

A COMPARISON OF HIGH SCHOOL STUDENTS WHO PARTICIPATE IN ATHLETICS  
VERSES NON-ATHLETES ON SEVEN DIMENSIONS OF WORK ETHIC

by

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Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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## ABSTRACT

This study compared the differences in work ethic dimension scores between high school student-athletes and students who do not participate in athletics. The underlying problem was that there is not enough research in this area and that current available studies provide conflicting information. The purpose of the study was to examine the differences in seven work ethic dimension scores from the Multidimensional Work Ethic Profile (MWEP) between student-athletes and non-athletes. The study used a quantitative, causal-comparative design to examine the differences in the two pre-existing groups. The convenience sample of participants ( $N = 144$ ) were selected from an available population that makes up the student body of a small, rural high school in Southeast Tennessee. The sample consisted of 84 students who identified themselves as athletes and 60 students who self-identified as non-athletes. The MWEP was administered during normally scheduled classes. The composite work ethic scores were analyzed with a one-way between-subjects analysis of variance (ANOVA) which found that a significant difference exists between athletes and non-athletes on work ethic ( $F(1,141) = 7.226, p = .008, \eta^2 = .049$ ). This allowed the researcher to reject the first null hypothesis. The individual work ethic dimension scores (self-reliance, leisure, morality/ethics, hard work, centrality of work, wasted time, and delay of gratification) were analyzed with a one-way multivariate analysis of variance (MANOVA) which found no significant difference in work ethic dimensions between athletes and non-athletes (Wilks'  $\Lambda = .910, F(7, 135) = 1.902, p = .074, \eta^2 = .090$ ). The MANOVA analysis resulted in a failure to reject the second null hypothesis.

*Keywords:* work ethic, centrality of work, delay of gratification, hard work, leisure, morality/ethics, self-reliance, wasted time

## **Dedication**

I dedicate this dissertation to my mother, Mrs. Eva Hazel Shipley. My mother is one of what historians call the “Greatest Generation.” She was born November 20, 1929 in Evarts, Kentucky as the fourth of what would become a family of nine children. In 1943, as World War II raged, and with two older brothers already gone to war, her family moved to Dayton, Tennessee. My mother finished the eighth grade in 1944, which was the last time she would formally enter a classroom as a student. At 14, she ended her education to begin working as a waitress to help support her family while the world tore itself apart. In 1946, she met her future husband, my father Roy Shipley Jr., after he returned from the war. They married in 1948, welcoming a son in 1949 and a daughter in 1950. I came along 21 years later. In 1979, my father died, leaving a 49-year-old widow with a seven-year-old first grader at home. Even though she had only been formally educated through the eighth grade, my mother instilled in me the belief that achieving an education was a path to success, and nothing less than my best effort was acceptable. My mother supported and encouraged me throughout my elementary and secondary education, and though my decision to attend the United States Military Academy worried her immensely due to the risks of military service, she never let it show to me, as I only discovered this from my older brother and sister. When I chose later in life to go back to school and become a teacher, I thought of the guidance my mother had provided in my education. Now, as I finish my pursuit of the degree Doctor of Education, words cannot express the gratitude I have that my mother would accept nothing less than my best effort, instilling in me a desire to succeed in my education while she had never had the opportunity to finish her education.

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Next is my family, beginning with my wife Sandra, who endured my stress levels and mood swings as I spent countless hours at the table reading articles and typing on the laptop, not having time for family time. Jeanna, my youngest daughter, dealt with the same things as my wife while working her way from seventh grade and into ninth grade as an honors student and cheerleader. Finally, I apologize to my two granddaughters, Leonna and Jada, who did not understand why “Pappaw” could not just get off the computer to play.

Dr. Lisa Foster, my committee chair, was an irreplaceable part of this process. I sincerely thank her for all of her encouragement and guidance during the past year.

Dr. Ronda Brady, committee member and fellow teacher, offered encouragement and an ear willing to listen to frustration from not just me but also from my wife.

My friend, Coach Ron Cox, started me on the path to becoming a teacher in January of 2010 when he walked into my office and informed me that he wanted me to be the offensive coordinator for our former middle school’s football team, which he had just been hired to coach.

Mr. Tobin Davidson took a chance and hired an uncertified teacher to teach 8th grade social studies in January 2011 while I worked on alternative certification.

Finally, thank you to my friend Dr. Jesse Neece, who I met as a fellow doctoral student at Liberty during my first intensive, for his support and encouragement.

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### **List of Abbreviations**

Analysis of variance (ANOVA)

Associations to Advance Collegiate Schools of Business (AACSB)

Dorsolateral prefrontal cortex (DLPFC)

Grade point average (GPA)

Institutional Review Board (IRB)

Multidimensional Work Ethic Profile (MWEP)

Multivariate Analysis of Variance (MANOVA)

National Center for Education Statistics (NCES)

National Collegiate Athletic Association (NCAA)

National Federation of State High School Associations (NFHS)

Protestant Ethic of Hard Work (PEHW)

Work Ethic Trait Behavior Indicator Inventory (WETBII)

## **CHAPTER ONE: INTRODUCTION**

### **Overview**

This study compared the work ethic of high school student-athletes with high school students who are non-athletes. The study compared overall work ethic, determined by a self-report survey, as well as compared athletes and non-athletes on seven individual dimensions that make up the work ethic construct. This chapter begins with the background information explaining the relevance of the current study and a brief history of the topic. The next sections are the problem statement and the purpose statement, which further outline the study. The significance of the study section comes next followed by the research questions that the researcher will attempt to answer. The final section provides the key terms found in the study.

### **Background**

The idea that people possess a work ethic is rooted in Europe's Reformation period that began in the 16th century and has evolved to its current construct based on the early 20th century work of Max Weber (Meriac, Thomas, & Milunski, 2015; Roth, 2014; Weber, 1958; Zabel, Biermeier-Hanson, Baltes, Early, & Shepard, 2017). Modern researchers have defined the concept of work ethic as "a set of beliefs and attitudes reflecting the fundamental value of work" (Meriac, Woehr, & Bannister, 2010, p. 316). Gerrard (2014) adds that work "defines our material capacities, shapes our social relationships, influences our identities, can provide a sense of purpose and meaning, and organizes our time" (p. 865). Recent studies have shown that individual work ethic may be declining by generation (Meriac et al., 2010, Roth, 2014), while other studies have shown little if any changes in work ethic by generation or time (Hite, Daspit, & Dong, 2015; Pogson, Cober, Doverspike, & Rodgers, 2003; Zabel et al., 2017).

Prior to the Reformation in Medieval Europe, work had one primary objective and that was survival (Byrne, 1990). Peasants and serfs labored under a feudal system in which the rewards went to the nobles and landowners, giving the average person very little reason to work hard because attaining a better life for one's self was not possible. The Renaissance brought changes to Europe, and concurrent with the Reformation of the Catholic Church, the idea that hard work could lead to reward resulted in the beginning of the concept of a work ethic (Roth, 2014; Weber, 1958).

Most modern studies of work ethic begin with the work of Max Weber in the early twentieth century. Weber (1958) theorized that it is not just a person's willingness to work hard, but also their belief that hard work was a vital and important part of life, combined with a willingness to forego leisurely activities that was responsible for the economic successes of the nineteenth century in Europe and the United States. Weber's work, originally published in 1905, has led to considerable further study of the work ethic construct.

Current studies of work ethic accept work ethic as a measurable construct that is multidimensional in nature, based on the work of Miller, Woehr, & Hudspeth (2001). Miller et al. studied previous measurements of work ethic and identified seven dimensions that make up work ethic: self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time, and delay of gratification. Floyd (2015) summarized that a strong work ethic could be observed and defined as the willingness to accomplish an assigned task regardless of or even in spite of the actual nature of the assigned task. The willingness to work hard and complete the job indicates that a person possesses a strong work ethic. Floyd also stated that a person with a strong work ethic finds their reward in the self-satisfaction of completing an assigned task. Outside of the business world, researchers have studied student work ethic and compared it with academic

achievement. Meriac (2015) studied the work ethic of students and how that it relates to academic motivation and performance while Meriac (2012) used the work ethic of students to predict both productive and counterproductive behaviors.

Highhouse, Zickar, and Yankelevich (2010) followed up on two previous studies, originally conducted in 1955 and 1980, and determined that work ethic has steadily declined over the previous 55 years. Meriac et al. (2010) supported the findings of Highhouse et al. with a study of work ethic across three generations of workers, Baby Boomers, Generation X, and Millennials, that showed a decrease in work ethic for younger members of the workforce. Zabel et al. (2017) contradicted Meriac et al. (2010) and Highhouse et al. by finding that generational cohorts did not cause any significant difference in measured work ethic. This finding by Zabel et al. suggested that work ethic was not in decline.

Students and academic achievement have also been a focus of work ethic studies. Van Ness, Melinsky, Buff, and Seifert (2010) discovered that the overall work ethic of college students is similar to that of workforce professionals. Van Ness et al. reported that while the overall work ethic scores were similar, there were significant differences in the measured dimensions that make up work ethic. Meriac (2015) found that higher levels of work ethic among surveyed students correlated to a higher level of academic achievement, while Dunn (2013) reported that education level connects to work ethic, with people of lower education levels scoring higher on the morality of work while higher education levels scored higher on preference of work.

While Meriac (2015) and Dunn (2013) connected higher levels of work ethic with higher academic achievement among students, other studies have looked at student-athletes and their academic performance. Levine, Etchison, and Oppenheimer (2014) reported that student-

athletes often underperform academically, but in contrast to their non-athlete peers, student-athletes have better time management skills, work ethic, and confidence. Levine et al. also found that even though they seem to underperform, student-athletes do care about their academic achievement.

Schultz (2017) studied the academic performance of high school student-athletes and found a small but significant negative effect on academic performance during in-season times versus off-season times for varsity athletes. Schultz's finding contradicted the findings of Yeung (2015), who found that students who participated in athletics perform higher academically than non-athletes. Meriac (2015) and Dunn (2013) both connected higher work ethic with high academic achievement. Levine et al. (2014) and Schultz (2017) reported student-athletes underperforming academically when compared to their non-athletes peers or to themselves in the off-season. The current literature provides contradictory findings on student work ethic and how that relates to athletic participation in that the primary measure for athletes has normally been academic achievement and not work ethic itself.

### **Problem Statement**

Findings related to measurable outcomes surrounding work ethic have shown mixed results. Studies have shown generational differences in work ethic (Highhouse et al., 2010; Meriac et al., 2010; Roth, 2014), while other studies (Zabel et al., 2017) found no significant difference in the work ethic based on age. A possible decline in work ethic is a concern to business owners and corporate executives who hire employees for their companies (Roth, 2014). Dunn (2013) and Meriac (2015) connected higher levels of work ethic to higher academic achievement by students in general, while Levine et al. (2014) and Schultz (2017) reported lower academic achievement from athletes due to their commitment to the sport they play. Yeung



(2015) reported high academic achievement by athletes compared to non-athletes, which Moore (2017) supports with a finding that student-athletes possessed a higher level of work ethic than their non-athletic peers did. A confusing picture emerges regarding work ethic among students, and particular student-athletes. Studies have shown that higher work ethic scores lead to higher academic achievement by students. Other studies have shown that student-athletes have higher work ethic scores than non-athletes. Work ethic as defined by the literature can be measured on a combination of seven dimensions (Meriac, 2015; Miller et al., 2001). The seven measurable dimensions of work ethic are self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time, and delay of gratification (Miller et al., 2001). Each of these dimensions has been studied separately, with the most recent studies of work ethic reporting results of each individual dimension (Meriac et al., 2010; Meriac, 2015; Miller et al., 2001). The problem was that studies of the work ethic of high school student-athletes versus non-athletes have not fully determined the underlying dimension or dimensions of work ethic that cause the overall reported differences in work ethic scores between student-athletes and non-athletes. Miller et al. (2001) and Meriac et al. (2010) reported that work ethic is a multidimensional construct, so an understanding of the differences between student-athletes and non-athletes on the seven individual dimensions of work ethic was needed to provide a deeper understanding of why the reported differences occur.

### **Purpose Statement**

The purpose of this quantitative causal-comparative study was to examine the differences in work ethic dimensions between high school student-athletes and non-athletes. The independent variable for this study was athletic participation by high school students. For the purpose of this study, athletic participation was defined as participation as a member of a high school sponsored athletic team or as a member of a non-school athletic team such as a travelling

select baseball or select volleyball team. The independent variable consisted of two groups, with the first group identified as athletes and the second group identified as non-athletes. The dependent variables for this study were the seven dimensions of work ethic: self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time, and delay of gratification (Miller et al., 2001). Miller et al. (2001) defined self-reliance as an individual's desire to strive for independence in their daily work while defining morality/ethics as a person's belief in a just and moral existence. Leisure defined a person's belief in the importance of non-work activities, and hard work represented a person's belief in the virtues of hard work (Miller et al., 2001). Centrality of work refers to a person's belief in work for work's sake and the importance of work to that person (Miller et al., 2001). Finally, Miller et al. defined wasted time as a person's attitudes and beliefs reflecting active and productive use of time while delay of gratification represented a person's orientation toward the future and postponement of rewards. The population for the study consisted of all high school students enrolled in ninth through twelfth grades at a rural Southeastern high school. The study used a convenience sample drawn from this population, and the design allowed all members of the population to have the opportunity to be included in the sample.

### **Significance of the Study**

Most work ethic studies conducted with student-athletes focus on the work ethic construct. The literature shows that work ethic is multidimensional with seven separate dimensions that make up a person's work ethic. Further study was required to examine differences in reported work ethic between student-athletes and non-athletes, taking into account the multidimensional nature of the work ethic construct student-athlete. Work ethic scores consisting of seven separate dimensions combined into a composite score could be misleading, in

that overall composite scores for work ethic yield similar results while simultaneously showing significant differences when the individual dimensions are examined separately. For example, student-athletes and non-athletes could be significantly different on the dimensions of hard work and leisure, but when combined into a work ethic score, this difference could vanish. The current study aimed to analyze the work ethic of student-athletes and non-athletes from a multidimensional viewpoint of work ethic to try to find which individual dimensions of the work ethic construct account for reported differences in work ethic scores between student-athletes and non-athletes. This study added to the body of knowledge on work ethic, students in general, and to the specific body of knowledge on work ethic and student-athletes. This study used high school students instead of college students, which is beneficial to the field of study because high school students are not always available to or accessible to researchers. Not only has this study provided a deeper understanding of the differences in work ethic among high school student-athletes and non-athletes, it helped to clarify the reported differences in work ethic studies involving studies that looked at students and academic achievement (Dunn, 2013; Meriac, 2015; Roth, 2014), as well as athletes and academic achievement (Schultz, 2017; Yeung, 2015). This study added to the field of knowledge of the work ethic construct by breaking the differences in work ethic scores between student-athletes and non-athletes down to the dimension level to discern exactly where the differences lie regarding work ethic. Education practitioners, including administrators, teachers, and coaches, can gain valuable insight into how their students view the concept of work ethic and can use that information to encourage their students and athletes to achieve desired results.

### Research Questions

**RQ1:** Is there a significant difference in work ethic between high school students who participate in athletics and high school students who are non-athletes?

**RQ2:** Is there a significant difference in the work ethic dimensions of self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time, and delay of gratification between high school students who participate in athletics and high school students who are non-athletes?

### Definitions

1. *Centrality of work* – Centrality of work is belief in work for work's sake and the importance of work in one's life (Deranty, 2015; Meriac et al., 2010; Miller et al., 2001; Weber, 1958).
2. *Delay of Gratification* – Delay of gratification is having an orientation towards the future by being able to resist immediate rewards while waiting for a future reward (Ho, Tong, & Jia, 2016; Miller et al., 2001; Reyna & Wilhelms, 2016).
3. *Leisure* – Leisure is having a pro-leisure attitude in favor of leisure activities and beliefs in the importance of non-work activities (Ateca-Amestoy, Serano-del-Rosal, & Vera-Toscano, 2008; Miller et al., 2001; Parr & Lashua, 2004).
4. *Hard work* – Hard work is a belief in the virtues of working hard (Desante, 2013; Ghorpade, Lackritz, & Singh, 2006; Miller et al., 2001; Weber, 1958).
5. *Morality/ethics* – Morality/ethics is the belief in a just and moral existence (Hazels, 2015; McGavin, 2013; Miller et al., 2001).
6. *Multidimensional Work Ethic Profile (MWEP)* – A 65-item survey developed to measure the work ethic construct on seven dimensions: centrality of work, delay of

gratification, leisure, hard work, morality/ethics, self-reliance, and wasted time (Meriac, 2012; 2015; Miller et al., 2001).

7. *Self-reliance* – Self-reliance is the attitude of striving for independence through one's daily work (Emerson, 2010; Liang, 2013; Miller et al., 2001).
8. *Wasted time* – Wasted time is the attitudes and beliefs one has that reflects active and productive use of time (Dale, 2012; Flinchbaugh, 2013; Horman & Kenley, 2005; Miller et al., 2001).
9. *Work ethic* – a set of beliefs and values reflecting the fundamental value of work (Byrne, 1990; Meriac et al., 2010; Roth, 2014; Weber, 1958).

## **CHAPTER TWO: LITERATURE REVIEW**

### **Overview**

This chapter begins with a review of the theoretical construct of work ethic. The theoretical construct section examines work ethic from its historical beginnings in the Post-Reformation era of the sixteenth and seventeenth centuries as the Protestant Ethic and how that the religious aspect of the Protestant Ethic evolved into the idea that people possess a work ethic. The next section further explores work ethic to establish the modern construct of what exactly defines a work ethic. The related literature explores the seven identified dimensions of work ethic, which make up the dependent variables for the study: self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time, and delay of gratification. The last two sections of the related literature examine work ethic as it pertains to students and academic achievement before moving on to work ethic and athletes. The final section provides a summary of the chapter and a conclusion based on the review of the literature.

### **Theoretical Framework**

The theoretical basis of this study is the belief that people possess a work ethic. The concept of work ethic, simply defined, is a person's beliefs about the importance of work (Byrne, 1990; Miller et al., 2001; Weber, 1958). A full understanding of work ethic is an important part of many relations in daily life: employer-employee, teacher-student, and coach-athlete.

### **Historical Foundations of Work Ethic**

The idea that people have a work ethic was born in the aftermath of the Protestant Reformation in Europe of the sixteenth and seventeenth centuries (Byrne, 1990). The Reformation traces its beginnings to 1517 when German priest Martin Luther protested the actions of the Roman Catholic Church with his *Ninety-five Theses* (Byrne, 1990). The

Reformation brought about a divide in the Christian Catholic church that eventually led to a split and the formation of the Protestant branch of Christianity. This reformation of Christian ideas led people to new beliefs about their relationship with God, dominated previously by the ritual of the Catholic Church. Martin Luther's ideas were the basis from which the later church was able to link the idea of hard work with the Christian belief in heavenly salvation (Roth, 2014).

Post-reformation intellectuals began to emphasize the idea of work ethic to counter the social welfare and social class status that defined a person's place in society through the Middle Ages and into the 17th Century (Byrne, 1990). A high willingness to work hard was only considered essential for the lowest levels of society, while the nobles and upper classes subscribed to a life of leisure and relaxation based on the efforts of the lower classes, going so far as to instill in the upper levels of society that they should avoid work (Byrne, 1990).

According to Roth (2014), upper-class society considered work a vulgar and unattractive way for a person to spend their time. Because of this, people did as little work as possible and only worked to survive. People accepted this as the status quo due to the perceived belief that God had ordained the ruling class with a divine right to rule. The lower classes reluctantly accepted their place in life, albeit with the ingrained belief that it was the responsibility of the noble class and the church to care for the well-being of the poor. There was no upward mobility in society, and with few exceptions, people were born into a social class and would remain there until they died. Nobles expected hard work from the serfs and peasants, and in exchange, they received protection from the nobles. In essence, hard work for the lower classes was the accepted and expected way of life, with a meager survival being the only incentive and reward for this hard work.

Post-Reformation intellectuals challenged and rejected the accepted beliefs regarding social responsibility for the poor instilled by the Catholic Church centuries earlier. Protestants instead adopted the stance that individuals were responsible for their place in society, leading to the idea of a Protestant Ethic (Weber, 1958). While viewed as a brutal and uncaring approach to the perhaps the neediest members of society, the basis for this fundamental shift in beliefs was essential to give the poorest members of society a reason to work hard to improve their status in life. As social responsibility for the poor began to shift, the beginnings of the Protestant Ethic can be traced to the pre-destination ideas of the followers of John Calvin (Wisman & Davis, 2013). Calvinists saw the accumulation of wealth and prosperity as an indicator of eternal salvation from God gained from hard work, with the credit for this worldly success given to God and not the individual. This Protestant Ethic, then, became a code for Christians to live by in which God rewarded hard work on earth with the accumulation of worldly wealth and the promise of acceptance into the God's kingdom in the afterlife. While still essential for survival, the motivation for hard work shifted from merely surviving this world to the attainment of reward both during life and with an afterlife in heaven.

With the Protestant Ethic developing in Europe during and after the Reformation, it was only natural for these ideas to cross the Atlantic Ocean with the earliest colonists to America. Seventeenth-century colonists left Europe and settled in America for many reasons, from escaping the religious persecution of Protestants in England, to a desire for greater financial success offered by the opportunity to own land. While the settlers of the Jamestown colony of Virginia arrived in 1607 with the primary goal of creating wealth and economic success for the colonies' owners, the settlement of what would become New England differed as Protestant Separatists and Puritans fled persecution in England. The settling of America resulted in a



blurring of the lines between the social classes of Europe, as land ownership gave colonists a social standing that had often been unachievable in Europe. Combined with the ability to own land and achieve a social status not previously available, the Protestant Ethic instilled the belief in colonists that anyone was able to rise out of the lowest levels of social class with a vertical mobility not available in Europe if they were willing to work hard (Wisman & Davis, 2013). The arrival of the Industrial Revolution further enhanced the belief that hard work would allow individuals to earn money, accumulate wealth, and allow individuals to improve their social status (Roth, 2014).

Credit for the development of the modern concept of work ethic goes to Weber (1958), who tied together the Protestant Ethic and the ideas of capitalism and entrepreneurship. The Calvinist idea that hard work can lead to the accumulation of wealth as a reward from God led to the simpler belief that hard work leads to economic and financial success while gradually removing the religious nature owed (Miller et al., 2001). As the religious connotations of heavenly reward slowly faded from the forefront of the Protestant ethic, supplanted by the goals of economic success and the attainment of wealth, the concept of a work ethic gradually replaced the concept the Protestant ethic. The foundation of work ethic became hard work and the avoidance of leisure activities, with the earning of money and the accumulation of wealth as the accepted way of life (Weber, 1958). The idea that people possess a work ethic and that this ethic indicates how willing a person is to work hard to achieve success has been ingrained in American culture. Unlike its historical roots, in which the poor were encouraged to work hard to achieve acceptance into the afterlife while the noble classes learned that hard work was beneath their societal status, the transformation of the Protestant ethic into work ethic transformed the perception of work ethic in improving one's economic place in society. Because of this

transformation, possessing a high work ethic was seen as desirable not just in workers, but in anyone who wanted to improve their social status. These ideas of hard work and upward mobility meshed extremely well with the settlement of North America by people who were not just seeking a place to practice their religion freely, but who were also looking for a chance to improve their status in society. Through the nineteenth and twentieth centuries, as the religious nature of the Protestant Ethic gradually faded, the work ethic replaced the Protestant Ethic.

### **Work Ethic**

A significant amount of research exists that studies the work ethic construct across different groups. Most current studies of work ethic accept work ethic as a measurable construct that is multidimensional in nature, based on the work of Miller et al. (2001). Miller et al. studied previous measurements of work ethic and identified seven dimensions that make up work ethic: self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time, and delay of gratification. Floyd (2015) summarized that a strong work ethic can be observed and defined as the willingness to accomplish an assigned task regardless of or even despite the actual nature of the assigned task. The willingness to work hard and complete the job indicates that a person possesses a strong work ethic. Floyd also stated that a person with a strong work ethic finds their reward in the self-satisfaction of completing an assigned task.

Work ethic is not a constant. The idea that people possess a work ethic has evolved over centuries and has changed from a construct of a religious nature to one of economic achievement. The original basis for the Protestant ethic as described by Weber (1958) linked the idea of a strong work ethic to the Calvinist beliefs of pre-destination. Colvin and McCracken (2016) found that over time, those religious differences that first led to the idea of work ethic have dissolved between different denominations of the Christian religion, with Protestants, and

more specifically Calvinists, showing no significant differences in work ethic when compared to Catholics. The modern construct of work ethic has evolved over time and has moved away from its historical roots in the Protestant branch of Christianity (Colvin & McCracken, 2016; Miller et al., 2001).

With the idea established that what defines a person's work ethic has changed over time, many contemporary studies have attempted to establish if a person's work ethic changes over time as well. Pogson et al. (2003) conducted a study of work ethic using participants that were at three distinctly different stages in their careers based on their ages. These age groups represented people at different stages in their careers. The youngest group consisting of workers under the age of thirty-one identified as beginning their careers with an average of around five years of experience in their job. The middle group was workers aged 31-44, considered stable in their careers, and with an average of nineteen years of experience at their job. The final group of workers were over the age of 44 and averaged approximately 29 years of work experience. Pogson et al. found no significant difference in the overall work ethic scores of these three groups of workers, which suggested that overall work ethic does not change over time in individuals. Pogson et al. also found, however, that individual dimension scores of work ethic did significantly differ over the three career stage groupings, which supports the multidimensional aspect of work ethic reported by Miller et al. (2001).

While Pogson et al. (2003) focused on age and work experience to study potential changes in work ethic and found no significant differences across age and experience groups, they did find differences in individual dimensions of work ethic. Pogson et al. relied on age alone as the determining factor in assigning their subjects to groups. Meriac et al. (2010) measured work ethic differences across generational cohorts. The findings by Meriac et al.

(2010) suggested that in the comparison of generational groups there were significant differences in work ethic scores. Meriac et al. (2010) divided their subjects into three groups based on generation: Millennials, Generation X, and Baby Boomers. Meriac et al. (2010) found significant differences in work ethic with Baby Boomers, the oldest grouping, scoring significantly higher than the other generational groups. While on the surface this result seems to have countered the findings of Pogson et al. (2003), Meriac et al. (2010) ruled out age and career stage as indicators of the difference by comparing answer tendencies of the three groups. However, Meriac et al. (2010) could not fully rule out the effect that age played in their findings. The average age of the Baby Boomer cohort was significantly higher than the other two, while the mean ages of the Generation X and Millennial cohorts were only slightly different, with the Generation X cohort less than 1.4 years older than the Millennial cohort. In a generational study of registered nurses, Jobe (2014) also found significant differences in work ethic across generational cohorts in support of Meriac et al. (2010). In both studies, however, a possible limitation is differences in interpretation of the questions based on the age and experience of the participant.

Other studies continue to support the findings of Pogson et al. (2003) suggesting no difference in work ethic exists due to age, career, or generation. Zabel et al. (2017), Hite et al. (2015), and Real, Mitnick, and Maloney (2010) all report either little or no differences in work ethic scores based on generational cohort. Hite et al. examined work ethic in the United States relating to changes in the population. Hite et al. not only examined generational differences in work ethic across the three previously established generational groups, Baby Boomers, Generation X, and Millennials, but also studied the differences by ethnicity. The ethnic groups used for the study were Caucasian, African American, Hispanic and Asian American. The

findings suggested that not only are there no significant differences in work ethic across the ethnic groups used in the study but also that there are no significant differences across generational cohorts.

The study conducted by Zabel et al. (2017) is perhaps the most comprehensive study of work ethic to date. Zabel et al. were able to compile a set of data from 105 published work ethic studies that included participant ages and work ethic scores. The researchers were able to assign each data point to a generational cohort representing Baby Boomers, Generation X, and Millennials, using the dates of the study and the reported ages of the study participants. Zabel et al. (2017) found in their examination that there was no significant difference in work ethic scores based on generational cohorts. These studies support the idea that while people possess a work ethic, it tends to remain constant over time regardless of career, age, or generational influences.

While studies have produced conflicting findings on whether work ethic changes with age or with generation, research was limited to data that was mostly collected at the time of the study. Highhouse et al. (2010) approached the question of whether work ethic is declining by studying the results of a simple question that posed to people for many years. The study looked at variations of a hypothetical scenario in which the researchers asked participants if they would continue working if they came into a significant amount of money that would provide for them for the rest of their life. In some cases, researchers presented the study participants with a “winning the lottery” scenario. In 1980, researchers repeated the initial 1955 study (Highhouse et al., 2010). Due to the repeated nature of the study, the research by Highhouse et al. included the responses of people over the course of 55 years. For the study, the researchers asked participants if they would continue working if they won the lottery or in some other way were provided enough money to live comfortably without working. In 1955, 80% of those asked

indicated that they would continue to work even if they won the lottery, leading the researchers to conclude that workers derived more from work than just economic benefit, supporting the idea that people possess a work ethic (Highhouse et al., 2010). A follow-up study (Vecchio, 1980) reported that only 72% of participants indicated that they would continue working if they won enough money to live comfortably for the rest of their life without working. Vecchio's (1980) study suggested that the measurable construct of work ethic was declining over time. Highhouse et al. (2010) then conducted a study of responses to the "lottery question" since 1980 and found that less than 70% of respondents would continue to work if they received enough money to live comfortably without having to work. Highhouse et al. (2010) used these findings to support the idea that work ethic is declining over time by asserting that if work ethic remained constant, then the results of the "lottery question" should have also remained constant over time. On the surface it appears that Highhouse et al. contradicted published research that there are no differences in work ethic due to age or generation, however, this study indicates that over time work ethic is declining even though it may have no significant difference between age or generational groups at a given point in time.

With the work ethic construct having undergone one major shift from the original Protestant Ethic into a more modern construct called the work ethic, the reported studies of a declining work ethic could instead be pointing to another shift in what the work ethic construct means. Roth (2014) believed that work ethic, as currently defined, is no longer applicable to the modern workforce and that a better measurement would be the development ethic first proposed by the Greek philosopher Aristotle and updated since. Roth's development ethic still relies heavily on work ethic but shifts the focus from the accumulation of wealth as the primary driver of the work ethic to one of five pieces of the development ethic. In short, Roth does not replace

the work ethic as intended but uses it to expand his proposed development ethic, which does not appear to affect the current literature on the work ethic construct.

While previously discussed studies have focused on the differences in work ethic across age, generational, and ethnic groupings, other studies have focused on how possible changes in work ethic related to the employer-employee relationship. More and more members of the Millennials generation enter the workforce each year. According to Highhouse et al. (2010), these Millennials bring with them a lower work ethic than previous generations of workers. This information is not to say that Millennials have a lower work ethic but it meant that work ethic overall is steadily declining as current studies have contradictory results on the differences between generational cohorts. Declining work ethic would be a serious concern for employers in almost any field. Forquesato (2016), Meriac, Thomas, and Milunski (2015), Roth (2014), and Van Ness et al. (2010) all examined the work ethic construct and how it relates to employers and employees.

Van Ness et al. (2010) conducted a study to understand and evaluate the differences in perceived work ethic between college students and workforce professionals. Van Ness et al. found that there was no significant difference in overall work ethic between college students and workforce professionals. Further analysis of the dimensions of work ethic, however, found that differences existed between the two groups. The study found that college students scored higher on the dimensions of self-reliance, leisure, and hard work, while workforce professionals scored higher on centrality of work, morals/ethics, and a dislike of wasted time. There was no significant difference found in the measurement of delay of gratification. It is unclear what impact these findings have as it relates to the future workforce, though, because Van Ness et al. was not able to account for possible changes to the work ethic dimension scores when a person

graduates from college and enters the workforce. The life of a college student is significantly different from that of a college graduate that has entered the workforce, which could account for the differences in the findings.

Another value that employers may see as beneficial for employees to possess is task persistence. Meriac, Thomas, and Milunski (2015) studied work ethic to determine if work ethic scores could predict task persistence and the intensity placed on completing an assigned task. Meriac, Thomas, and Milunski (2015) found that higher work ethic scores also indicated higher task persistence as well as high levels of intensity placed on completing an assigned task. The results of the study indicated that people with higher work ethic, when left unsupervised, will be more likely to complete an assigned task and will work harder on the assigned task, which could be beneficial for employers when assigning tasks to employees. In a separate study, Meriac, Slifka, and Labat (2015) found that work ethic directly correlated with grit. Duckworth, Peterson, Matthews, and Kelly (2007) defined grit, which in many ways is similar to work ethic, as having perseverance and a passion for completing long-term goals. Meriac, Slifka, and Labat (2015) found that while work ethic and grit are empirically different, several dimensions of work ethic and grit positively relate to each other, with the most significant relationship existing between the work ethic dimension of hard work and the grit dimension of perseverance of effort. The results of these two studies support the idea that work ethic positively relates to task persistence, task intensity, and grit.

Most studies of work ethic focus on studying a specific group or groups and making comparisons based on the reported work ethic scores. One such example is a study by Gorman and Meriac (2016) that examined the work ethic scores of correctional officers and compared them with previously published scores for other occupations. Gorman and Meriac found that



correctional officers tended to score higher on work ethic than other reported occupations. A study by Moore (2017) compared the work ethic of high school student-athletes with non-athletes, finding that student-athletes score higher levels on work ethic than their non-athlete peers.

With the existence of a work ethic firmly established by the literature, Lee, Padilla, and McHale (2016) researched the transmission of work ethic through family relationships in African American families. Lee et al. found that the work ethic of fathers positively linked to the work ethic of the oldest sibling in a household. The findings also suggested that the work ethic of older siblings, instead of the work ethic of the parents, most influenced the work ethic of younger siblings. These findings would support the idea that work ethic is a learned trait, but not necessarily passed down from parent to child, indicating that it is possible to learn work ethic from outside sources, possibly including athletic coaches. Participation in athletics and success in athletics requires commitment and effort, and in effect, a work ethic. The findings from Lee et al. that work ethic is a learned trait that can be passed down supports the idea that athletes possessing a higher work ethic than non-athletes could have learned their work ethic from their participation in athletics.

In summary, the contemporary theoretical construct of work ethic is historically rooted in the Protestant Reformation and the Protestant Ethic. Weber (1958) received credit for creating the modern concept of work ethic by combining the Protestant Ethic with the capitalist ideas of wealth accumulation and upward mobility in society as the religious aspect gradually faded away over time. Studies of work ethic include examining differences by generation, age, career level, occupation, education, and even athletic participation. It is clear from the literature that work

ethic exists as a measurable construct. What is less clear is precisely how exactly work ethic is learned and whether a person's work ethic can change over the course of their life.

### **Related Literature**

Miller et al. (2001) defined the modern construct of work ethic as a measurable multidimensional "attitudinal construct pertaining to work-oriented values" (p. 4). In constructing and validating an instrument to measure work ethic, Miller et al. identified seven individual dimensions that, when combined, make up the strength of a person's work ethic. These seven dimensions of work ethic are self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time, and delay of gratification. Previous studies have shown differences can occur in individual dimensions of work ethic while the overall measurement of work ethic has no significant differences. Other studies have shown that there can be similarities in individual dimension scores in studies in which overall work ethic scores are significantly different. A full understanding of the work ethic construct requires a deeper exploration of each dimension that makes up work ethic.

#### **Self-reliance**

Simply defined, self-reliance is a person's reliance on their own self and individual abilities to accomplish tasks on their own. In construction of their Multi-Dimensional Work Ethic Profile (MWEP), Miller et al. (2001) defined self-reliance as it pertains to work ethic as an individual's desire to strive for independence in their daily work. Miller et al. described self-reliance as a desire that individuals must be able to accomplish tasks, assignments, work, or essentially anything else without having to rely on others. Self-reliant individuals take pride in being able to complete tasks without having to rely on others. The idea of self-reliance as a dimension of work ethic traces to the same roots as work ethic itself, the Protestant Reformation

(Griffis, 2017). While not identified specifically, the idea of self-reliance interweaves into the concepts of hard work that would allow the poor to attain the promise of heaven (Byrne, 1990; Roth, 2014). The concept of American individualism, which was a main theme of the transcendentalist writers of the 1800s, grew from the idea of self-reliance (Liang, 2013).

Ralph Waldo Emerson is the transcendentalist author credited with creating the concept of self-reliance (Liang, 2013). Just as the work ethic construct evolved from the Protestant Reformation, Emerson's (2010) 1841 essay titled "Self-Reliance" is deeply rooted in his Protestant beliefs. As a Unitarian minister, Emerson rejected the Calvinistic ideas of predestination and instead focused on the idea that people begin life morally neutral and can earn their salvation (Ronan, 2013). Emerson's concept of self-reliance grew from this religious belief in attainment of salvation and was a common theme of many of the sermons he preached at Second Church in Boston, Massachusetts (Ronan, 2013). The overall theme of Emerson's essay is establishing the idea of individualism whereby people should think for themselves and not blindly depend on or accept other people's ideas. According to Griffis (2017), Emerson believed that both 16th-century European reformers as well as American Revolutionaries of the late 1700s had created new religions and new countries without fully understanding individuals and their place in the new societies that were emerging in Europe and America. Ronan (2013) pointed out that Emerson's concept of self-reliance was an oft-occurring theme of his sermons, in which he connected self-reliance on earth with the attainment of heavenly salvation, using passages such as "Thus you will recognize them by their fruits" (Matthew 7:20, English Standard Version). Friedman (2012) connected Emerson's idea of self-reliance with Emerson's broader concept of reason, which Emerson identified as "moral or religious sentiment" (p. 46). Anderson (2006) related that one of the fundamental principles of the Mormon faith, derived from Protestant

Christianity, is the concept of providing for one's self, or self-reliance, and providing for one's family, or family reliance.

Self-reliance has been the focus of multiple studies outside of the dimensionality of work ethic. With the concept of self-reliance born in Protestantism as well as with the transcendentalist authors of 19th-century America, it would seem only natural that people of other religions or nationalities would have a different view of self-reliance. Moguel (2014) studied the academic achievement of Latino students in American schools, specifically in history and social studies classes. Moguel found that Latino students significantly underperform when compared to other races in which demographic data is available. A possible explanation for this, according to Moguel, is that Latino students who grow up and mature in a culture that emphasizes interdependence on each other, as well as group identity, do not possess the same levels of self-reliance and individualism as non-Latino students. The American individualistic culture that places a high value on individual achievement does not resonate well with Latino students (Moguel, 2014). A final difference for Latino students is that Mexico and much of Central America are rooted in Roman Catholicism as their primary religion while America has its historical religious roots in Christian Protestantism. With self-reliance as well as the work ethic construct itself having its roots in Protestantism, the culture of Latino students is based in different approaches to work, thought, and even education (Moguel, 2014).

Other studies of self-reliance have centered on welfare recipients (Halvorsen, 1998; Rentto, 1999; Wong & Lou, 2010). Halvorsen (1998) studied social welfare policies in America, the United Kingdom, and Norway. Halvorsen went as far to state that the idea of work ethic is eroding in post-industrial nations as more people become dependent upon the welfare state. Americans, however, still consider self-reliance as a valuable, personal characteristic. The goal

of social welfare programs is to make people self-reliant, but in practice, the desired outcome of providing temporary welfare for gaining self-reliance has not been easy to achieve (Halvorsen, 1998). Norway has evolved its social welfare programs into what it calls workfare as a means for recipients to return to self-reliance by meeting work requirements to receive assistance (Halvorsen, 1998). Wong and Lou (2010) conducted a qualitative study of welfare recipients in Hong Kong. Wong and Lou found that welfare recipients have a strong desire to become self-reliant and exit the benefits system. One of the research questions that Wong and Lou attempted to answer was “Do welfare recipients still embrace a self-reliance ethos?” (p. 523). They found that employable welfare recipients still held a strong work ethic, with a desire for self-reliance found through employment and departure from the benefits system. Rentto (1999) analyzed the welfare state and self-reliance focusing on Aristotle’s belief in the divisions of society into a working class and a leisure class, while the creation of the welfare state to counter Aristotelian philosophy has failed to equalize classes and has instead led to excessive social welfare and dependence on the state. For this reason, Rentto supported changes to social welfare to foster a goal of self-reliance, similar to the workfare programs in Norway discussed by Halvorsen (1998).

With the development of the MWEP by Miller et al. (2001), studies using the MWEP to measure work ethic normally report self-reliance scores. Meriac et al. (2010) conducted a study to determine if work ethic differed by generation and found no significant difference in self-reliance over three generational cohorts. Pogson et al. (2003) studied differences in self-reported work ethic across career stages and found no significant difference in self-reliance. Gorman and Meriac (2016) found significant differences in work ethic scores for corrections officers when compared to other occupations; however, the dimension scores for self-reliance were not

significantly different across the compared occupations. Van Ness et al. (2010) found that college students displayed a significantly higher score for self-reliance than workforce professionals. Finally, in a study of whether work ethic predicts task persistence and intensity, Meriac, Thomas, and Milunski (2015) found that self-reliance alone is not a significant predictor of task persistence and intensity. Finally, Bazzy (2016) found that self-reliance negatively related to ego depletion.

The literature places self-reliance as both a stand-alone, measurable construct, and as a dimension of the work ethic construct. None of the reviewed literature contradicted the accepted position of self-reliance as a measurable dimension, even though different measurements exist. Self-reliance is measurable, and as a dimension of work ethic, provides understanding to for measurements of work ethic.

### **Morality/ethics**

Miller et al. (2001) defined the work ethic dimension of morality/ethics is as a person's belief in a just and moral existence. Miller et al. combined morality and ethics into one dimension of work ethic, which they label morality/ethics. Looking at these two separately, morality is "conformity to ideals of right human conduct" (Merriam Webster online, n.d.) and ethics is "a set of moral principles" or "a theory or system of moral values" (Merriam Webster online, n.d.). As the definitions from Merriam Webster show, morality and ethics closely intertwine with each other and support their combination into one dimension by Miller et al. for studying work ethic.

Separately from studies of work ethic, morality and ethics have been studied and written about extensively. Hazels (2015) attempted to break down the differences between morality and ethics in reference to business law. Hazels reported that people view ethics as a code or group of

rules that a group of people, or even society has chosen to abide by, even to the point that these agreed upon rules become the law of the land. Morality, according to Hazels, is more personal and is a quality learned from various inputs such as family, friends and religious beliefs. Hazels' research indicated that students are often confused about the differences between morals and ethics. Giving the complex and intertwined nature of the two, this confusion is justifiable as Hazels went as far to state that "the differences between ethics and morality can seem minute" (p. 78). Hazels also indicated that while society considers morals as personal beliefs, the Association to Advance Collegiate Schools of Business (AACSB) has required that ethics instruction be a part of business education.

McGavin (2013) explained a philosophical worldview used to differentiate between morality and ethics. According to McGavin, ethics is what a given culture enforces as appropriate professional standards, while morality refers to things that are inherently right or wrong when compared to universal principals. McGavin's definition of ethics supports Hazels (2015) use of the ethical theories of utilitarianism, which focuses on the greatest good, and deontology, with its focus on duties and rights, and Rawlsian beliefs in justice and fairness. Hazels' moral theories also closely align with McGavin. Hazels' use of Natural Law Theory, in which some actions are always morally wrong regardless of the circumstances, aligns with the definition provided by McGavin above. Shain and Newport (2014), in a study of business law, agreed that while closely related, morality and ethics are two separate and exclusive theoretical beliefs allowing for separate study. In each of these cases, the authors (Hazels, 2015; McGavin, 2013, Shain & Newport, 2014) laid out the case that while closely related, morality and ethics exist as separate constructs, which supports individual study.

In contradiction to the works referenced above, Piercey (2001) argued that morality and ethics are so intertwined with each other that one should not view them as “competing theories of practical reason but rather complementary and inseparable aspects of our experience” (p. 53). Piercey argued that a person cannot be moral and unethical or be ethical and immoral. The two theories of reason relate so closely that it is impossible to have one without the other and instead of trying to separate them, one should always view them together. Ethics, then, requires morality, with the reverse also being true (Piercey, 2001). Zigon (2009) supported this idea of an unbreakable connection between morality and ethics. Zigon’s ethnographic study of Muscovites led him to theorize that ethics is a result of or a response to a situation that questions a person’s morals.

There are many studies on moral and ethical behavior. Kaptein (2011) studied unethical behavior in the workplace. Kaptein defined unethical behavior as violating the generally accepted and moral normal behavior. Using a multidimensional model of ethical culture, Kaptein found that in an organization, clarity of ethical standards and the visibility of the unethical behavior had the most impact on reducing instances of unethical behavior. Flores and James (2012) conducted a qualitative study of teenagers and young adults with a focus on the moral and ethical issues that they encounter in their use of digital media. One primary focus of Flores and James was that even if young people can understand morality and ethics, they need to be able to recognize when a given situation has moral or ethical implications. Flores and James found that teenagers think about the consequences of their actions, even if they do not heed their thoughts regarding the moral or ethical results of those actions, and they acknowledge that their actions can have an impact on others. Flores and James found that 98% of the participants in their study showed at least one instance of unethical or immoral thinking, with 47% of



participants completely unaware of the moral or ethical implication of a given online situation, with the primary focus being on individual consequences.

Miller et al. (2001) included Morality/Ethics as one of the seven dimensions of the MWEP that measures work ethic. Since the MWEP enables measurement and analysis of each dimension of work ethic, most studies of work ethic that have used this instrument report the results for morality/ethics. While many of these studies compare work ethic between two independent variables, others use the work ethic dimensions to make other comparisons. Meriac, Thomas, and Mulinski (2015) used work ethic to predict task persistence and intensity. Meriac, Thomas, and Mulinski found that the morality/ethics positively and significantly related to task persistence. Meriac, Thomas, and Mulinski reported that morality/ethics as a dimension of work ethic is related to task motivation.

In a study of the work ethic of college students and workforce professionals, Van Ness et al. (2010) hypothesized that workforce professionals would have a higher mean score on the morality/ethics dimension of work ethic than college students. Analysis of the overall work ethic scores indicated that there was no significant difference in the work ethic of college students and workforce professionals (Van Ness et al., 2010). There was, however, a significant difference in the morality/ethics dimension of work ethic, with workforce professionals scoring significantly higher regarding this dimension. Meriac et al. (2010) examined generational differences in work ethic, using generational cohorts consisting of Millennials, Generation X, and Baby Boomers. The researchers discovered a problem in reporting of morality/ethics in that different generations interpreted the questions differently, resulting in non-equivalent scores between Baby Boomers and Generation X as well as between Generation X and Millennials (Meriac et al., 2010). Between Baby Boomers and Millennials, there was no significant difference in morality/ethics

(Meriac et al., 2010). Pogson et al. (2003) found a significant difference in morality/ethics relating to career stage, with higher levels of morality/ethics occurring as career stage advanced. Finally, Gorman and Meriac (2016) used the results of the MWEP for correctional officers and compared them to previous studies of other occupations, finding that correctional officers have a higher morality/ethics score than food preparation and service workers. The same study showed no significant differences observed with full-time students, office workers, sales workers, management, and personal care workers (Gorman & Meriac, 2016).

The concept of morality and ethics is too broad to cover in a review of literature. The literature does show that morality/ethics has been widely studied and is accepted by the literature to be a measurable construct. While there are many measures available for morality/ethics, the literature does not dispute its inclusion as a dimension of work ethic.

## **Leisure**

The third dimension of the work ethic construct is leisure, defined by Miller et al. (2001) as pro-leisure attitudes and a person's belief in the importance of non-work activities. Ateca-Amestoy et al. (2008) defined leisure as any identifiable activity that occurs at a specific time, and that is as a pleasant experience. Parr and Lashua (2004) outlined that leisure can be either objective, such as a specific setting or activity, or as subjective as a mental experience that a person has while engaged in certain activities. Shen and Yarnal (2010), reporting on Stebbin's theory of serious leisure and casual leisure, indicated that serious leisure is a type of leisure that requires a special skill set, such as ice skating, while casual leisure is an enjoyable activity that does not require special training or skills. Super (1984) relates that the pursuit of leisure activities may require expending effort and may not always be a relaxing activity. The literature shows that leisure, then, has multiple definitions used in many different contexts. In the

multidimensionality of work ethic, leisure negatively correlates to overall work ethic, in that the more value a person places on leisure activities, the lower that person's overall work ethic will be (Miller et al., 2001).

As the Protestant Work Ethic gained traction during the Post-Reformation period, people began to regard leisurely activities with disdain as hard work evolved as the means to salvation and the afterlife (Byrne, 1990; Roth, 2014; Weber, 1958). A disdain for leisure was included in all seven work ethic scales studied by Miller et al. (2001) during the formation of the Multidimensional Work Ethic Profile. Studies have shown, however, that participation in leisure activities has both psychological and health benefits (Crompton & Millward, 2009; Dillard & Bates, 2011; Kirk & Rhodes, 2011; Sonnentag, 2012).

According to Dillard and Bates (2011), the idea that while leisure occurs during free time, not all free time equated to leisure replaced early concepts that any free time away from labor directly equated to leisure. Dillard and Bates conducted a study to determine if leisure and recreation make up a unified theory to explain why people participate in recreational activities. Dillard and Bates found that people's participation in leisure and recreational activities falls into four different categories: escape (relaxation), enhancing relationships, personal mastery, and winning. The results showed that 30.1% of participants recreated to escape, 33.9% to enhance relationships, 20.1% for personal mastery, and 15.9% for winning (Dillard & Bates, 2011). Sonnentag (2012) found that people who can separate, or detach, themselves from their work during non-work hours are more satisfied with their lives, are more engaged at work, and show fewer symptoms of psychological strain. People who participate in leisure activities regularly and detach themselves from their work reported being more cheerful and less fatigued (Sonnentag, 2012).

Cropley and Millward (2009) conducted a qualitative study of workers who identified themselves as being able to switch-off from work easily and workers who report difficulty in being able to switch off from work. Cropley and Millward found that workers that cannot easily detach themselves from their work during non-working hours have a sense of blurred boundaries between work and leisure, allowing thoughts of work to dominate their leisure time. On the other hand, workers who can easily switch off, or detach from work, maintain a distinct boundary between work and leisure (Cropley & Millward, 2009). Cropley and Millward concluded that organizations should to educate employees on the benefits of leisure and detaching themselves from work during their time off. Kirk and Rhodes (2011) conducted a study of available research on leisure time physical activity to target physical inactivity in adults. Kirk and Rhodes found that total hours worked negatively related to leisure time physical activity. Kirk and Rhodes also found that the amount of activities required in one's occupation positively related to the amount of leisure time physical activity, with people who spend most of their work shift inactive tending to remain inactive during leisure time.

Studies of leisure have also focused on how personality affects leisure choices as well as perceptions of leisure activities from people who work in recreational fields (Barnett, 2013; Parr & Lashua, 2004; Szabo, 2013). Barnett (2013) studied the relationship between personality and leisure choices with results that indicated that personality traits were predictive of leisure choices across race and gender groups. Barnett reported that individual personality accounts for 40-50% of leisure choices. Parr and Lashua (2004) found that professionals working in leisure fields such as parks and recreation positions do not have a unique understanding of leisure when compared to non-professionals. While the results of the study supported a traditional view of leisure, enough differences existed to account for the previously discussed disconnect on how to

define leisure. Szabo (2013) conducted in-depth interviews of 31 experts specializing in sports business or sociology and found employer promotion of leisure sport activities can promote better health among employees and provide employers a tool with which to promote community involvement.

Other studies of leisure examined the perspective of individual satisfaction with leisure and time spent on leisure (Ateca-Amestoy et al., 2008; Kivel, 2000; Zuzanek, 2017). Ateca-Amestoy et al. (2008) used survey results to determine what factors prevented people's satisfaction with their leisure time. Ateca-Amestoy et al. found that social class based on income played a significant role in leisure satisfaction, with people who considered themselves as poor being much less likely to report feeling satisfied with their leisure time and activities. The number of children under 16 years of age in a household, or the presence of a child with a continuous aide situation negatively related to leisure satisfaction, which Ateca-Amestoy et al. attribute to the time-consuming nature of care imposed by those situations. Zuzanek (2017) reported that contrary to predictions from the 1960s that future society would be more focused on leisure activities as automation and utopian style societies developed, over the last thirty years daily workload has increased by over 100 minutes while free time has been reduced by over 50 minutes. Zuzanek connected the increasing workload and decreasing leisure time with reports of increased stress and decreasing life satisfaction among working mothers.

Since the current literature accepts the multidimensionality of work ethic, studies of this topic often report the finding for leisure as a dimension of work ethic. Meriac (2015) found that leisure scores of college students positively related to a dislike of academic activities, such as studying, and negatively influenced academic performance. In a different study of college students, Meriac (2012) found that leisure positively related to classroom disengagement

exhibited by students. Gorman and Meriac (2016) reported that correctional officers reported the lowest levels of support for participating in leisure activities when compared to data from other occupations, which the researchers attributed to less emphasis on downtime and relaxation. Pogson et al. (2003) found that leisure scores for individuals decreased as they aged and advanced in their careers. Lastly, Van Ness et al. (2010) reported that college students placed more emphasis on leisure than workforce professionals did, which was not surprising given the differences between college life and post-college employment.

The literature establishes leisure as a measurable dimension of the work ethic construct. Multiple studies have looked at leisure from various viewpoints, but none has contradicted the established multidimensionality of work ethic and its inclusion of leisure. Leisure is, therefore, a measurable construct relating to work ethic.

### **Hard Work**

Hard work is a person's belief in the virtues of hard work (Miller et al., 2001). Weber (1958) stated that hard work was the foundation of work ethic. Weber went on to say that hard work combined with a tendency to shun or avoid leisurely activities became the accepted way of life as the Protestant work ethic formed. Weber credited this changing ethic with helping the rise of capitalism in western society. People worked hard because work was no longer just a means for survival as it had been in medieval times, but now hard work was associated with the accumulation of wealth (Weber, 1958). Miller et al. (2001) included hard work as one of seven dimensions of work ethic in creating the MWEP due to analysis of the seven previous measures of work ethic that showed that hard work accounted for 22% of the combined questions from the other measures.

Previous studies have focused on hard work as both a dimension of work ethic and as an individual construct, as well as the fact that hard work has different meanings across societies, cultures, and age groups. Kennedy-Behr, Rodger, and Mickan (2015) studied well-being at pre-schools and found that pre-school children with developmental coordination disorder often view play as hard work. Ghorpade et al. (2006) studied a diverse group of 702 college students from a west coast university in the United States and attempted to correlate the Protestant ethics of hard work and success. Ghorpade et al. developed an instrument to measure success and hard work, which they called the Protestant Ethic of Hard Work (PEHW). The result of the study showed that success and hard work positively correlated with each other, while hard work was also positively but not significantly correlated with individualism and self-esteem and negatively correlated with age (Ghorpade et al., 2006). Other results for hard work indicated that females scored higher than males and that race significantly related to hard work with Filipinos scoring significantly higher than other races included in the study (Ghorpade et al., 2006). The final correlations for hard work showed that Roman Catholics scored significantly higher than other religions, undergraduates scored higher than graduates did, and participants born outside of the United States scored higher than those participants who were born in the United States (Ghorpade et al., 2006).

Schultz (2012) conducted a qualitative study to compare the idea of hard work held by American, French, and Norwegian male business professionals by examining, in part, their motivations for working in demanding jobs. The subjects of the study worked in professional positions, including finance, law, consulting, and engineering (Schultz, 2012). Schultz found that French and Norwegian professionals focused on the stimulation received for working hard as well as the enrichment they receive in their lives from their daily work. American

professionals, however, tended to focus on the external or extrinsic rewards for working hard and how personality is an indicator of hard work (Schultz, 2012). Schultz concluded that the different views of hard work expressed in the study are a natural product of the different cultures and societies from which the participants were drawn.

DeSante (2013) used the ideas of strong work ethic and hard work as opposed to poor work ethic in a study of how race and work history affect unemployment benefits. DeSante's asked the participants to allocate assistance funds between two applicants. The total allocation could not exceed \$1500 combined, and each applicant was applying for \$900 (DeSante, 2013). While the researcher did not include race on the application, the researcher created fictional names for the study that, based on psychological research, indicated to the participants that two of the applicants were white females, while the other two were black females (DeSante, 2013). The study was set up to make multiple comparisons: name only, work history only, and name and work history combined (DeSante, 2013). Study results indicated that an applicant with a work history that showed a perception of the applicant as a hard worker due to their excellent work history received significantly more money than a person perceived as lazy due to a poor work history (DeSante, 2013). DeSante also found that participants tended to punish a poor work history more severely than they rewarded an excellent work history. In investigating how race relates to the study when examining only names without work histories included, there was no significant difference in awards to white or black applicants (DeSante, 2013). That changed, however, when the researcher included work history. When randomly assigned the excellent work record, the white applicants received significantly higher awards than did black applicants, while at the same time, when randomly assigned poor work records, participants punished white



applicants significantly less than black applicants were punished (DeSante, 2013). DeSante concluded that racial bias is prevalent in analyses of hard work by individuals.

People in an academic or educational setting often view hard work as the path to success. Rau and Durand (2000) reported that the idea that hard work will equate to success could instead negatively affect a student's academic performance. Rau and Durand reported on a 12-year study at the University of Michigan that consistently found no significant correlation between the hours a student spends studying and the grade that they receive. Rau and Durand introduced the academic ethic, which focuses hard work into a disciplined and methodical study habit along with placing their academics above leisure activities. Rau and Durand found evidence of the existence of an academic ethic in students whose performance is higher than their peers are. Persky, Alford, and Kyle (2013) discussed the importance of teaching students learning strategies in order to promote lifelong learners. According to Persky et al., many students believed that learning and thus academic performance related solely to working harder. Without proper learning strategies, however, simply working harder does not always produce the desired results and then student development becomes limited (Persky et al., 2013). Wai and Rindermann (2017) found that hard work played a significant role in educational and occupational achievement with an analysis of previous research data that included members of Congress, CEOs of major corporations, federal judges, and other similarly powerful people.

Researchers often compare the work ethic construct to other constructs to determine if a relationship exists. Bazy (2016) conducted a study to determine if work ethic dimensions predict ego depletion. Bazy found that hard work positively related to ego depletion. Bazy theorized that the relationship between hard work and ego depletion could account for previous reports in the literature about the negative relationship between hard work and academic

performance. Meriac, Thomas, and Mulinski (2015) found that while overall work ethic could predict task persistence and intensity, hard work alone was not a significant contributor to the prediction.

Work ethic studies often report hard work as a dimension score or in comparisons with other scores. Gorman and Meriac (2016) reported that the overall work ethic of correctional officers was higher than other studied professions. The researchers found that correctional officer mean scores for hard work were only higher than the mean score for college students and were lower than all other reported professions (Gorman & Meriac, 2016). Meriac et al. (2010) found that members of the Baby Boomer generation score significantly higher on hard work than both Millennials and members of Generation X. Pogson et al. (2003) found significant differences in hard work across worker career stages. The reported differences were opposite of the hypothesized direction, however, with people in the earliest portions of their careers reporting higher hard work levels than workers in mid or late career (Pogson et al., 2003). Pogson et al. found that workers in mid and late career were not significantly different regarding hard work. Van Ness et al. (2010) hypothesized that workforce professionals would have higher mean scores on hard work than college students. While Van Ness et al. based their hypothesis on related literature, the results of the study indicated that college students had higher mean scores on hard work than workforce professionals. Van Ness et al. theorized that younger workers, represented by college students, were more willing to work hard to establish themselves in a career than workforce professionals who have already established themselves.

Of the seven dimensions of work ethic reviewed here, hard work is perhaps the most essential to the Protestant Ethic from which the construct of work ethic evolved. The literature shows that hard work is measurable in multiple ways but is consistent in support of the concept

that hard work is measurable. As perhaps the core of the work ethic construct, the reviewed literature readily accepts hard work as a measurable dimension of work ethic.

### **Centrality of Work**

Miller et al. (2001) defined centrality of work as a person's belief in work for work's sake and the importance of work to that person. Weber (1958) believed that an important part of a person's work ethic was the level to which a person considered work to be a central and important part of life. Centrality of work has similarly been defined as the beliefs about the importance of work regarding what role that work plays in a person's life (Hattrup, Ghorpade, & Lackritz, 2007; Hirschfeld & Feild, 2000). Dejours and Deranty (2010) presented that in the psychodynamic approach to work, centrality of work should be distinguished psychologically, by gender, social-political, and epistemically. Deranty (2015) considered work as indispensable and argued that work is the key to cognitive learning, emotional maturation, and moral development of individuals. In the multidimensional aspect of work ethic, eight separate scales developed to measure work ethic include centrality of work as a measurable dimension of overall work ethic (Miller et al., 2001).

Much of the focus on centrality of work relates to its relationship with workers and their commitment to, or alienation from, their jobs (Hirschfeld & Feild, 2000; Tan, 2016; Tziner, Ben-David, Oren, & Sharoni, 2014). Tan (2016) studied the role that centrality of work played in the relationship between alienation from work and organizational commitment and hypothesized that the negative relationship between work alienation and organizational commitment would be weaker when centrality of work was high. Tan's study intended to advance the study of the relationship between work alienation and organizational commitment because previous studies had not researched the role of centrality of work. Tan found that centrality of work supported the

hypothesis in all areas except for powerlessness, as workers with high centrality of work but who felt powerless in their job showed lower commitment. Tziner et al. (2014) studied employee attachment to their jobs relating to intentions to leave the job (turnover intentions), job satisfaction, and work centrality. Tziner et al. collected data from a self-report survey of 125 workers. Tziner et al. found that centrality of work did not significantly mediate turnover intentions; however, the researchers found a positive relationship between work centrality and job satisfaction. Hirschfeld and Feild (2000) found that centrality of work was more strongly correlated to work ethic and leisure than to work alienation. Hirschfeld and Feild's findings indicated that people who have a high centrality of work both identify with the work role and are more engaged in their work.

Generational and age-related studies of centrality of work have revealed similar results to previous studies (Kooij & Zacher, 2016; Lu, Huang, & Bond, 2016; Twenge & Kasser, 2013). Twenge and Kasser (2013) used previous studies of materialism and centrality of work to study changes in materialism of American youth between 1976 and 2007. Twenge and Kasser found that while materialistic values of America's youth have steadily increased, centrality of work has steadily decreased. According to Twenge and Kasser, this inverse relationship indicates that while young people desire an increasing amount of material rewards, they are not willing to work to earn them. Lu et al. (2016) analyzed 29,080 responses to the World Values Survey collected from employees in 45 countries and found that centrality of work is moderated worldwide by national cultural and gender roles. Kooij and Zacher (2016) found that in older workers, high centrality of work moderates the perceived negative effect that age has on an employee's attitude toward learning and development at work.

Hattrup et al. (2007) studied college students in five counties to examine the relationship between workgroup collectivism, centrality of work, and pride in work. Hattrup et al. found that positive relationships existed between all three factors in each country. Hattrup et al. also reported that in a comparison of individual counties, differences in the relationship measurements for work group collectivism, centrality of work, and pride in work were not significant. These results would support the idea that centrality of work is not only a measurable construct, but that it is measurable across cultures.

Like other dimensions of work ethic, studies involving work ethic measurements often report the finding for centrality of work. Van Ness et al. (2010) reported that workforce professionals have a significantly higher centrality of work than college students do. Van Ness et al. attributed this to the idea that as individuals leave college and enter the workforce, they face increased life responsibilities leading to a higher sense of centrality of work. In a study of work ethic across three career stages, Pogson et al. (2003) found no significant difference in centrality of work between workers who were in the early stages of their career, stable in their career, or in the later stages of their career. Meriac (2015) found that centrality of work positively related to intrinsic motivation in college students regarding academic motivation and performance. In comparing generational differences in work ethic, Meriac et al. (2010) found that Baby Boomers were significantly higher than both Millennials and Generation X in centrality of work, while Millennials and Generation X were not significantly different from each other. Meriac, Slifka, and Labat (2015) conducted a comparative study of work ethic and grit and found that centrality of work explained the variances found in job satisfaction and job turnover intentions.

In summary, centrality of work is the importance that a person places on work in their life. The occupation that a person has or the job that they hold often define who a person is. Centrality of work has been shown by the literature to be a measurable construct and has been studied both in conjunction with and separately from work ethic. The literature supports centrality of work as a measurable dimension as part of overall work ethic and as a stand-alone dimension for separate study.

### **Wasted Time**

Wasted time, as defined by Miller et al. (2001), is a person's attitudes and beliefs reflecting active and productive use of time. As wasted time relates to an unproductive use of one's time and effort, it is easy to confuse the concept of wasted time with doing nothing. That is not always the case, however, as people often expend considerable effort on menial tasks that have no actual impact on that task at hand. In their research into the multidimensionality of work ethic and development of the MWEP, Miller et al. found that wasted time existed as a dimension or subscale of all seven tested work ethic measures. Those work ethic measures were the Protestant Ethic Scale, Pro-Protestant Ethic Scale, Protestant Work Ethic Scale, Spirit of Capitalism Scale, Work and Leisure Scales, Eclectic Protestant Ethic Scale, and Australian Work Ethic Scale (Miller et al., 2001).

Studies of wasted time trend toward two different areas, with both considered wasted time. The first of these areas is time that a worker is simply not doing their assigned task (Bangor Daily News, 2005; Dale, 2012; Flinchbaugh, 2013; Jaramillo, Mulki, & Locander, 2006). The Bangor Daily News (2005) reported that results of an online survey showed that the average worker admits to wasting approximately two hours in an eight-hour workday. Taking the average salary of American workers and factoring in the number of workers, that admission

alone could essentially be costing American businesses up to \$759 billion per year (Bangor Daily News, 2005). Dale (2012) reported that managers estimate that average employees are only productive for six to six and half hours of an average eight-hour workday. Flinchbaugh (2013) supported those reports with his findings that both organizational and personal wasted time affect employee work performance.

The second area of focus on wasted time is when workers are working on non-productive tasks that do little or nothing to complete the assigned job (Dale, 2012; Flinchbaugh, 2013; Horman & Kenley, 2005; Jaramillo et al., 2005; Lucas, 2013; Richardson et al., 2014). Lucas (2013) reported that the average employee wastes approximately 50 minutes each workday on work or activities that have no productive value or that are not essential to task accomplishment. Flinchbaugh (2013) identified six major sources of waste in organizations: transportation, inventory, motion, waiting, overproduction, over-processing, and defects. Each of these sources results in wasted and non-productive time for employees, even if they are working. Dale (2012) reported on a study by UMS Group that classifies workers into four categories as a means for companies to evaluate and eliminate waste: 1. available and adding value, 2. available but not adding value, 3. available but not working, and 4. not available and not working.

While the previous studies have looked at wasted time from a very broad viewpoint, other studies have targeted specific industries or activities (Horman & Kenley, 2005; Jaramillo et al., 2005; Richardson et al., 2014). These types of studies often result in new processes or procedures to reduce wasted time. The entire basis for lean manufacturing subscribed to by countless industries is to reduce waste from the manufacturing process (Lean Production, n.d.). Richardson et al. (2014) studied emergency room nurses to identify wasted time in obtaining needed supplies by recording the amount of time spent outside of a patient's room seeking

supplies. By implementing a point of use supply system, Richardson et al. reported that nurses reduced the time spent seeking supplies by over 85%. Horman and Kenley (2005) conducted a meta-analysis of productivity improvement studies in the construction industry over a 30-year period and found that an average of 49.6% of time in construction is devoted to non-productive activity. Finally, Jaramillo et al. (2005) found that workers in sales often become dissatisfied with their jobs because of their ineffective time management, leading to wasted time preventing the accomplishment of their job and due to required activities that they view as wasteful because they have little or no bearing on their job.

Due to the wide acceptance of the multidimensionality of work ethic among researchers, most studies of work ethic, and especially those using the MWEP developed by Miller et al. (2001) reported findings for the wasted time dimension. Meriac, Slifka, and Labat (2015) reported that while work ethic and grit were closely related constructs, wasted time had no significant impact on the comparisons of the dimensions of work ethic and the dimensions of grit. Also reported, was the finding that wasted time and task persistence were not significantly related (Meriac, Thomas, & Mulinski 2015). Gorman and Meriac (2016) reported that correctional officers scored higher on wasted time, indicating a greater dislike of wasted time, than other professions. The researchers attributed this finding to the nature of the work corrections officers perform and their adherence to set schedules (Gorman & Meriac, 2016). Pogson et al. (2003) reported that across three career stages based on the age of the participants, dislike of wasted time increased as career stage and age increased. Meriac et al. (2010) reported that members of the Baby Boomer generation have a significantly higher dislike of wasted time than members of either Generation X or Millennials. Van Ness et al. (2010) reported that



workforce professionals score significantly higher than college students when evaluated on a dislike of wasted time.

Work ethic and wasted time have been the focus of studies in the field of education (Meriac, 2012; 2015; Wentworth & Chell, 1997). Wentworth and Chell (1997) found that efficient use of time, or not wasting time, accounted for 18.8% of the variance of work ethic scores between college undergraduate and graduate students. Meriac (2012) reported that wasted time negatively related to student disengagement. This research indicated that higher scores for wasted time, or a greater dislike for wasting time, resulted in less disengagement by students in the classroom (Meriac, 2012). Meriac (2015) reported that wasted time positively related to grade point average (GPA) in college undergraduate students

The areas of manufacturing and industry have placed great emphasis on the study of wasted time, particularly in efforts to eliminate waste in both production and employee effort. The literature supports the idea that one's personal feelings about wasted time are measurable and provide insight into a person's work ethic. Wasted time is, therefore, a literature-based and accepted dimension that makes up part of the work ethic construct and, like each of the other six dimensions, can be studied alone or as part of a composite work ethic score.

### **Delay of Gratification**

Miller et al. (2001) defined the final dimension of work ethic, delay of gratification, as a person's orientation toward the future and postponement of rewards. Other definitions of delay of gratification interpret it as the ability to resist an immediate, smaller reward, while waiting for a larger reward (Casey et al., 2011; Drobetz et al., 2014; Ho et al., 2016; Reyna & Wilhelms, 2016; Wilson, Andrews, & Shum, 2017). All seven available work ethic scales available before the development of the MWEP used delay of gratification as a measurable dimension of work

ethic (Miller et al., 2001). Delay of gratification has been studied both as a dimension of the work ethic construct as well as separately.

Delay of gratification has been linked to personal feelings of pride (Ho et al., 2016; Shimoni, Asbe, Eyal, & Berger, 2016). Shimoni et al. (2016) studied the effect of the emotions of pride and joy in eight-year-old children on their ability to delay gratification. After using a pretest to separate third-grade students into a control, pride, and joy groups, the researchers tested the students with a game that awarded a low number of points immediately or a higher number of points after a delay (Shimoni et al., 2016). The students in the control and joy groups were not significantly different in delay of gratification. The students in the pride group, however, demonstrated less willingness to wait for the higher point award and instead consistently chose the lower, but immediate award (Shimoni et al., 2016). Ho et al. (2016) studied pride and its connection to delay of gratification. Ho et al. studied two different facets of pride, authentic and hubristic. Authentic pride is achievement oriented and reflected in an understanding of one's actual level of ability and feelings of self-worth (Ho et al., 2016). Hubristic pride is the facet of pride motivates a need to feel superior to others (Ho et al., 2016). Ho et al. found that authentic pride resulted in a positive effect on a person's ability to delay gratification, while hubristic pride caused a negative effect.

Reyna and Wilhelms (2016) connected delay of gratification with gist, which is a course form of memory associated with fuzzy-trace theory. Reyna and Wilhelms developed an instrument to measure delay of gratification called the Delay-of-gratification Gist Scale and found that it reliably predicted the dimension of delay of gratification. The purpose of the study was to develop a predictor for problem behaviors based on delay of gratification (Reyna & Wilhelms, 2016). The purpose of the scale was to capture the "social, cultural and psychological

gestalt of willingness to sacrifice gratification in the present for the sake of greater rewards in the future” (Reyna & Wilhelms, 2016, p. 619).

Further studies on delay of gratification have used older subjects (Casey et al., 2011; Drobetz et al., 2014). Casey et al. (2011) conducted a study of individuals in a cohort that had completed a delay of gratification task as preschool students 40 years prior and shown the ability to delay gratification. Testing of the cohort repeated in their 20s and 30s, and the participants still exhibited the ability to delay gratification (Casey et al., 2011). Casey et al. tested this group once again, now in their mid-forties, with results that indicated that delay of gratification is an individual characteristic that remains stable over time. Drobetz et al. (2014) studied elderly patients to determine if dorsolateral prefrontal cortex (DLPFC) atrophy related to delay of gratification. Forty adults between the ages of 63 and 93 years participated in the study, which used MRI images of the brain. Drobetz et al. found that the DLPFC atrophy connected to delay of gratification as participants with higher levels of age-related atrophy of the DLPFC exhibited less ability to delay gratification.

Wood (1998) studied delay of gratification relating to socio-economic status and impulse buying. For the purpose of the study, the frequency of impulse buying connected with ability to delay gratification, with less instances of impulse buying correlating to a high level of delay of gratification. Wood reported that 60% of supermarket purchases by customers, and 53% of merchandise purchases were impulse buys not originally planned as shopping began. Wood found that education level, and not income, was associated with impulse purchases. Respondents that had completed some college, but that did not earn a degree, were the most likely to hold a low ability to make impulse buys reflecting a lower ability to delay gratification, while data showed men as less likely to make impulse buys than women (Wood, 1998).

Children and adolescents have been the subjects for multiple studies of delay of gratification (Cuskelly, Gilmore, Glenn, & Jobling, 2016; Romer, Duckworth, Sznitman, & Park, 2010; Wilson et al., 2017). Romer et al. (2010) assessed three risky behaviors of adolescents, tobacco use, marijuana use, and alcohol consumption, and compared that with delay of gratification. Romer et al. reported that accepted research shows that risk-taking behaviors increase during adolescence. Romer et al. found that participating in the three risky behaviors previously listed inversely related to delay of gratification across both gender and age, from adolescence thru young adulthood. In a study by Wilson et al. (2017), the researchers presented children from 5-12 years old with an opportunity to accept a small, wrapped package immediately, or to wait for a larger wrapped package. The purpose of the study was to attempt to extend the age of contemporary delay of gratification tasks, which previously centered on 3-5-year old children. Wilson et al. found that 7-year-old children were significantly more likely to delay gift reception than 5-year-olds were; however, there was no significant difference between 7-year olds and the older students in the study. These results accomplished the goal of extending standard delay of gratification tasks to children older than five years (Wilson et al., 2017). Cuskelly et al. (2016) used a similar delay of gratification task to study how children with Down syndrome compare with typically developing children and children with moderate intellectual disabilities. Cuskelly et al. found that children with Down syndrome have difficulty with delay of gratification, consistently choosing the immediate reward over delaying for a better award.

As a literature-based and accepted dimension of the work ethic construct, work ethic studies often report results for delay of gratification. Bazzay (2016) studied the relationship between work ethic dimensions and ego depletion and found that, contrary to the hypothesis, there was no significant relationship between delay of gratification and ego depletion. Meriac,

Slifka, and Labat (2015) found that delay of gratification did not positively relate to grit, which failed to support the research hypothesis. In a study of the relationship between the work ethic, academic motivation, and academic performance of college students, Meriac (2015) found that delay of gratification positively related to GPA. In a separate study, Meriac (2012) found that while delay of gratification was positively related to organizational citizenship behavior displayed by college students, it was not statistically significant. Gorman and Meriac (2016) reported that delay of gratification scores for correctional officers was not significantly different from other professions for which data was available. In a generational study, Meriac et al. (2010) reported a significant difference in delay of gratification between members of the Baby Boomer generation and members of Generation X. Pogson et al. (2003) found a negative linear relationship between career state advancement and delay of gratification, indicating that people in the later stages of their careers were less willing to delay gratification. Lastly, Van Ness et al. (2010) reported that there was no significant difference in delay of gratification between workforce profession and college students, even though other dimensions of work ethic were significantly different. Van Ness et al. found that overall work ethic scores were not significantly different between college students and workforce professionals, even though there were significant differences between other dimensions, lending support to the multidimensionality of work ethic.

The ability to resist an immediate reward in order to pursue a larger one ties back to the Calvinistic pre-destination beliefs that formed much of the basis for the emergence of the work ethic construct. The literature supports the belief that delay of gratification is measurable, with many studies designed solely to measure this one dimension. The literature also supports that delay of gratification is one part of the multidimensional nature of work ethic.

## **Work Ethic and Students**

Teachers teach. Students learn. While this oversimplification addresses the fundamental aspect of education, the reality is much more complex. In 2017, there were approximately 16.4 million students enrolled in high school in the United States (National Center for Education Statistics [NCES], 2017, United States Census Bureau, 2017). For most of these students, continuing their education at a two or four-year college or university was their first goal. Others will choose to enter the workforce or the military. Still, others will fail to complete high school, dropping out for a myriad of reasons. Student work ethic has been a major topic of research in the ongoing effort to improve our education systems. Schab (1976) studied work ethic among black high school students in the South and found that 88% of males and 77% of females agreed that finding a good job was extremely important to have a successful life. Schab's work focused on post-education life goals and not on academic achievement; however, most of the students surveyed believed that academic success, especially in English and mathematics, was important for achieving this goal. Gerrard (2014) focused on a theoretical construct identified as the learning ethic, which compares to work ethic in that hard work, perseverance, and resilience represent the learning ethic. Gerrard also pointed out how modern society has come to view both work and learning as a social duty that creates "normative distinctions between worthwhile and worthless lives" (p. 870).

Other studies of students relating to work ethic have attempted to determine if students had internalized the concept of a work ethic before finishing their education and entering the workforce (English, Manton, Sami, & Dubey, 2012; Wentworth & Chell, 1997). Most of these studies have involved college students that are more easily available to researchers. Before the development of the Multidimensional Work Ethic Profile by Miller et al. (2001), Wentworth and

Chell (1997) used the Protestant Work Ethic Scale and found that college students still value work ethic. Wentworth and Chell concluded that the ideas of work ethic, such as hard work and disdain for leisure, was conveyed to college students at a young age. Wentworth and Chell also found that after graduating college and entering the workforce, experiences such as organizational politics and lack of equity in the work environment often result in a decrease of the work ethic values that they attribute to cynicism. English et al. (2012) compared responses from graduate and undergraduate students in a college of business on qualities that students felt they would most need in the workplace. English et al. found that both groups of students placed “integrity/honesty” and “good work ethic” as the most important qualities a person must possess for successful employment.

Further study of college students has focused on the perceptions of students’ work ethic and on teaching students the skills that correlate to a positive work ethic (Hodges, 2017; Stevens & Miretzky, 2012). Stevens and Miretzky (2012) conducted a study of faculty perceptions of student characteristics and found that, according to faculty, basic student skills and student work ethic are declining while student sense of entitlement is increasing. Students were not willing to work to earn high grades and expected to be given grades of “A” based solely on the effort they put into a task, regardless of the quality of the finished work (Stevens & Miretzky, 2012). Another indicator of declining work ethic among students was an unwillingness to struggle in order to achieve a good grade (Stevens & Miretzky, 2012). Hodges (2017) reported that many technical colleges have begun a work ethic instruction program that teaches skills to build a positive and solid work ethic, such as attendance, character, attitude, appearance, respect, cooperation, communication, teamwork, organizational skills, and productivity. These programs

teach the so-called “soft skills” as skills needed to be a successful student while stressing the importance of how they carry over into the workplace throughout the program (Hodges, 2017).

Further studies have used work ethic to attempt to measure adolescent attitudes about work ethic as well as predicting student behavior (Fox & Grams, 2007; Meriac, 2012). Fox and Grams (2007) developed the Work Ethic Trait Behavior Indicators Inventory (WETBII) to measure adolescent attitudes and behaviors in their daily lives as students in order to assess work ethic of middle and high school age students. Fox and Grams wanted to create an assessment specific to students who have not entered the workforce and thus may not have a true understanding of many of the items on traditional work ethic models. The purpose of creating the WETBII was to develop a curriculum for teaching work ethic to high school students (Fox & Grams, 2007). Meriac (2012) used the MWEP to predict academic performance and counterproductive student behaviors, using standardized test scores, high school GPA, college GPA and behaviors such as instances of cheating and disengagement. Meriac (2012) found that work ethic related to academic performance, and that specific dimensions of work ethic accounted for the significant findings in the studied areas.

In applying work ethic to academic achievement by students, Rau and Durand (2000) challenged the idea that a student with a high work ethic will automatically be successful academically. Rau and Durand were following up on a 12-year study at the University of Michigan, which consistently found no correlation between the amounts of time that a student studied and their grades. Rau and Durand determined that a high work ethic was not enough to ensure academic success and expanded the concept of work ethic and hard work into an academic ethic that encompasses daily or near-daily study in a focused and disciplined manner. Dunn (2013) reports that different measures of work ethic report very different results



concerning the attainment of education. However, Dunn did not include the MWEP in his analysis, focusing instead on the much older Protestant Ethic scale developed in 1971 by Miles and Garrett (as cited in Dunn, 2013).

Parkhurst, Fleischer, Skinner, Woehr, and Hawthorne-Embree (2011) found that work ethic directly relates to task completion by students. Parkhurst et al. first administered the MWEP to a group of college students and then tasked the participants to complete ten of twenty math problems. Next, the researchers gave the students a chance to complete the remaining ten math problems or choose a new assignment with only nine problems. Students with higher work ethic scores, and specifically, high dimension scores in hard work and delay of gratification, tended to choose to complete the previous assignment, while students that scored high on leisure and thus lower on overall work ethic tended to choose the easier nine-question assignment (Parkhurst et al., 2011). Meriac (2015) found the high work ethic directly relates to higher academic achievement and that work ethic strongly and significantly related to academic motivation. Meriac's (2015) finding also supported the findings of Rau and Durand (2000) that high measures of hard work negatively correlate to higher GPA, which is attributed to continuing to work hard at studying without developing more effective study habits.

### **Student Athletes**

The National Federation of State High School Associations (NFHS) reported that during the 2016-2017 school year, 7,963,535 high school students participated in athletics (NFHS News, 2017). NFHS News (2017) also reported that 2016-2017 participation had increased by almost 95,000 student-athletes over the previous year. According to the NCES, in 2017 there were approximately 15.1 million students enrolled in public high schools in the United States (NCES, 2017). The United States Census Bureau (2017) reported that an additional 1.3 million

high school students attended private schools. When accounting for all high school students enrolled in public and private schools, 48.8% of them participate in high school athletics.

Researchers have studied athletic participation in children and teenagers from many different viewpoints, from effects on academic success and leadership traits to motivation and overall intrinsic benefits derived from participation. Neely and Holt (2014) conducted a qualitative study that examined the perspective of parents on allowing children as young as 5-8 years of age to participate in competitive athletics. Neely and Holt reported that parents indicated that participating in athletics produced a wide range of benefits for their children, including personal, social and physical benefits that led to increasingly positive self-perceptions. Personal benefits experienced by children competing in athletics were positive self-perception, personal responsibility, and good sportsmanship (Neely & Holt, 2014). Social benefits included friendships, learning to cooperate and work as a team, respect for authority, and engagement in school (Neely & Holt, 2014). Finally, parents reported physical benefits that included overall better physical health and improved coordination to go along with the actual development of skills in a specific sport (Neely & Holt, 2014). These findings supported previous work by Daniels and Leaper (2006) who found that athletic participation had a significant positive impact on peer acceptance and self-esteem in adolescent girls and boys.

Other studies have focused on perceived leadership benefits from participation in athletics (Dobosz & Beaty, 1999; Kniffin, Wansink & Shimizu, 2015; Pascarella & Smart, 1991; Snyder & Spreitzer, 1992). Dobosz and Beaty (1999) studied suburban high school student-athletes and found that student-athletes demonstrated significantly higher levels of leadership ability than their non-athlete peers did. Dobosz and Beaty supported previous work by Snyder and Spreitzer (1992) who found that students who excelled in academics, as well as athletics,

showed higher levels of leadership. Pascarella and Smart (1991) reported that student-athletes possess higher levels of self-esteem in addition to demonstrated higher levels of leadership ability. Kniffin et al. (2015) connected participation in high school varsity athletics as teenagers with higher levels of leadership and higher levels of career status in adult males. Surprisingly, Kniffin et al. also found a demonstrated more frequent occurrences of volunteering in their community or donating to charity, which would support Neely and Holt's (2014) observations of parental perceptions of social benefits in allowing young children to participate in athletics.

Over the years, the relationship between athletic participation and academic performance has received a great deal of attention from researchers attempting to connect these two facets of student life. Parsons (2013) studied college athletes at a small, private university to determine not only their academic habits but also the perceptions these athletes maintained about their academic performance. Parsons found that respondents, who were all athletes, reported good academic habits characterized by attending class, maintaining good grade point averages, and turning in assignments when they were due. Parsons also found that while many students reported positive relationships with their professors, approximately one third of the athletes in the study reported the presence of a negative stigma that existed from professors to athletes because of the perceived special treatment or focus on their sport instead of academic work, propagating the "dumb jock" stereotype.

Additional studies have focused on the motivations and attitudes of student-athletes toward their academic performance. Levine et al. (2014) attempted to contradict studies that categorize academic underperformance by athletes as a lack of motivations to succeed academically. Levine et al. found that the majority of college-aged student-athletes studied maintain a private but positive attitude about academic achievement and success while at the

same time believing that fellow athletes do not place the same high emphasis on academics.

Ryska and Vestal (2004) found that high school student-athletes with high levels of athletic motivation and ego reported significantly higher levels of future academic aspirations as well as greater use of academic strategies to ensure academic success.

The largest area of research comparing student-athletes with non-athletes focuses on the comparisons of academic achievement between the two groups. It is no surprise, then, that given the overwhelming number of studies conducted on this topic, results are varied. Studies have shown that non-athletes perform better than athletes in overall grade point averages (Emerson, Brooks, & McKenzie, 2009) and that athletes perform better academically during the offseason (Schultz, 2017). Other studies (Fox, Barr-Anderson, Neumark-Sztainer, & Wall, 2010; Harris, Hines, Mayes, Thomas, & Begley, 2015; Yeung, 2015; Zaugg, 1998) contradicted these findings.

Supporting the position that athletes underperform when compared with their non-athlete peers, Emerson et al. (2009) studied athletes at small National Collegiate Athletic Association (NCAA) Division III colleges and universities. Emerson et al. separated their study by athlete gender and selectivity of the school they attended. At schools with the strictest admissions criteria and moderately strict criteria, both male and female non-athletes significantly outperformed their peers who participated in athletics (Emerson et al., 2009). The results also showed that both male and female non-recruited “walk on” athletes significantly outperformed recruited athletes. At schools with the lowest admissions selectivity criteria, male recruited athletes still lagged well behind male non-athletes, however, male non-recruited, female recruited, and female non-recruited athletes significantly outperformed the non-athlete group. Schultz (2017) finds similar results in a study of high school athletes, reporting that high school varsity athletes have a small negative and significant effect on their grades while in season for

their sport. Schultz (2017) also reported a small but significant positive impact on academic performance for junior varsity athletes that are in season. A possible explanation for this difference is that varsity athletes are spending more time focusing on their sport than their junior varsity teammates.

The studies of academic underperformance by student-athletes contradict other studies that indicate that student-athletes outperform their non-athlete peers in the classroom (Zaugg, 1998; Fox et al., 2010; Harris et al., 2015; Yeung, 2015). Harris et al. (2015) conducted a phenomenological study of three black male student-athletes and found that while drawn to athletics for the potential of future success, positive academic achievement was a result due in part for a desire to continue that success off the field. Yeung (2015) found that student-athletes perform higher than non-athletes in every tested subject on the High School and Beyond survey published by the NCES. Zaugg (1998) compared high school athletes and non-athletes on mid-term grades, final grades, disciplinary referrals, demerit points, and classes absent. Student athletes performed higher on mid-terms in English, Social Studies, and Sciences, while performing higher on final grades in all four subjects: English, Social Studies, Mathematics, and Sciences (Zaugg, 1998). Lastly, Fox et al. (2010) found that for both high school boys and girls, athletic participation was independently associated with higher grade point averages and academic achievement. This finding by Fox et al. supported the idea that participation in athletics helps to foster a higher work ethic in students as they balance their sports participation with their academic requirements. While studies have shown that many non-athletes possess a high work ethic, the added dimension of athletic participation by students may be the underlying reason that they developed a higher work ethic.

### Summary

The Protestant Reformation of the sixteenth and seventeenth centuries was the catalyst for the belief that people possess a work ethic (Byrne, 1990). As the Catholic Church split, religious leaders in the new Protestant movement began to move away from the basic medieval beliefs about social responsibility for the poor previously based on the idea that the nobles and the church would provide for and care for the needs of the poor. Contemporary society viewed work as both menial and unpleasant performed only as a means of survival (Byrne, 1990). The Protestant Ethic, or Protestant Work Ethic, was derived from the writings of post-Reformation intellectuals who challenged long-held Catholic beliefs and instead spread the message that each was responsible for their place in society, and that through hard work, that standing could be improved (Weber, 1958). The Calvinist belief in pre-destination hinged in part on the belief that the accumulation of wealth during one's lifetime was a sign of favor from God and acceptance into the afterlife, which led people to work harder to earn their place in the afterlife (Wisman & Davis, 2013). As Europeans crossed the Atlantic and began settling in North America, the idea that people possess a work ethic came with the Protestant Puritans and Separatists who settled in New England in the early seventeenth century.

The work of Weber (1958) created and defined the modern theoretical construct of work ethic expanded upon by later researchers. Research that is more recent has established work ethic as a multidimensional construct that can be measured and is made up of seven separate dimensions which can be measured individually: self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time, and delay of gratification (Miller et al., 2001).

Educational researchers have conducted numerous studies on student academic achievement, as well as the connection between athletic participation and improved academic achievement. This

study will attempt to connect the work ethic construct with athletic participation by trying to determine if student-athletes have a different work ethic than their non-athlete peers, and in which specific dimensions, if any, those differences occur.

Previous researchers have conducted studies of athletic participation from multiple viewpoints. Multiple studies have focused on the perceived leadership qualities learned from participating in athletics (Dobosz & Beaty, 1999; Kniffen et al. 2015; Pascarella & Smart, 1991). Other studies have presented contradictory results of the effect of athletic participation on academic performance (Emerson et al., 2009; Levine et al., 2014; Parson, 2013; Schultz, 2017). Meriac (2012; 2015) connected high work ethic to high academic performance in students. The literature supports the concept that the work ethic construct is multidimensional in nature, and recent focus has been on seven identified dimensions that make up the modern idea of work ethic (Miller et al., 2001). The differences in overall work ethic between student-athletes and non-athletes, based on a comparison at the dimension level, have not been fully explored.

## **CHAPTER THREE: METHODS**

### **Overview**

This chapter describes the methodology that the researcher will use for the study. The researcher explains the rationale for the use of a causal-comparative design before introducing the independent and dependent variables. The next section lists the research questions and null hypotheses. Next is a description of the participants and setting for the study, which identifies both the location, population, and how the researcher will obtain the study sample. A short narrative on the history of the MWEP instrument precedes the section covering the detailed procedures the researcher used to conduct the study. The last section of the chapter outlines the method of data analysis that the researcher used for the study.

### **Design**

This quantitative study used a causal-comparative research design to examine the differences in work ethic dimension scores between high school students who participate in athletics with students who do not participate in athletics. According to Gall, Gall, and Borg (2007), a causal-comparative design is a non-experimental type of research that attempts to identify a cause and effect relationship between the independent variables and the dependent variables as a naturally occurring difference among groups. Additionally, a causal-comparative design is used when the researcher does not manipulate the independent variable (Gall et al., 2007). The current study examined the differences in work ethic between high school athletes and non-athletes.

The independent variable for the study was athletic participation by high school students (Schultz, 2017). For the purpose of this study, athletic participation was defined as participation as a member of a high school sponsored athletic team or as a member of a non-school athletic



team such as a traveling select baseball or volleyball team. Athletic participation was scored on a nominal scale represented by athlete and non-athlete. All participants in the study who identified themselves as a participant on a high school athletic team or multiple teams at the selected high school, as well as participants that do not compete in athletics for the school but who competed in organized athletics outside of school were classified as athletes (Moore, 2017; Schultz, 2017). Study participants who identified themselves as non-participants in any organized athletics were classified as non-athletes (Moore, 2017).

The dependent variables in this study were the overall composite work ethic score from the MWEP, as well as the seven dimensions of the MWEP: self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time, and delay of gratification (Miller et al., 2001). Miller et al. (2001) defined self-reliance as the importance of a person's independence from others. Morality/ethics represents beliefs about a just and moral existence. Leisure is the importance of leisure activity in one's life (Miller et al., 2001). Hard work is a person's attitudes toward and beliefs about the value of hard work in one's life. Centrality of work of work is the importance of work in one's life, while wasted time is a distaste for any unproductive use of time (Miller et al., 2001). Lastly, delay of gratification is the ability to resist an immediate reward and wait for a later reward (Miller et al., 2001).

### **Research Questions**

The research questions for this study were:

**RQ1:** Is there a significant difference in work ethic between high school student-athletes and non-athletes?

**RQ2:** Is there a significant difference in the work ethic dimensions of self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time, and delay of gratification between high school student-athletes and non-athletes?

### **Hypotheses**

The null hypotheses for this study were:

**H<sub>01</sub>:** There is no significant difference in work ethic between high school students who participate in athletics and high school students who are non-athletes.

**H<sub>02</sub>:** There is no significant difference in the work ethic dimensions of self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time, and delay of gratification between high school students who participate in athletics and high school students who are non-athletes.

### **Participants and Setting**

#### **Population**

The population for this study consisted of all high school students enrolled in ninth through 12th- grade at Rock High School, which is a pseudonym. The researcher selected Rock High School because the researcher had access to this population. Due to the vast differences between the approximately 20 high schools in the school district, in almost all demographic areas, it was not feasible for the population to consist of the entire school district. Rock High School is located in a large county in a southeastern state. The county had an estimated population in 2016 of just over 350,000 residents (United States Census Bureau, 2010a). The high school is located approximately 20 miles from the large urban area that accounts for just over half of the county's residents (United States Census Bureau, 2010a). The area surrounding Rock High School is a rural, unincorporated area of the county, consisting of farms, several

small businesses, and a small amount of manufacturing. The unincorporated community that Rock High School serves has approximately 2900 residents and the U. S. Census Bureau recognized it as a Census Designated Place (United States Census Bureau, 2010b). Most employed residents commute to other areas for employment.

Rock High School is part of a large county public school district with 79 schools serving Pre-K through 12th grade. There are 45,828 total students in the district, of which 23,581 are male, and 22,247 are female. The district's students are 52% Caucasian, 28% African-American, 14% Hispanic, 3% multiracial, and 3% all others. Approximately 45% of the district's students participate in free or reduced lunch programs.

The district has 18 high schools with 12,519 total students. There are 6,399 male students and 6,120 female students. High school students in the district are 54% Caucasian, 28% African-American, 13% Hispanic, 2% multiracial, and 3% all others. Participation in free and reduced lunch at the high school level mirrors the district at 45% participation.

The high school has 549 total students enrolled in sixth through 12th grades. Only the 308 high school students in grades 9 through 12 made up the population for the study. There were 148 male students in the population and 160 female students. The grade level enrollment breakdown consisted of 69 students in the ninth grade, 76 students in the 10th grade, 80 students in the 11th grade, and 83 students in the 12th grade. The high school is 92% Caucasian, 4% African American, 2% Hispanic, and 2% all other. The percentage of students receiving free or reduced lunch is 49%. The high school fields athletic teams in the following sports: football, cross-country, volleyball, basketball, wrestling, baseball, softball, and soccer, as well as a varsity cheerleading squad.

## **Sample**

The study used a convenience sample drawn from the available population of 308 students at Rock High School. All students enrolled at Rock High School in grades 9 through 12 had the opportunity to be included in the sample. The researcher introduced the study to the population by passing out letters to all students informing parents of the study and its purpose along with parental consent and student assent forms. The sample included all students at Rock High School that had parental consent and student assent giving permission to participate in the study.

The goal of this study was to have at least 150 participants evenly divided between athletes and non-athletes. The final sample consisted of 144 participants. The total number of participants in the sample exceeded 108, which was the minimum number of participants needed for a medium effect size with a statistical power of 0.07 at the 0.05 level of significance according to Warner (2013). The participant sample consisted of 32 ninth-grade students, 46 tenth-grade students, 32 eleventh-grade students, and 34 twelfth-grade students. There were 57 male, and 87 female students. The researcher did not collect the race or ethnicity of the sample participants as part of the demographic information. The average age of the participants in the sample was 15.5 years.

## **Athlete Group**

The athlete group consisted of 84 participants who self-identified as a member of an athletic team at Rock High School or as a member of a non-school traveling “select” team. The athlete group consisted of nine ninth-grade students, 33 tenth-grade students, 17 eleventh-grade students, and 25 twelfth-grade students. There were 36 male and 48 female students. The average age of the participants in the athlete group was 16.1 years old.

### **Non-Athlete Group**

The non-athlete group consisted of 60 participants who self-identified as not being a member of either a high school athletic or non-school “select” athletic team. The non-athlete group was made up of 23 ninth-grade students, 13 tenth-grade students, 15 eleventh-grade students, and nine twelfth-grade students. There were 39 male and 21 female students in the non-athlete group. The average age of the participants in the non-athlete group was 15.6 years old.

### **Setting**

The participants in the study self-identified, via the demographic information on the first page of the MWEP, whether they were an athlete or non-athlete. As previously stated, the athlete group consisted of all participants who identified themselves as members of a high school athletic team or as a member of a “select” travel athletic team. The plan for the study was that teachers at Rock High School would administer the study’s MWEP during a ninety-minute long advisory class period. Every high school student at Rock High School was enrolled in an advisory class and reported to advisory class once every two weeks. All high school students reported to advisory class at the same time, which allowed administration of the MWEP to the entire sample simultaneously. The advisory class was a club or homeroom type of environment, such as the school’s Fun Committee, with occasional instances of students receiving additional instruction or tutoring during this time. Advisory class assignments were not subject dependent. All high school teachers were assigned an advisory class. Advisory classes did not consist of a common grade level. The researcher trained the 16 teachers that had a high school level advisory class on proper administration of the MWEP instrument. All teachers that would have administered the MWEP were asked to sign a consent form with instructions on participant

confidentiality (see Appendix K). The instrument required 30 minutes to complete. Unexpected weather cancellations of school prevented data from being collected in the planned method. Because of this, the school's instructional coach oversaw data collection by personally visiting regularly scheduled classes to administer the MWEP to study participants, following the same directions provided to the advisory class teachers.

### **Instrumentation**

The instrument used for this study was the MWEP (see Appendix B) developed by Miller et al. (2001). Miller et al. developed the MWEP to measure the work ethic construct. Miller et al. cited a lack of attention to work ethic in contemporary, psychological literature as the basis for the development of a new instrument. Miller et al. believed that this was due to previous studies having reported conflicting results in their exploration of the relationship of work ethic to other relevant variables.

After examining seven available instruments available to measure work ethic, Miller et al. (2001) determined that all seven contained inherent flaws in their measurement of work ethic because they ignored the multidimensional aspect of work ethic and yielded only a composite work ethic score. Another flaw was that the seven available scales were relatively outdated, with development dates ranging from 1961 to 1984 (Miller et al., 2001). Miller et al. began creation of a new instrument that would accomplish four goals. The first goal was to reliably assess each of the six components or dimensions of work ethic reported in previous literature on work ethic on which Miller et al. based their study: hard work, leisure, centrality of work, wasted time, religion/morality, and self-reliance. The second goal was to assess the extent to which measures of these dimensions demonstrate convergent and discriminate validity with measures of other constructs. The third goal was to assess the relations between the components of work ethic

identified in the literature. The fourth and final goal was to validate their measurement of work ethic.

Miller et al. (2001) performed six pilot studies to create and validate the MWEP. The first study, conducted on 1415 undergraduate students at a large Southwestern university, consisted of a survey with 77 items (Miller et al., 2001). The items used a 5-point Likert scale with one representing strongly disagree and five representing strongly agree (Miller et al., 2001). The results of this study allowed Miller et al. to develop six of the seven dimensions included in the final instrument: hard work, leisure, centrality of work, wasted time, religion/morality, and self-reliance. Before the second study, religion/morality changed to morality/ethics when the research team removed religious specific items and while at the same time adding delay of gratification based on established literature (Miller et al., 2001).

Miller et al. (2001) conducted a second study with 1058 undergraduate psychology students (Miller et al., 2001). This second trial instrument used the same type 5-point Likert scale with 145 total items (Miller et al., 2001). Exploratory factor analysis and an item analysis of internal consistency further examined the validity of the instrument (Miller et al., 2001). The reliability coefficients for the dimensions were above 0.80 for all but one, delay of gratification, at the conclusion of study two (Miller et al., 2001).

A third study was conducted on 598 undergraduate psychology students to validate the findings of the previous two studies (Miller et al., 2001). Results from the third study were consistent with those of the second study. Four weeks after Study 3 was completed, Miller et al. (2001) retested 34 participants. The results showed that test-retest reliability estimates for the MWEP sub-scales were 0.92 for hard work, 0.92 for self-reliance, 0.93 for leisure, 0.92 for

centrality of work, 0.92 for morality/ethics, 0.83 for delay of gratification, and 0.95 for wasted time (Miller et al., 2001).

The fourth pilot study tested 741 United States Air Force enlisted personnel with similar results to Study 3 (Miller et al., 2001). Study 5 used working adults, and Miller et al. (2001) found the results to be equivalent to the previously tested students and the Air Force personnel from the previous two studies. A sixth and final study allowed Miller et al. to calculate a high level of internal consistency with  $\alpha = 0.95$  for composite and dimension scores. According to Miller et al., the final MWEP is valid for creating an overall work ethic composite score as well as measuring a person's scores on each of the seven separate dimensions of work ethic.

Researchers have used the final version of the MWEP in multiple studies that have further validated its usefulness for measuring work ethic. Woehr, Arciniega, and Lim (2007) conducted a study using participants from the United States, Korea, and Mexico, finding no variance in the instrument results across different cultures. Meriac, Poling, and Woehr (2009) studied gender differences in work ethic, finding that there was no significant difference in male and females regarding work ethic. Meriac et al. (2010) studied generational differences, finding a significant difference in work ethic based on age groups, with younger participants scoring at a lower level of work ethic than older participants do. Based on the literature, the MWEP has successfully been used to study work ethic many different ways, including generational studies (Meriac et al., 2010), culture studies (Woehr et al., 2007), and gender differences (Meriac et al., 2009). Meriac, Woehr, Gorman, and Thomas (2013) streamlined the MWEP into a shorter version and validated its use for work ethic studies; however, the current study uses the original long version. The many varied studies successfully performed with the MWEP indicate that it is a valid instrument for the current study.



As previously stated, the MWEP uses a 5-point Likert scale for scoring, with results of strongly disagree scoring as a 1, and 5 representing strongly agree (Miller et al., 2001). There are 65 total items on the MWEP divided into seven dimensions. Table 1 provides a breakdown of the MWEP items and the dimensions of work ethic to which they pertain (Miller et al., 2001). Five dimensions consist of 10 items each, while wasted time consisted of eight items and delay of gratification contains seven items.

Table 1

*MWEP Dimensions*

Dimension	# of Items	Items
Self-Reliance	10	6, 21, 26, 28, 32, 34, 44, 50, 55, 59
Morality/Ethics	10	7, 16, 15, 25, 37, 48, 51, 54, 57, 61
Leisure	10	5, 8, 14, 18, 27, 31, 43, 49, 58, 63
Hard Work	10	17, 20, 22, 24, 35, 38, 45, 47, 53, 60
Centrality of Work	10	2, 4, 10, 13, 30, 33, 40, 41, 52, 64
Wasted Time	8	1, 9, 12, 23, 36, 39, 56, 65
Delay of Gratification	7	3, 11, 19, 29, 42, 46, 62

Three items in the morality/ethics dimension and all items in the leisure dimension are designed to be reverse scored. Scoring for each dimension is done by finding the mean of the Likert scale items and then multiplying by 10 (Miller et al., 2001). This method allows wasted time and delay of gratification, which consist of fewer items, to be equally compared with the other dimensions. The resulting score for each separate dimension ranges from 10 – 50, with 10 indicating the lowest possible score and 50 representing the highest possible score. The scores for each sub-scale are then added together to produce a composite work ethic score that can range from 70, indicating extremely low work ethic, to 350, indicating extremely high work ethic

(Miller et al., 2001). Miller et al. (2001) constructed the MWEP to use individual dimensions scores or the overall composite scores for comparison. This study will use the overall composite score for work ethic for RQ1 and the scores for each dimension for RQ2 in relation to the dependent variables. Table 2 shows the reliability of the individual MWEP dimensions.

Table 2

*Reliability Estimates (Coefficient  $\alpha$ ) by Sample*

Dimension	Student Sample ( <i>N</i> = 598)	Air Force Sample ( <i>N</i> = 741)	Organizational Sample 1 ( <i>N</i> = 166)	Organizational Sample 2 ( <i>N</i> = 127)
Centrality of Work	0.84	0.84	0.81	0.79
Delay of Gratification	0.79	0.77	0.81	0.78
Hard Work	0.85	0.86	0.89	0.87
Leisure	0.87	0.86	0.86	0.88
Morality/Ethics	0.78	0.57	0.85	0.77
Self-Reliance	0.89	0.87	0.86	0.87
Wasted Time	0.79	0.76	0.76	0.76

The researcher contacted Dr. David Woehr, one of the developers of the MWEP, and requested permission to use the MWEP for this study. Dr. Woehr granted permission for use of the instrument, permission to publish the instrument, and provided the MWEP along with the scoring instructions (see Appendix A).

### Procedures

The researcher contacted the school district superintendent for written permission to conduct the study during the summer before the 2018-2019 school year (see Appendix D). The researcher then obtained verbal permission from the school principal to conduct the study at Rock High School and was provided written permission from the principal after Institutional

Review Board (IRB) approval was granted (see Appendix E). After the dissertation proposal was accepted, the researcher requested IRB approval to conduct the study (see Appendix F).

After the IRB approved the study, the researcher began recruitment and then data collection. The researcher conducted the study during the first semester of the 2018-2019 school year. Two weeks before conducting the survey the researcher sent a letter home to parents explaining the study and asking for student participation in the research study (see Appendix G). Parents were provided with a consent form with instructions for parents and students if they choose to participate or not participate in the study (see Appendix H). The consent form uses an opt-out design. The researcher considered all students that did not return a form indicating non-participation as part of the sample for the study. Students or parents who chose to opt-out of the study would have returned their consent form to the school secretary, who would have secured them in a locked file cabinet until retrieved by the researcher. This step did not happen as no students returned a consent/assent form to opt out of the study and all 308 high school students were available to be in the potential sample.

The researcher met with and trained the high school teachers that would have administered the MWEP on the proper steps for administering the instrument and obtained teacher signatures on the Teacher Agreement Form (see Appendix K). The researcher conducted this training at the first regularly scheduled monthly faculty meeting following IRB approval, which was on September 17, 2018. September 27, 2018 was the date set for data collection. However, the survey was not able to be administered due to weather causing a school cancellation on the scheduled day of the survey. The researcher had to change the planned procedure to have advisory class teachers administer the MWEP. The MWEP was administered on October 4, 2018 to the sample. On the day of administration of the MWEP, the researcher

provided the high school instructional coach with all the MWEP information for each student, a pencil for each student, and a large manila envelope for the completed MWEPs. The instructional coach then personally administered the MWEP to classes of students. The first page of the MWEP included the student directions and the demographic data collected as part of the study. Administration of the MWEP took approximately 30 minutes including time for instructions. The instructional coach used the provided directions to ensure proper administration of the MWEP (see Appendix I). The instructional coach read the student directions to the students, which included answering demographic information. The demographic information collected on the first page of the MWEP included gender, age, grade, and whether the student participates as an athlete on a high school sponsored team or as a member of a “select” travel team not affiliated with the school (see Appendix J).

The instructional coach collected the completed MWEP from each student and placed the completed MWEPs in the provided manila envelope. Once all completed MWEPs are in the envelopes, the instructional coach sealed the envelopes. The instructional coach did not deliver the sealed envelopes to the main office to the school secretary, but instead delivered them directly to the researcher, who secured them in a locked file cabinet. The students received permission to keep the pencil as a thank you for participating in the study.

The initial collection of data resulted in 131 students participating in the sample. While this met the requirement for a minimum of 108 participants, the athlete and non-athletes groups were decidedly unequal, with 85 athletes completing the survey and only 46 non-athletes. The researcher scanned these surveys and discovered that one athlete survey and five non-athlete surveys had incomplete surveys or demographic information. The researcher removed these surveys, which left 41 valid surveys from non-athletes as well as 84 complete surveys from

athletes. Data collection occurred a second time on October 25, 2018 focused on students who were non-athletes. The high school instructional coach utilized the same procedure while visiting regularly scheduled classes to give the MWEP to non-athletes willing to participate. This second collection resulted in 19 additional participants completing the MWEP and becoming part of the study sample.

The researcher scanned each submitted MWEP for completeness. The researcher discarded the previously mentioned six MWEPs that were not complete or that did not have completed demographic information on the first page of the MWEP and removed those participants from the study. This process left 144 participants in the study with 84 participants in the athlete group and 60 in the non-athlete group. The researcher then scored each MWEP based on the scoring instructions provided with the instrument (see Appendix C). The researcher entered all data into a researcher-created Microsoft Excel spreadsheet to facilitate scoring. This spreadsheet was used to calculate participant scores on each dimension of the MWEP. The researcher then uploaded participant data into SPSS for data analysis.

After completion of the study, the researcher printed out the raw data file for storage and then deleted the electronic copy. The researcher secured the printout of the raw data and the scored MWEPs in a locked file cabinet and will store them for three years following the conclusion of the study. The researcher will destroy the data by way of a paper shredder at the conclusion of the three-year period.

### **Data Analysis**

The researcher screened all data entered into SPSS and ensured that there were no missing data points. Data screening continued with a Box and Whisker plot for each independent variable group and dependent variables to identify extreme outliers (Gall et al.,

2007). The researcher removed extreme outliers from the data. The researcher also classified extreme outliers as any results that were significantly different from the mean results, such as a score of 70 that indicated that the participant selected strongly disagree, which is scored as a 1, for every question, or a perfect score of 350, which indicated a selection of strongly agree to every question. These results indicated that the participant did not take the MWEP.

A one-way analysis of variance (ANOVA) was used to analyze the composite work ethic scores from the MWEP in RQ1. Gall et al. (2007) and Warner (2013) indicate that ANOVA is used to determine if two or more groups that make up the independent variable are different on one dependent variable. An ANOVA is appropriate for this study because the researcher was determining whether the independent variable groups (athlete and non-athlete) were significantly different on the dependent variable of work ethic.

According to Gall et al. (2007), assumption testing for the ANOVA included testing for the assumption of normality and the assumption of homogeneity of variances. The assumption of normality was tested with a Kolmogorov-Smirnov test because the sample size of 144 was greater than  $N=50$ . The assumption of multivariate normal distribution was examined using a scatter plot of each independent variable group. Identifying the classic cigar shape created by the dependent variables on the scatter plot satisfied the assumption. The assumption of homogeneity of variance was tested with Levene's Test of equality of error variances. The confidence interval used for the study is 0.95 with the alpha level at  $p = 0.05$ . The effect size was reported as partial  $\eta^2$  (Gall et al., 2007).

A one-way multivariate analysis of variance (MANOVA) was used to analyze the data for the seven dimensions of work ethic from the MWEP. Gall et al. (2007) and Warner (2013) recommend MANOVA for determining if two or more groups comprising the independent

variable are different on more than one dependent variable. The rationale for using the MANOVA is that this study attempted to explain whether the independent variable groups (athlete and non-athlete) were significantly different on the dependent variables: self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time, and delay of gratification.

According to Gall et al. (2007), assumption testing for the MANOVA included testing for the assumption of normality, the assumption of multivariate normal distribution, the assumption of homogeneity of variance – covariance matrices, and the absence of multi-collinearity. The assumption of normality was tested with a Kolmogorov-Smirnov test because the sample size of 144 was greater than 50. The assumption of multivariate normal distribution was examined using a scatter plot of each independent variable group. Identifying the classic cigar shape created by the dependent variables on the scatter plot satisfied the assumption. The assumption of homogeneity of variance – covariance was tested with a Box's M test of equality of covariance. A Pearson's product moment test was used to test for the absence of multi-collinearity. The confidence interval used for the study is 0.95 with the alpha level at  $p = 0.05$ . Wilks's lambda (Wilk's  $\Lambda$ ) was used to indicate whether the sample means on the multiple dependent variables were equal across groups. Effect size, as instructed in Gall et al., was reported as partial eta squared ( $\eta^2$ ).

## **CHAPTER FOUR: FINDINGS**

### **Overview**

This chapter outlines the findings of the study based on analysis of the results from the MWEF. It begins with the research questions and null hypotheses. Next, the descriptive statistics for all variables are provided. The next section details the results of the analysis for the first research question are given. Data screening and assumption testing for the first research question are provided, followed by a detailed report of the statistical procedures used for analysis. The results for the second research question are then reported, beginning with assumption testing. The chapter concludes with the statistical procedures and findings for the second research question.

### **Research Questions**

**RQ1:** Is there a significant difference in work ethic between high school student-athletes and non-athletes?

**RQ2:** Is there a significant difference in the work ethic dimensions of self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time, and delay of gratification between high school student-athletes and non-athletes?

### **Hypotheses**

The null hypotheses for this study were:

**H<sub>01</sub>:** There is no significant difference in work ethic between high school students who participate in athletics and high school students who are non-athletes.

**H<sub>02</sub>:** There is no significant difference in the work ethic dimensions of self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time, and delay of gratification



between high school students who participate in athletics and high school students who are non-athletes.

### Descriptive Statistics

Data obtained for the dependent variable work ethic sorted on the independent variable athletic participation can be found in Table 3. There were 144 total participants divided into two groups ( $k = 2$ ). The two groups were athlete and non-athlete. There were 84 participants in the athlete group ( $n = 84$ ) and there were 60 participants in the non-athlete group ( $n = 60$ ). Each participant in the sample scored between 70 and 350 on the MWEP. The MWEP measured the participant's level of work ethic with higher scores indicating a higher work ethic. For the total sample, the mean score for work ethic was  $M = 252.29$  with a standard deviation of  $SD = 28.253$ . For the athlete group, the mean score for work ethic was  $M = 257.77$  and the standard deviation was  $SD = 27.131$ . The non-athlete group had a mean score for work ethic of  $M = 244.32$  with a standard deviation of  $SD = 28.070$ .

Table 3

#### *Descriptive statistics for work ethic*

Dependent Variable	Independent Variable	Mean	Std. Deviation	N
Work Ethic	Athlete	257.77	27.131	84
	Non-athlete	244.32	28.070	60
	Total	252.29	28.253	144

Data obtained for the dependent variables that make up the seven dimensions of work ethic sorted on the independent variable athletic participation can be found in Table 4. For the athlete group, the mean score for self-reliance was  $M = 37.04$  and the standard deviation was  $SD = 6.276$ . The non-athlete group had a mean score for self-reliance of  $M = 34.17$  with a standard deviation of  $SD = 5.039$ . For morality/ethics, the athlete group had a mean score of  $M = 42.20$

with and the standard deviation was  $SD = 5.566$ . The non-athlete group had a mean of  $M = 40.03$  and the standard deviation was  $6.548$  for morality/ethics. For leisure, the athlete group had a mean score of  $M = 26.36$  with a standard deviation of  $SD = 6.663$  while the non-athlete group had a mean score of  $M = 26.93$  and a standard deviation of  $SD = 5.461$ . For hard work, athletes had a mean of  $M = 41.40$  with a standard deviation of  $SD = 6.462$ . Non-athletes scored on hard work had a mean of  $M = 38.43$  and a standard deviation of  $SD = 7.393$ . Athletes had a mean score of  $M = 35.64$  with a standard deviation of  $SD = 6.159$  on centrality of work. Non-athletes had a mean score of  $M = 33.88$  with a standard deviation of  $SD = 6.159$  on centrality of work. For wasted time, athletes had a mean of  $M = 36.86$  and a standard deviation of  $SD = 5.558$  and non-athletes had a mean of  $M = 34.30$  with a standard deviation of  $SD = 6.440$ . Lastly, on delay of gratification, athletes had a mean score of  $M = 38.65$  and standard deviation of  $SD = 5.881$ . Non-athletes had a mean score of  $M = 36.57$  and a standard deviation of  $SD = 5.870$  on delay of gratification.

Table 4

*Descriptive Statistics for work ethic dimensions.*

<b>Dependent Variable</b>	<b>Independent Variable</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>N</b>
Self-reliance	Athlete	37.07	6.276	84
	Non-A	34.17	5.039	60
	Total	35.86	5.950	144
Morality/Ethics	Athlete	42.20	5.566	84
	Non-A	40.03	6.548	60
	Total	41.30	6.068	144
Leisure	Athlete	26.36	6.663	84
	Non-A	26.93	5.461	60
	Total	26.60	6.177	144
Hard Work	Athlete	41.40	6.462	84
	Non-A	38.43	7.393	60
	Total	40.17	6.997	144
Centrality of Work	Athlete	35.64	5.849	84
	Non-A	33.88	6.159	60
	Total	34.91	6.022	144
Wasted Time	Athlete	36.86	5.558	84
	Non-A	34.30	6.440	60
	Total	35.79	6.053	144
Delay of Gratification	Athlete	38.65	5.881	84
	Non-A	36.57	5.870	60
	Total	37.78	5.946	144

### **Results for Research Question 1**

**H<sub>01</sub>:** There is no significant difference in work ethic between high school students who participate in athletics and high school students who are non-athletes.

#### **Data screening**

Data screening was conducted on the dependent variable (work ethic) using the independent variables (athlete and non-athlete) regarding data inconsistencies and outliers. The researcher sorted the data using a box and whisker plot. No data errors or inconsistencies were

identified. The box and whisker plot identified a possible extreme outlier in the data, as participant #15, a non-athlete, appeared to be very low. The raw score for participant #15 was converted to a  $z$  score ( $z$  score = -3.36). According to Warner (2013), this score falls outside of the acceptable range for a  $z$  score (-3.30 to 3.30) and indicated that participant #15 was an extreme outlier. The researcher removed participant #15, a non-athlete, from the study prior to further analysis. See Figure 1 for box and whisker plot for work ethic of athlete and non-athlete.

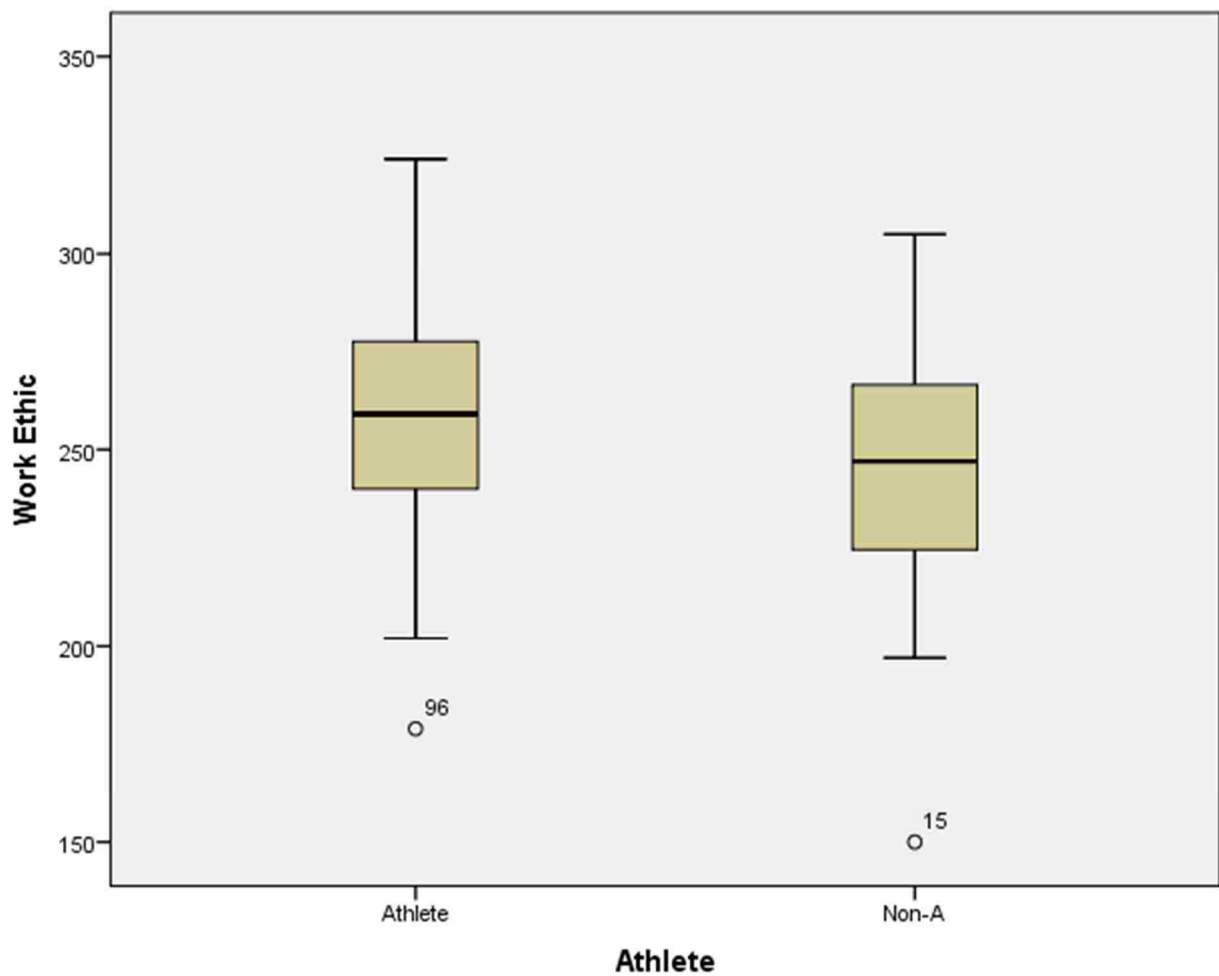


Figure 1. Box and Whisker Plot for work ethic of athlete and non-athlete

## Assumptions

A one-way between-subjects ANOVA was used to test the null hypothesis examining the difference in work ethic between high school athletes and non-athletes. ANOVA required that the assumptions of normality and homogeneity of variance were met, so normality was examined using a Kolmogorov-Smirnov test. Kolmogorov-Smirnov was used because the sample size was greater than 50. Both groups were found to not be statistically significant with  $p > .05$  in each case, satisfying the assumption. See Table 5 for the Kolmogorov-Smirnov test.

Table 5

<i>Tests of Normality<sup>a</sup></i>							
	Athlete	Kolmogorov-Smirnov <sup>b</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Work ethic	Athlete	.089	84	.097	.990	84	.799
	Non-A	.103	59	.187	.969	59	.134

<sup>a</sup>. There are no valid cases for WE when Athlete = .000. Statistics cannot be computed for this level. <sup>b</sup>. Lilliefors Significance Correction

The assumption of homogeneity of variance was examined using the Levene's test of equality of error variances. No violation was found ( $p = .802$ ) so the assumption of homogeneity of variance was met. See Table 6 for Levene's Test.

Table 6

<i>Levene's Test for Equality of Variances</i>			
Dependent Variable: Work ethic			
F	df1	df2	Sig.
.063	1	141	.802

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

<sup>a</sup>Design: Intercept + Athlete

## Results for the Null Hypothesis

A one-way between-subjects ANOVA was used to test the null hypothesis; that there was no significant difference in work ethic between high school student-athletes and non-athletes. This comparison was based on a scale score of 70 – 350 from the MWEP measuring level of work ethic. The results showed  $F(1, 141) = 7.226$  was greater than  $F$ -critical = 3.84 ( $df_1 = 1, df_2 = 141, \alpha = .05$ ) which was found in Appendix C of Warner (2013). Because  $F(1,141) > F$ -critical, the null hypothesis was rejected. In addition, the  $p = .008$  indicated statistical significance because it was less than  $\alpha = 0.05$ . The results indicated a need to reject the null hypothesis with a 95% confidence level. The resulting effect size  $\eta^2 = .049$  showed a medium effect on the dependent variable. Because there were only two groups, post hoc testing was not conducted. See Table 7 for the ANOVA results.

Table 7

### *One-way Between Subjects Analysis of Variance*

Tests of Between-Subjects Effects						
Dependent Variable: Work ethic						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	5051.429 <sup>a</sup>	1	5051.429	7.226	.008	.049
Intercept	8800143.429	1	8800143.429	12589.291	.000	.989
Athlete	5051.429	1	5051.429	7.226	.008	.049
Error	98561.564	141	699.018			
Total	9257406.000	143				
Corrected Total	103612.993	142				

<sup>a</sup>R Squared = .049 (Adjusted R Squared = .042)

## Results for Research Question 2

**H<sub>02</sub>:** There is no significant difference in the work ethic dimensions of self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time, and delay of gratification

between high school students who participate in athletics and high school students who are non-athletes.

### **Data Screening**

Data screening was conducted on the dependent variables (self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time, and delay of gratification) using the independent variables (athlete and non-athlete) regarding data inconsistencies and outliers. The researcher sorted the data using a box and whisker plots. No data errors or inconsistencies were identified. The researcher identified participant #33, a non-athlete, as a possible extreme outlier on the variable hard work. The raw score was converted to a  $z$  score ( $z$  score = -3.85).

According to Warner (2013) the  $z$  score fell outside of the acceptable range (-3.30 to 3.30) and confirmed the suspicion of an extreme outlier. However, since participant #33 was not identified as a possible extreme outlier on the other dependent variables, the researcher chose not to remove participant #33 from the study. See Figures 2 – 8 for box and whisker plots of the dependent variables self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time, and delay of gratification.

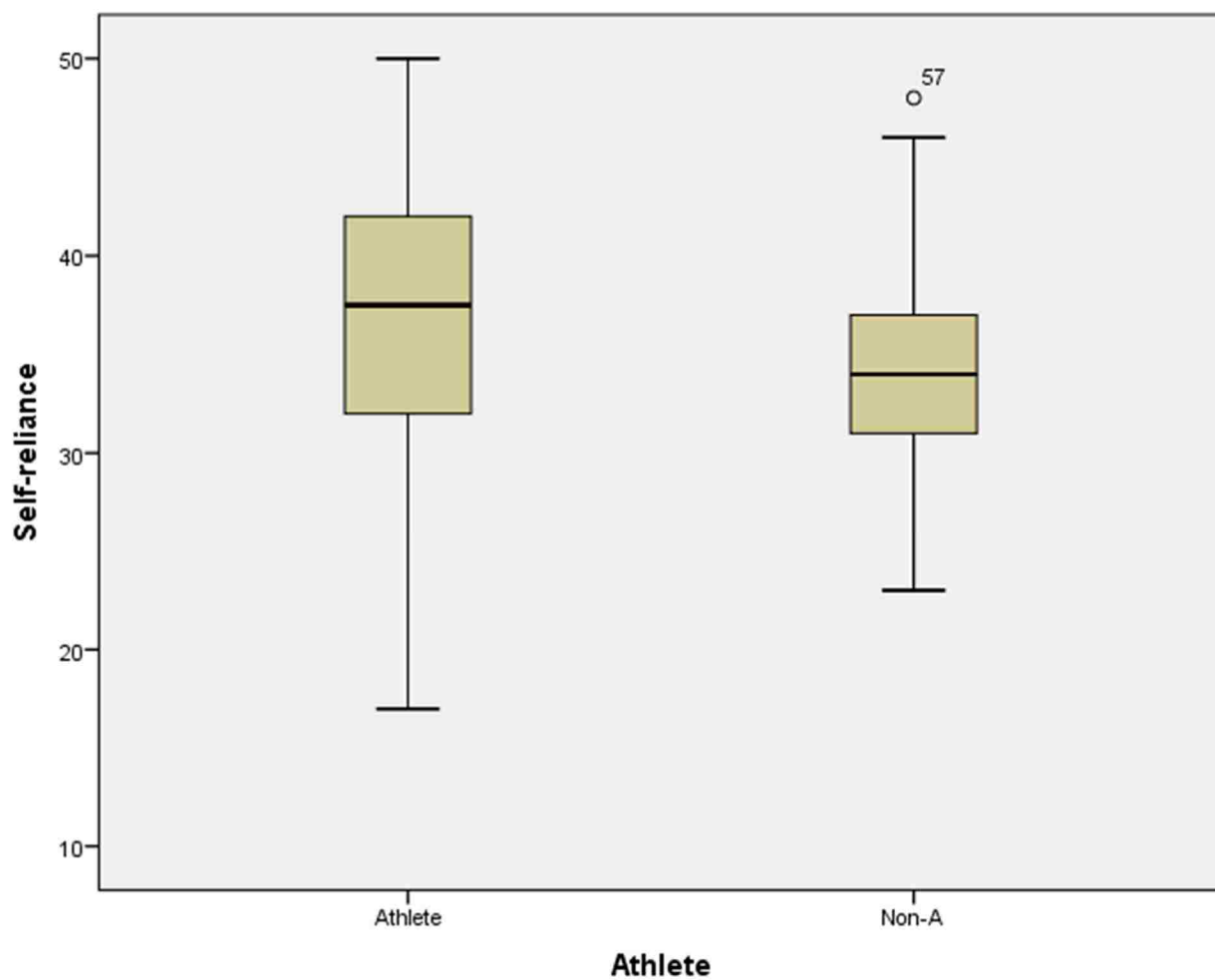


Figure 2. Box and Whisker Plot for self-reliance of athlete and non-athlete.



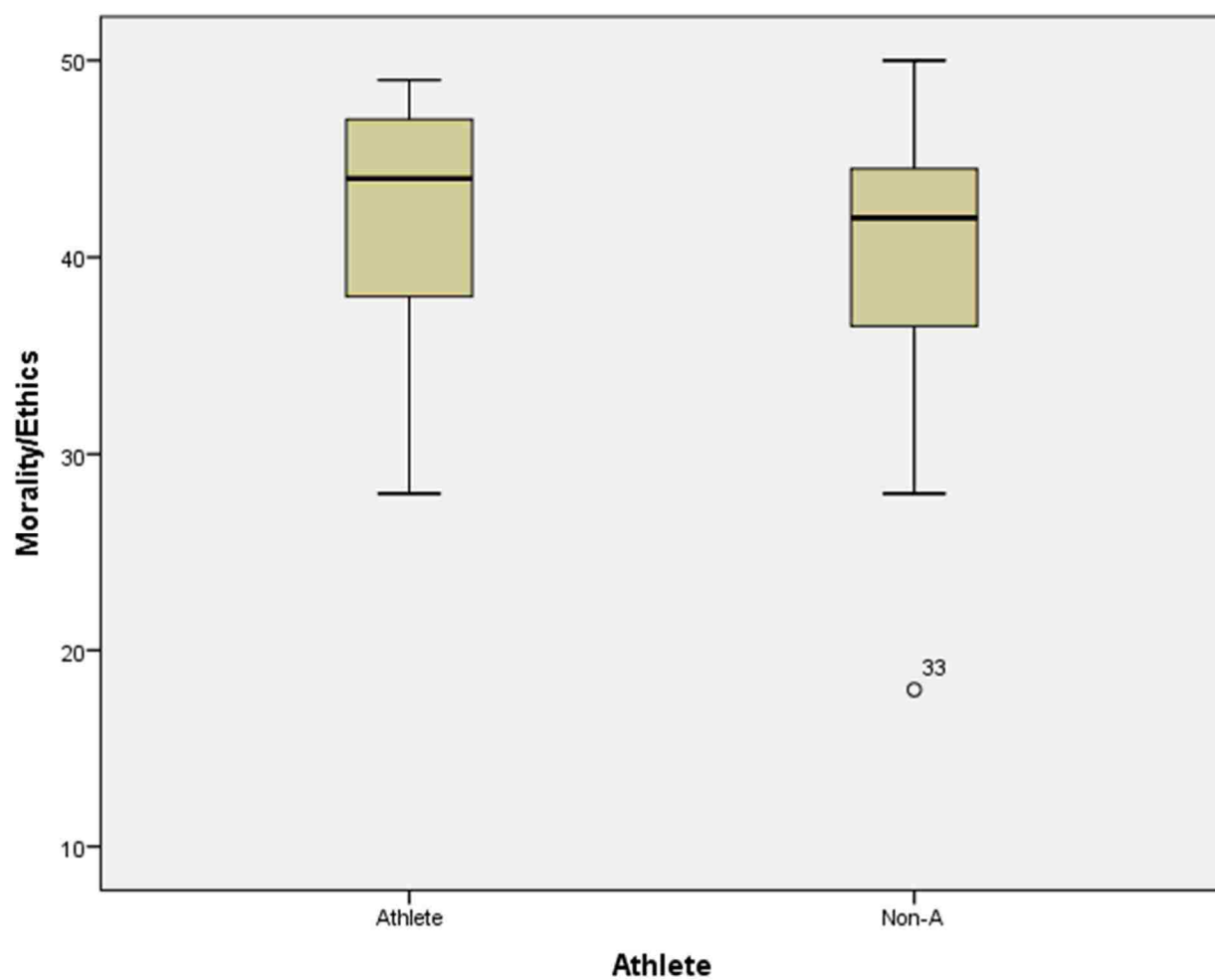


Figure 3. Box and Whisker Plot for morality/ethics of athlete and non-athlete

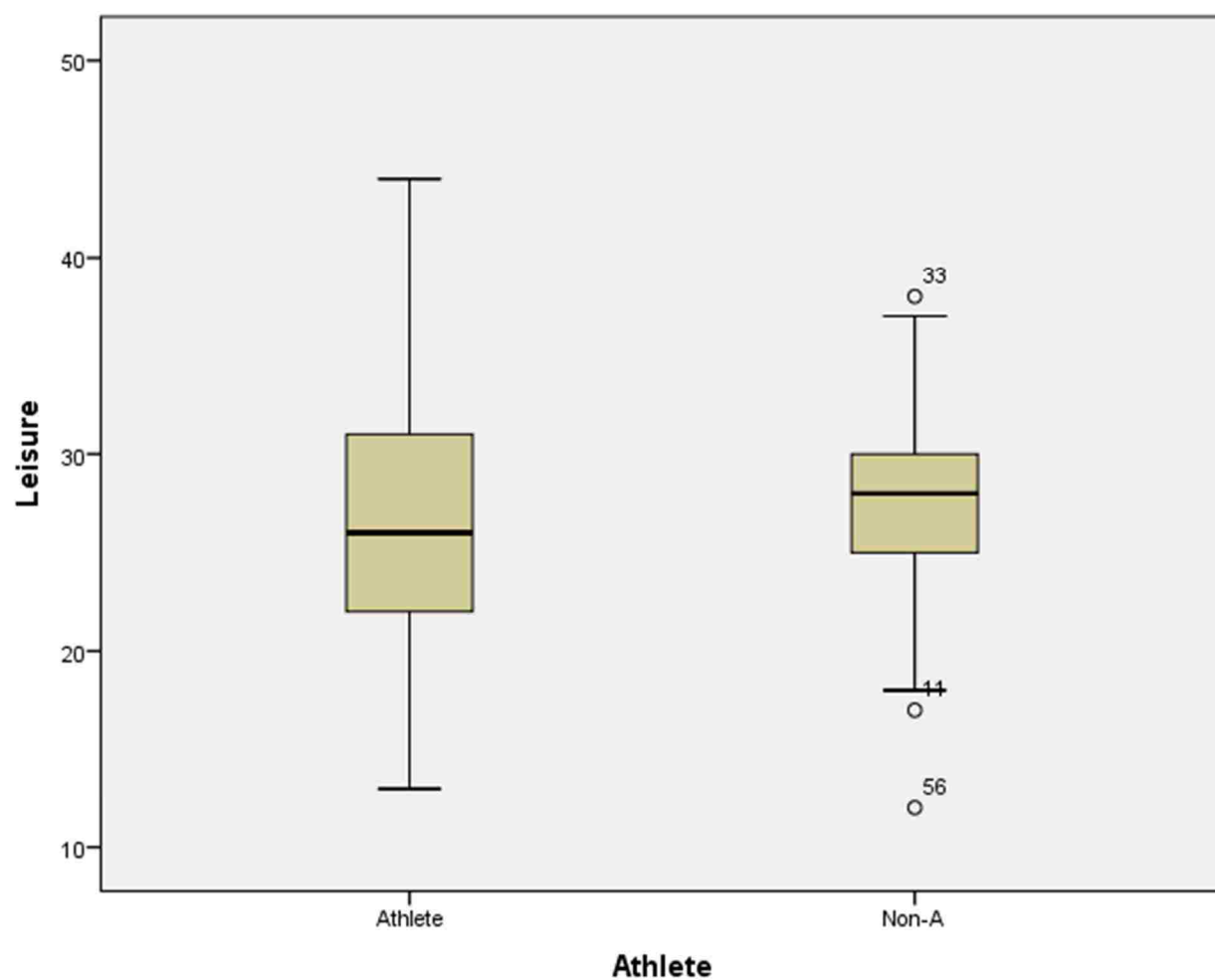


Figure 4. Box and Whisker Plot for leisure of athlete and non-athlete

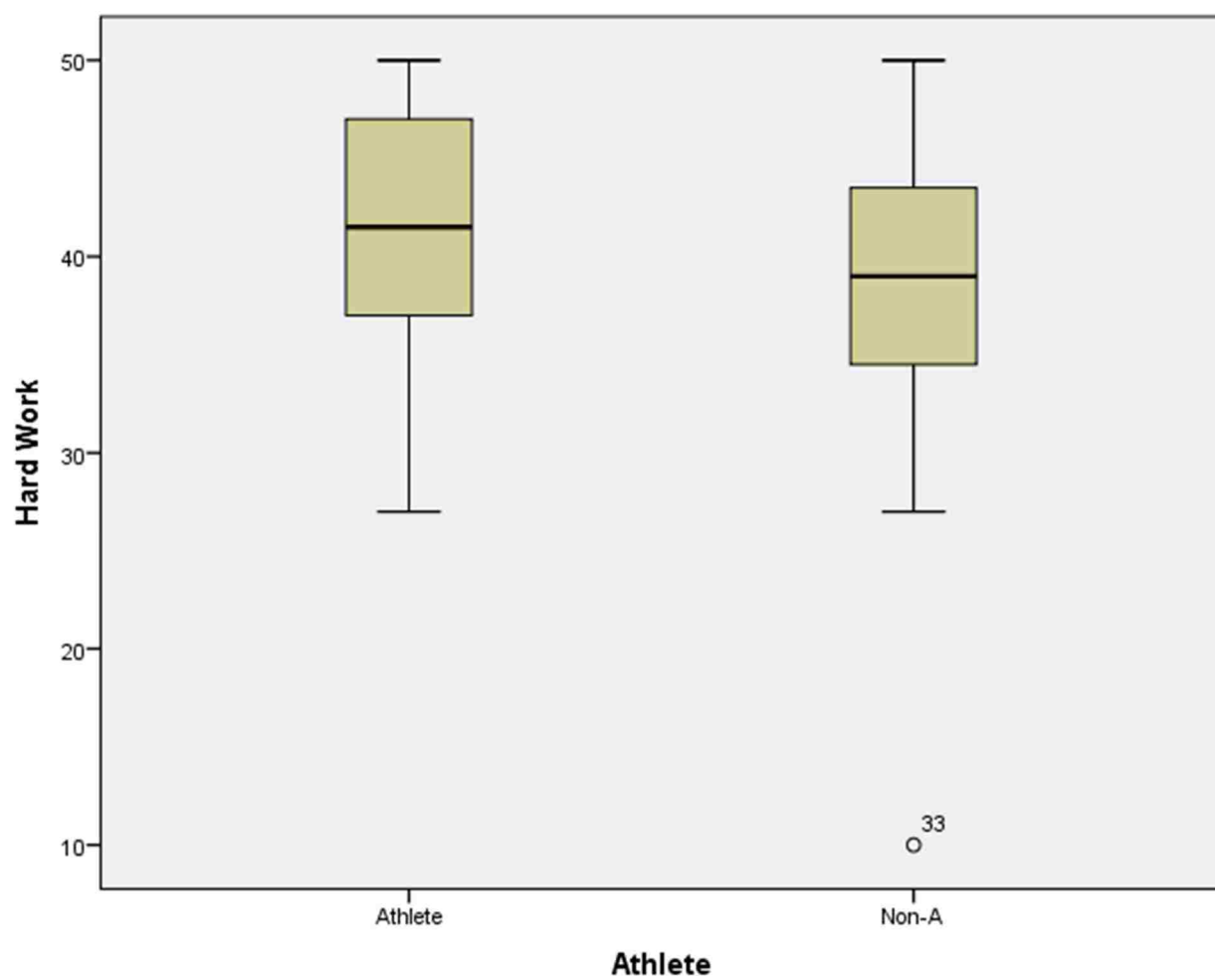


Figure 5. Box and Whisker Plot for hard work of athlete and non-athlete

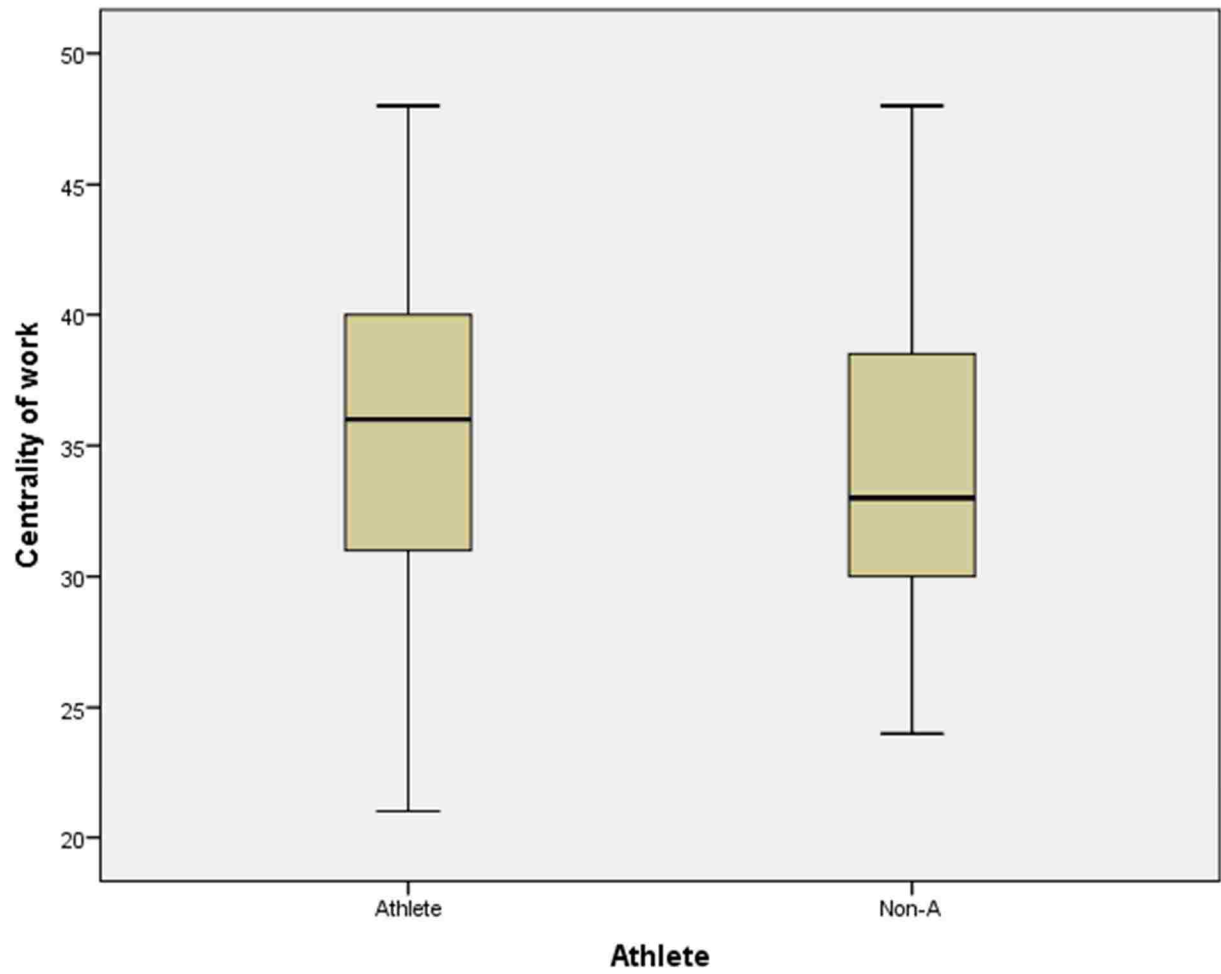


Figure 6. Box and Whisker Plot for centrality of work of athlete and non-athlete

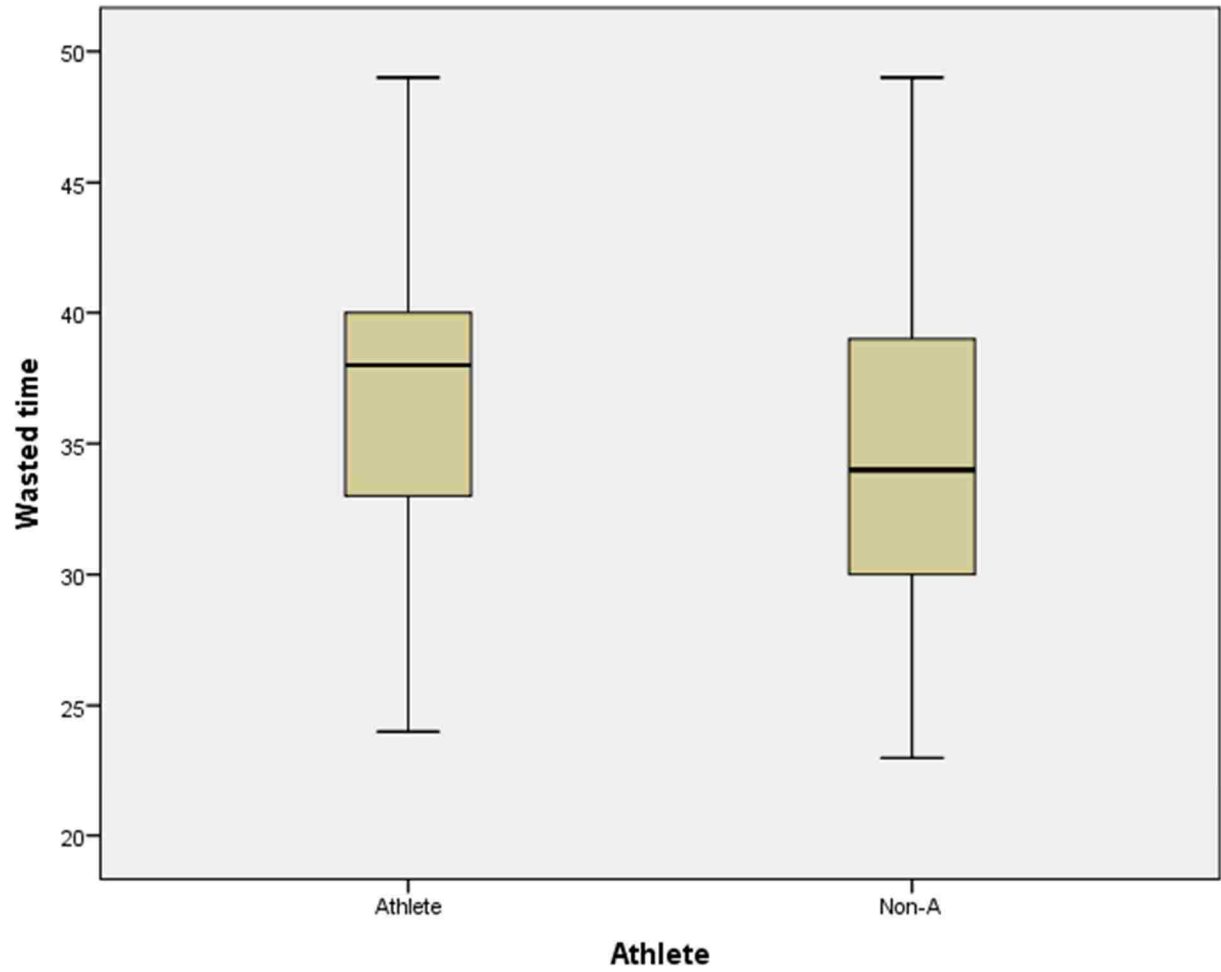
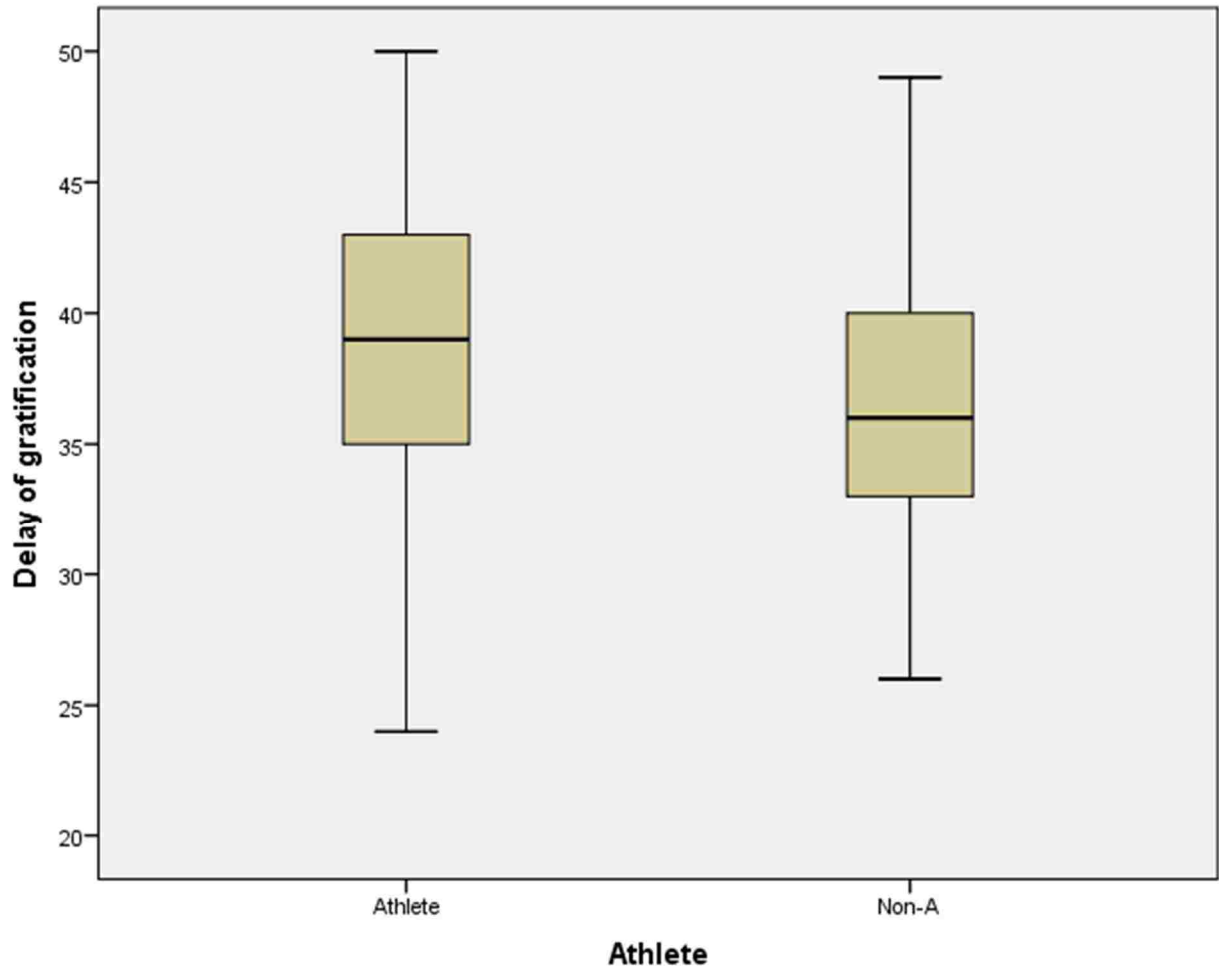


Figure 7. Box and Whisker Plot for wasted time of athlete and non-athlete

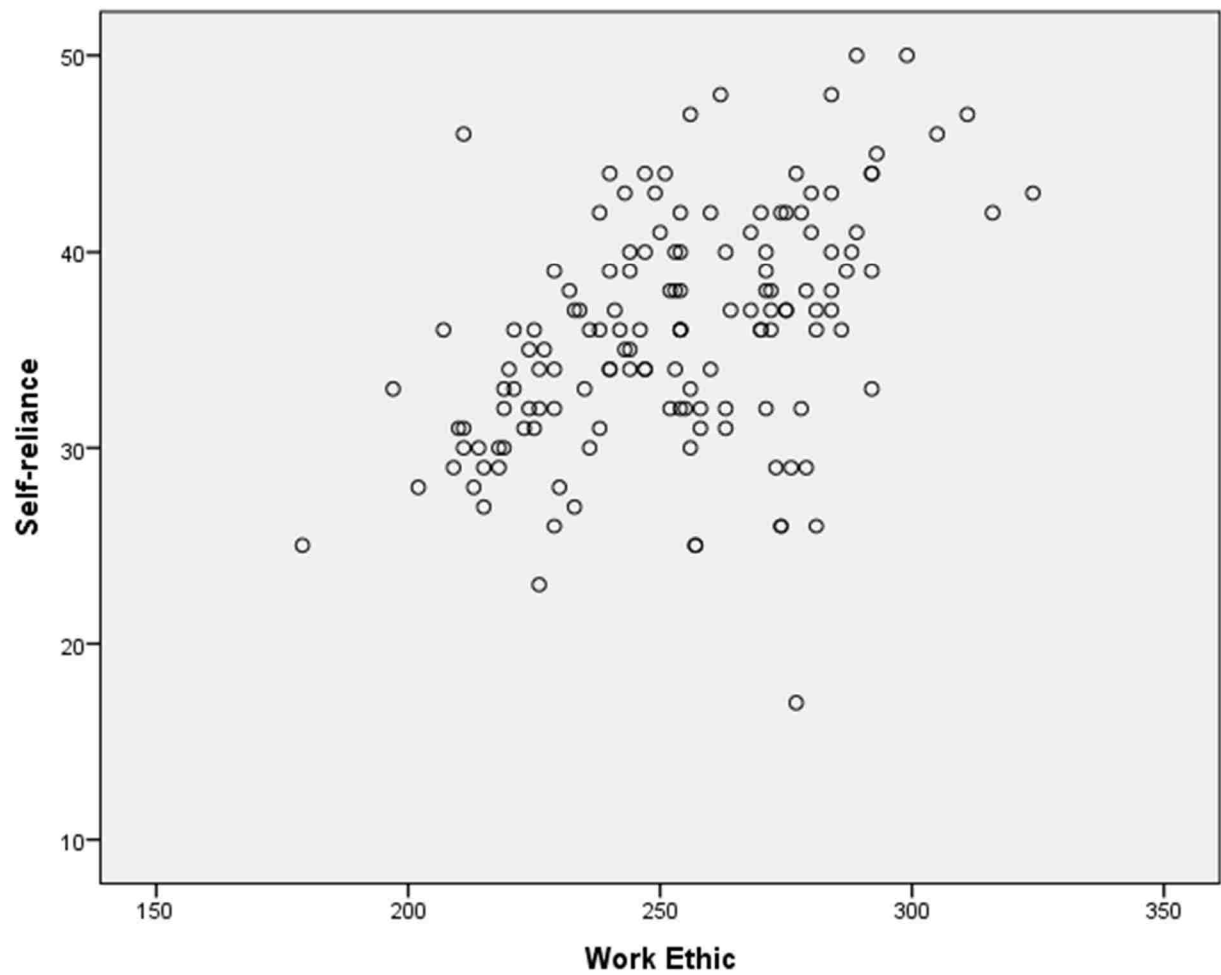


*Figure 8.* Box and Whisker Plot for delay of gratification of athlete and non-athlete

### **Assumptions**

A one-way MANOVA was used to test the null hypothesis examining the difference in seven work ethic dimensions between high school athletes and non-athletes. MANOVA requires normal multivariate distribution of the data. Scatterplots were used to test for normal multivariate distribution of the data. Identifying the classic cigar shape of the data points satisfied the assumption of normal multivariate distribution. The researcher did not observe any inconsistencies that violated this assumption. See Figures 9 –15 for the scatterplots for the

dependent variables self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time, and delay of gratification.



*Figure 9.* Scatter Plot for self-reliance of athlete and non-athlete

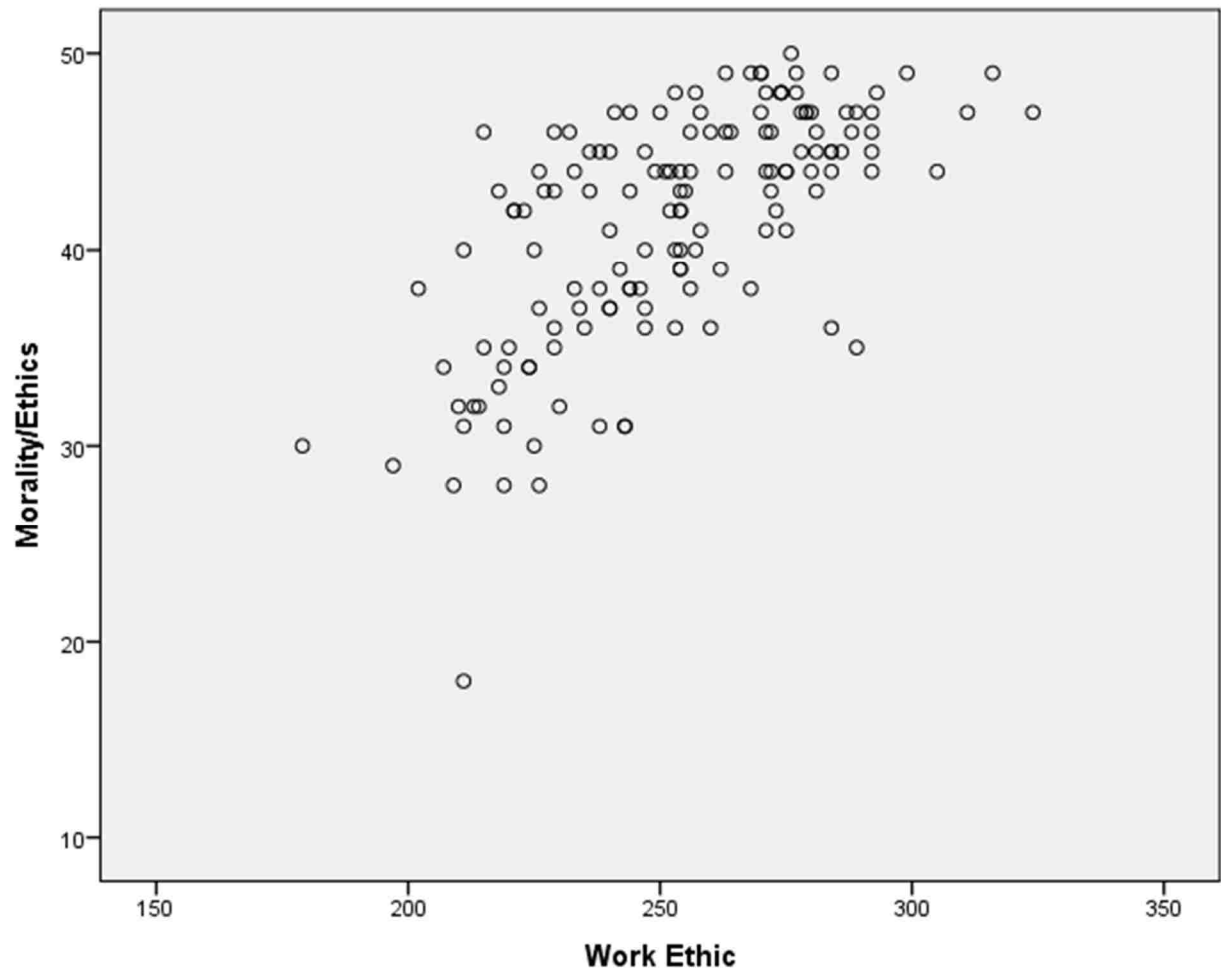


Figure 10. Scatter Plot for morality/ethics of athlete and non-athlete



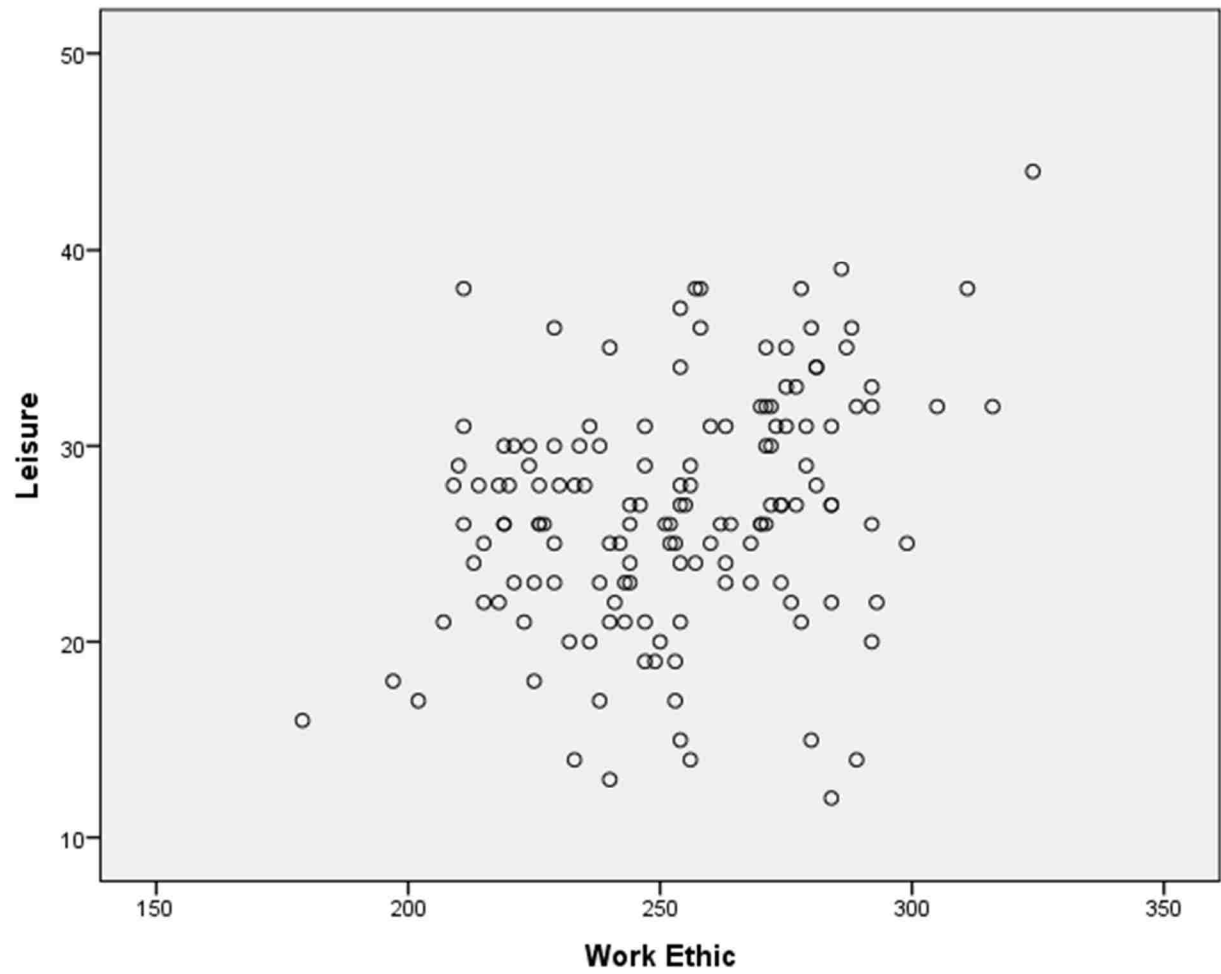


Figure 11. Scatter Plot for leisure of athlete and non-athlete

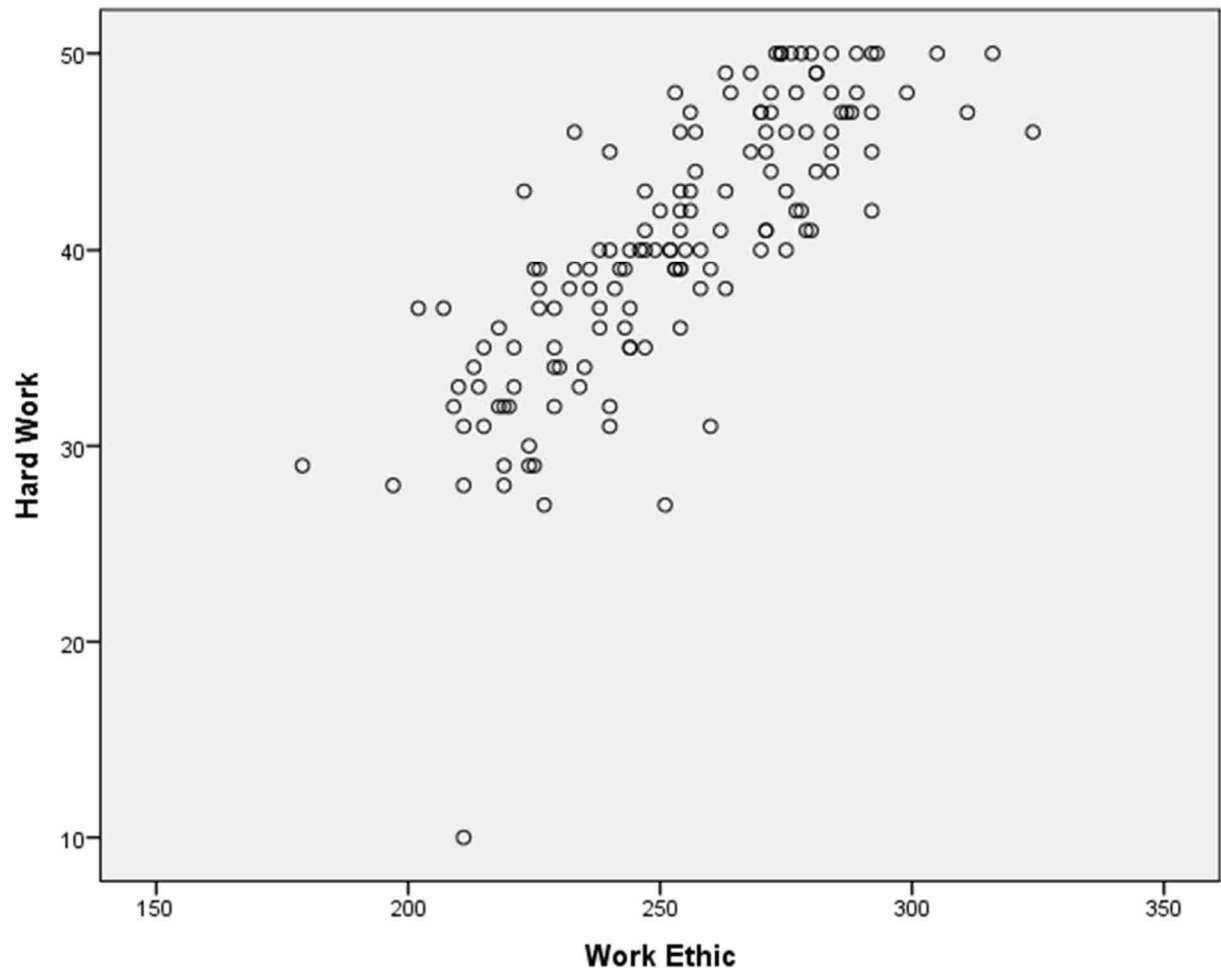


Figure 12. Scatter Plot for hard work of athlete and non-athlete

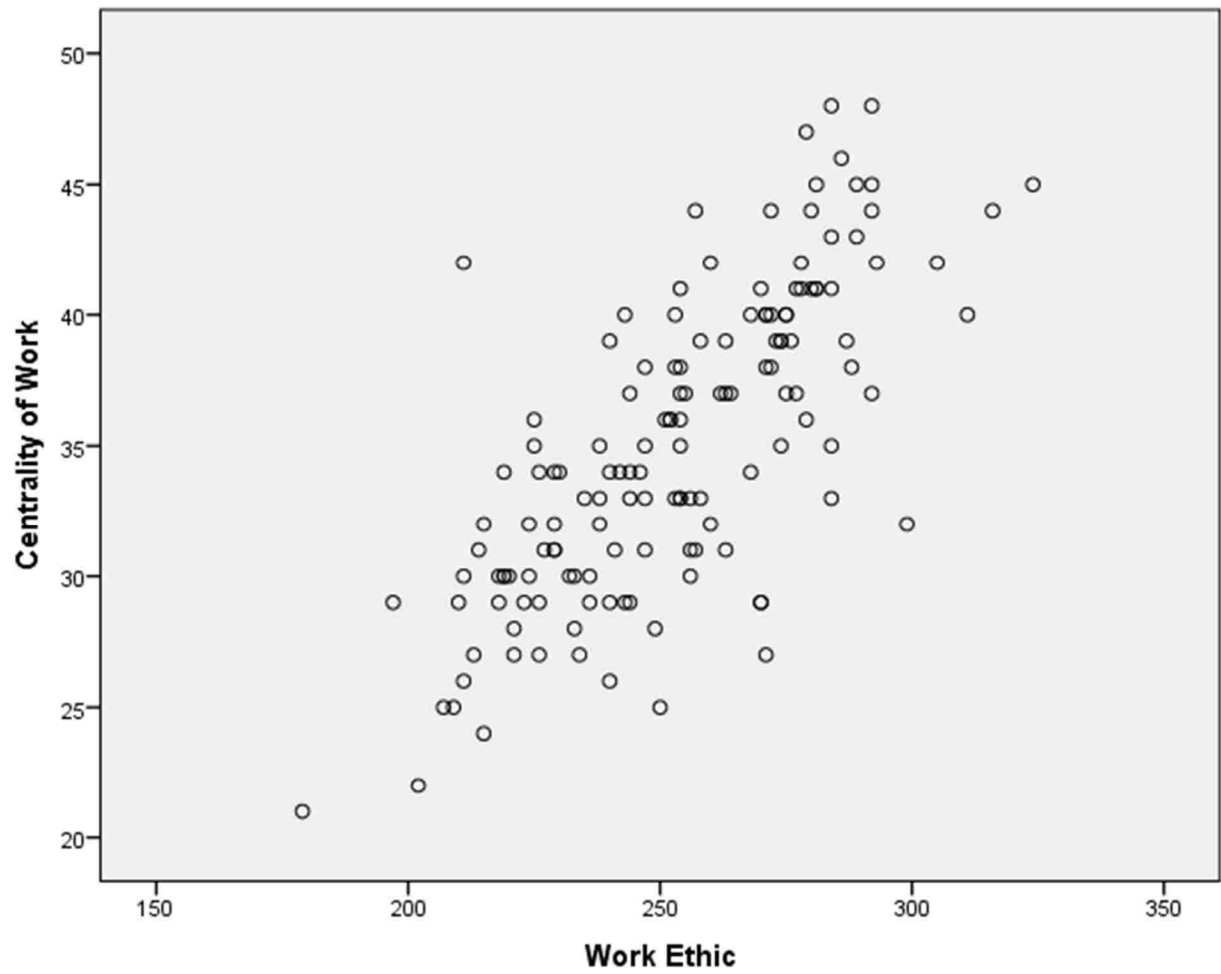


Figure 13. Scatter Plot for centrality of work of athlete and non-athlete

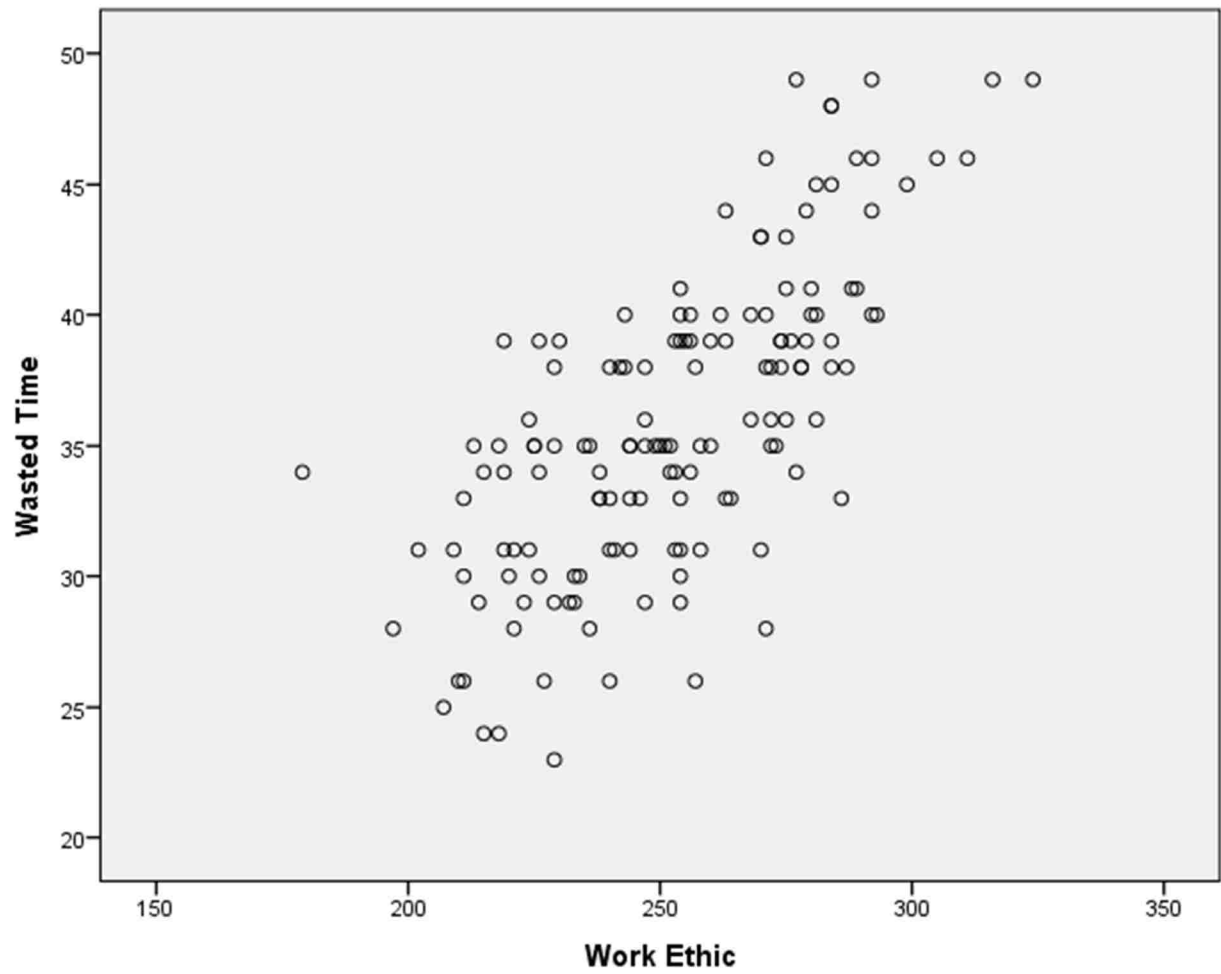


Figure 14. Scatter Plot for wasted time of athlete and non-athlete

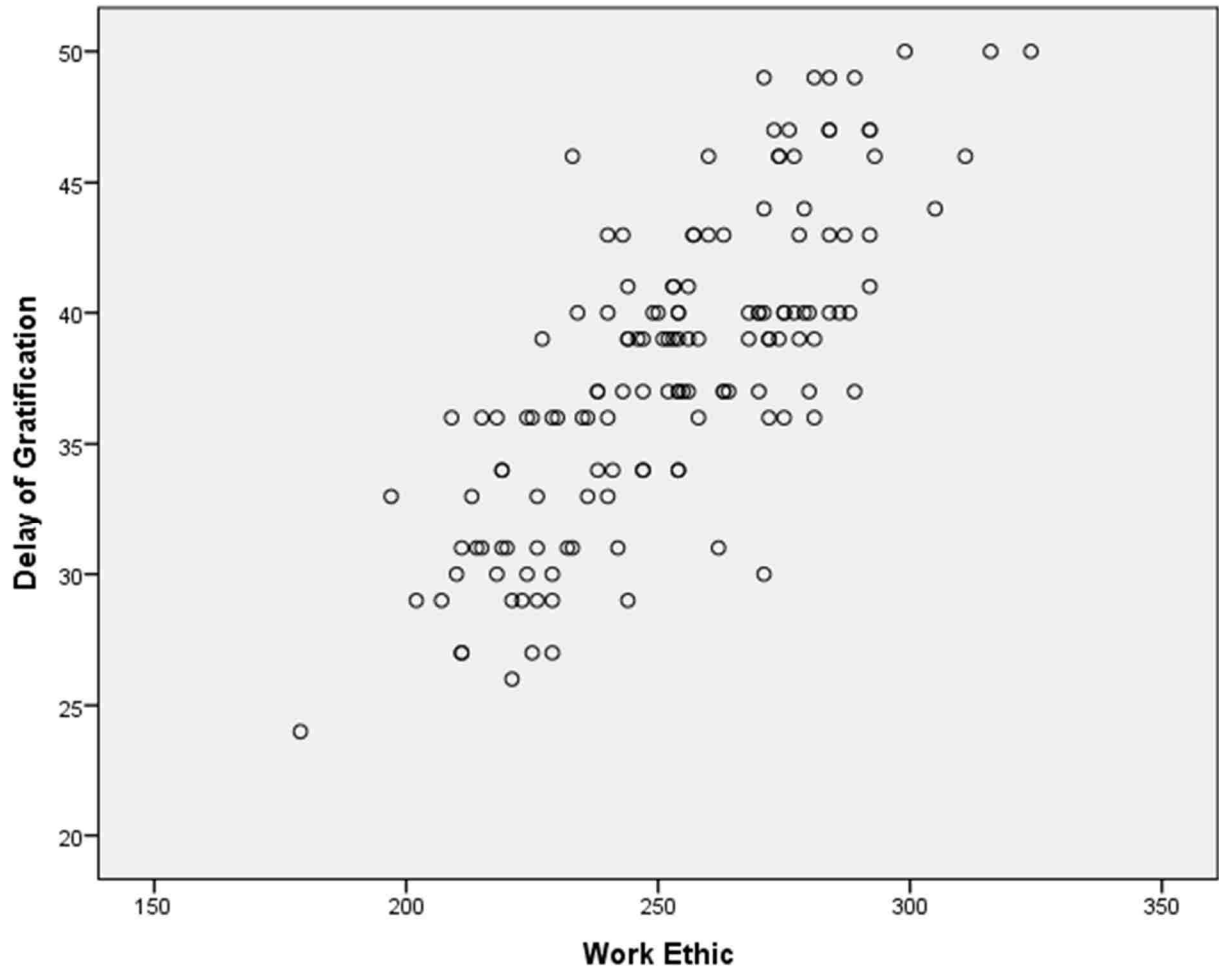


Figure 15. Scatter plot for delay of gratification of athlete and non-athlete

MANOVA required that the assumptions of normality and homogeneity of variance were met, so normality was examined using a Kolmogorov-Smirnov test. Kolmogorov-Smirnov was used because the sample size was greater than 50. The assumption of normality was not met in all cases. For morality/ethics, both athletes and non-athletes were  $p < .001$ . Non-athletes were found to be  $p = .039$  for leisure,  $p = .024$  for centrality of work, and  $p = .009$  for wasted time. For hard work, athletes were  $p = .002$ . According to Warner (2013), the ANOVA is considered

robust enough to withstand the violation of normality. See Table 8 for the results of the Kolmogorov-Smirnov test.

Table 8

<i>Tests of Normality</i>							
	Athlete	Kolmogorov-Smirnov <sup>b</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Self-reliance	Athlete	.087	84	.171	.981	84	.239
	Non-A	.092	59	.200*	.975	59	.269
Morality/Ethics	Athlete	.174	84	.000	.906	84	.000
	Non-A	.168	59	.000	.928	59	.002
Leisure	Athlete	.093	84	.073	.985	84	.432
	Non-A	.118	59	.039	.979	59	.406
Hard Work	Athlete	.128	84	.002	.942	84	.001
	Non-A	.109	59	.076	.933	59	.003
Centrality of Work	Athlete	.080	84	.200*	.988	84	.660
	Non-A	.124	59	.024	.961	59	.054
Wasted Time	Athlete	.095	84	.057	.978	84	.171
	Non-A	.135	59	.009	.971	59	.173
Delay of Gratification	Athlete	.131	84	.001	.973	84	.077
	Non-A	.112	59	.065	.968	59	.116

\*. This is a lower bound of the true significance.

a. There are no valid cases for SR when Athlete = .000. Statistics cannot be computed for this level.

b. Lilliefors Significance Correction

d. There are no valid cases for ME when Athlete = .000. Statistics cannot be computed for this level.

e. There are no valid cases for L when Athlete = .000. Statistics cannot be computed for this level.

f. There are no valid cases for HW when Athlete = .000. Statistics cannot be computed for this level.

g. There are no valid cases for CW when Athlete = .000. Statistics cannot be computed for this level.

h. There are no valid cases for WT when Athlete = .000. Statistics cannot be computed for this level.

i. There are no valid cases for DG when Athlete = .000. Statistics cannot be computed for this level.

The assumption of homogeneity of variance was examined using the Levene's test of equality of error variances. A violation was found for leisure ( $p = .027$ ). According to Warner (2013), ANOVA is robust to violations of the assumption of homogeneity of variance when  $N$  is fairly large ( $N > 30$  per group). See Table 9 for Levene's Test.

Table 9

*Levene's Test of Equality of Error Variances*

	F	df1	df2	Sig.
Self-reliance	3.232	1	141	.074
Morality/Ethic	.552	1	141	.459
Leisure	4.974	1	141	.027
Hard Work	.011	1	141	.918
Centrality of Work	.001	1	141	.970
Wasted Time	.440	1	141	.508
Delay of Gratification	.081	1	141	.776

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Athlete

The assumption of homogeneity of variance – covariance was tested with a Box's M test of equality of covariance. No violation of homogeneity of variance – covariance was found ( $p = .338$ ). See Table 10 for the results of the Box's M Test.

Table 10

*Box's Test of Equality of Covariance Matrices<sup>a</sup>*

Box's M	32.312
F	1.090
df1	28
df2	54407.205
Sig.	.338

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

<sup>a</sup>Design: Intercept + Athlete

The researcher conducted a bivariate Pearson's  $r$  correlation to test the assumption of multicollinearity. The highest correlations were between hard work and morality/ethic ( $r = .685$ ) and between hard work and delay of gratification ( $r = .623$ ). The results found no violation of the assumption of multicollinearity, so the assumption of multicollinearity was maintained. See Table 11 for the Pearson's  $r$  analysis.



Table 11

*Pearson's r Correlations*

		SR	ME	L	HW	CW	WT	DG
SR (Self-reliance)	Pearson Correlation	1	.140	-.080	.188*	.319**	.289**	.267**
	Sig. (2-tailed)		.095	.341	.024	.000	.000	.001
	N	144	144	144	144	144	144	144
ME (Morality/ Ethics?)	Pearson Correlation	.140	1	.122	.685**	.308**	.305**	.518**
	Sig. (2-tailed)	.095		.146	.000	.000	.000	.000
	N	144	144	144	144	144	144	144
L (Leisure)	Pearson Correlation	-.080	.122	1	.027	.316**	.134	.088
	Sig. (2-tailed)	.341	.146		.745	.000	.110	.294
	N	144	144	144	144	144	144	144
HW (Hard Work)	Pearson Correlation	.188*	.685**	.027	1	.492**	.574**	.623**
	Sig. (2-tailed)	.024	.000	.745		.000	.000	.000
	N	144	144	144	144	144	144	144
CW (Centrality Of Work)	Pearson Correlation	.319**	.308**	.316**	.492**	1	.538**	.537**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000
	N	144	144	144	144	144	144	144
WT (Wasted Time)	Pearson Correlation	.289**	.305**	.134	.574**	.538**	1	.530**
	Sig. (2-tailed)	.000	.000	.110	.000	.000		.000
	N	144	144	144	144	144	144	144
DG (Delay of Gratification)	Pearson Correlation	.267**	.518**	.088	.623**	.537**	.530**	1
	Sig. (2-tailed)	.001	.000	.294	.000	.000	.000	
	N	144	144	144	144	144	144	144

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

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

**Results for the Null Hypothesis**

A one-way MANOVA was conducted to determine the difference in work ethic dimensions (self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time,

and delay of gratification between high school student-athletes and non-athletes. No significant difference was found at the 95% confidence level with Wilks'  $\Lambda = .910$ ,  $F(7, 135) = 1.902$ ,  $p = .074$ . The effect size was large ( $\eta^2 = .090$ ). The researcher failed to reject the null hypothesis that there is no significant difference in the work ethic dimensions of self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time, and delay of gratification between student-athletes and non-athletes. Because there was a failure to reject the null hypothesis, post hoc testing was not conducted. See Table 12 for the results of the multivariate tests.

Table 12

*Multivariate Tests*

Effect		Value	F	Hypothesis		Sig.	Partial Eta Squared
				df	Error df		
Intercept	Pillai's Trace	.991	2033.264 <sup>b</sup>	7.000	135.000	.000	.991
	Wilks' Lambda	.009	2033.264 <sup>b</sup>	7.000	135.000	.000	.991
	Hotelling's Trace	105.428	2033.264 <sup>b</sup>	7.000	135.000	.000	.991
	Roy's Largest Root	105.428	2033.264 <sup>b</sup>	7.000	135.000	.000	.991
Athlete	Pillai's Trace	.090	1.902 <sup>b</sup>	7.000	135.000	.074	.090
	Wilks' Lambda	.910	1.902 <sup>b</sup>	7.000	135.000	.074	.090
	Hotelling's Trace	.099	1.902 <sup>b</sup>	7.000	135.000	.074	.090
	Roy's Largest Root	.099	1.902 <sup>b</sup>	7.000	135.000	.074	.090

<sup>a</sup>Design: Intercept + Athlete

<sup>b</sup>Exact statistic

## **CHAPTER FIVE: CONCLUSIONS**

### **Overview**

Chapter Five begins with a discussion of the findings from Chapter Four and how they relate to the literature review. The implications of the study are then presented to describe how the current study adds to the existing body of work on work ethic. The limitations of the study are then outlined. The final section of the chapter provides the researcher's recommendations for future research on the topic.

### **Discussion**

The purpose of this quantitative causal-comparative research study was to determine if there was a statistically significant difference in the work ethic of high school student-athletes and non-athletes, as well as to determine which of the seven independent dimensions of work ethic accounted for the difference. The population used for this study consisted of the student body of a rural, Southeast Tennessee high school with 308 total students in grades 9 -12. The researcher collected the data for this study in October of the fall semester of the 2018 – 2019 school year. Before collecting data, the researcher received all necessary permissions, approvals, parental consent, and student assent.

There were no students who returned the opt-out designed consent form, so all high school students at Rock High School, a pseudonym, were available to be part of the sample for the study. The high school's instructional coach, trained by the researcher, administered the MWEP to students who assented to be part of the study. During the first round of data collection, 131 students voluntarily took the MWEP. Six of these had to be discarded due to incomplete survey results or incomplete demographic information. The remaining surveys resulted in unequal groups, with valid MWEPs from 84 athletes and 41 non-athletes. The

researcher conducted a second round of data collection one week later with an emphasis on non-athletes, and collected an additional 19 MWEs, setting the final number of study participants at 144, with 84 athletes and 60 non-athletes. The researcher then screened and prepared for analysis.

The first research question asked if a significant difference in work ethic existed between high school student-athletes and non-athletes. A one-way between-subjects ANOVA was conducted to analyze overall work ethic differences between high school student-athletes and non-athletes. During initial data screening, participant #15, a non-athlete, was determined to be an extreme outlier and was removed from the study. For the remainder of the analysis, the non-athlete group would consist of 59 participants. All assumptions for ANOVA were maintained. The independent variable was athletic participation which consisted of two groups (athlete and non-athlete). The dependent variable was the composite work ethic score from the MWE. The results indicated that there was a statistically significant difference in work ethic between high school student-athletes and non-athletes ( $F(1, 141) = 7.226, p = .008, \eta^2 = .049$ ). Therefore, the researcher was able to reject the null hypothesis that no significant difference in work ethic exists between student-athletes and non-athletes.

The second research question asked if a significant difference existed between student-athletes and non-athletes on seven dimensions of work ethic, which are self-reliance, leisure, morality/ethics, hard work, centrality of work, wasted time, and delay of gratification. A one-way MANOVA was conducted with athletic participation as the independent variable and the seven work ethic dimensions as the dependent variables. Data were screened, and participant #33 was determined to be an extreme outlier on one dependent variable. However, since participant #33 did not appear as an extreme outlier on the other six dependent variables, the

researcher decided to leave participant #33 in the study. The results of the MANOVA indicated that there was no statistically significant difference in work ethic dimensions between high school student-athletes and non-athletes (Wilks'  $\Lambda = .910$ ,  $F(7, 135) = 1.902$ ,  $p = .074$ ,  $\eta^2 = .090$ ). This resulted in a failure to reject the second null hypothesis that no significant difference existed between student-athletes and non-athletes on the seven dimensions of work ethic.

Work ethic has been studied ever since Weber (1958) first tied together the concept of the Protestant ethic with the ideas of capitalism and developed the modern concept of work ethic. While overall student work ethic has been a major focus of studies, there is very limited information available about differences in work ethic between student-athletes and non-athletes. Most studies that compare student-athletes and non-athletes focus on differences in academic achievement between the two groups or the benefits of athletic participation and its relationship to leadership development. Studies of college students have attempted to identify levels of work ethic of students before entering the workforce (English et al., 2012; Wentworth & Chell, 1997). English et al. (2012) reported that a “good work ethic” and “integrity/honesty” were the two values most often reported by college students as the most important qualities a person must possess for future, successful employment. Meriac (2012) used the MWEP to predict academic performance and counterproductive behaviors based on the participant's level of work ethic. Fox and Grams (2007) developed the Work Ethic Trait Behavior Indicators Inventory (WETIBII) to help develop a curriculum for teaching work ethic to high school students. While many studies have focused on the positive benefits of students having a high level of work ethic, the gap in the literature exists in the area of comparison of work ethic between student-athletes and non-athletes.

Previous studies have resulted in conflicting results on the effect of work ethic on

academic achievement (Fox & Grams, 2007; Meriac, 2012; 2015; Rau & Durand, 2000). The results of the current study support previous studies through indirect connection. Meriac (2015) found that high work ethic directly related to higher academic achievement and was significantly related to academic motivation. Rau and Durand (2000) found that high work ethic was not enough to ensure academic success, while Meriac (2012; 2015) found a positive link between work ethic and academic performance. These two findings, while seeming contradictory, are supported by the current study. Moore (2017) found that student-athletes possess a higher work ethic than non-athletes do, which was mirrored by the current study that also found that athletes possess a higher work ethic than non-athletes. Schultz (2017) found a small negative impact of athletic participation on academic performance, while non-athletes performed higher academically. These studies, when looked at together, begin to form a picture of work ethic and its relation to student participation in athletics. Student athletes have been shown to possess a higher work ethic by the current study and Moore, but according to Rau and Durand work ethic alone is not enough to ensure academic success. Thus, Schultz's findings of a negative impact of athletic participation on academic performance do not contradict the findings that athletes possess a higher overall work ethic. Fox (2010) found that athletic participation fosters a higher work ethic as student-athletes balance their sports participation with their academic requirements. By synthesizing the results of these studies, one can argue that student-athletes possess a higher work ethic, which allows them to balance their athletic and academic requirements, while not necessarily leading to higher academic performance.

After finding a statistically significant difference in overall work ethic between high school student-athletes and non-athletes, an unexpected result was the failure to reject the second null hypothesis that there was no significant difference in the work ethic dimensions scores of

self-reliance, leisure, morality/ethics, hard work, centrality of work, wasted time, and delay of gratification. While the overall model was found to not be significant, a significant difference was found on the dimension of self-reliance ( $p = .004$ ). This would indicate that student-athletes were more self-reliant than their non-athletes peers. It is possible that athletic participation and the actions of requirements of being on an athletic team helped to foster a higher self-reliance in student-athletes. Gorman and Meriac (2016) found that corrections officers possessed higher self-reliance than people in other professional occupations. Corrections officers work together as a team, very similar to the athletes in the current study. A similar finding on self-reliance is therefore not surprising.

The current study's use of MANOVA to analyze the data may have affected the results, as the use of seven dependent variables lowered the overall significance level ( $p = .007$ ). Two other dimensions, hard work ( $p = .020$ ) and wasted time ( $p = .020$ ) were found to be fairly close to the tested significance level. Daniels and Leaper (2006) found that athletic participation had a significant positive impact on peer acceptance and self-esteem, while multiple studies (Debosz & Beaty, 1999; Kniffen, Wansink, & Shimizu, 2015) focused on perceived leadership benefits gained from athletic participation. Athletic participation easily connects to the idea of working hard to be successful in order to gain the benefits mentioned above. Finally, Fox (2010) supported the idea that wasted time would be distasteful to student-athletes who work to balance their time between athletics and academics.

### **Implications**

Very little research has been conducted to compare the work ethic of student-athletes to non-athletes. Moore (2017), who found a significant difference in the overall work ethic of student-athletes and non-athletes served as the basis for the current study. This study replicated

that result and attempted to further explore the reported differences in work ethic by examining work ethic at the dimension level. While the findings did not support a statistically significant difference between student-athletes and non-athletes at the dimension level, it is worth noting that the test of between-subjects effects for the seven work ethic dimensions did show that self-reliance ( $p = .004$ ) would have been significant even at the .007 level. Hard work ( $p = .020$ ) and wasted time ( $p = .023$ ), while not significant, show that a difference is present in these dimensions as well. Stand-alone studies of student-athletes versus non-athletes on any of these three dimensions of work ethic could easily yield different results than the present study, which was limited by sample size and chosen testing procedure.

Understanding work ethic on the dimension level can assist both educational professionals and athletic coaches. Educators teach in classrooms that are diverse in many ways. Classrooms are diverse in gender, race, ethnicity, religious preference, sexual orientation, and countless other ways. Educators are trained for dealing with diverse classrooms. Mixed into all of these, however, are student-athletes and non-athletes. Educators and coaches work hard to connect with their students and athletes respectively, so understanding the underlying makeup of student and athlete work ethic can aid in preparing that person to be successful and give the educator or coach a different approach to reaching their students or team. With 48.8% of high school students in the United States participating in high school athletics according to the National Federation of State High School Associations (NFHS News, 2017) and the NCES (2017), there is almost an even split of student-athletes and non-athletes in our schools. Further study needs to be conducted to fully understand the difference in work ethic between student-athletes and non-athletes on the dimensional level.



### **Limitations**

The current study had several limitations that affect its results. The first limitation is that the study used a self-report survey, the MWEF, to obtain the data for the study. A self-report survey can be a threat to internal validity in several ways. The first is that a self-report survey requires honesty on the part of the participants. The analysis conducted for the research questions used only the reported answers on the surveys. If the participants did not honestly answer the survey questions, then the results would not be valid. This dishonesty could occur if a participant knowingly answered incorrectly, or simply faked taking the survey by answering questions without reading them, known to educators as “Christmas Treeing” the survey. A second threat to internal validity is that the participants in the study were high school students. The MWEF was validated as a survey instrument using adults that work in various fields. High School age students may not have a full understanding of work outside of a school environment. While some students do hold part times jobs, most of the students in the population school are not employed. This information could lead to confusion as to what questions in the survey were asking, which in turn could lead to unintended incorrect responses or to the choice of neither agree nor disagree as a default answer.

As with internal validity, there were several threats to external validity. The first threat to external validity is that the researcher dealt with both limited population and demographics. The available population for the study was 308 students in a small, rural high school. The population was also overwhelming Caucasian. The results of the study can only be generalized to this small population and do not reflect any larger population of students, including the remainder of the school district, which has a more varied demographic breakdown. The second threat to external validity is the relatively small sample size used for the study. The study used a sample of 144

students drawn from the population of 308 students. As with the small size of the population, the small size of the sample prevents generalization of the results outside of this one population of students.

### **Recommendations for Future Research**

Further research needs to be conducted to address the reported differences in work ethic between high school student-athletes and non-athletes in order to further increase knowledge in the area of work ethic in general, and more specifically work ethic in the educational field and of student-athletes and non-athletes. Few studies specifically deal with the work ethic of student-athletes and non-athletes and even fewer that study high school age students. In addition, most studies of work ethic focus on the work ethic construct as a composite score of work ethic as opposed to researching the individual dimensions of work ethic. Further study would benefit education practitioners and coaches by revealing the dimensions of work ethic that students find to be the most important.

The most obvious future study to perform is one that uses a much larger population and sample size. The current study used a small, rural high school as the population. A study using a much larger high school or even an entire school district, as the population, with participants from multiple high schools, would provide results that could be more easily generalized to a larger population. A larger study could also help show if the results of the current study were differences between athletes and non-athletes as opposed to just a difference that could be attributed to the current study's population.

A future study could address a population that differs demographically. The present study mostly consisted of Caucasian students from a rural school. Similar studies need to be conducted in schools that are considered suburban and urban. In companion with the larger

study mentioned above, a study using a different demographic could investigate both gender and racial/ethnic differences in work ethic between student-athletes and non-athletes.

A study of work ethic of student-athletes and non-athletes that compared grade levels could also benefit the current body of knowledge. A comparison of the work ethic of student-athletes and non-athletes that also factored in grade levels would provide insight into whether work ethic changes as students age through high school. Although it would require several years to complete, a study that tracked the same group of student-athletes and non-athletes through high school and administered the MWEF before entering high school, and then again at the conclusion of each school year could also provide further insight into whether a student's work ethic changes over time.

The final recommendation would be to conduct the study in different regions of the country. The researcher conducted the current study at a small rural high school in the Southeast. The study should be conducted in different regions of the country, providing valuable insight into how student-athletes and non-athletes perceive work ethic in different regions of the country and answering whether students in the Northeast, Midwest, Southwest, and so forth, compare to students in the Southeast.

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## APPENDIX A: PERMISSION TO USE THE MWEP

Re: Request to use the MWEP for a doctoral dissertation




David Woehr [REDACTED]

Mon 6/26, 3:17 PM

Shipley, Roy J ✉








Reply all | ▾

Inbox

You replied on 6/26/2017 3:31 PM.

 <p>MWEP-SF research versi... 50 KB</p>	 <p>MWEP Scoring.pdf 56 KB</p>	 <p>MWEP MEASURE.pdf 430 KB</p>
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✓ Show all 7 attachments (1 MB) Download all Save all to OneDrive - Liberty University

Dear Roy,


Thanks for your interest in the MWEP. We developed the measure to be freely available for research purposes, so you are welcome to use the measure for your project. I would be interested in hearing about the results of your study. I've attached a few files and articles that may be helpful.

Sincerely,

Dave Woehr

Request to use the MWEP for a doctoral dissertation


7 ▾



David Woehr [REDACTED]

Today, 10:29 AM

Shipley, Roy J ✉







Reply all | ▾

Dear Roy,

Congratulations on completing your dissertation. You may publish the MWEP scale in you dissertation report.

Sincerely,

Dave Woehr

...

**APPENDIX B: MWEP**

# Multidimensional Work Ethic Profile



### Instructions

This booklet lists a series of work-related statements. Please circle the alternative that best represents your opinion to the right of each item. For example, if you strongly agree with item number one in the booklet you would circle SA to the left of the item. This booklet contains **65** statements. Please read each statement carefully. For each statement circle the response that best represents your belief or opinion.

Circle **SA** if you *strongly agree* with the statement.

Circle **A** if you *agree* with the statement.

Circle **N** if you *neither agree nor disagree* with the statement.

Circle **D** if you *disagree* with the statement.

Circle **SD** if you *strongly disagree* with the statement.

1. It is important to stay busy at work and not waste time.
2. I feel uneasy when there is little work for me to do.
3. If I want to buy something, I always wait until I can afford it.
4. I feel content when I have spent the day working.
5. Life would be more meaningful if we had more leisure time.
6. To be truly successful, a person should be self-reliant.
7. One should always take responsibility for one's actions.
8. I would prefer a job that allowed me to have more leisure time.
9. Time should not be wasted, it should be used efficiently.
10. Even if I were financially able, I would not stop working.
11. I get more fulfillment from items I had to wait for.
12. I schedule my day in advance to avoid wasting time.
13. A hard days work is very fulfilling.
14. The more time I can spend in a leisure activity, the better I feel.
15. One should always do what is right and just.
16. I would take items from work if I felt I was not getting paid enough.
17. Nothing is impossible if you work hard enough.

SD	D	N	A	SA
SD	D	N	A	SA
SD	D	N	A	SA
SD	D	N	A	SA
SD	D	N	A	SA
SD	D	N	A	SA
SD	D	N	A	SA
SD	D	N	A	SA
SD	D	N	A	SA
SD	D	N	A	SA
SD	D	N	A	SA
SD	D	N	A	SA
SD	D	N	A	SA
SD	D	N	A	SA
SD	D	N	A	SA
SD	D	N	A	SA
SD	D	N	A	SA

PLEASE GO ON TO THE NEXT PAGE

SD = Strongly Disagree D = Disagree N = Neither Agree Nor Disagree A = Agree SA = Strongly Agree

18. The less time one spends working and the more leisure time one has, the better.	SD	D	N	A	SA
19. Things that you have to wait for are the most worthwhile.	SD	D	N	A	SA
20. Working hard is the key to being successful.	SD	D	N	A	SA
21. Self-reliance is the key to being successful.	SD	D	N	A	SA
22. If one works hard enough, one is likely to make a good life for oneself.	SD	D	N	A	SA
23. I constantly look for ways to productively use my time.	SD	D	N	A	SA
24. Hard work makes one a better person.	SD	D	N	A	SA
25. One should not pass judgment until one has heard all of the facts.	SD	D	N	A	SA
26. People would be better off if they depended on themselves.	SD	D	N	A	SA
27. Work takes too much of our time, leaving little time to relax.	SD	D	N	A	SA
28. One should live one's own life independent of others as much as possible.	SD	D	N	A	SA
29. A distant reward is usually more satisfying than an immediate one.	SD	D	N	A	SA
30. It is very important for me to always be able to work.	SD	D	N	A	SA
31. More leisure time is good for people.	SD	D	N	A	SA
32. One must avoid dependence on other persons whenever possible.	SD	D	N	A	SA
33. Even if I inherited a great deal of money, I would continue to work somewhere.	SD	D	N	A	SA
34. I do not like having to depend on other people.	SD	D	N	A	SA
35. By working hard a person can overcome every obstacle that life presents.	SD	D	N	A	SA
36. I try to plan out my workday so as not to waste time.	SD	D	N	A	SA
37. You should never tell lies about other people.	SD	D	N	A	SA
38. Any problem can be overcome with hard work.	SD	D	N	A	SA
39. How a person spends their time is as important as how they spend their money.	SD	D	N	A	SA
40. Even if it were possible for me to retire, I would still continue to work.	SD	D	N	A	SA
41. Life without work would be very boring.	SD	D	N	A	SA
42. I prefer to save until I can afford something and not buy it on credit.	SD	D	N	A	SA

PLEASE GO ON TO THE NEXT PAGE

SD = Strongly Disagree D = Disagree N = Neither Agree Nor Disagree A = Agree SA = Strongly Agree

43. The world would be a better place if people spent more time relaxing.	SD	D	N	A	SA
44. I strive to be self-reliant.	SD	D	N	A	SA
45. If you work hard you will succeed.	SD	D	N	A	SA
46. The best things in life are those you have to wait for.	SD	D	N	A	SA
47. Anyone who is able and willing to work hard has a good chance of succeeding.	SD	D	N	A	SA
48. Stealing is all right as long as you don't get caught.	SD	D	N	A	SA
49. The job that provides the most leisure time is the job for me.	SD	D	N	A	SA
50. Having a great deal of independence from others is very important to me.	SD	D	N	A	SA
51. It is important to treat others as you would like to be treated.	SD	D	N	A	SA
52. I experience a sense of fulfillment from working.	SD	D	N	A	SA
53. A person should always do the best job possible.	SD	D	N	A	SA
54. It is never appropriate to take something that does not belong to you.	SD	D	N	A	SA
55. Only those who depend on themselves get ahead in life.	SD	D	N	A	SA
56. Wasting time is as bad as wasting money.	SD	D	N	A	SA
57. There are times when stealing is justified.	SD	D	N	A	SA
58. People should have more leisure time to spend in relaxation.	SD	D	N	A	SA
59. It is important to control one's destiny by not being dependent on others.	SD	D	N	A	SA
60. By simply working hard enough, one can achieve one's goals.	SD	D	N	A	SA
61. People should be fair in their dealings with others.	SD	D	N	A	SA
62. The only way to get anything worthwhile is to save for it.	SD	D	N	A	SA
63. Leisure time activities are more interesting than work.	SD	D	N	A	SA
64. A hard days work provides a sense of accomplishment.	SD	D	N	A	SA
65. A distaste for hard work usually reflects a weakness of character.	SD	D	N	A	SA

*THANK YOU!*



## APPENDIX C: MWEP SCORING



### Multidimensional Work Ethic Profile Scoring:

<b>Dimension</b>	<b>Items</b>
Self-reliance	6, 21, 26, 28, 32, 34, 44, 50, 55, 59
Morality/Ethics	7, 15, <u>16</u> , 25, 37, <u>48</u> , 51, 54, <u>57</u> , 61
Leisure	5, 8, 14, 18, 27, 31, 43, 49, 58, 63
Hard Work	17, 20, 22, 24, 35, 38, 45, 47, 53, 60
Centrality of Work	2, 4, 10, 13, 30, 33, 40, 41, 52, 64
Wasted Time	1, 9, 12, 23, 36, 39, 56, 65
Delay of Gratification	3, 11, 19, 29, 42, 46, 62


Dimensions are scored as the mean item response x 10.

Underlined items are reverse scored.

Individual dimensions may be used separately or summed to form a composite score. However, as scored, leisure is negatively correlated with the other dimensions. It may be reverse scored in order to combine it with other dimensions.


**APPENDIX D: SUPERINTENDENT APPROVAL**  
  
Superintendent

July 20, 2018

Mr. Roy Shipley  



Dear Mr. Shipley:

This letter serves to acknowledge your request to conduct research as part of the requirements for a doctoral degree which you are seeking. I understand your project centers around the differences in work ethic dimensions between high school student athletes and non-athletes.

As outlined in your introduction letter to my office, you understand that the survey used to collect this information is to be used strictly on a voluntary basis and students may discontinue their participation at any time. As with any such research done with students in , the data collection must be anonymous. I understand that only age, grade, and athletic participation demographic information will be collected.

I am approving your request to conduct such research. You must, however, work with your principal ensuring that this research project does not interfere with any student instruction and the school's daily operational schedule.

I wish you much success.

Best,  
Superintendent  


[REDACTED]  
[REDACTED]  
Superintendent  
[REDACTED]

Dear [REDACTED]

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for a doctoral degree. The title of my research project is:

A COMPARISON OF HIGH SCHOOL STUDENTS WHO PARTICIPATE IN ATHLETICS  
VERSES NON-ATHLETES ON SEVEN DIMENSIONS OF WORK ETHIC

The purpose of my research is to examine the differences in work ethic dimensions between high school student-athletes and non-athletes. The independent variable for this study will be athletic participation by high school students.

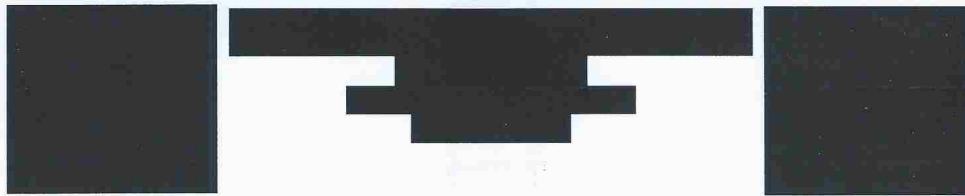
I am writing to request your permission to conduct my research at [REDACTED]  
[REDACTED]

Participants will be asked to complete the attached survey, The Multidimensional Work Ethic Profile, which will take approximately 30 minutes. Participants will be presented with informed consent information prior to participating. Taking part in this study is completely voluntary, and participants are welcome to discontinue participation at any time. Data collection will be anonymous, with only age, grade, and athletic participation demographic data collected.

Thank you for considering my request. If you choose to grant permission, please provide a signed statement on official letterhead indicating your approval. Approval can be emailed to [REDACTED]

Sincerely,

Roy J. Shipley  
Doctoral Candidate

**APPENDIX E: PRINCIPAL APPROVAL**

September 14, 2018

To: Roy Shipley

Ref: Request to conduct doctoral research at

[Redacted]

You have my permission to conduct your doctoral research. See me to coordinate time and place prior to proceeding.

[Redacted signature block]

Principal

[Redacted name]

July 23, 2018

[REDACTED]

Dear [REDACTED]:

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for a doctoral degree. The title of my research project is:

A COMPARISON OF HIGH SCHOOL STUDENTS WHO PARTICIPATE IN ATHLETICS  
VERSES NON-ATHLETES ON SEVEN DIMENSIONS OF WORK ETHIC

The purpose of my research is to examine the differences in work ethic dimensions between high school student-athletes and non-athletes. The independent variable for this study will be athletic participation by high school students.

I am writing to request your permission to conduct my research at [REDACTED]  
[REDACTED]

Participants will be asked to complete the attached survey, The Multidimensional Work Ethic Profile, which will take approximately 30 minutes. Participants will be presented with informed consent information prior to participating. Taking part in this study is completely voluntary, and participants are welcome to discontinue participation at any time. Data collection will be anonymous, with only age, grade, and athletic participation demographic data collected.

Thank you for considering my request. If you choose to grant permission, you can email your approval to [REDACTED].

Sincerely,

Roy J. Shipley  
Doctoral Candidate

## APPENDIX F: IRB APPROVAL

**LIBERTY UNIVERSITY**  
INSTITUTIONAL REVIEW BOARD

September 12, 2018

Roy J. Shipley

IRB Approval 3450.091218: A Comparison of High School Students Who Participate in Athletics Versus Non-Athletes on Seven Dimensions of Work Ethic

Dear Roy J. Shipley,

We are pleased to inform you that your study has been approved by the Liberty University IRB. This approval is extended to you for one year from the date provided above with your protocol number. If data collection proceeds past one year or if you make changes in the methodology as it pertains to human subjects, you must submit an appropriate update form to the IRB. The forms for these cases were attached to your approval email.

Your study falls under the expedited review category (45 CFR 46.110), which is applicable to specific, minimal risk studies and minor changes to approved studies for the following reason(s):

Your study involves surveying or interviewing minors, or it involves observing the public behavior of minors, and you will participate in the activities being observed.

Thank you for your cooperation with the IRB, and we wish you well with your research project.

Sincerely,



**G. Michele Baker, MA, CIP**

*Administrative Chair of Institutional Research*

**The Graduate School**

**LIBERTY**  
UNIVERSITY

*Liberty University | Training Champions for Christ since 1971*

## APPENDIX G: LETTER TO PARENTS AND STUDENTS

August 20, 2018

Parents and Guardians of Students at [REDACTED]  
and  
Students at [REDACTED]

Dear Student, Parent, or Guardian:

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for a doctorate degree. The purpose of my research is to determine if there is a significant difference in work ethic between high school student-athletes and non-athletes, and I am writing to invite students to participate in my study.

Students enrolled in 9<sup>th</sup>–12<sup>th</sup> grade at [REDACTED] who are willing to participate (and who have not opted out/have not been opted out by a parent/guardian) will be asked to complete an anonymous, 65-question survey. It should take approximately 30 minutes to complete the procedure listed. Participation will be completely anonymous, and no personal, identifying information will be collected. The survey will be administered during a regularly scheduled class at school.

If you are a student 18 years of age or older, no further action is required to participate. Simply read the attached consent document and complete the anonymous survey on the date that it is administered at school. If you **do not** wish to participate, you can opt out the day the survey is administered.

For parents/guardians of students under the age of 18, you should only return the attached consent document if you **do not** wish for your child/student to participate. Otherwise, your child/student will complete the anonymous survey on the date that it is administered at the school.

A consent document is attached to this letter. The consent document contains additional information about my research. The consent document only needs to be signed and returned if a parent/guardian or student wishes to opt out of the survey.

Sincerely,

Roy J. Shipley  
Doctoral Candidate  
Liberty University

## APPENDIX H: CONSENT AND ASSENT

The Liberty University Institutional  
Review Board has approved  
this document for use from  
9/12/2018 to 9/11/2019  
Protocol # 3450.091218

### PARENT/GUARDIAN CONSENT

#### A COMPARISON OF HIGH SCHOOL STUDENTS WHO PARTICIPATE IN ATHLETICS VERSUS NON-ATHLETES ON SEVEN DIMENSIONS OF WORK ETHIC

Roy Shipley  
Liberty University  
School of Education

This research study is being conducted by Roy Shipley, a doctoral candidate in the School of Education at Liberty University. Your child was selected as a possible participant because they are a student at [REDACTED]. Please read this form and ask any questions you may have before agreeing to allow him or her to be in the study.

#### *Why is this study being done?*

The purpose of this study is to examine the differences in work ethic between high school students who are athletes and students who are non-athletes. The study will examine work ethic at the dimensional level and attempt to add to the body of knowledge on work ethic by determining which specific dimensions of work ethic account for previously reported differences between athletes and non-athletes. The study aims to answer the following two research questions:

**RQ1:** Is there a significant difference in work ethic between high school students who participate in athletics and high school students who are non-athletes?

**RQ2:** Is there a significant difference in the work ethic dimensions of self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time, and delay of gratification between high school students who participate in athletics and high school students who are nonathletes?

#### *What will my child/student be asked to do?*

If you agree to allow your child/student to be in this study, he or she will be asked to do the following things:

1. Complete an anonymous demographic sheet that will only request your child/student's age, grade, gender, and athletic participation/non-participation.
2. Anonymously complete the Multidimensional Work Ethic Profile. This 65-question survey and demographic sheet will require approximately 30 minutes to complete.

#### *What are the risks and benefits of this study?*



The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

Participants should not expect to receive a direct benefit from taking part in this study. Benefits to society include adding to the body of knowledge on work ethic, and in particular the work ethic of high school students.

***Will my child be compensated for participating?***

Your child will not be compensated for participating in this study.

***How will my child's personal information be protected?***

The records of this study will be kept private. Research records will be stored securely and only the researcher will have access to the records.

- As data collection will be anonymous, no one, including the researcher, will be able to link collected data to individual participants.
- Data will be stored on a password locked computer and may be used in future presentations. After three years, all electronic records will be deleted.

***Is study participation voluntary?***

Participation in this study is voluntary. Your decision whether or not to allow your child to participate will not affect his or her current or future relations with Liberty University or [REDACTED]. If you decide to allow your child to participate, he or she is free to not answer any question or withdraw at any time prior to submitting the survey without affecting those relationships.

***What should I or my child do if I decide to withdraw him or her or if he or she decides to withdraw from the study?***

If you choose to withdraw your child or if your child chooses to withdraw from the study, he or she should inform the researcher that he or she wishes to discontinue participation prior to the day of the survey. On the day of the survey, if you choose to withdraw your child or your child chooses to withdraw from the study they should inform the teacher administering the survey prior to submitting the study materials. Your child's responses will not be recorded or included in the study.

***Whom do I contact if my child or I have questions or problems?***

The researcher conducting this study is Roy Shipley. If you have any questions, **you are encouraged** to contact him at [REDACTED]. You may also contact the researcher's faculty advisor, Dr. Lisa Foster, at [REDACTED].

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd, Green Hall 2845, Lynchburg, VA 24515 or email at [irb@liberty.edu](mailto:irb@liberty.edu).

***Please notify the researcher if you would like a copy of this information for your records.***

**REFUSAL OF CONSENT/OPT-OUT:** I have read and understood the above information. I have asked any questions that I have and have received answers. I **DO NOT** consent to allow my student to participate in the study.

---

Signature of Minor

Date

---

Signature of Parent/Guardian

Date

---

Signature of Investigator

Date

The Liberty University Institutional  
Review Board has approved  
this document for use from  
9/12/2018 to 9/11/2019  
Protocol # 3450.091218

## CONSENT FORM

### A COMPARISON OF HIGH SCHOOL STUDENTS WHO PARTICIPATE IN ATHLETICS VERSUS NON-ATHLETES ON SEVEN DIMENSIONS OF WORK ETHIC

Roy Shipley  
Liberty University  
School of Education

You are invited to be in a research study on work ethic. This study looks to examine the differences in work ethic between high school student-athletes and non-athletes. You were selected as a possible participant because you are a student at [REDACTED]. Please read this form and ask any questions you may have before agreeing to be in the study.

Roy Shipley, a doctoral candidate in the School of Education at Liberty University, is conducting this study.

**Background Information:** The purpose of this study is to examine the differences in work ethic between high school students who are athletes and students who are non-athletes. The study will examine work ethic at the dimensional level and attempt to add to the body of knowledge on work ethic by determining which specific dimensions of work ethic account for previously reported differences between athletes and non-athletes. The study aims to answer the following two research questions:

**RQ1:** Is there a significant difference in work ethic between high school students who participate in athletics and high school students who are non-athletes?

**RQ2:** Is there a significant difference in the work ethic dimensions of self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time, and delay of gratification between high school students who participate in athletics and high school students who are nonathletes?

**Procedures:** If you agree to be in this study, I would ask you to do the following things:

1. Complete an anonymous demographic sheet that will only request your age, grade, gender, and athletic participation/non-participation.
2. Anonymously complete the Multidimensional Work Ethic Profile. This 65-question survey and demographic sheet will require approximately 30 minutes to complete.

**Risks:** The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

**Benefits:** Participants should not expect to receive a direct benefit from taking part in this study.

Benefits to society include adding to the body of knowledge on work ethic, and in particular the work ethic of high school students.

**Compensation:** Participants will not be compensated for participating in this study.

**Confidentiality:** The records of this study will be kept private. Research records will be stored securely, and only the researcher will have access to the records.

- Data collection will be through an anonymous survey.
- Data will be stored on a password locked computer and may be used in future presentations. After three years, all electronic records will be deleted.

**Voluntary Nature of the Study:** Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time prior to submitting the survey without affecting those relationships.

**How to Withdraw from the Study:** If you choose to withdraw from the study, please inform the researcher that you wish to discontinue your participation prior to the day of the survey. If you choose to withdraw after beginning the survey, please inform the teacher prior to submitting your study materials. Your responses will not be recorded or included in the study.

**Contacts and Questions:** The researcher conducting this study is Roy Shipley. If you have questions, **you are encouraged** to contact him at [REDACTED]. You may also contact the researcher's faculty chair, Dr. Lisa Foster, at [REDACTED].

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at [irb@liberty.edu](mailto:irb@liberty.edu).

*Please notify the researcher if you would like a copy of this information for your records.*

**REFUSAL OF CONSENT:** I have read and understood the above information. I have asked any questions that I have and have received answers. I **DO NOT** consent to participate in the study.

---

Signature of Participant

---

Date

---

Signature of Investigator

---

Date

**APPENDIX I: TEACHER DIRECTIONS FOR ADMINISTERING THE MWEP****TEACHERS:**

Thank you for administering the Multidimensional Work Ethic Profile (MWEP) today. This survey will take approximately 25-30 minutes to complete.

1. In your envelope you will find a list of students in your class whose parents have declined consent as well as students who have declined assent to participate in the survey. **DO NOT GIVE THE MWEP** to these students.
2. You have one MWEP and a pencil for each student in your class that has elected to participate in the study.
3. Have students clear off their desks.
4. Pass out one copy of the MWEP and a pencil out to each student.
5. Remind the students that there is to be no talking during the MWEP.
6. Read the Student Directions (also enclosed in the packet).
7. As students complete the MWEP and turn it in to you, please place the completed surveys in the envelope.
8. Return the envelope to the main office to Mrs. Harris, who will secure them. Do not send them with a student, as this could affect confidentiality.
9. Thank you.

## APPENDIX J: STUDENT DIRECTIONS

### STUDENTS:

Thank you for participating this study. Participation is completely voluntary. Today you will be taking the Multidimensional Work Ethic Profile, which is a 65-question survey that will provide a profile of your beliefs about work ethic. You will respond to each question on a 5 point Likert Scale, and for each statement/question, you will choose one of the five responses listed below:

SD = Strongly Disagree

D = Disagree

N = Neither Agree nor Disagree

A = Agree

SA = Strongly Agree

As part of the study, please answer the following questions:

Your Age: \_\_\_\_\_

Gender (circle one):            MALE            FEMALE

Grade (circle one):            9<sup>th</sup>      10<sup>th</sup>      11<sup>th</sup>      12<sup>th</sup>

While in high school, have you participated as member of a high school athletic team? Circle YES or NO below. (football, basketball, baseball, softball, wrestling, cross country, soccer, volleyball, cheerleading, JROTC Raiders, track)

YES

NO

9<sup>th</sup> GRADE ONLY: Did you participate as a member of a middle school athletic team while in 8<sup>th</sup> grade?

YES

NO

While in high school, have you participated as a member of a non-school “select” type travelling sports team? Circle YES or NO below. (examples: volleyball, baseball, softball)

YES

NO

Turn to the first page of the survey and begin. Once again, thank you for your participation. You may keep the pencil.

## APPENDIX K: TEACHER AGREEMENT FORM

The Liberty University Institutional  
Review Board has approved  
this document for use from  
9/12/2018 to 9/11/2019  
Protocol # 3450.091218

### TEACHER STUDY INFORMATION & AGREEMENT FORM

#### A COMPARISON OF HIGH SCHOOL STUDENTS WHO PARTICIPATE IN ATHLETICS VERSUS NON-ATHLETES ON SEVEN DIMENSIONS OF WORK ETHIC

Roy J. Shipley  
Liberty University  
School of Education

You have been asked to assist in a research study on work ethic. This study is examining the differences in work ethic between student-athletes and non-athletes. You have been asked to assist in this research because you are a faculty member at [REDACTED]. Please read this form and ask any questions you may have before agreeing to assist in this study.

Roy J. Shipley, a doctoral candidate in the School of Education at Liberty University, is conducting this study.

The purpose of this study is to compare work ethic between student-athletes and non-athletes based on the results of the Multidimensional Work Ethic Profile (MWEP), a 65-question survey that analyzes a person's work ethic and takes approximately 30 minutes to complete. You will be asked to administer the survey during regular school hours to one of your classes. The study hopes to answer the following two research questions:

**RQ1:** Is there a significant difference in work ethic between high school students who participate in athletics and high school students who are non-athletes?

**RQ2:** Is there a significant difference in the work ethic dimensions of self-reliance, morality/ethics, leisure, hard work, centrality of work, wasted time, and delay of gratification between high school students who participate in athletics and high school students who are nonathletes?

If you agree to assist with this study, then sign the form below and return it to the researcher. By agreeing to help in this research, you agree to keep all information about the survey confidential. The survey data collection will be anonymous, but you must maintain the confidentiality of the surveys you administer to facilitate the anonymous nature of the data collection.

The researcher conducting this study is Roy J. Shipley. If you have questions, **you are encouraged** to contact him at [REDACTED]. You may also contact the researcher's faculty advisor, Dr. Lisa Foster, at [REDACTED].

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd, Green Hall 2845 Lynchburg, VA 24515 or email at [irb@liberty.edu](mailto:irb@liberty.edu).

*Please notify the researcher if you would like a copy of this information for your records.*

**TEACHER/FACULTY AGREEMENT:** I have read and understood the above information. I have asked any questions that I have and have received answers. I agree to assist in the data collection for this study by administering the survey to the study participants. I agree to keep all information confidential.

---

Signature of Teacher/Faculty Member

Date