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# The Relationship Between Burnout and Personality Traits in Secondary School Athletic Trainers

Marissa Abbondanzio

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THE RELATIONSHIP BETWEEN BURNOUT AND PERSONALITY TRAITS IN  
SECONDARY SCHOOL ATHLETIC TRAINERS

by

MARISSA ABBONDANZIO

(Under the Direction of Jody Langdon)

ABSTRACT

**Introduction:** Research has found that 30% of Athletic Trainers (ATs) experience burnout in their career. Limited literature has found the effects of burnout on ATs in the secondary school setting, though they account for 18% of the population. **Objective:** The aim of this investigation was to determine the relationship between burnout and personality traits in secondary school ATs. **Methods:** Participants included 143 ATs working in the secondary school setting and members of National Athletic Trainers' Association (NATA). The Maslach Burnout Inventory (MBI) was used to measure level of burnout. The Big Five Inventory (BFI) was used to measure one's type of personality traits. After IRB approval, the NATA was contacted to send out emails over an 8 week period. **Data Analysis:** Cronbach's alpha was calculated for the BFI and MBI constructs. Likert responses for the burnout scale were averaged. Pearson correlation coefficients were estimated to test the correlation of MBI and BFI. Utilizing Spearman's Rho, correlations were run to examine associations among marital status, age, race, ethnicity, and gender with BFI and MBI. Three stepwise regressions were run to determine the contributions of significant individual factors on the constructs of burnout. **Results:** Neuroticism was positively correlated with emotional exhaustion (EE) and depersonalization (DP), but not with personal accomplishment (PA). Conscientiousness, agreeableness, and extraversion are negatively correlated with EE. Agreeableness and conscientiousness were negatively correlated with DP.

None of the personality traits were negatively correlated with PA and openness does not correlate with burnout. Further, regression analyses confirmed that personality traits predicted EE, DP, and PA. **Conclusion:** Our results highlight the existence of moderate levels of burnout in ATs employed in the secondary school setting. Further, participants who scored high with the BFI in extraversion, conscientiousness, and agreeableness have higher levels of EE and DP. In addition, individuals who scored high on the personality construct of neuroticism have a positive correlation with EE and DP. While it is important to have an understanding of the individual factors that may lead to burnout, it is also important to note that burnout is a multifaceted issue.

**INDEX WORDS:** Big five inventory, Maslach burnout inventory – health service survey, Health care providers, Work stresses, Job satisfaction, Individual factors, Coping mechanisms

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B.S., University of Florida, 2018

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MASTER OF SCIENCE

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## DEDICATION

I would like to dedicate this thesis to my friends and family for encouraging me to move to Georgia to further my education. I know that you all are only a phone call away if I ever need anything! I don't know where I'd be without you all and your endless support. Thank you for listening to me and allowing me to talk through my thoughts (even if you didn't understand my thesis rambles). Lastly, I am grateful for endless coffee dates and ranting sessions with my classmates. I love you all!

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## CHAPTER 1

### INTRODUCTION

In 2006, for the first time in history, membership in the National Athletic Trainers' Association (NATA) showed a decline by about 1% (Terranova & Henning, 2011). Since then membership has been increasing steadily, until this past year. In 2018 membership dropped again from 47,120 members in 2017 to 45,788 members in 2018, this time dropping by approximately 3% (NATA 2018 year-end membership statistics, 2019). There is no exact factor identified to associate individuals leaving the profession, however it is reasonable to speculate that it may be from a decrease in job satisfaction and/or burnout. Over the past 15 years, research has examined the correlation between burnout and various factors in health care professionals.

Burnout was first defined by Freudenberger and Maslach as a syndrome of emotional exhaustion, cynicism, depersonalization in relationships with workers, and reduced personal accomplishment that can occur in any individuals due to excessive work in stressful conditions (Marek et al., 2017; Maslach & Jackson, 1981). In 1986, Maslach and Jackson created and defined the new and most commonly used definition of burnout as a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who interact with numerous people on a daily basis (Maslach & Jackson, 1986). Within helping professions, emotional exhaustion (EE) can be defined as mental fatigue and emotional distance from one's work (DeFreese & Mihalik, 2016b; Maslach et al., 2001). Depersonalization (DP) can be described as an act of distancing oneself from patients (DeFreese & Mihalik, 2016b; Maslach et al., 2001). Finally, reduced personal accomplishment (PA) can be demonstrated by a lack of job-related efficacy (DeFreese & Mihalik, 2016b; Maslach et al., 2001).

Researchers have found that 30% of Athletic Trainers may experience some degree of burnout throughout their career (DeFreese & Mihalik, 2016b). The abundance of burnout research conducted within Athletic Training is likely due to its association with professional commitment, career longevity, and retention within the field, from both theoretical and empirical perspectives (Barrett et al., 2016a). These factors lead to a large number of employees either leaving the profession or moving to a different Athletic Training setting around the age of 30. However, 45% of female ATs stated they changed job settings after having children, which studies have shown this is typically around the age of 28 (Mazerolle, 2008; Kahanov & Eberman, 2011). Additionally, research has determined that male ATs tend to leave the profession at the age of 35 or transition to the secondary school setting from collegiate or professional settings.

Athletic Trainers (ATs) are Board Certified and Licensed health care professionals who render services or treatments, under the direction of or in collaboration with a physician, in accordance with their education and training and the states' statutes, rules and regulations (Athletic Training Glossary, 2019). Moreover, ATs can provide injury and illness prevention, wellness promotion and education, emergency care, examination and clinical diagnosis, therapeutic intervention, and rehabilitation of injury and medical conditions (Athletic Training Glossary, 2019). The typical demands of an AT across all competitive levels include 60+ hour workweeks, as well as required travel and minimal control over their weekly work schedule (Barrett et al., 2016a; Eason et al., 2018a).

In addition to being an Athletic Trainer, these healthcare professionals typically work in more than one role. Research has shown Athletic Trainers to work as an athletic director, administrator, teacher, physical therapist, coach, or team manager, for example. These additional

roles may lead to subsequent stressors that could increase burnout. It is important to note that burnout has also occurred in many of these additional roles. Teachers, for example, have been found to feel burned out between 5% and 20% at any given time (Farber, 1991; Hakanen et al., 2006). Research has determined that teachers show high levels of exhaustion and cynicism, which are the core dimensions of burnout (Maslach et al., 1997). Previous studies suggested that 43-63% of high school and collegiate coaches experience moderate and high levels of burnout across all of the burnout dimensions (Vealey et al., 1992). Moreover, researchers have observed that 53% of a nation-wide sample of physical therapists have experienced burnout, where most experience symptoms at the age of 32 and had been practicing for 5 to 9 years (Schuster et al., 1984). Ultimately, researchers discovered that all health care providers might experience burnout within the first five years of their career due to lack of adequate exposure or job stressors, idealization of the job, and self-selected attrition (Mazerolle et al., 2012).

Numerous demographic variables have also been observed in conjunction with burnout. Some of the common variables include age, gender, race, ethnicity, and marital status. Additionally, research conducted specifically in the AT setting has observed other variables such as number of years certified, personal income, number hours worked in/out season, education level, hours spent per week on leisure activities, and any other responsibilities they had outside of AT to determine if they are correlated with burnout (Barrett et al., 2016; Eason et al., 2015; Kania et al., 2009; Mazerolle et al., 2008a). Not only has burnout alone been evaluated in numerous professions, it has also been examined in combination with many different variables and inventories. Common factors that have been observed are level of social support, stress level, athletic training specific issues, occupational engagement, job satisfaction, and personality. Regardless of the other factors considered, most research utilizes the Maslach Burnout Inventory

(MBI; Maslach et al., 1996; Maslach et al., 2018), which can be used to observe the three constructs of burnout and determine one's overall feeling of burnout. Across several studies, the measure has been used in conjunction with personality measures to associate potential correlates of burnout.

In general, personality refers to individual differences in characteristic patterns of thinking, feeling, and behaving (Kazdin, 2000). To assess an individual's personality traits, the Big Five Inventory (BFI) can be used (John et al., 2008; John et al., 1991). The BFI further defines personality traits by its 5 constructs: openness, extraversion, agreeableness, neuroticism, and conscientiousness (Barrett et al., 2016a). Openness is a person's intellect and receptiveness to culture and its traits include broad-mindedness, originality, and imagination (Barrett et al., 2016a). Extraversion can be defined by its traits of assertiveness, talkativeness, activeness, and sociability (Barrett et al., 2016a). Agreeableness is someone's degree of friendliness and traits include cooperativeness, trust, tolerance, and soft-heartedness (Barrett et al., 2016a). Neuroticism is a person's stability and traits associated are anxiousness, depression, anger, and insecurity (Barrett et al., 2016a). Last, conscientiousness is defined as conformity or dependability and traits are achievement orientation, responsibility, thoughtfulness, and organization (Barrett et al., 2016a). Researchers utilizing the BFI and the MBI found that extraverts and agreeable coworkers may experience less burnout because they have a positive perception of their work (Barrett et al., 2016a). In addition, neuroticism was to be positively correlated with burnout due to an individual's dislike of challenges at work. Furthermore, a higher level of neuroticism has been found to result in greater emotional exhaustion and depersonalization (Barrett et al., 2016a). However, this combination has been yet to be observed in secondary school athletic trainers.

ATs are typically seen in collegiate, professional, and secondary school settings. However, the majority of research has investigated the collegiate and professional settings, which combined make up approximately 20% of the AT population (Athletic Training Glossary, 2019). Furthermore, minimal research has been conducted to determine the effects of burnout on Athletic Trainers in the secondary school setting, which makes up 18% of the AT population (Athletic Training Glossary, 2019). Athletic Trainers in all settings are subjected to a unique set of stressors such as high athlete-to-athletic trainer ratio, minimal financial support, and dual role responsibilities (Capel, 1986; Capel, 1990; Hendrix et al., 2000).

In considering potential access to an AT, the Athletic Training Locations and Services (ATLAS) project found that 67% of all high schools across America reported having access to an on-site AT service, where 35% had full-time, 30% had part-time, and 3% were per diem. Additionally, Huggins et al. (2019) reported that overall student enrollment at a school plays a role in the level of AT services. Interestingly, a full time AT was found to be employed at schools with  $\geq 600$  students, whereas schools with  $< 600$  students reported having only a majority of part-time ATs (Huggins et al., 2018; Huggins et al., 2019). In addition to a high number of athletes, ATs tends to receive a low salary for the number of services and the amount of time given, typically far more than the standard 40 hours. According to the 2018 NATA salary survey, the average ATs earnings (regardless of degree) was \$57,203, which was about 33% lower than occupational therapists (\$85,350) and about 36% lower than physical therapists (\$88,880) according to the Bureau of Labor statistics in 2018 (National occupational employment and wage estimates, 2019; NATA 2018 salary survey, 2019). Taken together, there is evidence to suggest that these factors, including role overload, particularly long work hours, and an insufficient number of staff members to adequately address the health care needs of the

institution, can negatively affect one's perception of commitment, which is often influenced by variables such as burnout, satisfaction, and work-life balance (Mazerolle et al., 2018a).

There is no exact factor to associate with why ATs are leaving the profession, however it is reasonable to speculate that it may be from a decrease in job satisfaction and/or burnout. A person with greater job satisfaction is less likely to leave a profession, whereas a person with lower job satisfaction is more likely to leave (Terranova & Henning, 2011). In addition, the attrition of athletic trainers has increased over time and it has been found that AT lose the compassion and excitement that initially drew them to the profession (Hendrix et al., 2000). One could speculate that this increase in attrition could be a factor why membership in the NATA declined in 2006 and again in 2018 (NATA 2018 year-end membership statistics, 2019; Terranova & Henning, 2011).

In addition to veteran professionals leaving this profession, Dodge et al. (2009) discovered that students were leaving the profession before degree completion because they believed athletic training could lead to role strain and/or burnout in the future. Additionally, these participants believed role strain could be due to an intensive time commitment, which in turn could possibly lead to a further decline in NATA membership. A greater understanding of personality factors that influence burnout in athletic trainers will provide direction to cope with burnout or perhaps even prevent it, if possible (Hendrix et al., 2000). Research is needed to determine the potential correlations for burnout in secondary school Athletic Trainers. Therefore, the purpose of this study is to examine the relationship of personality traits and burnout in secondary school Athletic Trainers. For the purpose of this study, we have two research questions:

- (1) How will the characteristic of the Big Five correlate to burnout?



(2) How will demographics and characteristics of the Big Five Inventory predict burnout?

Research question one has three hypotheses: (1) neuroticism will be positively correlated to burnout, (2) conscientiousness, agreeableness, and extraversion will be negatively correlated to burnout, and (3) openness will not correlate to burnout. The second research question has two hypotheses: (1) age, gender, race, ethnicity, marital status, and education will predict burnout and (2) the Big Five characteristics will predict burnout. These hypotheses are based on findings from previous research (Barrett et al., 2016; Costa & McCrae, 1992; Mazerolle et al., 2012).

## CHAPTER 2

### METHODS

#### **Purpose**

To examine the relationship between burnout and personality traits in secondary school Athletic Trainers.

#### **Participants**

Researchers gained access to 1000 participants' email addresses through the National Athletic Trainers' Association (NATA). All participants are BOC Certified Athletic Trainers classified as members in the NATA and as working in the secondary school setting. Surveys were collected from the end of October to the end of December. Inclusion criteria for this study included BOC certified ATs, members of the NATA, and practicing ATs in the secondary school setting. Exclusion criteria for this study includes retired ATs, AT students, and Graduate Assistant ATs. The delimitations of this study were practicing ATs in a secondary school setting and members of the NATA. The assumptions of this study were that participants will answer honestly and they are all actively practicing in the secondary school setting.

At the end of the collection period, 166 respondents completed the survey, 2 declined after opening, and 23 did not complete the survey. The final sample included 143 participants. Within the sample, the mean age was  $38.13 \pm 12.23$  years with approximately 58.7% female and 40.6% male (1 person chose not to disclose gender). With regards to race, 86.7% identified as Caucasian, 4.2% Asian/Pacific Islander, 2.8% African American, and 0.7% identified as another race not specified. In addition, 93% of the sample identified as not of Hispanic origin. Participants reported that 62.2% have earned a master's degree, 35% earned a bachelor's degree, and 2.8% have a doctoral degree. Among the sample, mean number of years employed as a

certified athletic trainer was  $14.5 \pm 11.21$  years. On average, participants in this sample have been at their current position for  $8.58 \pm 8.82$  years. Participants reported working a mean of  $80 \pm 47.57$  hours per week, with a mean of  $70 \pm 31.15$  hours spent directly related to athletic training specific duties. In addition, participants reported having a mean of  $12.86 \pm 7.73$  teams current in season at their respective schools and reported having a mean of  $468.99 \pm 322.36$  athletes under their direct care. When asked about additional individuals assisting with duties, respondents reported a mean of  $3.85 \pm 8.26$  athletic training students and a mean of  $11 \pm 0.71$  certified athletic trainers. In addition, participants reported a salary mean of  $\$56,739.14 \pm \$21,964.57$ . A full listing of demographic information is located in Tables 1 and 2.

### **Instrumentation**

Data were collected using a web-based survey instrument using Qualtrics®. Web-based versions of these surveys are psychometrically sound and are similar to the paper and pencil versions (Maslach et al., 2018; John et al., 2008). The survey consists of 3 individual sections: demographics, the Big Five Inventory, and the Maslach Burnout Inventory.

**Demographics.** The first section of the survey contains items pertaining to personal and professional demographic information. Examples of this information includes gender, age, highest level of education, marital status, number of years certified, number of years at their current position, years of experience, salary, hours worked each week, number of staff ATs and student ATs, number of athletes receiving care each season, number of teams currently covering, number of sports at their high school, other credentials they have, other responsibilities they have, and what they do to manage stress.

**Burnout.** The observed traits of personality have been compared to burnout characteristics using the Maslach Burnout Inventory – Human Services Survey (MBI-HSS)

(Maslach et al., 2018). This measure has demonstrated acceptable internal-consistency reliability in Athletic Trainers as well as expected relationships with variables theoretically expected to be associated with AT burnout (Giaccobbi, 2009; Hendrix et al., 2003; Kania et al., 2009).

Therefore, the MBI-HSS has been a widely accepted and used method to quantify burnout in the helping professions (Maslach & Jackson, 1986). It incorporates three subscales: emotional exhaustion, depersonalization, and personal accomplishment. Emotional exhaustion (EE) illustrates feelings of being emotionally overextended and exhausted by work. Depersonalization (DP) describes a loss of concern for the people with whom one is working and an impersonal and unfeeling response toward them. Lastly, personal achievement (PA) defines the feelings of accomplishment and a sense of competence about one's job and sense of self-appreciation for the successes achieved.

The MBI-HSS consists of 22 questions measuring the 3 constructs of burnout. This instrument is scored on a 7-point Likert-type scale ranging from "never feel the effects" (0) to "feel the effects everyday" (6). The MBI-HSS is scored by summing the numeric responses in each of the subscales. Scores may range from 0 to 54 on the EE construct, from 0 to 30 on the DP construct, and 0 to 48 on the PA construct. A high degree of burnout is reflected by high scores on the EE and DP subscales and a low score on the PA subscale. A high degree is  $\geq 27$  for EE,  $\geq 10$  for DP and  $\leq 33$  for PA. An average degree of burnout is reflected by average scores on the EE, DP, and PA subscale. An average degree of burnout is 19-26 for EE, 6-9 for DP, and 39-34 for PA. Lastly, a low degree of burnout is reflected by low scores on the EE and DP subscales and a high score on the PA subscale. A low degree of burnout is  $\leq 18$  for EE,  $\leq 5$  for DP, and  $\geq 40$  on PA (Maslach et al., 1996). The validity and reliability for the MBI-HSS have been demonstrated in various populations of health care professionals; as such, it is considered the

best instrument available to assess burnout in ATs (Kania et al., 2009). The internal consistency reliability for the three subscales ranged from a Cronbach's alpha of 0.71 to 0.90, with a test retest reliability ranging from  $r = 0.71$  to  $r = 0.90$  (Maslach et al., 1997). In the current study, Cronbach's alpha for EE, DP, and PA were favorable (0.93, 0.75, 0.72, respectively).

**Big Five Personality Traits.** The Big Five Inventory (BFI) will be used to assesses personality traits (John et al., 2008; John et al., 1991). It is categorized by openness to experience, extraversion, agreeableness, neuroticism, and conscientiousness (John et al., 1991). The BFI measures the five domains of personality using 44 characteristics formulated as statements about oneself and rated on a 5-point scale ranging from 1, disagree strongly to 5, agree strongly. The reliability coefficients for the BFI subscales have been consistently reported as strong (Barrett et al., 2016a). In the current study, Cronbach's alpha for openness, extraversion, agreeableness, neuroticism, and conscientiousness were favorable (0.78, 0.87, 0.79, 0.82, 0.75, respectively).

Openness describes a person's intellect and receptiveness to culture. Traits include broad-mindedness, originality, and imagination (Barrett et al., 2016a). Openness is measured by 10 items, which include "is inventive," "is curious about many different things," and "has an active imagination." Extraversion includes traits such as assertiveness, talkativeness, activeness, and sociability (Barrett et al., 2016a). This subscale contained 8 items and respondents were asked to determine if descriptors such as the following applied to them: "assertive personality," "is sometimes shy," or "is outgoing, sociable." Agreeableness is viewed as degree of friendliness and traits that define is include cooperativeness, trust, tolerance, and soft-heartedness (Barrett et al., 2016a). This construct is evaluated by nine items, including "is something rude to others," "can be cold and aloof," and "likes to cooperate with others." Neuroticism refers to a person's

stability and includes traits such as anxiousness, depression, anger, and insecurity (Barrett et al., 2016a). Eight items are used to determine a participant's level of neuroticism, including questions such as "worries a lot," "gets nervous easily," and "is emotionally stable, not easily upset." Lastly, conscientiousness can be described as conformity or dependability and characteristics include achievement orientation, responsibility, thoughtfulness, and organization (Barrett et al., 2016a). The nine items in the subscale include "tends to be lazy," "is easily distracted," and "makes plan and follows through." All negatively keyed items will be reversed scored.

### **Procedures**

Data were collected during an 8-week period from the end of October to the end of December 2019. Upon institutional review board approval from Georgia Southern University, researchers contacted the NATA and filled out a research survey request. The NATA contacted potential participants by email. The e-mail included the purpose of the study, a brief description of the survey, a description of how consent would be obtained, and a link to a website URL, where the participants completed an online survey. Passive consent was utilized. A pilot study was completed to determine that the survey took approximately 25 minutes to complete.

### **Data Analysis**

Data were analyzed using SPSS statistical software (version 25; IBM Corporation, Armonk, NY). The Cronbach's alpha was calculated for each of the BFI personality trait scores and the constructs of burnout. Likert responses for the burnout subscales were averaged to provide a score for each participant. To examine the correlation of age with burnout scores and personality, Pearson correlation coefficients were utilized. We also included demographic variables in our correlation analysis to determine if any of those should be included in a multiple

regression. Utilizing a Spearman's rho, demographic variables were conducted to examine correlations between marital status, race, ethnicity, and gender with burnout and personality traits. It was assumed that the study variables were continuous, there is a linear relationship among variables, there are no significant outliers, and they are normally distributed. Based on the present study's findings, three stepwise regressions were run to determine each of the individual factors and their contributions to the overall model. Significance was determined using an alpha level of 0.05. Based on the coefficients output, the collinearity statistics for all three regressions obtained a VIF value of less than 2.0, thus concluding that there are no multicollinearity symptoms. A full listing of collinearity statistics is located in Table 3. It was assumed that the variables should be measured at a continuous level, there is a linear relationship between the two variables, there should be no significant outliers, there should be independence of observations, the data shows homoscedasticity, and that residuals of the regression line are approximately normally distributed.

## CHAPTER 3

### RESULTS

#### **Descriptives**

Within the sample, mean values for each of the constructs of burnout were EE at 3.42 (SD = 1.31), DP at 2.35 (SD = 1.06), PA at 5.72 (SD = 0.77). For personality, mean values were extraversion at 3.37 (SD = 0.86), agreeableness at 4.16 (SD = 0.55), conscientiousness at 4.13 (SD = 0.53), neuroticism at 2.56 (SD = 0.74), and openness at 3.54 (SD = 0.57). On average, 90 to 130 participants reported having football, track and field, volleyball, basketball, cross country, soccer, baseball, softball, tennis, and wrestling. In addition, 20-89 reported having swimming and diving, golf, both competitive and sideline cheerleading, lacrosse, field hockey, ice hockey, and dance. The majority of respondents claimed they only had an ATC credential, 13 reported having a master's of science (MS) and 13 reported having their CSCS in addition to their ATC. In addition to their athletic training duties, 42 participants said they also teach either as a full-time teacher, a substitute teacher, teach a sports medicine class, or are a CPR instructor. Other respondents reported having some type of administrative or clinic duty, however 65 participants stated they did not have any additional responsibilities other than being a full-time athletic trainer. Furthermore, based on the criteria indicated for levels of burnout, most participants were not considered burned out, five individuals showed signs of high burnout and four showed signs for low burnout. These scores can be found in Table 4.

When asked what they do to manage stress, 69 respondents stated they perform some sort of exercise such as hiking, weightlifting, running, and yoga, 41 reported doing some type of hobby such as reading, watching television, hunting, playing video games, and listening to music, and 40 reported socializing or doing something therapeutic such as spending time with



family, coworkers, or pets, going to therapy, or using medication. Others reported taking time off, leaving work at work by not checking emails at night or leaving paperwork at work, sleeping or relaxing, or other work-related adjustments such as having better communication, setting boundaries and limiting hours available, and increasing organization. Interestingly, 10 reported they do not experience stress and 20 participants said they are not doing anything to manage it.

### **Correlations**

With respect to emotional exhaustion, agreeableness ( $r = -0.24, p = 0.003$ ), conscientiousness ( $r = -0.19, p = 0.021$ ), extraversion ( $r = -0.17, p = 0.041$ ), age ( $r = -0.23, p = 0.005$ ), and marital status ( $r = -0.18, p = 0.035$ ) were all significantly negatively correlated with burnout, whereas neuroticism ( $r = 0.49, p < 0.001$ ) was positively correlated. Agreeableness ( $r = -0.38, p < 0.001$ ), conscientiousness ( $r = -0.26, p = 0.002$ ), age ( $r = -0.36, p < 0.001$ ), and marital status ( $r = -0.18, p = 0.032$ ) were significantly negatively correlated to depersonalization, however neuroticism ( $r = 0.42, p < 0.001$ ) was found to be positively correlated. In addition, neuroticism ( $r = -0.37, p < 0.001$ ), was found to be negatively correlated with personal accomplishment and agreeableness ( $r = 0.35, p < 0.001$ ), conscientiousness ( $r = 0.25, p = 0.003$ ), openness ( $r = 0.27, p = 0.021$ ), and extraversion ( $r = 0.24, p = 0.003$ ) were all found to be positively correlated with personal accomplishment. Furthermore, all other potential correlations were not significant. A full correlation table is located in Table 5.

### **Regressions**

Three separate stepwise regressions were run for each burnout construct with respect to personality traits and significant descriptive statistics. For EE, age, marital status, extraversion, agreeableness, conscientiousness, neuroticism were entered, resulting in a significant model,  $F$

(2) = 22.08,  $p < 0.001$ . Based on the analysis, only neuroticism was a significant predictor of EE,  $\beta = 0.47$ ,  $t = 5.85$ ,  $p < 0.001$ . Neuroticism explained 22.9% of the variance in EE.

For DP, age, marital status, agreeableness, conscientiousness, neuroticism were entered, resulting in a significant model  $F(3) = 18.25$ ,  $p < 0.001$ . Based on the analysis, age, neuroticism, and agreeableness were significant predictors of DP. For age,  $\beta = -0.27$ ,  $t = -3.44$ ,  $p = 0.001$ . For neuroticism,  $\beta = -0.29$ ,  $t = -3.51$ ,  $p = 0.001$ . For agreeableness,  $\beta = 0.18$ ,  $t = 2.08$ ,  $p = 0.04$ . Individually, age explained 13%, agreeableness explained 13.1%, and neuroticism explained 2.20% of the variance in DP. In total, this model explained 26.7% of the variance in DP.

For PA, agreeableness, neuroticism, extraversion, and openness were entered, resulting in a significant model  $F(4) = 10.81$ ,  $p < 0.001$ . Based on the analysis, agreeableness, neuroticism, extraversion, and openness were significant predictors of PA. For agreeableness,  $\beta = 0.23$ ,  $t = 2.75$ ,  $p = 0.007$ . For neuroticism,  $\beta = -0.19$ ,  $t = -2.27$ ,  $p = 0.025$ . For extraversion,  $\beta = 0.17$ ,  $t = 2.17$ ,  $p = 0.032$ . For openness, the standardized beta = 0.17,  $t = 2.29$ ,  $p = 0.024$ . Individually, neuroticism explained 13.30%, agreeableness explained 4.60%, openness explained 3.4%, and extraversion explained 2.6% of the variance in PA. In total, this model explained 21.60% of the variance in PA.

## CHAPTER 4

### DISCUSSION

The aim of this investigation was to determine the relationship between burnout and personality traits in secondary school athletic trainers. Our study found that neuroticism was positively correlated with emotional exhaustion and depersonalization, but not with personal accomplishment; that conscientiousness, agreeableness, and extraversion were all negatively correlated with emotional exhaustion; and that agreeableness and conscientiousness were found to be negatively correlated with depersonalization. In addition, none of the personality traits were found to be negatively correlated with personal accomplishment and that openness does not correlate with burnout. Further, regression analyses confirmed that personality traits predicted emotional exhaustion, depersonalization, and reduced personal accomplishment.

Based on the mean levels reported, on average, participants felt EE several times a month, but not every week. Considering DP, participants reported feeling depersonalization once a month or less on average, but not multiple times a month. Lastly, mean levels of PA indicated that participants felt personal accomplishment several times a week on average, but not every day. Our research determined that five participants reported high levels of burnout and four were considered low (Table 3). The mean values of EE, DP, and PA are comparable than those reported in previous studies of athletic trainers were in collegiate settings (Barrett et al., 2016). It is important to note, however, that previous studies have identified burnout using the Athletic Training Burnout Inventory (ATBI) and personality traits or burnout with other characteristics such as hardiness (Barrett et al., 2016; Hendrix et al., 2000). This study is the first to use the Maslach Burnout Inventory in combination with the Big Five Personality Traits for Athletic Trainers.

With respect to extraversion, participants on average neither agreed nor disagreed with statements such as “is talkative” and “is full of energy.” Participants did show high levels of agreeableness, indicating that they are “helpful and unselfish with others” and have “a forgiving nature.” Similar to extraversion, conscientiousness was consistently reported as participants neither agreeing nor disagreeing with statements such as “is a reliable worker” and “does things efficiently.” Overall, participants slightly disagreed with statements such as “is depressed, blue” and “can be tense,” indicating that their levels of neuroticism were low. Lastly, for openness, participants neither agreed nor disagreed with statements such as “is original, comes up with new ideas” and “is curious about many different things.”

### **Personality Traits Negatively Correlated with Burnout**

Our hypothesis that conscientiousness, agreeableness, and extraversion would be negatively correlated with the constructs of burnout was confirmed. As scores in conscientiousness, agreeableness, and extraversion increased, burnout score declined, though the correlation was weak. Conscientiousness, agreeableness, and extraversion were all negatively correlated with emotional exhaustion. Agreeableness and conscientiousness were found to be negatively correlated with depersonalization. Finally, none of the personality traits were found to be negatively correlated with personal accomplishment. Typically, individuals who score high in conscientiousness, agreeableness, and extraversion fall under a type A personality (Zellars et al., 2000). They thrive on social interactions, organization, and are bubbly in nature (Barrett et al., 2016). Within our study, participants reported socializing with family or friends to help alleviate stress. This behavior of being social, in addition to being happy and enthusiastic, can attribute to individuals who exhibit higher levels of extraversion. Extraverts are optimistic by nature and perceive less stress; thus, are better able to resist burnout (Barrett et al., 2016; Zellars et al.,

2000). In addition, an individual scoring high in agreeableness is viewed as friendly and cooperative. Typically, agreeable individuals get along well with others and our results have shown that these individuals tend to ensure good communication in the work place, as well as delegating when needed, and creating new protocols (Barrett et al., 2016; Zellars et al., 2000). Furthermore, individuals who demonstrate high levels of conscientiousness are effective in time management, careful planners, and organizers (Barrett et al., 2016; Zellars et al., 2000). Extraverts may experience less burnout because they have a positive perception of their work and may experience positive relationships at work because their cheerful disposition elicits a positive response from others. Agreeable coworkers may be similarly well liked by their colleagues and therefore experience a positive work environment, making individuals with one or both personality traits less susceptible to burnout. Conscientious individuals often demonstrate lower levels of conflict and are able to use their time wisely through time management, thus are more equipped to avoid burnout.

### **Personality Traits Positively Correlated with Burnout**

Our hypothesis that neuroticism would be positively correlated with burnout was confirmed. More specifically, neuroticism was found to be positively correlated with emotional exhaustion and depersonalization, but not with personal accomplishment. A person with a high score of neuroticism shows traits such as anxiety, insecurity, and a low level of emotional stability. They often dislike challenges at work, which they see as threatening and stress inducing (Alarcon et al., 2009; Barrett et al., 2016a). It would make sense that the connection between neuroticism and emotional exhaustion was strong, since neuroticism is often seen as a destructive coping mechanism that places the individual at greater risk for experiences of conflict (Roberts et al., 2003). Typically, those who are neurotic tend to be described as introverts and are less

satisfied and experience more negative life events than others (Eason et al., 2015; Zellars et al., 2000). This relationship also appears in previous literature, where high levels of neuroticism have been found to result in greater emotional exhaustion and depersonalization. Individuals scoring higher in neuroticism respond more negatively to situations that are stressful, therefore providing a firm link between personality and work conditions and environment (Barrett et al., 2016a; Zellars et al., 2000). An athletic trainers' work environment can present a variety of challenging situations including varied work schedules (Mazerolle et al., 2008a; Mazerolle et al., 2008b). Typical demands include 60+ hour workweeks, as well as required travel and minimal control over their weekly work schedule (Barrett et al., 2016a; Eason et al., 2018a). Research has determined that a higher level of neuroticism is likely to lead to a lower performance level (Zellars et al., 2000). As healthcare professionals, a lower performance level may lead to unintentional malpractice. Based on this information, it would make sense that an individual with a high level of neuroticism would consider this environment not enjoyable and stressful.

### **Regression Analyses**

Three separate stepwise regressions were run for each burnout construct with respect to personality traits and significant descriptive statistics. For emotional exhaustion, only neuroticism was found to be a significant predictor. For depersonalization, age, neuroticism, and agreeableness were significant predictors. Lastly, for personal accomplishment, agreeableness, neuroticism, extraversion, and openness were significant predictors. Across all three regression models, personality traits explained at least 21% of the variance in burnout-related constructs. In comparison to a previous study of athletic trainers, Barrett et al. (2016) found that extraversion, agreeableness, and neuroticism did not statistically predict burnout scores. In addition, researchers claimed that those traits were weakly correlated burnout and that personality traits

did not seem to predict burnout in ATs. One possible explanation for the conflicting results here could be that a composite measure of burnout was used in previous studies, while the current study separated them (Barrett et al., 2016). It is important to note that the study performed by Barrett et al. (2016) is the only one to date that supports the work in the current study.

Across these results, it is clear that participants had a variety of ways of working through stress at work and engaging in self-care. According to a study conducted by Groth et al. (2008), ATs should promote a healthy life style, not just for personal benefits but to also lead by example for their athletes. Additionally, ATs, in general, were found to be more physically active than the general population (Groth et al., 2018). This study coincides with the stress relief techniques reported in our study. The most commonly described self-care activity was taking part in exercise such as weight lifting, running, hiking, walking, and yoga to help alleviate stress. This type of coping is considered to be emotion-focused coping. This type of coping aims to manage the emotional distress that is associated with the situation (Baker & Berenbaum, 2007). Additionally, emotion-focused coping includes strategies such as denial, focusing on and venting of emotions, positive reinterpretation of events, and seeking out social support (Baker & Berenbaum, 2007).

Research has shown that physical exercise has been shown to effectively reduce stress and its related symptoms. Regular physical activity decreases symptoms of anxiety and depression as well as physiological stress and anger (Conn, 2010a; Conn, 2010b; McDonald & Hodgdon, 1991). Numerous studies support the idea of using physical exercise as an effective tool in preventing and reducing work-related stress by increasing mood, self-concept, and work performance, as well as reducing the duration of absenteeism from work (Bruin et al., 2017; Conn, 2010a; Conn, 2010b; Groth et al., 2008; McDonald & Hodgdon, 1991). Within the current

study, other participants reported reading, watching television, listening to music, eating junk food, journaling, and playing video games as other hobbies they enjoyed. In addition, many participants indicated that they spent time with family and friends, took vacations, and spent more time relaxing or sleeping to reduce their stress levels. Research has shown that several positive coping approaches such as physical exercise, meditation and relaxation, and hobby and vacation activities have all been correlated with lower rates of burnout (Seidman & Zager, 1991).

On the other hand, some participants reported ways to make adjustments to work. Some of these changes include limiting work hours, open communication, and time management and organization. These adjustments to work are considered problem-focused coping. This type of coping involves efforts to modify the problem at hand and includes elements such as generating options to solve the problem, evaluating the pros and cons of different options, and implementing steps to solve the problem (Baker & Berenbaum, 2007). Overall, participants in this study demonstrated relatively low levels of burnout compared to other studies. Based on the research, it is reasonable to speculate that lower levels of burnout may be due to the participants reported coping mechanisms to stress, as mentioned above.

### **Limitations and directions for future research**

Our study is not without limitations. It is important to note that the surveys were distributed during the transition from fall to winter sports; therefore, some schools may have more sports in/out of season than others. It would be beneficial to complete a longitudinal study measuring burnout and its influencing factors at a variety of times throughout the year.

Furthermore, we only surveyed ATs that were currently practicing in the profession. This is considered a large limitation when researching burnout because those who may have experienced the highest levels of burnout may have already left the profession. In this study, we obtained a



14.3% response rate. As this percentage is low, it is important to note and consider as a limitation of this study.

## **Conclusion**

Our study was the first to examine burnout and personality traits in secondary school athletic trainers. Further research might consider evaluating coping strategies in relationship to burnout. Perhaps studies with this perspective would help ATs to explain the variety of individual factors that could affect burnout. Furthermore, studies focusing on personality in athletic training could focus specifically on hardiness, resiliency, type A personality, work-life balance, and job satisfaction, which have been previously researched in different healthcare populations. In addition, asking demographic questions such as what state they reside in and what size their school is, for example 2A vs 7A, may be important factors to note, as well as if their employers do anything to monitor burnout.

Our results highlight the existence of moderate burnout in ATs employed in the secondary school setting. This study has determined that people who scored high in the personality constructs of extraversion, conscientiousness, and agreeableness tend to have higher levels of emotional exhaustion and depersonalization. In addition, individuals who scored high on the personality construct of neuroticism were shown to have a positive correlation with emotional exhaustion and depersonalization. While it is important to have an understanding of the individual factors that may lead to burnout, it is also important to note that burnout is a multifaceted issue. Even though personality provided moderate correlation in predicting burnout, other factors, such as hardiness, resiliency, and coping strategies, should be examined in combination with burnout to determine the greater cause and how it can be reduced.

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## TABLES

Table 1. Demographic Characteristics

<b>Demographic</b>	<b>Mean <math>\pm</math> SD</b>
Age	38.13 $\pm$ 12.23
Years certified	14.5 $\pm$ 11.21
Years at current position	8.58 $\pm$ 8.82
Athletes under direct care	468.99 $\pm$ 322.36
AT students under your supervision	3.85 $\pm$ 8.26
Additional ATs	11 $\pm$ 0.71
Yearly salary	\$56,739.14 $\pm$ \$21,964.57
Hours spent on AT duties	70 $\pm$ 31.15
Hours per week	80 $\pm$ 47.57
Teams currently managing	12.86 $\pm$ 7.73

Table 2. Demographics Continued

<b>Characteristic</b>	<b>Number</b>	<b>Percentage</b>
<b>Gender</b>		
Male	58	40.3%
Female	84	58.3%
Prefer to self-describe	1	0.7%
<b>Race</b>		
African American	4	2.8%
Caucasian	124	86.1%
Hispanic	8	5.6%
Asian/Pacific Islander	6	4.2%
Other	1	0.7%
<b>Ethnicity</b>		
Hispanic, Latino, or Spanish Origin	10	6.9%
Not of Hispanic, Latino, or Spanish Origin	133	92.4%
<b>Level of Education</b>		
Bachelors Degree	50	34.7%
Masters Degree	89	61.8%
Doctorate Degree	4	2.8%
<b>Marital Status</b>		
Single	63	39.1%
Married	77	47.8%
Divorced	3	1.9%

Table 3. Collinearity Statistics

<b>Regression</b>	<b>Tolerance</b>	<b>VIF</b>
<b>EE <math>F(2)</math></b>		
How old are you?	0.839	1.192
Neuroticism	0.839	1.192
<b>DP <math>F(3)</math></b>		
How old are you?	0.818	1.222
Agreeableness	0.787	1.271
Neuroticism	0.662	1.511
<b>PA <math>F(4)</math></b>		
Neuroticism	0.759	1.318
Agreeableness	0.799	1.252
Openness	0.947	1.056
Extraversion	0.944	1.060

Table 4. Significant Levels of Burnout

<b>High Degree of Burnout</b>			
<b>Participant</b>	<b>Emotional Exhaustion</b>	<b>Depersonalization</b>	<b>Personal Accomplishment</b>
90	40	17	31
103	41	16	31
122	44	22	33
135	54	16	31
141	52	27	27
<b>Low Degree of Burnout</b>			
<b>Participant</b>	<b>Emotional Exhaustion</b>	<b>Depersonalization</b>	<b>Personal Accomplishment</b>
2	10	5	55
3	12	5	55
7	13	5	55
13	16	5	52

Table 5. Correlations

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
<b>1. Emotional Exhaustion</b>	---												
<b>2. Depersonalization</b>	0.64**	---											
<b>3. Personal Accomplishment</b>	-0.35**	-0.40**	---										
<b>4. Openness</b>	0.17	-0.11	0.27**	---									
<b>5. Conscientiousness</b>	-0.19*	-0.26	0.25**	0.18*	---								
<b>6. Extraversion</b>	-0.71*	-0.14	0.24**	0.12	0.17*	---							
<b>7. Agreeableness</b>	-0.24**	-0.38**	0.35**	0.17*	0.22**	0.07	---						
<b>8. Neuroticism</b>	0.49**	0.42**	-0.37**	-0.40**	-0.36**	-0.22**	-0.44**	---					
<b>9. Age</b>	-0.23**	-0.36**	0.143	0.06	0.25**	0.07	0.05	-0.40**	---				
<b>10. Race</b>	-0.03	-0.02	-0.08	-0.09	0.04	0.10	-0.19*	0.08	0.00	---			
<b>11. Gender</b>	0.05	0.08	0.05	0.02	0.02	0.14	-0.05	0.35**	-0.40**	0.05	---		
<b>12. Marital Status</b>	-0.18*	-0.18*	0.04	0.10	0.15	0.15	0.04	-0.20*	0.51**	0.04	-0.32**	---	
<b>13. Ethnicity</b>	-0.09	-0.05	0.03	-0.09	-0.01	-0.06	0.11	-0.05	0.07	-0.46**	-0.10	0.07	---

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

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

Table 6. Types of Sports Covered by Athletic Trainers

<b>Sport</b>	<b>Number of schools reported having that sport</b>
Track and Field	130
Volleyball	130
Football	117
Basketball	123
Cross Country	118
Soccer	114
Baseball	111
Softball	108
Wrestling	93
Tennis	97
Swimming and Diving	81
Golf	67
Cheer (competitive and sideline)	65
Lacrosse	50
Field Hockey	34
Hockey	23
Dance	21
Bowling	18
Gymnastics	16
Water polo	11
Crew	11
Rifle	9
Powerlifting/weightlifting	8
Squash	4
Skiing	4
Unified sports	4
Sailing/surfing/fishing	4
Ultimate Frisbee	3
Judo	3
Band	3
Rugby	2
Equestrian	2
Badminton	2
Fencing	2
Disc Golf	1
Archery	1
Flag Football	1
Racquetball	1
Yoga	1
Intramurals	1
Hiking	1
Rodeo	1

Table 7. Participants' Credentials (Other Than Certified Athletic Trainer)

<b>Any other credentials</b>	<b>Number of responses</b>
None other than ATC	79
Licensed Athletic Trainer (LAT)	22
Masters of Science (MS)	13
CSCS	13
CPR instructor	9
NBCT	9
Masters of Education (Med)	5
CES	4
ImPACT Trained Athletic Trainer (ITAT)	4
Masters of Arts (MA)	3
PES	3
EMT	3
Administration degree/license	3
Certified Athletic Administrator (CAA)	3
MBA	2
Certified personal trainer	2
Certified KT practitioner	2
Radiographic Testing certification (RT)	2
CMA	1
Registered dietitian (RD)	1
MSPT	1
CAFS	1
Wrestling weigh in certification	1
USA Triathlon Certified Coach	1
ASTYM	1
Drivers Education license	1
Drug testing certification	1
Functional movement specialist (FMS)	1
Massage Therapist	1
Certified Speed Specialist (CSS)	1
Doctor of Athletic Training (DAT)	1
Physical Therapist Assistant (PAT)	1
Certified yoga teacher	1
Human movement specialist (HMS)	1
Registered orthopedic technician	1
Licensed school counselor	1
Vocational License CTE for Rehabilitation and Therapeutics Teaching	1

Table 8. Participants' Self-Reported Additional Job Responsibilities

<b>Responsibility</b>	<b>Number reported</b>	<b>Response</b>
Nothing else	65	No
Yes, but did not specify	6	Yes
Teaching	42	6x full-time teacher, 4x Substitute teacher, 12x Health science/PE teacher, 18x teacher, and 3x CPR instructor
Clinic Duties	18	6x PT office, 10x Clinic Duties/hours, concussion management at clinic, and owner of a therapy clinic
Coaching	3	Coaching, Varsity golf coach, & Varsity girls soccer coach
Administration	20	6x Director of a department, 6x assistant/head athletic director, 3x school advisor, 4x supervisory, mentoring, and monitor for lunch periods
Club duties	3	2x Sports medicine club sponsor and club leader
Outreach/Per-diem	5	3x Outreach, per-diem contract AT coverage, and occupational medicine AT
Dorm responsibilities	3	Dorm head and 2x dorm parents
Team duties	5	Laundry and uniform manager, equipment and uniforms, game day manager drug testing, and conduct hydration testing
Other	4	Marketing for hospital, administer impact testing, incident response and planning team member, and shadowing a physician



Table 9. Participants' Self-Reported Methods of Stress Management

<b>Techniques used to relieve stress</b>	<b>Number of people</b>	<b>Type of technique</b>
Exercise	69	38x exercise, 10x workout, 2x weight lifting, 3x running, 2x hiking, walking, stretching, 11x yoga
Other hobbies	41	11x reading, 2x watching television, 5x hobbies, 5x outdoor activities (hunting, camping, gardening, fishing), playing candy crush, 3x listening to music, 2x playing video games, 2x eating junk food/alcohol, crafting, journaling, playing golf, parks and recreation sports, playing racquetball, 2x laughing/making others laugh, trying new things, and 2x meal prep/healthy eating
Socializing/Therapy	40	19x family time, taking to boss/co-workers, 6x spending time with friends, 7x spending time with pets, 3x going to therapy, and 2x medication
Nothing	20	16x nothing, no time, stress more, 3x keep working and don't think about it
Taking time off vacationing	23	14x taking time off, 2x mental health days, and 7x taking a vacation
Other work related adjustments	19	4x limiting hours, 4x open communication, 3x keeping work and life separate, new job, 4x time management and organization, delegate, creating new protocols, take one issue at a time, and stay on top of documentation
Leaving work at work	14	11x leaving work at work and 3x not checking emails at home/after hours
Sleeping/relaxing	13	8x sleeping, going to bed early, 4x relaxing
Don't have stress	10	10x I'm not stressed

## APPENDIX A

### LIMITATIONS, DELIMITATIONS, & ASSUMPTIONS

#### **Limitations**

The limitations of this study include the timing of data collection and the length of the survey. We speculate that the limitations of this study will be due to the timing of data collection and the length of the survey. The Athletic Trainers' workload fluctuates throughout the year, so the specific timeframe was chosen to maximize participation. It is estimated that the length of the survey should take no more than 30 minutes; however there are 66 questions and participants may take longer to complete the survey than anticipated.

#### **Delimitations**

The delimitations of this study include only surveying practicing athletic trainers in the secondary school setting. In addition, they must be members of the National Athletic Trainers' Association (NATA).

#### **Assumptions**

For the purpose of this study, we assumed that participants answered honestly and that participants were all actively practicing in the secondary school setting.

## APPENDIX B

### LITERATURE REVIEW

#### **Introduction**

In 2006, for the first time in history, membership in the National Athletic Trainers' Association (NATA) showed a decline by about 1% (Terranova & Henning, 2011). Since then membership was increasing steadily, until this past year. In 2018 membership dropped again from 47,120 members in 2017 to 45,788 members in 2018, this time dropping by approximately 3% (NATA 2018 year-end membership statistics, 2019). There was no exact factor identified to associate leaving the profession, however it is reasonable to speculate that it may be from a decrease in job satisfaction and/or burnout. In addition, it was found that 23% of increase in membership from 2007 to 2008 was due to student memberships, indicating that they are driving the membership numbers to increase, but then leaving the profession upon graduation (Terranova & Henning, 2011). An Athletic Trainers' work environment is characterized by an array of job-related demands and social interactions. As a result, the demands and frustrations associated with these characteristics may lead to burnout.

Burnout first appeared in the 1970's with studies by Freudenberger and Maslach. At this time, burnout was defined as a syndrome of emotional exhaustion, cynicism, depersonalization in relationships with coworkers, and reduced personal accomplishment that can occur in any individuals due to excessive work in stressful conditions (Maslach & Jackson, 1981; Marek et al., 2017). In 1986, Maslach and Jackson created the new definition of burnout that soon became the most widely used. They defined burnout as a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who do interpersonal work (Maslach & Jackson, 1986). These 3 constructs of burnout were than

further defined by DeFreese and Maslach. Emotional exhaustion (EE) is defined as mental fatigue and emotional distance from one's work (DeFreese & Mihalik, 2016; Maslach et al., 2001). In addition, EE has been reported as a primary factor in burnout due to one's feelings of despair, isolation, exhaustion, and being overwhelmed (Hendrix et al., 2000). Further, depersonalization (DP) has also been determined as a primary factor in burnout and can be described as an act of distancing oneself from patients (DeFreese & Mihalik, 2016; Maslach & Schaufeli, 2001). Finally, reduced personal accomplishment (PA) can be demonstrated by a lack of job-related efficacy (DeFreese & Mihalik, 2016; Maslach & Schaufeli, 2001).

### **Incidence Rate**

Over the past 15 years, research has examined the correlation between burnout and various factors in health care professionals. Studies have shown that the rates of burnout tend to vary depending on the population being studied, however occupations closely related to Athletic Training seem to have similar rates. In 2017, 37% of adults in different occupations reported that their stress level had increased over the past year (Laporte, 2018). In addition, it was found that 14% of respondents aged 18 to 29 years knew a relative or close friend who was diagnosed with burnout (Laporte, 2018). More specifically, teachers have been found to feel burned out between 5% and 20% at any given time (Farber, 1991; Hakanen et al., 2006). Research has determined that teachers show high levels of exhaustion and cynicism, which are the core dimensions of burnout (Maslach et al., 1997). In a related occupation, 43-63% of high school and collegiate coaches experience moderate and high levels of burnout across all three burnout dimensions (Vealey et al., 1992). This could be due to the interaction demands of this type of job setting. On the other hand, Raedeke (2004) found that coaches displaying characteristic of entrapment (the perception of higher costs and low benefits associated with role, a lack of attractive alternatives

to coaching, that they invested a significant amount, and that others wish them to continue) scored higher on the burnout dimension of emotional exhaustion.

Burnout can occur in many other occupations, with around 50% of health care providers reporting burnout symptoms (Sanfilippo et al., 2017). Furthermore, it has been determined that 41.2% of general practitioner physicians have experienced burnout in their careers (Bhagavathula et al., 2018). On average, more than 26% of emergency nurses have reported high levels of emotional exhaustion and depersonalization and low levels of personal accomplishment (Adriaenssens et al., 2015). In addition, researchers have observed that 53% of a nationwide sample of Physical Therapists have experienced burnout, where most experience symptoms at the age of 32 and had been practicing for 5 to 9 years (Schuster et al., 1984). Furthermore, research has determined that Physical Therapists reported high levels of emotional exhaustion and depersonalization and low levels of personal accomplishment (Balogun et al., 2002). Lastly, it has been found that 30% Athletic Trainers may experience some degree of burnout (DeFreese & Mihalik, 2016; Kania et al., 2009). Ultimately, researchers discovered that all health care providers might experience burnout within the first five years of their career due to lack of adequate exposure or job stressors, idealization of the job, and self-selected attrition (Mazerolle et al., 2012).

### **Traits Associated With Burnout**

Burnout can occur for many reasons, however the most common involves work stresses becoming too much for an individual to handle (Barrett et al., 2016a). Laporte (2018) reported that common symptoms associated with burnout are feeling drained of physical and emotional energy, a feeling of achieving less than one should, or a feeling of not getting what one wants out of one's work. Other studies have shown that additional causes for burnout can be high demand

jobs and low resource availability, as well as perfectionism (Makkai, 2018). Perfectionism can play an important role in the development of burnout because it predisposes the employee to face job demands improperly. Further research has found that some of the causes of burnout can be divided into two categories: situational and individual. Situational factors include job demands and resources, which can lead to fatigue and psychological distancing from the job. Some of the most common job demands that lead to burnout are ambiguity, conflict, stress, workload, and tension. Burnout among service professionals not only affects the individual, but also the workplace and client treatment. Service providers report feeling drained, unable to give anymore of themselves, and cope by decreasing client contact and adopt negative attitude towards their clients (Balogun et al., 2002). Furthermore, numerous demographic variables have also been observed in conjunction with burnout. Some of the common variables include age, gender, race, ethnicity, and marital status. Additionally, research conducted specifically in the AT setting has observed other variables such as number of years certified, personal income, number hours worked in/out season, education level, hours spent per week on leisure activities, and any other responsibilities they had outside of AT to determine if they are correlated with burnout (Barrett et al., 2016; Eason et al., 2015; Kania et al., 2009; Mazerolle et al., 2008a). Not only has burnout alone been evaluated in numerous professions, it has also been examined in combination with many different variables and inventories. Common factors that have been observed are level of social support, stress level, athletic training specific issues, occupational engagement, job satisfaction, and personality. Additionally, research has found that burnout may not occur only because of organizational factors related to workplace environment and job expectations, but rather because of individualized or personal factors (Barrett et al., 2016a). Individual perspectives have been used to reveal the intra-individual heterogeneity of burnout and its

development over time (Makkai, 2018). Research has determined that several personality traits can influence the level of job satisfaction, meaning those who react to stressful situations with emotional instability are more likely to be less satisfied with their jobs (Barrett et al., 2016a). Even though the workplace may be the cause of some stressors for an individual, these individuals can also bring certain characteristics and attitudes about their job into the workplace, which may contribute to their level of burnout (Barrett et al., 2016a; Maslach & Schaufeli, 2001). Despite the growing examination of personality and burnout, there is limited research investigating this relationship in Athletic Trainers.

### **Athletic Training**

More recent work in Athletic Training suggests that 30% of Athletic Trainers are also affected by burnout (DeFreese & Mihalik, 2016; Kania et al., 2009). Athletic Trainers are board certified and licensed health care professionals who render services or treatments, under the direction of or in collaboration with a physician, in accordance with their education and training and the states' statutes, rules and regulations (Athletic Training Glossary, 2019). Athletic Trainers can provide injury and illness prevention, wellness promotion and education, emergency care, examination and clinical diagnosis, therapeutic intervention, and rehabilitation of injury and medical conditions. These health care professionals typically are seen in collegiate, professional, and secondary schools settings. Even though Athletic Trainers in the secondary school settings make up 18% of this population, the majority of research has investigated the collegiate and professional settings, which combined make up 20% of the AT population (Athletic Training Glossary, 2019). According to the Athletic Training Locations and Services (ATLAS) project, 67% of all high schools across America reported having access to an on-site AT service, where 35% had full-time, 30% had part-time, and 3% were per diem (Huggins et al., 2019). Minimal

research has been conducted on burnout in the high school setting leaving many factors unknown. In addition to full time board certified and licensed Athletic Trainers working in the high school, collegiate, and professional setting, there are also graduate assistants and undergraduate Athletic Training student who are exposed to this environment. The research conducted on burnout in collegiate Athletic Trainers has observed traits such as hardiness, personality, and perceived stress (Hendrix et al., 2000). In addition, studying burnout in the graduate student population is important because of the time needed to fulfill the dual roles of AT and student; heightened stress experienced by Athletic Training students not only jeopardizes the health and wellness of the care provider but jeopardizes the quality of patient care (Mazerolle et al., 2012). Graduate Assistant Athletic Trainers (GAATs) must balance academic responsibilities with clinical responsibilities. Role strain due to stress and the time needed to meet job demands has been found to lead to burnout in this population (Mazerolle et al., 2016). Even though many educational programs that employ GAATs follow guidelines that set limits on work hours per week, these requirements are not strictly enforced or followed (Mazerolle et al., 2012). Furthermore, research has found that GAATs reported working on average 40 hours per week clinically, which is comparable to a full-time staff member during off season. However, this number does not include the amount of time spent traveling or academic responsibilities (Mazerolle et al., 2016). Research has determined that GAATs spends almost 4 times as many hours at their clinical setting as they do in their graduate school classes. Furthermore, GAATs found that balancing academic and their work roles to be difficult due to the time and energy they require.

ATs are expected to be selfless, put other's needs first, work long hours and perform at high levels to help their patient/athlete recover. These expectations result in work-related stress.



The typical demands of an Athletic Trainer require sixty or more hour workweeks, as well as required travel and minimal control over their weekly work schedule (Barrett et al., 2016a; Eason et al., 2018). Data has shown that the average athlete-to-Athletic Trainer ratio in the collegiate setting is 80:1. This ratio is larger than any student-to-professor or athlete-to-coach ratio (Kania et al., 2009). However, this ratio has not been determined in the secondary school setting (Pryor et al., 2015). Interestingly, Huggins et al. (2019) reported that overall student enrollment at a school plays a role in the level of AT services. Additionally, researchers determined that full time ATs were found to be employed at schools with  $\geq 600$  students, whereas schools with  $< 600$  students reported having only a majority of part-time ATs (Huggins et al., 2018; Huggins et al., 2019). In addition to a high number of athletes, ATs tends to receive a low salary for the number of services and the amount of time given, typically way more than the required 40 hours. According to the 2018 NATA salary survey, the average ATs earnings (regardless of degree) was \$57,203, which was about 33% lower than occupational therapists (\$85,350) and about 36% lower than physical therapists (\$88,880) according to the Bureau of Labor statistics in 2018 (National occupational employment and wage estimates, 2019; NATA 2018 salary survey, 2019).

The amount of burnout research conducted within Athletic Training is likely due to its association with professional commitment, career longevity, and retention within the field, from both theoretical and empirical perspectives (Barrett et al., 2016a). These factors lead to a large number of employees either leaving the profession or moving to a different Athletic Training setting around the age of 30, in general. However, 45% of female ATs stated they changed job settings after having children, which studies have shown this is typically around the age of 28 (Mazerolle, 2008; Kahanov & Eberman, 2011). Additionally, research has determined that male

ATs tend to leave the profession at the age of 35 or transition to the secondary school setting instead (Kahanov & Eberman, 2011). Perhaps a greater understanding of the factors that influence ATs to leave the profession will provide a decrease in occupational change early on.

Over the past fifteen years of research, different traits in relation to burnout have been investigated. Some of these traits investigated include social support, Athletic Training issues, occupational engagement, perceived stress, health status, and exercise behavior. High levels of social support, which includes an individuals' perception of who they are supported by and how satisfied they are with this support, has been found to lower athlete trainers' perception of stress (Hendrix et al., 2000). On the other hand, the greater the number of issues an Athletic Trainer could identify with, the higher the stress reported. The Athletic Training issues survey is used to identify specific variables in an Athletic Training setting (Hendrix et al., 2000). In addition, occupational engagement is considered a positive antipode of burnout and involves energy, learning, personal or occupational development, job involvement and occupational efficacy (Giacobbi, 2009; Maslach et al., 1997). Moreover, perceived stress, which encompasses thoughts and feelings about stressful events, control, overload, coping, and experienced stress, was found to be a significant predictor of all 3 constructs of burnout (Hendrix et al., 2000). Furthermore, health status is used to determine the current psychological and physical health symptoms. In conjunction, exercise behavior can be used to determine if there are any correlations between burnout and a person's activity level. Research discovered lower levels of burnout reported by Athletic Trainers, however the results from the research revealed that 15.3% of this population received help from a mental health professional, which is greater than the average percent across the United States, as well as ATs reporting engaging in 2.5 bouts of strenuous exercise per week, which is higher than the public health recommendations (Giacobbi, 2009).

Athletic Trainers are subjected to a unique set of stressors such as high athlete to Athletic Trainer ratio, minimal financial support, and dual role responsibilities (Capel, 1986; Capel, 1990; Hendrix et al., 2000). For example, a head Athletic Trainer can also be the curriculum director or a clinical instructor. Research has shown Athletic Trainers to work as an athletic director, administrator, teacher, physical therapist, coach, and team manager, for example. These additional roles may lead to other stresses that could increase burnout. Furthermore, role overload, particularly long work hours, and insufficient number of staff members to adequately address the health care needs of the institution, can negatively affect one's perception of commitment (Mazerolle et al., 2018a). A person with greater job satisfaction is less likely to leave a profession, whereas a person with lower job satisfaction is more likely to leave (Terranova & Henning, 2011). In addition, the attrition of Athletic Trainers has increased over time and it has been found that Athletic Trainers lose the compassion and excitement that initially drew them to the profession (Hendrix et al., 2000). When examining specific reasons for leaving the profession before degree completion, Dodge et al. (2009) discovered students believed Athletic Training could lead to role strain or burnout in the future. Participants in this study believed this strain could be due to an intensive time commitment. A greater understanding of the factors that influence burnout in Athletic Trainers will provide direction to alleviate stress and burnout (Hendrix et al., 2000).

### **Burnout and Personality Traits**

Even though the workplace may be a contributor to burnout, individuals bring certain characteristics to the work place, such as personality traits and attitude (Barrett et al., 2016a; Maslach & Schaufeli, 2001). These personality traits may work together with workplace issues to influence burnout. In general, personality refers to individual differences in characteristic

patterns of thinking, feeling, and behaving (Kazdin, 2000). Personality traits can be defined by 5 constructs: openness to experience, extraversion, agreeableness, neuroticism, and conscientiousness (Barrett et al., 2016a). Openness to experience is a person's intellect and receptiveness to culture and its traits include broad-mindedness, originality, and imagination. Extraversion can be defined by its traits of assertiveness, talkativeness, activeness, and sociability. It has been determined that extraverts may experience less burnout because they have a positive perception of their work and may experience positive relationships at work because their cheerful disposition elicits a positive response from others (Zellars et al., 2000). Agreeableness is an individual's degree of friendliness and traits include cooperativeness, trust, tolerance, and soft-heartedness. Research has shown that agreeable coworkers may be similarly well liked by their colleagues and therefore experience a positive work environment, making them less susceptible to burnout (Zellars et al., 2000). Barrett et al. (2016a) determined that a higher reported score in extraversion and agreeableness, showed a lower score in burnout. Neuroticism is a person's stability and traits associated are anxiousness, depression, anger, and insecurity. Neuroticism has been found to positively correlate to burnout, meaning that when neuroticism increases, so will an individual's burnout score (Barrett et al., 2016a). Individuals who exhibit this trait tend to dislike challenges at work, which they perceive as threatening and stress inducing (Barrett et al., 2016a). Lastly, conscientiousness is defined as conformity or dependability and traits are achievement orientation, responsibility, thoughtfulness, and organization.

Recent studies have shown that burnout can be influenced by several personality traits, which can then influence an individual's level of job satisfaction (Barrett et al., 2016a; Eason et al., 2015). Job satisfaction is defined as the degree to which people like their jobs and consists of

an affective component that comprises an individual's feeling of satisfaction regarding his or her job and a perceptual component that evaluates whether one's job is meeting one's needs (Cranny et al., 1992). For example, individuals who react to stressful situations with emotional instability are more likely to be less satisfied with their jobs (Barrett et al., 2016a). This portrays an example of the personality trait neuroticism. Research determined that the new generation of health care professionals are more willing to leave a job within the first few years if it does not meet their immediate goals and that younger employees, especially with less than 10 years of experience, have greater intentions to leave (Terranova & Henning, 2011). In addition, Barrett et al. (2016a) found that a high level of neuroticism results in greater emotional exhaustion and depersonalization. In the Athletic Training population, researchers have determined that hardiness increases as stress decreases (Mazerolle et al., 2018a). Hardiness describes a person's perception of control and influence on his or her own environment along with his or her willingness to openness to grow and change (Hendrix et al., 2000). In addition, stress has been found to lead to burnout; therefore hardiness could be a mitigating factor to burnout (Barrett et al., 2016a). In conjunction, it has been found in nurses and Athletic Trainer's that burnout is significantly predicted by the personality traits extraversion and neuroticism (Zellars et al., 2000). Extraverts tend to have a positive perception of their work and may experience positive relationships, lessening their potential for burning out (Barrett et al., 2016a).

Burnout may serve a critical role in facilitating how personality affects individuals behaviors at work. For example, extraverts' predisposition to experience positive emotions and optimism may allow them to be less likely to experience various dimensions of burnout and possibly avoid negative work outcomes (Swider & Zimmerman, 2010). Personality characteristics such as neuroticism, extraversion, agreeableness, conscientiousness, and openness

(also known as the Big Five) have been found to be associated with burnout in emergency nurses (McCrae & Costa, 1987). In addition, low levels of hardiness, which include less involvement in daily activities, a lower sense of control over events, and less openness to change are correlated to higher levels of emotional exhaustion (Maslach & Schaufeli, 2001). In addition, higher levels of burnout have been determined among people who have an external locus of control rather than an internal locus of control (Maslach & Schaufeli, 2001). Furthermore, those who experience burnout tend to cope with stressful events in a rather passive, defensive way, whereas active and confrontive coping is associated with less burnout. On the other hand, lower levels of hardiness, poor self-esteem, an external locus of control, and an avoidant coping style typically constitute the profile of a stress-prone individual (Semmer, 1996).

Research with the Big Five personality dimensions has found that burnout is linked to the dimension of neuroticism (John et al., 2008; John et al., 1991; Maslach & Schaufeli, 2001). Individuals who have high levels of neuroticism tend to be anxious and fearful at and away from work. In addition, researchers have determined that high levels of emotional exhaustion and depersonalization can occur due to an individual's predisposition of negative feelings. In addition, neurotic individuals tend to focus on the negative aspects of a situation (Suls et al., 1998). Furthermore, type-A individuals also tend to score high on the emotional exhaustion dimension of burnout. Type-A behavior includes characteristics such as competitive, time-pressured life style, hostility, and an excessive need for control.

Researchers have determined that extraverts are more likely to experience positive emotions, such as cheerfulness, enthusiasm, and optimism compared to introverts (Clark & Watson, 1999). Since extraverts should have a more favorable and positive view of their level of job-related self-efficacy and personal accomplishment than introverts, depersonalization is

unlikely to appear in extraverts considering their enjoyment of interpersonal relationships in direct opposition to distancing oneself from clients and coworkers (Maslach & Schaufeli, 2001). In addition, agreeable individuals are supportive and good-natured and their cognitions about their future work performance should not lead them to negative psychological conditions such as frustration and emotional exhaustion, but in turn allow them to cope with uncertainty (Zellars et al., 2000). Due to agreeable individuals ability to adapt, they are more likely to have a positive view of their jobs because of their tendency to have an understanding of the negative aspects of the work environment. This leads to lower levels of depersonalization in agreeable individuals.

Furthermore, conscientious individuals should be less likely to experience emotional exhaustions because of their work ethic and perseverance (Costa & McCrae, 1985; Saucier & Ostendorf, 1999). These traits allows them to avoid work performance reductions and feelings of anxiety and nervousness which are associated with emotional exhaustion. Conscientious individuals are also achievement-orientated, which allows them to avoid feelings of decreased personal accomplishment. In addition, individuals who score high in openness are less likely to become emotionally exhausted from frustration and anxiety due to their open-mindedness (Zimmerman, 2008). However, they may experience depersonalization with their work when exposed to stressors because they are less inclined to adopt strategies that are quick fixes.

### **Measurement of Personality and Burnout**

Understanding that personality traits might influence job satisfaction and burnout, it is important to consider how personality is measured. To assess an individual's personality traits, the Big Five Inventory (BFI) can be used (John et al., 2008; John et al., 1991). The BFI, also known as the Five Factor Model (FFM), was constructed by John et al. in 1991. The BFI is categorized by openness to experience, extraversion, agreeableness, neuroticism, and

conscientiousness (Barrett et al., 2016a). The BFI measures the 5 domains of personality using 44 characteristics formulated as statements about oneself and rated on a 5-point scale ranging from 1, disagree strongly to 5, agree strongly. The reliability coefficients for the BFI subscales have been consistently reported as strong (Barrett et al., 2016a). The Cronbach's alpha for openness is 0.83, extraversion 0.86, agreeableness is 0.79, neuroticism is 0.87, and conscientiousness is 0.82 (John et al., 1991). Openness is measured by 10 items, which include "is inventive," "is curious about many different things," and "has an active imagination." The extraversion subscale contains 8 items and respondents are asked to determine if descriptors such as the following applied to them: "assertive personality," "is sometimes shy," or "is outgoing, sociable." Agreeableness is evaluated by 9 items, including "is something rude to others," "can be cold and aloof," and "likes to cooperate with others." To determine a participant's level of neuroticism, 8 items are used that include questions such as "worries a lot," "gets nervous easily," and "is emotionally stable, not easily upset." Lastly, conscientiousness uses 9 items, which include "tends to be lazy," "is easily distracted," and "makes plan and follows through."

Although the BFI is a credible measure to determine personality, it is not the only one currently utilized. Other measures are available such as the Ten-Item Personality Inventory (TIPI) and NEO-PI-R (Neuroticism, Extraversion, Openness- Personality Inventory- Revised). The TIPI was created by Gosling et al. (2003) based off the FFM for researchers who needed a brief measure of personality. This measure includes ten items and has been found to not be as strong compared to other measures. In addition, further research is needed to determine the validity of this measure (Ehrhart et al., 2009). The NEO-PI-R is an elaborate version of the FFM that contains 240 items created by Costa and McCrae (1992). The NEO-PI-R measure is lengthy



and is not ideal for many research purposes, however the more commonly used instead is the BFI (Gosling et al., 2003).

Many traits have previously been compared to the constructs of burnout using the Maslach Burnout Inventory (MBI) (Maslach et al., 1996; Maslach et al., 2018). It incorporates three subscales: emotional exhaustion, depersonalization, and personal accomplishment. Emotional exhaustion (EE) illustrates feelings of being emotionally overextended and exhausted by work. Depersonalization (DP) describes a loss of concern for the people with whom one is working and an impersonal and unfeeling response toward them. Lastly, personal achievement (PA) defines the feelings of accomplishment and a sense of competence about one's job and sense of self-appreciation for the successes achieved. The MBI provides numerous versions, depending on which profession is being researched. The Maslach Burnout Inventory – Human Services Survey (MBI-HSS) has demonstrated acceptable internal-consistency reliability in Athletic Trainers as well as expected relationships with variables theoretically expected to be associated with AT burnout (Giaccobbi, 2009; Hendrix et al., 2003; Kania et al., 2009). Therefore, the MBI-HSS has been a widely accepted and used method to quantify burnout in the helping professions (Maslach & Jackson, 1986). The MBI-HSS consists of 22 questions measuring the 3 constructs of burnout. This instrument is scored on a 7-point Likert-type scale ranging from “never feel the effects” (0) to “feel the effects everyday” (6). The MBI-HSS is scored by summing the numeric responses in each of the subscales. Scores may range from 0 to 54 on the EE construct, from 0 to 30 on the DP construct, and 0 to 48 on the PA construct. A high degree of burnout is reflected by high scores on the EE and DP subscales and a low score on the PA subscale. A high degree is  $\geq 27$  for EE,  $\geq 10$  for DP and  $\leq 33$  for PA. An average degree of burnout is reflected by average scores on the EE, DP, and PA subscale. An average

degree of burnout is 19-26 for EE, 6-9 for DP, and 39-34 for PA. Lastly, a low degree of burnout is reflected by low scores on the EE and DP subscales and a high score on the PA subscale. A low degree of burnout is  $\leq 18$  for EE,  $\leq 5$  for DP, and  $\geq 40$  on PA (Maslach et al., 1996). The validity and reliability for the MBI-HSS have been demonstrated in various populations of health care professionals; as such, it is considered the best instrument available to assess burnout in ATs (Kania et al., 2009). The internal consistency reliability for the 3 subscales ranged from a Cronbach's alpha of 0.71 to 0.90, with a test retest reliability ranging from  $r = 0.71$  to  $r = 0.90$  (Maslach et al., 1997). In the current study, Cronbach's alpha for EE, DP, and PA were favorable (0.93, 0.75, 0.72, respectively).

The MBI has been used with other questionnaires to examine factors correlating to burnout. For example, DeFreese & Mihalik (2016) studied burnout using the MBI with social support, perceived stress, and work incongruence. One finding from this study is that negative social interactions were positively associated with the burnout dimension of depersonalization. This means that Athletic Trainers experiences of unwanted advice or intrusion, failure to provide help, unsympathetic or insensitive behavior, and rejection or neglect from individuals at work may contribute to higher levels of disengagement with athletes (DeFreese & Mihalik, 2016). In addition, Kania et al. (2009) found a positive relationship between depersonalization and stress level using the MBI. For example, if an AT is working with a team that has a sudden increase in injured athletes, the demand on the AT to provide treatments for the athlete increases. If this AT perceives that his or her resources are not adequate to meet this demand, the level of stress increases. The AT also may perceive an inability to meet the increased demands as failure, thereby decreasing his or her sense of PA and increasing the level of stress (Kania et al., 2009).

Although the MBI is widely used, it is not specific to Athletic Trainers. In 2008, Clapper

and Harris revised the MBI to make the scale and items assessing burnout more specific to Athletic Trainers by adding new constructs (Clapper & Harris, 2008). They named the new instrument the Athletic Training Burnout Inventory (ATBI). This inventory analyzes four constructs: emotional exhaustion and depersonalization (EEDP), administrative responsibility (AR), time commitment (TC), and organizational support (OS). The EEDP construct includes 18 questions that evaluate an Athletic Trainers job frustration and level of emotional hardening (Mazerolle et al., 2012). The AR construct includes 9 questions that evaluate the pressure with paperwork and other duties identified as administrative. The TC construct includes 4 questions and evaluates the amount of time necessary to complete the workday and how it is perceived to influence time away from home. The last construct, OS, includes 19 questions evaluating interpersonal relationships with supervisors and coworkers. The ATBI has a maximum score of 36 and a minimum score of 6. A score between 6 and 15 indicates a low level of burnout, a score between 15 and 25 represents a moderate level of burnout, and a score between 26 and 36 represents a high level of burnout. This survey has been validated by Clapper and Harris (2008) and has a reliability coefficient of 0.85 for EEDP, 0.82 for AR, 0.86 for TC, and 0.80 for OS. The ATBI contains 62 items representing these 4 constructs and are scored on a 6-point Likert scale ranging from 1 (never true) to 6 (always true) (Clapper & Harris, 2008). This instrument can be used in conjunction with other inventories to determine a correlation between different factors. For example, the BFI and ATBI were used together to determine if there was a correlation between personality traits and burnout in collegiate Athletic Trainers (Barrett et al., 2016a). However, it is important to note that this instrument has not been updated or revalidated since 2008. Therefore, at this time the best measurement to use is the MBI-HSS.

## **Conclusion**

Even though burnout has become more widely known, there is still more to learn about how burnout is related to personality in specific occupations. Research has shown a link between certain personality traits, such as neuroticism, and burnout in numerous settings including in Athletic Trainers. Further, due to the quantity of athletes that Athletic Trainers are in contact with daily, the number of hours spent in the Athletic Training (AT) room, and the professional relationships involved in this occupation, Athletic Trainers score higher on the depersonalization construct of burnout than teachers, doctors, and nurses (Hendrix et al., 2000). The link between burnout and personality traits is important to investigate in order to determine what characteristics an individual possesses. This could lead to a better understanding of how to adapt in the work environment to diminish or eliminate the burnout risk. In addition, the number of employment opportunities for secondary school athletic trainers has increased substantially over the past several years (Gardiner-Shires & Mensch, 2009). However, despite this increase there is still limited research conducted in the secondary school setting, let alone with burnout or personality traits. Therefore, the purpose of this study is to examine the relationship of personality traits and burnout in secondary school Athletic Trainers.

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## APPENDIX C IRB DOCUMENTS

**IRB STUDY APPROVAL LETTER**

Georgia Southern University Office of Research Services & Sponsored Programs		
<b>Institutional Review Board (IRB)</b>		
Phone: 912-478-5465		Veazey Hall 3000
		PO Box 8005
Fax: 912-478-0719	IRB@GeorgiaSouthern.edu	Statesboro, GA 30460

**To:** Abbondanzio, Marissa; Langdon, Jody; Harris, Brandon; Patterson, Steve

**From:** Office of Research Services and Sponsored Programs  
Administrative Support Office for Research Oversight Committees  
(IACUC/IBC/IRB)

**Approval Date:** 10/22/2019

**Subject:** Institutional Review Board Exemption Determination - Limited Review

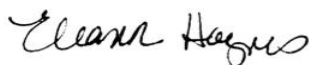
After a review of your proposed research project numbered **H20136** and titled **"The Correlation Between Burnout and Personality Traits in Secondary School Athletic Trainers"** it appears that your research involves activities that do not require full approval by the Institutional Review Board (IRB) according to federal guidelines. In this research project research data will be collected anonymously.

According to the Code of Federal Regulations Title 45 Part 46, your research protocol is determined to be exempt from full review under the following exemption category(s):

Exemption 2      Research involving only the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, if: Information obtained is recorded in such a manner that human participants cannot be identified, directly or through identifiers linked to them. Please visit our FAQ's for more information on anonymous survey platforms: Any disclosure of the human participant's responses outside the research could not reasonably place the participant at risk of criminal or civil liability or be damaging to the participant's financial standing, employability or reputation; Survey or interview research does not involve children; The research project does not include any form of intervention.

Any alteration in the terms or conditions of your involvement may alter this approval. *Therefore, as authorized in the Federal Policy for the Protection of Human Subjects, I am pleased to notify you that your research, as submitted, is exempt from IRB approval. No further action or IRB oversight is required, as long as the project remains the same. If you alter the project, it is your responsibility to notify the IRB and acquire a new determination of exemption. Because this project was determined to be exempt from further IRB oversight, this project does not require an expiration date.*

Sincerely,



Eleanor Haynes  
Compliance Officer

## INFORMED CONSENT



**WATERS COLLEGE OF HEALTH PROFESSIONS**

---

**DEPARTMENT OF HEALTH SCIENCES AND KINESIOLOGY**

---

### **Informed Consent**

#### **The Correlation Between Burnout and Personality Traits in Secondary School Athletic Trainers**

My name is Marissa Abbondanzio and I am an Athletic Training Masters Student at Georgia Southern University. The purpose of this research is to examine how personality traits correlate to burnout in Secondary School Athletic Trainers.

The survey consists of 3 individual sections: demographics, the Big Five Inventory, and the Maslach Burnout Inventory. The survey will take no more than 30 minutes to complete. The risk for taking this survey is no greater than risks associated with daily life experiences.

This studies aim is to add to the current literature on burnout in athletic trainers. The benefits to participants include knowledge on what personality traits may increase the development of burnout and what behavioral traits may be adjusted to decrease burnout in the future. This also benefits society because it will allow athletic trainers to understand why they may be feeling effects of burnout based on their personality traits.

Unidentified or coded data from this study may be placed in a publicly available repository for study validation for 3 years. You will not be identified by name in the data set or any reports using information obtained from this study, and your confidentiality as a participant in this study will remain secure. Subsequent uses of records and data will be subject to standard data use policies which protect the anonymity of individuals and institutions. Unidentified data will be protected through an online server (Qualtrics®). Unidentified data will be maintained on a password protected computer and locked in a secure office by the student researcher. Research advisor will be responsible for the data upon graduation of the student researcher. Unidentified data will be destroyed 3 years after conclusion of research.

If you have questions about this study, please contact the researcher named above or the researcher's faculty advisor, whose contact information is located at the end of the informed consent. For questions concerning your rights as a research participant, contact Georgia Southern University Institutional Review Board at 912-478-5465.

Participating is voluntary, you may stop at any time. In addition, you do not have to answer any questions they do not want to answer. There is no penalty for deciding not to participate in the study. You may decide at any time that they don't want to participate further and may withdraw without penalty or retribution.



You must be 18 years of age or older to consent to participate in this research study. If you consent to participate in this research study and to the terms above, please sign your name and indicate the date below.

You will be given a copy of this consent form to keep for your records. This project has been reviewed and approved by the GSU Institutional Review Board under tracking number H20136.

Title of Project: The Correlation Between Burnout and Personality Traits in Secondary School Athletic Trainers

Principal Investigator: Marissa Abbondanzio, P.O. Box 8076, Statesboro, GA 30460, (912) 478-0200, [mal3779@georgiasouthern.edu](mailto:mal3779@georgiasouthern.edu)

Other Investigator(s): Brandonn Harris, P.O. Box 8076, Statesboro, GA 30460, (912) 478-0200, [bharris@georgiasouthern.edu](mailto:bharris@georgiasouthern.edu);

Steve Patterson, P.O. Box 8076, Statesboro, GA 30460, (912) 478-0200, [spatterson@georgiasouthern.edu](mailto:spatterson@georgiasouthern.edu)

Research Advisor: Jody Langdon, P.O. Box 8076, Statesboro, GA 30460, (912) 478-0200, [jlangdon@georgiasouthern.edu](mailto:jlangdon@georgiasouthern.edu)

By selecting "I Agree," you are stating that:

- 1) You are currently practicing as a certified athletic trainer
- 2) You are currently practicing in the secondary school setting
- 3) You have read the above information
- 4) You voluntarily agree to participate

By selecting "I Disagree," participants are stating that they disagree to the informed consent and will be directed to the end of the survey.

## LETTER OF COOPERATION



October 23, 2019

Human Subjects - Institutional Review Board  
Georgia Southern University  
P.O. Box 8005  
Statesboro, GA 30460

Re: Research Study: The Correlation Between Burnout and Personality in Secondary School Athletic Trainers  
Principle Investigators: Marissa Abbondanzio, LAT, ATC

Dear Review Board,

This letter serves to give permission to Marissa Abbondanzio, LAT, ATC to complete the research project, The Correlation Between Burnout and Personality in Secondary School Athletic Trainers during the period 2019-2020 academic year at our facility.

Marissa will have access to our data specific to this study and the NATA Senior Special Projects Coordinator to conduct this research project. The research project has been described to me to my satisfaction.

Sincerely,

A handwritten signature in black ink, appearing to read 'David Sadler', is written over a light blue horizontal line.

David Sadler  
Executive Director

## LICENSE TO REPRODUCE

For use by Marissa Abbondanzio only. Received from Mind Garden, Inc. on February 29, 2020



To Whom It May Concern,

The above-named person has made a license purchase from Mind Garden, Inc. and has permission to administer the following copyrighted instrument up to that quantity purchased:

**Maslach Burnout Inventory forms: Human Services Survey, Human Services Survey for Medical Personnel, Educators Survey, General Survey, or General Survey for Students.**

The three sample items only from this instrument as specified below may be included in your thesis or dissertation. Any other use must receive prior written permission from Mind Garden. The entire instrument form may not be included or reproduced at any time in any other published material. Please understand that disclosing more than we have authorized will compromise the integrity and value of the test.

**Citation of the instrument must include the applicable copyright statement listed below. Sample Items:**

**MBI - Human Services Survey - MBI-HSS:**

I feel emotionally drained from my work.  
I have accomplished many worthwhile things in this job.  
I don't really care what happens to some recipients.

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**MBI - Human Services Survey for Medical Personnel - MBI-HSS (MP):**

I feel emotionally drained from my work.  
I have accomplished many worthwhile things in this job.  
I don't really care what happens to some patients.

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**MBI - Educators Survey - MBI-ES:**

I feel emotionally drained from my work.  
I have accomplished many worthwhile things in this job.  
I don't really care what happens to some students.

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Cont'd on next page



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**MBI - General Survey - MBI-GS:**

I feel emotionally drained from my work.  
In my opinion, I am good at my job.  
I doubt the significance of my work.

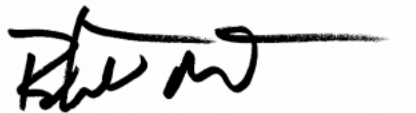
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**MBI - General Survey for Students - MBI-GS (S):**

I feel emotionally drained by my studies.  
In my opinion, I am a good student.  
I doubt the significance of my studies.

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Sincerely,

A handwritten signature in black ink, appearing to read "Robert Most", with a long horizontal line extending to the right.

Robert Most  
Mind Garden, Inc.  
[www.mindgarden.com](http://www.mindgarden.com)

## RECRUITMENT EMAIL

To whom it may concern,

My name is Marissa Abbondanzio, I am a certified athletic trainer at Statesboro High School and graduate student at Georgia Southern University. I am currently working on my thesis and am looking for participants to take a brief survey for my study.

Burnout is an ever growing issue in many professions, however is more prevalent in the health care profession. The purpose of my research is to examine how personality traits correlate to burnout in Secondary School Athletic Trainers. We also hope to better understand if personality traits and behavior predict burnout.

Participation in this research will include completion of an online survey via Qualtrics®. The survey consists of 3 individual sections: demographics, the Big Five Inventory, and the Maslach Burnout Inventory. The survey is approximately 60 questions and should take no more than 25 minutes to complete. No identifying information will be collected.

Data collection will run from November 1<sup>st</sup> to December 31<sup>st</sup>, 2019. If you would like to participate, please click the following link. This will redirect you to the survey via Qualtrics®.

If you have questions about this study, please contact me or my faculty advisor, Dr. Jody Langdon as follows:

Principal Investigator: Marissa Abbondanzio, LAT, ATC.

Email: ma13779@georgiasouthern.edu

Research Advisor: Jody Langdon, Ph.D. Phone: (912) 478-0200,

Email: jlangdon@georgiasouthern.edu

I appreciate your time and consideration.

Thank you,  
Marissa Abbondanzio, LAT, ATC

## APPENDIX D SURVEY'S

**MBI HUMAN SERVICES SURVEY**

**Instructions:** On the following page are 22 statements of job-related feelings. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, write the number "0" (zero) in the space before the statement. If you have had this feeling, indicate how often you feel it by writing the number (from 1 to 6) that best describes how frequently you feel that way. An example is shown below.

<b>How often:</b>	0	1	2	3	4	5	6
	Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

1. \_\_\_\_\_ I feel emotionally drained from my work.
2. \_\_\_\_\_ I have accomplished many worthwhile things in this job.
3. \_\_\_\_\_ I don't really care what happens to some recipients.

If you never feel depressed at work, you would write the number "0" (zero) under the heading "How often." If you rarely feel depressed at work (a few times a year or less), you would write the number "1." If your feelings of depression are fairly frequent (a few times a week but not daily), you would write the number "5."

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## BIG FIVE PERSONALITY TRAITS

### How I am in general

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who *likes to spend time with others*? Please write a number next to each statement to indicate the extent to which **you agree or disagree with that statement**.

1 Disagree Strongly	2 Disagree a little	3 Neither agree nor disagree	4 Agree a little	5 Agree strongly
---------------------------	---------------------------	------------------------------------	------------------------	------------------------

### I am someone who...

- |   |  |
|---|--|
| 1. ____ Is talkative                            | 23. ____ Tends to be lazy                              |
| 2. ____ Tends to find fault with others         | 24. ____ Is emotionally stable, not easily upset       |
| 3. ____ Does a thorough job                     | 25. ____ Is inventive                                  |
| 4. ____ Is depressed, blue                      | 26. ____ Has an assertive personality                  |
| 5. ____ Is original, comes up with new ideas    | 27. ____ Can be cold and aloof                         |
| 6. ____ Is reserved                             | 28. ____ Perseveres until the task is finished         |
| 7. ____ Is helpful and unselfish with others    | 29. ____ Can be moody                                  |
| 8. ____ Can be somewhat careless                | 30. ____ Values artistic, aesthetic experiences        |
| 9. ____ Is relaxed, handles stress well.        | 31. ____ Is sometimes shy, inhibited                   |
| 10. ____ Is curious about many different things | 32. ____ Is considerate and kind to almost everyone    |
| 11. ____ Is full of energy                      | 33. ____ Does things efficiently                       |
| 12. ____ Starts quarrels with others            | 34. ____ Remains calm in tense situations              |
| 13. ____ Is a reliable worker                   | 35. ____ Prefers work that is routine                  |
| 14. ____ Can be tense                           | 36. ____ Is outgoing, sociable                         |
| 15. ____ Is ingenious, a deep thinker           | 37. ____ Is sometimes rude to others                   |
| 16. ____ Generates a lot of enthusiasm          | 38. ____ Makes plans and follows through with them     |
| 17. ____ Has a forgiving nature                 | 39. ____ Gets nervous easily                           |
| 18. ____ Tends to be disorganized               | 40. ____ Likes to reflect, play with ideas             |
| 19. ____ Worries a lot                          | 41. ____ Has few artistic interests                    |
| 20. ____ Has an active imagination              | 42. ____ Likes to cooperate with others                |
| 21. ____ Tends to be quiet                      | 43. ____ Is easily distracted                          |
| 22. ____ Is generally trusting                  | 44. ____ Is sophisticated in art, music, or literature |