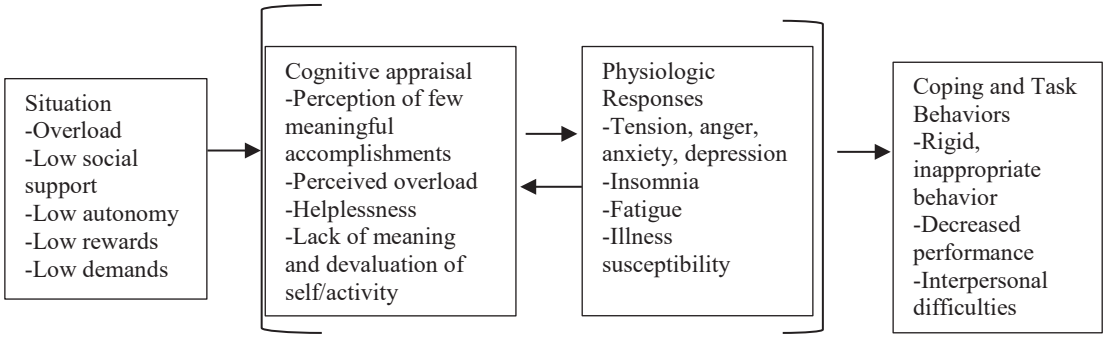

Figure 4.1. Smith's Cognitive-Affective Model of Athletic Burnout

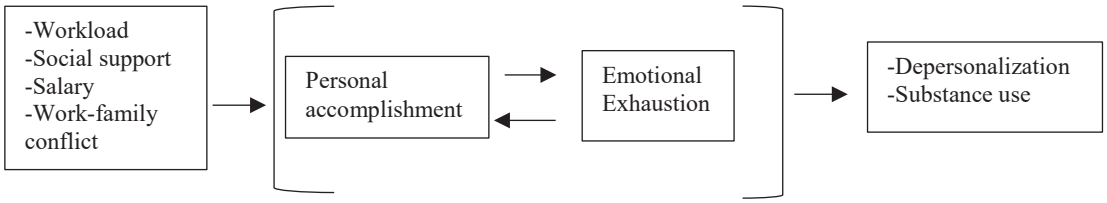

Figure 4.2. Variables mapped onto Smith's Model

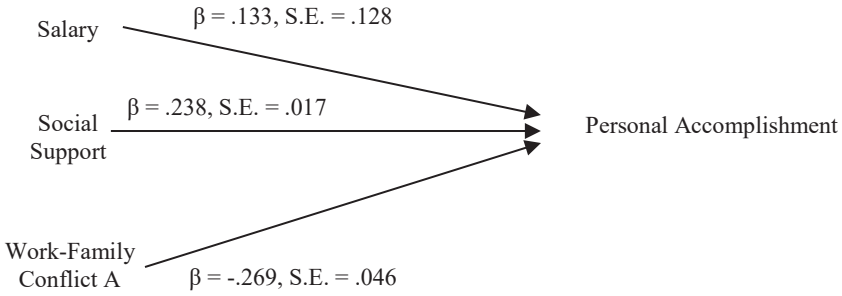

Figure 4.3 Situational variables significantly associated with personal accomplishment. $R^2 = .133$

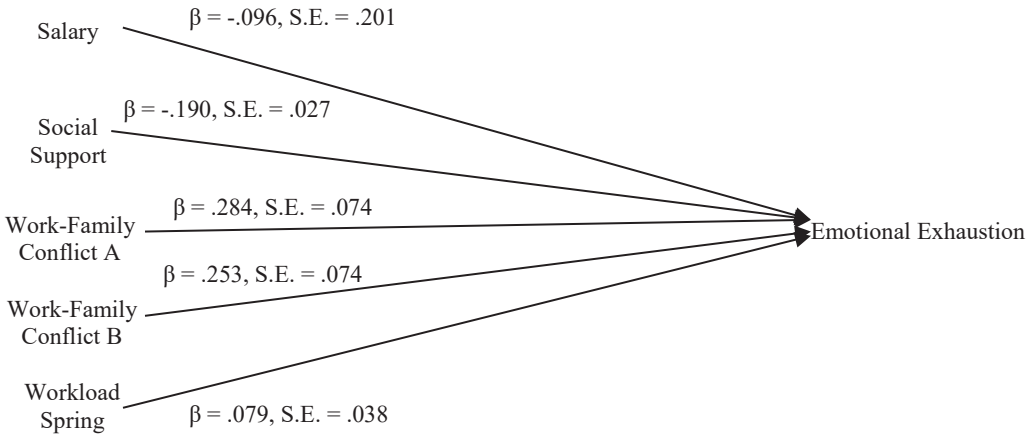

Figure 4.4 Situational variables significantly associated with emotional exhaustion. $R^2 = .375$

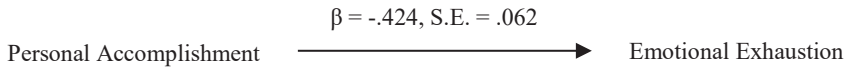

Figure 4.5 Personal accomplishment's relationship with emotional exhaustion. $R^2 = .178$

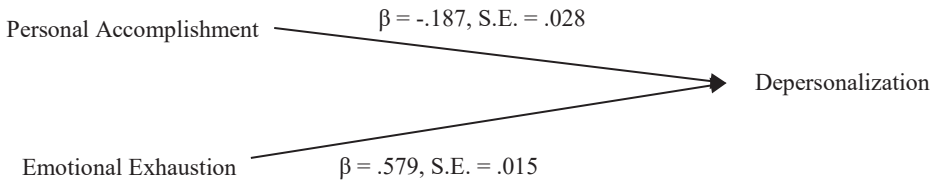

Figure 4.6 Associations between personal accomplishment, emotional exhaustion and depersonalization. $R^2 = .460$

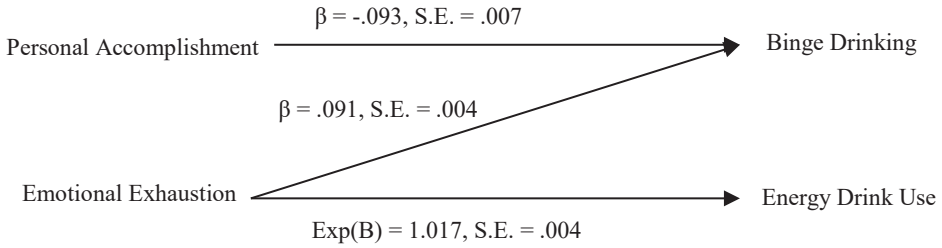

Figure 4.7 Associations between personal accomplishment, emotional exhaustion and substance use.

References

Ackerley, G. D., Burnell, J., Holder, D. C., & Kurdek, L. A. (1988). Burnout among licensed psychologists. *Professional Psychology: Research and Practice, 19*(6), 624-631. doi:10.1037/0735-7028.19.6.624

Brake, T., Bouman, A. M., Gorter, R. C., Hoogstraten, J., & Eijkman, M. A. J. (2008). Using the maslach burnout inventory among dentists: Burnout measurement and trends. *Community Dentistry and Oral Epidemiology, 36*(1), 69-75. doi:10.1111/j.1600-0528.2007.00372.x

Braun, M., Schonfeldt-Lecuona, C., Kessler, H., Beck, J., Beschoner, P., & Freudenmann, R. (2008). Burnout, depression and substance use in german psychiatrists: Data of a pilot study. *Nervenheilkunde, 27*(9), 800-800.

Burnout. (2010). *Black's medical dictionary, 42nd edition* (). London, UK: A&C Black.

Campbell, D. (1985). The prevalence of burnout among athletic trainers. *Athletic Training, 20*, 110-113.

Capel, S. (1990). Attrition of athletic trainers. *Athletic Training, 25*, 34-35.

DeFreese, J. D., & Mihalik, J. P. (2016). Work-based social interactions, perceived stress, and workload incongruence as antecedents of athletic trainer burnout. *Journal of Athletic Training (Allen Press), 51*(1), 28-34. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=113499504&site=ehost-live&scope=site

Dyrbye, L. (2010). Physicians married or partnered to physicians: A comparative study in the american college of surgeons. *J Am Coll Surg, 21*1(5), 663-671. doi:10.1016/j.jamcollsurg.2010.03.032

Edwards, D., Burnard, P., Hannigan, B., Cooper, L., Adams, J., Juggessur, T., . . . Coyle, D. (2006). Clinical supervision and burnout: The influence of clinical supervision for community mental health nurses. *Journal of Clinical Nursing, 15*(8), 1007-1015. doi:10.1111/j.1365-2702.2006.01370.x

Fender, L. K. (1989). Athlete burnout: Potential for research and intervention strategies. *Sport Psychologist,* 3(1), 63-71. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=20736216&site=ehost-live&scope=site

Freudenberger, H. J. (1974). Staff burn-out. *Journal of Social Issues, 3*0(1), 159-165.

Gaffney, B., Hardin, R., Fitzhugh, E., & Gi-Yong Koo. (2012). The relationship between burnout and job satisfaction in certified athletic trainers. *International Journal of Sport Management, 1*3(1), 73-86. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=73350924&site=ehost-live&scope=site

Giacobbi Jr., P. R. (2009). Low burnout and high engagement levels in athletic trainers: Results of a nationwide random sample. *Journal of Athletic Training (National Athletic Trainers' Association), 4*4(4), 370-377. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=43928237&site=ehost-live&scope=site

Groth, J. J., Ayers, S. F., Miller, M. G., & Arbogast, W. D. (2008). Self-reported health and fitness habits of certified athletic trainers. *Journal of Athletic Training, 4*3(6), 617-623. doi:10.4085/1062-6050-43.6.617

Halbesleben, J. R. B., Wakefield, B. J., Wakefield, D. S., & Cooper, L. B. (2008). Nurse burnout and patient safety outcomes: Nurse safety perception versus reporting behavior. *Western Journal of Nursing Research, 3*0(5), 560-577. doi:10.1177/0193945907311322

Hedden, S. L., United States. Substance Abuse and Mental Health Services Administration, & RTI International. (2015). *Behavioral health trends in the united states: Results from the 2014 national survey on drug use and healt*h. Rockville, MD: Substance Abuse and Mental Health Services Administration, Department of Heath & Human Services.

Hendrix, A. E., & Acevedo, E. O. (2000). An examination of stress and burnout in certified athletic trainers at division I-A universities. *Journal of Athletic Training (National Athletic Trainers' Association), 3*5(2), 139. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=3236612&site=ehost-live&scope=site

Hughes, P. H., Storr, C. L., Sheehan, D. V., Brandenburg, N. A., Baldwin Jr, D. C., Brandenburg, N. A., . . . Anthony, J. C. (1999). Physician substance use by medical specialty. *Journal of Addictive Diseases, 1*8(2), 23-37. doi:10.1300/J069v18n02_03

Kahanov, L., & Eberman, L. E. (2011). Age, sex, and setting factors and labor force in athletic training. *Journal of Athletic Training (National Athletic Trainers' Association), 4*6(4), 424-430. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=65923840&site=ehost-live&scope=site

Kania, M. L., Meyer, B. B., & Ebersole, K. T. (2009). Personal and environmental characteristics predicting burnout among certified athletic trainers at national collegiate athletic association institutions. *Journal of Athletic Training (National Athletic Trainers' Association), 4*4(1), 58-66. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=37588135&site=ehost-live&scope=site

Kazarian, S. S., & McCabe, S. B. (1991). Dimensions of social support in the MSPSS: Factorial structure, reliability, and theoretical implications. *Journal of Community Psychology, 1*9(2), 150-160. doi:10.1002/1520-6629(199104)19:2<150::AID-JCOP2290190206>3.0.CO;2-J

Losa Iglesias, M. E., Vallejo, R. B. d. B., & Fuentes, P. S. (2010). The relationship between experiential avoidance and burnout syndrome in critical care nurses: A cross-sectional questionnaire survey. *International Journal of Nursing Studies, 4*7(1), 30-37. doi:10.1016/j.ijnurstu.2009.06.014

Manfreda, K. L., Bosnjak, M., Berzelak, J., Haas, I., & Vehovar, V. (2008). Web surveys versus other survey modes: A meta-analysis comparing response rates. *International Journal of Market Research, 5*0(1), 79-104.

Maslach, C., & Jackson, S. (1986). *Maslach burnout inventory: Human services editio*n. Mountain View, CA: CPP, Inc.

Maslach, C. (1982). *Burnout, the cost of carin*g. Englewood Cliffs, N.J: Prentice-Hall.

Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Organizational Behavior,* 2(2), 99-113. doi:10.1002/job.4030020205

Mazerolle, S., Pitney, W., & Eason, C. (2015). Experiences of work-life conflict for the athletic trainer employed outside the national collegiate athletic association division I clinical setting. *Journal of Athletic Training, 5*0(7), 748-759. doi:10.4085/1062-6050-50.4.02

Mazerolle, S. M., Bruening, J. E., Casa, D. J., & Burton, L. J. (2008). Work-family conflict, part II: Job and life satisfaction in national collegiate athletic association division I-A certified athletic trainers. *Journal of Athletic Training (National Athletic Trainers' Association), 4*3(5), 513-522. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=34918986&site=ehost-live&scope=site

Mazerolle, S. M., Eason, C. M., & Goodman, A. (2016). Exploring summer medical care within the national collegiate athletic association division I setting: A perspective from the athletic trainer. *Journal of Athletic Training, 5*1(2), 175-175. doi:10.4085/1062-6050-51.3.03

Mazerolle, S. M., & Pagnotta, K. D. (2011). Student perspectives on burnout. *Athletic Training Education Journal,* 6(2), 60.

Mazerolle, S., & Eason, C. (2016). A longitudinal examination of work-life balance in the collegiate setting. *Journal of Athletic Training, 5*1(3), 223-223. doi:10.4085/1062-6050-51.4.03

National Athletic Trainers' Association. (2018). March 2018 NATA certified membership by job setting. Retrieved from https://members.nata.org/members1/documents/membstats/2018-03.htm

National Institute on Alcohol Abuse and Alcoholism. (2016). Drinking levels defined. Retrieved from https://www.niaaa.nih.gov/alcohol-health/overview-alcohol-consumption/moderate-binge-drinking

National Institute on Drug Abuse. (2016). *Monitoring the future: National survey results on drug use: 1975-2015: 2015 overview, key findings on adolescent drug use;2016 ASI 4494-14*.

Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996). Development and validation of work-family conflict and family-work conflict scales. *Journal of Applied Psychology, 8*1(4), 400-410. doi:10.1037//0021-9010.81.4.400

Nirel, N., Goldwag, R., Feigenberg, Z., Abadi, D., & Halpern, P. (2008). Stress, work overload, burnout, and satisfaction among paramedics in Israel. *Prehospital and Disaster Medicine : The Official Journal of the National Association of EMS Physicians and the World Association for Emergency and Disaster Medicine in Association with the Acute Care Foundation, 2*3(6), 537-546. doi:10.1017/S1049023X00006385

Oglesby, L. W., Amrani, K. A., Wynveen, C. J., & Gallucci, A. R. (2018). Do energy drink consumers study more*? Journal of Community Health, 4*3(1), 48-54. doi:10.1007/s10900-017-0386-8

Oreskovich, M. R., Shanafelt, T., Dyrbye, L. N., Tan, L., Sotile, W., Satele, D., . . . Boone, S. (2015). The prevalence of substance use disorders in american physicians. *The American Journal on Addictions, 2*4(1), 30-38. doi:10.1111/ajad.12173

Pitney, W. A., Mazerolle, S. M., & Pagnotta, K. D. (2011). Work-family conflict among athletic trainers in the secondary school setting. *Journal of Athletic Training, 4*6(2), 185-193. doi:10.4085/1062-6050-46.2.185

Reed, S., & Giacobbi Jr, P. R. (2004). The stress and coping responses of certified graduate athletic training students. *Journal of Athletic Training, 3*9(2), 193-200.

Rupert, P. A., & Morgan, D. J. (2005). Work setting and burnout among professional psychologists. *Professional Psychology: Research and Practice, 3*6(5), 544-550. doi:10.1037/0735-7028.36.5.544

Smith, R. (1986). Toward A cognitive affective model of athletic burnout. *Journal of Sport Psychology,* 8, 36-50.

Trinkoff, A. M., & Storr, C. L. (1998). Substance use among nurses: Differences between specialties. *American Journal of Public Health, 8*8(4), 581-585. doi:10.2105/AJPH.88.4.581

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment, 5*2(1), 30-41.

CHAPTER FIVE

Manuscript Two

Abstract

Context: Spiritual well-being is the expression of one's spirituality as measured in the dimensions of existential and religious well-being. Smith's Cognitive Affective Model of Athletic Burnout suggests that personality factors such as spiritual well-being and use of religious coping methods may affect burnout and/or its causes and outcomes. This has not been examined in collegiate athletic trainers (ATs).
Objective: To investigate the relationship between spiritual well-being and burnout in collegiate ATs.
Design: Cross-sectional study.
Setting: Web-based survey.
Participants: 783 certified ATs that were employed fulltime in the collegiate setting were sampled for this study. Part-time employees (e.g. graduate assistants, interns) were excluded. The National Athletic Trainers' Association (NATA) membership directory email broadcast service was utilized to distribute our survey.
Interventions: A 100-item online questionnaire was created for this study. It utilized survey items from previously used scales, including the Maslach Burnout Inventory (MBI), the Spiritual Well-Being Scale, the Brief RCOPE, and substance use questions from the Monitoring the Future study. Participants required approximately 10-15 minutes to complete the survey.
Main Outcome Measures: Path analyses were used to analyze survey data. All independent (existential well-being, religious well-being, positive and negative religious coping) and dependent variables (situational variables, MBI burnout subscales, substance use, and intention to leave) were mapped onto Smith's Cognitive-Affective Model of Athletic Burnout to determine which variables alter burnout levels, self-reported substance use, and intention to leave the profession. Tests of mediation and/or moderation were conducted when appropriate.
Results: Existential well-being was a significant positive predictor of social support. It was also a significant negative predictor of work-family conflict, decreased sense of personal accomplishment, emotional exhaustion, depersonalization, intention to leave the profession, and binge drinking. Existential well-being also served as a mediator or moderator in several components of the path model.
Conclusions: Existential well-being is a protective factor against burnout as well as some of its causes and effects in collegiate ATs.

Introduction

The National Interfaith Coalition on Aging (1975) defines spiritual well-being as "the affirmation of life in a relationship with God, self, community and environment that nurtures and celebrates wholeness." In other words, spiritual well-being is the expression of one's spirituality. Spiritual well-being has both a vertical and horizontal dimension (Ellison, 1983; Moberg & Brusek, 1978). The horizontal dimension, also known as existential well-being, refers to one's sense of purpose and satisfaction in life (Ellison, 1983). The vertical dimension, also known as religious well-being, refers to an individual's relationship with God or some other higher power. These concepts are separate from the concept of religion, which is a set of organized practices also used to express spirituality (Reed & Reed, 1986).

Research suggests that individuals with greater spiritual well-being are less likely to report symptoms of anxiety (Dunn, Hundley, & Shelton, 2007; Mela et al., 2008) and depression (Coleman, 2004; Cotton, Larkin, Hoopes, Cromer, & Rosenthal, 2005). Existential well-being is positively correlated with self-reported mental health and physical health (Edmondson et al., 2005). Both existential and religious well-being are negatively correlated with perceived stress (Edmondson et al., 2005).

Those who experience higher levels of stress also report greater symptoms of anxiety and depression (Wiegand & Funk, 2012). Individuals undergoing stressful situations may use many different coping strategies to manage their stress. Some individuals use positive methods (e.g. seek social support, exercise) while others use negative methods (e.g. ignore/avoid the situation, consume alcohol) (Dawson, Grant, & Ruan, 2005; Reed & Giacobbi Jr, 2004). Some also use religion as a method of coping

with stress (Reed & Giacobbi Jr, 2004). In fact, research has found that those with a stronger sense of religiosity report lower levels of stress (Ross, 1990). As with stress, a person can employ both positive and negative religious coping methods (Pargament, Smith, Koenig, & Perez, 1998). Similar to other coping strategies, religious coping consists of positive methods (e.g. praying to God, relying on God in times of trouble) and negative methods (e.g. blaming God or the devil for one's problems) (Pargament et al., 1998). Those who adopt more positive religious coping methods are less likely to report psychological symptoms of distress (Pargament et al., 1998) and alcohol consumption (Martin, Ellingsen, Tzilos, & Rohsenow, 2015). Conversely, those who use adopt more negative religious coping methods report increased depressive symptoms and callousness toward others (Pargament et al., 1998).

Despite what is known about the relationships between spiritual well-being, religious coping and psychological aspects of health (e.g. perceived stress, depressive symptoms) (Coleman, 2004; Edmondson et al., 2005), there is a lack of research examining the relationship between these variables and burnout. Burnout is a psychological condition that expresses itself in three components (i.e. emotional exhaustion, depersonalization of patients, decreased sense of personal accomplishment) (Maslach, 1982). Emotional exhaustion is a fatigue that goes beyond physical description and may consist of feeling tired even after a normal night of rest (Maslach, 1982). Depersonalization involves objectification of patients, while decreased sense of personal accomplishment refers to a perception that one is not achieving goals as much as normal (Maslach, 1982). Burnout is typically seen in helping professions, including healthcare workers (Capel, 1986; Halbesleben, Wakefield, Wakefield, & Cooper, 2008; Oreskovich

et al., 2015). The potential effects of burnout in these professionals includes decreased job satisfaction (Charoensukmongkol, Moqbel, & Gutierrez-Wirsching, 2016) and increased risk of heavy episodic drinking (Oreskovich et al., 2015) and tobacco use (Losa Iglesias, Vallejo, & Fuentes, 2010). A meta-analysis found an inverse relationship between religious coping and all three subscales of burnout, especially depersonalization (Shin et al., 2014). However, this study did not distinguish between positive and negative religious coping methods in its analyses.

Burnout associated with athletic trainers (ATs) has been understudied. Older research suggests that ATs suffer from burnout at lower rates than other healthcare professionals (Capel, 1986; Giacobbi Jr., 2009). Previous research suggested that ATs, especially those in the collegiate setting, have an "off-season" in which they can recover from stress by working fewer hours (Capel, 1986). However, recent legislative changes in the National Collegiate Athletic Association (NCAA) has increased the amount of organized practice time allowed for many collegiate sports in their off-season (Mazerolle, Eason, & Goodman, 2016). Because organized practices require medical coverage, collegiate ATs are now being required to increase their workload accordingly. Because high workloads and burnout are associated with an increased intention to leave the profession (Capel, 1990), the effects of these legislative changes on burnout and intention to leave should be examined.

Burnout in collegiate ATs is of concern because this condition is associated with increases in work-family conflict (Mazerolle, Bruening, Casa, & Burton, 2008). Research in collegiate ATs has found that high workload and low salary both lead to increases in burnout (See Manuscript One). Social support serves as a protective factor, as an inverse

relationship exists between social support and burnout (DeFreese & Mihalik, 2016). Potential consequences of collegiate ATs suffering from burnout include leaving the profession (Capel, 1990) and increased substance use (Campbell, 1985).

The effects of spiritual well-being on the consequences of burnout in ATs are unknown. Existential well-being is inversely correlated with intention to leave one's job (Olowookere, Adekeye, Adejumo, Agoha, & Sholarin, 2016), but it is unknown if a similar correlation exists in collegiate ATs. Burnout is a risk factor for binge drinking of alcohol in collegiate ATs (See Manuscript One), but the effects of spiritual well-being or the use of religious coping methods on substance use in this population is unknown.

Smith's Cognitive-Affective Model of Athletic Burnout (Figure 1) provides a theoretical framework to explain the process of burnout in athletes and ATs (Smith, 1986). This model has found support within the AT literature for use with collegiate ATs (See Manuscript One). Smith's model proposes that situational variables (e.g. work-family conflict, low social support) provoke both cognitive appraisal (e.g. decreased personal accomplishment) and physiological response (e.g. emotional exhaustion), which in turn leads to coping behaviors such as depersonalization, substance use and leaving the profession (Smith, 1986). Smith also suggested that personality and motivational factors (e.g. existential well-being, religious well-being, positive religious coping, negative religious coping) may influence all other components of the model (Smith, 1986). The only published study examining spiritual well-being and burnout in healthcare professionals found that existential well-being is a significant protective factor for burnout in counselors & psychotherapists (Hardiman & Simmonds, 2013). However,

these relationships have not been reported in the published literature examining collegiate ATs.

The purpose of this study was to examine potential relationships between personality factors (i.e. existential well-being, religious well-being, positive religious coping, negative religious coping) and burnout. Due to a lack of research in this subject area, we adopted null hypotheses for relationships between spiritual well-being, the use of religious coping methods, burnout, and intention to leave the profession. Based on previous research (Parenteau, 2017), we hypothesized that there will be an inverse relationship between spiritual well-being, positive religious coping and substance use but a positive relationship between negative religious coping and substance use.

Methods

Participants

All participants in this study (n=783) were certified ATs working fulltime in the collegiate setting. This included ATs from all divisions of the National Collegiate Athletic Association (NCAA) as well as ATs from the National Association of Intercollegiate Athletics (NAIA) and the National Junior College Athletic Association (NJCAA). To be included in this study, participants had to be a member of the National Athletic Trainers' Association (NATA) and be employed fulltime in the collegiate setting. Participants that indicated they were not a fulltime employee (e.g. graduate assistants, interns) or that they no longer worked in the collegiate setting were excluded from data analysis. Additionally, any participant that identified as working academically fulltime was also excluded.

Procedures

This study received approval from Baylor University's institutional review board. A cross-sectional study design in the form of a one-time online survey was used for data collection. This survey was formatted electronically using Qualtrics (Provo, UT) survey software. We then contacted the National Athletic Trainers' Association (NATA) membership directory service to send an email to a requested number of NATA members that meet the specified criteria of the study. We asked the membership directory to send the recruitment email to 7000 ATs working fulltime in the collegiate setting. Only 6867 members met our criteria, so the email was sent to all qualifying members. The recruitment email contained a description of the study, an informed consent page, and a hyperlink to the survey. We did not want to be able to identify our participants due to the sensitive nature of questions pertaining to illegal behaviors. To avoid identification of participants and thereby increase the likelihood of truthful responses, passive consent was obtained by answering "Yes" to an initial consent statement on the survey. The membership directory also sent a reminder email one week and two weeks after initial delivery, which encouraged recipients to complete the survey if they had not yet done so. The survey contained 16 demographic questions and several previously-utilized scales that measured each of the variables of interest for our study.

Questionnaire

The questionnaire consisted of multiple previously-used scales that measured spiritual well-being (Ellison, 1983), religious coping (Pargament, Feuille, & Burdzy, 2011), work-family conflict (Netemeyer, Boles, & McMurrian, 1996), social support (Zimet, Dahlem, Zimet, & Farley, 1988), workload, burnout (Maslach & Jackson, 1986),

intention to leave the profession (Terranova & Henning, 2011), and substance use (National Institute on Drug Abuse, 2016). We will briefly describe how each variable was measured.

*Spiritual well-being***.** The Spiritual Well-Being Scale (SWBS) (Ellison, 1983) is a 20-item instrument divided into two 10-item subscales. One subscale measures religious well-being (RWB) and examines the relationship one has with God. The other subscale measures existential well-being (EWB), which examines one's view of their purpose and overall view on life. Each item is answered and scored on a 6-point Likert scale from 1 ("Strongly Disagree") to 6 ("Strongly Agree") with no neutral option. Items in each subscale were totaled to create an EWB and RWB score respectively. A higher subscale score indicates greater well-being. In an assessment of internal consistency for these subscales, coefficient alphas were .78 (EWB) and .87 (RWB) (Paloutzian & Ellison, 1982).

Religious coping. Use of religious coping techniques was assessed using the Brief RCOPE (Pargament et al., 2011). The Brief RCOPE is a 14-item instrument that assesses the use of positive (PRC) and negative (NRC) religious coping techniques when dealing with major life stressors. The instrument consists of two 7-item subscales that each measure PRC and NRC. Each item is answered and scored on a 4-point Likert scale from 0 ("Not at all") to 3 ("A great deal"). Items from each subscale are totaled to create a PRC and NRC total, with a higher subscale score indicating greater use of that technique. In a study that assessed internal consistency of the subscales across different populations,

the PRC subscale was found to have a median alpha of .92 and the NRC subscale had a median alpha of .81 (Pargament et al., 2011).

Work-family conflict. Perception of WFC was measured using an instrument developed by Netemeyer et al. (Netemeyer et al., 1996) This instrument has been used a couple of times in AT research (Mazerolle, Pitney, & Eason, 2015; Pitney, Mazerolle, & Pagnotta, 2011) and consists of 5 items that each speak to different forms of WFC. Each item was answered on a 7-point Likert scale ranging from "Strongly Disagree" to "Strongly Agree". The items are then totaled together with a higher score indicating a higher degree of perceived WFC.

When used in AT research, the work-family conflict scale is administered twice, each with a different definition of "family". One version defines family as a partner, spouse, or children, while the other defines family as close relatives such as parents, siblings, or grandparents (Mazerolle et al., 2015; Pitney et al., 2011). We administered the WFC scale in a manner consistent with these previous studies. In a study that utilized ATs as a sample, the two scales had reported Cronbach α levels of .95 and .94, respectively (Pitney et al., 2011).

Social support. The Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet et al., 1988) was used to measure perceived social support. It consists of 12 items that measure perceived support that one receives from family, friends, and significant others. Each item is answered and scored on a 7-point Likert scale ranging from 1 ("Very Strongly Disagree") to 7 ("Very Strongly Agree"). The items were summed together to create one overall score, with a higher score indicating a higher

degree of perceived social support. The scale has a reported internal consistency coefficient of α = .79 (Kazarian & McCabe, 1991).

Workload. Participants were asked to provide an estimate of how many hours they work per week on average. This was divided into three times of year to mirror the typical college semester system by inquiring about time spent working in the fall (August-December), spring (January-May) and summer (June-July).

Burnout. The Maslach Burnout Inventory – Health Human Services edition (Maslach & Jackson, 1986) was used to measure burnout in our participants. It is divided into three subscales that measure emotional exhaustion, depersonalization and sense of personal accomplishment. It consists of 22 total items, with nine items pertaining to emotional exhaustion, five to depersonalization, and eight to personal accomplishment. Each item is answered and scored on a 7-point Likert scale from 0 ("Never") to 6 ("Every Day"). All items from a subscale are totaled together to generate a subscale score. A higher subscale score in emotional exhaustion and depersonalization indicates greater burnout, while a higher score in personal accomplishment indicates less burnout. Each subscale is a separate measure of a burnout and the subscales cannot be totaled together to create an overall burnout score (Maslach & Jackson, 1986). The three subscales have reported internal consistency coefficients of .89 (emotional exhaustion), .77 (depersonalization) and .74 (personal accomplishment) (Maslach & Jackson, 1981).

Intention to leave. The Intention to Leave Survey (Terranova & Henning, 2011) was developed to measure the intent of ATs to either leave their current position for another AT job or to leave the profession altogether. For the purposes of our study, we

utilized a single question from this survey that assessed one's intention to leave the profession altogether. It was measured and scored on a 5-point Likert scale from 1 ("Strongly Disagree") to 5 ("Strongly Agree") with a higher score indicating greater intention to leave the profession at the time of survey completion. Only one study reported use of this survey (Terranova & Henning, 2011). The internal consistency coefficient from this study was $\alpha = .86$.

Substance use. We utilized questions from the Monitoring the Future Study (National Institute on Drug Abuse, 2016) to assess use of cigarettes, smokeless tobacco, marijuana, and energy drinks in the past 30 days. We also asked each participant to report their binge drinking frequency ("How many times (if any) have you had five or more drinks in a row (4 or more for females) over the last 30 days?"). The item assessing cigarette use had seven possible answers (i.e. "Not at all", "Less than one cigarette per day", "One to five cigarettes per day", "About one-half pack per day", "About one pack per day", "About one and one-half packs per day", "Two packs or more per day") and the other substance use items provided seven possible answers (i.e. "Never", "1-2", "3-5", "6-9", "10-19", "20-39", "40+").

Statistical Analysis

All statistical analyses were performed using SPSS (version 24; IBM Corp, Armonk, NY). All participant data was downloaded from Qualtrics and converted into an SPSS worksheet. The variables of interest analyzed in this study were religious and existential well-being, positive and negative religious coping, work-family conflict, workload, perceived social support, burnout subscales (i.e. emotional exhaustion,

personal accomplishment, depersonalization), intention to leave the profession of athletic training and use of various substances within the last 30 days.

Descriptive statistics (e.g. mean, SD, range) were used to examine the distribution and central tendency of responses. The assumptions of normality and homoscedasticity were checked using normal P-P plots and scatterplots. All hypotheses were tested using multiple regression. The variables were all mapped onto Smith's model (Figure 2). All personality and motivational variables (i.e. existential well-being, religious well-being, positive religious coping, negative religious coping) were placed into multiple regression models to assess their relationship with situational variables (i.e. work-family conflict, perceived social support, salary, average hours of work per week). They were also used to assess personal accomplishment, emotional exhaustion, and every coping behavior (i.e. depersonalization, intention to leave, substance use). The situational variables were then placed into multiple regression models to assess personal accomplishment and emotional exhaustion. Finally, emotional exhaustion and personal accomplishment were placed into multiple regression models to predict depersonalization, intention to leave, and substance use.

Tests of mediation were required when any spiritual variable (i.e. existential well-being, religious well-being, positive religious coping, negative religious coping) was significantly associated with another variable that was also a significant variable in the model. Mediation testing was performed as described by Baron and Kenny (1986). Analyses that did not indicate mediation were then tested for moderation as described by Baron and Kenny (1986).

Results

Demographics

Of the 6867 participants contacted, 1211 started their survey and 857 completed it (29.2% dropout rate). Of those completing the survey, 74 did not meet inclusion criteria. This resulted in a sample size of 783, an 11.4% response rate. Participants were 36.4 ± 11.1 years old (range 22-79 years), with 12.6 ± 9.8 years (range 0-45 years) of AT experience. Similar workloads were reported for the fall and spring semesters. ATs in the sample averaged 57 ± 11.6 (range 30-100) hours worked per week during the fall (i.e. August-December) and 53.6 ± 11.2 (range 30-100) hours per week during spring (i.e. January-May). The average workload of the sample during the summer (i.e. June; July) was 23.3 ± 17.4 (range 0-80) hours per week. The sample mostly identified as white, non-Hispanic (n=713, 91.1%) and single (n=409, 52.2%). The majority of participants did not have children (n=484, 61.8%). Those participants reporting children had an average of 2.05 ± .86 children (range 1-6). Additional demographic information for our sample can be found in Table 1. In comparison to statistics from the NATA membership database (National Athletic Trainers' Association, 2018), demographics of our sample were representative of the overall collegiate AT population in terms of gender, ethnicity, and NATA district.

Means, standard deviations and ranges of results for the MBI subscales, MSPSS, work-family conflict scales, SWB subscales and the Brief RCOPE can be found in Table 2. Approximately 38.9% of participants reported a high level of burnout with an emotional exhaustion score greater than 26 (Kania, Meyer, & Ebersole, 2009). Similarly, 33.6% of participants reported a high level of burnout with a depersonalization score

greater than 9. Additionally, 17.7% of the sample reported a high level of burnout with a personal accomplishment score of less than 34. Over 46% of our participants reported at least one binge drinking episode in the previous 30 days and nearly 23% reported consuming at least one energy drink within the same timeframe. Fewer participants reported the use of other substances, with 5.4% reporting the use of smokeless tobacco, 4.2% reporting the use of marijuana, and 1.8% having smoked at least one cigarette in the previous month. Approximately 18.1% of participants either agreed or strongly agreed that they are actively searching for a job outside the profession of athletic training. A full report on substance use and current career intentions of our sample can be found in Table 3.

Evaluation of normal P-P plots revealed that several substance use variables (i.e. marijuana, cigarettes, energy drinks) closely followed a Poisson distribution rather than a normal distribution. Therefore, a Poisson model was used in place of multiple regression for these analyses. Smokeless tobacco use displayed a bimodal curve which did not align with either a normal or Poisson distribution. The smokeless tobacco variable was therefore dichotomized (0 = no use, 1 = use) and a binary logistic regression was used.

Multiple Regression Analyses

Due to the large number (25) of regressions that were completed, only those that produced significant results will be described in detail. An analysis that evaluated the relationship between situational variables and personal accomplishment showed that social support ($B = .113$, $p < .001$; 95% CI = 0.08, 0.15), salary ($B = .468$, $p < .001$; 95% CI = 0.22, 0.72), and WFC-A ($B = -.239$, $p < .001$; 95% CI = -0.33, -0.15) were all significantly associated with personal accomplishment ($R^2 = .133$). An analysis of

situational variables influencing emotional exhaustion revealed that increases in average hours worked per week in the spring semester (B = .084, p = .029; 95% CI = 0.01, 0.16), WFC-A (B = .475, p < .001; 95% CI = 0.33, 0.62) and WFC-B (B = .416, p < .001; 95% CI = 0.27, 0.56) were all associated with increases in emotional exhaustion. Salary (B = -.630, p = .002; 95% CI = -1.03, -0.24) and social support (B = -.172, p < .001; 95% CI = -0.23, -.012) were inversely related to emotional exhaustion (R^2 = .375).

Subsequent analyses evaluated the relationship between personal accomplishment, emotional exhaustion and the coping behaviors of depersonalization and intention to leave the profession. Emotional exhaustion (B = .288, p < .001; 95% CI = 0.26, 0.32) and personal accomplishment (B = -.174, p < .001; 95% CI = -0.23, -0.12) were both significant predictors of depersonalization (R^2 = .460). Emotional exhaustion (B = .044, p < .001; 95% CI = 0.036, 0.051) and personal accomplishment (B = -.023, p < .001; 95% CI = -0.037, -0.009) were also significantly associated with one's intention to leave the profession of athletic training (R^2 = .228).

Statistical analyses were used to determine the extent to which emotional exhaustion and personal accomplishment were correlated with substance use. Emotional exhaustion (B = .008, p = .023; 95% CI = 0.001, 0.015) and personal accomplishment (B = -.016, p = .02; 95% CI = -0.029, -0.003) were correlated with binge drinking behaviors (R^2 = .022). Emotional exhaustion (Exp(B) = 1.017, p < .001; 95% CI = 1.009, 1.026) was also a significant predictor of energy drink use.

Next, statistical analyses were used to determine the extent to which spiritual variables (i.e. existential well-being, religious well-being, positive religious coping and negative religious coping) influenced all other components of the model. For situational

variables, we found that greater existential well-being was related to decreases in WFC-A (B = -.238, p < .001; 95% CI = -0.31, -0.17), WFC-B (B = -.237, p < .001; 95% CI = -0.31, -0.17), and workload both in the fall (B = -.228, p < .001; 95% CI = -0.346, -0.110) and spring (B = -.240, p < .001; 95% CI = -0.35, -0.13). Greater existential well-being was also related to increased social support (B = .709, p < .001; 95% CI = 0.59, 0.83) and salary (B = .026, p = .005; 95% CI = 0.008, 0.044). Greater existential well-being was also related to increases in personal accomplishment (B = .380, p < .001; 95% CI = 0.32, 0.44) and decreases in emotional exhaustion (B = -.827, p < .001; 95% CI = -0.93, -0.72). In an analysis of coping behaviors, increases in existential well-being were related to decreased depersonalization (B = -.328, p < .001; 95% CI = -0.38, -0.27) and intention to leave (B = -.058, p < .001; 95% CI = -0.07, -0.05). Increases in existential well-being (B = -.023, p < .001; 95% CI = -0.033, -0.013) and PRC methods (B = -.024, p = .018; 95% CI = -0.044, -0.004) were also linked to a decrease in binge drinking frequency. Finally, a Poisson regression showed that existential well-being (Exp(B) = .970, p = .035, 95% CI = 0.944, 0.998) and religious well-being (Exp(B) = .960, p = .003, 95% CI = 0.935, 0.986) are protective factors against marijuana use. Another Poisson regression showed that PRC (Exp(B) =.969, p = .024, 95% CI = 0.943, 0.996) was a protective factor against energy drink use while NRC (Exp(B) = 1.041, p = .028, 95% CI = 1.004, 1.079) is a risk factor for energy drink use.

Mediation

In every instance (15) that a spiritual variable was associated with a variable that was also associated another variable, a test of mediation was performed. Due to the large number of mediation analyses performed, only those that produced significant results (3)

will be described in detail. The mediation effect of existential well-being on social support's relationship with emotional exhaustion resulted in a decrease in the unstandardized coefficient from B = -.270 ($p < .001$) to B = -.048 ($p = .132$). The mediation effect of existential well-being on personal accomplishment predicting binge drinking resulted in a decrease in the unstandardized coefficient from B = -.022 ($p < .001$) to B = -.006 ($p = .377$). Finally, the mediation effect of existential well-being on emotional exhaustion's relationship with binge drinking resulted in a decrease in the unstandardized coefficient from B = .012 ($p < .001$) to B = .003 ($p = .479$).

Moderation

Twelve of 15 models that were tested for mediation did not yield significant results. These models were then tested for moderation, which yielded one significant result. In an analysis of the moderation effect of existential well-being on personal accomplishment predicting emotional exhaustion, the unstandardized coefficient for both existential well-being and personal accomplishment changed slightly from step one to step two of the model, but the interaction effect of these two variables yielded significant results when included in step two (B = -.014, $p = .036$; 95% CI = -0.028, -0.001). From step one to step two, explained variance in the model changed from $R^2 = .318$ to $R^2 = .322$ and the F value of the model increased by 4.394 when the interaction effect was included ($p = .036$).

Discussion

To our knowledge, ours is the first published study to examine spiritual well-being in collegiate ATs. The average score for existential well-being in our sample is

comparable to that of counselors and psychotherapists (Hardiman & Simmonds, 2013). However, the average score for religious well-being in our sample was nearly 43% higher in comparison to Hardiman's study. Future research should examine spiritual well-being in other healthcare professionals so that more comparisons can be made.

Spiritual Well-Being and Situational Variables

Our study found that existential well-being influenced several situational variables. Existential well-being was a significant negative predictor for both forms of work-family conflict, regardless of the definition used for "family". To our knowledge, this is the first published study to examine the relationship between existential well-being and work-family conflict in healthcare professionals. Lambert (2006) found that married couples who had a "shared secret vision or purpose" were able to prevent conflict and reduce marital stress. As existential well-being speaks to one's sense of purpose, this could possibly explain the relationship between it and work-family conflict. However, this would need to be further verified by examining the existential well-being of the spouse/partner of our participants. Other factors must also significantly influence perceptions of work-family conflict in collegiate ATs, as our model only explained approximately 6% of the variance in each work-family conflict scale.

Our results suggested that existential well-being is positively correlated with social support. These results support Lambert's findings (2006), but only in terms of social support that comes from significant others. Having individuals with similar ideals in one's social network may make it easier for one to rely on those persons in times of trouble. Future research should continue to examine this relationship.

Analyses showed that fall and spring workloads (as measured by average hours of work per week) were significantly associated with existential well-being. To our knowledge, ours is the first study to examine the relationship between hours worked and existential well-being in healthcare professionals. Those who work less may be able to engage in spiritual practices more, thereby increasing their existential well-being. Future research should further examine this relationship to determine which variable is causal. Given that our model only explained approximately 3% of the variance in fall and spring workload, future research should also examine this relationship. It is likely that other factors contribute to workload and influence the relationship between existential well-being and workload.

Results suggested that existential well-being was positively correlated with salary in our sample. This relationship has not been examined in previous literature. Those with a higher salary may be more inclined to believe that they are fulfilling their purpose in life, as their monetary concerns are more assuaged than those with a smaller salary. Although these variables are significantly associated, the model only explained 2% of variance. While future studies should investigate this relationship further, those studies should also include other variables that may contribute to salary.

Spiritual Well-Being and Burnout

Existential well-being is correlated with all three burnout subscales (i.e. emotional exhaustion, depersonalization, decreased sense of personal accomplishment) in our sample. These results support previous study of counselors (Hardiman & Simmonds, 2013). Contrary to a previous study (Shin et al., 2014), PRC and NRC were not correlated with any of the burnout subscales in our sample. Because existential well-

being is concerned with life satisfaction, one who is more satisfied with life and has a greater sense of purpose may be less likely to report the negative symptoms of burnout in their life. As this area of research is largely understudied, further research should be conducted to confirm our findings.

Spiritual Well-Being and Coping Behaviors

Further analysis of the model found that existential well-being was negatively correlated with one's intention to leave the profession of athletic training. These results support previous findings (Olowookere et al., 2016). ATs with a higher sense of existential well-being would be less likely to leave the profession as they may view their career as a calling. Further research into the relationship between existential well-being and intention to leave one's job or the profession of athletic training is warranted.

Analyses suggested that both existential well-being and use of positive religious coping techniques were protective factors against heavy episodic drinking, which supports previous literature (Harrell & Powell, 2014; Martin et al., 2015; Unterrainer, Lewis, Collicutt, & Fink, 2013). Those with a stronger sense of life satisfaction may have less need to abuse substances such as alcohol in order to cope with their problems. The same logic can be used for those who are more likely to utilize positive religious coping techniques, as these individuals are relying on religious acts rather than alcohol to manage their stress. Future research should further explore the relationship between existential well-being, positive religious coping and binge drinking in collegiate ATs.

Existential well-being and religious well-being were both protective factors against marijuana use in our sample. This supports previous findings (Palamar, Kiang, & Halkitis, 2014). As many religions view the body as dear and therefore disapprove of the

use of illicit drugs that may harm it (Herman-Kinney & Kinney, 2013), an inverse relationship between religious well-being and marijuana use is logical. A stronger sense of purpose and life satisfaction may also lead to a decreased need of illicit substance use in order to cope with stress.

The use of positive religious coping methods was found to be a protective factor against energy drink use, while the use of negative religious coping methods was a risk factor for energy drink use. To our knowledge, ours is the first study to examine this relationship. Individuals who utilize positive religious coping methods may be more likely to believe that the harmful side effects of energy drinks outweigh the benefits. Individuals who use more negative religious coping techniques may be less inclined to view their body as sacred and therefore ignore the potential risks. Future research should further examine these relationships.

Mediation

We found that after controlling for existential well-being, social support was no longer significantly associated with emotional exhaustion. In conjunction with another analysis that established a relationship between existential well-being and social support, this new model suggests that the relationship between social support and emotional exhaustion is partially mediated by existential well-being. Our study is the first to examine this relationship in healthcare professionals. Our findings suggest that existential well-being is more important than social support in the management of burnout. Future research should continue to explore this relationship to confirm our findings.

While both personal accomplishment and emotional exhaustion appeared to be contributing factors for binge drinking behaviors, they were both insignificant when

controlling for existential well-being. These findings suggest that existential well-being is a partial mediator in the relationship between these burnout subscales and binge drinking. Previous studies that have examined substance use and burnout in healthcare professions (Braun et al., 2008; Oreskovich et al., 2015) did not include spiritual well-being variables in data collection or analysis, which makes our study unique. This would suggest that burnout itself is not a direct contributor to one's risk of engaging in heavy episodic drinking. Rather, the relationship between these two burnout subscales and binge drinking is largely explained by their relationship with existential well-being. We admit that there must be other factors besides spiritual well-being that contribute to one's risk of binge drinking, as the model that utilized all spiritual variables as independent variables only explained 7.2% of the variance in binge drinking in our sample. Causes of binge drinking in collegiate ATs need to be researched further.

Moderation

We found that existential well-being moderated the relationship between personal accomplishment and emotional exhaustion in our sample. Our results are unique to the literature. A greater sense of purpose and life satisfaction may protect an individual from feelings of decreased accomplishment, which may in turn lead to less emotional exhaustion. Future studies should continue to examine how existential well-being protects against negative perceptions associated with burnout.

Limitations and Future Directions

Our study had several limitations. The response rate for our survey was 11.4%, which is lower than average for online surveys (Manfreda, Bosnjak, Berzelak, Haas, &

Vehovar, 2008). This potentially increased the risk of selection bias in our study. It is possible that those suffering the most from burnout felt that they were too overworked to complete a survey. The amount of time required to complete the survey may have discouraged participation. However, our sample size was still larger than that of previous studies used to examine Smith's model (Hendrix & Acevedo, 2000; Kania et al., 2009) and our sample was representative of collegiate ATs in terms of gender, ethnicity and geographical location. Because we utilized the NATA membership directory, reception of the survey was dependent upon the current contact information available to NATA. Any former ATs that have already left the profession were unable to be reached. Because our survey asked questions about substance use, social desirability may have affected responses. We attempted to control for this by not collecting identifying information such as name, address, phone number or email addresses from our participants.

Due to the large number of regressions performed in our study, it is possible that some results were statistically significant due to chance. Utilizing the adjustment procedure described by Benjamini and Hochberg (1995) and setting our false discovery rate at 0.25, five individual analyses may have been determined statistically significant at the .05 level due to chance. Due to the cross-sectional nature of our study, we were unable to infer causality from any of our statistical analyses. Because we only collected data from collegiate ATs to maintain homogeneity of the sample, our results may only be generalizable to collegiate ATs. Some participants reported not having a spouse and/or child. This would have impacted their responses to the work-family conflict scale which defined "family" as such. By dividing the sample into those that had both a spouse and children, either a spouse or children, or neither, we found that each group's mean score

for WFC-A did not differ from the overall mean score by more than 5%. Furthermore, WFC-A in each group was still significantly associated with emotional exhaustion, personal accomplishment and existential well-being.

Future research should continue to examine the effects of spiritual well-being and religious coping techniques on burnout in ATs. Specifically, it would be beneficial to examine spiritual well-being as it relates to burnout and work-family conflict from a longitudinal perspective, following ATs throughout their various sport seasons. Such research would allow for a better understanding of the influence of spiritual well-being on the overall well-being of ATs.

Conclusions

Our study indicates that existential well-being is vital in the management of burnout symptoms. Although spiritual well-being and its effects on collegiate ATs has not received adequate attention in the literature, this study found that existential well-being is a protective factor against work-family conflict, decreased sense of personal accomplishment, emotional exhaustion, depersonalization, intention to leave the profession, and binge drinking. Our study also found that existential well-being is positively correlated with perceived social support. Further analyses also revealed that existential well-being serves a mediating role in several relationships, specifically the relationships between social support and emotional exhaustion, personal accomplishment and binge drinking, and emotional exhaustion and binge drinking. Our results also suggest that existential well-being serves as a moderator in the relationship between personal accomplishment and emotional exhaustion. Our study suggests that utilization of practices to improve spiritual well-being in collegiate ATs may result in better health

outcomes for members of this profession. Therefore, greater emphasis on the spiritual well-being of collegiate ATs, both in awareness and improvement of one's own spiritual well-being, is warranted.

References

Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.

Benjamini, Y., & Hochberg, Y. (1995). Controlling the false discovery rate: a practical and powerful approach to multiple testing. *Journal of the Royal Statistical Society, 57*(1), 289-300.

Campbell, D. (1985). The prevalence of burnout among athletic trainers. *Athletic Training, 20*, 110-113.

Capel, S. A. (1986). Psychological and organizational factors related to burnout in athletic trainers. *Research Quarterly for Exercise & Sport, 57*(4), 321-328. Retrieved from http://articles.sirc.ca/search.cfm?id=233938

Capel, S. (1990). Attrition of athletic trainers. *Athletic Training, 25*, 34-35.

Charoensukmongkol, P., Moqbel, M., & Gutierrez-Wirsching, S. (2016). The role of co-worker and supervisor support on job burnout and job satisfaction. *Journal of Advances in Management Research, 1*3(1), 4-22. doi:10.1108/JAMR-06-2014-0037

Coleman, C. L. (2004). The contribution of religious and existential well-being to depression among african american heterosexuals with HIV infection. *Issues in Mental Health Nursing, 25*(1), 103-110.

Cotton, S., Larkin, E., Hoopes, A., Cromer, B. A., & Rosenthal, S. L. (2005). The impact of adolescent spirituality on depressive symptoms and health risk behaviors. *Journal of Adolescent Health, 3*6(6), 529-529. doi:10.1016/j.jadohealth.2004.07.017

Dawson, D., Grant, B., & Ruan, W. (2005). The association between stress and drinking: Modifying effects of gender and vulnerability. *Alcohol and Alcoholism, 4*0(5), 453-460. doi:10.1093/alcalc/agh176

DeFreese, J. D., & Mihalik, J. P. (2016). Work-based social interactions, perceived stress, and workload incongruence as antecedents of athletic trainer burnout. *Journal of Athletic Training (Allen Press), 5*1(1), 28-34. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=113499504&site=ehost-live&scope=site

Dunn, L. L., Hundley, M. C., & Shelton, M. M. (2007). Spiritual well-being, anxiety, and depression in antepartal women on bedrest. *Issues in Mental Health Nursing, 2*8(11), 1235-1246. doi:10.1080/01612840701651504

Edmondson, K. A., Lawler, K. A., Jobe, R. L., Younger, J. W., Piferi, R. L., & Jones, W. H. (2005). Spirituality predicts health and cardiovascular responses to stress in young adult women. *Journal of Religion and Health, 4*4(2), 161-171. doi:10.1007/s10943-005-2774-0

Ellison, C. W. (1983). Spiritual well-being: Conceptualization and measurement. *Journal of Psychology and Theology, 1*1, 330-331-340.

Giacobbi Jr., P. R. (2009). Low burnout and high engagement levels in athletic trainers: Results of a nationwide random sample. *Journal of Athletic Training (National Athletic Trainers' Association), 4*4(4), 370-377. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=43928237&site=ehost-live&scope=site

Halbesleben, J. R. B., Wakefield, B. J., Wakefield, D. S., & Cooper, L. B. (2008). Nurse burnout and patient safety outcomes: Nurse safety perception versus reporting behavior. *Western Journal of Nursing Research, 3*0(5), 560-577. doi:10.1177/0193945907311322

Hardiman, P., & Simmonds, J. G. (2013). Spiritual well-being, burnout and trauma in counsellors and psychotherapists. *Mental Health, Religion & Culture, 1*6(10), 1044-1055. doi:10.1080/13674676.2012.732560

Harrell, Z. A. T., & Powell, K. (2014). The relationship between parent and student religious coping and college alcohol use. *Journal of Religion and Health, 5*3(3), 895-903. doi:10.1007/s10943-013-9683-4

Herman-Kinney, N. J., & Kinney, D. A. (2013). Sober as deviant: The stigma of sobriety and how some college students "Stay dry" on a "Wet" campus. *Journal of Contemporary Ethnography, 4*2(1), 64-103. doi:10.1177/0891241612458954

Kania, M. L., Meyer, B. B., & Ebersole, K. T. (2009). Personal and environmental characteristics predicting burnout among certified athletic trainers at national collegiate athletic association institutions. *Journal of Athletic Training, 4*4(1), 58-66. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=37588135&site=ehost-live&scope=site

Kazarian, S. S., & McCabe, S. B. (1991). Dimensions of social support in the MSPSS: Factorial structure, reliability, and theoretical implications. *Journal of Community Psychology, 1*9(2), 150-160. doi:10.1002/1520-6629(199104)19:2<150::AID-JCOP2290190206>3.0.CO;2-J

Lambert, N. M., & Dollahite, D. C. (2006). How religiosity helps couples prevent, resolve, and overcome marital conflict. *Family Relations, 5*5(4), 439-449. doi:10.1111/j.1741-3729.2006.00413.x

Losa Iglesias, M. E., Vallejo, R. B. d. B., & Fuentes, P. S. (2010). The relationship between experiential avoidance and burnout syndrome in critical care nurses: A cross-sectional questionnaire survey. *International Journal of Nursing Studies, 4*7(1), 30-37. doi:10.1016/j.ijnurstu.2009.06.014

Manfreda, K. L., Bosnjak, M., Berzelak, J., Haas, I., & Vehovar, V. (2008). Web surveys versus other survey modes: A meta-analysis comparing response rates. *International Journal of Market Research, 5*0(1), 79-104.

Martin, R. A., Ellingsen, V. J., Tzilos, G. K., & Rohsenow, D. J. (2015). General and religious coping predict drinking outcomes for alcohol dependent adults in treatment. *The American Journal on Addictions, 2*4(3), 240-245. doi:10.1111/ajad.12181

Maslach, C., & Jackson, S. (1986). *Maslach burnout inventory: Human services editio*n. Mountain View, CA: CPP, Inc.

Maslach, C. (1982). *Burnout, the cost of carin*g. Englewood Cliffs, N.J: Prentice-Hall.

Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Organizational Behavior,* 2(2), 99-113. doi:10.1002/job.4030020205

Mazerolle, S., Pitney, W., & Eason, C. (2015). Experiences of work-life conflict for the athletic trainer employed outside the national collegiate athletic association division I clinical setting. *Journal of Athletic Training, 5*0(7), 748-759. doi:10.4085/1062-6050-50.4.02

Mazerolle, S. M., Bruening, J. E., Casa, D. J., & Burton, L. J. (2008). Work-family conflict, part II: Job and life satisfaction in national collegiate athletic association division I-A certified athletic trainers. *Journal of Athletic Training, 4*3(5), 513-522. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=34918986&site=ehost-live&scope=site

Mazerolle, S. M., Eason, C. M., & Goodman, A. (2016). Exploring summer medical care within the national collegiate athletic association division I setting: A perspective from the athletic trainer. *Journal of Athletic Training, 5*1(2), 175-175. doi:10.4085/1062-6050-51.3.03

Mela, M. A., Marcoux, E., Baetz, M., Griffin, R., Angelski, C., & Deqiang, G. (2008). The effect of religiosity and spirituality on psychological well-being among forensic psychiatric patients in canada. *Mental Health, Religion & Culture, 1*1(5), 517-532. doi:10.1080/13674670701584847

Moberg, D. O., & Brusek, P. M. (1978). Spiritual well-being: A neglected subject in quality of life research. *Social Indicators Research,* 5(3), 303-323. doi:10.1007/BF00352936

National Athletic Trainers' Association. (2018). March 2018 NATA certified membership by job setting. Retrieved from https://members.nata.org/members1/documents/membstats/2018-03.htm

National Institute on Drug Abuse. (2016). *Monitoring the future: National survey results on drug use: 1975-2015: 2015 overview, key findings on adolescent drug use;2016 ASI 4494-14*. ().

National, Interfaith Coalition on Aging. (1975). *Spiritual well-being: A definitio*n. Athens, GA: NICA.

Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996). Development and validation of work-family conflict and family-work conflict scales. *Journal of Applied Psychology, 8*1(4), 400-410. doi:10.1037//0021-9010.81.4.400

Olowookere, E. I., Adekeye, O. A., Adejumo, G. O., Agoha, B. C., & Sholarin, M. A. (2016). Influence of religiosity on turnover intention: Empirical evidence from selected employees in lagos and ogun states. *Ife Psychologia, 2*4(2), 132.

Oreskovich, M. R., Shanafelt, T., Dyrbye, L. N., Tan, L., Sotile, W., Satele, D., . . . Boone, S. (2015). The prevalence of substance use disorders in american physicians. *The American Journal on Addictions, 2*4(1), 30-38. doi:10.1111/ajad.12173

Palamar, J. J., Kiang, M. V., & Halkitis, P. N. (2014). Religiosity and exposure to users in explaining illicit drug use among emerging adults. *Journal of Religion and Health, 5*3(3), 658-674. doi:10.1007/s10943-012-9660-3

Paloutzian, R., & Ellison, C. (1982). Spiritual well-being scale. *Measures of Religiosity,* , 382-385.

Parenteau, S. C. (2017). Religious coping and substance use: The moderating role of sex. *Journal of Religion and Health, 5*6(2), 380-387. doi:10.1007/s10943-015-0166-7

Pargament, K., Feuille, M., & Burdzy, D. (2011). The brief RCOPE: Current psychometric status of a short measure of religious coping. *Religions,* 2(1), 51-76. doi:10.3390/rel2010051

Pargament, K. I., Smith, B. W., Koenig, H. G., & Perez, L. (1998). Patterns of positive and negative religious coping with major life stressors. *Journal for the Scientific Study of Religion, 3*7(4), 710-724.

Pitney, W. A., Mazerolle, S. M., & Pagnotta, K. D. (2011). Work-family conflict among athletic trainers in the secondary school setting. *Journal of Athletic Training, 4*6(2), 185-193. doi:10.4085/1062-6050-46.2.185

Reed, P. G., & Reed, P. G. (1986). Religiousness among terminally ill and healthy adults. *Research in Nursing & Health,* 9(1), 35-41. doi:10.1002/nur.4770090107

Reed, S., & Giacobbi Jr, P. R. (2004). The stress and coping responses of certified graduate athletic training students. *Journal of Athletic Training, 3*9(2), 193-200.

Ross, C. E. (1990). Religion and psychological distress. *Journal for the Scientific Study of Religion, 2*9(2), 236-245.

Smith, R. (1986). Toward A cognitive affective model of athletic burnout. *Journal of Sport Psychology,* 8, 36-50.

Terranova, A. B., & Henning, J. M. (2011). National collegiate athletic association division and primary job title of athletic trainers and their job satisfaction or intention to leave athletic training. *Journal of Athletic Training, 46*(3), 312-318.

Unterrainer, H., Lewis, A., Collicutt, J., & Fink, A. (2013). Religious/Spiritual well-being, coping styles, and personality dimensions in people with substance use disorders. *International Journal for the Psychology of Religion, 23*(3), 204-213. doi:10.1080/10508619.2012.714999

Wiegand, D. L., & Funk, M. (2012). Consequences of clinical situations that cause critical care nurses to experience moral distress. *Nursing Ethics, 19*(4), 479-487. doi:10.1177/0969733011429342

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment, 52*(1), 30-41.

Table 5.1. Demographics

	n	%
Gender		
Male	326	41.6
Female	453	57.9
Ethnicity		
White	713	91.1
Black	23	2.9
Hispanic	29	3.7
Native American	5	0.6
Asian	13	1.7
Multiracial	15	1.9
Other	6	0.8
Marital Status		
Single	409	52.2
Married	333	45.5
Divorced	37	4.7
Widowed	3	0.4
Religious Affiliation		
Protestant	275	35.4
Catholic	230	29.6
Other Christian	130	16.7
Jewish	7	0.9
Other Religion	19	2.4
None	116	14.9
NATA District		
1 (CT, ME, MA, NH, RI, VT)	62	7.9
2 (DE, NJ, NY, PA)	91	11.6
3 (DC, MD, NC, SC, VA, WV)	100	12.8
4 (IL, IN, MI, MN, OH, WI)	157	20.1
5 (IA, KS, MO, NE, ND, OK, SD)	96	12.3
6 (AR, TX)	51	6.5
7 (AZ, CO, NM, UT, WY)	36	4.6
8 (CA, HI, NV, Guam, American Samoa)	68	8.7
9 (AL, FL, GA, KY, LA, MS, TN, Puerto Rico, Virgin Islands)	87	11.1
10 (AK, ID, MT, OR, WA)	32	4.1
Level of Competition		
NCAA Division I	296	37.8

NCAA Division II	143	18.3
NCAA Division III	189	24.1
NAIA	70	8.9
NJCAA	63	8.0
Other	21	2.7
Salary		
Less than $20,000	38	4.9
$20,000 - $29,999	25	3.2
$30,000 - $39,999	147	18.8
$40,000 - $49,999	236	30.1
$50,000 - $59,999	167	21.3
$60,000 - $69,999	65	8.3
$70,000 - $79,999	51	6.5
$80,000 - $89,999	23	2.9
$90,000 - $99,999	13	1.7
Greater than $100,000	14	1.8

Table 5.2. Survey instrument results

Questionnaire Component	**Scale Range**	**Participant's Scores, Mean ± SD (Range)**
Emotional Exhaustion MBI subscale	0-54	23.7 ± 11.9 (0-53)
Depersonalization MBI subscale	0-30	7.7 ± 5.9 (0-27)
Personal Accomplishment MBI subscale	0-48	38.9 ± 6.3 (13-48)
Existential Well-Being SWBS subscale	10-60	48.1 ± 7.8 (22-60)
Religious Well-Being SWBS subscale	10-60	43.1 ± 13.8 (10-60)
Positive Religious Coping Brief RCOPE subscale	0-21	9.3 ± 7.0 (0-21)
Negative Religious Coping Brief RCOPE subscale	0-21	1.6 ± 2.7 (0-20)
Work-Family Conflict Scale A	5-35	25.5 ± 7.1 (5-35)
Work-Family Conflict Scale B	5-35	25.8 ± 7.2 (5-35)
Multidimensional Scale of Perceived Social Support	12-84	67.1 ± 13.2 (12-84)

Table 5.3 Substance Use and Intention to Leave Demographics

	Binge Drinking n (%)	Marijuana n (%)	Smokeless Tobacco n (%)	Energy Drink n (%)
Never	418 (53.4)	750 (95.8)	741 (94.6)	602 (76.9)
1-2	208 (26.6)	12 (1.5)	6 (0.8)	76 (9.7)
3-5	92 (11.7)	4 (0.5)	6 (0.8)	38 (4.9)
6-9	37 (4.7)	1 (0.1)	3 (0.4)	18 (2.3)
10-19	21 (2.7)	4 (0.5)	0 (0.0)	24 (3.1)
20-39	4 (0.5)	2 (0.3)	7 (0.9)	18 (2.3)
40+	1 (0.1)	5 (0.6)	18 (2.3)	5 (0.6)

	Cigarettes n (%)
Not at all	769 (98.2)
Less than one cigarette per day	6 (0.8)
1-5 cigarettes per day	4 (0.5)
About one-half pack per day	1 (0.1)

	Intention to Leave n (%)
Strongly Disagree	304 (40.2)
Disagree	155 (20.5)
Neutral	157 (20.8)
Agree	98 (12.5)
Strongly Agree	42 (5.6)

Table 5.4. Spiritual Well-Being and Religious Coping Predicting Situational Variables

Variable	B	95% CI Lower	95% CI Upper	β	t	R	R^2
Work-Family Conflict A						0.249	0.062
Existential Well-Being	-0.238	-0.309	-0.167	-0.261	-6.596[a]		
Religious Well-Being	0.027	-0.040	0.095	0.054	0.797		
Positive Religious Coping	0.021	-0.117	0.159	0.021	0.303		
Negative Religious Coping	-0.015	-0.223	0.193	-0.006	-0.142		
Work-Family Conflict B						0.255	0.065
Existential Well-Being	-0.237	-0.310	-0.165	-0.253	-6.446[a]		
Religious Well-Being	0.001	-0.068	0.070	0.002	0.028		
Positive Religious Coping	0.077	-0.064	0.217	0.073	1.073		
Negative Religious Coping	0.062	-0.150	0.274	0.022	0.573		
Social Support						0.438	0.192
Existential Well-Being	0.709	0.588	0.829	0.423	11.561[a]		
Religious Well-Being	0.019	-0.096	0.133	0.020	0.322		
Positive Religious Coping	-0.063	-0.295	0.169	-0.034	-0.533		
Negative Religious Coping	-0.249	-0.601	0.102	-0.051	-1.391		
Salary						0.140	0.020
Existential Well-Being	0.026	0.008	0.044	0.112	2.801[b]		
Religious Well-Being	0.002	-0.016	0.019	0.012	0.177		
Positive Religious Coping	-0.008	-0.043	0.028	-0.029	-0.423		
Negative Religious Coping	-0.040	-0.094	0.015	-0.058	-1.439		
Workload Fall						0.168	0.028
Existential Well-Being	-0.228	-0.346	-0.110	-0.151	-3.791[a]		
Religious Well-Being	0.073	-0.039	0.186	0.088	1.284		
Positive Religious Coping	-0.024	-0.253	0.205	-0.014	-0.203		
Negative Religious Coping	0.214	-0.143	0.571	0.047	1.178		
Workload Spring						0.182	0.033
Existential Well-Being	-0.240	-0.353	-0.128	-0.167	-4.200[a]		
Religious Well-Being	0.071	-0.036	0.178	0.089	1.299		
Positive Religious Coping	-0.028	-0.246	0.190	-0.017	-0.251		
Negative Religious Coping	0.208	-0.132	0.548	0.048	1.201		

[a] $P < .001$
[b] $P < .01$

Table 5.5. Spiritual Well-Being and Religious Coping Predicting Burnout Subscales

Variable	B	95% CI Lower	95% CI Upper	β	t	R	R^2
Personal Accomplishment						0.451	0.203
Existential Well-Being	0.380	0.322	0.438	0.470	12.892[a]		
Religious Well-Being	-0.052	-0.107	0.003	-0.116	-1.863		
Positive Religious Coping	0.033	-0.079	0.145	0.037	0.577		
Negative Religious Coping	0.021	-0.148	0.191	0.009	0.248		
Emotional Exhaustion						0.522	0.272
Existential Well-Being	-0.827	-0.932	-0.722	-0.539	-15.450[a]		
Religious Well-Being	0.021	-0.078	0.121	0.025	0.424		
Positive Religious Coping	0.142	-0.060	0.345	0.083	1.382		
Negative Religious Coping	-0.012	-0.320	0.295	-0.003	-0.079		
Depersonalization						0.413	0.171
Existential Well-Being	-0.328	-0.383	-0.272	-0.429	-11.612[a]		
Religious Well-Being	0.001	-0.052	0.054	0.003	0.044		
Positive Religious Coping	0.069	-0.039	0.176	0.080	1.252		
Negative Religious Coping	-0.037	-0.200	0.126	-0.017	-0.448		

[a] $P < .001$

Table 5.6. Spiritual Well-Being and Religious Coping Predicting Intention to Leave and Binge Drinking

Variable	B	95% CI Lower	95% CI Upper	β	t	R	R^2
Intention to Leave						0.342	0.117
Existential Well-Being	-0.058	-0.070	-0.045	-0.353	-9.195[a]		
Religious Well-Being	0.001	-0.010	0.013	0.013	0.194		
Positive Religious Coping	0.011	-0.013	0.034	0.058	0.880		
Negative Religious Coping	-0.003	-0.039	0.033	-0.006	-0.143		
Binge Drinking						0.269	0.073
Existential Well-Being	-0.023	-0.033	-0.013	-0.169	-4.362[a]		
Religious Well-Being	-0.001	-0.011	0.009	0.025	-0.237		
Positive Religious Coping	-0.024	-0.044	-0.004	0.083	-2.375[b]		
Negative Religious Coping	0.004	-0.026	0.035	-0.003	0.286		

[a] $P < .001$

[b] $P < .05$

Table 5.7 Spiritual Well-Being and Religious Coping Predicting Other Substance Use[a]

Variable	B	S.E.	Exp(B)	95% CI Lower	95% CI Upper	Wald Chi-Square
Cigarettes						
Existential Well-Being	-.061	.034	0.941	0.880	1.006	3.150
Religious Well-Being	.004	.034	1.004	0.939	1.074	.014
Positive Religious Coping	-.042	.072	0.959	0.833	1.104	.345
Negative Religious Coping	-.056	.119	0.945	0.749	1.193	.223
Marijuana						
Existential Well-Being	-.030	.014	0.970	0.944	0.998	4.428[b]
Religious Well-Being	-.040	.014	0.960	0.935	0.986	8.767[c]
Positive Religious Coping	-.040	.036	0.960	0.895	1.030	1.266
Negative Religious Coping	-.080	.063	0.923	0.815	1.045	1.614
Energy Drinks						
Existential Well-Being	-.012	.007	0.988	0.975	1.001	3.174
Religious Well-Being	.006	.007	1.006	0.993	1.019	.831
Positive Religious Coping	-.031	.014	0.969	0.943	0.996	5.112[b]
Negative Religious Coping	.040	.018	1.041	1.004	1.079	4.836[b]
Smokeless Tobacco						
Existential Well-Being	.022	.027	1.022	0.969	1.078	.628
Religious Well-Being	-.021	.025	0.979	0.933	1.029	.686
Positive Religious Coping	-.002	.056	0.998	0.895	1.114	.001
Negative Religious Coping	.097	.063	1.102	0.974	1.247	2.371

[a] Cigarettes, marijuana and energy drink analyses used a Poisson regression. Smokeless tobacco analysis used a binary logistic regression.
[b] $p < .05$
[c] $p < .01$

Table 5.8. Mediation Analyses

Variable	B	95% CI Lower	95% CI Upper	β	t	R	R^2
Emotional Exhaustion						0.270	0.073
Social Support	-0.244	-0.306	-0.182	-0.270	-7.717[a]		
Emotional Exhaustion						0.520	0.270
Social Support	-0.048	-0.110	0.014	-0.052	-1.509		
Existential Well-Being	-0.751	-0.854	-0.647	-0.495	-14.238[a]		
Binge Drinking						0.128	0.016
Personal Accomplishment	-0.022	-0.034	-0.010	-0.128	-3.569[a]		
Binge Drinking						0.226	0.051
Personal Accomplishment	-0.006	-0.019	0.007	-0.035	-0.833		
Existential Well-Being	-0.029	-0.039	-0.018	-0.208	-5.190[a]		
Binge Drinking						0.131	0.017
Emotional Exhaustion	0.012	0.005	0.018	0.131	3.648[a]		
Binge Drinking						0.227	0.051
Emotional Exhaustion	0.003	-0.005	0.010	0.029	0.708		
Existential Well-Being	-0.028	-0.040	-0.017	-0.2010	-5.047[a]		

[a] $P < .001$

Table 5.9. Moderation Analysis

Variable	B	95% CI Lower	95% CI Upper	β	t	R	R^2
Emotional Exhaustion						0.564	0.318
Existential Well-Being	-0.598	-0.700	-0.496	-0.393	11.466[a]		
Personal Accomplishment	-0.497	-0.623	-0.370	-0.264	-7.710[a]		
Emotional Exhaustion						0.567	0.322
Existential Well-Being	-0.607	-0.709	-0.504	-0.398	-11.623[a]		
Personal Accomplishment	-0.528	-0.658	-0.399	-0.281	-8.002[a]		
EWB x PA	-0.014	-0.028	-0.001	-0.067	-2.096[b]		

[a] $P < .001$
[b] $P < .05$

Table 5.10. Summary of Significant Direct Effects and Indirect Effects

Direct Effects	β
PA $_{WFCA}$	-.269
PA $_{SS}$	.238
PA $_{Salary}$	.133
EE $_{WFCA}$	.284
EE $_{WFCB}$	.253
EE $_{SS}$	-.190
EE $_{Salary}$	-.096
EE $_{Workload\ Spring}$	.079
EE $_{PA}$	-.424
DP $_{PA}$	-.187
DP $_{EE}$	.579
Binge Drinking $_{PA}$	-.093
Binge Drinking $_{EE}$	.091
ITL $_{PA}$	-.116
ITL $_{EE}$	.416
WFCA $_{EWB}$	-.261
WFCB $_{EWB}$	-.253
SS $_{EWB}$	.423
Salary $_{EWB}$	.112
Workload Fall $_{EWB}$	-.151
Workload Spring $_{EWB}$	-.167
PA $_{EWB}$	.470
EE $_{EWB}$	-.539
DP $_{EWB}$	-.429
ITL $_{EWB}$	-.353
Binge Drinking $_{EWB}$	-.169
Binge Drinking $_{PRC}$	-.083
Indirect Effects	
PA $_{EWB.WFCA}$	.070
PA $_{EWB.SS}$	.101
PA $_{EWB.Salary}$	.015
EE $_{EWB.WFCA}$	-.074
EE $_{EWB.WFCB}$	-.064
EE $_{EWB.SS}$	-.080
EE $_{EWB.Salary}$	-.012
EE $_{EWB.Workload\ Spring}$	-.013
EE $_{EWB.PA}$	-.199
DP $_{EWB.PA}$	-.088
DP $_{EWB.EE}$	-.312
Binge Drinking $_{EWB.PA}$	-.044
Binge Drinking $_{EWB.EE}$	-.049
ITL $_{EWB.PA}$	-.055
ITL $_{EWB.EE}$	-.224

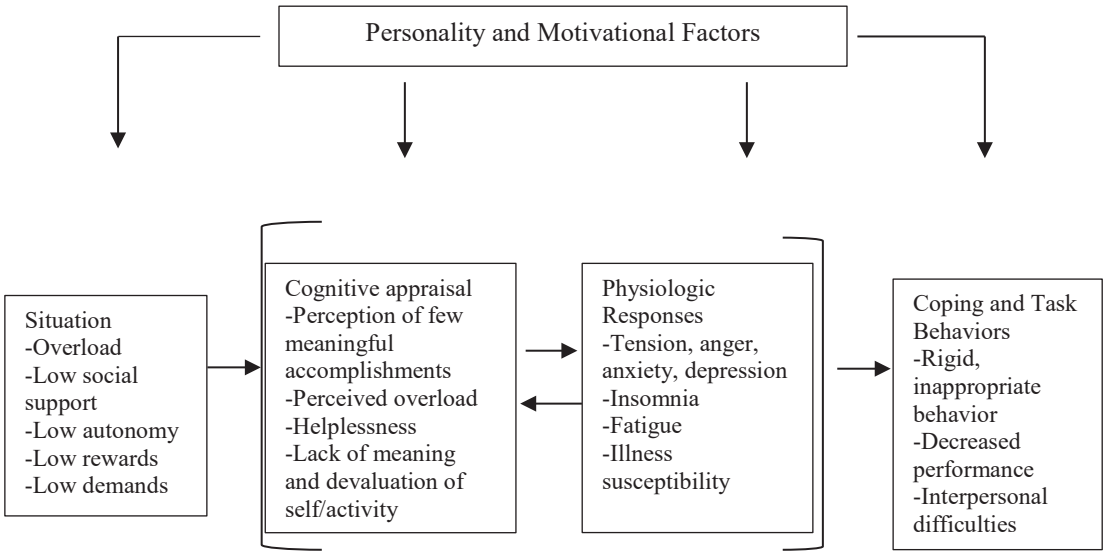

Figure 5.1 Smith's Cognitive-Affective Model of Athletic Burnout

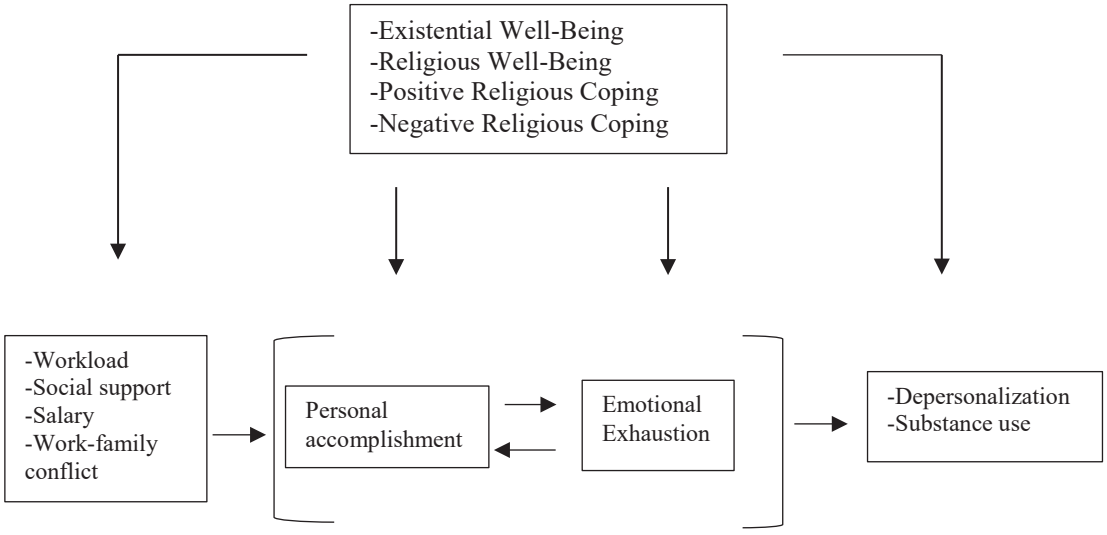

Figure 5.2 Variables mapped onto Smith's Model

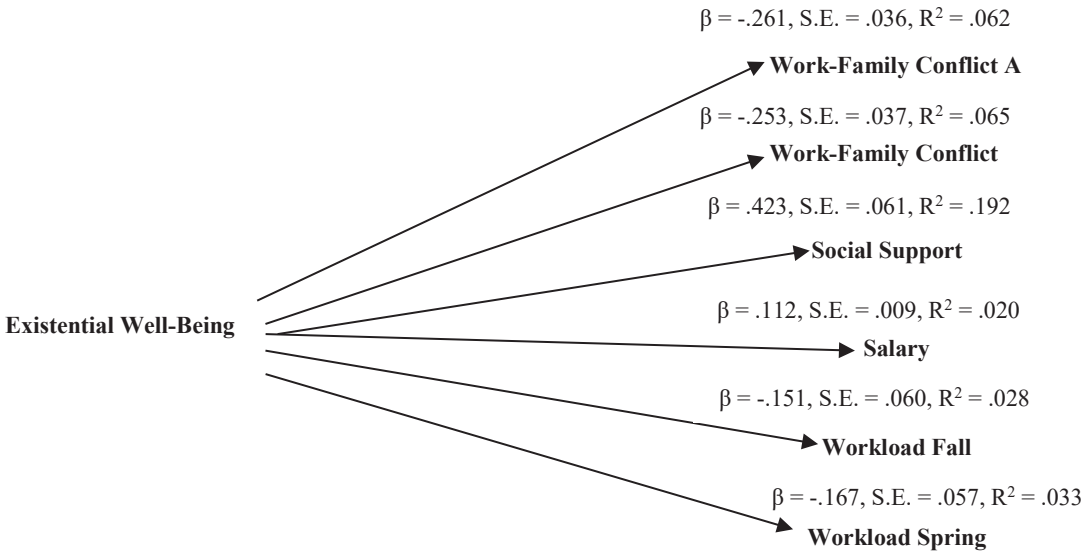

Figure 5.3 Significant associations between existential well-being and situational variables.

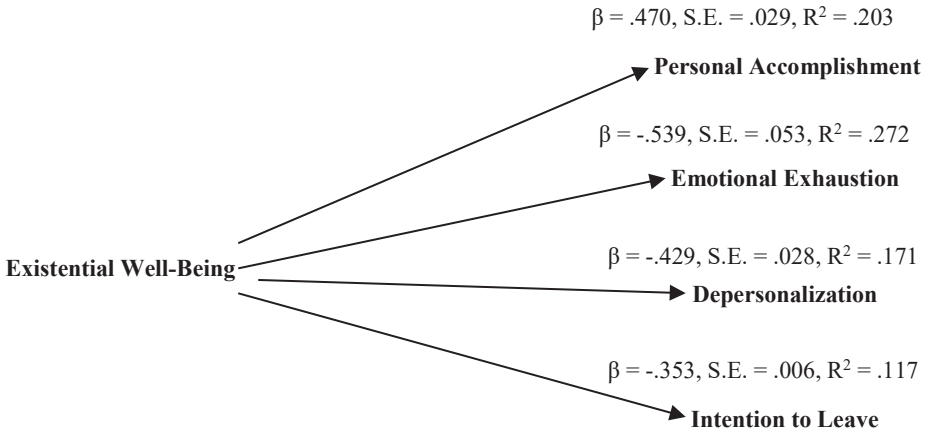

Figure 5.4 Significant associations between existential well-being, burnout subscales, and intention to leave the profession of athletic training.

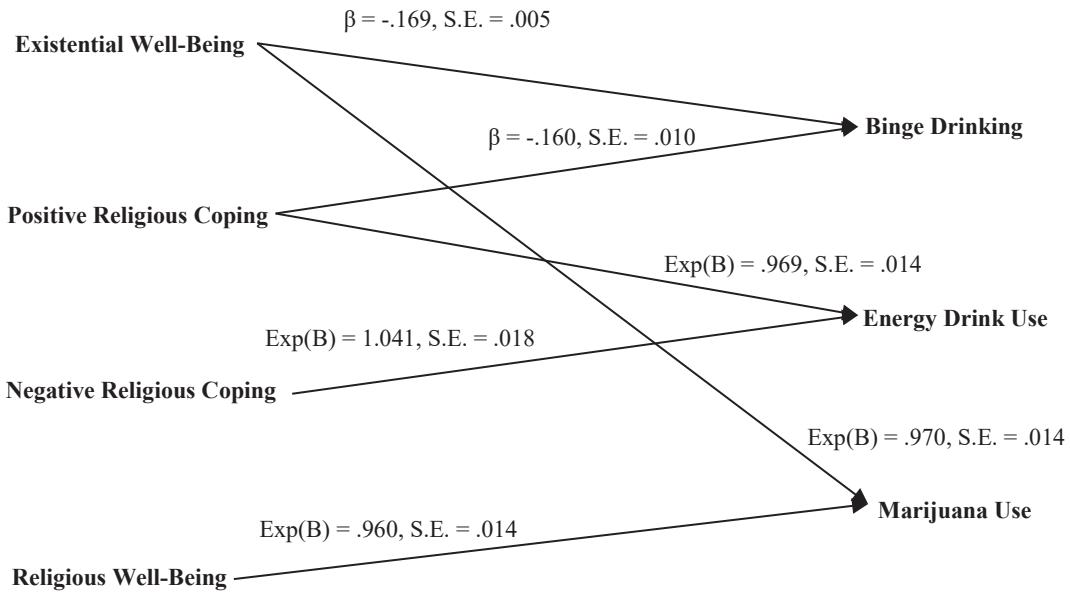

Figure 5.5 Significant associations between spiritual variables and substance use.

CHAPTER SIX

Summary of Conclusions

The purpose of this dissertation was to test six hypotheses:

H_1: There will be no association between spiritual well-being and burnout in ATs.

H_2: There will be no association between spiritual well-being and intention to leave the profession of athletic training.

H_3: There will be no association between use of religious coping techniques and burnout in ATs.

H_4: As burnout in ATs increases, so will their risk of substance use.

H_5: There will be an inverse association between spiritual well-being and substance use in ATs.

H_6: There will be no association between the use of religious coping techniques and substance use in ATs.

Hypothesis One: Spiritual Well-Being and Burnout

Our results suggest that existential well-being is a significant protective factor against emotional exhaustion, depersonalization, and a decreased sense of personal accomplishment in collegiate ATs. These results are in agreement with the only other known published study to examine this relationship in healthcare professionals (Hardiman & Simmonds, 2013). We also found that religious well-being is not a significant predictor of any of the subscales of burnout, which also agrees with Hardiman & Simmonds (2013). These results imply that our sense of purpose and satisfaction in life

(i.e. existential well-being) is more important than our relationship with a higher power (i.e. religious well-being) in terms of managing burnout symptoms. It is a logical conclusion that individuals with a greater sense of purpose would have a greater sense of personal accomplishment. A sense of purpose may also help individuals to combat emotional exhaustion. Although their work may be tiring physically and emotionally, knowing that they are truly serving a purpose may help individuals to perceive and report less exhaustion.

Hypothesis Two: Spiritual Well-Being and Intention to Leave

Our results also suggest that existential well-being is a protective factor against one's intention to leave the profession of athletic training. Our results agree with previous research (Olowookere, Adekeye, Adejumo, Agoha, & Sholarin, 2016). Because one component of existential well-being is an individual's sense of purpose, ATs that have a stronger sense of purpose in their life may see their athletic training career as part of that purpose. Therefore, individuals with greater existential well-being would be less inclined to leave the profession.

Hypothesis Three: Religious Coping and Burnout

Our analyses found that the use of religious coping techniques was not significantly associated with symptoms of burnout (i.e. emotional exhaustion, depersonalization, decreased personal accomplishment) in collegiate ATs. This was not in agreement with previous studies which found that increased use of religious coping techniques was correlated with a decrease in reported burnout symptoms (Shaddock et al., 1998; Shin et al., 2014). However, we controlled for the effects of spiritual well-being

in our religious coping analyses and found that existential well-being was a significant predictor of burnout symptoms while positive and negative religious coping techniques were not.

Hypothesis Four: Burnout and Substance Use

We found emotional exhaustion and a decreased sense of personal accomplishment to be significant contributing factors to binge drinking in our sample. These findings agree with previous research (Braun et al., 2008; Oreskovich et al., 2015). Collegiate ATs suffering from burnout may use binge drinking as a coping mechanism for their stress. Future research should continue to study this relationship.

The results of our study also suggested that emotional exhaustion is positively correlated with energy drink consumption. This relationship has not been reported previously in the literature. Collegiate ATs may be using energy drinks to combat the fatigue associated with burnout. Future research should continue to study the motives of energy drink consumption by collegiate ATs.

Hypothesis Five: Spiritual Well-Being and Substance Use

Our study also found that existential well-being and positive religious coping techniques are protective factors against binge drinking. This finding agrees with previous literature (Harrell & Powell, 2014; Martin et al., 2015; Unterrainer et al., 2013). An analysis of mediation revealed that neither emotional exhaustion nor personal accomplishment is significantly correlated with binge drinking when existential well-being is controlled for. This relationship has not been examined in previous literature and should be evaluated further in the future.

Analyses also found that existential well-being and religious well-being are protective factors against marijuana use. These results agree with previous findings (Palamar, Kiang, & Halkitis, 2014). These findings support the protective nature of spiritual well-being against illegal drug use. Future studies should continue to explore the relationship between spiritual well-being and illegal substance use in collegiate ATs.

Hypothesis Six: Religious Coping and Substance Use

Results suggest that increased use of positive religious coping techniques was associated with decreased binge drinking in our sample. This is in agreement with previous research (Martin et al., 2015; Unterrainer et al., 2013). Those who are more likely to rely on religious acts to manage their stress may be less likely to abuse alcohol as a coping mechanism because they view the body as sacred and may avoid behaviors that would harm it.

Increased use of positive religious coping methods was associated with decreased energy drink use and increased use of negative religious methods was associated with increased energy drink use. This relationship has not been examined previously in the literature. This is an interesting finding and future studies should continue to examine this relationship.

Conclusions

In conclusion, spiritual well-being and religious coping methods serve a beneficial role in the management of burnout, its causes and its effects in collegiate ATs. Members of the profession continue to suffer from burnout, which can lead to negative coping behaviors including binge drinking and leaving the profession. Because our study

has suggested that greater spiritual well-being and use of positive religious coping methods are correlated with decreased reporting of burnout symptoms, intention to leave the profession and binge drinking, every possible management tool (now including spiritual well-being and positive religious coping) should be utilized. Interventions designed to increase the spiritual well-being and utilization of positive religious methods of collegiate ATs may lead to beneficial outcomes including a decrease in work-family conflict, decrease in burnout symptoms, decreased substance use, and decreased intention to leave the profession. Collegiate ATs should also seek ways to improve their own spiritual well-being such as participation in organized religious practices or personal meditation.

APPENDIX

APPENDIX

Questionnaire

1. What is your age? (Fill in)

2. What is your gender?
   - o Male
   - o Female

3. With which race do you identify? (Please check all that apply)
   - o White, non-Hispanic
   - o Black, non-Hispanic
   - o Hispanic
   - o Native American or American Indian
   - o Asian or Pacific Islander
   - o Biracial or Multiracial
   - o Other: _____

4. What is your present religion, if any?
   - o Catholic
   - o Protestant: (Please specify)_____
   - o Other Christian: (Please specify)_____
   - o Jewish
   - o Other religion: (Please specify)_____
   - o None

5. How often do you attend religious services at a place of worship?
   - o Never
   - o Less than once a year
   - o Once or twice a year
   - o Several times a year
   - o Once a month
   - o 2-3 times a month
   - o About once a week
   - o Several times a week

6. How religious do you consider yourself to be?
   - o Not religious
   - o Slightly religious
   - o Moderately religious
   - o Very religious
   - o I don’t know

7. About how often do you spend time praying outside of religious services?
   - Never
   - Only on certain occasions
   - Once a week or less
   - A few times a week
   - Once a day
   - Several times a day

8. At which level does most of the sports at your institution compete?
   - NCAA Division I
   - NCAA Division II
   - NCAA Division III
   - NAIA
   - NJCAA
   - Other_____

9. What is your marital status?
   - Single
   - Married
   - Divorced
   - Widowed

10. How many children do you have? (Fill in)

11. How many years of experience do you have as a certified athletic trainer? (Fill in)

12. How many certified athletic trainers (including yourself) currently work at your institution? (Fill in)

Full time	
Part time	
Graduate Assistant	

13. Which sports are you the primary athletic trainer for at your institution? (Please check all that apply)

- Baseball
- Football
- Men's Basketball
- Men's Cross Country
- Men's Fencing
- Men's Golf
- Men's Gymnastics
- Men's Ice Hockey
- Men's Lacrosse
- Men's Rifle
- Men's Skiing
- Men's Soccer
- Men's Swimming & Diving
- Men's Tennis
- Men's Track & Field
- Men's Volleyball
- Men's Water Polo
- Men's Wrestling
- Softball
- Women's Basketball
- Women's Beach Volleyball
- Women's Bowling
- Women's Cross Country
- Women's Equestrian
- Women's Fencing
- Women's Golf
- Women's Gymnastics
- Women's Ice Hockey
- Women's Lacrosse
- Women's Rifle
- Women's Rowing
- Women's Rugby
- Women's Skiing
- Women's Soccer
- Women's Swimming & Diving
- Women's Tennis
- Women's Track & Field
- Women's Triathlon
- Women's Volleyball
- Women's Water Polo

14. Approximately how many hours do you work per week during the following times of year? (Fill in)

August 1 – December 31	
January 1 – May 31	
June 1 – July 31	

15. Aside from your work as an athletic trainer, please select all other work responsibilities that you have at your institution.

- Preceptor
- Formal education
- Sport operations
- Other_____

16. Approximately how much does your athletic training employment pay per year?

- Less than $20k
- $20k - $29k
- $30k - $39k
- $40k - $49k
- $50k - $59k
- $60k - $69k
- $70k - $79k
- $80k - $89k
- $90k - $99k
- More than $100k

Spiritual Well-Being

17. For each of the following statements circle the choice that best indicates the extent of your agreement or disagreement as it describes your personal experience:

SA = Strongly Agree	D = Disagree
MA = Moderately Agree	MD = Moderately Disagree
A = Agree	SD = Strongly Disagree

a. I don't find much satisfaction in private prayer with God.	SA MA A D MD SD
b. I don't know who I am, where I came from, or where I'm going.	SA MA A D MD SD
c. I believe that God loves me and cares about me.	SA MA A D MD SD
d. I feel that life is a positive experience.	SA MA A D MD SD
e. I believe that God is impersonal and not interested in my daily situations.	SA MA A D MD SD
f. I feel unsettled about my future.	SA MA A D MD SD
g. I have a personally meaningful relationship with God.	SA MA A D MD SD
h. I feel very fulfilled and satisfied with life.	SA MA A D MD SD
i. I don't get much personal strength and support from my God.	SA MA A D MD SD
j. I feel a sense of well-being about the direction my life is headed in.	SA MA A D MD SD
k. I believe that God is concerned about my problems.	SA MA A D MD SD
l. I don't enjoy much about life.	SA MA A D MD SD
m. I don't have a personally satisfying relationship with God.	SA MA A D MD SD
n. I feel good about my future.	SA MA A D MD SD
o. My relationship with God helps me not to feel lonely.	SA MA A D MD SD
p. I feel that life is full of conflict and unhappiness.	SA MA A D MD SD
q. I feel most fulfilled when I'm in close communion with God.	SA MA A D MD SD
r. Life doesn't have much meaning.	SA MA A D MD SD
s. My relation with God contributes to my sense of well-being.	SA MA A D MD SD
t. I believe there is some real purpose for my life.	SA MA A D MD SD

Burnout

18. For each of the following statements, circle the choice that best indicates your personal experience as a certified athletic trainer by selecting the phrase that best describes how frequently you feel that way.

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

1. I feel emotionally drained from my work.	0 1 2 3 4 5 6
2. I feel used up at the end of the workday.	0 1 2 3 4 5 6
3. I feel fatigued when I get up in the morning and have to face another day on the job.	0 1 2 3 4 5 6
4. I can easily understand how my patients feel about things.	0 1 2 3 4 5 6
5. I feel I treat some patients as if they were impersonal objects.	0 1 2 3 4 5 6
6. Working with patients all day is really a strain for me.	0 1 2 3 4 5 6
7. I deal very effectively with the problems of my patients.	0 1 2 3 4 5 6
8. I feel burned out from my work.	0 1 2 3 4 5 6
9. I feel I'm positively influencing patients' lives through my work.	0 1 2 3 4 5 6
10. I've become more callous toward people.	0 1 2 3 4 5 6
11. I worry that this job is hardening me emotionally.	0 1 2 3 4 5 6
12. I feel very energetic.	0 1 2 3 4 5 6
13. I feel frustrated by my job.	0 1 2 3 4 5 6
14. I feel I'm working too hard on my job.	0 1 2 3 4 5 6
15. I don't really care what happens to some of my patients.	0 1 2 3 4 5 6
16. Working with patients directly puts too much stress on me.	0 1 2 3 4 5 6
17. I can easily create a relaxed atmosphere with my patients.	0 1 2 3 4 5 6
18. I feel exhilarated after working closely with patients.	0 1 2 3 4 5 6
19. I have accomplished many worthwhile things in this job.	0 1 2 3 4 5 6
20. I feel like I am at the end of my rope.	0 1 2 3 4 5 6
21. In my work, I deal with emotional problems very calmly.	0 1 2 3 4 5 6
22. I feel my patients blame me for some of their problems.	0 1 2 3 4 5 6

Social Support

19. We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

1 = "Very Strongly Disagree
2 = "Strongly Disagree"
3 = "Mildly Disagree"
4 = "Neutral"
5 = "Mildly Agree"
6 = "Strongly Agree"
7 = "Very Strongly Agree"

a. There is a special person who is around when I am in need.	1	2	3	4	5	6	7
b. There is a special person with whom I can share joys and sorrows.	1	2	3	4	5	6	7
c. My family really tries to help me.	1	2	3	4	5	6	7
d. I get the emotional help & support I need from my family.	1	2	3	4	5	6	7
e. I have a special person who is a real source of comfort to me.	1	2	3	4	5	6	7
f. My friends really try to help me.	1	2	3	4	5	6	7
g. I can count on my friends when things go wrong.	1	2	3	4	5	6	7
h. I can talk about my problems with my family.	1	2	3	4	5	6	7
i. I have friends with whom I can share my joys and sorrows.	1	2	3	4	5	6	7
j. There is a special person in my life who cares about my feelings.	1	2	3	4	5	6	7
k. My family is willing to help me make decisions.	1	2	3	4	5	6	7
l. I can talk about my problems with my friends.	1	2	3	4	5	6	7

Work-Family Conflict

20. For each of the following statements, circle the choice that best indicates the extent of your agreement or disagreement as it describes your personal experience:

1 = "Strongly Disagree" 2 = "Disagree"
3 = "Slightly Disagree" 4 = "Neutral"
5 = "Slightly Agree" 6 = "Agree"
7 = "Strongly Agree"

"Family" is defined as having a partner or spouse with or without children.

a. The demands of my work interfere with my home and family life. 1 2 3 4 5 6 7
b. The amount of time my job takes up makes it difficult to fulfill family responsibilities. 1 2 3 4 5 6 7
c. Things I want to do at home do not get done because of the demands my job puts on me. 1 2 3 4 5 6 7
d. My job produces strain that makes it difficult to fulfill family duties. 1 2 3 4 5 6 7
e. Due to work-related duties, I have to make changes to my plans for family activities. 1 2 3 4 5 6 7

21. For each of the following statements, circle the choice that best indicates the extent of your agreement or disagreement as it describes your personal experience:

1 = "Strongly Disagree" 2 = "Disagree"
3 = "Slightly Disagree" 4 = "Neutral"
5 = "Slightly Agree" 6 = "Agree"
7 = "Strongly Agree"

"Family" is defined as close relatives, including parents, siblings, and grandparents, involved in one's life.

a. The demands of my work interfere with my home and family life. 1 2 3 4 5 6 7
b. The amount of time my job takes up makes it difficult to fulfill family responsibilities. 1 2 3 4 5 6 7
c. Things I want to do at home do not get done because of the demands my job puts on me. 1 2 3 4 5 6 7
d. My job produces strain that makes it difficult to fulfill family duties. 1 2 3 4 5 6 7
e. Due to work-related duties, I have to make changes to my plans for family activities. 1 2 3 4 5 6 7

Religious Coping

22. The following items deal with ways you cope with stress. There are many ways to deal with problems. These items ask what you do to cope with your stressors. We want to know to what extent you do what the item says. *How much or how frequently*. Don't answer on the basis of what works or not – just whether or not you do it. Try to rate each item separately in your mind from the others. Make your answers as true FOR YOU as you can.

a. Looked for a stronger connection with God.	0	1	2	3
b. Sought God's love and care.	0	1	2	3
c. Sought help from God in letting go of my anger.	0	1	2	3
d. Tried to put my plans into action together with God.	0	1	2	3
e. Tried to see how God might be trying to strengthen me in this situation.	0	1	2	3
f. Asked forgiveness for my sins.	0	1	2	3
g. Focused on religion to stop worrying about my problems.	0	1	2	3
h. Wondered whether God had abandoned me.	0	1	2	3
i. Felt punished by God for my lack of devotion.	0	1	2	3
j. Wondered what I did for God to punish me.	0	1	2	3
k. Questioned God's love for me.	0	1	2	3
l. Wondered whether my church had abandoned me.	0	1	2	3
m. Decided the devil made this happen.	0	1	2	3
n. Questioned the power of God.	0	1	2	3

Intention to Leave

23. I am actively searching for a job outside the profession of athletic training.
    - Strongly agree
    - Agree
    - Neutral
    - Disagree
    - Strongly disagree

Substance Use

24. How many times (if any) have you had five or more drinks in a row (4 or more for females) over the last 30 days?
    - Never
    - 1-2
    - 3-5
    - 6-9
    - 10-19
    - 20-39
    - 40+

25. How frequently have you smoked cigarettes during the past 30 days?
    - Not at all
    - Less than one cigarette per day
    - One to five cigarettes per day
    - About one-half pack per day
    - About one pack per day
    - About one and one-half pack per day
    - Two packs or more per day

26. On how many occasions (if any) have you used smokeless tobacco during the last 30 days?
    - Never
    - 1-2
    - 3-5
    - 6-9
    - 10-19
    - 20-39
    - 40+

27. On how many occasions (if any) have you used marijuana (weed, pot) or hashish (hash, hash oil) during the last 30 days?

- Never
- 1-2
- 3-5
- 6-9
- 10-19
- 20-39
- 40+

28. On how many occasions have you consumed an energy drink (e.g. Monster, Red Bull) or energy shot (e.g. 5 Hour Energy) during the last 30 days?

- Never
- 1-2
- 3-5
- 6-9
- 10-19
- 20-39
- 40+

REFERENCES

Ackerley, G. D., Burnell, J., Holder, D. C., & Kurdek, L. A. (1988). Burnout among licensed psychologists. *Professional Psychology: Research and Practice, 19*(6), 624-631. doi:10.1037/0735-7028.19.6.624

Adams, C. J., Hough, H., Proeschold-Bell, R. J., Yao, J., & Kolkin, M. (2017). Clergy burnout: A comparison study with other helping professions. *Pastoral Psychology, 66*(2), 147-175. doi:10.1007/s11089-016-0722-4

Ai, A. L., Seymour, E. M., Tice, T. N., Kronfol, Z., & Bolling, S. F. (2009). Spiritual struggle related to plasma interleukin-6 prior to cardiac surgery. *Psychology of Religion and Spirituality, 1*(2), 112-128. doi:10.1037/a0015775

Ai, A. L., Pargament, K., Kronfol, Z., Tice, T. N., & Appel, H. (2010). Pathways to postoperative hostility in cardiac patients: Mediation of coping, spiritual struggle and interleukin-6. *Journal of Health Psychology, 15*(2), 186-195. doi:10.1177/1359105309345556

Allport, G. W. (1958). *The nature of prejudice*

Antoniou, A. -., Polychroni, F., & Vlachakis, A. -. (2006). Gender and age differences in occupational stress and professional burnout between primary and high-school teachers in greece. *Journal of Managerial Psychology, 21*(7), 682-690. doi:10.1108/02683940610690213

Aparicio, S., Welch Bacon, C. E., Parsons, J. T., Bay, R. C., Cohen, R. P., DeZeeuw, T., & Valovich McLeod, T. C. (2015). Staffing levels at national collegiate athletic association football bowl subdivision-level institutions. *Journal of Athletic Training (Allen Press), 50*(12), 1277-1285. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=112822481&site=ehost-live&scope=site

Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.

Bianchi, R., Schonfeld, I., & Laurent, E. (2015). Burnout-depression overlap: A review. *Clinical Psychology Review, 3*6, 28-41. doi:10.1016/j.cpr.2015.01.004

Bowman, T., Mazerolle, S., & Goodman, A. (2015). Career commitment of postprofessional athletic training program graduates. *Journal of Athletic Training, 5*0(4), 426-431. doi:10.4085/1062-6050-49.3.69

Bradley, R., Schwartz, A. C., & Kaslow, N. J. (2005). Posttraumatic stress disorder symptoms among low-income, african american women with a history of intimate partner violence and suicidal behaviors: Self-esteem, social support, and religious coping. *Journal of Traumatic Stress, 1*8(6), 685-696. doi:10.1002/jts.20077

Brake, T., Bouman, A. M., Gorter, R. C., Hoogstraten, J., & Eijkman, M. A. J. (2008). Using the maslach burnout inventory among dentists: Burnout measurement and trends. *Community Dentistry and Oral Epidemiology, 3*6(1), 69-75. doi:10.1111/j.1600-0528.2007.00372.x

Braun, M., Schonfeldt-Lecuona, C., Kessler, H., Beck, J., Beschoner, P., & Freudenmann, R. (2008). Burnout, depression and substance use in german psychiatrists: Data of a pilot study. *Nervenheilkunde, 2*7(9), 800-800.

Bufford, R., Paloutzian, R., & Ellison, C. (1991). Norms for the spiritual well-being scale. *Journal of Psychology and Theology, 1*9(1), 56-70.

Burke, R. J., Shearer, J., & Deszca, G. (1984). Burnout among men and women in police work: An examination of the cherniss model. *Journal of Health and Human Resources Administration,* 162-188.

Burnout. (2010). *Black's medical dictionary, 42nd editio*n. London, UK: A&C Black.

Caccese, T., & Mayerberg, C. (1984). Gender differences in perceived burnout of college coaches. *Journal of Sport Psychology,* 6, 279-288.

Campbell, D. (1985). The prevalence of burnout among athletic trainers. *Athletic Training, 2*0, 110-113.

Capel, S. A. (1986). Psychological and organizational factors related to burnout in athletic trainers. *Research Quarterly for Exercise & Sport, 5*7(4), 321-328. Retrieved from http://articles.sirc.ca/search.cfm?id=233938

Capel, S. (1990). Attrition of athletic trainers. *Athletic Training, 2*5, 34-35.

Carlson, J. R., Anson, R. H., & Thomas, G. (2003). Correctional officer burnout and stress: Does gender matter*? The Prison Journal, 8*3(3), 277-288. doi:10.1177/0032885503256327

Chandler, D. J. (2009). Pastoral burnout and the impact of personal spiritual renewal, rest-taking, and support system practices. *Pastoral Psychology, 5*8(3), 273-287. doi:10.1007/s11089-008-0184-4

Chandler, D. J. (2010). The impact of pastors' spiritual practices on burnout. *The Journal of Pastoral Care & Counseling : JPCC, 6*4(2), 6.1-9.

Charoensukmongkol, P., Moqbel, M., & Gutierrez-Wirsching, S. (2016). The role of co-worker and supervisor support on job burnout and job satisfaction. *Journal of Advances in Management Research, 1*3(1), 4-22. doi:10.1108/JAMR-06-2014-0037

Clapper, D. C., & Harris, L. L. (2008). Reliability and validity of an instrument to describe burnout among collegiate athletic trainers. *Journal of Athletic Training (National Athletic Trainers' Association), 4*3(1), 62-69. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=31317375&site=ehost-live&scope=site

Cole, B. S. (2005). Spiritually-focused psychotherapy for people diagnosed with cancer: A pilot outcome study. *Mental Health, Religion & Culture,* 8(3), 217-226. doi:10.1080/13694670500138916

Coleman, C. L. (2004). The contribution of religious and existential well-being to depression among african american heterosexuals with HIV infection. *Issues in Mental Health Nursing, 2*5(1), 103-110.

Colucciello, M. L. (1990). Socialization into nursing: A developmental approach. *Nursingconnections,* 3(2), 17-27.

Cotton, S., Larkin, E., Hoopes, A., Cromer, B. A., & Rosenthal, S. L. (2005). The impact of adolescent spirituality on depressive symptoms and health risk behaviors. *Journal of Adolescent Health, 3*6(6), 529-529. doi:10.1016/j.jadohealth.2004.07.017

Cotton, S., Puchalski, C. M., Sherman, S. N., Mrus, J. M., Peterson, A. H., Feinberg, J., . . . Tsevat, J. (2009). Spirituality and religion in patients with HIV/AIDS. *Journal of General Internal Medicine, 2*4(8), 1-994. doi:10.1007/s11606-009-1052-3

Dale, J., & Weinberg, R. (1990). Burnout in sport : A review and critique. *Journal of Applied Sport Psychology,* 2(1), 67-83. Retrieved from http://articles.sirc.ca/search.cfm?id=294749

Dawson, D., Grant, B., & Ruan, W. (2005). The association between stress and drinking: Modifying effects of gender and vulnerability. *Alcohol and Alcoholism, 4*0(5), 453-460. doi:10.1093/alcalc/agh176

DeFreese, J. D., & Mihalik, J. P. (2016). Work-based social interactions, perceived stress, and workload incongruence as antecedents of athletic trainer burnout. *Journal of Athletic Training (Allen Press), 5*1(1), 28-34. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=113499504&site=ehost-live&scope=site

Dorrel, B., Symonds, M. L., & Lammert, J. (2014). Role strain in dual role collegiate athletic trainers. *Missouri Journal of Health, Physical Education, Recreation & Dance, 2*4, 40-54. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=113834139&site=ehost-live&scope=site

Dunn, L. L., Hundley, M. C., & Shelton, M. M. (2007). Spiritual well-being, anxiety, and depression in antepartal women on bedrest. *Issues in Mental Health Nursing, 2*8(11), 1235-1246. doi:10.1080/01612840701651504

Dyrbye, L. N., Shanafelt, T. D., Balch, C. M., Satele, D., Sloan, J., & Freischlag, J. (2011). Relationship between work-home conflicts and burnout among american surgeons: A comparison by sex. *Archives of Surgery, 14*6(2), 211-217. doi:10.1001/archsurg.2010.310

Dyrbye, L. N., Thomas, M. R., Huntington, J. L., Lawson, K. L., Novotny, P. J., Sloan, J. A., & Shanafelt, T. D. (2006). Personal life events and medical student burnout: A multicenter study. *Academic Medicine, 8*1(4), 374-384. doi:10.1097/00001888-200604000-00010

Dyrbye, L. (2010). Physicians married or partnered to physicians: A comparative study in the american college of surgeons. *J Am Coll Surg, 21*1(5), 663-671. doi:10.1016/j.jamcollsurg.2010.03.032

Eberman, L. E., & Kahanov, L. (2013). Athletic trainer perceptions of life-work balance and parenting concerns. *Journal of Athletic Training, 4*8(3), 416-423. doi:10.4085/1062-6050-48.2.01

Eberman, L. E., Kahanov, L., Kahanov, M., & Yoder, A. (2011). Mentorship of new faculty members. *International Journal of Athletic Therapy & Training, 1*6(6), 34-37. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=69644883&site=ehost-live&scope=site

Edmondson, K. A., Lawler, K. A., Jobe, R. L., Younger, J. W., Piferi, R. L., & Jones, W. H. (2005). Spirituality predicts health and cardiovascular responses to stress in young adult women. *Journal of Religion and Health, 4*4(2), 161-171. doi:10.1007/s10943-005-2774-0

Edwards, D., Burnard, P., Hannigan, B., Cooper, L., Adams, J., Juggessur, T., . . . Coyle, D. (2006). Clinical supervision and burnout: The influence of clinical supervision for community mental health nurses. *Journal of Clinical Nursing, 1*5(8), 1007-1015. doi:10.1111/j.1365-2702.2006.01370.x

Ellison, C. W. (1983). Spiritual well-being: Conceptualization and measurement. *Journal of Psychology and Theology, 1*1, 330-331-340.

Fender, L. K. (1989). Athlete burnout: Potential for research and intervention strategies. *Sport Psychologist,* 3(1), 63-71. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=20736216&site=ehost-live&scope=site

Firth, H., McKeown, P., McIntee, J., & Britton, P. (1987). Professional depression, 'burnout' and personality in longstay nursing. *International Journal of Nursing Studies, 2*4(3), 227-237. doi:10.1016/0020-7489(87)90005-8

Francis, L. J., Hills, P., & Kaldor, P. (2009). The oswald clergy burnout scale: Reliability, factor structure and preliminary application among australian clergy. *Pastoral Psychology, 5*7(5-6), 243-252.

Freudenberger, H. J. (1974). Staff burn-out. *Journal of Social Issues, 30*(1), 159-165.

G. Koenig, D. B. L., Harold. (2001). Religion and mental health: Evidence for an association. *International Review of Psychiatry, 13*(2), 67-78. doi:10.1080/09540260124661

Gaffney, B., Hardin, R., Fitzhugh, E., & Gi-Yong Koo. (2012). The relationship between burnout and job satisfaction in certified athletic trainers. *International Journal of Sport Management, 13*(1), 73-86. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=73350924&site=ehost-live&scope=site

Gallup, G. (2011). In Newport F. (Ed.), *More than 9 in 10 americans continue to believe in go*d. Princeton, NJ:

Genia, V. (2001). Evaluation of the spiritual well-being scale in a sample of college students. *International Journal for the Psychology of Religion, 1*1(1), 25-33. doi:10.1207/S15327582IJPR1101_03

Giacobbi Jr., P. R. (2009). Low burnout and high engagement levels in athletic trainers: Results of a nationwide random sample. *Journal of Athletic Training (National Athletic Trainers' Association), 4*4(4), 370-377. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=43928237&site=ehost-live&scope=site

Gieck, J., Brown, R. S., & Shank, R. H. (1982). Burnout syndrome among athletic trainers. *Athletic Training, 1*7(1), 36-40. Retrieved from http://articles.sirc.ca/search.cfm?id=112792

Gieck, J. H. (1986). Athletic training burnout: A case study. *Athletic Training, 2*1(1), 43-43. Retrieved from http://articles.sirc.ca/search.cfm?id=183503

Goodman, A., Mensch, J. M., Jay, M., French, K. E., Mitchell, M. F., & Fritz, S. L. (2010). Retention and attrition factors for female certified athletic trainers in the national collegiate athletic association division I football bowl subdivision setting. *Journal of Athletic Training, 4*5(3), 287-298. doi:10.4085/1062-6050-45.3.287

Groth, J. J., Ayers, S. F., Miller, M. G., & Arbogast, W. D. (2008). Self-reported health and fitness habits of certified athletic trainers. *Journal of Athletic Training, 4*3(6), 617-623. doi:10.4085/1062-6050-43.6.617

Halbesleben, J. R. B., Wakefield, B. J., Wakefield, D. S., & Cooper, L. B. (2008). Nurse burnout and patient safety outcomes: Nurse safety perception versus reporting behavior. *Western Journal of Nursing Research, 3*0(5), 560-577. doi:10.1177/0193945907311322

Hall, W. M., Schmader, T., & Croft, E. (2015). Engineering exchanges. *Social Psychological and Personality Science,* 6(5), 528-534. doi:10.1177/1948550615572637

Hardiman, P., & Simmonds, J. G. (2013). Spiritual well-being, burnout and trauma in counsellors and psychotherapists. *Mental Health, Religion & Culture, 1*6(10), 1044-1055. doi:10.1080/13674676.2012.732560

Harrell, Z. A. T., & Powell, K. (2014). The relationship between parent and student religious coping and college alcohol use. *Journal of Religion and Health, 5*3(3), 895-903. doi:10.1007/s10943-013-9683-4

Hedden, S. L., United States. Substance Abuse and Mental Health Services Administration, & RTI International. (2015). *Behavioral health trends in the united states: Results from the 2014 national survey on drug use and healt*h. Rockville, MD: Substance Abuse and Mental Health Services Administration, Department of Heath & Human Services.

Hendrix, A. E., & Acevedo, E. O. (2000). An examination of stress and burnout in certified athletic trainers at division I-A universities. *Journal of Athletic Training (National Athletic Trainers' Association), 3*5(2), 139. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=3236612&site=ehost-live&scope=site

Henning, J. M., & Weidner, T. G. (2008). Role strain in collegiate athletic training approved clinical instructors. *Journal of Athletic Training, 4*3(3), 275-283. doi:10.4085/1062-6050-43.3.275

Herman-Kinney, N. J., & Kinney, D. A. (2013). Sober as deviant: The stigma of sobriety and how some college students “Stay dry” on a “Wet” campus. *Journal of Contemporary Ethnography, 4*2(1), 64-103. doi:10.1177/0891241612458954

Himle, D. P., Jayaratne, S., & Thyness, P. A. (1993). The impact of setting on work-related stress and performance among norwegian social workers. *International Social Work, 3*6(3), 221-231. doi:10.1177/002087289303600304

Holt-Lunstad, J., Steffen, P. R., Sandberg, J., & Jensen, B. (2011). Understanding the connection between spiritual well-being and physical health: An examination of ambulatory blood pressure, inflammation, blood lipids and fasting glucose. *Journal of Behavioral Medicine, 3*4(6), 477-488. doi:10.1007/s10865-011-9343-7

Hughes, P. H., Storr, C. L., Sheehan, D. V., Brandenburg, N. A., Baldwin Jr, D. C., Brandenburg, N. A., . . . Anthony, J. C. (1999). Physician substance use by medical specialty. *Journal of Addictive Diseases, 1*8(2), 23-37. doi:10.1300/J069v18n02_03

Innstrand, S. T., Langballe, E. M., & Falkum, E. (2011). The longitudinal effects of individual vulnerability, organisational factors, and work-home interaction on burnout among male church ministers in norway. *Mental Health, Religion & Culture, 1*4(3), 241-257. doi:10.1080/13674670903470621

Kahanov, L., & Eberman, L. E. (2011). Age, sex, and setting factors and labor force in athletic training. *Journal of Athletic Training (National Athletic Trainers' Association), 4*6(4), 424-430. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=65923840&site=ehost-live&scope=site

Kahanov, L., Loebsack, A. R., Masucci, M. A., & Roberts, J. (2010). Perspectives on parenthood and working of female athletic trainers in the secondary school and collegiate settings. *Journal of Athletic Training, 4*5(5), 459-466. doi:10.4085/1062-6050-45.5.459

Kania, M. L., Meyer, B. B., & Ebersole, K. T. (2009). Personal and environmental characteristics predicting burnout among certified athletic trainers at national collegiate athletic association institutions. *Journal of Athletic Training (National Athletic Trainers' Association), 4*4(1), 58-66. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=37588135&site=ehost-live&scope=site

Karatepe, O. M., Babakus, E., & Yavas, U. (2012). Affectivity and organizational politics as antecedents of burnout among frontline hotel employees. *International Journal of Hospitality Management, 3*1(1), 66-75. doi:10.1016/j.ijhm.2011.04.003

Kazarian, S. S., & McCabe, S. B. (1991). Dimensions of social support in the MSPSS: Factorial structure, reliability, and theoretical implications. *Journal of Community Psychology, 1*9(2), 150-160. doi:10.1002/1520-6629(199104)19:2<150::AID-JCOP2290190206>3.0.CO;2-J

Kumar, S. (2015). Influence of spirituality on burnout and job satisfaction: A study of academic professionals in oman. *South Asian Journal of Management, 2*2(3), 137.

Lackritz, J. R. (2004). Exploring burnout among university faculty: Incidence, performance, and demographic issues. *Teaching and Teacher Education, 2*0(7), 713-729. doi:10.1016/j.tate.2004.07.002

Lambert, N. M., & Dollahite, D. C. (2006). How religiosity helps couples prevent, resolve, and overcome marital conflict. *Family Relations, 5*5(4), 439-449. doi:10.1111/j.1741-3729.2006.00413.x

Lee, R. T., & Ashforth, B. E. (1993). A longitudinal study of burnout among supervisors and managers: Comparisons between the Leiter and Maslach (1988) and Golembiewski et al. (1986) models. *Organizational Behavior and Human Decision Processes, 5*4(3), 369-398. doi:10.1006/obhd.1993.1016

Leiter, M. P. (1988). Burnout as a function of communication patterns. *Group & Organization Studies, 1*3(1), 111.

Levin, J. S., & Schiller, P. L. (1987). Is there a religious factor in health*? Journal of Religion and Health, 2*6(1), 9-36. doi:10.1007/BF01533291

Lewis, C. A., Maltby, J., & Day, L. (2005). Religious orientation, religious coping and happiness among UK adults. *Personality and Individual Differences, 3*8(5), 1193-1202. doi:10.1016/j.paid.2004.08.002

Liang, S., & Hsieh, A. (2007). Burnout and workplace deviance among flight attendants in taiwan1. *Psychological Reports, 10*1(2), 457-468. doi:10.2466/pr0.101.2.457-468

Losa Iglesias, M. E., Vallejo, R. B. d. B., & Fuentes, P. S. (2010). The relationship between experiential avoidance and burnout syndrome in critical care nurses: A cross-sectional questionnaire survey. *International Journal of Nursing Studies, 4*7(1), 30-37. doi:10.1016/j.ijnurstu.2009.06.014

Luk, A. L., Bessie P. S. Chan, Cheong, S. W., & Stanley K. K. Ko. (2010). An exploration of the burnout situation on teachers in two schools in macau. *Social Indicators Research, 9*5(3), 489-502. doi:10.1007/s11205-009-9533-7

Manfreda, K. L., Bosnjak, M., Berzelak, J., Haas, I., & Vehovar, V. (2008). Web surveys versus other survey modes: A meta-analysis comparing response rates. *International Journal of Market Research, 5*0(1), 79-104.

Martin, R. A., Ellingsen, V. J., Tzilos, G. K., & Rohsenow, D. J. (2015). General and religious coping predict drinking outcomes for alcohol dependent adults in treatment. *The American Journal on Addictions, 2*4(3), 240-245. doi:10.1111/ajad.12181

Maslach, C., & Jackson, S. (1986). *Maslach burnout inventory: Human services editio*n. Mountain View, CA: CPP, Inc.

Maslach, C., Jackson, S. E., & Leiter, M. P. (2016). *Maslach burnout inventory manua*l (4th ed.) Mind Garden, Inc.

Maslach, C., Jackson, S. E., & Leiter, M. P. (1997). Maslach burnout inventory. *Evaluating Stress: A Book of Resources,* 3, 191-218.

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology, 5*2(1), 397-422. doi:10.1146/annurev.psych.52.1.397

Maslach, C. (1982). *Burnout, the cost of caring*. Englewood Cliffs, N.J: Prentice-Hall.

Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Organizational Behavior,* 2(2), 99-113. doi:10.1002/job.4030020205

Mazerolle, S., & Eason, C. (2015). Perceptions of national collegiate athletic association division I female athletic trainers on motherhood and work-life balance: Individual- and sociocultural-level factors. *Journal of Athletic Training, 5*0(8), 854-861. doi:10.4085/1062-6050-50.5.02

Mazerolle, S., & Eason, C. (2016). Navigating motherhood and the role of the head athletic trainer in the collegiate setting. *Journal of Athletic Training, 5*1(7), 566-575. doi:10.4085/1062-6050-51.10.02

Mazerolle, S., Eason, C., & Eberman, L. (2017). Perceptions of work-life balance practices offered in the collegiate practice setting. *Journal of Athletic Training, 5*2(12), 1131-1139. doi:10.4085/1062-6050-52.11.28

Mazerolle, S., Eason, C., Pitney, W., & Mueller, M. (2015). Sex and employment-setting differences in work-family conflict in athletic training. *Journal of Athletic Training, 5*0(9), 958-963. doi:10.4085/1052-6050-50.2.14

Mazerolle, S., Goodman, A., & Pitney, W. (2015). Achieving work-life balance in the national collegiate athletic association division I setting, part I: The role of the head athletic trainer. *Journal of Athletic Training, 5*0(1), 82-88. doi:10.4085/1062-6050-49.3.88

Mazerolle, S., & Pitney, W. (2011). Workplace environment: Strategies to promote and enhance the quality of life of an athletic trainer. *Athletic Training & Sports Health Care,* 3(2), 59-62. doi:10.3928/19425864-20110225-04

Mazerolle, S., Pitney, W., & Eason, C. (2015). Experiences of work-life conflict for the athletic trainer employed outside the national collegiate athletic association division I clinical setting. *Journal of Athletic Training, 50*(7), 748-759. doi:10.4085/1062-6050-50.4.02

Mazerolle, S. M., Bowman, T. G., & Fister, C. (2015). Coping strategies used by athletic training majors to manage clinical and academic responsibilities. *International Journal of Athletic Therapy & Training, 20*(3), 4-12. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=102628371&site=ehost-live&scope=site

Mazerolle, S. M., & Bruening, J. E. (2006). Sources of work-family conflict among certified athletic trainers, part 1. *Athletic Therapy Today, 1*1(5), 33-35.

Mazerolle, S. M., Bruening, J. E., & Casa, D. J. (2008). Work-family conflict, part I: Antecedents of work-family conflict in national collegiate athletic association division I-A certified athletic trainers. *Journal of Athletic Training, 4*3(5), 505-512. doi:10.4085/1062-6050-43.5.505

Mazerolle, S. M., Bruening, J. E., Casa, D. J., & Burton, L. J. (2008). Work-family conflict, part II: Job and life satisfaction in national collegiate athletic association division I-A certified athletic trainers. *Journal of Athletic Training (National Athletic Trainers' Association), 4*3(5), 513-522. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=34918986&site=ehost-live&scope=site

Mazerolle, S. M., Eason, C. M., & Goodman, A. (2016). Exploring summer medical care within the national collegiate athletic association division I setting: A perspective from the athletic trainer. *Journal of Athletic Training, 5*1(2), 175-175. doi:10.4085/1062-6050-51.3.03

Mazerolle, S. M., Eason, C. M., & Trisdale, W. A. (2015). Work-life balance perspectives of male NCAA division I athletic trainers: Strategies and antecedents. *Athletic Training & Sports Health Care,* 7(2), 50-62. doi:10.3928/19425864-20150216-01

Mazerolle, S. M., Faghri, P., Marcinick, M., & Milazzo, S. (2010). Athletic trainers' workload in NCAA division I athletic programs. *Athletic Therapy Today, 1*5(3), 34-37. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=51536379&site=ehost-live&scope=site

Mazerolle, S. M., Monsma, E., Dixon, C., & Mensch, J. (2012). An assessment of burnout in graduate assistant certified athletic trainers. *Journal of Athletic Training (Allen Press), 4*7(3), 320-328. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=77413269&site=ehost-live&scope=site

Mazerolle, S. M., & Pagnotta, K. D. (2011). Student perspectives on burnout. *Athletic Training Education Journal,* 6(2), 60.

Mazerolle, S. M., Pitney, W. A., Casa, D. J., & Pagnotta, K. D. (2011). Assessing strategies to manage work and life balance of athletic trainers working in the national collegiate athletic association division i setting. *Journal of Athletic Training, 4*6(2), 194-205. doi:10.4085/1062-6050-46.2.194

Mazerolle, S. M., Pitney, W. A., & Goodman, A. (2013). Factors influencing the decisions of male athletic trainers to leave the NCAA division-I practice setting. *International Journal of Athletic Therapy & Training, 1*8(6), 7-12. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=91659360&site=ehost-live&scope=site

Mazerolle, S., & Eason, C. (2016). A longitudinal examination of work-life balance in the collegiate setting. *Journal of Athletic Training, 5*1(3), 223-223. doi:10.4085/1062-6050-51.4.03

McCullough, M. E., Hoyt, W. T., Larson, D. B., Koenig, H. G., & Thoresen, C. (2000). Religious involvement and mortality: A meta-analytic review. *Health Psychology, 19*(3), 211-222. doi:10.1037//0278-6133.19.3.211

Mela, M. A., Marcoux, E., Baetz, M., Griffin, R., Angelski, C., & Deqiang, G. (2008). The effect of religiosity and spirituality on psychological well-being among forensic psychiatric patients in canada. *Mental Health, Religion & Culture, 1*1(5), 517-532. doi:10.1080/13674670701584847

Moberg, D. O., & Brusek, P. M. (1978). Spiritual well-being: A neglected subject in quality of life research. *Social Indicators Research,* 5(3), 303-323. doi:10.1007/BF00352936

Monod, S., Brennan, M., Rochat, E., Martin, E., Rochat, S., & Büla, C. J. (2011). Instruments measuring spirituality in clinical research: A systematic review. *Journal of General Internal Medicine, 2*6(11), 1345-1357.

National Athletic Trainers' Association. (2018). March 2018 NATA certified membership by job setting. Retrieved from https://members.nata.org/members1/documents/membstats/2018-03.htm

National Institute on Alcohol Abuse and Alcoholism. (2016). Drinking levels defined. Retrieved from https://www.niaaa.nih.gov/alcohol-health/overview-alcohol-consumption/moderate-binge-drinking

National Institute on Drug Abuse. (2016). *Monitoring the future: National survey results on drug use: 1975-2015: 2015 overview, key findings on adolescent drug use;2016 ASI 4494-14*. ().

National Interfaith Coalition on Aging. (1975). *Spiritual well-being: A definitio*n. Athens, GA: NICA.

Naugle, K. E., Behar-Horenstein, L., Dodd, V. J., Tillman, M. D., & Borsa, P. A. (2013). Perceptions of wellness and burnout among certified athletic trainers: Sex differences. *Journal of Athletic Training (Allen Press), 4*8(3), 424-430. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=90102175&site=ehost-live&scope=site

Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996). Development and validation of work-family conflict and family-work conflict scales. *Journal of Applied Psychology, 8*1(4), 400-410. doi:10.1037//0021-9010.81.4.400

Nirel, N., Goldwag, R., Feigenberg, Z., Abadi, D., & Halpern, P. (2008). Stress, work overload, burnout, and satisfaction among paramedics in Israel. *Prehospital and Disaster Medicine : The Official Journal of the National Association of EMS Physicians and the World Association for Emergency and Disaster Medicine in Association with the Acute Care Foundation, 2*3(6), 537-546. doi:10.1017/S1049023X00006385

Oglesby, L. W., Amrani, K. A., Wynveen, C. J., & Gallucci, A. R. (2018). Do energy drink consumers study more*? Journal of Community Health, 4*3(1), 48-54. doi:10.1007/s10900-017-0386-8

Olowookere, E. I., Adekeye, O. A., Adejumo, G. O., Agoha, B. C., & Sholarin, M. A. (2016). Influence of religiosity on turnover intention: Empirical evidence from selected employees in lagos and ogun states. *Ife Psychologia, 2*4(2), 132.

Oreskovich, M. R., Shanafelt, T., Dyrbye, L. N., Tan, L., Sotile, W., Satele, D., . . . Boone, S. (2015). The prevalence of substance use disorders in american physicians. *The American Journal on Addictions, 2*4(1), 30-38. doi:10.1111/ajad.12173

Palamar, J. J., Kiang, M. V., & Halkitis, P. N. (2014). Religiosity and exposure to users in explaining illicit drug use among emerging adults. *Journal of Religion and Health, 5*3(3), 658-674. doi:10.1007/s10943-012-9660-3

Paloutzian, R., & Ellison, C. (1982). Spiritual well-being scale. *Measures of Religiosity,* , 382-385.

Parenteau, S. C. (2017). Religious coping and substance use: The moderating role of sex. *Journal of Religion and Health, 5*6(2), 380-387. doi:10.1007/s10943-015-0166-7

Pargament, K., Feuille, M., & Burdzy, D. (2011). The brief RCOPE: Current psychometric status of a short measure of religious coping. *Religions,* 2(1), 51-76. doi:10.3390/rel2010051

Pargament, K. I., Smith, B. W., Koenig, H. G., & Perez, L. (1998). Patterns of positive and negative religious coping with major life stressors. *Journal for the Scientific Study of Religion, 3*7(4), 710-724.

Pastore, D., & Kuga, D. (1993). High school coaches of women's teams: An evaluation of burnout levels. *Physical Educator, 5*0(3), 126-131.

Piderman, K. M., Schneekloth, T. D., Shane Pankratz, V., Maloney, S. D., & Altchuler, S. I. (2007). Spirituality in alcoholics during treatment. *American Journal on Addictions, 1*6(3), 232-237. doi:10.1080/10550490701375616

Pitney, W. A. (2006). Organizational influences and quality-of-life issues during the professional socialization of certified athletic trainers working in the National Collegiate Athletic Association division I setting. *Journal of Athletic Training, 4*1(2), 189-195. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=20951540&site=ehost-live&scope=site

Pitney, W. A., Ilsley, P., & Rintala, J. (2002). The professional socialization of certified athletic trainers in the national collegiate athletic association division I context. *Journal of Athletic Training, 3*7(1), 63-70.

Pitney, W. A., Mazerolle, S. M., & Pagnotta, K. D. (2011). Work-family conflict among athletic trainers in the secondary school setting. *Journal of Athletic Training, 4*6(2), 185-193. doi:10.4085/1062-6050-46.2.185

Pitney, W. A., Stuart, M. E., & Parker, J. (2008). Role strain among dual position physical educators and athletic trainers working in the high school setting. *Physical Educator, 65*(3), 157.

Reed, P. G., & Reed, P. G. (1986). Religiousness among terminally ill and healthy adults. *Research in Nursing & Health,* 9(1), 35-41. doi:10.1002/nur.4770090107

Reed, S., & Giacobbi Jr, P. R. (2004). The stress and coping responses of certified graduate athletic training students. *Journal of Athletic Training, 3*9(2), 193-200.

Riter, T. S., Kaiser, D. A., Hopkins, J. T., Pennington, T. R., Chamberlain, R., & Eggett, D. (2008). Presence of burnout in undergraduate athletic training students at one western us university. *Athletic Training Education Journal,* 3(2), 57.

Ronen, S., & Malach Pines, A. (2008). Gender differences in engineers' burnout. *Equal Opportunities International, 2*7(8), 677-691. doi:10.1108/02610150810916749

Ross, C. E. (1990). Religion and psychological distress. *Journal for the Scientific Study of Religion, 2*9(2), 236-245.

Rupert, P. A., & Morgan, D. J. (2005). Work setting and burnout among professional psychologists. *Professional Psychology: Research and Practice, 3*6(5), 544-550. doi:10.1037/0735-7028.36.5.544

Rupert, P. A., Stevanovic, P., & Hunley, H. A. (2009). Work-family conflict and burnout among practicing psychologists. *Professional Psychology: Research and Practice, 4*0(1), 54-61. doi:10.1037/a0012538

Safiya, G. D., Marcia, M. H., Colleen, D., & Laderman, G. (2009). Spiritual well-being, depressive symptoms, and immune status among women living with HIV/AIDS. *Women and Health, 4*9(2-3), 119-143. doi:10.1080/03630240902915036

Sari, H. (2005). How do principals and teachers in special schools in turkey rate themselves on levels of burnout, job satisfaction, and locus of control*? Alberta Journal of Educational Research, 51*(2), 172-192.

Shaddock, A. J., Hill, M., & van Limbeek, C. A. H. (1998). Factors associated with burnout in workers in residential facilities for people with an intellectual disability. *Journal of Intellectual and Developmental Disability, 23*(4), 309.

Shin, H., Park, Y., Ying, J., Kim, B., Noh, H., & Lee, S. (2014). Relationships between coping strategies and burnout symptoms: A meta-analytic approach. *Professional Psychology-Research and Practice, 45*(1), 44-56. doi:10.1037/a0035220

Smith, R. (1986). Toward A cognitive affective model of athletic burnout. *Journal of Sport Psychology, 8*, 36-50.

Stassen, W., Van Nugteren, B., & Stein, C. (2013). Burnout among advanced life support paramedics in Johannesburg, South Africa. *Emergency Medicine Journal, 30*(4), 331-333. doi:10.1136/emermed-2011-200920

Tarakeshwar, N., Vanderwerker, L. C., Paulk, E., Pearce, M. J., Kasl, S. V., & Prigerson, H. G. (2006). Religious coping is associated with the quality of life of patients with advanced cancer. *Journal of Palliative Medicine, 9*(3), 646-657. doi:10.1089/jpm.2006.9.646

Terranova, A. B., & Henning, J. M. (2011). National Collegiate Athletic Association division and primary job title of athletic trainers and their job satisfaction or intention to leave athletic training. *Journal of Athletic Training, 46*(3), 312-318.

Thrasher, A. B., Walker, S. E., Hankemeier, D. A., & Mulvihill, T. (2016a). Graduate-assistant athletic trainers' perceptions of professional socialization in the collegiate setting: Part I. *Journal of Athletic Training, 51*(10), 770; 758-770. doi:10.4085/1062-6050-51.11.09

Thrasher, A. B., Walker, S. E., Hankemeier, D. A., & Mulvihill, T. (2016b). Graduate-assistant athletic trainers' perceptions of the supervisor's role in professional socialization: Part II. *Journal of Athletic Training, 51*(10), 771; 779-779. doi:10.4085/1062-6050-51.11.10

Trinkoff, A. M., & Storr, C. L. (1998). Substance use among nurses: Differences between specialties. *American Journal of Public Health, 8*8(4), 581-585. doi:10.2105/AJPH.88.4.581

Tsevat, J., Leonard, A. C., Szaflarski, M., Sherman, S. N., Cotton, S., Mrus, J. M., & Feinberg, J. (2009). Change in quality of life after being diagnosed with HIV: A multicenter longitudinal study. *AIDS Patient Care and STDs, 23*(11), 931-937. doi:10.1089/apc.2009.0026

Unterrainer, H., Lewis, A., Collicutt, J., & Fink, A. (2013). Religious/Spiritual well-being, coping styles, and personality dimensions in people with substance use disorders. *International Journal for the Psychology of Religion, 23*(3), 204-213. doi:10.1080/10508619.2012.714999

Vergamini, G. (1981). Professional burnout: Implication for the athletic trainer. *Athletic Training, 16*(3), 197-198. Retrieved from http://articles.sirc.ca/search.cfm?id=112242

Walter, J. M., Van Lunen, B. L., Walker, S. E., Ismaeli, Z. C., & Oñate, J. A. (2009). An assessment of burnout in undergraduate athletic training education program directors. *Journal of Athletic Training (National Athletic Trainers' Association), 4*4(2), 190-196. Retrieved from http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=38017976&site=ehost-live&scope=site

Whelan-Gales, M. A., Quinn Griffin, M. T., Maloni, J., & Fitzpatrick, J. J. (2009). Spiritual well-being, spiritual practices, and depressive symptoms among elderly patients hospitalized with acute heart failure. *Geriatric Nursing, 3*0(5), 312-317. doi:10.1016/j.gerinurse.2009.04.001

Wiegand, D. L., & Funk, M. (2012). Consequences of clinical situations that cause critical care nurses to experience moral distress. *Nursing Ethics, 19*(4), 479-487. doi:10.1177/0969733011429342

Winkelstein Jr, W., & Rerate, A. C. (1964). Age trend of mortality from coronary artery disease in women and observations on the reproductive patterns of those affected. *American Heart Journal, 6*7(4), 481-488.

Winwood, P. C., & Winefield, A. H. (2004). Comparing two measures of burnout among dentists in australia. *International Journal of Stress Management, 1*1(3), 282-289. doi:10.1037/1072-5245.11.3.282

Worley, J. A., Vassar, M., Wheeler, D. L., & Barnes, L. L. B. (2008). Factor structure of scores from the maslach burnout inventory. *Educational and Psychological Measurement, 6*8(5), 797-823. doi:10.1177/0013164408315268

Yener, D., Oskaybaş, K., & Dursun, T. (2014). The effects of burnout on organizational commitment in logistics sector. *İşletme Araştırmaları Dergisi,* 6(2), 15-25.

Zedeck, S., Maslach, C., Mosier, K., & Skitka, L. (1988). Affective response to work and quality of family-life - employee and spouse perspectives. *Journal of Social Behavior and Personality,* 3(4), 135-157.

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment, 5*2(1), 30-41.