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## Student-Athletes' Resilience at Religious and Secular Higher Education Institutions

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**Student-Athletes' Resilience at Religious and Secular Higher Education Institutions**

by  
Thayer Trenhaile

A dissertation submitted to the faculty of Bethel University  
in partial fulfillment of the requirements for the degree of  
Doctor of Education

Saint Paul, MN  
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Approved By:  
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### **Abstract**

The purpose of this study was to examine whether there was a statistically significant ( $p < 0.05$ ) difference in student-athletes' resilience by whether they attended religious or secular higher education institutions. The study utilized data from the 2018 Multi-Institutional Study of Leadership (MSL) survey, which was completed by 8,163 student-athletes at 70 different institutions. The researcher used a confirmatory factor analysis to create the resilience and pre-college factors and an ordinary least squares regression to examine whether there are differences in students' resilience controlling for pre-college demographics and other collegiate variables. The results of the regression analysis suggested that student-athletes who attended religious institutions have significantly ( $p < 0.05$ ) lower resilience compared to student-athletes who attended secular institutions. A discussion, recommendations for practice, and recommendations for research are included.

I would like to dedicate this dissertation to my family.

Mom and Dad. You two are my heroes. You have blessed me with so much. Your story of persevering and being first generation college students and being successful motivates me more than you know. You taught Kara, Westin, and I to love others like Jesus. Thank you for all of your support no matter what. I wouldn't be where I am today without all of your love and support.

Kara and Westin. I am so blessed to be your sibling. You two have made me better and it has been so much fun cheering you on. I am looking forward to the memories we will keep making together. Thank you for all of your love and support.

Grandparents: Thank you for all of your unconditional love. I have never taken your support lightly and I will always carry it with me.

Extended Family and Friends: I appreciate you more than you know. I have been blessed with so many wonderful humans in my life. I am excited to see where God takes us on our journeys.

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## Chapter 1: Introduction

### Introduction

An estimated 6% of high school student-athletes (approximately 500,000 students) go on to compete in collegiate-level sports (National Collegiate Athletic Association [NCAA], 2020a). While college student-athletes tend to have higher rates of academic success and complete bachelor's degrees at higher rates than non-student-athletes (NCAA, 2020b), college student-athletes also experience various psychological and sociocultural stressors, such as time demands, grades, financial pressures, and fatigue (Schary, 2019). When student-athletes spend at least 30 hours a week training, practicing, competing, and traveling, they face more physical and mental stressors than other college students on a daily basis (Cho et al., 2020).

Student-athletes who want to be high achievers in the classroom also experience increased stress with combined academic and athletic performance demands (Davis et al., 2019). Student-athletes balance the numerous demands and expectations of school, sports, social engagement, and personal development daily to achieve greater well-being (Etzel et al., 2006), and it is important for higher education coaches and athletic administrators to create an environment to support students' resilience through the services they have available to them on campus and within the community.

Student-athletes find their identity on campus and in the community from their athletic identity. These athletic identities are a valued component of athletes' sense of self; however, athletic identities can also pose risks when athletes experience abrupt ends to their athletic careers (Graupensperger et al., 2020). These risks include a lack of social connectedness with others when they are leaving a school and team setting and transitioning to the real world (Graupensperger et al., 2020). Student-athletes know their role on their team; however, during

the transition after high school graduation, they may not know their role and how they fit in on their college campuses, which can cause additional stress for student-athletes.

Collegiate athletics is ever-changing, and the resilience of new generations of student-athletes will also change. For instance, athletes report lower levels of social support and greater levels of depressive and social anxiety symptoms than do non-athletes (Storch et al., 2005).

Some of the many stressors that may affect college athletes include peer pressures, independence, the need to please family, friends, coaches, and time management between the academic and athletic rigors (Sutcliffe & Greenberger, 2020). Students involved in different programs can experience different levels of anxiety, burnout, and depression (Chigerwe et al., 2020).

These stressors culminate into high rates of mental health disorders among student-athletes. For instance, 10-15% of student-athletes have clinical mental health needs significant enough to warrant counseling services (Beauchemin, 2014). The pressures are so high for student-athletes that college students who have a strong athlete identity have elevated odds of suicide attempts compared to their peers (Miller & Hoffman, 2009). It is therefore important that institutions take active measures to enhance student-athletes' resilience, their ability to adapt to "difficult or challenging life experiences, especially through mental, emotional, and behavioral flexibility and adjustment to external and internal demands" (American Psychological Association, 2023, para. 1).

Resilience can act like a mechanism to help individuals thrive in the face of adverse situations (Davydov et al., 2010). Resilience is positively associated with academic persistence, reduced stress, increases in positive emotions, psychological growth, general wellbeing, improved mental health, lower depressive symptoms, higher health-promoting behaviors, and

reductions in mental health problems (Chiang et al., 2021; Davydov et al., 2010; Gao et al., 2017; Hartley, 2013; Rutten et al., 2013; Samani et al., 2007).

While there are a number of factors that can enhance individuals' resilience, scholars have pointed to greater spiritual health, religiosity, spirituality, faith, religiousness, and spiritual growth as a factor in promoting resilience, especially among adolescents and college students (Greene & Conrad, 2002; Kim & Esquivel, 2011; Long, 2011; Peres et al., 2007; Smith et al., 2012). As institutions that actively promote spirituality or religiosity among students, religious colleges and universities offer a holistic review of education that incorporates the intellectual, social, and spiritual development of students (Derrico et al., 2015). Consequently, students attending religious institutions may be better positioned to have greater spirituality and resilience. Further, religious colleges and universities may foster students' resilience along with their mental health given that such institutions hire faculty and staff with religious interpersonal approaches and values including care, compassion, and open-mindedness, and they infuse curricular and co-curricular experiences with spiritual content (Hall et al., 2009).

Although there are potential connections between the spiritual and religious opportunities at religious colleges and universities and college students' development of resilience, at present, scholars have not investigated whether students' resilience at religious institutions might differ compared to students' resilience at secular institutions. Additionally, scholars have not investigated whether the differences between religious and secular institutions might contribute to differences in resilience among one particular student group: student-athletes. While the types of spiritual and religious options may differ between religious and secular higher education institutions, and thus contribute differently to students' development of resilience, there is no research regarding whether student-athletes attending those different types of institutions may

have different levels of resilience. Given that student-athletes are vital to the overall success of smaller religious institutions and may be at risk for experiencing higher rates of mental health challenges, stress, or mental health disorders, studies about student-athletes' resilience at religious institutions are important in the field of higher education.

### **Statement of Problem**

College student-athletes are expected to perform at a high level and win. Such competitive pressures can come not only from within, but also from family, coaches, fans, and administrators (Egan, 2019). According to a National Collegiate Athletic Association survey, 50% of women college student-athletes felt overwhelmed by all they had to do, 27% felt overwhelming anxiety, 9% felt so depressed it was difficult to function, 16% felt that things were hopeless, and 39% felt mentally exhausted (NCAA, 2020). Further, 31% of college student-athletes who are men felt overwhelmed by all they had to do, 14% felt overwhelming anxiety, 7% felt so depressed it was difficult to function, 11% felt that things were hopeless, and 26% felt mentally exhausted (NCAA, 2020). The success of student-athletes within the intercollegiate athletics program depends on the combined efforts made by the whole institution to make the overall educational college experience for student-athletes a success (Kamusoko & Pemberton, 2013).

Over 34% of NCAA student-athletes are self-identified racial-ethnic minority student-athletes (Ballesteros & Tran, 2020). This number is a 6% increase since 2011 for racial-ethnic minority student-athletes competing in intercollegiate athletics (Ballesteros & Tran, 2020). Many of the racial-ethnic minority student-athletes often report feeling isolated, judged, or marginalized due to their racial identity, as well as exploited for their athletic abilities and unsupported by school administrators (Ballesteros & Tran, 2020). Student-athletes are less likely

to use on-campus mental health services compared to college students who are not athletes (Watson, 2006). Further, mental health services are underutilized within the general racial-ethnic samples (Rosenthal & Wilson, 2008).

For student-athletes, unmet mental health concerns can also become comorbid with other mental health issues, further exacerbating their mental health needs (Zivin et al., 2009). Ballesteros and Tran (2020) found that 81% of African American student-athletes, 78% of Latin American student-athletes, and 79% of Asian American student-athletes expressed some form of mental health need. In spite of the high rate of need, the mental health services to combat these needs were used at less than 11% (Ballesteros & Tran, 2020). Many diverse student-athletes might not feel comfortable using the services at the school due to not feeling comfortable at the institution or within the community. These feelings can be stronger if diversity, equity, and inclusion are not a high priority within the campus setting or the community.

Many student-athletes are forced to have a very strict schedule, which ultimately creates very little control in their lives (Watson, 2006). This strict schedule happens throughout the whole year whether they are in-season or in the off-season. Juggling sleep, workouts, classes, homework, and athletic practices leaves very little time for student-athletes to experience balance in their life. The lack of time and flexibility within student-athletes' schedules creates less time to not only engage in their way of coping with the stressors, but ultimately less time to seek the mental health services offered on campus or within athletic departments, which will then lower their personal resilience levels.

Even though many colleges and universities are investing in mental health through services and personnel, sometimes those services are not enough. It is very important to educate individuals on both the warning signs of mental health disorders and the mental health services

available. Before the education process, one needs to clearly understand the perceptions associated with mental health literacy and the process of seeking mental health services. This information could provide coaches, athletic administrators, and counselors with data to ensure they are providing the correct services, pathways to the services, and the ability to engage student-athletes about potential mental health behaviors (Cutler & Dwyer, 2020).

When serving student-athletes' mental health, one of the most challenging barriers to conquer is numerous types of stigma. Examples of stigma include the athletes' thoughts and feelings towards seeking help (personal stigma), their perceptions of their fellow athletes' thoughts on seeking help (personal perceived stigma), and the general public's thoughts on seeking help (perceived public stigma). All these factors contribute to student-athletes deciding if and when to seek mental health help (Cutler & Dwyer, 2020). The attitudes towards mental health can determine whether a student-athlete is getting the help that they need. Even though being a team member can create a positive student-athlete identity, it can also have a negative effect mentally if the same team is not externally supportive of players seeking mental health support when needed (Cutler & Dwyer, 2020).

There are several mental health and well-being interventions that have decreased student-athletes' stress and anxiety and positively increased their well-being, yet student-athletes continue to refuse use of mental health support structures (Cutler & Dwyer, 2020). It takes everyone such as coaches, athletic administrators, and support staff to learn more about mental health and the student-athletes' perceptions in order to better serve this population at colleges and universities across the United States (Cutler & Dwyer, 2020).

Private and religious higher education institutions are uniquely positioned to offer different programs and activities throughout the week, such as attending chapel, religious

organizations, or integrated religious classes, that may increase students' resilience. Some religious institutions include an established mentoring community that tends to provide the needed combination of "nurture and challenge" to promote spiritual growth (Parks, 2000). Those mentoring communities could be developed within freshman seminar classes that integrate faith very heavily into the classroom. Some religious institutions also have chapel on campus at a time when no other classes are scheduled, which permits students to prioritize their spiritual development. In comparison, secular colleges and universities may not offer such opportunities for spiritual growth and development. Often, evangelical Christian students feel as though they are an oppressed minority on secular higher education campuses (Bowman & Small, 2010); however, religious colleges and universities are safe spaces for Christian students to express their faith (Magolda & Gross, 2009).

Student-athletes are valuable members of campus communities, especially at smaller religious institutions where they contribute to a larger share of overall enrollment figures; therefore, student-athletes' resilience needs to be a top priority at smaller private institutions. Yet, at present, there is very little research related to student-athletes' resilience at religious institutions. It is therefore important to examine the environmental factors, including institutional type, that may influence student-athletes' resilience. Given the stressful conditions related to their positionality on campuses, student-athletes are at risk for poor resilience. The organizational conditions matter, and being enrolled at religious institutions might create conditions to support student-athletes' resilience because religious institutions have extra support, such as various campus ministries and ministry communities.

Religious institutions have the potential to foster resilience in their student populations, with opportunities for spiritual growth and mentorship programs. These institutions can provide



a safe space for Christian students to express their faith and offer additional support, such as campus ministries and mentorship communities, which may be particularly beneficial to student-athletes. Additionally, it is important to conduct further research on the topic of student-athlete resilience specifically at religious institutions. The integration of faith and psychology in graduate programs at Christian institutions could also contribute to the resilience of student-athletes through a holistic approach that considers their physical, emotional, and spiritual needs. Institutions of higher education have a responsibility to promote the resilience and well-being of all their students, including student-athletes. Research has suggested that student-athletes face significant stressors related to their positionality on campuses. Furthermore, they often experience a difficult balance between their athletic and academic responsibilities which can negatively impact their mental health. Although there is limited empirical research on the relationship between resilience and mental health in student-athletes, it is crucial for institutions to prioritize the promotion of resilience in these students. Student-athletes face a unique set of challenges that can negatively impact their mental health and well-being. Therefore, it is essential for institutions to recognize these challenges and provide additional support to help build resilience in student-athletes.

### **Statement of Purpose**

The purpose of this study was to examine whether there are differences in student-athletes' resilience by whether they attended religious or secular higher education institutions.

### **Research Question and Hypotheses**

**RQ1:** Is there a significant difference in student-athletes' resilience by whether they attended religious or secular higher education institutions?

**Ho1:** There is no significant difference in student-athletes' resilience by whether they

attended religious or secular higher education institutions.

**Ha1:** There is a significant difference in student-athletes' resilience by whether they attended religious or secular higher education institutions.

### **Significance of the Study**

While there has been an abundance of research conducted on college student-athletes, there have been far fewer studies conducted to examine whether student-athletes at religious institutions may have different levels of resilience compared to student-athletes at secular institutions. A quantitative research study could change the way religious institutions consider their students' and student-athletes' resilience. Athletics are an important part of enrollment at religious institutions, especially smaller or private institutions, where athletes constitute a larger share of their student populations; therefore, understanding student-athletes' resilience is important when considering the relationships between resilience and student-athletes' retention (ACE, 2019). An increase in tuition money through student-athletes' retention and possible recruitment may lead to higher enrollment and retention rates and less financial strain for these institutions.

Even though this study is strictly looking at the resilience of student-athletes at religious institutions and whether their levels of resilience differ from the resilience of student-athletes at secular institutions, this study has the potential to have a positive impact on different types of higher education institutions. For instance, there are many aspects of this study that public colleges and universities can implement in their collegiate athletic departments to increase student-athletes' resilience. Approximately 80% of Division III institutions are private institutions, which are heavily dependent upon students' enrollment for funding (NCAA, 2021). On average, student-athletes make up 25% of the student body at Division III institutions, so

Division III institutions may be more invested in the outcomes of this study (NCAA, 2020).

Furthermore, if student-athletes at religious institutions have a higher level of resilience, the colleges and universities may work to expand athletics offerings and increase the student-athlete enrollment. This, in turn, could result in decreasing resources currently directed toward resilience and retention and reallocating those resources to other underfunded parts of the college or universities. Or, if student-athletes at smaller, religious institutions are found to have lower levels of resilience when compared to public schools, will these colleges and universities develop programs and provide services to increase resilience in student-athletes? What additional resources can increase resilience and positively impact student-athlete retention?

Additionally, if it is determined that religious student-athletes are less resilient student-athletes than those enrolled at public colleges and universities, will that change the recruitment process? For example, will coaches utilize surveys and questionnaires in an effort to identify and hopefully recruit more resilient student-athletes knowing that more resilient student-athletes need fewer services and are more likely to be retained (ACE, 2019)?

This study may encourage college and university presidents to reconsider what they are looking for when they hire senior-level administrators. With all the changes in college athletics within the past few years, such as the ever-changing landscape of the NCAA, administrators need to be on the front end of these changes and looking for ways to serve student-athletes, which includes better supporting their resilience along with their mental health.

With increased knowledge about student-athletes' well-being in higher education, there might be applications of this research within other educational communities as well. The local K-12 school districts could use that information to also examine how they are promoting resilience to their student-athletes. Unfortunately, many of the coaches and advisors are not trained with

any resilience and mental health knowledge or how to positively impact the resilience and mental health of student-athletes. If policies at the K-12 level were made to improve the resilience and mental health of the student-athletes in the district, it may cultivate a positive culture within the district. Giving students at the K-12 level access to resources that will increase their resilience and mental health will set them up for success as they enter the workforce or pursue more education after graduating high school. Implementing a positive youth development framework would go a long way in combating the issues that have been stated above (Eime et al., 2013).

### **List of Definitions**

**Resilience:** the process and outcome of successfully adapting to difficult or challenging life experiences, especially through mental, emotional, and behavioral flexibility and adjustment to external and internal demands (American Psychological Association, 2023).

According to the National Library of Medicine (2022):

“Stress: a feeling of emotional or physical tension. Stress can come from any event or thought that makes one feel frustrated, angry, or nervous (para. 1). Stress is the body’s reaction to a challenge or demand. In short bursts, stress can be positive, such as when it helps one avoid danger or meet a deadline” (para. 2). “The human body reacts to stress by releasing hormones. These hormones make one’s brain more alert, causes muscles to tense, and increases one’s pulse, which is the body’s way to protect itself” (para. 5).

**Student-athlete:** a full-time or part-time student of a university or college who also participates in an organized and competitive athletic program offered by the school (North Central College, 2021).

According to North Central College (2021).

“In addition to attending classes, studying, and taking exams, student-athletes have

responsibilities to their team that can include:

- Attending practice, typically 20 hours per week following NCAA rules
- Maintain a minimum grade point average in order to remain eligible
- Practicing and training when classes are not in session
- Representing the college with respectful behavior during games and competitions”

(para. 7)

### **Summary**

In order to achieve the goals of studying the differences in student-athletes’ resilience, it is important to examine all potential barriers when it comes to this topic. The next few chapters will expand on the study. Chapter 2 provides an overview of the background and factors that are associated with resilience and mental health among college students. The third chapter will outline the methodology utilized for the study. In the fourth chapter, the results will be presented. The final chapter discusses the results of the study as they relate to the current body of research and implications for practice and future research.

## Chapter 2: Review of Literature

### Introduction

There is a growing need for higher education institutions to build college students' resilience in the hopes of supporting their overall ability to recover from adversity, manage daily stressors, and support their mental health. The rates of mental health disorders among college students across the United States have increased for years. From 2013 to 2021 there was a 135% increase in depression and a 110% increase in anxiety among college students. The number of students who met the criteria for one or more mental health problems doubled in that same time span (Lipson et al., 2022). College students' mental health is one of the most pressing challenges in higher education. With more than 22 million people enrolled in colleges and universities within the United States and with the traditional college years of life coinciding with the age of lifetime mental illnesses, higher education leaders have an opportunity to be a crucial setting where prevention and treatment can make a difference (McAlpine, 2021).

While there is a significant unmet need for mental health services among college and university students in the United States, the need is more pronounced among student-athletes (Lipson et al., 2015). Earlier estimates suggested that 10-15% of student-athletes have clinical mental health needs significant enough to warrant counseling services (Beauchemin, 2014), a number that has grown steadily ever since the pandemic (NCAA, 2022). In 2021, 47% of female student-athletes and 25% of male student-athletes felt overwhelmed by all they had to do, 38% of female student-athletes and 22% of male student-athletes reported feeling mentally exhausted constantly or almost every day, 29% of female student-athletes and 12% of male student-athletes felt overwhelming anxiety, and 9% of female student-athletes and 6% of male student-athletes felt so depressed it was difficult to function (NCAA, 2022).

The pandemic has worsened student-athletes' outlook on their academic success as student-athletes expressed little optimism about their ability to keep up with and pass their fall 2021 courses compared to both the fall and spring of 2020. Only half of the student-athletes were pleased with their ability to find the balance between academics and extracurricular activities, including athletics (NCAA, 2022). Mental health is the most cited reason for contemplating transferring among those considering doing so at some point in the academic year with 61% of female student-athletes and 40% of male student-athletes contemplating the transfer due to mental health (NCAA, 2022).

While student-athletes' mental health is concerning, only around half of student-athletes feel that their mental health is a priority to their athletics department and around half agreed that their coaches take their mental health concerns seriously (NCAA, 2022). It is therefore important to determine whether other institutional conditions, including a focus on spirituality or religious development offered at religious institutions, can help student-athletes to develop resilience to support their mental health and wellbeing.

The mental health of student-athletes has become increasingly concerning in recent years, with a growing number of them requiring counseling services for clinical mental health needs. Research indicates that the prevalence of depressive symptoms and other mental health issues is comparable among both athlete and nonathlete student populations. Despite long-held stereotypes regarding the athletic capabilities and academic commitment of student-athletes, research has revealed that they experience greater psychological distress than their nonathlete counterparts, and yet they often underutilize professional mental health services such as psychotherapy and vocational counseling. In addition to the negative impact on academic performance, mental health issues can have serious consequences for the overall well-being and

future success of student-athletes.

This is a concerning issue that highlights the need for institutions to prioritize the mental health and well-being of student-athletes. Moreover, with many student-athletes feeling overwhelmed by the demands of academics and extracurricular activities, including sports participation, it is essential to determine ways to develop resilience in student-athletes. One potential avenue for promoting resilience and supporting the mental health needs of student-athletes is through offering resources related to spirituality or religious development. Research has shown that religiosity and spirituality can serve as protective factors for mental health.

Despite potential limitations related to the availability and acceptance of these resources on college campuses, integration of spiritual practices in wellness programs may serve as an effective approach toward promoting resilience and supporting student-athlete's mental health needs. Therefore, institutions should prioritize the provision of services that foster resilience and provide emotional support to student-athletes. Furthermore, future resilience training programs should provide student-athletes with a range of adaptive coping strategies to enable them to better manage academic and athletic stressors, leading to positive mental health outcomes.

### **Approaches to the Review of Literature**

The approach to the research was to use key terms in identifying scholarly documents that were relevant to this research topic. The key terms utilized in searches included *resilience*, *student-athlete*, *secular institutions*, *faith-based institutions*, *well-being*, and *emotional health*, which provided many relevant published studies and articles that were pertinent to this topic. The databases utilized in research included ERIC, Google Scholar, ProQuest, EBSCO, and the Bethel University Library's LibSearch. The results revealed several themes in the data related to college students' resilience, college students' mental health, college student-athletes' mental health,



factors associated with college student-athletes' mental health, and organizational conditions to support college student-athletes' mental health, as detailed below.

### **College Students' Resilience**

Resilience is a well-known factor that supports students' success within higher education (Azmitia et al., 2018; Clauss-Ehlers & Wibrowski, 2007; Stuber, 2011). Another part of resilience is psychological, which refers to the phenomenon that many people do not or only temporarily become mentally ill despite significant psychological or physical burdens (Bonanno et al., 2011). Over the past two decades, the concept of resilience has significantly changed from a trait-oriented to an outcome- or process-oriented approach. A trait-oriented approach assumes that resilience is primarily determined by a certain personality type, which enhances individual adaptation to stress or adversity (Chmitorz et al., 2018).

According to Chmitorz et al. (2018), "In recent years, resilience is increasingly considered an outcome (outcome-oriented approach) meaning that mental (or physical) health is maintained or regained despite significant stress or adversity" (p. 79). According to Fletcher and Sarkar (2013), "resilience factors refer to resources which protect a person from the potential negative effect of stressors by modifying the individual's response to stress and adversities" (p. 14).

Resources and resilience go hand in hand. For example, people living in resource-rich and stable environments are more resilient when faced with adversities than individuals in a more unfavorable context (Chmitorz et al., 2018). According to Balcombe and De Leo (2021), "The relationship between exposure to stress and resilience is of interest around the world for whether there are short and/or long-term psychological effects in association with other mitigating factors such as uncertainty, loss of control, loneliness, and isolation" (para. 5). Fletcher (2018)

“established that there are various biopsychosocial factors (i.e., personality, motivation, confidence, focus, challenge, support, and environment) that interact to contribute to the development of athlete psychological resilience,” and reiterated that “there is yet to be an effective understanding of the numerous adverse personal and situational factors that eventuate in adjustment to stress and superior performance” (p. 742).

Balcombe and De Leo (2021) found “the lack of rigorous evidence-based studies that analyze psychological resilience processes in high-level athlete studies has limited its effectiveness and clinical adoption” (para. 8). According to Atkinson and Martin (2020), “High levels of resilience were correlated with the highest quality of life in a replication study with 87 wheelchair rugby athletes with various disabilities. The student-athletes with grit, resilience, hardiness, and social support were the most engaged with their sport” (para. 5). The relationship between psychological resilience and burnout in athletes has been investigated in different evidence-based approaches. Wagstaff et al. (2018) found that “psychological resilience moderates the potential negative effect of organizational stressors on burnout” (p. 3). Raanes et al. (2019) found “psychological resilience and perceived stress to be correlated with burnout among junior athletes” (p. 2).

Athletes who are self-determined and motivated are more likely to be resilient (Trigueros et al., 2019). Trigueros found that “the social aspects of being a college student-athlete, especially with regards to the relationship with coaches, were proposed in preliminary empirical evidence of the psychological construct of interrelations during competition and the effect upon athlete psychological well-being. The need for further studies to confirm that self-determined motivation positively predicts athletes’ resilience” (p. 9).

Gonzalez et al. (2019) found that “comparisons with ethnically diverse and gender-

balanced representation in studies with various high-level athletes and non-athletes are required. A structural equation model applied with 641 female football and basketball players found athletes' resilience is positive for sport engagement as it boosts satisfaction and inhibits spoiling of basic psychological needs" (p. 131). According to Hosseini and Besharat (2010), "the Connor and Davidson Resilience Scale (CD-RISC) was used in two Iranian correlational studies in addition to measurements of student-athletes' achievement according to a rating by their coaches. These authors found that resilience and mental health were positively associated with sport achievement" (para. 1). Student-athletes with higher rates of resilience have greater psychological hardiness, reduced stress, and improved mental health (Sadeghi & Einaky, 2021). Sadeghi and Einaky also noted that "college student-athletes' resilience is also associated with decreases in physical symptoms, anxiety symptoms, social dysfunction, and depression symptoms" (p. 10). Student-athletes with higher resilience and hardiness have overall better mental health (Sadeghi & Einaky, 2021).

Simons et al. (2020) study found the following: It focused on the experience of stressors and maladjustment (i.e., relocation, being away from home for long periods of time/being on tour, or injury). The study was adapted during a COVID-19 lockdown period to investigate five main stressors among student-athletes: uncertainty about the future, decreased income, changed university teaching methods, training facilities unavailable, and season/competition canceled. The results suggested that psychological resilience may result from successful implementation of coping strategies and self-guided interventions, which helped student-athletes to positively adjust after a period of overwhelming stress in a COVID-19 lockdown period.

Resilience is a crucial characteristic for student-athletes as it has been found to be positively related to sports engagement, satisfaction, psychological hardiness, and overall mental

health. Several studies have indicated that higher levels of resilience in student-athletes are related to improved athletic achievement, decreased stress levels, reduced physical and mental health symptoms, and improved overall health. Hosseini and Besharat's (2010) correlational study of Iranian student-athletes found a positive association between resilience, mental health, and sport achievement. Similarly, Sadeghi and Einaky's (2021) study found that college student-athletes with higher resilience had reduced stress levels and improved mental health.

### **College Students' Mental Health**

Mental health includes emotional, psychological, and social well-being and it affects how individuals think, feel, and act. Mental health also helps how one handles stress, relates to others, and makes healthy choices (Centers for Disease Control and Prevention [CDC], 2018). Mental health is important at every stage of life, from childhood and adolescence through adulthood (CDC, 2018). Although the terms are often used interchangeably, poor mental health and mental illness are not the same (CDC, 2018). A person can experience poor mental health and not be diagnosed with a mental illness (CDC, 2018). Likewise, a person diagnosed with a mental illness can experience periods of physical, mental, and social well-being (CDC, 2018).

Mental and physical health are equally important components of overall health (CDC, 2018). For example, depression increases the risk for many types of physical health problems, particularly long-lasting conditions like diabetes, heart disease, and stroke (CDC, 2018). Similarly, the presence of chronic conditions can increase the risk for mental illness (CDC, 2018). Additionally, mental/emotional health is positively associated with quality, satisfaction, psychological health, and joy in life (Leung & Pong, 2021; Yonker et al., 2012). Individuals with good mental/emotional health are also significantly more likely to experience feelings of happiness, respect, contentment, forgiveness, mercy, humility, peace, beauty, honesty, and

harmony (Pong, 2018). Additionally, those who experience mental/emotional health are also more likely to have a clear meaning and purpose in life and engage in self-reflection and introspection to further improve themselves (Emmons, 1999).

There are also associations between spiritual well-being and individuals' mental/emotional health as well. Individuals with anxiety can become easily confused about the meaning of their own existence, feel a loss of trust in others, become disinterested in their surroundings, and suspect others' beliefs and principles (Csikszentmihalyi, 2000), all of which are symptoms of lower spiritual well-being. Those who have lower spiritual well-being also have a higher chance of experiencing moderate or high anxiety, whereas the opposite is true for those with higher spiritual well-being (Fabrbris et al., 2017). While many symptoms of depression are very similar to low spirituality, there has been very little research on this topic among college students generally and college students who are athletes specifically (Leung & Pong, 2021).

People's mental health can change over time, depending on many factors (CDC, 2018). When the demands placed on a person exceed their resources and coping abilities, their mental health could be impacted (CDC, 2018). For example, if someone is working long hours, caring for a relative, or experiencing economic hardships, they may experience poor mental health (CDC, 2018). Biological factors such as genetics, brain chemistry, life experiences such as trauma or abuse, or a family history of mental health problems can all contribute to mental health (U.S. Department of Health, 2022).

Experiencing one or more of the following feelings or behaviors can be an early warning sign of a mental health issue: eating or sleeping too much or too little, pulling away from people and usual activities, having low or no energy, feeling numb or like nothing matters, having unexplained aches and pains, feeling helpless or hopeless, smoking, drinking, or using drugs

more than usual, feeling unusually confused, forgetful, on edge, angry, upset, worried, or scared, yelling or fighting with family and friends, experiencing severe mood swings that cause problems in relationships, having persistent thoughts and memories one cannot get out of one's head, hearing voices or believing things that are not true, thinking of harming oneself or others, inability to perform daily tasks like taking care of kids or getting to work or school (U.S. Department of Health, 2022).

Positive mental health allows people to realize their full potential, cope with the stresses of life, work productively, and make meaningful contributions to their communities (U.S. Department of Health, 2022). Ways to maintain positive mental health include getting professional help if needed, connecting with others, staying positive, getting physically active, helping others, getting enough sleep, and developing coping skills (U.S. Department of Health, 2022). College students' mental health is turning into a crisis that not only exists in the collegiate setting but beyond (Lipson et al., 2022). Approximately 75% of lifetime mental health problems will occur by the age of 24, so it is important to take steps to mitigate college students' mental health disorders (Lipson et al., 2022). Mental health disorders are associated with a range of negative educational outcomes, from lower grades to delayed graduation, and even dropping out (Sontag-Padilla et al., 2014). Negative outcomes can have repercussions for the remainder of the student's lives and for generations to come. Treating mental health disorders can help students achieve better outcomes in school and beyond. Twenty percent to 40% of students who experience a mental health disorder seek treatment in college and this rate is even lower at public colleges and universities (Lipson et al., 2015).

Recognizing the signs of mental health issues, developing coping skills, and seeking professional help when necessary are critical to maintaining positive mental health. College

students are particularly vulnerable to mental health issues due to the stressors associated with transitioning to college life and fulfilling academic requirements. College students face various challenges and risks during the transition from school to society, which can lead to an increased prevalence of mental health issues such as anxiety and depression. Furthermore, college students are expected to take on adult responsibilities such as financial support and personal relationships, adding to the stress they already face. The prevalence of mental health disorders among college students is a growing concern, with negative outcomes such as lower grades and delayed graduation. Therefore, colleges and universities should prioritize the mental health of their students by providing access to mental health services, promoting mental health awareness, and creating a supportive campus environment that encourages open communication about mental health. The high prevalence of mental health disorders among college students has turned into a crisis that extends beyond the collegiate setting, with approximately 75% of lifetime mental health disorders developing before the age of 24. In light of this, it is crucial that mental health needs of college students are addressed to prevent long-term negative consequences. The negative outcomes associated with untreated mental health disorders among college students can have lasting repercussions on their academic and personal lives, and even future generations. Therefore, it is important that colleges and universities prioritize mental health awareness and support services to ensure the well-being of their students not only during their college years, but throughout their lives. Moreover, mental health issues can have serious consequences such as increased risk of suicidal ideation and attempts among college students. Research shows that a significant number of college students contemplate suicide, which underlines the gravity of the issue. The social stigma attached to mental health issues further exacerbates the problem, leading many college students to refrain from seeking help or requesting educational accommodations.

Colleges and universities must take into consideration the social stigma attached to mental health disorders and develop strategies that reduce it, including increasing awareness about available resources and promoting open communication about mental health. Furthermore, the transition to college is a stressful challenge for many students, and effective adjustment and coping mechanisms are crucial to avoid mental health disorders.

### **College Student-Athletes' Mental Health**

Recently the NCAA published a study that they conducted in the fall of 2021. This study was an association-wide survey and had responses from over 9,800 student-athletes at all levels (NCAA, 2022). The data indicated that rates of mental exhaustion, anxiety, and depression in college student-athletes have seen little change since the fall of 2020 and remain 1.5 to 2 times higher than identified before the COVID-19 pandemic (NCAA, 2022).

Sixty-nine percent of female student-athletes and 63% of male student-athletes agreed that they know where to go on campus if they have mental health concerns (NCAA, 2022). When these student-athletes were asked if they would feel comfortable seeking support from a mental health provider on campus, less than half of women's sports and men's sports participants answered that they would agree with that statement (48% and 46%) (NCAA, 2022).

### **Factors Associated with Student-Athletes' Mental Health**

There are also a number of factors that can negatively affect the mental health of American college students. Two of these include demographic characteristics and organizational factors, which are discussed below. These factors are closely connected with college student resilience.

#### ***Demographic Characteristics***

Student-athletes are one of the groups that had higher levels of mental health concerns



according to recent research (NCAA, 2022). This group joined those reporting family economic hardships, women, students of color, and those identifying on the queer spectrum as experiencing higher rates of mental distress. More specifically, 16% of female student-athletes said they felt very lonely constantly or almost every day (NCAA, 2022), while 10% of female student-athletes reported feeling things were hopeless (NCAA, 2022). Just like their heterosexual student-athlete peers and non-student-athlete peers transitioning into the higher education setting, lesbian, gay, and bisexual student-athletes find their transition magnified as they fear peer rejection due to their sexual orientation (DeFoor et al., 2018). This is especially important given that lesbian, gay, and bisexual student-athletes rely more on peer social support for their well-being when family support is low and fear of parental rejection is present (DeFoor et al., 2018).

Unfortunately, sexual minority student-athletes reported that they view sports as having an unsafe environment (DeFoor et al., 2018). This perspective would likely decrease the positive benefits of sport, such as physical and psychosocial health, that one would receive from athletic participation. Similarly, only 39% of queer spectrum students reported feeling that student-athlete mental health was a priority to the athletics department (NCAA, 2022).

When looking more in depth at student-athlete queer-spectrum responses on the NCAA mental health survey, one of the largest mental health stressors was “political disagreements with family or friends” as 30% of queer-spectrum respondents either “agreed” or “strongly agreed” (NCAA, 2022). Twelve percent of straight student-athletes viewed “political disagreements with family or friends” as a negative impact on mental health (NCAA, 2022). These findings would support research from DeFoor et al. (2018) in recognizing the importance of family and friends and the negative impact political disagreements can have on student-athletes.

Further research from the NCAA (2022) found that approximately 20% of male student-athletes transfer during their college experience, while 10% of female student-athletes transfer. Academics and playing time were noted as major reasons for males to transfer, while 36% of female student-athletes who transferred identified mental health and conflict with coach or teammates as the top reasons for transferring (NCAA, 2022). More specifically, 55% of division three female student-athletes identified academics as their reason for transferring, with mental health being the second highest reason.

Factors identified as having the largest negative impact on student-athlete mental health included academic worries and planning for the future (NCAA, 2022). Forty-eight percent of women's student-athletes and 39% of male student-athletes rated academic worries as having the most negative impact on mental health.

### ***Added Pressures for Student-Athletes***

While there are many aspects of higher education environments that can support student-athletes, what is forgotten about is that they may have the same if not more stressors than a nonathlete peer at their institution (Egan, 2019). Some of the common stressors shared between athletes and their nonathlete peers are coping with symptoms of anxiety, mood disorders, challenges with eating behavior or substance use, gender-based violence, sexual assault, racism, and, harassment or violence based on sexual orientation which can all negatively impact their mental health (Egan, 2019). Simply pursuing an academic degree at a higher education institution can be deemed a "full-time" job. With many nonathletes battling their own challenges with just pursuing their academic degree, student-athletes with their sports time commitments are many times trying to balance their schedule of essentially having two "full-time" jobs (Egan, 2019). There is added pressure for student-athletes to have success in their sport, which can

cause issues with performance both inside and outside of the classroom. The added pressure is unavoidable due to student-athletes needing to excel in both in order to keep their academic eligibility (Van Slingerland et al., 2019). Even though student-athletes reported experiencing less anxiety and depression than their non-student-athlete peers with their schedules having very little to no free time, they tend to have no time to decompress compared to their non-student-athlete peers (Egan, 2019).

Juggling the two full-time jobs, student-athletes can easily forget to take care of themselves through proper sleep and nutrition. Without proper sleep and nutrition, the chances for injury for student-athletes go up significantly. If a student-athlete does face an injury, they not only face a challenge physically but mentally as well (Egan, 2019). Some of these mental challenges come from worrying about getting back to the level of competition they were at before their injury (Egan, 2019). Along with the injury that the student-athlete faces, they also find themselves feeling isolated from the team for a period of time and not involved in as much as they normally would have been (Egan, 2019).

No matter if the student-athlete participates in a team sport or an individual sport, they are still more connected socially than their non-athlete peers on campus (Nelson & Wechsler, 2001). With that being said, student-athletes are more susceptible to peer influences both in their sport and in other sports to support those social bonds (Nelson & Wechsler, 2001). Some of the highest rates of binge drinking came from student-athletes that are involved in lacrosse (69% of men and 57% of women), hockey (64% of men and 56% of women), and swimming (55% of men, 49% of women) (Egan, 2019). With athletes sometimes viewing a mental health condition as a potential weakness, untreated mental health conditions in student-athletes can be associated with substance abuse in order for the athlete to try to self-treat (Reardon & Creado, 2014).

Athletes experience the same stressors as their nonathlete peers, such as coping with symptoms of anxiety, mood disorders, challenges with eating behavior or substance use, gender-based violence or sexual assault, racism, and harassment or violence based on sexual orientation (Egan, 2019). Many of these factors can be pre-existing stressors before they even come to college. With being in a new environment away from home some of the stressors could become brand new as well. New college student-athletes are not used to experiencing the stressors of having two full-time jobs (athletics and academics) at the same time. While the NCAA has rules and regulations in regard to how many hours student-athletes can spend on their respective sports, student-athletes spend voluntary time watching film along with extra time spent in informal training. Student-athletes often defer self-care to prioritize athletic and academic obligations, which may enhance stress and worry because they frequently sacrifice much-needed time to decompress (Egan, 2019).

### ***Organizational Factors***

Coaches also have the power over many of the stressors experienced by student-athletes, as they often control areas like athletes' playing time, scholarship money, and weekly schedules (Roxas & Ridinger, 2016). There are other factors that contribute to student-athletes' mental health, including teammate support and experiencing positive emotions such as joy, interest, contentment, and love, all traits that create positive emotions within student-athletes (Cho et al., 2020). Consistency from coaches, administration, and support staff is key to eliminating as many stressors as possible.

Additional organizational factors to support students' mental health include nutritional services. For example, female athletes competing in collegiate sports can be at an increased risk in weight-dependent sports such as gymnastics, diving, figure skating, and cross-country/track

and field, and coaches and athletic administration should focus on all of the student-athletes nutritional needs to ensure they do not develop eating disorders (DiBartolo & Shaffer, 2002). Athletic departments should evaluate their student-athletes' levels of self-concept so that their susceptibility to eating disorders or other mental health challenges can be addressed (McLester et al., 2014). The types of sports in which there are competitive advantages to weight and shape are prone to have student-athletes with a higher risk of eating disorder symptoms (Darcy et al., 2013). Some of the sports that may be the case are swimming, diving, cheerleading, dance, track and field, triathlon, gymnastics, rowing, wrestling, cycling, equestrian, figure skating, and synchronized swimming. Many of these symptoms of eating disorders in the sports listed above happen before college and are developed in adolescence. These can be very difficult to monitor since healthy eating and exercising above and beyond regular training is typically celebrated as progress toward athletics goals and a good work ethic (Egan, 2019).

Organizational factors can contribute to student-athletes' resilience. For instance, the ethical climates of schools have influenced the impact that coaches can have on their student-athletes (Schary, 2019; Yukhymenko-Lescroart et al., 2015). Additional organizational factors to support students' mental health and resilience include the availability of nutritional services such as special cafeterias with certain dietary needs (University of Minnesota, ???). Female athletes competing in collegiate sports can be at an increased risk in weight-dependent sports such as gymnastics, diving, figure skating, cross-country, and track and field, and coaches and athletic administration should focus on all of the student-athletes nutritional needs to ensure they do not develop eating disorders (DiBartolo & Shaffer, 2002).

## **Summary**

As shown throughout the literature review, there are many factors that are outside of the

control of the student-athlete in regard to their resilience and mental health. The data shared in the literature review is a reminder on why one needs to not only keep researching this topic but also start to take action on improving the resilience of student-athletes across the country.

### Chapter 3: Methodology

There is a significant unmet need for mental health services among college and university students in the United States; however, the need is more pronounced among college student-athletes (Lipson et al., 2015). While there has been an abundance of research conducted on college student-athletes, there have been far fewer studies conducted to examine whether student-athletes at religious institutions may have different levels of resilience, which could support student-athletes' mental health, compared to student-athletes at secular institutions. A quantitative research study could change the way religious institutions consider their students' and student-athletes' resilience.

The following chapter outlines the methodology of the study. The section briefly revisits the purpose of the study's theoretical framework and research design. Next, the research questions, hypotheses, and data analyses were proposed.

#### **Purpose of the Study**

The purpose of this study is to examine whether there are differences in student-athletes' resilience based upon students' enrollment in religious or secular institutions.

#### **Research Question**

**RQ1:** Is there a significant difference in student-athletes' resilience by whether they attended religious or secular higher education institutions?

#### **Hypotheses**

**Ho1:** There is no significant difference in student-athletes' resilience by whether they attended religious or secular higher education institutions.

**Ha1:** There is a significant difference in student-athletes' resilience by whether they attended religious or secular higher education institutions.

## Theoretical Framework

Astin (1984) created a theory about students' involvement on college campuses, which was extended to the input-environment-output model a decade later (as cited in Astin, 1991). Astin defined student involvement as the amount of physical and psychological energy that the student invests in the academic experience. Additional inputs include demographic characteristics or pre-college experiences, while the environment includes factors including the type of institution (e.g., religious or secular), institutional size, and additional environmental conditions. Astin measured outcomes including academic achievement, students' development, and others; however, for the purpose of this study, the outcome of interest is students' resilience.

Astin (1984) also created the Input-Environment-Output model used for assessment in higher education (as cited in Astin, 1991). Input in the IEO model refers to student characteristics such as demographic background, sociocultural experiences prior to college, and measures for college readiness (Callahan et al., 2017). Environment refers to student experiences in academic or co-curricular settings as defined by a particular intervention, either a curricular experience or co-curricular experience (Callahan et al., 2017). Output refers to the desired outcomes expected after a student participates in an intervention. The outcomes of an intervention are affected by inputs and the environment (Callahan et al., 2017). Astin's IEO model correlates with this study since the environment of the institution will explain the difference in student outcomes for the study.

Students who are involved within intercollegiate athletics are heavily involved both physically and psychologically. Along with athletics comes the academic progress of student-athletes (NCAA, ???). As student-athletes attend institutions, there are certain benchmarks of credits that need to be completed in order for the student-athlete to make progress towards



graduation (NCAA, ???). If student-athletes fail to meet these standards, then they are academically ineligible and not able to compete in the athletic events they are involved in until these requirements are met (NCAA, ???).

At the Division III level, the main focus for student-athletes is academics (NCAA, ???). Unlike Division I and Division II universities, students who attend Division III institutions must meet the academic standards set forth by the institution themselves (NCAA, ???). The rules set forth by the Division III rules committee allow student-athletes at this level to be more integrated into the campus community and treated like normal students (NCAA, ???). This is done by having less time allotted for practice and competition (NCAA, ???). A lot of the institutions that participate in Division III athletics have a median enrollment of 1,751 students (NCAA, ???). This once again goes to show how crucial recruiting and retaining students are at Division III institutions.

### **Research Design**

This quantitative study will be non-experimental and utilize pre-existing secondary data. This research design was chosen to have the greatest likelihood of answering the research questions using a representative national sample of student-athletes. The study utilized data from the 2018 administration of the Multi-Institutional Study of Leadership (MSL) survey.

### **Instrumentation**

The 2018 version of the MSL survey was utilized because it was the most recent survey data available to researchers. The MSL survey is used to assess students' collegiate experiences and outcomes, such as resilience. The MSL survey also dives into involvement experiences, leadership related outcomes, and developmental outcomes related to resilience and spiritual development. The MSL also measures students' engagement in a variety of experiences;

demographic characteristics; and academic, prosocial, and leadership outcomes. The researcher utilized data from the MSL survey that was collected that was previously administered at 70 colleges and universities in spring 2018.

Dugan (2015) and Tyree (1998) tested the psychometric properties of the MSL instrument and discovered that common concerns related to self-reported data (e.g., social desirability, halo effect, and item format) are not problematic. Additionally, several changes have been made to improve the psychometric properties of the instrument (e.g., content, criterion, and construct validity), including reducing the number of items and removing two constructs (Dugan, 2015; Tyree, 1998).

## **Sample**

In spring 2018, 70 institutions participated in the MSL and each institution invited 4,000 randomly-selected students to participate in the survey. The response rates varied between 14% to 48% across the institutions ( $n = 75,025$ ). The final sample only included 8,163 student-athletes who responded to the measures in the survey. Among the total student-athlete respondents, 56.4% were women ( $n = 4,569$ ), 43.0% were men ( $n = 3,484$ ), and 0.6% were transgender ( $n = 49$ ). Additionally, 0.3% were American Indian ( $n = 27$ ), 5.5% Asian ( $n = 452$ ), 5.3% Black ( $n = 433$ ), 0.6% Native Hawaiian or Pacific Islander ( $n = 46$ ), 4.3% Hispanic or Latinx ( $n = 348$ ), 0.8% Middle Eastern or Northern African ( $n = 63$ ), 69.3% White ( $n = 5,659$ ), 2.5% had another race not listed in the survey ( $n = 208$ ), and 11.4% were multiracial ( $n = 927$ ). The sample was primarily younger: 95.2% were under 24 ( $n = 7,773$ ) and 4.8% were 24 or older ( $n = 390$ ). More information about the sample is shown in Chapter 4.

## **Variables**

### ***Dependent Measures***

The dependent measure was students' resilience, which was measured through the 10-item Connor-Davidson Resilience Scale (CD-RISC-10) (Campbell-Sills et al., 2006; Connor & Davidson, 2003). The CD-RISC-10 Scale is a parsimonious version of the 25-item CD-RISC scale (Connor & Davidson, 2003). The reduced version of the CD-RISC scale was selected for use in the MSL survey to reduce the overall number of items students complete. The CD-RISC-10 has high reliability and validity (Gonzalez et al., 2016). On the CD-RISC-10 scale, students rated their agreement (1 = not at all to 5 = true nearly all of the time) to items such as "I am able to adapt when changes occur" and "I can deal with whatever comes my way." Researchers have previously demonstrated the strong internal consistency for the parsimonious resilience factor in the MSL (Soria & Roberts, 2021).

### ***Independent Measures***

The primary independent measure of interest is whether student-athletes attended religious or secular institutions. Information about the religious affiliation of the colleges and universities in the sample was provided by MSL in the data file. Colleges and universities provided their religious affiliation information to the Integrated Postsecondary Education Data System (IPEDS). Institutions' IPEDS identifiers were merged with the MSL survey responses by MSL Principal Investigators and then the identifiers were removed after additional institutional information (e.g., Carnegie classification, size, location) were merged into the datafile. Slightly more than one-third (35.6%) attended religious institutions ( $n = 2,908$ ) while 64.4% attended secular institutions ( $n = 5,255$ ). The variable was coded as 0 = secular institutions, 1 = religious institutions.

The researcher also included the following demographic "input" variables that were all self-reported by students: age, gender, race/ethnicity, sexual orientation, citizenship, disability,

parents' highest level of education, and parents' income. While age was a continuous variable, the others were dummy-coded. Gender was coded as 1 = women, 0 = all others, and 1 = transgender, 0 = all others. Sexual orientation was dummy-coded with the straight/heterosexual students as the common referent variable ("0"). Citizenship was coded as 1 = international students, 0 = domestic students. Disability was coded as 1 = has a long-lasting condition (physical, visual, auditory, mental, emotional, or other) that substantially limits one or more major life activities (ability to see, hear, or speak; to learn, remember, or concentrate), 0 = does not have a long-lasting condition (physical, visual, auditory, mental, emotional, or other) that substantially limits one or more major life activities (ability to see, hear, or speak; to learn, remember, or concentrate). Parents' level of education was collapsed and coded 1 = first-generation students (parents have < a bachelor's degree) and 0 = continuing-generation (parents have > a bachelor's degree). Parents' income was dummy-coded with "rather not say" and "don't know" as the referent category ("0").

Additionally, there were three pre-college resilience items. The survey question were phrased, "looking back to before you started college, please indicate your level of agreement with the following items?" and the three separate items were "I thought of myself as a strong person, I was not easily discouraged when I experienced failure, and I was able to effectively manage negative emotions like sadness, fear, or anger," all scaled 1 = strongly disagree to 5 = strongly agree.

The collegiate "environmental" variables were either provided by institutions or self-reported by students. The environmental variables included institutions' Carnegie classification, size, control, and setting. Carnegie classification was dummy-coded with baccalaureate institutions as the referent group ("0"). Size was dummy-coded with 1,000-4,000 as the referent

group (“0”), control was coded 1 = private, 0 = public, and setting was dummy-coded with “town or rural” as the referent (“0”). Additionally, students provided information about whether they had transferred to their institutions and their class level, enrollment status, academic major, and residence (on- or off-campus). Class level was dummy-coded with freshman as the common referent group (“0”). The transfer variable was coded 1 = transfer student, 0 = non-transfer student, enrollment status was coded 1 = full-time, 0 = part-time, academic major was dummy coded with “undeclared or other” as the common referent group (“0”), and residence was coded 1 = on-campus, 0 = off-campus.

### **Data Analysis**

After getting approval from the Bethel University Institutional Review Board, the researcher was able to analyze the data using JASP. First, a confirmatory factor analysis was utilized to create the resilience and pre-college factors from the 10 college resilience and three pre-college resilience items. Next, to analyze whether there are statistically significant differences between student-athletes’ resilience at secular and religious higher education institutions controlling for demographic and institutional variables, the researcher utilized an ordinary least squares regression. The researcher tested the assumptions of regression analysis for multicollinearity, homoscedasticity of errors, normal distribution of errors, linearity, and independence of the observations. The *a priori* alpha criterion for statistical significance is  $p < 0.05$ , which is standard in social sciences (Soria, 2022).

### **Limitations and Delimitations**

The delimitations of the study is that it is limited to the 2018 MSL survey data. Findings of the study may only be generalized to higher education institutions within the United States. Findings from student-athletes attending higher education institutions in other countries could

look vastly different compared to the data available.

The limitation that the MSL survey does not provide is that one does not know what exactly the student-athletes encountered at either their secular or public institution. One also does not know the institutions that the student-athletes attended. This data set is also a little older and could look different due to the resilience of college students getting worse during the COVID-19 pandemic. The COVID-19 pandemic led to an alteration in many work and lifestyle factors (Ratten, 2020). During the COVID-19 pandemic, there were increased mental health vulnerabilities in high-risk subpopulations such as children, student-athletes', low socioeconomic groups, among others (Balcombe & De Leo, 2020).

The data collected for this study are cross-sectional and therefore the researcher cannot measure the longitudinal outcomes associated with attending a religious or secular institution. Additionally, although the researcher used random samples from four-year institutions, the results may not be easily generalizable to students enrolled at other types of institutions. Unmeasured variables not used in data analysis may impact the outcomes associated with attending a religious or secular institution.

### **Ethical Considerations**

This research used ethical considerations put forth in the Belmont Report: respect for persons, beneficence, and justice (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979). In this study, respect for persons and beneficence were demonstrated through the anonymity given to students and institutions who participated in the study. All institutions that administered the MSL survey received IRB approval before administration. Participants were required to indicate their consent to participate in the study via a consent form. The random samples helped to ensure that each student enrolled

at the different institutions received an equal chance of participation. Participants were entered into lottery drawings to win a gift card offered at each institution.

To solidify that all ethical considerations were taken, permission was gained through Bethel University's Institutional Review Board (IRB) prior to the research (see Appendix A). No information on identification was obtained for this study from the participants. All responses to the MSL survey that have been publicly shared with researchers are anonymous. It is not possible to identify individual participants or institutions that administered the survey to students.

### **Summary**

The information presented in this chapter provided the methodological framework of the proposed research study. The statistical analysis for each question was discussed. The next chapter will provide the results from the data analysis. A full explanation of the results will be discussed.

## Chapter 4: Results

### Introduction

The purpose of this study was to determine the resilience of student-athletes and compare it at religious institutions vs secular institutions. In this student the independent variable was if student-athletes were attending religious or secular institutions. The dependent measure was students' resilience, which was measured through the 10-item Connor-Davidson Resilience Scale (CD-RISC-10) (Campbell-Sills et al., 2006; Connor & Davidson, 2003).

This section consists of the research questions and related hypotheses, statistical analyses, and findings. In addition to the demographic information provided, mean and standard deviation for pre-college and college resilience items are included as are the regression results for college resilience.

### Participation

The study utilized data from the 2018 administration of the Multi-Institutional Study of Leadership (MSL) survey. The MSL survey assesses collegiate experiences and elements that contribute to outcomes for students including leadership. The 2018 version had 70 institutions participating and a total of 75,025 students in the final sample. Of those respondents, 8,163 or 10.9% were student-athletes. These student-athletes were retained for the analysis in the present study.

### Descriptive Statistics

The descriptive statistics for the demographic (input) and collegiate (environmental) variables are demonstrated in Table 1. In the survey, 3,484 or 43.0% were male student-athletes, while female student-athletes consisted of 4,569 or 56.4%. Less than 1% (0.6%) identified as transgender or gender non-conforming. The majority of the participants were White, who



accounted for 69.3% of the participants or 5,629 respondents. Eleven percent or 927 respondents were multiracial. Asian American student-athletes made up 5.5% of the participants, while 5.3% of respondents were African American or Black student-athletes. Four percent of the participants were Latinx or Hispanic. No international students identified as student-athletes and nearly all participants were full-time students as less than 2% were part-time students.

The majority of the participants were students enrolled at public institutions as 5,255 or 64.4% described their institution as a public college or university, while 35.6% of students or 2,908 student-athletes were attending private higher education establishments. Ten percent or 783 student-athlete participants were first-generation students and 15.9% of the participants acknowledged being transfer students. The sexual orientation category had 81.8% or 6,679 participants identifying as heterosexual, while 1,365 or 16.7% were LGBTQ+.

Additionally, 22% of participants were freshmen or sophomores, while 26% were juniors and the largest group of respondents were seniors at 29.5%. Nearly 12% or 959 student-athlete respondents had a long-lasting condition that substantially limits one or more major life activities (i.e. disability). Nearly 29% or 2,340 respondents were enrolled at institutions with from 1,000 to 4,999, while 2,210 or 27.1% of student-athletes attended an institution of 5,000 to 9,999 students. Additionally, 44.3% or 3,611 participants estimated parental income at over \$100,000 per year. Finally, the majority of student-athletes lived off-campus: 56.3% or 4,597 lived at a location in their local community as opposed to on-campus housing.

**Table 1***Descriptive Information for MSL Survey Student-Athlete Respondents*

	<i>n</i>	<i>%</i>
<i>Gender</i>		
Men	3,484	43.0
Women	4,569	56.4
Transgender or Gender Non-Conforming	49	0.6
<i>Race/Ethnicity</i>		
Middle Eastern or Northern African	63	0.8
African American or Black	433	5.3
American Indian or Alaska Native	27	0.3
Asian American	452	5.5
Native Hawaiian or Pacific Islander	46	0.6
Latinx or Hispanic	348	4.3
Multiracial	927	11.4
White/Caucasian	5659	69.3
Race Not Listed	208	2.5
<i>International Status</i>		
Domestic	8,163	100
International Student	0	0
<i>Parental Education</i>		
Continuing-generation	7,326	90.3
First-generation	783	9.7
<i>Transfer Status</i>		
Started At Present Institution	6,864	84.1
Started Elsewhere	1,299	15.9
<i>Enrollment Status</i>		
Full-time	8,007	98.1
Less than Full-Time	156	1.9
<i>Sexual Orientation</i>		
Heterosexual	6,679	81.8
LGBTQ+	1,365	16.7
Preferred Response Not Listed	119	1.5
<i>Class Level</i>		
Freshman	1,789	22.1
Sophomore	1,802	22.3
Junior	2,103	26.0

Senior	2,388	29.5
<i>Parents' Income</i>		
Less than \$12,500	206	2.5
\$12,500 - \$24,999	224	2.7
\$25,000 - \$39,999	349	4.3
\$40,000 - \$54,999	402	4.9
\$55,000 - \$74,999	757	9.3
\$75,000 - \$99,999	941	11.5
\$100,000 - \$149,999	1,474	18.1
\$150,000 - \$199,999	823	10.1
\$200,000 and over	1,314	16.1
Don't know	1,198	14.7
Rather not say	475	5.8
<i>Academic Majors</i>		
Natural Sciences	1,091	13.4
STEM	1,808	22.1
Business/Communication	1,849	22.7
Health Sciences	1,123	13.8
Education	281	3.4
Human Sciences	514	6.3
Social Sciences	1,438	17.6
<i>Disability</i>		
Does not have a long-lasting condition (physical, visual, auditory, mental, emotional, or other) that substantially limits one or more major life activities (ability to see, hear, or speak; to learn, remember, or concentrate)	7,204	88.3
Has a long-lasting condition (physical, visual, auditory, mental, emotional, or other) that substantially limits one or more major life activities (ability to see, hear, or speak; to learn, remember, or concentrate)	959	11.7
<i>Carnegie Classification</i>		
Baccalaureate	1,368	16.8
Master's Colleges and Universities: Small and Medium Programs	1,072	13.1
Master's Colleges and Universities: Larger Programs	2,218	27.2
Doctoral/Professional Universities	212	2.6
Doctoral Universities: High Research Activity	1,313	16.1
Doctoral Universities: Very High Research Activity	1,980	24.3
<i>Institutional Size</i>		
1,000 to 4,999	2,340	28.7
5,000 to 9,999	2,210	27.1
10,000 to 19,999	1,729	21.2
20,000+	1,884	23.1

<i>Control</i>		
Public	5,255	64.4
Private	2,908	35.6
<i>Residence</i>		
On-campus housing	3,566	43.7
Off-campus housing	4,597	56.3
<i>Institutional Setting</i>		
Town or Rural	982	12.0
Suburb	2,261	27.7
Small City	999	12.2
Midsize City	1,835	22.5
Large City	2,086	25.6

The means and standard deviations from the pre-college resilience and college Resilience items are provided in Table 2. The scale for the items was (1 = not at all to 5 = true nearly all of the time). Of the pre-college items, students were most likely to report that “I thought of myself as a strong person” and least likely to report that “I was not easily discouraged when I experienced failure.” In the college resilience items, the student-athletes were most likely to report that they believe they can achieve their goals, even if there are obstacles, and second-most likely to tie with reporting that they think of themselves as a strong person when dealing with life’s challenges and difficulties and tend to bounce back after illness, injury, or other hardships.

**Table 2**

*Mean and Standard Deviation for Pre-College and College Resilience Items*

	<i>M</i>	<i>SD</i>
<i>Pre-College Resilience</i>		
I thought of myself as a strong person	3.89	0.91
I was not easily discouraged when I experienced failure	3.46	1.05
I was able to effectively manage negative emotions like sadness, fear, or anger	3.50	1.08
<i>College Resilience</i>		
I am able to adapt when changes occur	3.96	0.79
I can deal with whatever comes my way	3.91	0.81

I try to see the humorous side of things when I am faced with problems	3.93	0.96
Having to cope with stress can make me stronger	3.81	0.91
I tend to bounce back after illness, injury, or other hardships	4.01	0.88
I believe I can achieve my goals, even if there are obstacles	4.14	0.79
Under pressure, I stay focused and think clearly	3.83	0.91
I am not easily discouraged by failure	3.63	0.98
I think of myself as a strong person when dealing with life's challenges and difficulties	4.01	0.88
I am able to handle unpleasant or painful feelings like sadness, fear, and anger	3.84	0.94

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### Factor Analysis

The researcher conducted a confirmatory factor analysis on the three pre-college resilience items and the 10 college resilience items. The factorial model had an acceptable fit (CFI = 0.993, TLI = 0.992, RMSEA = 0.067, SRMR = 0.039; Kline, 2015). The pre-college resilience factor had good reliability ( $\alpha = 0.799$ ,  $\omega = 0.805$ ), as did the college resilience factor ( $\alpha = 0.912$ ,  $\omega = 0.913$ ). The factor scores were computed with a mean of 0.0 and a standard deviation of 1.0.

### Ordinary Least Squares Regression

The researcher tested the assumptions of regression analysis for multicollinearity, homoscedasticity of errors, normal distribution of errors, linearity, and independence of the observations. The variance inflation factors were within acceptable ranges (1.056 to 1.183), so the multicollinearity assumptions were not violated. In testing homoscedasticity, the researcher examined scatterplots of standardized residuals against the standardized predicted values and observed random scatter and variability in the scatterplots. The researcher also produced a histogram of standardized residuals and normal probability plots comparing the distribution of standardized residuals to a normal distribution and found evidence for the normal distribution of residuals. The researcher examined the matrix scatterplots and discovered the relationships between the predictor and outcome variable were relatively linear. The researcher also found the

residual errors were consistently independent across the model (the Durbin-Watson statistic was 1.96,  $p < 0.05$ ). The results of these analyses suggest the regression assumptions were not violated (Tabachnick & Fidell, 2012).

The overall regression model for student-athletes' resilience was statistically significant ( $F = 44.424$ ,  $p < 0.001$ ; Table 3). The variables entered into the model explained 22.0% of student-athletes' resilience ( $R^2 = 0.220$ ,  $p < 0.001$ ). The results of the regression analysis suggests that student-athletes who attended religious institutions have significantly lower resilience compared to student-athletes who attended secular institutions ( $\beta = -0.043$ ,  $p < 0.01$ ). The relationships between institutional type (religious or secular) were small and held controlling for students-athletes' demographic and collegiate variables.

While the primary focus of this study was to examine whether there are significant differences in student-athletes' resilience based upon whether they attended a religious or secular institution, there are several findings that are also noteworthy. For one, student-athletes' pre-college resilience was much more strongly associated with student-athletes' college resilience than institutional type, demographic characteristics, or other environmental variables. Thus, the type of institution—whether religious or secular—may not matter as much as the levels student-athletes' pre-college resilience. Furthermore, transgender student-athletes, student-athletes attending college full time, and LGBTQ+ student-athletes had significantly lower levels of resilience compared to their peers. Student-athletes who are Native Hawaiian or Pacific Islander, sophomores, juniors, seniors, and from higher income brackets also have significantly higher resilience compared to their peers.

**Table 3***Regression Results for College Resilience*

	<i>B</i>	<i>SE</i>	$\beta$	<i>p</i>
Constant	0.058	0.093		
Religious Institution	-0.088	0.032	-0.043	**
Pre-college Resilience	0.432	0.010	0.439	***
Women	-0.038	0.021	-0.019	
Transgender	-0.612	0.128	-0.048	***
Middle Eastern or Northern African	-0.048	0.113	-0.004	
African American or Black	-0.034	0.045	-0.008	
American Indian or Alaska Native	-0.262	0.172	-0.015	
Asian American	-0.078	0.044	-0.018	
Native Hawaiian or Pacific Islander	0.275	0.136	0.021	*
Latinx or Hispanic	0.021	0.050	0.004	
Multiracial	0.013	0.031	0.004	
Race Not Listed	-0.051	0.074	-0.008	
International Student	-0.052	0.049	-0.013	
First-generation	0.029	0.035	0.009	
Transfer	0.027	0.028	0.010	
Full-Time	-0.146	0.072	-0.020	*
LGBTQ+	-0.069	0.027	-0.026	*
Preferred Response Not Listed	-0.061	0.088	-0.007	
Sophomore	0.058	0.029	0.025	*
Junior	0.112	0.028	0.050	***
Senior	0.243	0.028	0.113	***
Less than \$12,500	-0.051	0.067	-0.008	
\$12,500 - \$24,999	0.067	0.063	0.011	
\$25,000 - \$39,999	0.060	0.052	0.012	
\$40,000 - \$54,999	0.092	0.049	0.020	
\$55,000 - \$74,999	0.104	0.039	0.031	**
\$75,000 - \$99,999	0.039	0.036	0.013	
\$100,000 - \$149,999	0.154	0.032	0.061	***
\$150,000 - \$199,999	0.098	0.038	0.030	***
\$200,000 and over	0.144	0.033	0.054	***
Natural Sciences	-0.028	0.045	-0.010	
Science, Technology, Engineering, or Mathematics	-0.068	0.042	-0.029	
Business or Communications	-0.011	0.038	-0.005	
Health-Related	0.029	0.045	0.010	
Education	0.037	0.064	0.007	
Humanities	0.055	0.053	0.014	
Social Sciences	0.030	0.038	0.012	
Has a Disability	-0.051	0.031	-0.017	

Master's Colleges and Universities: Small and Medium Programs	0.131	0.047	0.045
Master's Colleges and Universities: Larger Programs	0.046	0.044	0.021
Doctoral/Professional Universities	0.105	0.083	0.017
Doctoral Universities: High Research Activity	0.052	0.055	0.019
Doctoral Universities: Very High Research Activity	0.012	0.061	0.005
5,000 to 9,999	-0.064	0.039	-0.029
10,000 to 19,999	-0.060	0.049	-0.025
20,000+	-0.082	0.055	-0.035
Private	0.056	0.032	0.029
Suburb	-0.056	0.037	-0.025
Small City	-0.044	0.044	-0.015
Midsize City	-0.058	0.039	-0.025
Large City	-0.005	0.043	-0.002

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

## Summary

To address the research questions, an ordinary least squares regression was conducted to determine if there are statistically significant differences in student-athletes' resilience based upon whether they attended religious or secular affiliated institutions. The results suggested that student-athletes who attended religious colleges and universities have significantly lower levels of resilience compared to student-athletes at secular colleges or universities (see Table 4).

## Table 4

### Overview of Results

<i>Null Hypotheses</i>	<i>Conclusion</i>	<i>p</i>
H <sub>0</sub> 1: There is no significant difference in student-athletes' resilience by whether they attended religious or secular higher education institutions.	Fail to Reject	> 0.05
H <sub>0</sub> 2: There is a significant difference in student-athletes' resilience by whether they attended religious or secular higher education institutions.	Reject	> 0.05



## Chapter 5: Conclusions and Recommendations

### Overview of Study

The purpose of this study was to determine whether college student-athletes attending a religious higher education institution have significantly different levels of resilience than student-athletes who attend a secular college or university. Many college student-athletes experience stressors that may lead to higher rates of mental health disorders and concerns. It is therefore important that institutions work concertedly to enhance student-athletes' resilience, their ability to adapt, adjust, and cope with demanding situations (American Psychological Association, 2023). Resilience can help individuals to thrive in the face of adverse situations and may be especially beneficial to student-athletes' mental health because resilience is associated with reduced stress, increases in psychological growth, improved overall wellbeing, lower depressive symptoms, and reductions in mental health concerns (Chiang et al., 2021; Davydov et al., 2010; Gao et al., 2017; Hartley, 2013; Rutten et al., 2013; Samani et al., 2007).

Although researchers and policymakers continue to draw attention to college student-athletes' mental health, many athletic teams have a culture of the team over self, which leads college student-athletes to underutilize psychological services (Watson, 2006). Further, student-athletes may have a perceived public stigma that may prevent them from seeking psychological help for fear of peers' negative judgments. Therefore, it is incumbent upon higher education institutions to create supportive conditions to increase students' resilience so they can navigate daily stressors and achieve wellbeing (Corrigan, 2004). Given that religious institutions are more likely than secular institutions to offer programs to support college students' development of faith and spirituality, which are associated with increased resilience (Mathews, 2021), it is important to examine whether the organizational conditions at religious institutions are

associated with increases in student-athletes' resilience. Therefore, the research question framing this study was, "is there a significant difference in student-athletes' resilience by whether they attended religious or secular higher education institutions?"

The results of the regression analysis suggest that college student-athletes who attended religious institutions have significantly lower resilience compared to college student-athletes who attended secular institutions ( $\beta = -0.043, p < 0.01$ ). The size of the differences is relatively small, suggesting that the organizational context may not account for much variance in college student-athletes' resilience. Student-athletes' pre-college resilience was much more strongly associated with student-athletes' college resilience than institutional type, demographic characteristics, or other environmental variables. Consequently, the type of institution—whether religious or secular—may not matter as much as the levels of resilience that student-athletes bring with them to their higher education experience.

While the primary focus of this study was to examine whether there are significant differences in student-athletes' resilience based upon whether they attended a religious or secular institution, several findings are also noteworthy. For one, student-athletes' pre-college resilience was a much stronger predictor of their college resilience than institutional type, demographic characteristics, or other environmental variables. Furthermore, transgender student-athletes, student-athletes attending college full time, and LGBTQ+ student-athletes had significantly lower levels of resilience compared to their peers. Student-athletes who are Native Hawaiian or Pacific Islander, sophomores, juniors, seniors, and from higher income brackets also have significantly higher resilience compared to their peers.

This quantitative study provides insight into the differences in resilience among student-athletes based on whether they attended a religious or secular higher education institution. The

findings suggest that institutional type is significantly associated with student-athletes' resilience, with those attending religious institutions demonstrating lower levels of resilience compared to their peers at secular institutions. However, the study also demonstrates that pre-college resilience is a much stronger predictor of college resilience than institutional type or other environmental variables.

Student-athletes who come from families of color and have lower socioeconomic status have a higher risk of mental health disorders and resilience (Barnes, 2019). The results of this study also align with the previous statement. Moreover, the study highlights the importance of pre-college resilience levels as a predictor for college resilience among student-athletes. Overall, the results of this study suggest that to promote resilience among student-athletes, it is important to consider not only their institution type, but also their pre-college resilience levels and other demographic variables such as transgender identity, LGBTQ+ status, race/ethnicity, income level, and class standing.

Although prior scholars have found associations between individuals' resilience, spiritual health, religiosity, spirituality, faith, religiousness, and spiritual growth (Greene & Conrad, 2002; Kim & Esquivel, 2011; Long, 2011; Peres et al., 2007; Smith et al., 2012), this study found that student-athletes attending religious institutions do not necessarily have higher levels of resilience compared to student-athletes attending secular institutions. There may be many reasons for this finding. First, the majority of larger institutions tend to be secular in nature. Larger institutions typically have more resources to support student-athletes and thus, increase resilience. For example, DeFoor et al. (2018) hypothesized that sports medicine providers should advocate for "holistic health" and they can play a significant role in student-athlete mental health, and thus increase resilience.

Similarly, the majority of student-athletes at Division III schools attend religious institutions and these institutions tend to lack academic support systems when compared to larger, Division I colleges and universities. Given that academic worries was rated as having the largest negative impact on mental health of student-athletes at the Division III level (NCAA, 2022), having fewer academic supports for student-athletes would likely increase mental health concerns and decrease resilience. For example, it is not uncommon to hear of academic tutors and advisors who travel with Division I athletic teams to support student-athletes; however, these types of support are not available at Division III institutions.

Another factor supporting mental health is the athletic departments and coaches it employs. As identified from NCAA (2022) research, only 39% of queer spectrum student-athletes reported feeling that student-athlete mental health was a priority to the athletics department. At smaller institutions, not only are athletic departments much smaller, but also have fewer coaches for sports. For example, at religious Division III schools, it is not uncommon to have many athletic department employees who carry multiple administrative responsibilities for several different sports. In addition, many coaches at smaller religious schools work part time and have other jobs on campus or in the local community. Sometimes these multifaceted positions make it difficult to engage more effectively with student-athletes outside of showing up for practices and games. Coaches and administrators in these scenarios would be hard-pressed to prioritize college student-athletes' mental health.

The results of the study underscores the need for higher education institutions to consider a multifaceted approach that supports and promotes resilience among all student-athletes, particularly those from marginalized or minoritized backgrounds. Additionally, institutions should provide resources and support for student-athletes with lower pre-college resilience levels

to promote their overall well-being and success in college. The study highlights that while institutional type impacts student-athletes' resilience, pre-college resilience levels are ultimately a much stronger predictor. Therefore, promoting resilience among student-athletes should involve addressing environmental factors and providing them with resources and support to develop their resilience skills early in their higher education career. In summary, this study suggests that student-athletes' college resilience levels are influenced by factors such as institutional type and demographic variables.

### **Implications and Recommendations for Practitioners**

This research will have a number of implications for intercollegiate athletic departments at religious institutions. First, athletic departments can utilize the results of this project as a part of an identification and planning process to support programs that enhance the resilience and overall wellbeing of student-athletes at their institutions. Given that student-athletes' pre-college resilience is one of the stronger predictors of student-athletes' resilience in college, it is important for athletic department administrators, coaches, academic advisors, and other staff who are seeking to improve student-athletes' resilience to first gauge the resilience levels of student-athletes when they first enter the institution. Next, athletic department administrators, coaches, academic advisors, and other staff can work alongside college student-athletes who have lower levels of resilience at their immediate enrollment and work to build student-athletes' resilience during their first year.

Second, the retention of student-athletes continues to be a critical part of the enrollment management plans for nearly all institutions, but even more so for smaller institutions that rely on a high percentage of student-athletes for the majority of their student enrollment. As the mental health crisis among college students grows after the pandemic and the increasing number

of college students who seek mental health services, increasing resilience and other prosocial behaviors must be considered as ways to enhance college student wellbeing. By increasing and improving resilience through relationships with faculty and staff on a college campus, overall student wellbeing should improve and the need for mental health services should decrease.

This study examined the resilience levels of student-athletes at religious higher education institutions compared to secular higher education institutions. Administrators, faculty, and staff who are employed at religious higher education institutions, have the opportunity to intervene and provide opportunities and specific programming directed at ways to improve resilience. By serving these student-athletes and providing effective ways to increase their resilience, these employees have provided an experience that will serve these student-athletes long after graduation.

Institutions can also consider implementing resilience-building programs and interventions as part of their enrollment management plans to improve overall student wellbeing, particularly in the wake of the COVID-19 pandemic. By taking a proactive approach to promoting student-athletes' resilience, higher education institutions will be better equipped to address the growing mental health crisis among college students.

Based on survey findings of this study, coaches along with academic and athletic administrators at religious-affiliated institutions must take action to improve student-athletes' resilience. A review of the literature does indicate some successful efforts are being made to improve resilience for college-student athletes. For example, Sullivan et al. (2023) found that a four session, group training program covering mindfulness, cognitive-behavioral therapy, coping skills, and positive psychology did have a significant positive impact on student-athletes' intention to use adaptive coping strategies. While student-athlete knowledge did not increase in

those areas, the intention to engage and implement these resilience-building activities is much more important than increasing knowledge.

Other resilience-building programs found positive results from a ten-hour summer program where Division I athletes received strengths-based resiliency training on the topics of active coping, building strength, increasing cognitive awareness, and facilitating social support (Chandler et al., 2020). Interestingly, those student-athletes who had experienced Adverse childhood experiences during their younger years benefited at a higher level when compared to student-athletes who had not experienced adverse childhood experiences. Additionally, the RESET (Resilience and Enhancement in Sport, Exercise, & Training) online training program found positive results as student-athletes increased self-compassion, decreased self-criticism and improved on perceived performances in only six meetings (Kuchar et al., 2023).

Even though student-athletes have resiliency-building activities built into their day, such as social interaction and support, physical activity, ie structure, some describe being a student-athlete as regularly being told what to improve on and what they need to learn (Chandler et al., 2020). This mindset makes it a challenge to accept and engage in positive psychology training, which was an important part of the training accessed by Chandler et al. Regardless, benefits from these programs must rise to the top of the needs list for university administrators, both academic and athletic. These resiliency-building interventions and initiatives will likely have a more lasting impact on student-athletes than a new competition arena or practice facility.

Athletic administrators must advocate and inform other campus leaders about the importance of training student-athletes with coping strategies and other resilience-building tools will not only help athletically, but also encourage student-athletes to deal effectively with

academic stressors (Sullivan et al., 2023). Consequently, resilience-building initiatives will positively impact the university currently and the lives of graduates in the future.

Also, given the brief, repeatable nature of these resiliency-building training programs, the financial cost to deliver these or similar programs appears minimal when compared to the cost of the construction of new facilities, adding coaches, scholarship monies for student-athletes, etc. The benefits of these resilience-building programs clearly appear to outweigh the cost of these programs. Since an institution of higher education's mission is to grow and nurture cognitive development, athletic administrators, coaches, and other university personnel must focus on the benefits of participation in resiliency-building initiatives. It would be immoral and unethical for coaches to make recruiting decisions solely based on resiliency traits and positive mental health. Therefore, the development of resilience-building programs and interventions for student-athletes must be incorporated into the overall athletic experience.

Moreover, given the mental health crisis that has arisen due to the pandemic, it is imperative that college campuses prioritize programs and initiatives aimed at promoting resilience-building behaviors among their students. The recommendations suggested by this study are particularly relevant for religious higher education institutions—they can leverage their unique programming and values to create specific opportunities aimed at building resilience among student-athletes. In conclusion, higher education institutions must acknowledge the importance of student-athletes' resilience and take proactive measures to promote it. In order to fully comprehend the extent to which various factors influence student-athletes' resilience levels, future research could incorporate qualitative methods such as interviews or focus groups. Further collaboration with mental health experts is necessary to design specialized interventions aimed at addressing the specific needs of student-athletes.



Limited empirical evidence suggests that resilience is inversely related to mental ill-health in athletes, and academic success is enhanced by higher levels of resilience. Student-athletes are particularly vulnerable to stressors that are unique to their dual role in sports and academics, highlighting the need for resilience-building interventions. To achieve high levels of athletic success, it is essential that activities and strategies aimed at promoting psychological resilience are included in training programs. This can be achieved by helping student-athletes realize that their goals are achievable despite the challenges they may encounter, and implementing interventions to enhance mental health outcomes. Furthermore, future resilience programs targeted towards student-athletes should educate them on coping strategies that are adaptive and effective in handling stress. Incorporating resilience-building programs and interventions into the overall athletic experience is crucial for student-athletes.

One promising intervention that has been demonstrated to be effective in building mental health literacy and resilience among student-athletes is the utilization of coping strategies. These strategies can aid student-athletes in managing stressors related to both academics and sports. Future resilience training programs aimed at student-athletes should focus on providing them with a repertoire of coping strategies that can enable them to deal with academic and athletic stressors effectively. Moreover, interventions should be designed to promote social support among student-athletes, which has been shown to play a crucial role in promoting positive adaptation to stressors. Interventions aimed at enhancing social support can involve training coaches, fostering team building exercises and improving communication and relationships among team members. In addition to coping strategies and social support, the use of mental health education can also be beneficial in promoting resilience among student-athletes. By educating student-athletes about the importance of mental health and providing them with

knowledge on how to care for their mental well-being, they are better equipped to manage stress related to their dual roles as student-athletes. Overall, it is crucial that resilience-building interventions are incorporated into the athletic experience for student-athletes.

These interventions can serve to enhance athletic performance, promote psychological resilience, and improve mental health outcomes. One effective approach that can be utilized to build psychological resilience among student-athletes is the development of psychological skills. Incorporating psychological skills training into athletic training programs may aid in building resilience by teaching student-athletes how to effectively handle pressure, distractions, and setbacks. Furthermore, the development of resilience can be enhanced by helping student-athletes realize that their goals are achievable despite any stress or obstacles they may face.

### **Recommendations for Researchers**

Overall, understanding the complexities of how institutional type and demographic variables impact resilience levels among student athletes is crucial not just for retention efforts but also long-term success beyond graduation. As such, further exploration of these issues through continued research will be critical in developing strategies best suited for meeting this challenge head-on within higher education systems across diverse regions globally. In addition to supporting student-athletes, this research study identified several other groups that tend to have lower levels of resilience. Research has indicated that lower resilience impacts overall student wellbeing and administrators, faculty, and staff have opportunities to embrace these groups and have a lasting impact on their futures long after the college experience has been completed.

To fully understand the factors that influence student-athletes' resilience levels, it is important to delve deeper into the data collected in this study. Future research can incorporate qualitative methods such as interviews or focus groups to gain more in-depth insights from

student-athletes themselves. Moreover, intercollegiate athletic departments and higher education institutions can benefit from collaborating with mental health experts to design specialized interventions tailored to student-athletes' specific needs. It is important to discover why student-athletes at religious institutions have a lower resilience compared to student-athletes at secular institutions and whether institutional programs or the organizational context contributes to those differences in students' resilience.

The results of the research indicates that Native Hawaiian or Pacific Islanders have a significantly higher level of resilience when compared to other student-athlete groups. This is a notable finding and further research exploring the connection between this population, student-athletes, and resilience should be conducted. While past researchers (Carlton et al., 2006) have indicated that physical fitness was a stronger resilience factor for Native Hawaiians than non-Hawaiians, the connection and involvement with intercollegiate athletics has not been clarified. Similarly, achievement and family support have also been noted as a strong resilience factor for Native Hawaiians (Carlton et al., 2006). The interplay among achievement, family support and intercollegiate athletics provides another opportunity for researchers to examine resilience and student-athletes. All of this research could enhance student-athlete recruiting as coaches seek to fill their rosters with resilient student-athletes.

The study on student-athletes' resilience levels sheds light on a critical issue faced by higher education institutions. However, there is an opportunity to delve deeper into the psychological factors that contribute to resilience and how they can be influenced positively for the benefit of student-athletes. Qualitative research methods such as in-depth interviews or focus groups could provide insights into the lived experiences of student-athletes, particularly those from marginalized communities who may encounter additional barriers in navigating college life.

Furthermore, collaboration with mental health experts can lead to more effective interventions tailored towards addressing specific needs. Such interventions should not only aim at promoting resilience levels but also foster an environment that supports overall well-being. In summary, the research indicates that Native Hawaiian or Pacific Islander student-athletes display higher resilience levels than other groups of student-athletes. While Native Hawaiians or Pacific Islanders student-athletes showed higher resilience levels than other athlete groups studied here, little is known about why this group fares better despite facing systemic challenges similar to other minoritized ethnicities. Further exploration of this connection and involvement with intercollegiate athletics, achievement, family support, and psychological factors should be conducted to gain a better understanding.

The potential implications of this research are significant, as they could inform the development of effective interventions designed to support student-athletes from all backgrounds. Moreover, a better understanding of the factors influencing student-athlete resilience could help institutions recruit and retain athletes who possess these critical qualities.

The present findings offer broad support to the grounded theory of psychological resilience and optimal sport performance, suggesting that psychological factors play a crucial role in athletes' challenge appraisal and metacognitions. The process of resilience appears to be complex and influenced by a range of psychological factors. In particular, research suggests that resilience is positively related to sports performance and psychological well-being but negatively related to psychological disorders. Given the positive effects of resilience on student-athlete performance and well-being, it is essential to investigate interventions that can foster its development.

Collaboration with mental health experts to design tailored interventions may be particularly effective in this regard. These interventions could focus on promoting mental health and building resilience among student-athletes. Additionally, incorporating psychological skills training and resilience-building activities in student-athlete training programs could also be beneficial. In conclusion, student-athletes' resilience is a crucial factor that influences athletic performance and psychological well-being. Although there is limited empirical evidence on the relationship between student-athlete resilience and mental ill-health, research suggests that higher levels of psychological resilience are associated with better academic performance, reduced mental health issues and improved sports performance. To fully understand the impact of resilience on student-athlete success, more research needs to be conducted on various factors influencing this construct. Moreover, strategies to enhance psychological resilience in student-athletes should be investigated and implemented to support their athletic success and overall well-being. The present findings support the importance of promoting student-athlete resilience to enhance athletic performance and well-being.

In order to retain student-athletes who possess critical qualities, it is crucial to focus on promoting their psychological resilience. Psychological resilience is a complex construct that plays a crucial role in enhancing athletic performance and the psychological well-being of student-athletes. Research has shown a positive relationship between resilience and sports performance, as well as overall psychological well-being. Furthermore, resilience has been found to have a negative relationship with psychological disorders. Despite the limited empirical evidence in this area, it is important to note that research has demonstrated a performance-enhancing effect of resilience on student-athletes.

Therefore, there is a need for collaboration between sports and mental health experts to design tailored interventions that cater to the unique needs of student-athletes. In order to promote student-athlete resilience, training programs should incorporate activities that develop psychological skills and enhance resilience. These activities could include strategies that help athletes overcome adversity and setbacks, as well as exercises that promote positive thinking, mindfulness, and emotional self-regulation. Moreover, it is essential for coaches to create an environment that fosters psychological resilience and well-being. Training programs should educate student-athletes about effective coping strategies that can be used to deal with both academic and athletic stressors. In addition, research has also suggested that the use of cognitive behavioral therapy and positive psychology techniques may be effective in promoting resilience among student-athletes. Future research should focus on identifying the most effective interventions for promoting psychological resilience in student-athletes.

In conclusion, psychological resilience is a critical factor that plays an important role in promoting athletic success and overall well-being of student-athletes. Training programs designed to enhance student-athlete resilience should incorporate activities that develop psychological skills, promote effective coping strategies and foster a positive environment that supports the personal growth and psychological well-being of student-athletes. Such training programs require a collaborative effort between sports and mental health experts, and coaches should create an environment that fosters resilience among student-athletes.

### **Concluding Comments**

This study aimed to examine the impact of attendance at a religious higher education institution or a secular higher education institution and resilience in student-athletes. Students are the heart and soul of every college or university. Student-athletes play a critically important role

within the institution as sports are often considered the “front porch” of an institution. This exposure to the community, fan base, media, faculty, and staff notably impacts the institution’s perception. Based on being high-profile representatives of the institution, improving student-athletes' resilience and well-being is paramount.

While the regression analysis results suggest that student-athletes who attended religious institutions have statistically significant ( $p < 0.05$ ) and lower resilience than student-athletes who attended secular institutions, further research on this finding needs to be conducted. Researchers should, however, encourage university administrators and other decision-makers in religious higher education institutions to increase support for student-athlete wellbeing by implementing programming and interventions that increase resilience. Not only will increasing resilience in student-athletes increase the student-athlete experience, but it could also likely result in more wins, success, and, consequently, a more positive reputation for the college and university.

In conclusion, promoting student-athletes' resilience is essential for ensuring positive academic and personal outcomes (Sorkilla et al., 2018). Furthermore, it is important to recognize that resilience levels may vary among different ethnic groups of student-athletes, and further research should be conducted.

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## Appendix A

### IRB Approval



**BETHEL**  
UNIVERSITY

Institutional Review Board  
3900 Bethel Drive  
PO2322  
St. Paul, MN 55112

March 27, 2023

Thayer Trenhaile  
Bethel University  
St. Paul, MN 55112

Re: Research Project: *Student-athletes' Emotional Health at Religious and Secular Higher Education Institutions*

Dear Thayer Trenhaile,

On March 27, 2023, the Bethel University Level Two Institutional Review Board completed the review of your proposed study and approved the above referenced study.

Please note that this approval is limited to the project as described on the most recent Human Subjects Review Form documentation, including email correspondence. Please be reminded that it is the responsibility of the investigator to bring to the attention of the IRB Committee any proposed changes in the project or activity plans, and to report to the IRB Committee any unanticipated problems that may affect the welfare of human subjects. The approval is valid until March 26, 2024.

Sincerely,



Safary Wa-Mbaleka, EdD, PhD  
Chairperson, EdD in Leadership Level Two IRB Committee

## Appendix B

### MSL Approval



Correia-Harker, Ben

to me, Krista ▾

Mar 14, 2023, 10:26 AM (4 days ago)



Hello Thayer,

I'm happy to inform you that your request has been approved! Please complete following steps in order to fulfill this request:

- For the data access fee, please make a \$500 check payable to "Multi-Institutional Study of Leadership, LLC". Please do not place any information in the "memo line" of the check.
  - Mail checks to:

Multi-Institutional Study of Leadership, LLC

c/o John Dugan

710 W Bittersweet Place, Unit 1

Chicago, IL 60613

- The primary method of data transference is through Dropbox. Please send an email to me that includes the email address associated with your Dropbox account.
- Please ensure all necessary variables have been included in your study proposal. Once data has been provided, any requests for additional variables or modifications to the proposed study that require data to be re-cut may result in additional fees.
- Sign and return a scanned copy of the MSL Data Use Parameters (attached) and IRB approval/exemption documentation to me.

Please note data will not be shared until the aforementioned items have been addressed and will take approximately two to three weeks for processing. Should you have any questions or concerns, please feel free to contact me.

Best,

Ben

Benjamin P. Correia-Harker, Ph.D.  
Clinical Assistant Professor, Student Affairs in Higher Education  
Educational Policy & Leadership  
College of Education  
Marquette University  
Schroeder Complex, 113G  
Milwaukee, WI 53233  
414.288.3150

Co-Principal Investigator, [Multi-Institutional Study of Leadership](#)

#### Office Hours

[Book time with Correia-Harker Ben](#)