Examining Perceived Life Stress Factors among Intercollegiate Athletes: A Holistic Perspective

A Dissertation Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Landon Tyler Huffman
May 2014

Copyright © 2014 by Landon T. Huffman
All rights reserved.

DEDICATION

To my wife,

Tabatha Blair Fox Huffman

CCCV

my best four-legged friend,

Zorro

and my family…

Cheryl

Earl

Tavia

Emily

…those with us as well as those we await to be united.

ACKNOWLEDGMENTS

First and foremost, it is essential to acknowledge the Name above all names as the ultimate source of life, purpose, guidance, inspiration, motivation, passion, and joy underpinning all of life's pursuits. It was a blessing to feel comforted by this Divine and supernatural peace while navigating the challenges associated with this professional trajectory – I've never walked alone.

What an unbelievable journey. As with any task worth pursuing the outcome is not the product of simply one individual. Although this manuscript is among the final requirements for my doctoral studies, it is worth acknowledging the past three years collectively as my experiences during this time have contributed significantly to my personal and professional growth and development.

The path leading to this point in time began with heartfelt conversations with my wife and best friend Tabatha. ***To Tab*** – you personify what it means to sacrifice and be a rock of support for our family. I admire and appreciate your commitment to our relationship and obedience to callings in our life. I appreciate your loving touch and words of affirmation when holding me accountable to maintaining my work/life balance. This required steady perseverance and patience from you as well as daily reflection and self-discipline from me which will pay dividends throughout our seasons of life together.

To my immediate and extended family as well as friends and church community near and afar – thanks for being consistent sources of encouragement. Do not underestimate the power of your encouragement in my life. Regardless of our circumstances you all have challenged me to pursue my passions with excellence while never abandoning my faith and core values. I treasure your prayers for me and my family as well as our many conversations from miles apart. I cherish

our memories and look forward to the moments we will share. I may be a Tar Heel born and bred but I'm proud to be a VFL!

While this process literally began with my family, it was the efforts of my advisor, Dr. Rob Hardin, committee members, and core group of faculty members in the Department of Kinesiology, Recreation, and Sport Studies which directly impacted my growth.

To Rob [cue the walk-up music] – it is an understatement to say your mentorship as an advisor has been worthwhile from day one. Your creative ideas and healthy push-back helped refine my core values as a researcher, instructor, and scholar. Thanks for taking time to lead by example, invest in me, and help me develop my "brand." It goes without saying I cherish your friendship and the discourse we have exchanged throughout the past three years.

To my committee members – Dr. Steven Waller, Dr. Rebecca Zakrajsek, and Dr. Russell Zaretzki – I appreciate you devoting extensive time, energy, and effort to critiquing all elements of this study from conception to defense.

To Dr. Waller – since my first visit in Knoxville it was evident you would also play a pivotal role in my holistic maturity. Some of my most memorable moments in HPER were our discussions in the hallway and in the chair adjacent to your desk. I'm honored and humbled that your fingerprint is prevalent in this document, my research agenda, and most importantly my life as a man, husband, and father.

To Dr. Z. – I thank you for modeling what it takes to be a solid interdisciplinary colleague. You enthusiastically stepped away from your comfort zone because you believed in me as a person. Your expertise challenged me to view the subject matter from a different perspective which I am confident resulted in a stronger, well-informed study.

To Dr. Zaretzki – I cannot thank you enough for serving as an invaluable piece to this research and forcing me to explore implications and opportunities through yet another lens. Through your instruction I have been fortunate to attain a valuable skillset which will help me achieve my personal and professional goals.

Similarly, I would be remiss if I neglected to acknowledge ***Dr. Tom Ladd*** – thank you for introducing me to structural equation modeling and carving time from your busy schedule on multiple occasions to offer statistical analysis guidance.

There are several other notable individuals to express my gratitude including Mr. Jim Bemiller, Dr. Joy DeSensi, and Dr. Lars Dzikus.

To Mr. Bemiller – thanks for demonstrating your leadership and providing me the privilege to be an integral part of Partners in Sports. I have been fortunate to cultivate many relationships with bright students and exemplary professionals based on our interactions and the strength of Partners.

To Dr. DeSensi – I will forever be indebted to your service and commitment to inclusive excellence. You have a remarkable and infectious passion for people which I aspire to extend to students I mentor and advise.

To Lars – you have opened my eyes to how effective teaching and learning is fostered. I appreciate you sharing your teaching philosophy and approach to the classroom environment. You are a bright mind and have a gift to assess and appropriately question issues and phenomena unlike anyone I have ever encountered.

To all of the numerous other ***KRSS faculty and staff*** – including Dr. Buck Jones, Dr. Jeffrey Fairbrother, Dr. Dixie Thompson, Dr. Sylvia Trendafilova, Dr. Bob Reich, Mr. Larry Brown, Ms. Margy Wirtz-Henry, Dr. Gene Fitzhugh, Dr. Leslee Fisher, Dr. Gene Hayes, Dr. Sarah

Hillyer, Dr. Ashleigh Huffman, Dr. Angela Wozencroft, Ms. Lynnetta Holbrook, Ms. Sarah Bicknell, and Ms. Jane Johns – you have been a pleasure to interact with. You mean much more than this brief acknowledgment and I wish you all the best.

To Dr. Brody Ruihley and ***Dr. Adam Love*** – thank you for extending a welcoming hand, listening ear, and wise advice. You model what it takes to be successful scholars and have helped pave the way for those matriculating after you to meet our personal and professional goals.

To Dr. Josh Pate – you are wise beyond your years and taught me what living life to the fullest truly looks like. Your bold and courageous attitude to chase after your dreams continues to inspire me.

To Dr. Tim Mirabito – thanks for guiding me along from the moment I first stepped foot on campus through the job search process. My philosophical approach to holistic care will always contain a "Mirabito flavor" based on our dialogue while I was dominating you in hoops! I respect and value your unique insights and always look forward to our conversations.

To Julie and Allison – thanks for being sources of support for Tabatha during our transition to Knoxville. You possess welcoming spirits and made us feel at home immediately.

To Dr. Sarah Stokowski – your passion for seeking answers to the tough questions is admirable. Thanks for demonstrating the courage to bring these issues to light.

To my colleagues and peers – Cheryl Rode and family, Josh Bowles, Lizzy Taylor, Hal Wilson and family, Nalani Butler, Victor Martin, Marcus Amos, and Alicia Johnson, and LeQuez Spearman – thanks for being a sounding board to commiserate and celebrate together! Each of you are at different stages of your studies and career but I want to take a moment to encourage you – rest assured you all have chosen the right path, wherever it may take you. May

you be comforted knowing you are fulfilling your purpose to enhance students' lives and impact the sport enterprise in a positive manner, leaving it better than you found it.

TCB

Proverbs 3: 5-6

ABSTRACT

The National Collegiate Athletic Association (NCAA) subscribes to the principle of intercollegiate athlete well-being (Article 2.2) which includes health and safety (Article 2.2.3). However, intercollegiate athletes, particularly those competing in arguably the most competitive level of intercollegiate athletics (i.e., NCAA Division I Football Bowl Subdivision [FBS]), are exposed to unique stressors which may compromise their well-being. One dimension which has been received less frequent investigation in the context of athlete welfare is that of spirituality. In lieu of the unique intercollegiate athletic environment and stressors, it is critical to investigate the relationships between the spiritually-related characteristics, specifically religiosity, resiliency, and perceived stress to gain a holistic understanding of athlete wellness.

This study employed survey methodology by emailing intercollegiate athletes competing in the Southeastern Conference (SEC) (N = 6,950). Athletes' emails were gathered from their respective university's online public directory. Each intercollegiate athlete was individually emailed inviting him/her to participate in the study. Religiosity was measured using the Duke Religion Index, resiliency was measured with the Brief Resilience Scale, and perceived stress was measured using the Perceived Stress Scale. Additional independent variables social support, athletic identity, and resiliency were measured to provide context to the results.

Structural equation modeling (SEM) was utilized to analyze the relationships between religiosity, resiliency, social support, athletic identity, and perceived stress among SEC athletes based on the theoretical frameworks proposed by Williams and Andersen (1998) and Wiese-Bjornstal, Smith, Shaffer, and Morrey (1998). Confirmatory Factor Analysis (CFA) and SEM techniques revealed good model fit among respondents (n = 646; *CMin* = 1474.34 at 724 *df*; *CFI*

= 0.949, *RMSEA* = 0.040, *pclose* = 1.00). Specific relationships comprising the model are discussed in the manuscript.

Results from this study provide context for offering resources intended to meet the holistic needs of intercollegiate athletes and help them effectively manage life stress and life transitions. Athletic administrators and coaches are encouraged to incorporate a spiritual health advisor, such as a sport chaplain, within their athlete well-being model.

Key words: Holistic care, intercollegiate athletics, religiosity, resiliency, stress

TABLE OF CONTENTS

CHAPTER I: INTRODUCTION 1

History of Athletics in Higher Education 1

A shaky start 1

Regulating intercollegiate athletics 2

The rise of commercial influences 3

The Contemporary Intercollegiate Athlete 5

Commodification of intercollegiate athletes 5

Holistic Care of Intercollegiate Athletes 8

Life Stress and Intercollegiate Athletes 9

Illness and injury 11

Managing Stress 12

Coping 12

Coping and resiliency 13

Resiliency and religiosity 13

Topic Relevance 15

Purpose 16

Operational Definition of Terms 16

Note on Tables and Figures 20

CHAPTER II: REVIEW OF LITERATURE 21

Life Stress 21

Life stress and collegiate students 26

Life stress and collegiate military students 30

Life stress and intercollegiate athletes 31
Measuring Life Stress 39
Measures focusing on symptoms of life stress 39
Measures focusing on incidence of life stress 40
Measure focusing on overall perception of life stress 44
Managing Stress 45
Coping 50
Resiliency 51
Resiliency vs. recovery 53
Resiliency vs. hardiness 54
Resiliency vs. positive coping 56
Resiliency described as a trait vs. process vs. outcome 57
Toward an operational construct of resiliency 58
Contemporary conceptual framework of resiliency 60
Measures of resilience 63
Resiliency and religiosity 65
Religiosity and Spirituality 65
Religiosity 65
Spirituality 67
Choosing a construct 70
Religiosity and Stress Management 71
Religiosity and negative coping 73
Religiosity and positive coping 73

Religiosity and Spirituality among Intercollegiate Athletes 75
Measures of Religiosity 80
Duke University Religion Index (DUREL) 80
Santa Clara Strength of Religious Faith Questionnaire – Short Form (SCSRFQ-SF) 81
Holistic Care within the Educational Experience 82
Holistic Care Models 83
Prisons 83
Healthcare 86
Military 90
Law enforcement 97
Best Practices for Holistic Care in Intercollegiate Athletics 98
Qualifications 98
Job responsibilities 99
Philosophical framework 100
Funding 102
Shift in ethos 103
Visual representation of holistic care model for intercollegiate athletic departments 104
CHAPTER III: METHODOLOGY 107
Survey 107
Religiosity 107
Resiliency 108
Perceived life stress 109
Perception as a common denominator 112

Demographics 113
Ancillary Measures 113
Social support 113
Athletic identity 114
Socioeconomic status 115
Sample 115
Geographical representation 116
Sport participation representation 116
Procedure 117
Statistical Analysis 119
Chapter III Tables and Figures 120
CHAPTER IV: RESULTS 121
Sample Demographics and Descriptives 121
Confirmatory Factory Analysis 126
Apriori CFA model 126
RQ 1: Model Fit 137
RQ 2: Interdependent Relationships Among Primary Variables 144
RQ 3: Interdependent Relationships Among Ancillary Variables 147
CHAPTER V: DISCUSSION 149
Interdependent Relationships Among Primary Variables 149
Religiosity and perceived life stress 149
Religiosity and resiliency 152
Resiliency and perceived life stress 153

Interdependent Relationships Among Ancillary Variables 154

Religiosity and ancillary variables 155

Resiliency and ancillary variables 156

Alternative Theoretical Model 157

Implications for Athletic Administrators and Coaches 160

Implications for Spiritual Health Advisors 166

Limitations 171

Future Research 174

Conclusion 177

REFERENCES 179

APPENDICES 214

Appendix A: Resilience Definitions and Summaries 215

Appendix B: IRB Approval 219

Appendix C: Email to Director of Operations 220

Appendix D: Email to Intercollegiate Athletes 221

Appendix E: Online Questionnaire 222

VITA 227

LIST OF TABLES

Table 1.1 *Outline of Common Stressors of Intercollegiate Athletes* 10

Table 2.1 *The 15 Scales of the COPE Inventory* 52

Table 2.2 *Descriptors Illustrating Polarization of Religion and Spirituality* 72

Table 2.3 *Summary of Healthcare Chaplain Interventions* 91

Table 2.4 *Supporting Evidence for General Benefits of Spirituality* 95

Table 4.1 *Basic Demographic Profile and Descriptives of Respondents* 122

Table 4.2 *Descriptive Statistics of Athletic Participation of Respondents* 123

Table 4.3 *Descriptive Statistics of Religiously-Affiliated Attributes of Respondents* 124

Table A.1 *Definitions of Resiliency* 215

Table A.2 *Summary of Resilience Theories* 216

LIST OF FIGURES

Figure 2.1. Stress and injury model (Williams & Andersen, 1998). 47

Figure 2.2. Integrated model of psychological response to the sport injury and rehabilitation process (Wiese-Bjornstal et al., 1998). 48

Figure 2.3. Holistic Transactional Stress Model. 49

Figure 2.4. Prototypical trajectories of disruption in normal functioning during the 2-year period following a loss or potential trauma (in Bonanno, 2005, p. 136). 55

Figure 2.5. Richardson and colleagues' (1990) resiliency model. 59

Figure 2.6. A grounded theory of psychological resilience and optimal sport performance (Fletcher & Sarkar, 2012, p. 672). 62

Figure 2.7. Holistic care model for intercollegiate athletic departments 106

Figure 3.1. Theoretical model tested. 120

Figure 4.1. Apriori measurement model for religiosity. 127

Figure 4.2. Apriori measurement model for resiliency. 128

Figure 4.3. Apriori measurement model for social support. 129

Figure 4.4. Apriori measurement model for athletic identity. 130

Figure 4.5. Apriori measurement model for perceived life stress. 131

Figure 4.6. Abbreviated apriori CFA measurement model (comprised of Figure 4.1 through Figure 4.5). 132

Figure 4.7. Refined measurement model for religiosity. 138

Figure 4.8. Refined measurement model for resiliency. 139

Figure 4.9. Refined measurement model for social support. 140

Figure 4.10. Refined measurement model for athletic identity. 141

Figure 4.11. Refined measurement model for perceived life stress. 142

Figure 4.12. Abbreviated refined CFA measurement model (comprised of Figure 4.7 through Figure 4.11). 143

Figure 4.13. Abridged structural model tested (comprised of Figure 4.7 through Figure 4.11). 145

Figure 4.14. SEM analysis of apriori structural model with standardized regression weights. . 146

Figure 5.1. Alternative theoretical model and accompanying SEM analysis..... 158

Figure 5.2. SEM analysis of apriori structural model with standardized regression weights. ... 159

Figure 5.3. Holistic care model for intercollegiate athletic departments. 161

CHAPTER I: INTRODUCTION

History of Athletics in Higher Education

The National Collegiate Athletic Association (NCAA) is currently the most prominent organization for intercollegiate athletics in the United States. In its most recent participation report, the NCAA noted more 460,000 students participated in championship-sponsored sports at more than 1,000 universities (Irick, 2013). However, before elaborating on the current state of the intercollegiate athlete, it is appropriate to offer a brief history of athletics in higher education in order to better provide context to modern day intercollegiate athletics.

A shaky start. The relationship between recreation and athletics in the United States' model of higher education has a turbulent history. In the 19th century, faculty questioned students' involvement in recreation and intramurals as an unproductive distraction (Covell & Barr, 2010). However, as its popularity grew colleges and universities began to adopt the classical motto *Mens sana in corpore sano* – a sound mind in a sound body – and contemporary intercollegiate athletics remains firmly rooted in this ideal (Branch, 2011).

Furthermore, university officials recognized recreation and sport provided many benefits for its university such as promoting a sense of community and pride among students, faculty, alumni, and local supporters (Huffman & Cooper, 2012; Mixon, Trevino, & Minto, 2004). Crowley (2006) posits intercollegiate athletics and higher education should support one another, not present a dichotomy. However, ever since the first intercollegiate athletic contest between Harvard and Yale in 1852 (a rowing match), the purpose, mission, and values of intercollegiate athletics has been questioned and scrutinized, particularly regarding its place within higher education.

Regulating intercollegiate athletics. During the first 55 years of intercollegiate athletic participation, few governing bodies emerged to regulate rules, much less safety, among participants. Non-students were frequently recruited and/or hired to compete on behalf of the university, and it was not uncommon for local businesses to shower the winners with awards, cash, and benefits (Covell & Barr, 2010; Crowley, 2006; Gerdy, 1997, 2006; Jozsa, 2013; Oriard, 2009; Rader, 2008; Smith, 1990, 2011; Sperber, 1990, 2000; Stokowski, 2013; Yost, 2010). Also, many intercollegiate athletes suffered injuries, and the death toll caused by football-related hits and injuries was unsettling and garnered public attention, reaching the president of the United States.

In 1905, President Theodore Roosevelt ultimately convened several university representatives to reform intercollegiate athletes to curb injuries and deaths (Covell & Barr, 2010; Crowley, 2006; Gerdy, 1997, 2006; Jozsa, 2013; Oriard, 2009; Rader, 2008; Smith, 1990, 2011; Sperber, 1990, 2000; Stokowski, 2013; Yost, 2010). One outcome of these meetings was the formation of the Intercollegiate Athletic Association of the United States in 1906, which would later change its name to the National Collegiate Athletic Association (NCAA) in 1910 (National Collegiate Athletic Association, 2012). Members of the NCAA quickly agreed on uniform rule changes which sought to curb violence, regulate amateurism, and reduce professional activity (Covell & Barr, 2010; Crowley, 2006; Gerdy, 1997, 2006; Jozsa, 2013; Oriard, 2009; Rader, 2008; Smith, 1990, 2011; Sperber, 1990, 2000; Stokowski, 2013; Yost, 2010). These areas of reform were rooted in the notion of a level playing field and athlete welfare, but throughout the first century of the NCAA's existence adherence to the values of welfare have been critiqued due to the influences of commercialism which have crept into

intercollegiate athletics (Gerdy, 1997, 2006; Jozsa, 2013; Oriard, 2009; Rader, 2008; Smith, 1990, 2011; Sperber, 1990, 2000; Stokowski, 2013; Yost, 2010).

The rise of commercial influences. Intercollegiate athletic success in the latter half of the 20th century, particularly from football and men's basketball, provided notoriety for universities (Anderson, 2012; Humphreys & Mondello, 2007; Pope & Pope, 2009). Authors have described an athletic department as the proverbial "front porch" of its university due to the fact it is highly visible in the media to the public and has the capability of shaping the perceptions of a university (Fisher, 2009; Huffman & Cooper, 2012). This visibility and notoriety has resulted in increased educational contributions and prospective student applications, which in turn manifested itself into an arms race consisting of hiring professional coaches, constructing state-of-the art facilities, lowering academic standards for athletes, and offering distinctive resources for the sake of attracting, and enrolling, top performing athletes (Anderson, 2012; Covell & Barr, 2001; Covell & Barr, 2010; Crowley, 2006; Gerdy, 1997, 2006; Gurney, Tan, & Winters, 2010; Humphreys & Mondello, 2007; Jozsa, 2013; Oriard, 2009; Pope & Pope, 2009; Rader, 2008; Smith, 1990, 2011; Sperber, 1990, 2000; Stokowski, 2013; Yost, 2010). Authors have suggested this increase in commercial influences has led to the commodification of intercollegiate athletes (Byers & Hammer, 1995; Coakley, 2008; Eitzen, 2011, 2012; Sage, 1998; St Louis, 2009; Van Rheenen, 2012; Zimbalist, 1999, 2006).

In addition to this increased focus and investment targeted toward recruiting prospective athletes, there was a trend for stadiums to increase seating capacity which produced increased revenues by charging admission (i.e., gate receipts). Moreover, the advent of television broadcasting introduced yet another lucrative temptation for universities to accept commercially-driven dollars and potentially compromising one of the NCAA's guiding principles of athlete

well-being outlined in Article 2.2 (Gerdy, 1997, 2006; Jozsa, 2013; National Collegiate Athletic Association, 2013, p.3; Oriard, 2009; Rader, 2008; Smith, 1990, 2011; Sperber, 1990, 2000; Yost, 2010). For instance, in 2010 the NCAA announced its 14-year, $10.8 billion contract with CBS Sports and Turner Broadcasting to broadcast the NCAA men's basketball tournament championship (National Collegiate Athletic Association, 2011). Furthermore, local, regional, and national retailers offered incentives and cash for universities to partner with them by engaging in various marketing efforts (Smith, 1990, 2011). On the one hand athletics received attention and additional revenue which trickled down to the athletes, but on the other hand teams trained extensively and traveled long distances, which competed with their academic studies. Crowley (2006), in his description of the history of the NCAA, commented,

> As the [NCAA] enters its second century, protecting the principle of educational primacy remains its most fundamental mission. Amateurism, and how to define or refine it, is still on the agenda. So are the challenges of commercialism, governance, academic integrity, financial uncertainty, diversity, external intervention, the role of television and the function of enforcement. The problems associated with recruiting and subsidizing that were formidable before the NCAA was established and that have compelled attention ever since, have not gone away" (p. 149)

Given the culmination of these dynamics, increased pressures and stressors were, and continue to be, exerted on intercollegiate athletes (Anderson, 2012; Covell & Barr, 2001; Crowley, 2006; Gerdy, 1997, 2006; Gurney et al., 2010; Humphreys & Mondello, 2007; Jozsa, 2013; Oriard, 2009; Pope & Pope, 2009; Rader, 2008; Smith, 1990, 2011; Sperber, 1990, 2000; Stokowski, 2013; Yost, 2010).

The Contemporary Intercollegiate Athlete

Throughout the previous two decades, the Knight Commission (1991; 2001; 2010; 2012) has suggested the monetary consequences of winning have resulted in misguided priorities of the educational mission of higher education. Although the NCAA subscribes to principles emphasizing intercollegiate athlete well-being (Article 2.2), the overall educational experience (Article 2.2.1), and health and safety (Article 2.2.3) (NCAA, 2013, p.3), the prevalent financial implications associated with athletic success (i.e., winning), particularly within the most competitive level of intercollegiate athletics (i.e., NCAA's Football Bowl Subdivision [FBS]) (Eitzen, 2011, 2012), has a tendency to blur to the lines of genuine holistic care versus commodification of an athletic skill-set.

Commodification of intercollegiate athletes. The process of recruiting, enrolling, and retaining (or conversely deselecting) intercollegiate athletes has been criticized for treating the individual as if he or she was a commodity, and in some cases easily disposed of, as winning can take priority over the health, safety, and well-being of intercollegiate athletes (Gerdy, 2006; Stokowski, 2013).

Recruitment. For many intercollegiate athletes their path to their university began differently than their non-athlete peers. It may have started when these individuals were participating on their high school and/or club teams a few years prior to enrolling at a university. For instance, long before intercollegiate athletes enroll at a university, their physical attributes are quantified, rated, and sold by recruiting services to university coaching staffs. These coaching staffs then target specific "commodities" from around the country and pursue them in hopes of securing their commitment to attend the university (Branch, 2011; Oriard, 2009; Zimbalist, 1999, 2006).

During this pursuit (according to Article 2.11 and Article 13; NCAA, 2013), coaches regularly contact prospects travel to the hometowns of these exemplary athletes, and/or host prospects on an all-expense-paid campus visit (i.e., official visit) attempting to convince them why their respective university and/or team were a good fit (Dumond, Lynch, & Platania, 2008). Prospective intercollegiate athletes are permitted to take up to five official visits to colleges of their choice (Article 13.6; NCAA, 2013), which coupled with coaches' national travel accounts for the majority of the $1 million recruiting budget of some university athletic departments (Office of Postsecondary Education, 2013). Ultimately the prospective intercollegiate athlete must synthesize all of the information presented from this multitude of sources and select a university which is the best fit for his or her holistic expectations (Huffman & Cooper, 2012)

Enrollment. The essence of collegiate enrollment involves the university extending an offer and the prospective student accepts the offer. However, most universities have specific academic criteria which must be met in order for a university to formally extend an offer, and these requirements can pose a roadblock in the athletic recruitment process. In fact, university administrators have been ridiculed for special treatment of intercollegiate athletes in the enrollment process. For instance, some universities have a committee whose purpose is to consider admitting students on a special case-by-case basis whose academic credentials are inferior to the incoming class, and a large majority of these "special admits" are indeed prospective students who have been targeted to participate on intercollegiate athletic teams (Covell & Barr, 2001; Gurney et al., 2010; Stokowski, 2013). It is important to note that a "special admit" label can differ widely from school to school depending on the nature of the average credentials of the incoming student.

From an athlete welfare perspective, it seems these individuals are provided worthwhile academic opportunities to pursue higher education which they would likely not receive if not for their athletic skill-set, but it also means intercollegiate athletes can be systematically exploited as a result of entering college underprepared academically and face the risk of academic ineligibility due to subpar academic performance once they are enrolled (Hawkins, 2010; Van Rheenen, 2012).

***Retention*.** Once intercollegiate athletes arrive on campus, there are athletic and academic demands which must be met in order for the individual to be retained, or else deselected, on an annual basis (Fernandez, Stephan, & Fouquereau, 2006; Lally, 2007). Athletes who have signed an athletic grant-in-aid (GIA) are responsible for meeting the expectations of the coaching staff (e.g., attending workouts, practices, film study, contests, travel) or risk being deselected from the team, subsequently forfeiting their athletic GIA (Coakley, 2008; Gayles, 2009; Gayles & Hu, 2009; Gerdy, 2006). Furthermore, intercollegiate athletes may feel pressured to play injured, compromising their long-term health, to avoid being deselected. If the intercollegiate athlete does not produce according to the expectations of the coaching staff, he or she can be deselected and replaced as if a mere ineffective commodity. The commodification of intercollegiate athletes will be elaborated upon later in this manuscript.

Within this context of commercialization of intercollegiate athletics and commodification of intercollegiate athletes, in recent years athletic administrators have shifted toward a trend promoting holistic care of intercollegiate athletes. This shift can either be perceived as a more ornate and structured system of commodification focusing on boosting performance, or as a genuine step toward reform and caring for the well-being of the individual. This research

approaches this recent trend from the perspective of the latter, and positions holistic care as a strategy to attend to the unique environment of intercollegiate athletics.

Holistic Care of Intercollegiate Athletes

Another line of research rightfully suggests individuals participating in intercollegiate athletics have the opportunity to glean numerous holistic personal development benefits, including physical fitness, mental focus, emotional maturity, spiritual reflection, and skills such as leadership, communication, time management, self-discipline, and teamwork (Hirko, 2009; Howard-Hamilton & Sina, 2001; Pascarella & Blimling, 1996; Watson & Kissinger, 2007). As a result, universities employ a variety of personnel to foster this holistic educational experience – essentially fostering their physical, psychological, and spiritual development. For instance, among their various respective job responsibilities and duties, strength and conditioning staff improve physical "bigger, faster, stronger" measurables; athletic trainers and the sports medicine team actively treat and rehabilitate physical injuries; coaching staff members advise, scheme, and motivate regarding performance and strategy in competition; sport nutritionists educate athletes regarding weight management techniques; sport psychology consultants (SPC) educate athletes on psychological skills to enhance performance and well-being; academic advisors and/or academic tutors to assist athletes with their study habits and course material; licensed social workers and/or licensed mental health professionals assist with diagnosing and treating psychological issues and disorders; and life skills coordinators provide opportunities for interpersonal skills enhancement and community service (Dzikus, Hardin, & Waller, 2012; Powers, 2007). There is currently a gap in the resources provided for spiritual development and introspection. Chaplains may be available but they are most likely not a hired full-time member of the holistic support team – this will be explored in great depth further in the current study.

Intercollegiate athletes are immersed in a unique environment in which they must balance demands and dynamics associated with their academic, athletic, personal, and social pursuits juxtaposed with the culturally-driven notion that success is attained by winning and personal performance. These staff members provide a plethora of beneficial holistic services, but critics contend these services are a byproduct of the commodification of athletes as a means to an end toward athletic success and retention. Athletic administrators are tasked with combatting this perception that intercollegiate athletes are a commodity with a 5-year shelf life. That discussion necessitates genuinely seeking to care for the holistic needs of intercollegiate athletes, not simply support their athletic endeavors. Therefore, this research intends to provide insight regarding how athletic administrators can curb the abuses of the commodification of intercollegiate athletes by committing to provide all elements of holistic care for intercollegiate athletes, including spiritual development which is less common among the resources offered. A more holistic approach will more adequately help intercollegiate athletes efficiently manage their unique stressors and life transitions.

Life Stress and Intercollegiate Athletes

Intercollegiate athletes comprise a unique subculture of the college student body and are exposed to a variety of unique experiences and stress based on a culmination of their athletic, academic, and social environments (Etzel, Ferrante, & Pinkney, 2006; Lu, Hsu, Chan, Cheen, & Kao, 2012; Yusko, Buckman, White, & Pandina, 2008). These distinctive life stressors can be categorized broadly into college-related, athletically-related, and transition-related stress which are outlined in Table 1.1 and expounded upon in Chapter II. The effects of stress can be especially detrimental to intercollegiate athletes since stress can affect their athletic performance as well as personal holistic health and wellness.

Table 1.1

Outline of Common Stressors of Intercollegiate Athletes

Type of Stressor	Definition
College-related	Resulting from the educational experience of a full-time college student
Time management	Inability to effectively manage one's schedule to meet obligations and responsibilities
Personal expectations	Exerting undue pressure(s) on oneself
Family expectations and family life	Perceived undue pressure(s), demands, and/or burdens exerted on an individual by one's relative(s); various stressors stemming from issues and problems one's relative(s) are experiencing
Employment decisions and finances	Resulting from budgeting one's finances as well as having access, or not having access, to money, and possible conditions pertaining to that access
Academic pressures	Caused by rigid demands from professors and/or coursework
Living arrangements	Experiences from living independently and/or managing one's domicile space and environment
Relationships	Resulting from complex interactions between two or more individuals or groups of people
Physical health issues	Effects of a reciprocal relationship involving stress and wellness, or lack thereof, including risky behavior(s)
Environmental stressors	Occurrences specific to one's geographical surroundings and its associations
Information overload	Triggered by competing technologies as well as receiving and digesting information from a variety of communication mediums
Daily hassles	Frequent relatively minor annoyances, but can also accumulate to cause increased stress
Athletically-related	Resulting from managing the demands, expectations, responsibilities, and experiences associated with one's athletic schedule and pursuits
Transition-related	Experiences with entering college, progressing through college, and exiting out of college to begin life's next stage
Collective Stress	Stress resulting from the cumulative effect of one or more stressors
Chronic Stress	Stress resulting from the ongoing presence of one or multiple stressors over time

Illness and injury. In a study by Risch and colleagues (2009) the results indicated stressful life events were risk factors for depression and illness among college students. Similarly, studies have concluded stress resulted in greater depression and hopelessness and suicide ideation (Ciarrochi, Deane, & Anderson, 2002; Davidson, Wingate, Rasmussen, & Slish, 2009; Glick, Stillman, Reardon, & Ritvo, 2012; Johnson & Sarason, 1978). Furthermore, researchers have suggested intercollegiate athletes are more likely to have increased risk for social and psychological disorders requiring clinical counseling and intervention (due to adjustment issues, emotional concerns, identity foreclosure, and/or other psychological distress) as compared to the general student body (10-15% and 8-9% respectively) (Ferrante, Etzel, & Lantz, 1996; Gallagher, 2005; Hinkle, 1994; Potuto & O'Hanlon, 2007; Simons & Van Rheenen, 2000; Watson, 2005).

Bramwell, Masuda, Wagner, and Holmes (1975) also called attention to the dynamics between stress and injury. Illness and/or injury is more likely to set-in when an individual perceives a situation as "overwhelming, threatening, unsatisfying, or conflictual" (Bramwell et al., 1975, p. 6), and there is evidence to support a significant association between life stress and subsequent athletic injuries (Kleinert, 2007; Yusko et al., 2008). For intercollegiate athletes, illness and/or injury results in loss of practice time, playing time, and games. Research by Ford, Eklund, and Gordon (2000) and Malinauskas (2010) concluded "athletes with high life stress, poor coping skills or behaviour, or low social support appear more vulnerable to injury" as well (Ford et al., 2000, p. 302). Therefore, managing stress is critical for this special population of college students so they can reduce their likelihood of injury or illness which ultimately affords them the opportunity to meet their athletic and personal responsibilities and obligations.

Ultimately, regardless of the stressors encountered, intercollegiate athletes are at risk of experiencing mental health issues as well as poor holistic wellness when they fail to effectively manage perceived stress (Kissinger & Watson, 2009). Furthermore, literature supports the notion that intercollegiate athletes do not initiate seeking support and they typically underutilize support services offered to them (Ferraro & Rush, 2000; Pearson & Petitpas, 1990; Pinkerton, Hinz, & Barrow, 1989; Watson, 2005, 2006; Watson & Kissinger, 2007). Mentink (2002) also found coaches and athletic administrators do not adequately recognize holistic health issues when they arise in their intercollegiate athletes. Therefore, it is important to explore strategies intercollegiate athletes can employ to more efficiently manage life stress.

Managing Stress

There is an old adage that says, "The only constant is change" – individuals are constantly exposed to new situations, and individuals' respective responses are largely dependent on the perception of the events. Stress affects all aspects of our holistic wellness, including physical, mental, emotional, and spiritual wellness (Blonna, 2005). As these stressors present themselves, individuals appraise the situation and subsequently manage the stress response, particularly for events which are perceived as distressing (as opposed to eustress, which is stress caused by events which are interpreted as positive in nature).

Coping. There are virtually an infinite number of techniques and strategies individuals can utilize to cope with a stressor(s). Some individuals may be more inclined to employ certain techniques more frequently than others based on their genetic predisposition, environment, and/or context of the situation. Similarly, the coping strategies employed can evolve and change over time as the environment and context changes. For the purposes of this study, this research

will focus on the variables of resiliency and religiosity, specifically regarding their relationships with stress.

Coping and resiliency. Research suggests individuals who are more resilient will more effectively cope with and manage stress (Bonanno, 2004; 2005; Bonanno, Galea, Bucciarelli, & Vlahov, 2007; Bonanno & Keltner, 1997; Bonanno, Moskowitz, Papa, & Folkman, 2005; Bonanno, Rennicke, & Dekel, 2005; Bonanno et al., 2002). The construct of resiliency is developed in the review of literature, but essentially it is operationally defined as one's propensity to positively evaluate a situation and subsequently "bounce back" from the stressful event (Fletcher & Sarkar, 2013; Smith, 2008). For example, an individual who is more resilient may glean benefits from a stressor which was perceived as debilitative to a less resilient individual. Research has demonstrated intercollegiate athletes have been encouraged to recognize the benefits of stress as it related to their emotional, interpersonal, identity, and spiritual development (Chickering & Reisser, 1993; Galli & Reel, 2012; Milam, Ritt-Olson, & Unger, 2004). Maintaining a more stable state of equilibrium is beneficial for intercollegiate athletes so they do not experience sudden detrimental spikes in daily functioning, which in their environment could have particularly damaging effects on their academic, athletic, social, and personal endeavors (Crust & Azadi, 2010; Gerber et al., 2013; Gucciardi, Gordon, & Dimmock, 2009). Since "bouncing back" encompasses utilizing holistic facilitative responses, religiosity may be a pathway to recruit facilitative responses (Fletcher & Sarkar, 2012; Wylleman, Alfermann, & Lavallee, 2004). Therefore, the link between resiliency and religiosity will be explored as they relate to managing stress.

Resiliency and religiosity. As previously mentioned, there are multiple approaches one can adopt in order to manage stress in pursuit of holistic wellness. One pathway an individual(s)

may employ is invoking religiosity, which can include spiritual practices such as prayer, mediation, reading sacred texts, practicing spiritual rituals, and/or participating in forms of group worship (Blonna, 2005; Hales, 2007; Koenig, 2009; Pargament, Smith, Koenig, & Perez, 1998). The construct of religiosity is developed in the review of literature, but essentially it is operationally defined as being inclusive of spiritual practices shared by a group of like-minded people, such as adherents to a particular faith tradition(s), and including an element of an individual's sense of meaning and purpose in life (Delaney & Madigan, 2009; Galli & Reel, 2012; Hales, 2007; Koenig, 2009; Koenig, Parkerson, & Meador, 1997; Shaw, Joseph, & Linley, 2005). Although religious obligations may present potential stressors to an individual(s), religiosity can also be the source of positive coping and desired holistic wellness outcomes (Besterman-Dahan, Barnett, et al., 2012; Fitchett et al., 2004; Hales, 2007; Galli & Reel, 2012; Hufford, Fritts, & Rhodes, 2010; Koenig, King, & Carson, 2012; Pargamaent et al., 1998; Storch, Storch, Welsh, & Okun, 2002).

Research has suggested athletes who exhibited greater religiosity were shown to have positive health outcomes (Galli & Reel, 2012; von Guenthner & Hammermeister, 2007), optimized team cohesion, maturity, commitment, and athletic performance (Hufford et al., 2010), effective coping with injury, suffering, and trauma (Hufford et al., 2010), greater well-being, greater happiness, great life satisfaction, greater hope, greater optimism, greater purpose and meaning in life, greater satisfaction with relationships, higher self-esteem, greater social support, less loneliness, lower rates of depression, faster recovery from depression, lower rates of suicide, less anxiety, fewer psychotic tendencies, lower rates of alcohol and substance abuse, less risky behavior, less delinquency, less criminal activity, less risky behavior (Hales, 2007; Koenig, 2009; Koenig et al., 2012; Moore, Berkley-Patton, & Hawes, 2013; Shaw et al., 2005), and

greater resiliency (Hufford et al., 2010; Yi, Smith, & Vitaliano, 2005). Given the support for religiosity's and resiliency's impact on stress, it is appropriate to analyze the relationships between these constructs among athletes competing in one of the most competitive leagues of intercollegiate athletics.

Topic Relevance

Given the rise of commercialism and elite competition in Division I-FBS athletics, intercollegiate athletes have been subjected to potential exploitation and increased stress. As a result, the NCAA's principles promoting intercollegiate athlete well-being (Article 2.2), overall educational experience (Article 2.2.1), and health and safety (Article 2.2.3) (NCAA, 2013, p.3) have arguably been compromised. Therefore, it is vital to focus attention on the holistic care of intercollegiate athletes and reflect on possible gaps in services (e.g., spiritual development) when seeking to fulfill the mission of higher education and principles of the NCAA.

More specifically, the emerging domain of spirituality, as cultivated via religiosity, will be examined as it relates to stress management and resiliency, which will also promote well-being and health and safety issues. Essentially, this subject is worthy of being investigated in order to determine if religiosity among intercollegiate athletes is consistent with research involving the general public suggesting increased religiosity fosters increased resiliency and stress reduction. Lower perceived stress is correlated with fewer incidences of injury and illness as well as greater wellness; therefore, this subject is worthwhile as intercollegiate athletes will be less likely to have their athletic and academic performance detrimentally impacted as a result of effective stress management strategies (which can include increased religiosity).

Purpose

Luthar and colleagues (Luthar, 2006; Luthar & Cicchetti, 2000; Luthar, Cicchetti, & Becker, 2000) argued resilience is predominantly a process of learned adaptations (i.e., protective and promotive factors), and religiosity is operationally considered a learned personal factor as well (Astin, Astin, & Lindholm, 2011b; Fowler, 2001; Koenig, 2008; Loehr & Schwartz, 2003; McSherry & Cash, 2004; Watson, 2011; Wills, 2007). Given the evidence that religiosity fosters spirituality and resiliency, and resiliency fosters facilitative meta-cognitions, this study will test the hypothesis that religiosity will foster biopsychospiritual homeostasis (i.e., resilience) and less perceived stress among intercollegiate athletes (Fletcher & Sarkar, 2013).

Ultimately, there has been research evaluating the relationships between stress and resiliency, stress and religiosity, and resiliency and religiosity, but there is a gap in the literature analyzing the relationships between religiosity, resiliency, and perceived stress among intercollegiate athletes in a single study. Therefore, the current research will examine the relationship between religiosity, resiliency, and perceived stress among the unique population of intercollegiate athletes.

Operational Definition of Terms

- Coping – "refers to the strategies employed following the appraisal of a stressful encounter" (Fletcher & Sarkar, 2013, p. 16).
- Faith – a construct relating to one's firmly held belief system (Fowler, 2001). It is common for faith traditions to align with religious ideals, but not a prerequisite. It is the opinion of the researcher that faith bridges the gap between religiosity and spirituality – religiosity without spirituality is futile, and spirituality without religiosity is destitute wandering. Consequently,

the three aforementioned terms are independent constructs yet closely related and sometimes interdependent with one another.

- Football Bowl Subdivision (FBS) – a subdivision of NCAA Division I which meets the most stringent requirements regarding financial commitment, spectator attendance, and scheduling (Irick, 2013; NCAA, 2013). In 2012-2013, 120 NCAA member institutions met criteria to be classified as FBS, and these athletic programs are generally regarded as the most competitive intercollegiate athletic teams in the United States.
- Holistic care – broadly pertaining to addressing all elements of an individual's personal development, health, and wellness, including intellectual pursuits, physical fitness, mental focus, emotional maturity, spiritual reflection, and interpersonal skills. Universities employ a variety of personnel to nurture the holistic educational experience – essentially fostering their physical, psychological, and spiritual development (Hirko, 2009; Howard-Hamilton & Sina, 2001; Pascarella & Blimling, 1996; Watson & Kissinger, 2007). For the purposes of this research, the spiritual dimension of holistic care will be examined.
- Intercollegiate athlete – listed as a member of the varsity team (Irick, 2013). For the purposes of this study, male practice players participating on female teams are not eligible to participate in the study since they are not included in the NCAA's Sports Sponsorship and Participation Rates Report (Irick, 2013). The term "intercollegiate athlete" is by-and-large synonymous with the mainstream term "student-athlete," but "student-athlete" is not utilized in this manuscript due to its history associated with labor and employment law, particularly regarding the NCAA's defense that intercollegiate athletes should not be eligible to receive workers' compensation. The widely-held notion that the term student-athlete was coined as a

noble description to emphasize the priority of academic endeavors as compared to athletic pursuits is a farce (Byers & Hammer, 1995).

- Meta-cognitions – the process by which an individual integrates his or her knowledge, recognition, and control over his or her cognitions (Flavell, 1979; Fletcher & Sarkar, 2012).
- NCAA – "a diverse, voluntary, unincorporated Association of four-year colleges and universities, conferences, affiliated associations and other educational institutions" (NCAA, 2013, Article 4.02.1, p. 18). The NCAA is the largest governing body of intercollegiate athletics in the United States, overseeing 460,000+ intercollegiate athletes competing in 20+ sports at 1,000+ member institutions across three divisions comprising the NCAA (Irick, 2013).
- NCAA Division I – according to the NCAA Division I manual (NCAA, 2013), the NCAA Division I "strives in its athletics program for regional and national excellence and prominence" and "sponsors at the highest feasible level of intercollegiate competition…" (Article 20.9.2, pp. 345-346; p. 354). In essence, Division I institutions are the most competitive intercollegiate athletics programs as evidenced by their philosophy and financial commitment to fund the most sports and athletic grants-in-aid relative to the other NCAA divisions.
- Perceived life stress – a holistic transaction appraisal process involving a stimulus and the individual's (in)ability to cope with the stimulus given the current psycho-socio-environmental context (Lazarus, 1966, 1977, 1993a, 1993b, 1999; Lazarus & Folkman, 1984). In essence, an individual's evaluation of a situation invokes the stress response rather than the event itself. The construct of perceived life stress considers the cumulative appraisal of stress, inclusive of event-specific stressors as well as chronic stressors.

- Prospective intercollegiate athlete – "a student who has started classes for the ninth grade" but has not yet enrolled in a four-year institution or participated in a practice or competition (NCAA, 2013, Article 13.02.12, p. 77). For the purposes of this research, a prospective intercollegiate athlete is more specifically a "recruited prospective intercollegiate athlete," which essentially entails being provided with a paid visit to campus, being contacted or encountered by a coach(es) or athletics staff, or being issued a National Letter of Intent outlining an offer for athletically-related financial aid (NCAA, 2013, Article 13.02.13.1).
- Religiosity – inclusive of various organizational and non-organizational spiritual practices such as prayer, meditation, reading sacred texts, and/or attending services, shared by a group of like-minded people (Delaney & Madigan, 2009; Hales, 2007). Religiosity also includes an intrinsic element which fuels an individual's sense of meaning or purpose (Galli & Reel, 2012; Koenig et al., 1997; Shaw et al., 2005).
- Resiliency – a holistic "concept that encapsulates stressors, cognitive appraisal and meta-cognitions, psychological factors, and facilitative responses" (Fletcher & Sarkar, 2013, p. 672), which emphasizes the "positive evaluation and meta-cognition of stressors" (Fletcher & Sarkar, 2013, p. 673). In essence, resiliency is the individual's perceived ability to "bounce back" as evidenced by maintaining a relatively consistent level of biopsychospiritual homeostasis when exposed to stress (Fletcher & Sarkar, 2013; Smith, 2008).
- Special admission – "an [intercollegiate] athlete may be admitted under a special exception to the institution's normal entrance requirements if the discretionary authority of the president or chancellor (or designated admissions officer or committee) to grant such exceptions is set forth in an official document published by the university (e.g., official

catalog) that describes the institution's admissions requirements (NCAA, 2013, Article 14.1.6.1.1, p. 140).

- Spirituality – an abstract, dynamic, multifaceted construct which "has to do with the values that we hold most dear, our sense of who we are and where we come from, our beliefs about why we are here – the meaning and purpose that we see in our work and our life – and our sense of connectedness to one another and to the world around us" (Astin et al., 2011b, p. 4). It has also been described in conjunction with transcendence and integrative aptitude of one's physical, cognitive, emotional, social, and moral self (Fletcher & Sarkar, 2013). In essence, spirituality is present in all human-beings but is subjective and cultivated individualistically. An individual "may be spiritual and not very religious, religious and not very spiritual, neither religious nor spiritual, or both religious and spiritual" (Kaiser, 2000, p. 7).

Note on Tables and Figures

All tables and figures are labeled according to their respective chapter number and appear on the page directly after where they are first referred.

CHAPTER II: REVIEW OF LITERATURE

Life Stress

Hans Selye, a pioneer researcher of stress, once described stress as a scientific concept which has well known but yet too little understood (Selye, 1956). Olpin and Hesson (2010) proceeded to offer a simplistic definition of stress as "a demand made upon the adaptive capacities of the mind and body" (p. 3). However, Blonna (2005) pointed to four classic views of stress: stress as response, stress as stimulus, stress as a transaction, and stress as a holistic phenomenon. Blonna acknowledged each of the aforementioned descriptors as incomplete and flawed in their own sense, but together they give a more accurate picture of the complex puzzle of stress. As a result, Blonna (2005) ultimately defined stress in the following way:

> stress is a holistic transaction between the individual and a stressor [i.e., stimulus] that results in the body's mobilization of a stress response [i.e., physiological adaptations to attempt to reach homeostasis]. A holistic transaction is a stress appraisal process involving the potential stressor [i.e., stimulus], the individual, and the environment; an individual's appraisal process is influenced by his or her level of well-being and ability to cope with the potential stressor at that moment under the specific environmental conditions surrounding the person and the potential stressor (p. 4).

To further clarify, a stressor can be any occurrence which is perceived as a threat or challenge which activates the stress response; therefore, a stressor can be described as a stimulus whereas stress is the body's adaptation and response (Olpin & Hesson, 2010). According to Blonna (2005), stress never occurs in a vacuum so it is important to view the phenomenon of stress accordingly to its respective time and space. For example, an individual's genetic makeup

combined with their unique living environment and experiences influence one's response to life's stressors (Olpin & Hesson, 2010).

As researchers continued to develop the concept, influences, and outcomes of stress, Richard Lazarus emerged as a prolific contributor to this body of research. Lazarus is best known for referring to stress as transactional (Lazarus, 1966, 1977, 1993a, 1993b, 1999; Lazarus & Folkman, 1984). Lazarus endorsed the notion that stressors could be physical in nature, but he elaborated on the hypothesis that stressors could also be psychosocial. In other words, an individual's perception (the *transaction*) and evaluation (the *treat appraisal process*) of a potential stressor invokes the stress response as much as the event itself. Furthermore, Lazarus' model consists of three steps to the transaction: first the primary appraisal assesses the nature of the stressor; next, if the stressor is perceived as a threat, the secondary appraisal assesses one's capability of utilizing resources, or lack thereof, to manage the stressor; finally, a third reappraisal integrates the information from the first two appraisals (Lazarus, 1966, 1977, 1999).

Lazarus' approach differed from his predecessors Selye (1956, 1974) and Holmes and Rahe (1967) because Selye did not consider the role of perception, and Holmes and Rahe operated under the assumption there are universal stressors rather than unique transactional appraisals. Lazarus contended each stressor is unique because each appraisal is unique given the overall context of the situation. As time passes our environment will inevitably change, at least minimally, which influences appraisals. Also, Lazarus did not place much emphasis on eustress because according to his model eustress would not trigger the stress response in the same way a challenging or threatening stressor would (Lazarus, 1966, 1977, 1993a, 1993b, 1999; Lazarus & Folkman, 1984).

In their text, authors Olpin and Hesson (2010) affirm Lazarus' transaction theory of stress with minor deviations. For example, they report how an individual's experience of stress depends on her or his perception of the stressor, which can be positive (eustress) or negative (distress) in nature – the "*reaction* to the events in life, rather than the actual event, is what will determine whether the outcome will be positive or negative" (Olpin & Hesson, 2010, p. 3). This distinction between eustress and distress is noteworthy. For instance, the Yerkes-Dodson Principle suggests a certain amount of arousal is appropriate and can be healthy, beneficial and advantageous, but excessive arousal is detrimental (Yerkes & Dodson, 1908). This healthy, useful, beneficial, desirable arousal can be referred to as eustress. Furthermore, appropriate levels of eustress have the ability to boost performance in athletics, academics, and creative activities (Olpin & Hesson, 2010). On the other hand, "Distress refers to the negative effects of stress that drain us of energy and surpass our capacity to cope" (Olpin & Hesson, 2010, p. 4).

Olpin and Hesson (2010) provide two metaphors to help visualize and comprehend the delicate balance between managing eustress and distress. The first metaphor pertains to muscle building. To effectively build a muscle, a balance is required between too little weight and too much weight. For example, not lifting enough weight will not tax the muscle(s) and there will be an ineffective outcome. On the other hand, if too much weight is attempted then the individual is at a higher risk for injury. In much the same way, too little (eu)stress could result in boredom and apathy, but too much (dis)stress could result in physical, mental, emotional, social, and spiritual breakdown. A second metaphor to illustrate the same relationship pertains to the idea of a guitar string. Too little tension and the string will not produce the desired tone, but too much tension will result in the string breaking.

Olpin and Hesson (2010) also note the occurrences of acute and chronic stress. Acute stress results in an immediate stress response commonly associated with the "fight-or-flight" reaction. However, chronic stress is the result of a prolonged stress response. Acute stress can be healthy and life-saving, but when the body does not have time to recover to reach homeostasis, exhaustion can set-in which fosters an environment for injury and illness. Blonna (2005) alludes to the notion that life events force the body to readjust, and too many in a short period of time can cause higher risk for injury and illness. Olpin and Hesson (2010) offer an anecdote which could be utilized to summarize acute and chronic eustress and distress within a holistic transaction framework:

> Life is like a river, and most people jump in the river of life without ever really deciding where they want to end up. So, in a short period of time, they get caught up in the current: current events, current fears, current challenges. When they come to forks in the river, they don't consciously decide where they want to go, or which direction is right for them. They merely 'go with the flow.' They become a part of the mass of people who are directed by the environment instead of by their own values. As a result, they feel out of control. They remain in this unconscious state until one day the sound of the raging water awakens them and they discover that they are 5 feet from Niagara Falls in a boat with no oars. At this point…it's too late. They are going to take a fall. Sometimes it's an emotional fall. Sometimes it's a physical fall. Sometimes it's a financial fall. It is likely that whatever challenges you have in your life currently could have been avoided by some better decisions upstream (p. 130).

Kanner, Coyne, Schaefer, and Lazarus (1981) added to the discussion of life stress by introducing the concept of daily hassles to complement life stress. Research from these authors

purport minor distressing events (i.e., hassles) were better predictors of stress symptoms and stress outcomes than the more widely studied "major" life events (it is worth noting that minor positive events of eustress were coined as uplifts). However, Wong (1993) reminded readers that since individuals perceive hassles differently, individuals subsequently manage stress according to different strategies and tactics. Yet, Wong (1993) also presented a valid question when asking why do some people get overwhelmed while others are resilient to seemingly similar stressors? Rather than offering a specific answer, Wong (1993) concluded one resolution could be instilling proactive coping to identify and utilize specific resources which are appropriate given the specific stressor.

The aforementioned literature review supports the idea that stress is perceived differently based on a variety of unique personal traits and experiences as well as environment characteristics. However, there are some life events where, on average, people experience increased levels of stress. For example, individuals in the United States are often faced with potential elevated perceived stress when they graduate high school due to the decision-making process about his or her next steps (this is also a time which may present the first major life decision they confront). After graduating from high school individuals "may choose to apply for a job, join a branch of the military service, or enroll in a post-secondary institution of higher education" (Huffman & Cooper, 2012, p. 226). Individuals who choose to pursue higher education (approximately 66% of high school graduates according to Bureau of Labor Statistics, 2013) encounter, in general, a unique set of stressors due to their circumstances and demands (Ferry, Tobin, & Beesley, 2004). It is important to be aware of the common stressors so educational administrators at the collegiate level can effectively provide services and resources to enhance student development. Although the target sample of the current research is

intercollegiate athletes, it is appropriate to examine the broader sample of collegiate students first since intercollegiate athletes comprise a subculture of the student body.

Life stress and collegiate students. Since intercollegiate athletes are expected to be full-time college students (Article 14.01.2; NCAA, 2013, p. 135) they experience college-related stressors similar to their full-time collegiate peers. First and foremost, students face stress when they transition into college (Ferry et al., 2004). Subsequently, researchers have evaluated college students' life stress from a number of different perspectives. For example, Gadzella, Baloglu, Masten, and Wang (2012) categorized life's stressors into "five categories: frustrations, conflicts, pressures, changes, and self-imposed" (p. 83). They elaborated that an individuals' reaction to stressors could fall into one of "four categories: physiological, emotional, behavioral, and cognitive appraisal" (p. 83). Olpin and Hesson (2010) took a different approach in their text and chose to organize the most common stressors of college students in the following categories: time management, personal expectations, family expectations, family life, employment decisions, finances, school pressures, living arrangements, relationships, physical health issues, environmental stressors, information overload, and daily hassles. Each of these aforementioned stressors would likely fit into the categorical model described by Gadzella et al. (2012), although the specific category would be dependent on each individual's perception of the stressor. While this synthesis of the literature provides an appropriate starting point, it is necessary to examine these broad strokes to better evaluate the stress palette (the following areas do not comprise a mutually exclusive nor exhaustive inventory).

Time management. If students do not effectively manage their time, they will not be able to fulfill their responsibilities and obligations. Stress can set-in when poor time management causes individuals to feel like they are overwhelmed with tasks and obligations or "no matter

how hard [they] work, [they] feel like [they] never get caught up (Olpin & Hesson, 2010, p. 8). Furthermore, Andrews and Wilding (2004) concluded poor academic performance can be a consequence of students' poor time management skills.

Personal expectations. Students can be their own worst enemies. For instance, stress can ensue when students, particularly those who are high-achievement oriented, set unrealistic expectations or pursue more endeavors than feasible. When students put this kind of pressure on themselves they are more likely to experience "low self-esteem or feelings that [their] life is out of control" (Olpin & Hesson, 2010, p. 9).

Family expectations and family life. Similar to personal expectations, the expectations of family members can be a source of significant stress for students. Even though family members may have good intentions when encouraging their children with questions about academic and career choices, students may perceive these queries as demands and burdens. In one sense, it is desirable to receive healthy support from parents; however, unrealistic expectations can be unhealthy and detrimental as students navigate the interpersonal realizations which arise in higher education (Olpin & Hesson, 2010). Furthermore, stressors stemming from students' family life incorporate much more than expectations. For example, "family life stressors can include…health problems, substance abuse, strong disagreements, loss of family members, difficulties with stepparents, homesickness, and divorce" (Olpin & Hesson, 2010, p. 10).

Employment decisions and finances. Attending college can be a source of financial stress for some students. Stress can be the result of having access to money or not having access to money. Some scholarships require their recipient(s) to meet certain standards, such as credit load, grade point average (GPA), community service, or other academic or extracurricular performance demands. For some students it may be the first time they live independently from

their parents, and subsequently they learn (or fail to learn) to budget their time and money. Additionally, college tuition and fees, as well as the cost of living, can be burdensome for students who do not have access to scholarships, grants, loans, or other sources of financial aid. Consequently, college students may have to perform a cost-benefit analysis to evaluate balancing a job with academic studies (Olpin & Hesson, 2010).

Andrews and Wilding (2004) led a study which specifically analyzed financial stress of college students. The authors noted that students most closely associated their stress of finances with not being able to afford essential items, and/or facing a financial crisis. One outcome from their research was students who experience financial stress were more likely to see a detrimental shift in their academic performance. Furthermore, Andrews and Wilding (2004) determined students were more likely to present with depressive and anxiety symptoms when facing perceived financial stressors.

School pressures. Similar to personal expectations, specific school pressures can cause a college student to be stressed. Coursework or professors can exert rigid demands on college students, especially first-year students who are adjusting to the holistic experience college offers (Olpin & Hesson, 2010). Other examples of school pressures which can cause stress for college students include forgetting an assignment's deadline, being absent or tardy to class, not fully comprehending the course material, feeling unprepared for class discussions, anxieties with class presentations, and failing an assignment or exam (Olpin & Hesson, 2010).

Living arrangements. Living apart from parents can be a stressor for college students, particularly if this is their first experience living independently. Additional choices associated with living arrangements include deciding who a roommate(s) should be, whether to live in a

dormitory or apartment, if surrounding themselves with friends and noise is more productive or counterproductive, and contemplating to join Greek life on campus (Olpin & Hesson, 2010).

Relationships. In our lives we are exposed to many relationships, and the significance of each relationship varies due to a host of reasons and circumstances. When a relationship is perceived to be "close" in nature (e.g., friend, relative, colleague), stress can result when that person becomes injured or ill, particularly when he or she experiences suffering or death (Andrews & Wilding, 2004). Furthermore, as most individuals have experienced first-hand, relationships can be complex and complicated. Relationships have the ability to produce eustress, but they can be difficult to manage, and Andrews and Wilding (2004) concluded relationship difficulties are a common distressor for college students and regularly associated with depression and anxiety.

Physical health issues. The relationship between stress and physical health is interesting because of the reciprocal relationship between the two. Individuals who are stressed are more susceptible to injury and illness. The contrary is also true – individuals who become ill or injured are faced with additional stress. Other examples of a high stress situations among college students stem from risky behavior, including active sexual behavior, which can result in infections, diseases, and pregnancies (particularly when unplanned) (Andrews & Wilding, 2004).

Environmental stressors. Examples of environmental stressors can include "noise, crowding, traffic, weather, pollution, and violence" (Olpin & Hesson, 2010, p. 10). Students who attend college in an unfamiliar city or region are prone to experience environmental stressors. Furthermore, students who study abroad and experience another culture are likely to be more sensitive to environmental stressors (Olpin & Hesson, 2010).

Information overload. A term used to describe information overload is technostress, which is stress caused by competing technologies as well as receiving and digesting information from a variety of communication mediums. Students may overwhelmed and frustrated given the constant introduction of new technology and the learning curve associated with adapting and learning new skill sets (Olpin & Hesson, 2010; Weil & Rosen, 1998).

Daily hassles. Building on Lazarus' description of hassles, Olpin and Hesson (2010) comment that these "petty annoyances, frustrations, and unpleasant surprises…may add up to more grief than life's major stressful events" (p. 11). For example, daily hassles can present themselves in the form of a valued item being lost or stolen, legal problems or crime (Andrews & Wilding, 2004; Kanner et al., 1981), car repairs, failing technology, irritating aches and pains (Olpin & Hesson, 2010), concerns about weight or physical appearance, health of a family member, rising prices of common goods, and home and yard maintenance (Kanner et al., 1981).

***Collective stress*.** In essence, collective stress is the cumulative result of one or more stressors present in an individual's life. Collective stress may or may not be a summation of the stressors; for example, a combination of stressors may result in a synergistic effect, greater than what would be expected of the sum of the stressors (Olpin & Hesson, 2010).

***Chronic stress*.** Individuals who experience a stressor(s) over a length of time may suffer from chronic stress. Chronic stress can be the result of a repetitive stressor(s) and/or a stressor(s) which has lingering effects. If an individual experiences prolonged symptoms of the stress response, he or she may be experiencing chronic stress (Olpin & Hesson, 2010).

Life stress and collegiate military students. In a study by Gibson and Myers (2006), drawing on work from Glaser and colleagues (1999) and Gold and Friedman (2000), the authors researched specific stressors of students at The Citadel, a United States' military college. This

perspective offered unique insights regarding the distinctiveness of college students intricately engaged in dual roles: academics and cadet training. The authors commented,

> In addition to adjustment issues that traditional college students experience, military trainees who are college students have reported unique issues that require adjustment specific to their education, training, and environment…Rigorous physical demands, required conformity, and obedience to authority are variables that are cited as common causes of stress by cadets (Gibson & Myers, 2006, p. 647).

Given the fact that military training is a source of stress (Gold & Friedman, 2000), researchers have examined proactive measures to mitigate stress. As a result of these studies social support was determined to facilitate effective, healthy adjustment and better wellness (Ferry et al., 2004; Gibson & Myers, 2006; Ornish, 2000; Osborn, 2005). The rationale for studying this unique population of students (i.e., cadets) has parallels which can be extended to intercollegiate athletes (e.g., rigorous physical demands, required conformity, and obedience to authority). As a result, it is appropriate to review the literature regarding the primary stressors of intercollegiate athletes so, ultimately, administrators can provide appropriate resources and services to proactively help these unique students manage stress.

Life stress and intercollegiate athletes. Intercollegiate athletes comprise a unique subculture of the college student body and are exposed to a variety of unique experiences and stressors based on their social environment (Etzel et al., 2006; Lu et al., 2012; Yusko et al., 2008). Some authors propose intercollegiate athletes could even be referred to as nontraditional students or a minority group given these unique academic and athletic roles (Aries, McCarthy, Salovey, & Banaji, 2004). Kimball and Freysinger (2003) have described participation in intercollegiate athletics as both a stress-reliever and stress-inducer for athletes, which captures

the essence of the complex "costs" and benefits of sport participation. Their athletic and sport-related responsibilities (sometimes obligations depending on financial aid requirements) combined with the academic and social elements of college present distinct sources of stress which necessitate inquiry regarding this subgroup (Adler & Adler, 1991; Hudd et al., 2000; Kimball & Freysinger, 2003; Papanikolaou, Nikolaidis, Patsiaouras, & Alexopoulos, 2003; Sperber, 1990, 2000; Wilson & Pritchard, 2005). Also, athletic departments can be physically separated from other student affairs departments which can unintentionally cause intercollegiate athletes to feel alienated from the rest of the college community (Lubker, 2006).

In fact, researchers have suggested intercollegiate athletes are more likely to have increased risk for social and psychological disorders requiring clinical counseling and intervention (due to adjustment issues, emotional concerns, or other psychological distress) as compared to the general student body (10-15% and 8-9% respectively) (Ferrante et al., 1996; Gallagher, 2005; Hinkle, 1994; Potuto & O'Hanlon; Simons & Van Rheenen, 2000; Watson, 2005). Furthermore, literature supports the notion that intercollegiate athletes do not initiate seeking support and underutilize support services offered to them (Ferraro & Rush, 2000; Pearson & Petitpas, 1990; Pinkerton et al., 1989; Watson, 2005, 2006; Watson & Kissinger, 2007). Lastly, Mentink (2002) concluded coaches and athletic administrators do not adequately recognize mental health issues when they arise in their intercollegiate athletes. As a result, life stress of intercollegiate athletes will be explored; these insights provide rationale, justification, and support for focusing on this population.

Sport-related stress. Bramwell and colleagues (1975) provided a solid foundation of sport-related stressors for intercollegiate athletes: being dropped from the team (later coined as "deselection"); change in athletic performance; trouble with head coach; personal injury;

changing schools or teams; major errors in games. G. Wilson and Pritchard (2005) added further sources of stress for intercollegiate athletes that stemmed from balancing academics and athletics, relationships, academics, physical health symptoms, mental health symptoms, body satisfaction, and social stress. Furthermore, Giacobbi and colleagues (2004) identified major sources of stress as "training intensity, high performance expectations, interpersonal relationships, being away from home, and academics" (p. 8). Research by Broughton and Neyer (2001) and J. C. Watson and Kissinger (2007) echoed the results from aforementioned studies, concluding intercollegiate athletes experience the stressors arising from performance, time management due to practice and competition, and physical injury.

Finally, Lu and colleagues (2012) synthesized literature from a variety of researchers (Anshel & Wells, 2000; Etzel et al, 2006; Fletcher, & Hanton, 2003; Gould, Udry, Bridges, & Beck, 1997; Johnson & Ivarsson, 2011; Loughran & Etzel, 2008; Poczwardoswski, Barott, & Henschen, 2002; Steffen, Pensgaard, & Bahr, 2009) in which they identified the following specific stressors of intercollegiate athletes: competitive performance demands, worry about injury recovery, coach-athlete relationship, "repetitive and exhausting training, frequent travels and competitions, injuries, pressures to win and avoid losses, internal competitions between teammates, media pressures, and sometimes burnout" (Lu et al., 2012, p. 254). Lu and colleagues (2012) ultimately categorized stressors of intercollegiate athletes into eight categories: "(a) sports injury, (b) performance demand, (c) coach relationships, (d) training adaptation, (e) interpersonal relationships, (f) romantic relationships, (g) family relationships, and (h) academic requirements" (p. 259).

Bramwell and colleagues (1975) also called attention to the dynamics between stress and injury. Illness is more likely to set-in when an individual perceives a situation as "overwhelming,

threatening, unsatisfying, or conflictual" (Bramwell et al., 1975, p. 6), and there is evidence to support a significant association between high life stress, poor coping skills, low social support, and subsequent vulnerability to athletic injuries (Ford et al., 2000; Kleinert, 2007; Yusko et al., 2008). For intercollegiate athletes, illness and/or injury results in loss of practice time, playing time, and games. Therefore, managing stress is critical for this population of college students so they can reduce their likelihood of injury or illness which ultimately affords them the opportunity to meet their athletic responsibilities and obligations.

Transition-related stress. Transition to a college or university can be a challenge for any student, but given the unique athletic and academic demands of intercollegiate athletes, researchers suggest the transition and subsequent stress can be intensified (Hudd et al., 2000; Kimball & Freysinger, 2003; Papanikolaou et al., 2003; Wilson & Pritchard, 2005).

Studies have also sought to identify stressors of intercollegiate athletes associated with transitioning, particularly from high school to a university setting. Tracey and Cortlett (1995) wrote:

> several challenges faced during the transition emerged…especially the feeling in the fall semester of being overwhelmed by the volume of physical and mental work, the initial isolation and loneliness, and the need to accommodate both the freedom and responsibility of increased independence (p. 81).

Broughton and Neyer (2001) and J. C. Watson and Kissinger (2007) also presented the case that intercollegiate athletes face unique career transitions given their experiences, skill set, and career trajectory. For instance, it is inevitable that all athletic playing careers will be terminated at one point or another, either voluntary or involuntary, and this thought can be distressing. While many retired athletes make a successful transition into a career after their

playing career ends, others' struggle with distressing issues such as identity foreclosure and social isolation (Bohnert, Aikins, & Edidin, 2007; Eitzen & Sage, 2003; Shurts & Shoffner, 2004; Van Rheenen, 2012; Visek, Watson, Hurst, Maxwell, & Harris, 2010; Wylleman & Lavallee, 2004). Coupled with this fact is that athletes exhibit low levels of career maturity and they are vocationally unprepared once their athletic career is terminated (Levy & Gordon, 2005).

***Commodification*.** As previously mentioned, there are a variety of stakeholders who exert pressure on athletic teams to be successful (Gerdy, 2006; Jozsa, 2013; Oriard, 2009; Rader, 2008; Smith, 1990, 2011; Zimbalist, 1999, 2006). Prospective intercollegiate athletes must ultimately select a school based on a variety of college-choice factors (Huffman & Cooper, 2012), which can add to the perceived stress he or she encounters during the recruiting process. Additionally, athletes can fall victim to breaking amateurism rules by accepting impermissible benefits (e.g., cash, cars, jewelry, vacations, etc.) from zealous supporters who attempt to solicit their athletic services, thus jeopardizing their intercollegiate athletic eligibility (Branch, 2011; Oriard, 2009; Zimbalist, 1999, 2006). In this light, pressure from coaches and external stakeholders fosters an environment in which athletic winning takes priority over the holistic educational experience of intercollegiate athletes (Lewis, 2010).

***Special admission*.** The admissions process can operate differently for prospective intercollegiate athletes. Authors have suggested a separate set of admissions criteria exists for athletes to ensure coaches championships (Covell & Barr, 2001; Gurney et al., 2010; Stokowski, 2013). For instance, some universities have a committee whose purpose is to consider admitting students on a special case-by-case basis whose academic credentials are inferior to the incoming class. Most of these "special admits" are indeed intercollegiate athletes. University officials justify accepting these individuals can have the flexibility to enroll athletic talent in an attempt to

win games and based on the fact they can provide value to the university and student body based on their unique skill set (i.e., athletic ability). Van Rheenen (2012) elaborateed,

> The over-representation of Black college athletes on revenue-producing teams, and the corresponding lower graduation rates of this population when compared to other students, highlights the racial and cultural divisions of opportunity. Institutions face a crisis of conscience when educational opportunities are offered to certain students based primarily on their athletic ability, especially when these opportunities are perceived as disingenuous due to the academic preparation and demanding athletic commitments of these recruited college athletes…The recruitment and admission of these physically gifted prospects to many educational institutions, despite their often lower academic profiles than other matriculating students, reveal how some schools appear to prioritize athletic over academic potential (p. 1-4).

From an athlete welfare perspective, it seems these individuals are provided worthwhile opportunities emphasizing racial integration and social mobility that they would not receive otherwise given the opportunity to pursue higher education, but it also means intercollegiate athletes can be systematically exploited as a result of entering college underprepared academically and face the risk of academic ineligibility due to subpar academic performance once they are enrolled (Hawkins, 2010; Van Rheenen, 2012).

Academic support services. In a similar vein, university officials have recognized this increased risk of academic failure and have therefore proceeded to provide academic support services for intercollegiate athletes (Broughton & Neyer, 2001; Gayles, 2009; Gurney et al., 2010; Potuto & O'Hanlon, 2007). Sometimes these academic support services are housed in separate university buildings and/or departments from other students, effectively segregating

them from their non-athlete peers. Furthermore, intercollegiate athletes' athletic schedules consist of strength and conditioning workouts, team meetings, film study, practices, competitions, travel, and media obligations which restrict their academic study time (Gayles, 2009; Potuto & O'Hanlon, 2007; Stokowski, 2013). Consequently, athletic departments commonly employ academic advisors and/or academic tutors to assist athletes with their study habits and course material. From an athlete welfare perspective, academic support services help bridge the gap caused by time demands, but it also can cause individuals to become dependent on this support group, communicating the message that athletes *need* assistance and/or are not capable of succeeding on their own, as well as potentially perceived as an effort to retain this "commodity" by sustaining minimal academic requirements (Stokowski, 2013; Stokowski, Huffman, & Aicher, 2013).

***Retention*.** Intercollegiate athletes also encounter demands associated with retention – these include athletic, academic, and personal demands. Similarly, athletic administrators invest resources into retaining these unique assets (Stokowski, Huffman, & Aicher, 2013). The concept of retention can concern remaining on an athletic team, being deselected from the team but remaining enrolled at the university, or withdrawing from the university.

Athletic considerations for retention. Athletes who have signed an athletic grant-in-aid (GIA) are responsible for meeting the expectations of the coaching staff or risk being deselected from the team, subsequently forfeiting their athletic GIA (Coakley, 2008; Gayles, 2009; Gayles & Hu, 2009; Gerdy, 2006). As a result, intercollegiate athletes are forced to devote substantial time to athletic obligations in order to receive financial aid. In addition to workouts, practices, film study, contests, and travel, intercollegiate athletes may feel pressured to play injured,

compromising their long-term health, or the sake of not dropping on the depth chart, and once again being deselected.

Academic considerations for retention. From an academic perspective, intercollegiate athletes face demands of continuing eligibility. If athletes do not meet specific academic requirements, such as credit hours per semester, progress toward degree, grade point average (GPA), and credit hours passed, they are ineligible to compete athletically, and once again risk losing their athletic GIA (Article 14.4) (Coakley, 2008; Gayles, 2009; Gayles & Hu, 2009; Gerdy, 2006; NCAA, 2013). Therefore, intercollegiate athletes may struggle with the burden of remaining academically eligible rather than focusing on the holistic educational experience. Research has identified the phenomena of academic clustering prevalent among intercollegiate athletes, which occurs when 25% of teammates major in the same discipline (Adler & Adler, 1991; Case, Greer, & Brown, 1987; Fountain & Finley, 2009). Furthermore, intercollegiate athletes may feel pressured to cut corners and fall victim to academic fraud when the academic demands overwhelm these students who were admitted with subpar academic credentials (Tracey & Cortlett, 1995).

Personal considerations for retention. While managing the athletic and academic demands of intercollegiate athletics, athletes must also manage personal characteristics which influence their retention. For example, is the intercollegiate athlete satisfied with coaching and teammate relationships, the location of the college, and/or overall expectations of the educational experience being met? When intercollegiate athletes are not retained from year to year, setbacks arise from the perspectives of the university, team, coach, and athlete.

Athletic identity. As a result of the aforementioned convolution of unique stressors, intercollegiate athletes can feel set apart from their collegiate non-athlete peers due to a unique

sense of athletic identity. Research suggests intercollegiate athletes are susceptible to identity crisis, role engulfment, identity foreclosure, and/or dehumanization due to the myriad of demands they are presented with (Adler & Adler, 1991; Hawkins, 2010; Van Rheenen, 2012; Visek et al., 2010; Wylleman & Lavallee, 2004). Consequently, intercollegiate athletes may sacrifice elements of their whole person as they identify primarily as an athlete as opposed to a student, citizen, or young professional. Likewise, when an individual solely identifies as an athlete and their athletic career ends, they are at risk to experience increased levels of stress as they transition into life after sport (Adler & Adler, 1991; Hawkins, 2010; Lally, 2007; Van Rheenen, 2012; Visek et al., 2010; Wylleman & Lavallee, 2004). In light of the unique stressors intercollegiate athletes encounter, it is critical to assess the instruments researchers have utilized to measure and study life stress.

Measuring Life Stress

Researchers have employed a variety of instruments and methods to measure and evaluate life stress. The instruments utilized can broadly be described as measuring *symptoms* of stress, *incidence* of stressful events, and/or individuals' overall *perception* of stress. Therefore, the most relevant measures of life stress, particularly as it pertains to the purpose of this study and population, will be critiqued.

Measures focusing on symptoms of life stress. Within the measures of life stress, there are far fewer options for instruments which focus on the symptoms of life stress. The rationale for focusing on symptoms is that physical symptoms are presumably manifestations of one's exposure and response to stress. The most relevant measure in this category is the Daily Analysis of Life Demands for Athletes (DALDA) (Rushall, 1990), a self-report inventory of sources and symptoms of life stress. This questionnaire is not appropriate for the purpose of this study

because it is intended to monitor physical training attributes, such as fatigue and recovery. Furthermore, it was constructed to be used with longitudinal study designs (repeat measures) rather than a snapshot approach like this study seeks.

An alternative option would be to utilize the Symptoms of Stress Assessment (Olpin & Hesson, 2010). This assessment consists of a grid of 14 stress symptoms and respondents indicate the frequency of the symptoms experienced (i.e., never, once a month, once a week, 2-3 times a week, every day or night, 2-3 times a day). The limitations with using this assessment include: it has not be validated with any particular sample, and there is no uniform method to score or interpret the results, which means this instrument is most beneficial to be used as a self-assessment rather than in a research study.

Measures focusing on incidence of life stress. The most popular measures of life stress in the college-aged literature are constructed in the form of inventories. The inventories, in general, measure the incidence and/or frequency with which events occur in one's life. The most relevant instruments within this category include (in alphabetical order) the Athletic Life Experiences Survey (ALES) (Passer & Seese, 1983), College Student Life-Event Scale (CSLES) (Levine and Perkins, 1980), College Student-Athletes' Life Stress Scale (CSALSS) (Lu et al., 2012), Inventory of College Students' Recent Life Experiences (ICSRLE) (Kohn, Lafreniere & Gurevich, 1990), Life Events Survey for Collegiate Athletes (LESCA) (Petrie, 1992), and Social and Athletic Readjustment Rating Scale (SARRS) (Bramwell et al., 1975).

Athletic Life Experiences Survey (ALES). The ALES (Passer & Seese, 1983) was modified from the Life Experiences Survey (LES) (Sarason, Johnson, & Siegel, 1978). The authors took the original 57-item LES instrument and added 19 items specifically related to intercollegiate athletes while removing 12 items which were irrelevant to this population.

Respondents are asked to rate each of the events and/or statements on a 7-point rating scale from -3 (“extremely negative”) to +3 (“extremely positive”). Strengths of this instrument are that it considers negative life change and positive life change subscales, which essentially provides more information regarding differences between distress and eustress, and it has been used in conjunction with multiple scales in the past. A couple of weaknesses are the length of the inventory, as with most incidence-focused instruments, it asks about stress experienced in the past 12 months rather than a current snapshot, and it does not explicitly take into consideration respondent’s perceptions and appraisals of stress.

College Student Life-Event Scale (CSLES). The CSLES (Levine & Perkins, 1980) is composed of 99 items which represent life events and contain questions asking about the adjustment demands of college students. Similar to the ALES, the CSLES asks about events which occurred in the past 12 months, and respondents are asked to rate the impact of the event and/or statements on a 7-point rating scale from -3 (“extremely negative”) to +3 (“extremely positive”). A higher score is indicative of greater stress, which is a limitation because it assumes being exposed to an event is stressful but does not consider the role of perception as much as other instruments. The authors of the CSLES also purport 14 categories inherent in their instrument, such as academic affairs, male-female relationships, and family matters. Although the categories provide an acceptable point of departure, more validity and reliability measures need to be performed.

College Student-Athletes’ Life Stress Scale (CSALSS). The CSALSS (Lu et al., 2012) consists of 24 items which represent eight factors of life stress for intercollegiate athletes. The fact that this questionnaire is relatively short is desirable since multiple questionnaires will be employed in this research. Respondents rate each statement on a six-point rating scale ranging

from 1 (“never”) to 6 (“always”) which captures a snapshot of athletes’ current state of stress, which is a strength for the purposes of this study. Furthermore, the CSALSS was published in 2012 so the items are timely for the current state of intercollegiate athletes – the categories include: academic requirements, sports injury, coach relationships, family relationships, romantic relationships, interpersonal relationships, performance demand, and training adaptation. Conversely, this instrument has not been widely utilized and validated. Another limitation of this instrument is it has primarily been tested with Taiwanese collegiate athletes. Its face validity appears to be consistent with intercollegiate athletes competing in the United States, but this instrument needs to be validated specifically with a United States intercollegiate athlete sample; therefore, it is not a good fit for the purposes of the current research.

Inventory of College Students’ Recent Life Experiences (ICSRLE). The ICSRLE was developed by Kohn and colleagues (1990) and lists 49 items which participants identify and rate stressors or hassles they have experienced in the past month. The intensity of each stressor is rated on a scale from 0 (“not at all part of my life”) to 3 (“very much part of my life”). Scores are added together and a higher total score indicates greater exposure to hassles and stress. Research has identified seven factors emerging from the 49-item inventory which include: developmental challenge, time pressure, academic alienation, romantic problems, assorted annoyances, general social mistreatment, and friendship problems. Strengths of this instrument are the current temporal nature of the assessment and that it does not assume every event experienced causes distress or eustress, but a limitation of this instrument is that it does not address intercollegiate athletes’ unique stressors.

Life Events Survey for Collegiate Athletes (LESCA). The LESCA (Petrie, 1992) is a relevant instrument to consider for this research because it was designed to capture the unique

stressors of intercollegiate athletes. Another strength of this instrument is that it was specifically designed to measure events' impact according to a transactional framework of stress, which is aligned with the theoretical framework of this study. However, it is a relatively lengthy instrument consisting of 69 life events in which respondents indicate which have occurred during the past 12 months. Similar to other inventories, participants are asked to rate the impact of the event on an 8-point scale ranging from -4 ("extremely negative") to +4 ("extremely positive"). Since the scores range from negative to positive, there are two subscales, negative life stress and positive life stress, which provide support for distress and eustress within the transactional framework. At this point in the literature review, the LESCA and CSALSS are the most appropriate instruments. The LESCA is an established instrument with acceptable reliability and validity which make it an attractive option. However, the main limitation remains regarding the nature of inventories – the lists are lengthy and non-exhaustive which leaves gaps in the information collected.

Social and Athletic Readjustment Rating Scale (SARRS). The SARRS (Bramwell et al., 1975), modified from Holmes and Rahe's (1967) seminal Social Readjustment Rating Scale (SRRS), contains 57 life events specific to athletes. Each life event is given an objective value ranging from 4 to 101 which is intended to measure the amount and duration of change in various life events. The values are totaled and a higher score indicates the individual will experience greater readjustment. Limitations of this instrument are that respondents' perceptions are not taken into consideration, and the scores attributed to each life event were determined by the authors of the instrument despite the respondents' unique lived experience and appraisal(s).

Student Life Stress Inventory – Revised (SSI-R). The SSI-R (Gadzella et al., 2012) lists 53 items grouped into nine categories (frustrations, conflicts, pressures, changes, self-imposed,

physiological, emotional, behavioral, cognitive appraisal) and two sections (stressors and reactions to stressors). The items are measured on a five-point rating scale ranges from 1 ("never") to 5 ("most of the time"), and a total stress score is the sum of the values from all nine categories. This scale is intended to reflect college students' life experiences on an off campus and measure college students' stress levels. The authors purport acceptable validity and reliability scores but the instrument is relatively new and best to undergo further investigation, particularly regarding the proposed latent variables.

As previously mentioned, the inventories provide valuable perspectives when studying life stress. However, for the purposes of this study, most of these inventories share the disadvantages that they are too lengthy and time consuming, especially when combined with other instruments as this study demands. Furthermore, they are limited in the results they produce because most do not effectively consider a transactional framework regarding stress, the results can be difficult to interpret from a multidimensional latent variable standpoint, and they fail to capture an inclusive list of unique stressors of intercollegiate athletes. Therefore, it is appropriate to consider a measure which specifically focuses on the overall perception of life stress.

Measure focusing on overall perception of life stress. The Perceived Stress Scale (PSS) (Cohen, Kamarck, & Mermelstein, 1983; Cohen & Williamson, 1988) was designed to measure the degree to which situations in one's life are appraised as stressful, which is grounded in stress-as-a-transaction framework (Lazarus, 1966, 1977, 1993a, 1993b, 1999; Lazarus & Folkman, 1984). The authors have designed and tested instruments consisting of 14 items, 10 items, and four items, and the 10-item has been recommended as the most parsimonious instrument (Cohen & Williamson, 1988). The instructions ask respondents to indicate how

frequently, during the past month, they experience a series of statements on a five-point rating scale from 0 (“never”) to 4 (“very often”). The scores are added and higher scores are indicative of greater perceived stress. Although some studies have suggested three categories have emerged from the PSS (i.e., low perceived stress, moderate perceived stress, and high perceived stress), the results have been interpreted as unidimensional, which is a good fit for this research design.

There are no perfect instruments to measure life stress due to the abstract nature. Each has advantages as well as disadvantages, but for the purposes of this study the PSS-10 will be utilized. Essentially, the PSS differs from the aforementioned instruments because its focus is on overall perception of stress rather than the impact of the specific individual events. For example, the same event could cause different perceptions of stress for different people so a more objective inventory can be a disadvantage. Similarly, respondents may inadvertently misattribute the source of stress so an inventory may not accurately achieve its purpose of identifying specific stressors. Inventories also assume experiencing more events will yield more stress, but in reality an individual could feel more stressed from a few high-stress situations rather than many low-stress occurrences. Finally, an inventory cannot possibly list all of the possible stressors in one’s life; therefore, if an individual is experiencing a stressor(s) not listed then his or her score will not accurately reflect his or her perceived stress. On the other hand, a limitation of the PSS is the results do not indicate which stressors may be greater sources of stress relative to other stressors. Additional description, psychometric evaluation, and rationale for selecting the PSS are discussed in the methodology.

Managing Stress

Given the breadth of knowledge surrounding stressors and how individuals experience life stress, researchers have taken steps to gain a better understanding of the factors and process

regarding *how* individuals respond to stressors. Models proposed by Williams and Andersen (1998) (see Figure 2.1) and Wiese-Bjornstal, Smith, Shaffer, and Morrey (1998) (see Figure 2.2) offer insights regarding the variables and process which influence the stress response.

For the purposes of this study, meshing these similar models provides an appropriate theoretical framework to test the variables of interest (i.e., perceived life stress, resiliency, and religiosity). However, there is an assumption which needs to be made in order to ground the theoretical and statistical approach to this study. Both models intend to only assess physical sport injuries, but this study will make the assumption that a sport injury can be an injury to any element(s) of the holistic person (e.g., physical injury, emotional injury, spiritual injury, social injury, etc.). Therefore, a meshing of these two models is provided in Figure 2.3 and a description of the constructed model follows.

Essentially, the Holistic Transactional Stress Model consists of three sections. The first section of the model represents the athlete's current disposition prior to a stressor. After the individual experiences a source(s) of stress, the second section, core processing, occurs. It is during the core processing that the transactional appraisals occur. At its most basic level, the presence of a stressor(s) causes the individual, in general, to appraise the situation (according to the work by Lazarus described earlier) and then those thoughts will affect the individual's emotions followed by behaviors. The bidirectional arrows within the core processing are indicators that core processing can occur in any particular sequence, but is most common to be processed according to thoughts, emotions, behaviors (as indicated by the larger arrows).

Simultaneously, there are multiple factors which influence an individual's core processing, as illustrated by the six broad categories contained in the ring (i.e., personality, history of stressors, interventions, coping resources, personal factors, and situational factors).

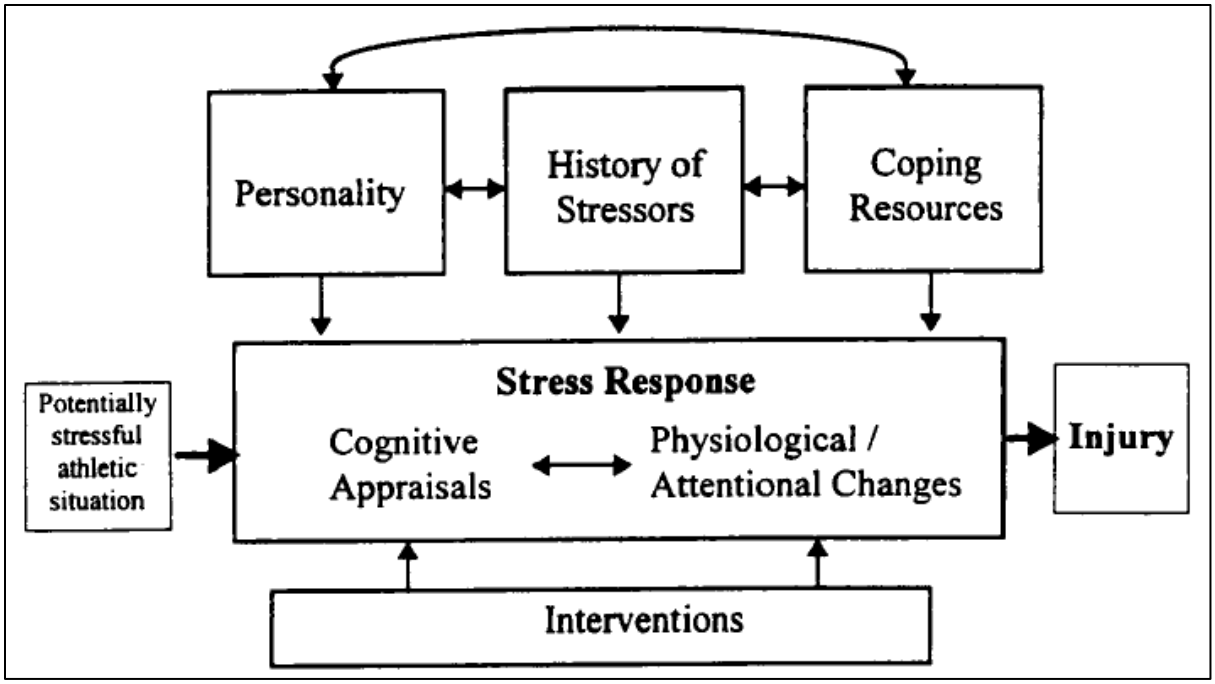


Figure 2.1. Stress and injury model (Williams & Andersen, 1998).

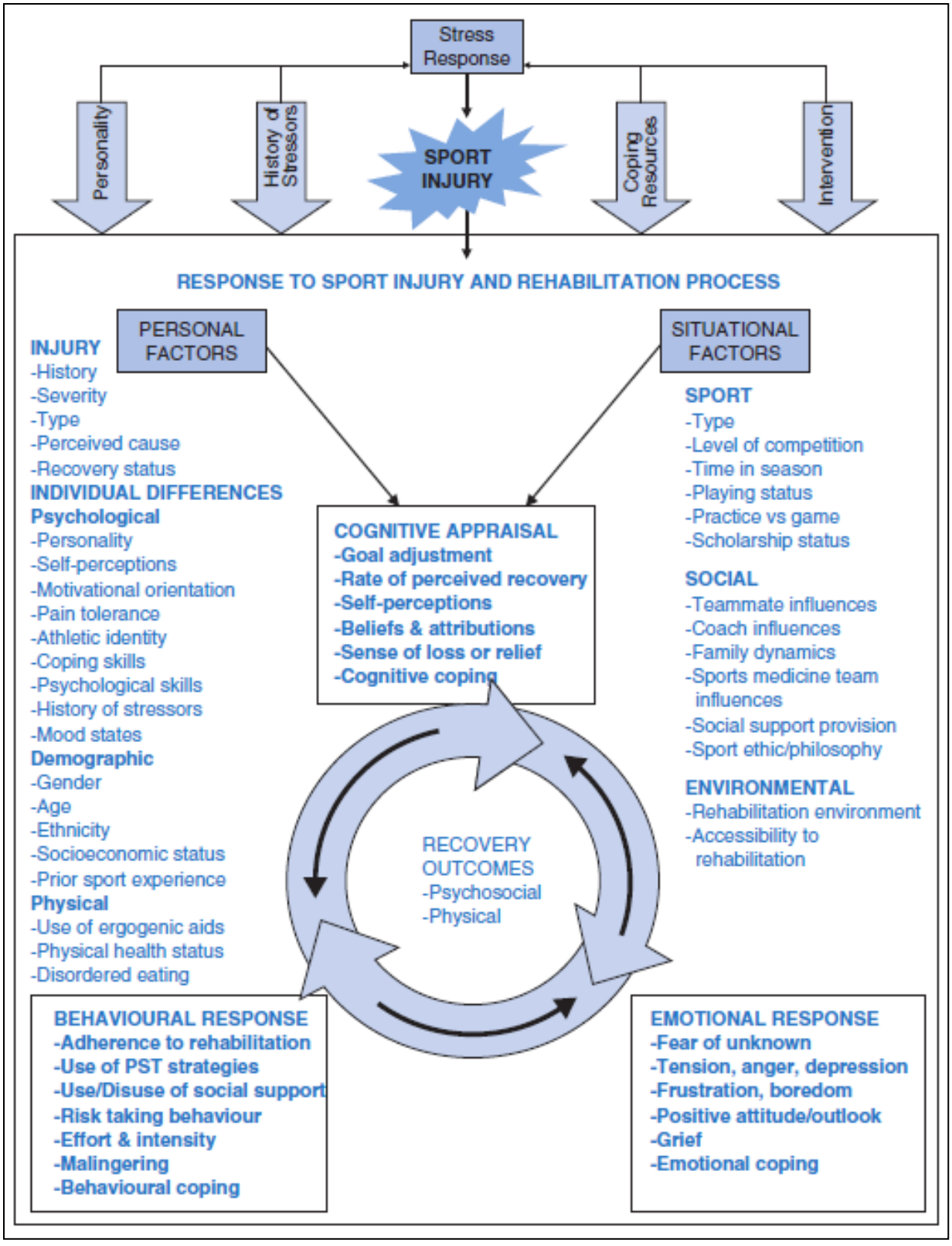


Figure 2.2. Integrated model of psychological response to the sport injury and rehabilitation process (Wiese-Bjornstal et al., 1998).

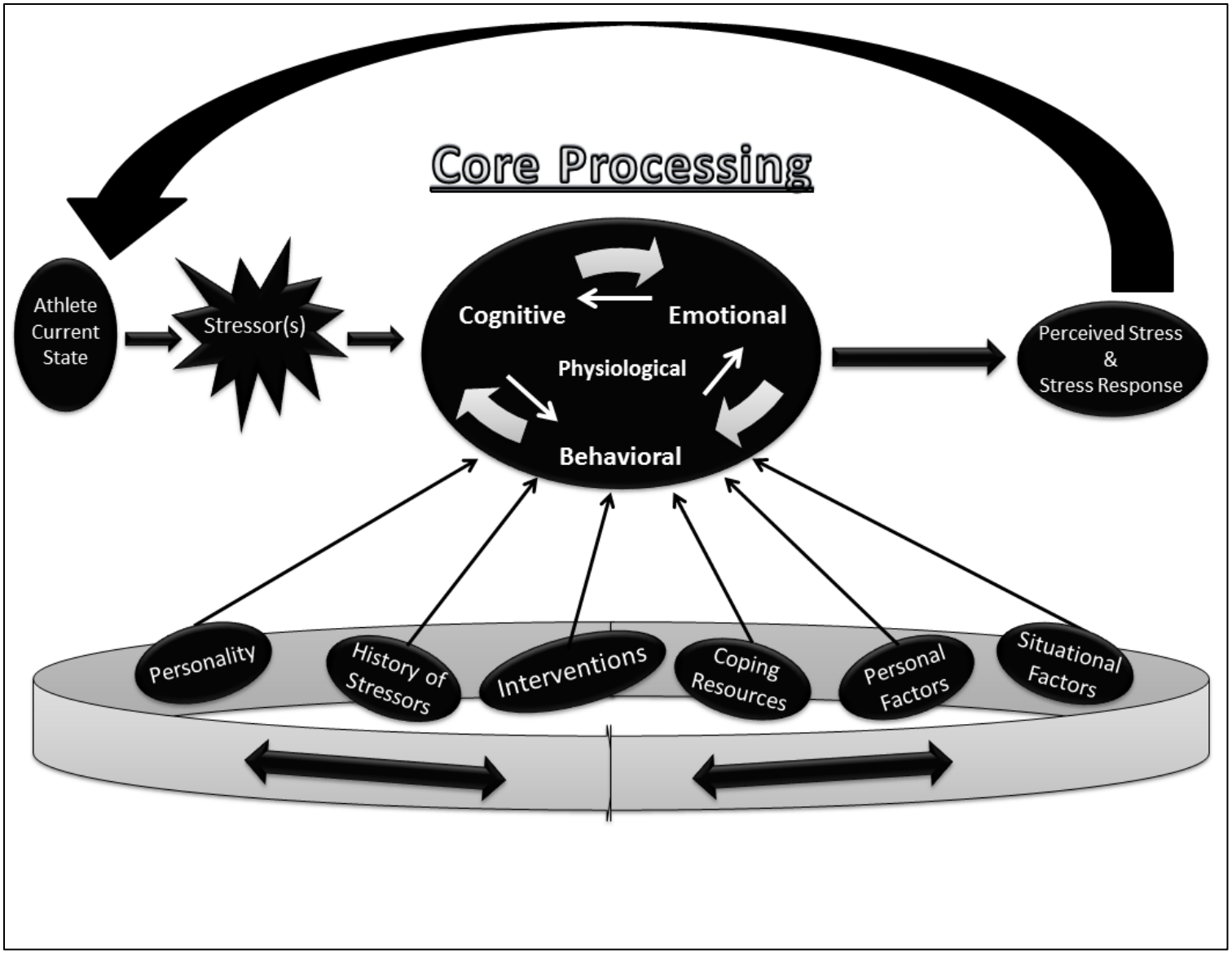


Figure 2.3. Holistic Transactional Stress Model.

Elements of these categories may occur before or after the stressor and some may be acquired whereas others are innate. Nonetheless, the figure is meant to illustrate elements within these categories have the possibility of being interrelated and interacting with each other, such as moderating and/or mediating relationships – the categories and their respective elements are not meant to be mutually exclusive nor exhaustive. Finally, during the third and final section, the individual ultimately experiences some level of perceived stress as well as an appropriate response to the stress, which can be positive or negative in nature (Walker, Thatcher, & Lavallee, 2007). The cyclical process immediately begins again with the athlete's new disposition.

This theoretical model is helpful to guide the current research because this study seeks to gain a better understanding of the factors which affect the core processing of the transactional framework, notably resiliency and religiosity. However, before expounding upon the concepts of resiliency and religiosity, it is necessary to briefly review the notion of coping, as resiliency and religiosity arguably fall within the parameters of coping strategies.

Coping. At the surface level, Wong (1993) speaks to the evolution of coping strategies. Specifically, Wong (1993) posits a model known as the Resource-Congruence Model which simply suggests an individual will effectively manage stress when he or she seeks out the best available resource(s) given a particular stressor. Although this model is not complex, it justifies providing holistic resources as a creative, collective, and proactive means of helping individuals cope with stress, and aligns with the aforementioned stress response models by Wiese-Bjornstal et al. (1998) and Williams and Andersen (1998).

Individuals can employ a variety of techniques and strategies to attempt to manage and cope with stress. Research has identified cognitive and behavioral (Galli & Vealey, 2008) as well as productive and maladaptive techniques employed by individuals to cope with stress, which

include: social withdrawal, advice from others, trusting relationships, goal-setting, time management, confidence-building, imaging, visualizing, change in appetite, change in sleep and rest patterns, thought control, changes in exercise, physical activity, and play, logical analysis, changes in financial spending, positive reinterpretation, task focusing, self-reflection, identity development, wishful thinking, optimism, risky and destructive behaviors, changes in sexual activity, self-blame, progressive relaxation, meditation, yoga, laughter, downscaling responsibilities and obligations, hobby activities, and prayer (Blonna, 2005; Carver, Scheier, & Weintraub, 1989; Corbin, Welk, Corbin, & Welk, 2011; Giacobbi et al., 2004; Kim, & Duda, 2003; Litman, 2006; Nicholls & Polman, 2007). The COPE Inventory developed by Carver et al. (1989) identified 15 techniques commonly utilized to cope with stress (see Table 2.1).

However, regardless of the techniques utilized, individuals are genetically and environmentally predisposed to perceive stressors, and subsequently manage the stress response, differently. Essentially, individuals who consistently demonstrate productively managing the stress response are deemed to have high resiliency (Brennan, 2008; Fletcher & Sarkar, 2013; Galli & Vealey, 2008; Gu & Day, 2007; Palmer, 2008; Riolli & Savicki, 2003). Therefore, it is vital to link the concept of resiliency and coping.

Although an in-depth review of coping literature is not necessary within the scope of the current research, it is appropriate to examine the concept of resiliency as it pertains to coping and stress management. The link between resiliency as a predispositional personal trait compared to resiliency as a process (e.g., training) and resiliency as an outcome will be explored.

Resiliency

The term and concept of resiliency has existed in several domains of the social sciences which examine human functioning and behavior, such as in business, education, military,

Table 2.1

The 15 Scales of the COPE Inventory

Scale	**Typified by**
Active-coping	Taking steps to eliminate the problem
Planning	Thinking about dealing with the problem
Suppression of competing activities	Focusing only on the problem
Restraint-coping	Waiting for the right moment to act
Instrumental Social Support	Seeking advice from others
Positive reinterpretation	Reframing the stressor in positive terms
Acceptance	Learning to accept the problem
Denial	Refusing to believe the problem is real
Turning to Religion	Using faith for support
Emotional social support	Seeking sympathy from others
Focus on & venting emotions	Wanting to express feelings
Behavioral disengagement	Giving up trying to deal with the problem
Mental disengagement	Distracting self from thinking about the problem
Substance use	Using alcohol or drugs to reduce distress
Humor	Making light of the problem

Note. Table taken from Littman (2006)

communities, and sport performance (Brennan, 2008; Galli & Vealey, 2008; Gu & Day, 2007; Palmer, 2008; Riolli & Savicki, 2003). However, resiliency has a history of being operationally defined and conceptualized in a variety of different ways (i.e., trait, process, or outcome) which has raised challenges with conducting research on resiliency (Fletcher & Sarkar, 2013). Therefore, it is appropriate to analyze various approaches to resiliency in order to select the most relevant framework as it relates to the current research.

In their line of recent research Fletcher and Sarkar (2012, 2013) assumed the task of synthesizing multiple conceptualizations of resiliency before ultimately offering their conclusions regarding their description of the construct. In their synthesis, Fletcher and Sarkar clearly distinguished what resiliency was *not*. For example, there has been a tendency to refer to resiliency synonymously with recovery, hardiness, and/or positive coping; however, these three constructs are each distinctly different according to their own characteristics (Campbell-Sills, Cohan, & Stein, 2006; Major, Richards, Cozzarelli, Cooper, & Zubek, 1998; Van Vliet, 2008).

Resiliency vs. recovery. Bonanno and colleagues (Bonanno, 2004, 2005; Bonanno et al., 2002; Bonanno et al., 2007; Bonanno & Keltner, 1997; Bonanno, Moskowitz, et al., 2005; Bonanno, Rennicke, et al., 2005) dedicated research to examining the links and points of divergence among resiliency and recovery. Specifically, Bonanno (2005) proposed resiliency and recovery are distinctive primarily based on the daily functioning outcomes (see Figure 2.4). Specifically, an individual who exhibits recovery experiences relatively more severe disruptions in normal daily functioning following a stressor (such as symptoms of depression or posttraumatic stress syndrome) than an individual who exhibits resiliency. Furthermore, an individual in recovery will experience these disruptions in normal functioning for a longer period

of time following a stressor than a person typifying resiliency, who will return at a state of equilibrium more quickly (Bonanno, 2004, 2005).

In Bonanno's (2004) estimation, approximately 35-55% of the general population exhibit resilient characteristics and behavior as opposed to the 15-35% who respond to a stressor(s) in a state of recovery. Furthermore, Bonnano and colleagues (Bonanno, 2004; 2005; Bonanno et al., 2002; Bonanno et al., 2007; Bonanno & Keltner, 1997; Bonanno, Moskowitz, et al., 2005; Bonanno, Rennicke, et al., 2005) and Fredrickson, Tugade, Waugh, and Larkin (2003) clarified that resilient functioning is demonstrated by completing personal obligations, fulfilling social responsibilities, and displaying positive emotions and interpersonal aptitude in the immediate and short-term following exposure to a stressor. In summary, a resilient individual is may experience a relatively mild and brief disruption(s) in normal functioning following distress (Bonanno, Moskowitz, et al., 2005), which is driven by the ability to maintain psychological equilibrium (Bisconti, Bergeman, & Boker, 2006) and function at or near their pre-stressor levels.

Resiliency vs. hardiness. Bonanno (2004) proceeded to write "there are multiple and sometimes unexpected pathways to resilience" (p. 20), including hardiness. Hardy individuals may be more inclined to foster resiliency, but the two constructs are distinct from one another. Hardiness is a personality trait which has been described as consisting of three dimensions, including "being committed to finding meaningful purpose in life, the belief that one can influence one's surroundings and the outcome of events, and the belief that one can learn and grow from both positive and negative life experiences" (Bonanno, 2004, p. 25). Individuals who possess greater hardiness generally evaluate stressors as less threatening (Bonanno, 2004), have great self-efficacy using coping strategies, and more confident seeking social support (Florian,

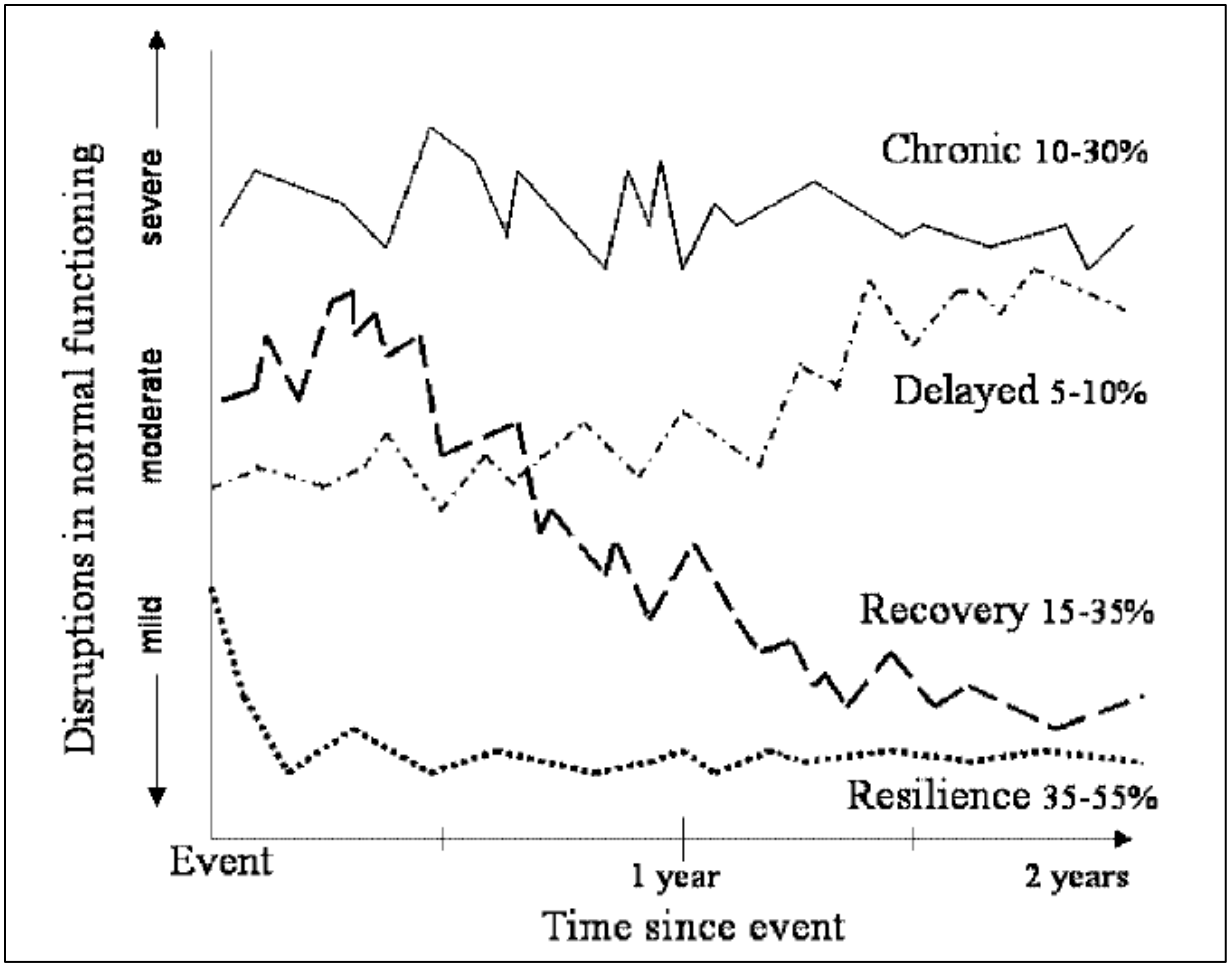


Figure 2.4. Prototypical trajectories of disruption in normal functioning during the 2-year period following a loss or potential trauma (in Bonanno, 2005, p. 136).

Mikulincer, & Taubman, 1995; Gore, 1981), thus buffering against perceived life stress (Kobasa, Maddi, & Kahn, 1982). Furthermore, in regards to the population of interest, there is evidence reflecting the similarities between resilience and hardiness because both have been shown to be associated with improved athletic performance in elite sport (Crust & Azadi, 2010; Gerber et al., 2013; Gucciardi et al., 2009). However, there is no guarantee that a hardy individual will exude resilience rather than recovery when encountering a stressor(s).

Resiliency vs. positive coping. Blonna (2005) proposed five broad categories in which individuals can positively cope with perceived life stress: rethink, reduce, relax, release, and reorganize. Within each of these broad categories the following positive coping techniques could be employed to manage stress: seeking advice from others, engaging in trusting relationships, goal-setting, effective time management, confidence-building, imaging, visualizing, healthy change in diet (if necessary), healthy change in sleep and rest patterns, thought control, healthy changes in exercise and play, appropriate changes in financial spending, positive reinterpretation, task focusing, self-reflection, identity development, optimism, healthy changes in sexual activity, progressive relaxation, meditation, yoga, laughter, downscaling responsibilities and obligations, prayer (Blonna, 2005; Carver et al., 1989; Corbin et al., 2011; Giacobbi et al., 2004; Kim, & Duda, 2003; Litman, 2006; Nicholls & Polman, 2007). Therefore, positive coping can be utilized to facilitate a more resilience response, but positive coping does not guarantee a resilient response.

In light of the research and literature regarding resiliency, recovery, and positive coping, Bonanno (2004) defined resilience as

> "the ability of adults *in otherwise normal circumstances* [italics added] who are exposed to an isolated and potentially highly disruptive event…to maintain relatively stable,

> healthy levels of psychological and physical functioning…as well as the capacity for generative experiences and positive emotions (pp. 20-21)

However, it is important is review other descriptions of resiliency before ultimately choosing the operational description for the current research.

Resiliency described as a trait vs. process vs. outcome. Work by Richardson (2002) and Richardson, Neiger, Jensen, and Kumpfer (1990) resulted in a description of resiliency largely grounded in developmental theory which contends one's resilience, or lack thereof, is the product of an interactive synthesis of genetic, person, and environmental factors (Bonanno, 2004; Cicchetti, 2010; Gerber et al., 2013). Nonetheless, Richardson and colleagues (1990) and Richardson (2002) initiated three subareas of research, referred to as waves. The initial wave of research centered primarily on determining the personality traits and characteristics of resilient individuals (including hardiness which was described earlier). The results from this wave provided some insights to the resiliency puzzle, but it also led to more evidence pointing to resiliency as an appraisal process.

The second wave of research emphasized analyzing resiliency from a "process" perspective, particularly how individuals acquire traits and appraise situations (Richardson, 2002). For example, Lepore and Revenson (2006) conceptualized resiliency as entailing three dimensions: resistance, recovery, and reconfiguration. This approach essentially proposes resiliency can be described as not being disrupted by stress (i.e., resistance), returning to pre-stress levels of functioning after encountering stress (i.e., recovery), or as a result of recovery an individual embraces a new worldview due to the process (i.e., reconfiguration) (Galli & Vealey, 2008). Similar to the link between the first and second waves, results from the second wave suggested resiliency could occur as an outcome-based construct.

During the third wave of research, Richardson and colleagues (1990) and Richardson (2002) explored the forces which drive individuals toward reconfiguration and self-actualization. By their estimation resiliency could be assessed based on the ethos of universal equilibrium, or conversely its disruption. Besterman-Dahan, Barnett, et al. (2012) as well as Bonanno and colleagues (2007) expounded on this approach of resiliency by describing the resilience "outcome" based on the presence, absence, and/or incidence of Post-Traumatic Stress Disorder (PTSD) symptoms. At this point in the research, the "process" description seems to be the best fit to guide the resiliency construct, and is worthy of additional explanation.

Toward an operational construct of resiliency. Based on a synthesis of resiliency literature, Fletcher and Sarkar (2013) recommended a process-oriented framework to describe resiliency, primarily grounded in Richardson and colleagues' (1990) model (see Figure 2.5). According to the aforementioned resiliency model an individual begins in a state of biopsychospiritual homeostasis, also described as a "comfort zone" in which the individual is in a balanced holistic state physically, mentally, and spiritually. If the person experiences a stressor(s) and lacks sufficient protective resources he or she will experience a disruption. Next, the individual will move from disorganization and begin the reintegration progression and experience an outcome of either dysfunctional reintegration, maladaptive reintegration, homeostatic reintegration, or resilient reintegration. In essence, resilient reintegration is desired, resulting in the individual attaining additional protective factors which theoretically mean the individual will be more apt to buffering against stress in the future.

Seminal work by Luthar and colleagues (Luthar, 2006; Luthar & Cicchetti, 2000; Luthar et al., 2000) elaborated on the framework by Richardson and colleagues (1990) and Richardson (2002) to set the stage for a more contemporary framework of resilience as a dynamic process.

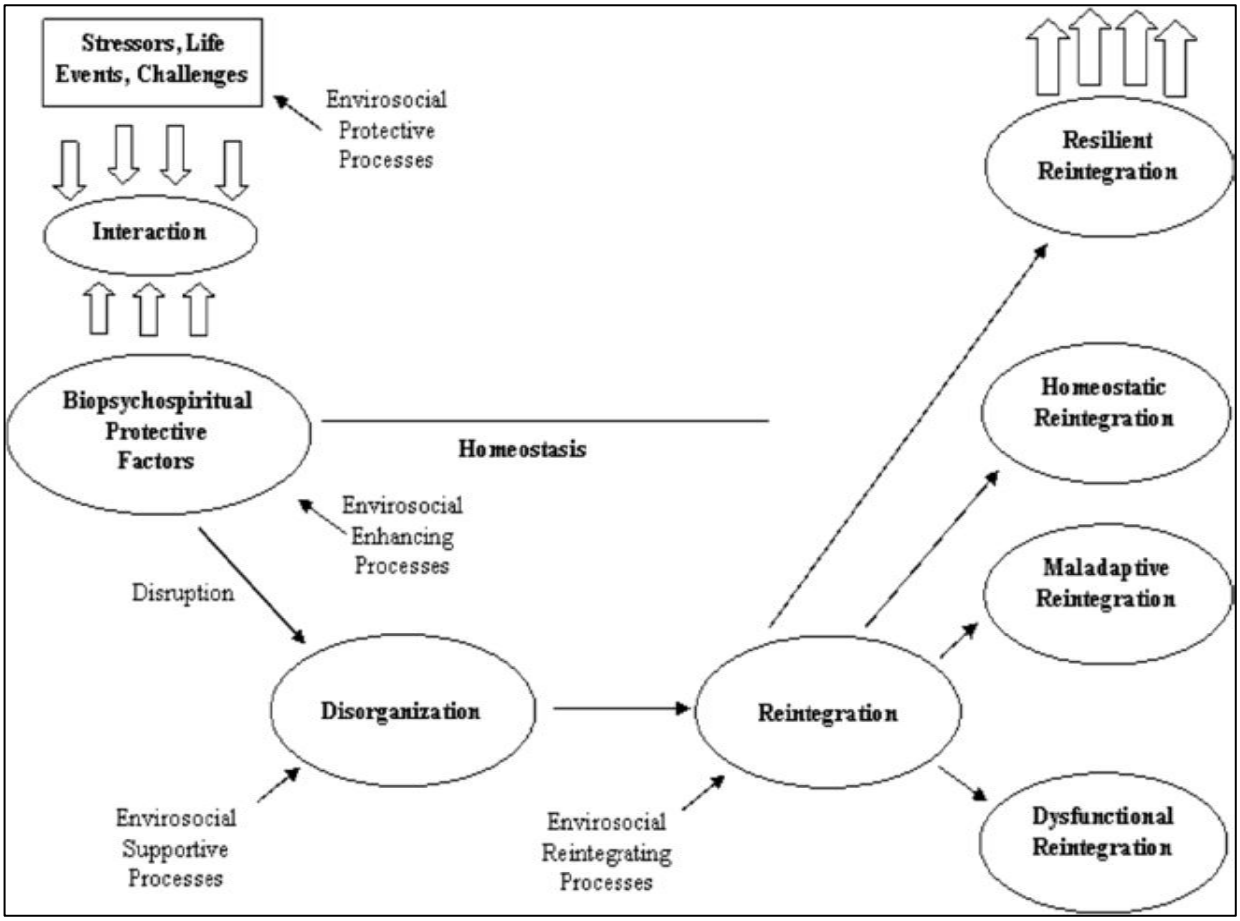


Figure 2.5. Richardson and colleagues' (1990) resiliency model.

Luthar and colleagues (Luthar, 2006; Luthar & Cicchetti, 2000; Luthar et al., 2000) argued that resilience is a dynamic process because how an individual employs protective factors and appraises the situation varies from experience to experience depending on the stressor(s) and the context.

Subsequently, Fletcher and colleagues (Fletcher & Fletcher, 2005; Fletcher & Hanton, 2003; Fletcher, Hanton, & Mellalieu, 2006; Fletcher & Sarkar, 2012, 2013; Fletcher & Scott, 2010) built on the work by Luthar and colleagues (Luthar, 2006; Luthar & Cicchetti, 2000; Luthar et al., 2000) and described resiliency specifically in terms of a transactional framework. Fletcher and colleagues (Fletcher & Fletcher, 2005; Fletcher & Hanton, 2003; Fletcher, Hanton, & Mellalieu, 2006; Fletcher & Sarkar, 2012, 2013; Fletcher & Scott, 2010) noted that stressors arise from the environment in which one lives and functions, and stress is "mediated by the processes of perception, appraisal and coping, and, as a consequence, result in positive or negative responses, feeling states, and outcomes. This ongoing process is moderated by various personal and situational characteristics…" (Fletcher & Sarkar, 2013, p. 15). Consequently, Fletcher and Sarkar (2013) concluded that resilience is comprised of a variety of protective factors which individuals employ to effectively buffer against negative appraisals of stressors. More specifically, resilient forces influence the meta-cognitions of the holistic stress transactional process at various stages of the appraisal (i.e., thoughts, emotions, actions), which in turn affect the coping strategies selected and employed (additional descriptions of the resiliency construct are provided in Table A.1 and Table A.2 in Appendix A).

Contemporary conceptual framework of resiliency. For the purposes of this research, the conceptual framework proposed by Fletcher and Sarkar (2012; 2013) will be used to guide the resiliency construct. In essence, their theoretical model described resiliency "as an

overarching concept that encapsulates stressors, cognitive appraisal and meta-cognitions, psychological factors (positive personality, motivation, confidence, focus, perceived social support), and facilitative responses" (Fletcher & Sarkar, 2013, p. 672), which emphasized the core processing component of the Holistic Transactional Stress Model. In fact, their model focused on resiliency (see Figure 2.6) which aligns nicely with the illustration of the Holistic Transactional Stress Model mentioned previously, with striking similarities between the core processing and meta-cognition portions.

Given the fact meta-cognitions is a relative new addition to the resiliency literature, it is necessary to briefly elaborate on this element of the resiliency conceptualization, particularly relating to athletes. Flavell (1979) originally coined the term "meta-cognition" who essentially described it as one's awareness of his or her thoughts (i.e., cognitions) and ability to control them. In their study, Fletcher and Sarkar (2012) applied this concept to the Olympic champions, noting they were self-aware of their goals even at early stages of their athletic careers. In regards to controlling their cognitions when striving to attain their athletic goals, Fletcher and Sarkar (2012) found they utilized psychological strategies such as goal-setting, imagery, self-talk, and relaxation. Finally, during the more mature stages of their athletic journey, the Olympic champions reflected on their experiences and acknowledged their ability to effectively manage their cognitions had a facilitative effect on their sport performance while, conversely, having a debilitative effect when they did not effectively manage their cognitions.

This type of approach was appealing because resiliency is conceptualized from a holistic perspective considering intra- and inter-personal characteristics in which resilience is developed over the course of one's life, including before, during, and after their athletic career (Fletcher & Sarkar, 2012; Wylleman et al., 2004). This construct of resiliency is also appropriate for the

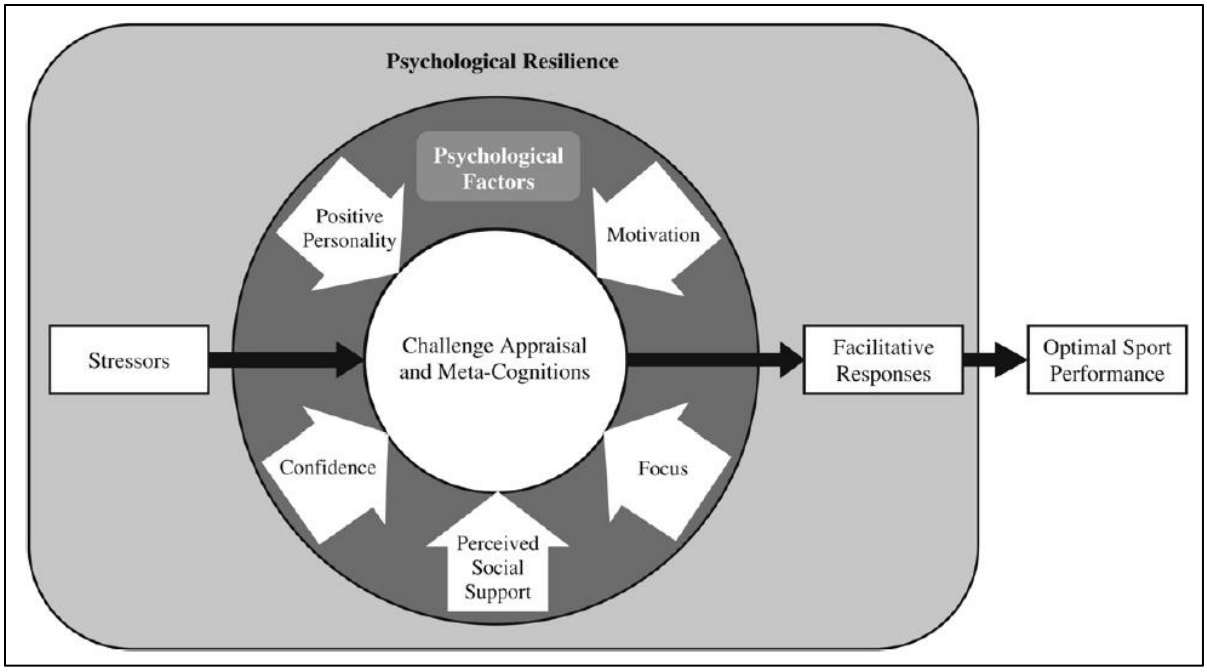


Figure 2.6. A grounded theory of psychological resilience and optimal sport performance (Fletcher & Sarkar, 2012, p. 672).

current research because it provides flexibility for the exploratory nature of this research design. For example, resiliency will be tested as an independent variable which covaries with a variety of other personal and contextual factors. Furthermore, Fletcher and Sarkar's (2012) construct of resiliency has been used analyzing stress in an elite athlete population(s), which provides rationale for employing the aforementioned operational definition for this research. In light of the chosen operational construct for resiliency, the most relevant measures of resiliency will be reviewed.

Measures of resilience. The most relevant measures of resiliency, particularly as it pertains to the purpose of this study and population, are the Resilience Scale, Connor-Davidson Resiliency Scale, and Brief Resilience Scale.

Resilience Scale (RS). The RS, developed by Wagnild and Young (1993), is comprised of 25 items measures on a 7-point rating scale. The scores are totaled and a higher score is indicative of greater resilience. The RS originally had a Cronbach's alpha score of 0.91, and subsequent reliability scores have indicated acceptable reliability across a wide variety of populations, spanning age and ethnicity. A weakness of the RS is that it is questionable as being unidimensional versus multidimensional. Also, the glaring disadvantage of utilizing the RS for this research design is resilience is assumed to be a personality characteristic rather than according to an appraisal process.

Connor-Davidson Resiliency Scale (CD-RISC). The CD-RISC is comprised of 25 items measured on a five-point rating scale. Accordingly, an individual can score along the range of 0-100 with a higher score indicative of greater resilience (Connor & Davidson, 2003). Additionally, a 2-item instrument and 10-item instrument have been developed and validated as well (Campbell-Sills & Stein, 2007; Vaishnavi, Connor, & Davidson, 2007). The original

instrument has been deemed valid and reliable across multiple populations, which is an advantage of the instrument (e.g., Cronbach's alpha score of 0.89 and test-retest intraclass correlation coefficient of 0.87). However, the CD-RISC was developed to be more clinical in nature, grounded in a framework for treating anxiety, depression, and stress. Although the connection with stress is favorable, resilience is treated more from a trait and outcome perspective rather than an appraisal construct. As a result, the CD-RISC is not a good fit for this research design.

Brief Resilience Scale (BRS). The BRS (Smith et al., 2008) is a self-report questionnaire consisting of six items each measured on a five-point rating scale. A unidimensional composite score representing resiliency is calculated by summing the scores of all six questions – a higher score is indicative of greater resiliency. The internal consistency of the BRS was deemed acceptable with Cronbach's alpha scores ranging from 0.80 to 0.91 in the four samples tested when constructing the scale (Smith et al., 2008). Also, the test-retest reliability (ICC) was acceptable ($r = 0.69$; $r = 0.62$) (Smith et al., 2008).

Based on the operational definition of resiliency, the BRS appropriately captures respondents' appraisals and (meta)cognitions related to the perceived ability to "bounce back" rather than personal characteristics, symptoms, or coping techniques which other instruments tend to measure (Smith, 2008). Also, the BRS is a good fit for the research design based on the fact it is relatively brief and was designed to be used in conjunction with health outcomes and health stressors. The BRS has been cited in more than 20 articles, and it has been tested with undergraduate samples so it should be appropriate for the subgroup of collegiate students sampled in this research design (i.e., intercollegiate athletes). As a result, the BRS will be employed to measure resiliency for the current study.

Resiliency and religiosity. Based on the aforementioned literature review of stress and resiliency, there is a gap in the literature examining the relationship between religiosity and resiliency, particularly among intercollegiate athletes. For the purposes of this study, the role of religiosity interacting in tandem with resiliency will be explored.

Religiosity and Spirituality

When individuals hear or read the terms "religion," "religiosity," and/or "spirituality," they may think of a similar set of characteristics and attributes. However, Kaiser (2000) states that an individual "may be spiritual and not very religious, religious and not very spiritual, neither religious nor spiritual, or both religious and spiritual" (p. 7). As a result, the constructs of these terms diverge, so it is vital to establish operational paradigms before delving into a model intended to facilitate holistic wellness for intercollegiate athletes.

Religiosity. Several traditional definitions exist to describe religiosity, but sociologists Delaney and Madigan (2009) explain religiosity as adhering to "a system of beliefs and ritualistic behaviors which unite a group of like-minded people together into a social group who adhere to ideals of spirituality" (p. 260). Similarly, Koenig (2008) adds that a religious individual often seeks the "Sacred, the Divine, God (in Western cultures), or Ultimate Truth, Reality, or nirvana (in Eastern cultures)" (Koenig, 2008, p. 11). Furthermore, Hill and colleagues (2000) outlined three historical commonalities that religious individuals experience: "(1) a supernatural power to which individuals are motivated or committed; (2) a feeling present in the individual who conceives such a power; and (3) the ritual acts carried out in respect of that power" (p. 56). Given the abundance of research and comments on religiosity, a few basic descriptors emerged as the construct was framed.

Systematic. Virtually every definition of religiosity includes an element of institutionalized, "specific behavioral, social, doctrinal, and denominational characteristics" (Astin et al., 2011b, p. 5). As a result, there are arguments suggesting religiosity is representative of a more rigid, narrow, and less inclusive nature due to its organized features. Although systems vary from religion to religion, they typically include both organized and unorganized rituals and traits which can be relatively objective and observable. Additionally, the fundamental nature of religiosity being systematic is further understood in tandem with the following explanations of community and the sacred (Astin et al., 2011b; Fowler, 2001; Hill et al., 2000; Wills, 2007; Zinnbauer, Pargament, & Scott, 1999).

Community. Due to the largely systematized, institutionalized traits of traditional religiosity, there is a sense of community, particularly by tenets of the same faith traditions. In a similar vein, this type of community is more public regarding the expectations of adherents. More specifically, organized religiosity (e.g., church attendance) is largely a social endeavor, and this essence of community is intended to provide accountability and foster faith development. On the other hand, non-organizational religiosity is more private in nature and can include practices such as prayer and/or reading sacred texts. As a result, the line can be blurred between organized and non-organized religiosity, which endorses an element of subjectively to the widely held beliefs that religiosity is rigid and exclusive (Astin et al., 2011b; Fowler, 2001; Koenig, 2008; Wills, 2007).

Sacred. The essence of religiosity is the sacred – without the sacred, religiosity withers to mere ideology or self-satisfaction. However, it is critical to note that the concept of the sacred can take any form which the individual(s) deem as significant, reverent, and an ultimate concern

worth pursuing. The notion of the sacred is an active pursuit and can be the journey, destination, and/or goal. Anandarajah and Hight (2001) suggested:

> Many people find spirituality [the search for the sacred] through religion or through a personal relationship with the divine. However, others may find it through a connection to nature, through music and the arts, through a set of values and principles or through a quest for scientific truth (p. 83).

Similarly, Zinnbauer and colleagues (1999) elaborated on the significance of the sacred, writing:

> By connecting religion with the sacred, boundaries are marked around the construct to distinguish it from other related processes (e.g., creativity, poetry, fantasy), and to distinguish the psychology of religion from other related disciplines (e.g., philosophy, social work). However, religion is not a static entity. Functionally, religion represents a search for any number of significant goals in life (p. 908).

Scholars added that the inclusion of the sacred is the foundation of our spirit (and spirituality), community, and systematic behaviors that define religiosity (Hill et al., 2000; Pargament, 1997; Wills, 2007; Zinnbauer et al., 1999).

From the description of religiosity above, one notices the inclusion of the word spirit and spirituality to describe religiosity. However, scholars such as Dyson, Cobb, and Forman (1997) argue that that spirituality is not exclusive to religiosity. This line of thought can be traced back to Maslow (1964) who suggested concepts such as values, ethics, morals, and even spirituality should be "taken away from the exclusive jurisdiction of the institutionalized churches" (p. 12). As a result, it is appropriate to offer insights into New Age constructions of the term spirituality.

Spirituality. Western thoughts of "spirituality" are largely influenced by Judeo-Christian religious constructs, but the phenomenon of spirituality has a relatively short history of being

used independently of religion (Astin et al., 2011b; Robinson, 2007; Zohar & Marshall, 2004). For instance, Hill et al. (2000) suggested religiosity has moved from sacred to secular, and spirituality has connotations pointing to a more secular term. Additionally, he points to three dominant categories into which spirituality falls: God-oriented, world-oriented, or humanistic/people-oriented. For example, Marjorie Thompson (1995) provided a definition of a God-oriented (albeit Christian) description of spirituality. She described spirituality as humans' way of "expressing how we live with God in this world" (Thompson, 1995, p. 6). More specifically, this description of spirituality entails how God's spirit (i.e., the Holy Spirit from a Christian perspective) lives within us, relates to us (and us to him), challenges us, changes us, and transforms us. Thompson (1995) summarized her description of the abstract nature of spirituality by commenting that "Spirituality points to a path – to choices of belief, value commitments, patterns of life, and practices of faith" (p. 7) which allow us to conform to the image of God. However, it is the latter portion of this description which allows for more flexibility apart from religion – which "God," if any, is being sought after? As a result, spirituality is clearly a multidimensional concept which necessitates dissecting.

Astin and colleagues (2011b) distilled a plethora of research regarding the multidimensional concept of spirituality to construct their operational definition. The concluded spirituality's abstract, dynamic, and multifaceted nature "has to do with the values that we hold most dear, our sense of who we are and where we come from, our beliefs about why we are here – the meaning and purpose that we see in our work and our life – and our sense of connectedness to one another and to the world around us" (Astin et al., 2011b, p. 4). Although Astin and colleagues (2011b) offered a succinct description of spirituality, their definition is certainly not the only definition that exists. Therefore, it is critical to outline common characteristics which

are present in a variety of definitions of spirituality to more effectively ground this complex concept (it is necessary to note that each of the following elements are not mutually exclusive, but rather may overlap with one another).

Subjectivity. First and foremost, spirituality is subjective and can mean different things to different people. Similarly, an individual's God or higher power, or lack thereof, can take many forms depending on open interpretation. According to contemporary notions, there is no objective truth in which to root one's spirituality. Many scholars partially describe spirituality as a dynamic force and/or energy that drives us at our core. This type of force is responsible for helping make sense of the following characteristics of spirituality: connectedness, purpose, values, and integrative aptitude. (Astin et al., 2011b; Dyson et al., 1997; Fetzer Institute, 2003; Goddard, 2000; Hindman, 2002; Loehr & Schwartz, 2003; McSherry & Cash, 2004; Parks, 2000; Robinson, 2007; Tanyi, 2002; Thompson, 1995).

Connectedness. Working within the subjective framework, research supports spirituality's sense of connectedness – with self, others, the environment, and/or a Higher Power(s). Individuals who report a stronger sense of spirituality indicate the occurrence of personal wholeness, authenticity, and empowerment, as well as solid relationships regarding their sense of community (local and extended). Within this context, connectedness helps make sense of the emotions and complicated feelings we experience, such as hope, love, peace, joy, comfort, and support. Additionally, the element of connectedness is associated with the concept of transcendence. As an individual develops his or her spirituality, he or she has the perceptive ability to transcend barriers (e.g., physical, mental, emotional, social, spiritual) and connect in the spiritual realm of the respective relationship(s) (Anandarajah & Hight, 2001; Dyson et al.,

1997; Fetzer Institute, 2003; Hindman, 2002; Love & Talbot, 2009; McSherry & Cash, 2004; Robinson, 2007; Sharts-Hopko, 2003; Tanyi, 2002).

Purpose and values. A cornerstone trait of an individual who embraces spirituality is the opportunity to derive meaning and purpose in life. Largely based on our lived experiences, our spirituality shapes who we are and who we want to be, inspiring us to achieve our "optimal being" (Tanyi, 2002, p. 506). Individuals who exhibit a clearer sense of purpose are more likely to be fulfilled in their vocational and avocational pursuits. Similarly, one's spirituality facilitates resolve and personal development of core values. These core values can be moral (e.g., honesty, loyalty, respectful, etc.) or amoral in nature (e.g., car, house, family, trophy, achievements, etc.) and is subjective to each individual (Anandarajah & Hight, 2001; DeSensi & Rosenberg, 2010; Dyson et al., 1997; Hindman, 2002; McSherry & Cash, 2004; Parks, 2000; Robinson, 2007; Tanyi, 2002; Watson & Nesti, 2005).

Integrative aptitude. A unique facet of spirituality is its distinctive capacity to integrate other aspects of personal development, including physical, cognitive, emotional, social, and moral. By effectively linking behavioral, psychological, philosophical, and spiritual, one can achieve a greater sense of holistic wellness. Furthermore, researchers commonly argue that spirituality is an active process and quest consisting of peaks and valleys which can shift over the course of one's lifetime (Anandarajah & Hight, 2001; Astin et al., 2011b; Baker, 2003; Goddard, 2000; Hindman, 2002; Kaiser, 2000; Love & Talbot, 2009; Maimes, 2002; McSherry & Cash, 2004; Ravizza, 2002; Robinson, 2007; Wills, 2007).

Choosing a construct. So the question remained whether these two concepts, religiosity and spirituality, are interrelated or polar opposites, and which to align with for the purposes of this study? There is evidence to support the argument of divergence (Wills, 2007) (see Table

2.2), but Zinnbauer et al. (1999) caution against polarized definitions. Hill et al. (2000) added support for the interrelatedness of the two terms by citing the similarities shared between religiosity and spirituality: develop across a lifespan, are expressed or influenced by groups of like-minded individuals, related to affect and emotion, and are related to positive mental health and social functioning.

While recognizing the similarities between religiosity and spirituality, the current research seeks to gain a better understanding of the construct of religiosity. Religiosity provides a unique blend of structure and personal search, journey, quest, and expression, but it is distinguished from secular connotations commonly associated with spirituality. Similarly, it was determined that religiosity is a better fit for this research design given the fact it is slightly more tangible than spirituality (since spirituality is relatively more subjective than religiosity) (Koenig, 2008). A more tangible construct will theoretically yield more distinct results from which conclusions can be drawn regarding the relationship between religiosity, resiliency, and stress. Therefore, the operational construct of religiosity is described as adhering to various organization and non-organization spiritual practices such as prayer, meditation, reading sacred texts, and/or attending services, shared by a group of like-minded people (Delaney & Madigan, 2009; Hales, 2007). Religiosity also includes an intrinsic element which fuels an individual's sense of meaning or purpose (Galli & Reel, 2012; Koenig et al., 1997; Shaw et al., 2005).

Religiosity and Stress Management

As previously alluded to, among the numerous strategies to manage wellness and cope with stress includes utilizing religiosity, such as prayer, meditation, reading sacred texts, and/or attending services (Hales, 2007). However, it is important to note that religiosity can present as negative coping and positive coping (Blonna, 2005; Pargament et al., 1998).

Table 2.2

Descriptors Illustrating Polarization of Religion and Spirituality

Religion	**Spirituality**
Organized	Personal
Collective	Individual
Public	Private
Substantiative	Functional
Traditional	Non-traditional
Restrictive	Positive
Institutional	

Religiosity and negative coping. Religious obligations can present as stressors to individuals, particularly intercollegiate athletes who are already inundated with unique responsibilities and demands. For instance, religious observances, holidays, diets, and/or treatment philosophies could interfere with practice, travel, and/or game schedule as well as strength and conditioning, nutrition, and/or treatment regimens. Therefore, Pargamaent and colleagues (1998) suggested an individual experiencing any sort of religious struggle could exasperate their perception of the situation and subsequent stress level. Besterman-Dahan, Barnett, and colleagues (2012) and Fitchett et al. (2004) found support that negative religious coping could adversely affect holistic wellness, such as increased levels of emotional distress, depressive symptoms, and poor physical health outcomes. Additionally, Hufford and colleagues (2010) found spiritual distress and "moral injury" could result in interpersonal conflict.

Religiosity and positive coping. On the other hand, research points to evidence that religious individuals are generally less depressed and anxious as well as better apt to cope with trauma than non-religious individuals (Hales, 2007; Storch, Storch, Welsh, et al., 2002). Research by Galli and Reel (2012) suggested athletes who employed religiosity as a coping strategy demonstrated positive health outcomes. They commented, "Nearly all of the athletes noted enjoying spiritual benefits as a result of their experience. Many of the athletes' religious beliefs were affirmed based on the perception that they received assistance from a higher power during their struggles" (Galli & Reel, 2012, p. 310). Hufford and colleagues (2010) added that spiritual outcomes optimized personal and team cohesion, maturity, commitment, and performance, encourages creative outlets (e.g., art, music, journaling), and helps individuals and teams effectively cope with injury, suffering, and trauma. Finally, research synthesized by Koenig, King, and Carson (2012) identified greater religiosity is correlated with greater well-

being, greater happiness, great life satisfaction, greater hope and optimism, great purpose and meaning in life, higher self-esteem, adaptation to bereavement, greater social support, less loneliness, lower rates of depression, faster recovery from depression, lower rates of suicide, less anxiety, fewer psychotic tendencies, lower rates of alcohol and substance abuse, less delinquency and criminal activity, greater satisfaction with relationships, less risky behavior, and living longer.

Galli and Reel (2012) presented a concise proposition to explain how religiosity can produce positive health outcomes. Essentially, religiosity does not operate in a vacuum, thus social support is an inherent element of religiosity. For example, individuals who exhibit greater religiosity may be more likely to have access to a network of like-minded individuals who can offer perceived comfort and wise consultation when stress presents itself. Similarly Giacobbi and colleagues (2004) suggested religiosity can encourage athletes "to develop enriching social support systems because the benefits gained from supportive others, both in and out of the athletic context, offer potential emotional, social, and cognitive mechanisms for growth" (p. 17). Furthermore, according to Shaw and colleagues (2005), individuals who demonstrated greater religiosity were more likely to experience a more secure sense of meaning and purpose in their lives. Evidence also supported the notion that religiosity can provide a sense of self-worth, encourage prayer (which fosters peace and calmness), boost energy, increase altruism, and promote forgiveness (Hales, 2007). Lastly, researchers have pointed to evidence that religiosity contributed to greater prevention of stress, resiliency, recovery, and reduced perceived stress (Hufford et al., 2010; Yi et al., 2005). In addition to understanding religiosity and stress management in general, it is appropriate to review relevant literature regarding religiosity and

spirituality among the intercollegiate athlete populations specifically, which will provide context regarding the current state of intercollegiate athletics.

Religiosity and Spirituality among Intercollegiate Athletes

Research by Barnette (2001) explored psychodynamic therapy with a 20-year-old African-American heterosexual junior female intercollegiate athlete presenting with Post-Traumatic Stress Syndrome Disorder (PTSD). The client's PTSD stemmed from being raped by five African-American intercollegiate athletes at a nearby college while visiting her boyfriend at the college. Barnette utilized the Life History Survey when interviewing the client and her background revealed that "although from a 'very strong Christian family,' [she] was not actively involved in church or its spiritual practices" (Barnette, 2001, p. 31). Upon further discussions the client reported she struggled with contradictions between her spiritual upbringing and current behavior, most directly centering on the idea that sex before marriage is a sin. She felt dirty, guilty, and ashamed about her current relationship with her current fiancé. As a result, Barnette (2001) concluded helping her client better understand her spirituality helped her positively cope with PTSD symptoms.

Dillon and Tait (2000) tested the relationship between spirituality and "being in the zone" (i.e., flow) among intercollegiate athletes at a non-sectarian NCAA Division III college ($N = 62$). The authors developed the Spirituality in Sports Test (SIST) to test for this relationship. The SIST consists of 10-items measured on a four-point scale – 1 (almost never) to 4 (almost always) – and produced a Cronbach's alpha score of 0.98. No subscales within the religious construct were mentioned. Also, Dillon and Tait (2000) tested the correlation between their SIST and the Spiritual Involvement and Beliefs Scale developed by Hatch, Burg, Naberhaus, and Hellmich (1998) to test the validity ($r = 0.71$). Dillon and Tait (2000) acknowledged some limitations of

their instrument, including the fact that it is intended to be administered to intercollegiate athletes competing on team sports, rather than individual sports, and since this was the first study utilizing the SIST, the results are exploratory in nature. The authors concluded a significant relationship existed between spirituality and being "in the zone."

In the study by von Guenthner and Hammermeister (2007), they assessed the link between wellness (operationalized by the constructs emotional, social, spiritual, intellectual, and physical well-being) and athletic performance (operationalized according to athletic coping). The sample included collegiate athletes (N = 142) from a midsized NCAA Division I university competing in various sports. Individuals completed the Optimal Living Profile which consisted of 119 self-report questions (scored on a Likert-type scale anchored by 1 indicating "Strongly Agree / Very Frequently" and 5 indicating "Strongly Disagree / Almost Never") to measure for each of the dimensions of wellness, and the Athletic Coping Skills Inventory was utilized to measure psychological variables tied to athletic performance. The spiritual subscale in the original article by Renger and colleagues (2000) had a test-retest correlation coefficient of 0.82 for spiritual health and produced a high reliability score with a Cronbach's alpha score of 0.94 (von Guenthner & Hammermeister, 2007). The minor challenges of this instrument are that it uses "self-report measures rather than direct behavioral measures" (p. 1048), and the results were based on composite scores of wellness instead of examining individual subscales' (e.g., spirituality) relation to athletic performance. Nonetheless, von Guenthner and Hammermeister (2007) concluded "athletes scoring higher on the dimensions of wellness also scored significantly higher on athletic coping skills" (p. 1043).

Lee and Opio (2011) explored the experiences of intercollegiate athletes from Africa competing in the United States. The authors interviewed 16 intercollegiate athletes competing in

a variety of sports (via "snowball sampling" from a variety of African countries attending predominantly White colleges and universities in the Southeastern and Southwestern United States. One interviewee commented he faced the challenge of misunderstandings and negative stereotypes associated with his religious beliefs. "He, like many of the student athletes in this study, felt a burden to overcome ignorant assumptions from members of the host society. In this case, the student athlete also encountered negative assumptions about being Arabic and Muslim" (Lee & Opio, 2011, p. 637). Specifically, the student commented:

> Man I don't even want to tell people that I am Muslim anymore because even if I told them I wasn't, they already have made that [assumption] since I look Arabic then I [must be] Muslim. What if [I was] Hindu? Sometimes my coach doesn't want me to fast during Ramadan. This is like telling me, 'Don't practice your religious beliefs' (Lee & Opio, 2011, p. 637).

A limitation of this study is that the sample only included intercollegiate athletes attending universities in the Southeast and Southwest.

A study by Moore et al. (2013) examined the relationships between religiosity, alcohol consumption, and sexual behavior among college intercollegiate athletes (N = 83) at a medium-sized urban Midwestern university competing in NCAA Division I no football. To measure religiosity, the authors asked participants "(a) how often they attended worship services in the past 12 months (1 = not at all to 7 = daily), and (b) whether their religious beliefs influenced their behavior (1 = disagree to 7 = agree)" (p. 932). The authors concluded religious beliefs were a "significant predictor of less alcohol use and less sexual activity," but "increased church attendance was not found to be a protective factor" (p. 930); therefore, "a possible effective strategy for decreasing risky sex and drinking behaviors may be to involve religious leaders (e.g.,

team chaplains) in the sexual health and alcohol education of [intercollegiate] athletes" (Moore et al., 2013; p. 938). A challenge with using their subscale was that it only includes two items, which are limited in scope and presents reliability issues (in fact, the authors did not report reliability or validity measures). Another major caution acknowledged by the authors is "it [is] impossible to determine whether religiosity decreases for intercollegiate athletes after they begin engaging in sexual and alcohol use behaviors or if intercollegiate athletes that reported engaging in sex and alcohol-related behaviors were already less religious before engaging in these activities" (Moore et al., 2013, p. 938). As a result, this limitation will likely occur in this present research study as well.

Murray, Joyner, Burke, Wilson, and Zwald (2005) concluded there was "no quantitative relationship between [team] cohesion level and levels of spirituality" (p. 237) among softball players at six NCAA Division I institutions ($N = 92$). Specifically, the authors tested the hypothesis that softball players who prayed more would exhibit increased levels of team cohesion. To measure spirituality, the authors utilized the Spirituality in Sports Test (SIST) developed by Dillon and Tait (2000). There were no new reliability measures reported in the study by Murray and colleagues (2005) (see earlier description for psychometrics of the SIST). The authors acknowledged two challenges with the study design: the first being the fact that "the primary researcher's experience as a member of the Christian faith [and former competitor in college softball] may have influenced interpretation of the results and responses" (Murray et al., 2005, p. 235), and two that this study only explored the relationships among females competing in a single sport.

Storch, Kovacs, et al. (2004) were interested in testing the relationship between religious faith and psychological adjustment, which was operationalized by depressive symptoms, trait

anxiety, and loneliness, among intercollegiate athletes competing in a large public NCAA Division I university in the Southeastern United States (N = 61). Religious faith was measured by a self-report instrument, the Santa Clara Strength of Religious Faith Questionnaire – Short Form developed by Plante, Vallaeys, Sherman, and Wallston (2002) (description to follow). Based on the results, the authors concluded there was not a statistically significant relationship between religious faith and depressive symptoms, trait anxiety, or loneliness. One limitation that the authors acknowledged was since they used different scales to measure religious faith in past studies as compared to their present study, it is not appropriate to compare results as the constructs of religiosity were operationalized slightly different.

In a study by Synovitz, Gillan, Wood, Nordness, and Kelly (2006), the authors examined the dynamics and relationships between complementary and alternative medicine (CAM) and a number of variables, including CAM use, health locus of control (HLC), and spirituality. The total stratified sample of participants included 997 students (143 were intercollegiate athletes) attending a midsized Southern university. The researchers utilized an adapted version of Pargament's Meaning Scale (Pargament, 1999) to measure spirituality. This scale consists of six items measured a five-point rating scale indicating the level of agreement or disagreement (α = 0.96); no subscales were discussed. The authors decided to categorize the results into "low, medium, or high spirituality" (Synovitz et al., 2006, p. 89), and the results suggested CAM use was greater among intercollegiate athletes, HLC was "significantly related to use of CAM therapies and to spirituality level" (Synovitz et al., 2006, p. 87), "higher spirituality levels were also associated with HLC but not with greater CAM use" (Synovitz et al., 2006, p. 93), and "since college students are employing CAM therapies, health educators need to plan and implement CAM educational programs and/or courses to increase students' knowledge about

safe versus unsafe CAM practices" (Synovitz et al., 2006, p. 87). In light of the aforementioned review of religiosity and spirituality in intercollegiate athletes, it is necessary to review the most relevant measures of religiosity for the purpose of this study.

Measures of Religiosity

The most relevant measures of religiosity as it pertains to the selected operational construct for this study and population will be reviewed. Specifically, they include the Duke University Religion Index and Santa Clara Strength of Religious Faith.

Duke University Religion Index (DUREL). The DUREL is a five-item self-report questionnaire which encapsulates dimensions of religiosity based on frequency of attending sacred services (e.g., church attendance), time spent independently observing sacred practices (e.g., mediation, prayer, reading sacred texts), and the degree to which one perceives faith to guide their daily activities and life's purpose (Koenig et al., 1997). Organizational and non-organizational religiosity are measured on six-point rating scales, and intrinsic religiosity is assessed using a five-point rating scale on the final three items of the questionnaire. The developers of the DUREL suggested it consists of three subscales but caution against potential scoring limitations depending on the type(s) of analysis used. For the purposes of this study, and considering the statistical analyses, all items will summed for a composite score representing religiosity – a higher score is indicative of greater religiosity (Koenig & Büssing, 2010; Koenig et al., 1997).

The reliability of the intrinsic religiosity subscale has been deemed acceptable with a Cronbach's alpha score ranging from 0.70 to 0.90 in previous studies (Koenig et al., 1997; Storch, Storch, Kolsky, & Silvestri, 2001; Storch, Storch, Welsh, et al., 2002). Moreover, criterion validity has been considered satisfactory based on their desirable relationships with

physical health, mental health, and social support (Koenig et al., 1997; Storch et al., 2001). The overall instrument has high test-retest reliability (intra-class correlation coefficient of 0.91), high internal consistency (Cronbach's alpha scores ranging from 0.78 to 0.91), and high convergent validity with other measures of religiosity (correlations ranging from 0.71 to 0.86) (Koenig et al., 1997).

Santa Clara Strength of Religious Faith Questionnaire – Short Form (SCSRFQ-SF). The SCSRFQ-SF (Plante et al., 2002) is a self-report instrument consisting of five items answered on a four-point rating scale. As a result, a respondent can score on a range from 0-20, with a higher score indicating greater religiosity. Psychometric analysis performed by Storch, Roberti, Bravata, and Storch (2004) found the SCSRFQ-SF to be unidimensional in nature after performing a principal components analysis with varimax rotation. The reliability of this one-factor structure was supported given the fact that it reported a Cronbach's alpha score of 0.95.

Overall, the DUREL and SCSRFQ-SF share similar characteristics supported by the fact they have a relatively high correlation (ranging from 0.71-0.85) in samples with college students. However, the DUREL was ultimately selected because it is more established (employed in more than 100 published articles across the world and available in 10 languages), was constructed to be clinical and cross-sectional in nature, and was designed to measure religiosity in conjunction with health outcomes (i.e., perceived stress in the current study), which is useful for this research design. Additionally, the DUREL has also been utilized in research to measure religiosity of intercollegiate athletes competing at public universities in the Southeastern United States, which is a focus of this study (Storch & Storch, 2002a; Storch & Storch, 2002b; Storch, Storch, & Adams, 2002; Storch et al., 2001; Storch, Storch, Kovacs, Okun, & Welsh, 2003; Storch, Storch, Welsh, et al., 2002).

Having reviewed the relevant literature pertaining to stress, resiliency, and religiosity it is necessary to refocus attention to the Holistic Transactional Stress Model. Specifically, this model provides insights which can be applied to frame the theory driving holistic care models. For the purposes of this study, holistic care models within the educational experience will be reviewed.

Holistic Care within the Educational Experience

Thus far the literature reviewed has primarily centered on how intercollegiate athletes are exposed to a variety of unique stressors based on their distinct environment and demands. However, another line of research rightfully suggests individuals participating in intercollegiate athletics have the opportunity to glean numerous holistic personal development benefits, including physical fitness, mental focus, emotional maturity, spiritual reflection, and interpersonal skills such as leadership, communication, time management, self-discipline, and teamwork (Hirko, 2009; Howard-Hamilton & Sina, 2001; Pascarella & Blimling, 1996; Watson & Kissinger, 2007). In fact, universities employ a variety of personnel to foster these benefits, which is a substantial financial investment. For instance, athletic trainers and the sports medicine team actively treat and rehabilitate physical injuries; sport nutritionists educate athletes regarding weight management techniques; sport psychologists work with athletes to overcome perceived barriers to boost their performance and health; licensed mental health professionals assist with diagnosing and treating psychological issues and disorders; and life skills coordinators provide opportunities for interpersonal skills enhancement and community service (Dzikus et al., 2012; Powers, 2007).

However, there is currently a gap in the resources provided for spiritual introspection, particularly on a consistent basis. Hindman (2002) offered wise insights pertaining to the spiritual element of holistic care in higher education:

> Spirituality is not something we have to add to the curriculum, or infuse into students' lives like a missing additive or a diet supplement. It is already there. The question is what spirit shall be affirmed and nurtured. The task is to increase awareness, open eyes to see, and provide ways for our spirited lives to move from being splintered and painful toward wholeness and joy (p. 181).

Chaplains may be available to facilitate spiritual development but they are most likely not a hired full-time member of the holistic support team (especially at public state institutions). Athletic administrators would be wise to recognize that "spiritual development, like student development, can either be fostered or inhibited by the environmental context in which students live, grow, and develop" (Love & Talbot, 2009, p. 622). Therefore, it is important for intercollegiate athletic administrators to reflect on established models of holistic care employed in other industries in order to best structure resources to meet intercollegiate athletes' needs.

Holistic Care Models

Before focusing on the holistic care model in intercollegiate athletic settings (particularly incorporating the religiosity dimension) it is vital to evaluate current models of spiritual care and spiritual development. Four areas which commonly support chaplains (i.e., prisons, healthcare, military, and law enforcement) will briefly be explored to determine current prospects and best practices to construct an effective holistic care model providing spiritual support services when working with intercollegiate athletes.

Prisons. Correctional facilities have a long history of utilizing chaplains, although their purpose has shifted over the years. Insights from literature regarding prison chaplaincy will be applicable to this research primarily regarding the behavioral outcomes of the subjects. The prison located in Auburn, New York was one of the first prisons in the United States and was

founded on the premise of "redemptive discipline" which had connotations to religious ideologies (Thomas & Zaitzow, 2006, p. 247). Hicks (2008) identified seven duties of prison chaplains operating in the United States:

> managing religious programming to ensure that all prisoners are afforded opportunities to practice their faith of choice; pastoral counseling; death notification and grief counseling; marriage counseling; liturgical duties for their own religious denomination; advisement on religious program policy; and volunteer recruitment and training (p. 404).

Sundt, Dammer, and Cullen (2002) provided evidence that inmates who participated in religious programming reported improved transitioning and adjustment. Sundt et al. (2002) also surveyed prison chaplains and learned chaplains were greatly supportive of rehabilitation and spent the majority of their time on the job providing counseling services – both via means of religious (60%) and secular methods (40%). When commenting on the religious mediums of rehabilitation and treatment, one chaplain responded:

> [A typical counseling session involves] a Bible-based approach to inmates, discovering Biblical moral principles and God's design for a spiritual healthy life. If an individual chooses or seeks help from this source, there is a broad base for the individual to have forgiveness, release from guilt, anger, helplessness as well as defined goals for his future. The spiritual base affects the physical, emotional, [and] behavioral aspects of the individual as well as the spiritual (Sundt et al., 2002, p. 76).

Extending on the nature of the service prison chaplains provide, chaplain participants commented they meet current needs as well as post-release needs (Sundt et al., 2002). As a result, Sundt and colleagues (2002) proceeded to conclude "chaplains place more importance on inmate adjustment [to prison] and rehabilitation than on religious conversion" (p. 73), which is

an important outcome particularly given the fact chaplains are operating in a state-supported institution. This can be more easily achieved when chaplains have "a basic understanding and appreciation of other faith groups is an ecumenical approach…[and] the prison chaplain of one denomination also organizes services and activities for members of other faiths" (Thomas & Zaitzow, 2006, p. 252).

However, there are a couple of challenges which have emerged from the prison chaplaincy literature. The first challenge concerns that of control. Since chaplains are not specifically tasked with the duty of physically controlling the inmates, they have the unique opportunity to build relationships with the inmates and influence their rehabilitation and treatment since there is not a subordinate dynamic. In a similar vein, Hicks' (2008) research conveyed a critically important message regarding the relationships between the security guards and chaplains. The prison chaplain commented:

> I need [the prison guard(s)] to be on my team to be able to accomplish religious programming. But I also have to see myself as a member of their team. So I have to support them if I desire them to support me (Hicks, 2008, p. 414)

Hicks concluded the programming was most effective when the officers and chaplains acknowledged they were on the same "team" and worked to support one another. For instance, officers could provide additional information to chaplains based on their observations and interactions with the inmates, which could assist with an intervention. In return, a proactive intervention by the chaplain could prevent an issue which would have made the officers' responsibilities managing the inmate(s) more difficult (Hicks, 2008).

A second challenge, and red flag, concerns the referral process. Prison chaplains acknowledged their referral processes could be improved if more resources were provided to

encourage chaplains to refer individuals to professionals operating in secular domains (Sundt et al., 2002; Worthington, Kurusu, McCullough, & Sandage, 1996). Since correctional facilities are managed in the secular domain, chaplains must be comfortable restraining their proselyting goals and partnering with a referral network, both spiritually and secularly (Sundt et al., 2002).

Healthcare. The history of hospitals is closely linked with faith-affiliated charity, and given the complexities and dynamics associated with illness, suffering, and death, it is no surprise spiritual care is a major point of discussion within the healthcare enterprise (Ekedahl & Wengströmy, 2008). The Joint Commission for the Accreditation of Healthcare Organizations (JCAHO) guidelines state, "patients have a fundamental right to considerate care that safeguards their personal dignity and respects their cultural, psychosocial, and spiritual values" (Cadge, Freese, & Christakis, 2008, p. 626). In fact, there is literature that points to suggestions and recommendations for spiritual assessment tools for this capacity (LaRocca-Pitts, 2009). Therefore, the spiritual model of care utilized in healthcare will offer insights into the role of spirituality as it relates to health (i.e., physical, psychological, and emotional) outcomes.

The majority of research concerning spiritual care in healthcare regards the role of nurses and healthcare chaplains. Since nurses have a lot of interaction with patients and are responsible for a particular standard of care, studies commonly sample nurses as their target population. In studies by Kuuppelomäki (2002) and Cressey and Winbolt-Lewis (2000) nurses agreed they needed more training to be able to identify, assess, and manage issues of spiritual support. Currently this could consist of listening, being available, providing a peaceful environment, and arranging various spiritual and/or religious activities for the patient. The nurses acknowledged "spiritual anxiety" (Kuuppelomäki, 2002, p. 210) prevalent in their line of work, and were even referred to as an extension of the hospital chaplain (Cressey & Winbolt-Lewis, 2000). However,

nurses also reported a blurring of roles and responsibilities regarding spiritual care among the multidisciplinary healthcare team, which had a tendency to strain relationships and the standard of patient care (Ekedahl & Wengströmy, 2008). Potentially contributing to these strained relationships is the juxtaposition of science and religion.

The article by Loewy and Loewy (2007) argues vehemently that there is no place for chaplains in healthcare, commenting:

> Chaplains are not healthcare professionals – and, arguably, not even allied healthcare professionals – for 3 rather important reasons: (1) chaplaincy has no biomedical foundation; (2) chaplains have no unique biomedical specialty training; and (3) chaplains would presumably reject the idea of being closely supervised by the patient's physician! (p. 53).

Since they argued the attending physician cannot be responsible for individual patients' subjective spiritual matters, any resource relating to spiritual care is outside the scope of the formal healthcare team. On the contrary, Cressey and Winbolt-Lewis (2000) made the case that "holistic care must include the healing of our spirits" (pp. 170-171) in conjunction with healing our physical bodies and minds. They commented:

> Where religion is an important part of a person's life, it is often a major factor in their well-being. Being ill may challenge the faith of such a religious believer and may result in a degree of inner turmoil and confusion, which may need to be explored sensitively (Cressey & Winbolt-Lewis, 2000, p. 175).

If not remedied, spiritual anxiety can impede a patient's body to heal. In fact, Cressey and Winbolt-Lewis (2000) pointed to evidence that incorporating spiritual care was correlated with an increase in desired physiological effects to fight against disease and illness. Consequently, it

seems logical for the physician, chaplain, and other members of the healthcare team to collaborate with one another to enhance the patients' healing potential by offering spiritually-based resources and/or interventions (Cressey & Winbolt-Lewis, 2000; Flannelly, Handzo, Galek, Weaver, & Overvold, 2006).

On the other end of the spectrum from Loewy and Loewy (2007) is LaRocca-Pitts (2009) who subscribes to the collaborative, inclusive, holistic nature of the healthcare team. He proceeded to recommend:

> It is best not to ask patients if they want to see the chaplain. When a clinician asks patients if they want to see a chaplain, the clinician is, in essence, asking them to self-assess their own need for spiritual support and assuming they understand the role of the chaplain on the healthcare team. If the clinician assesses the patient has spiritual concerns, the referral to the chaplain should be placed. Let the chaplain follow-up on the appropriateness of the referral (LaRocca-Pitts, 2009, p. 4).

In some healthcare settings, the chaplain serves additional functions outside of direct patient care, including serving the patients' families and hospital staff, serving as an advocate for patients' safety and welfare, as well as offering perspective when ethical issues arise (Flannelly et al., 2006). Vanderwerker and colleagues (2008) added that patients are referred to chaplains for emotional issues, not strictly spiritual issues.

Although there is support for chaplains as a contributing member of the healthcare team, there are barriers and challenges for chaplains to navigate as they seek their fit on the team. Norwood's (2006) research revealed two dominant barriers for healthcare chaplains: structural and ideological. Since a chaplain is not required to be well-versed in the hard sciences of medicine, it may be a challenge to learn the medical lingo, etiquette, and space within a

healthcare facility (e.g., when it is appropriate to touch patients, move machinery, adjust tubing, etc.). Research from Norwood (2006) also indicated there was a theme of physical space constraints (e.g., lack of office space and limited credentialing) for chaplains in hospitals.

Chaplains are also apt to a variety of stereotypes and assumptions which can form a perceived barrier. For instance, "[hospital] staff tend to think of chaplains in terms of the rituals they perform (baptisms, anointing the sick and the dying, Communion, Last Rites, prayer)" (Norwood, 2006, p. 18) rather than the holistic services they offer. As a result, chaplains are cognizant to present themselves as caring, not proselytizing, and do not "invoke religion or ritual [until] specifically requested to do so" (Norwood, 2006, p. 20). Vanderwerker et al. (2008) paint eda beautiful picture of their perception of a chaplain's role amidst an infinite number of religious and spiritual belief systems:

> Pastoral care is taking action with the deliberate intent to work with the resiliency of the human soul as defined by that soul's theological framework and understanding. Pastoral care is actively bringing all the experience one has, all the resources one has, all the knowledge one has, to a situation in which someone is spiritually and/or emotionally vulnerable. Pastoral care is crisis management on theological terms. Pastoral Care is helping to transform what appears broken into wholeness (p. 113).

This aforementioned outlook aligns with research from LaRocca-Pitts (2006) suggesting a chaplain should first offer spiritual care for an individual, and then proceed to pastoral care to those who request it – from this viewpoint, a patient's spiritual outlook will always take precedence over a chaplain's faith tradition (see also Cressey & Winbolt-Lewis, 2000; Norwood, 2006).

Beder and Yan (2013) investigated chaplains in a unique healthcare system: the United States Veterans Health Administration (VHA). Chaplains are present in every VHA hospital (464 full-time, 83 part-time, 82 intermittent) as an extension of the broader military chaplain service (which will be explored later in this review). Chaplains in the VHA system employ integrative and existential aspects when counseling Veterans with PTSD symptoms, moral injury, addictions, and other chronic and acute pains as well as those Veterans presenting with spiritual and emotional needs arising from the post-deployment transition (Beder & Yan, 2013; Besterman-Dahan, Gibbons, et al., 2012; Chang, Stein, Stewart, Hendricks, & Skarf, 2012; Drescher et al., 2011). The VHA's Mental Health and Chaplaincy Initiative was specifically established to address these mental health needs, particularly via collaborative holistic care (Department of Veterans Affairs, 2012).

Overall, Handzo and colleagues (2008) offered a summary of the general and religious activities in which chaplains intervene with patients in healthcare (see Table 2.3). This outline provides a point of entry for discussion regarding the model and role of chaplains in intercollegiate athletics. Given the prevalence of chaplains in the VHA system it is appropriate to evaluate chaplains' role in the broader military outside of the healthcare domain.

Military. Chaplains serving in the military encounter a variety of unique situations when compared to chaplains serving in prisons and healthcare facilities. Models of holistic care in the military link spirituality and religiosity to performance outcomes, transitions into and out-of the military, and struggles with identity and trauma (Sigmund, 2003; Wilson & Moran, 1998). Also, the unique dynamics between church and state will offer insights regarding best practices for holistic care at public universities.

Table 2.3

Summary of Healthcare Chaplain Interventions

General Activities	**Spiritual/Religious Activities**
Crisis intervention	Hearing a confession or amends
Emotional enabling	Faith affirmation
Ethical consultation / deliberation	Theological development
Life review	Performing a religious rite or ritual
Patient advocacy	Providing a religious item
Counseling	Offering a blessing
Bereavement	Praying
Empathetic listening	Meditation
	Other spiritual support

Otis (2009) provided an excellent overview of military chaplaincy, particularly regarding its "interfaith structure and pluralistic cooperation" (p. 3). Otis wrote:

> Chaplains are formally responsible to (a) their faith tradition and endorsing agency, (b) the military chain of command, and (c) the Chaplaincy and Chief of Chaplains. The basic requirements to become a chaplain are: ordination and ecclesiastical endorsement by a valid religious faith group recognized by the Department of Defense, and a Master's Degree (these are in addition to standard military requirements such as health, age, good standing, lack of criminal violations, etc.). Endorsing agencies, as established in 1905, function so as to screen, recommend, and counsel member clergy who indicate a desire to become U.S. military chaplains (p. 8).

Otis (2009) also noted military chaplains are placed, rotated, and funded according to military contracts and assignments, not according to the preferences of the members of a congregation. This structure is intended to facilitate a pluralistic approach to ministry since they are held accountable to the government rather than dependent upon denominational donations and stakeholders. As a result, military chaplains are expected to serve the needs of the military personnel and their families regardless of differences in beliefs or faith traditions (Otis, 2009).

To assist with this pluralistic structure, chaplains are often a liaison between the military personnel in which they are assigned and local religious leaders of various faith groups, and some branches have a team of assistants who work alongside the chaplain(s) (e.g., Chaplain Assistants; Religious Program Specialists) (Otis, 2009). Seiple (2009) added, "[chaplains] understand that there can be respectful cooperation [with various faith groups] without compromising one's faith or theology" (Seiple, 2009, p. 45).

The duties of a military chaplain are similar as those previously mentioned in prisons and healthcare, but working in the military presents unique situations and challenges. Since chaplains are employed by the government, they must follow orders from their senior officers (Brown, 2012). However, military chaplains are also in a position to "provide professional guidance and advice to commanders, staff, and all other military personnel on issues of spirituality, religious dynamics, ethics, morality, and personal wellbeing" (Otis, 2009, p. 3). This type of expectation sets the tone that the spiritual element of holistic care is inclusive of all personnel, not just the active service people. Furthermore, military chaplains and mental health services are relatively progressive in terms of their collaboration with one another to provide holistic care. Specifically, "[chaplains] are expected to refer those service members whose concerns extend beyond the spiritual and support issues to mental health care providers for professional care" (Besterman-Dahan, Gibbons, et al., 2012, p. 1028). This type of collaboration has fostered a sense of interdependency respecting and utilizing the specialized services from a variety of professionals and resources.

Service people and veterans experience stressful and traumatic experiences which may leave them with negative emotions to process, and chaplains can provide an avenue to fill this need and provide a source of coping. Scholars have identified that military personnel may exhibit symptoms resulting from negative combat experience including marital conflict, thoughts of suicide, traumatic brain injuries, depression, anxiety, and domestic violence, and risky behaviors to attempt to anaesthetize emotional distress including substance abuse, sexual promiscuity, reckless driving, and gambling – which in turn adversely affect work performance and family life and cause a continuation of this cycle (Brown, 2012; Coll, Weiss, & Yarvis, 2011; Hall, 2008; Hoge, 2010; Koenig, McCullough, & Larson, 2001; Maguen et al., 2010; McCarroll et al.,

2008; Peterson, Baker, & McCarthy, 2008; Simmons & Decoster, 2007; Sohn, 2008) (see Table 2.4). In light of the aforementioned symptoms service people and veterans may face, military personnel who self-reported themselves as more spiritual had reduced levels of depression, anxiety, substance abuse, suicidal thoughts, and other risky behaviors as well as positive outcomes of work performance (Brown, 2012; Chang et al., 2012).

There is an element of military chaplaincy which is worth highlighting in the context of this study as it ultimately relates to intercollegiate athletics – performance outcomes. Hufford and colleagues (2010) commented "strong links [exist] between spirituality and physical, psychological, and medical health" (p. 75). In fact, Hufford and colleagues (2010) introduced the term "spiritual fitness" (also referred to as "psychospiritual fitness") to illustrate the intersection of spirituality with the other traditional elements of holistic development. For instance, if chaplains can help military personnel manage their emotional and/or psychological "strength" via spirituality and/or religiosity, the intent is for that strength to translate to physical strength in their daily tasks and performance (Otis, 2009).

Since the inception of military chaplaincy, there have been concerns regarding its legality. Although the intricate legal arguments are outside the scope of this research, it is important to note possible conflicts of interest in order to avoid these potential pitfalls. Ultimately, it is inappropriate for chaplains to use their position and influence to advance government (especially Department of Defense) agendas to their patrons, and it is inappropriate for chaplains to use their position and influence to advance church/denominational agendas (Otis, 2009).

Another issue is that chaplains promise complete confidentiality and have no duty to report paperwork chronicling conversations. Although this approach has the ability to encourage

Table 2.4

Supporting Evidence for General Benefits of Spirituality

Benefit	**Supporting Evidence**
Hope and optimism	– Religiosity had a positive association with greater hope or optimism
Less depression	– Religiosity was frequently cited as reducing depression – Evidence from clinical trials revealed religious interventions decreased the time of recovery from depression
Fewer suicides	– Religiosity had an inverse relationship with suicide ideation
Less anxiety	– Religious individuals reported less anxiety and fear
Less alcohol and drug abuse	– Religiosity was associated with significantly lower alcohol, drug, and substance abuse
Greater marital stability	– Divorce and separation are significant predictors of poor mental health and suicide – Positive associations between religiosity and marital happiness and family stability, as well as negative associations between religiosity and rates of divorce and separation
Less risky behavior	– Inverse relationship between religiosity and risk taking (including behaviors such as smoking, not wearing seatbelts, sexual promiscuity, etc.) – Avoiding certain risks was more strongly correlated with specific religious traditions than others.
Longevity	– There was evidence to support more religious individuals lived longer (taking into account other variables as well)

Note. From Hufford et al. (2010) and Koenig et al. (2001).

some individuals to pursue help without facing the negative stereotypes of seeking care from a mental health professional, chaplains face an ethical dilemma to refer individuals to a trained professional(s) when an issue presents itself (Besterman-Dahan, Gibbons, et al., 2012). Consequently, this is rationale supporting a more collaborative relationship between the holistic care team. Seddon, Jones, and Greenberg (2011) eloquently outlined the nature of a collaborative holistic relationship(s):

> Collaboration between chaplains and mental health professional should serve to enhance the skill sets of both professionals. Mental health professionals should be able to provide a comprehensive range of evidence-based treatments, which the majority of chaplains would not be able to, while chaplains can offer an avenue of support that can be far more confidential than a mental health professional could provide. Effective collaboration may well improve the ability of both professional groups to successfully return [clients] to a good state of health…We conclude that with the correct training and a sufficiently mutual understanding of each other's roles, a collaborative model between military doctors and chaplains is likely to prove successful in improving the mental health of service (p. 1360).

Additionally, Hufford et al. (2010) described the "Comprehensive Soldier Fitness" (CSF) program consisting of cross-trained professionals who provide services which aim to cultivate resilience among service personnel and their families. One element of the CSF program is the Domain of the Human Spirit, which consists of spiritual strength and spiritual fitness. These concepts consist of elements including self-awareness of core values and feelings of purpose and meaning among other elements such as social awareness (Hufford et al., 2010; Sweeny, 2008). The connection between spirituality, holistic wellness, and resiliency is worth exploring in a

sample of intercollegiate athletes as they experience similar stressors of authority structure, schedule restraints, performance demands, identity issues, and transitions into and out-of their respective military and intercollegiate athletic careers.

Law enforcement. Examining chaplains in law enforcement adds some valuable insights which could be applicable to intercollegiate holistic care. Fair (2009a; 2009b) wrote from the perspective of a police chaplain who completed academy training in order to better understand and empathize with the individuals he counseled (police chaplains can be either civilian or sworn-in). He provided a vivid account of his perspective of the dynamics which occur in his field:

> Civilians are on the outside of the [yellow and black crime scene] tape, and officers are on the inside. It is a clear line of demarcation. Officers, civilian crime scene investigators, communications operators, unit secretaries, and clean-up crew are allowed inside the tape. Everyone else, including the media, is on the outside. One recent addition to the group allowed inside that blue circle or yellow tape is police chaplains (Fair, 2009a, p. 50).

Fair proceeded to write that even inside the tape there is another unspoken inner circle where only sworn cops exchange information. This subculture seems to be present in intercollegiate athletics as evidenced by an inner-circle of the coaching staff and athletes. In another article, Fair (2009b) shared his thoughts about chaplaincy in general:

> The first tenet of chaplaincy is to do no further harm. It is often said, 'A preacher does not necessarily [make] a good chaplain.' Unfortunately, well-meaning members of the clergy from all faith traditions can do more harm than good…People fear what they don't understand. There are some ministers who fear they are compromising their own faith if

> they perform services for someone of another denomination or religion. But the fact is that most clergymen are not that insecure (p. 75).

Fair's accounts provide wise insights and guidelines for chaplains in any public setting, and will certainly be applied when gleaning best practices for a model for holistic care in intercollegiate athletics.

Best Practices for Holistic Care in Intercollegiate Athletics

It is logical for the spiritual dimension of holistic care to be led by an individual with training in spirituality and/or religiosity. However, it is important to operationalize boundaries in which one will lead and manage holistic programs intended to promote spiritual development of individuals in an athletic department.

Qualifications. Individuals wishing to be credentialed as chaplains can complete requirements according to the Board of Chaplaincy Certification, Inc. (BCCI), which is an affiliate of the globally recognized Association of Professional Chaplains (APC). However, the chaplaincy profession does not require a licensure (neither state nor federally mandated) in order to practice, so a BCCI certification is just one of multiple credentials available. Since the APC was birthed from the healthcare sector, the majority of individuals who seek certification according to the BCCI pursue being a chaplain in health and clinical settings. Nonetheless, athletic administrators would be wise to encourage sport chaplains to hold a reputable credential, such as a certification offered from the BCCI, prior to working with athletes.

Based on literature from Fair and Warden (n.d.), they suggest law enforcement chaplains should be required to hold: a minimum of bachelor's degree, preferably some seminary training or Clinical Pastoral Education (CPE) units, some pastoral or chaplain experience, no criminal record, an endorsement from the Academy of Certified Chaplains, Chaplain Fellowship

Ministries, and/or National Center for Crisis Management, and an ecclesiastical endorsement from one's denomination or religious authority (in the event the individual is non-denominational or does not belong to a religious authority, he or she will be handled on a case by case basis). Establishing and requiring a licensure complemented by a specific training curriculum would be a step in the right direction to protect the profession of chaplaincy as well as the individuals they serve. Chaplains in intercollegiate athletic departments should also be trained and have experience adequately offering interfaith programming, services, and resources (Zinnbauer, Pargament, & Scott, 1999), which "meet the needs of all assigned personnel regardless of their faith group. Chaplains are always accountable for ministry practice to all faith groups while they serve…yet maintain close ties to their respective endorsers" (Otis, 2009, p. 5)

Job responsibilities. Chaplaincy has been referred to as a "Ministry of Presence" (Fair, 2009b; Otis, 2009) and characterized as "soul doctors" and "moral physicians" (Sundt et al., 2002); therefore, chaplains must first and foremost be available and visible. In addition to focusing on providing interfaith services, specific religious and secular programming should also address: transition into, through, and out of college (Zinnbauer et al., 1999); career advice and career transitions (Sundt et al., 2002; Zinnbauer et al., 1999); emotional stress (Sundt et al., 2002); family counseling (Hicks, 2008; Otis, 2009); post-college needs (Sundt et al., 2002); and retirement(s) (Fair & Warden, n.d.). To deliver these services, a variety of techniques can be used, including one-on-one conversations, peer support groups, and guest speakers (McNally & Solomon, 1999). Furthermore, services and activities should be offered for members of various faith traditions (Thomas & Zaitzow, 2006). These resources should be proactive and/or preventative in nature as well as used for treatment and/or intervention.

Beyond programming, chaplains should be committed to the referral process, both internal and external to the athletic department, when a presenting issue is beyond the scope of their training. Research has explored the notion that religious counselors are reluctant to refer clients to secular professionals and vice versa (Besterman-Dahan, Gibbons, et al., 2012; Sundt et al., 2002; Worthington et al., 1996). Undoubtedly, there needs to be a shift in this ethos of caring for patients! There must be sincere collaboration to foster interdependency which respects and utilizes specialized services from a variety of resources and professionals. An intercollegiate athletics chaplain must be prepared to refer athletes, coaches, and staff to religious leaders of various denominations, faith traditions, and mental health professionals (Baldacchino, 2006) rather than selfishly pursuing a personal and/or denominational agenda(s).

Intercollegiate athletics chaplains could also incorporate conducting faith assessments of athletes upon their entry into college to be added along with all of the other medical assessments. LaRocca-Pitts (2009) provided a literature review with several different options for faith assessments (e.g., FACT, CSI-MEMO, ACP, FICA, HOPE, and FAITH). This valuable piece of patient information would provide insights for the holistic care team as they structured personal development initiatives, interventions, and treatment programs (Cressey & Winbolt-Lewis, 2000; Wills, 2007). Other miscellaneous responsibilities of the chaplain would include: advocating for the intercollegiate athletes (Sundt et al., 2002); advising when ethical issues arise in the athletic department (Flannelly et al., 2006); recruiting and training a ministry team of confidants who would assist the chaplain as well as provide accountability, guidance, and direction for spiritual development (Hicks, 2008; Otis, 2009).

Philosophical framework. The concepts of "spiritual fitness" and "spiritual muscle" (Hufford et al., 2010) seem to be an appropriate entry point to frame the philosophical

framework of chaplaincy within the context of intercollegiate athletics. “Fitness” and “wellness” are commonly used in athletics so “spiritual fitness” is a metaphor with connotations of more tangible outcomes in which individuals can relate. A chaplain in an intercollegiate athletic department should view his or her role as service-oriented rather than evangelistic or proselytizing and only invoke religious or spiritual practices when explicitly asked to do so by an individual (Harding, Flannelly, Galek, & Tannenbaum, 2008; Norwood, 2006). Although the majority of chaplains in the U.S. are trained according to a Judeo-Christian faith tradition, chaplains should “be sensitive to all races regardless of background and personal history…A basic understanding and appreciation of other faith groups is an ecumenical approach” (Thomas & Zaitzow, 2006, p. 252). After all, it should not be difficult for chaplains trained in Judeo-Christian faith traditions to foster an ecumenical approach and extend the concept of healing to everyone, as the sacred texts command “loving thy neighbor” (Leviticus 19:18; Matthew 22:39) (Cressey & Winbolt-Lewis, 2000).

A holistic approach will be most effective when all staff committed to its goals, objectives, and strategies, particularly regarding the value of spiritually/religiosity. The relationships among a multidisciplinary team are intended to be collaborative and symbiotic (Flannelly et al., 2006; Hicks, 2008). However, a collaborative approach does not undermine the boundaries and role demarcations which are appropriate to clearly define job responsibilities to work interdependently (Ekedahl & Wengströmy, 2008). Members of the holistic care team should be cautious to avoid “power plays” over each other regarding whose services are more important and who is subordinate. As a result, the graphical representation of the holistic care model in intercollegiate athletic departments should assume a relatively flat structure. Additionally, a more radical approach to improving the status quo of chaplaincy is surrounding

the chaplain with a core group of assistants to support the chaplain and hold him or her accountable to properly serving all intercollegiate athletes, coaches, and staff appropriately and effectively (Otis, 2009). This would require a shift in the ethos of spiritual care for intercollegiate athletics, as spiritual care is not limited to the sole responsibility of the chaplain (Cressey & Winbolt-Lewis, 2000).

In regards to confidentiality and privacy issues with religiosity and chaplaincy, it appears the best practice for intercollegiate athletic departments would be to require confidentiality between the chaplain and intercollegiate athletes (e.g., private records chronicling meetings). Literature supports individuals may prefer to consult with a chaplain before seeking clinical treatment because of greater trust with a chaplain and to avoid negative stereotypes associated with seeing a mental health professional (Besterman-Dahan, Gibbons, et al., 2012; Brown, 2012). However, chaplains must be prepared to genuinely encourage referrals and educate intercollegiate athletes on the collaborative nature of all professionals within the holistic care model.

Funding. There is a point of contention regarding how chaplains should be compensated and affiliated with a state university or athletic department. Chaplains at large public universities are not officially hired, unless they assume another job title such as "life skills coach." Rather, they are more likely to be independent of an athletic department, affiliated with a faith-based organization (e.g., Fellowship of Christian Athletes, Athletes in Action, Team United), and are granted limited access to facilities and intercollegiate athletes. Based on a synthesis of the literature, it is the opinion of the researcher that chaplains should be hired by the athletic department as a member of the holistic care team. At first thought it may seem that a state-supported university hiring a chaplain would violate laws enforcing separation of church and

state. However, by having a chaplain on staff, it would ensure the chaplain abide by established policies and procedures as a state actor, similar to chaplains operating in the military, VHA hospitals, and/or tax-supported city, county, state, or federal law enforcement (Otis, 2009).

Within this paradigm, the chaplain would be accountable to the legal policies and procedures set in place by the university and athletic department while having the flexibility to provide interfaith services and resources. Simply having an office on campus akin to other athletic personnel would facilitate this "Ministry of Presence" (Norwood, 2006). If a member of the clergy was contracted or worked on a fee basis, it would likely be more expensive, inconvenient access, and ineffective counseling because intercollegiate athletes and holistic care staff would not be able to build a trusting relationship with the clergy person (Beder & Yan, 2013). Anecdotally, some push-back for incorporating a chaplain in intercollegiate athletic departments is that they currently have a licensed social worker and mental health provider on staff so it is perceived that a chaplain would not offer valuable services outside what these professionals deliver. However, the military has recognized the combined need for social workers, mental health professionals, and chaplains, and chaplains provide an alternative skillset and voice to help individuals reach their optimal wellness.

Shift in ethos. Athletic administrators "must recognize that emotional crises in a student's life may have a spiritual element or…may be a spiritual emergency or crisis. Failure to recognize this possibility may result in misdirected advice or counseling, or a misdirected referral" (Love & Talbot, 2009, p. 625). With that said, the services provided to foster holistic development are akin to a tool belt – the right tool for the job is subjective and depends on the knowledge and preference of the user (LaRocca-Pitts, 2009). Spiritual care provides another crucial tool to effectively address issues which intercollegiate athletes encounter.

Finally, there is a major caution regarding the ethos of chaplaincy in intercollegiate athletics – chaplaincy services (i.e., sacred) must not be a means for secular ends (Zinnbauer, 1999). For example, it is reprehensible to simply have chaplains on staff for self-serving purposes such as boosting the image of the athletic department, attracting recruits, or so intercollegiate athletes will perform better in the classroom and in competition. There are no perfect methods by which to deliver spiritual services – the only imperative is that this area of study is researched so best practices emerge. A few decades ago Bertocci (1972) provided wise insights regarding the dangers of a lack of research specifically regarding the intersection of psychology and religion (which is relevant given the constructs of stress and resiliency are grounded in a transactional framework):

> Especially in the area of the psychology of religion, psychologists may be likened to fisherman throwing their lines into an unexplored lake. What fish they catch depends upon the nature of the hook and of the bait used. It seems clear that a wise psychologist will bring with him a variety of hooks and bait, and try to be aware of his own limitations as a fisherman (p. 38).

It is our duty to be well-informed and deliver links to these gaps in the literature.

Visual representation of holistic care model for intercollegiate athletic departments. In light of the knowledge that intercollegiate athletes have difficultly managing perceived stress arising from transitioning into, through, and out of college, they deserve special attention to ensure their holistic wellness needs are being met.

The graphical representation illustrated in Figure 2.7 is a proposed model outlining holistic care support services for intercollegiate athletic departments based on the aforementioned literature review. This model was derived from the Holistic Transactional Stress

Model (see Figure 2.3) grounded in research by Williams and Andersen (1998) and Wiese-Bjornstal et al. (1998) described in detail earlier.

The theoretical model is inclusive of the prevention, intervention, treatment, and rehabilitation resources and services which affect perceived stress. The items outlined in the dotted boxes represent the athletic department staff members who, as a team, coordinate and provide the holistic services (the order of their appearance is random as they can offer different services and affect different characteristics depending on the context and/or unique needs of the individual). Each intercollegiate athlete may not utilize all of the services offered, or to the same extent as some of their peers, but the tools are available to holistically care for intercollegiate athletes. The holistic care team is positioned within the model to illustrate their facilitative role in reducing perceived stress and enhancing holistic wellness.

A limitation of the model is that time is not represented; thus, there is no standard to illustrate how quickly, or slowly, an intercollegiate athlete navigates the transactional appraisal stress response on his or her way to recovery. Another caution when using this model is avoiding the temptation to conclude causation. For example, it is possible that individuals with greater perceived stress are more likely to seek spiritual involvement, or that an outside factor(s) may affect both religiosity and stress. Similarly, it does not accurately conclude whether religiosity increases/decreases after stressors present themselves, or if intercollegiate athletes exhibited more/less religiosity before experiencing the stressor(s).

Based on a synthesis of the literature surrounding stress, resiliency, religiosity, and holistic care, this study will explore the gap in the literature regarding religiosity's effect on biopsychospiritual homeostasis (i.e., resilience) and perceived stress among intercollegiate athletes. It is necessary to discuss the methodology employed to test these desired relationships.

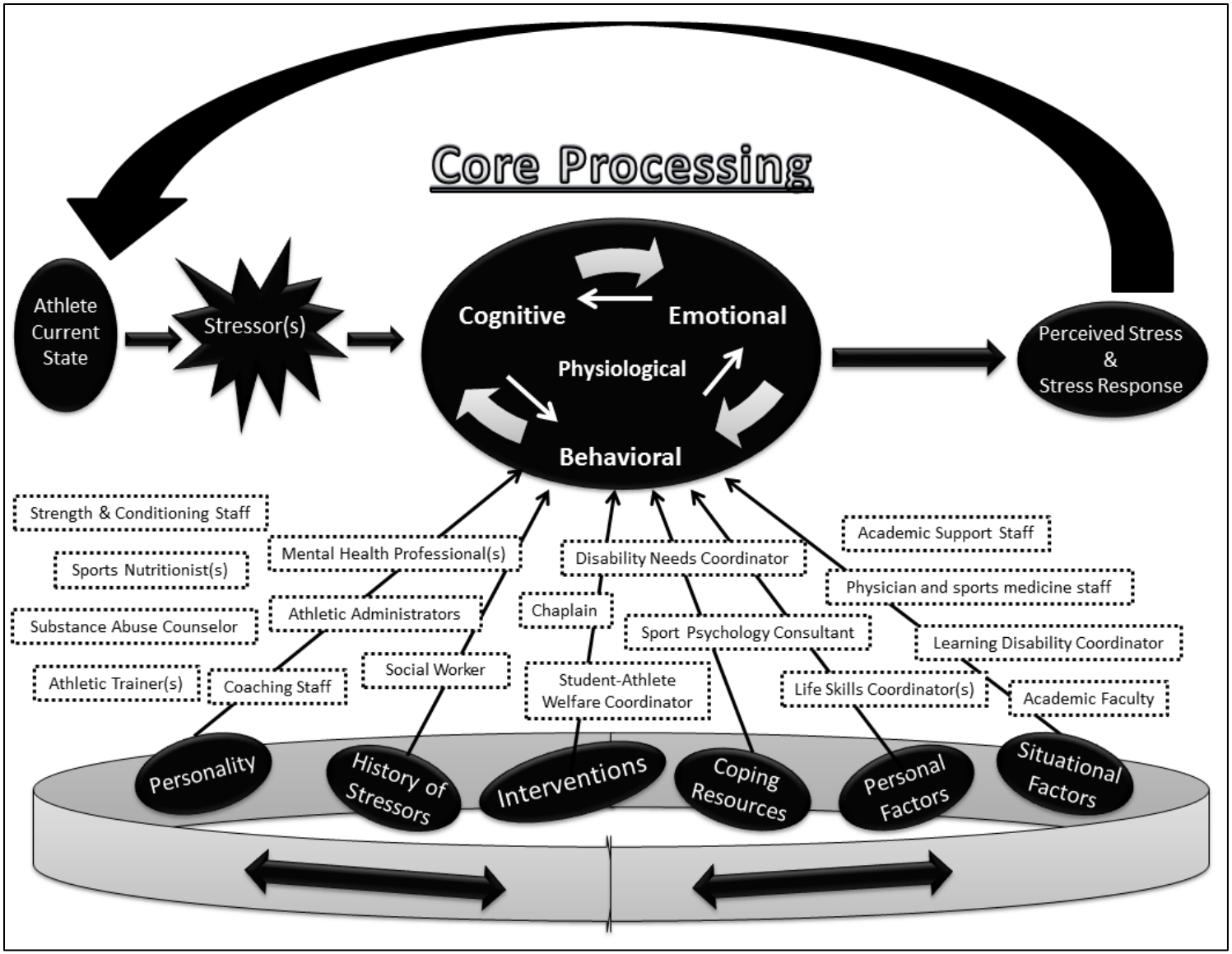


Figure 2.7. Holistic care model for intercollegiate athletic departments

CHAPTER III: METHODOLOGY

Survey

An online questionnaire was utilized to collect data to examine the relationships between religiosity, resiliency, and stress among intercollegiate athletes. The Institutional Review Board (IRB) approved all sampling, survey, and methodological procedures prior to data collection (see Appendix B). Specific instrumentation comprising the questionnaire will be discussed first followed by a discussion of the sample and the sampling procedures. Finally, the statistical analyses employed will be discussed. Since there are three primary constructs which are the focus of this study, the instrumentation was constructed from a combination of existing questionnaires measuring religiosity, resiliency, and perceived life stress.

Religiosity. The Duke University Religion Index (DUREL) developed by Koenig et al. (1997) was used to measure subjects' religiosity. The DUREL is a five-item self-report questionnaire which encapsulates dimensions of religiosity based on frequency of attending sacred services (e.g., church attendance), time spent independently observing sacred practices (e.g., mediation, prayer, reading sacred texts), and the degree to which one perceives faith to guide their daily activities and life's purpose (Koenig et al., 1997). Organizational and non-organizational religiosity are measured on six-point rating scales, and intrinsic religiosity is assessed using a five-point rating scale on the final three items of the questionnaire. The developers of the DUREL suggested it consists of three subscales and potential scoring limitations depending on the type(s) of analysis used. For the purposes of this study, particularly considering the statistical analyses, the measurement model will be tested in SPSS Amos statistical software to determine whether all items should be summed for a composite score or if a second-order factor(s) exists within the religiosity construct (Koenig & Büssing, 2010; Koenig

et al., 1997). A minor modification was made to the DUREL by removing the neutral answer choice.

In the event a second-order factor(s) exists, the reliability of the intrinsic religiosity subscale has been deemed acceptable with a Cronbach's alpha score ranging from 0.70 to 0.90 in previous studies (Koenig et al., 1997; Storch et al., 2001; Storch, Storch, Welsh, et al., 2002). Criterion validity was appropriate based on research that organizational and non-organizational elements in the DUREL were related to physical health, mental health, and social support in the community and clinical samples tested by Koenig and colleagues (1997). The overall instrument has high test-retest reliability (intra-class correlation coefficient = 0.91), high internal consistency (Cronbach's alpha scores ranging from 0.78-0.91), and high convergent validity with other measures of religiosity (correlations ranging from 0.71-0.86) (Koenig et al., 1997).

The DUREL was also selected because it is a good fit for the research design based on the fact it is relatively brief, was constructed to be clinical and cross-sectional in nature, and was designed to measure religiosity in conjunction with health outcomes (i.e., perceived stress in the current study). Also, the DUREL has been used in more than 100 published studies conducted throughout the world and is available in 10 languages. Additionally, the DUREL has also been utilized in the previous literature to measure religiosity of intercollegiate athletes competing at public universities in the Southeastern United States, which is a focus of this research design (Storch & Storch, 2002a; Storch & Storch, 2002b; Storch, Storch, & Adams, 2002; Storch et al., 2001; Storch et al., 2003; Storch, Storch, Welsh, et al., 2002).

Resiliency. The instrument utilized to measure resiliency in this study is the Brief Resilience Scale (BRS) (Smith et al., 2008). The BRS is an appropriate instrument to measure athletes' appraisals of their ability to "bounce back" to state of biopsychospiritual homeostasis

upon encountering a perceived stressor(s) (Smith, 2008). The BRS is a self-report questionnaire consisting of six items each measured on a five-point rating scale. A unidimensional composite score measuring resiliency is calculated by summing the scores of all six questions – a higher score is indicative of greater resiliency. A minor modification was made to the BRS by removing the neutral answer choice.

The internal consistency of the BRS was deemed acceptable with Cronbach's alpha scores ranging from 0.80 to 0.91 in the four samples tested when constructing the scale (Smith et al., 2008). Also, the test-retest reliability (ICC) was acceptable ($r = 0.69$; $r = 0.62$) (Smith et al., 2008). The BRS was also selected because it is a good fit for the research design based on the fact it is relatively brief and was designed to be used in conjunction with health outcomes and health stressors. Also, the BRS has been cited in more than 20 articles, and it has been tested with undergraduate samples so it is appropriate for the subgroup of collegiate students sampled in this research design (i.e., intercollegiate athletes).

Perceived life stress. The dependent variable being tested in this study is perceived life stress. Throughout the literature review of life stress, researchers have employed a variety of methods to measure life stress (the most relevant measures were discussed in the literature review). Based on the design, content, and reliability critiques of the various measures of life stress, the instrument selected to be utilized for the current research is the 10-item Perceived Stress Scale (PSS-10) developed by Cohen and Williamson (1988). The PSS was specifically designed based on the theoretical framework grounded in stress as a transaction (e.g., appraisal and perception) (Lazarus, 1966, 1977, 1993a, 1993b, 1999; Lazarus & Folkman, 1984), which makes it an appropriate instrument for this study.

Rationale for measuring overall stress versus event-specific inventories. Given the operational conceptualization of perceived life stress as a holistic transactional framework, the PSS-10 appropriately measures the overall perception of life stress rather than a futile attempt to sum the impact of individual stressors (Lazarus, 1966, 1977, 1993a, 1993b, 1999; Lazarus & Folkman, 1984). For instance, there are several inventories with specific life events which overlap common stressors as well as contain unique events specific to a particular inventory. The fact that different inventories contain differing lists of stressors is evidence that no single list can be exhaustive due to the individualized nature of life events and stressors. Consequently, there is an inevitable gap in capturing a comprehensive measure of perceived stress since no single list can possibly contain every single stressor experienced by every individual participating in the study. Another weakness of event-specific instruments is that a higher incidence of events occurring will naturally yield a higher composite score of stress, but in reality this score may not accurately reflect the individual's global perceived stress (Cohen et al., 1983).

Confounding this concern is the fact that perceived stress should not be isolated as a mere sum of individual stressors, but rather measured as a cumulative outcome. For instance, Cohen and colleagues (1983) pointed to evidence that individuals may inaccurately evaluate the effect of a stressor in his or her life by misattributing the actual source of the stress (Gochman, 1979; Keating, 1979; Worchel, 1978; Worchel & Teddlie, 1976). Similarly, a single stressor does not present itself in a vacuum so there is no basis for suggesting a particular stressor is a cause for greater perceived stress. Additionally, the PSS-10 focuses on cumulative appraisals and perceived stress experienced by the participant, rather than a mere sum of seemingly isolated objective occurrences identified by inventories (Cohen et al., 1983). Furthermore, the PSS-10 is sensitive to "chronic stress deriving from ongoing life circumstances, to stress from expectations

concerning future events, to stress from events not listed on a particular life-events scale, and to reactions to the specific events included on any scale" which events-specific inventories lack (Cohen et al., 1983, p. 387). Last but not least, Cohen and colleagues (1983) concluded from their research that the PSS was a better predictor of psychological and physical symptoms than the life-event inventories.

***PSS description and psychometrics*.** The PSS-10 is a self-report questionnaire consisting of 10 items based off of the original 14-item PSS developed by Cohen et al. (1983). Cohen and Williamson (1988) refined the original 14-item instrument to 10 items to make it a more succinct and parsimonious instrument. Each of the 10 questions is measured on a five-point rating scale. A unidimensional composite score representing perceived life stress is calculated by summing the scores of all 10 questions – a higher score is indicative of greater perceived life stress.

The PSS-10 was deemed reliable and valid based upon initial analysis by Cohen and Williamson (1988) and confirmed by Roberti, Harrington, and Storch (2006). The Cronbach's alpha scores ranged from 0.84 to 0.86 in the initial three samples tested with the 14-item PSS (Cohen et al., 1983), and 0.89 in the sample tested by Roberti et al. (2006). Furthermore, the test-retest reliability (ICC) was acceptable (r = 0.85 after two days) (Cohen et al., 1983). Convergent and divergent criteria were considered satisfactory based upon in-depth analyses which were consistent with expected associations with various heavily research traits, characteristics, and trends (e.g., depression, anxiety, health locus of control, faith, aggression) (Roberti et al., 2006).

Additionally, the current research is most interested in a snapshot of current perceived stress rather than one's experiences over a 3, 6, or 12-month time period. The PSS-10 appropriately captures the current perceived stress of respondents based on the terminology used in the questions (Cohen et al., 1983). The PSS-10 was also selected because it is a good fit for

the research design based on the fact it is relatively brief (which is desirable to prevent respondent fatigue since the current research will utilize the PSS-10 in conjunction with multiple instruments), was designed to be used in conjunction with health outcomes and health stressors, and has been validated with collegiate student samples at public universities in the southeastern United States (Roberti et al., 2006). Also, the original 14-item PSS has been cited in more than 6,300 articles and translated into several different languages, while the PSS-10 has been cited in more than 1,600 articles and has been translated into multiple languages in its own right. Based on this comprehensive justification for a global measure compared to event-specific inventories, the PSS-10 is appropriate to measure perceived stress of intercollegiate athletes in the current study.

Perception as a common denominator. All of the primary instruments employed – the DUREL (measuring religiosity), BRS (measuring resiliency), and PSS-10 (measuring perceived life stress) – are self-report instruments which hinge on the concept of self-perception. This distinction is important to emphasize since this research design is grounded in the conceptual framework that individuals' worldview (encompassing religiosity, resiliency, and stress) is based on a transactional appraisal process, not as observed and described by a third-party perspective(s) (Delaney & Madigan, 2009; Fletcher & Sarkar, 2012, 2013; Galli & Reel, 2012; Koenig et al., 1997; Lazarus, 1966, 1977, 1993a, 1993b, 1999; Lazarus & Folkman, 1984; Wiese-Bjornstal et al., 1998; Williams & Andersen, 1998). This can be more easily interpreted according to the adage "perception is reality." Consequently, this research design is dependent on the assumption that participants will answer items on the questionnaire honestly and accurately, but also acknowledges the dynamics of self-perception as outlined in the aforementioned literature review.

Demographics

In addition to the three primary scales, a series of questions will be asked to collect demographic information from participants. The principal demographic characteristics include age, gender, sport, religious preference, athletic scholarship status, year of athletic eligibility, ethnic identity, residency status, citizenship, cumulative grade point average (GPA), documented learning disability status, and hometown zip code. Each of these demographic questions will provide context for the results of the relationships between religiosity, resiliency, and stress, as well as offer points of departure for future inquiries.

Ancillary Measures

In addition to the three primary measures described earlier, this instrument will include three ancillary measures. The rationale for including these auxiliary measures is to provide a sort of measuring stick in which to compare the effects of the primary independent variables of religiosity and resiliency.

Social support. The notion of social support was a prevalent construct in the review of literature relating to stress reduction (Ferry et al., 2004; Ford et al., 2000; Gibson & Myers, 2006; Hufford et al., 2010; Malinauskas, 2010; Ornish, 2000; Osborn, 2005; Yi et al., 2005), increased religiosity (Galli & Reel, 2012; Giacobbi et al., 2004; Koenig et al., 2012; Shaw et al., 2005), and enhanced resiliency (Hufford et al., 2010; Yi et al., 2005). For the purpose of this research, the Multidimensional Scale of Perceived Social Support (MSPSS), developed by Zimet, Dahlem, Zimet, & Farley (1988), was selected based on the fact it is an established scale (cited in more than 2,000 articles) with adequate reliability and validity (Cronbach's alpha coefficient of 0.88, and test-retest score of 0.85), it was grounded in the framework of perception (similar to the primary variables being tested), and has been employed by research with

intercollegiate athletes and stress, particularly employed in conjunction with the PSS-10 (Malinauskas, 2010). Also, the MSPSS was constructed with brevity in mind (12 items measured on a seven-point rating scale anchored by "very strongly disagree" and "very strongly agree") as it is expected to be used in tandem with multiple scales. It is necessary to note the MSPSS consists of three subscales (i.e., family, friends, and special person) which will be confirmed in the measurement model. A higher composite score within each subscale is indicative of greater perceived social support.

Athletic identity. Intercollegiate athletes can also be set apart from their collegiate non-athlete peers due to their sense of athletic identity. Research suggests intercollegiate athletes are at a higher risk for presenting with symptoms of distress, exhibiting less resiliency, and being diagnosed with social and psychological disorders when an individual strongly identifies as an athlete (e.g., due to an identity crisis, role engulfment, identity foreclosure, and/or dehumanization) (Adler & Adler, 1991; Ferrante et al., 1996; Gallagher, 2005; Hawkins, 2010; Hinkle, 1994; Lally, 2007; Martin, Eklund, & Adams-Mushett, 1997; Potuto & O'Hanlon, 2007; Simons & Van Rheenen, 2000; Van Rheenen, 2012; Visek et al., 2010; Watson, 2005; Wylleman & Lavallee, 2004).

For the purpose of this research, the Athletic Identity Measurement Scale (AIMS), developed by Brewer, Van Raalte, and Linder (1993), was selected to measure athletic identity because it is an established scale (cited in more than 500 articles) with adequate validity and reliability (Cronbach's alpha coefficients ranging from 0.80 to 0.93, and test-retest score of 0.89) (Brewer et al., 1993), it is grounded in the framework of self-reported perceptions (similar to the primary variables being tested), and it has been employed by research with intercollegiate athletes (Brewer et al., 1993; Hale & Waalkes, 1994; Murphy, Petitpas, & Brewer, 1996). Also,

the AIMS was constructed with brevity in mind (10 items measured on a seven-point rating scale) as it is expected to be used in conjunction with multiple scales. A higher composite score is indicative of greater identification with the athlete role (i.e., athletic identity).

Socioeconomic status. Olpin and Hesson (2010) pointed to evidence suggesting finances can be a source of stress for collegiate students. Consequently, this research design will measure socioeconomic status (SES) as an additional ancillary independent variable. In order to capture socioeconomic status the instrument will request participants' hometown zip code. Subsequently, the median household income will be attributed to each participant based on their hometown zip code according to data from the 2010 United States Census (United States Census Bureau, 2013). The rationale for employing this approach is because it will likely yield more responses, as well as more accurate information, as compared to a self-report question requesting family income (Huffman & Cooper, 2012). Although this approach is not specifically representative of the individual, it provides an accurate snapshot of the participants' hometown environment in which the participant was exposed and nurtured. Given the nature of these procedures, the socioeconomic status of international intercollegiate athletes will not be collected.

Sample

For the purposes of this study, the target sample was current intercollegiate athletes competing at member institutions in the Southeastern Conference (SEC) (N = 7,100). The SEC is arguably one of the most competitive intercollegiate athletic conferences in the United States which makes it an appropriate sample to analyze. For example, SEC member institutions won seven national championships during the 2012-2013 academic year, and in the past seven years SEC schools have crowned a national champion in 15 of the 21 sports it sponsors (SEC Digital Network, 2013). Additionally, the SEC led the nation in total fan attendance in football and

baseball, and the University of Kentucky led the nation in average attendance for basketball (SEC Digital Network, 2013). Due to the athletic success of the SEC, in May 2013 the SEC announced a 20-year broadcast deal with ESPN to launch the SEC Network, and is expected to be the richest contract in intercollegiate athletics history (ESPN, 2013). Given the increased exposure of all 21 SEC sports and the consistent "behind-the-scenes" access, it is reasonable to think these new demands, exposure, expectations, and competitive pressure could result in greater stress for SEC intercollegiate athletes.

Geographical representation. Given the elite nature of the SEC (institutions are members of the NCAA Division I – Football Bowl Subdivision) coaches recruit prospective intercollegiate athletes spanning the entire United States as well as foreign countries. However, there is still an element of rationality which is expected to exist in the sample, specifically a large portion from the southeastern United States. The results from this study will not be strictly limited to the geographical parameters of athletes competing in the southeastern United States but the results will not be generalizable to all intercollegiate athletes competing across the United States.

Sport participation representation. The SEC and its member institutions are also representative of NCAA Division I institutions from a sport participation perspective. For example, in 2012-2013 the average NCAA Division I institution sponsored 8.7 men's sports, 10.4 women's sports, and 19.0 overall sports (Irick, 2013). Similarly, in 2012-13 the average SEC institution sponsored 7.9 men's sports, 9.9 women's sports, and 17.8 overall sports. Nonetheless, the discussion will focus on the interactions of the variables surrounding SEC athletes.

Procedure

The final questionnaire utilized for this research was designed using Qualtrics, an online survey software. Qualtrics generated a URL link which was distributed via email to SEC intercollegiate athletes encouraging them to voluntarily participate in the study. Given the fact that access to SEC athletes' email addresses is relatively restricted, the researcher contacted the director of operations for each individual team in the SEC (as specified on the staff directory on each respective official athletic department's website) and requested that individual to forward the email containing the URL link to his or her intercollegiate athletes. In the event a director of operations was not named, the email was sent to the longest-tenured assistant coach who had an email address listed.

The email correspondence described the purpose of the study and contained a link which directed the potential participants to the online questionnaire (see Appendix C). The email requested the director of operations to forward the information to his or her intercollegiate athletes inviting them to participate in the research. The survey took approximately 10 minutes to complete, and participants were assured that all information gathered would be held confidential and anonymous as well as presented only in group form.

The rationale for contacting the director of operations was two-fold: first, the director of operations frequently communicates with his or her athletes so he or she will have the email addresses easily accessible, and secondly the athletes are conditioned to read and acknowledge emails from the director of operations. Therefore, athletes may be more inclined to take a few minutes to respond to a questionnaire if the email is endorsed by their director of operations rather than an unfamiliar researcher. The initial plan was to send two follow-up emails to the director of operations – the first follow-up email to be sent one week after the initial contact, and

the second follow-up email to be sent two weeks after the initial contact with the online survey closing three weeks after initial contact. However, there was a modification to the procedure following the second round of emails sent to the directors of operations.

After emailing the second round of emails to the directors of operations at each SEC university, there was a relatively low response rate (only 30 usable responses). In an effort to proactively address this concern of low response rate another approach was adopted. Instead of relying on the directors of operations as an intermediary, the researcher decided to email the SEC intercollegiate athletes directly (see Appendix D). Therefore, intercollegiate athletes' emails were collected from their respective universities' public directories. Each of the 14 SEC universities' public directories are operated slightly different which affected the access granted to students' email addresses. Specifically, five universities restricted access to their public directories to only individuals who have a university-affiliated username. As a result, specific email addresses were not collected from athletes competing at these five universities, meaning their invitation to participate was dependent upon their director of operations forwarding the email to them. Also, not all athletes' contact information was made available in the public directories due to privacy settings on their behalf or the university's behalf. Nonetheless, more than 4,000 individual email addresses were accessible and collected for current SEC intercollegiate athletes.

As previously alluded to, an email was sent to the individual athletes inviting them to participate in the research (two weeks after the email sent to the directors of operations) followed-up by a reminder email sent one week and two weeks later. Finally, the online survey closed five weeks following the initial email sent to the director of operations (see Appendix E to view the content of the online questionnaire).

Statistical Analysis

In order to test the relationships between religiosity, resiliency, and stress, a structural equation model (SEM) will be employed using SPSS Amos 20. The theoretical model tested is based on a review of the literature as presented in Chapter II, which is primarily grounded in the integrated model of the stress appraisal (see Figure 3.1) developed by Williams and Andersen (1998) (see Figure 2.1) and Wiese-Bjornstal and colleagues (1998) (see Figure 2.2). For the purposes of this study, a few specific independent variables are teased out of the Holistic Transactional Stress Model (see Figure 2.3) to test their interactive relationships with perceived life stress – Figure 3.1 illustrates the theoretical model tested in the current research design. The following research questions will be examined to guide the discussion:

RQ 1: How well does the proposed model fit the relationships between religiosity, resiliency, athletic identity, social support, socioeconomic status, and perceived life stress among intercollegiate athletes competing in the SEC?

RQ 2: What is the relationship between [2A, 2B, 2C] among intercollegiate athletes competing in the SEC?

2A: religiosity and resiliency

2B: religiosity and perceived life stress

2C: resiliency and perceived life stress

RQ 3: How do the ancillary variables social support, athletic identity, and socioeconomic status interact with religiosity, resiliency, and perceived stress?

Chapter III Tables and Figures

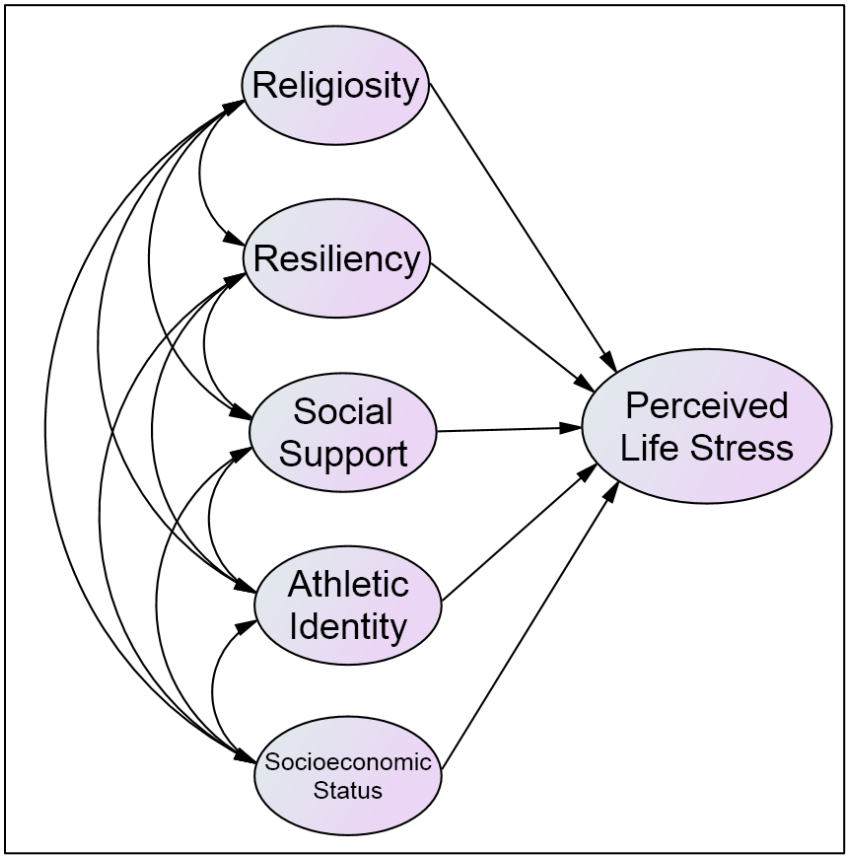


Figure 3.1. Theoretical model tested.

CHAPTER IV: RESULTS

Once the survey was closed, it was determined 68% (n = 595) of intercollegiate athletes who accessed the survey completed it in its entirety, but responses from 646 participants were usable once the data was screened.

Sample Demographics and Descriptives

Listwise deletion was employed for all cases, meaning a single missing value for any of the independent or dependent variables resulted in the case being expunged from the usable sample. The Qualtrics survey software was administered so that respondents were notified when a question was not answered. Respondents were not required to answer every question before progressing to the next question since every question was voluntary. This methodology was employed to avoid concerns of data missing at random and/or data missing completely at random. After the initial listwise deletion procedures, it was determined that 558 cases were usable. However, fast-forwarding within the results chapter, it was determined socioeconomic status was measured poorly so it was ultimately dropped from the structural model. The rationale for why socioeconomic status was measured poorly and subsequently dropped is explained in detail within the discussion of the confirmatory factor analysis techniques in the results chapter. As a result, listwise deletion procedures were re-administered exempting missing socioeconomic status data. Demographics and descriptives are based on the final usable sample (n = 646) and displayed in Table 4.1 through Table 4.3.

The average age of the respondent was just under 20 years of age (μ = 19.9; SD = 1.4). More than double the amount of women completed the questionnaire (n = 441; 68.3%) as compared to their male counterparts (n = 201; 31.1%). Since gender representation in the SEC is 43.7% women and 56.3% men, it is appropriate to note the sample may not be a proportional

Table 4.1

Basic Demographic Profile and Descriptives of Respondents

			μ				
Mean age	19.9				***Perceived Life Stress***	***Social Support***	***Athletic Identity***
	n	***%***	***Religiosity***	***Resiliency***			
Overall	646	-	17.98	22.65	26.41	71.56	30.33
Gender							
Women	441	68.3	18.09	22.16	27.01	72.94	30.02
Men	201	31.1	17.68	23.67	25.06	68.81	31.15
Ethnicity							
White	519	80.3	17.70	22.90	26.11	72.04	30.15
Black	56	8.7	20.21	21.88	27.95	69.96	30.04
Multi-ethnic	33	5.1	18.94	21.33	26.55	70.85	31.18
Hispanic	18	2.8	17.83	22.22	27.78	72.28	33.61
Native American	5	0.8	18.60	22.80	27.40	64.00	30.60
Asian	5	0.8	15.40	19.60	28.60	61.40	37.20
Pacific Islander	3	0.5	21.67	17.00	31.33	77.33	32.67
Citizenship							
US citizen	577	89.3	18.49	22.75	26.40	71.87	29.94
International country of origin	68	10.5	13.54	21.71	26.47	69.15	33.71
Residency Status							
In-state	234	36.2	19.08	22.70	26.29	71.79	29.88
Out-of-state	365	56.5	17.42	22.66	26.42	71.66	30.31
GPA							
3.5-4.0	280	43.3	17.94	23.13	25.53	72.13	28.37
3.0-3.49	175	27.1	18.54	22.84	26.11	71.27	30.49
2.5-2.99	88	13.6	17.91	22.42	27.69	71.40	33.40
< 2.49	13	2.0	17.23	23.23	28.92	69.08	31.00
No GPA (first-semester enrollee)	88	13.6	17.13	20.83	28.10	71.03	33.24
Documented Learning Disability							
No	586	90.7	18.16	22.77	26.20	71.92	30.13
Yes	46	7.1	16.33	22.00	28.13	68.48	32.04

Note. All means reported are based on the final measurement model. Standard deviation values are not reported.

Table 4.2

Descriptive Statistics of Athletic Participation of Respondents

			μ				
	n	***%***	***Religiosity***	***Resiliency***	***Perceived Life Stress***	***Social Support***	***Athletic Identity***
Overall	646	-	17.98	22.65	26.41	71.56	30.33
Sport							
Track & field	139	21.5	18.68	23.32	25.34	72.32	28.75
Swimming & diving	114	17.6	16.73	22.09	27.62	71.40	29.56
Soccer	51	7.9	19.00	23.69	25.14	73.55	32.94
Softball	37	5.7	20.03	23.11	26.86	73.84	29.81
Equestrian	37	5.7	15.30	21.95	27.51	69.68	25.73
Volleyball	37	5.7	18.05	22.00	27.73	75.78	29.46
Football	33	5.1	19.85	23.21	25.73	69.15	34.21
Golf	32	5.0	16.84	23.63	24.38	71.88	31.28
Tennis	31	4.8	13.29	21.45	25.10	68.84	33.42
Rowing	30	4.6	14.43	22.30	28.13	67.80	32.37
Baseball	26	4.0	21.65	23.35	25.65	70.19	33.15
Cross country	26	4.0	18.62	21.69	26.23	73.27	30.69
Basketball	14	2.2	21.79	22.00	27.36	67.71	27.50
Gymnastics	14	2.2	20.29	20.93	27.36	70.43	33.07
Rifle	5	0.8	23.20	25.00	23.80	71.60	24.40
Sand volleyball	5	0.8	19.60	21.40	27.80	74.00	33.60
Wrestling	4	0.6	20.50	22.00	30.00	59.25	35.50
Athletic Scholarship Status							
Full	184	28.5	17.52	22.23	26.91	71.29	32.27
Partial	307	47.5	17.90	23.08	26.01	71.85	29.50
None	152	23.5	18.74	22.24	26.63	71.32	29.78
Year of Athletic Eligibility							
1st year	153	23.7	17.76	21.66	27.20	71.25	32.37
2nd year	173	26.8	17.68	22.43	26.75	70.18	30.71
3rd year	140	21.7	17.63	22.98	26.06	72.43	30.24
4th year	145	22.4	18.80	23.16	25.84	72.42	28.43
≥ 5th year	32	5.0	18.47	24.59	24.63	73.34	27.63

Note. All means reported are based on the final measurement model. Standard deviation values are not reported.

Table 4.3

Descriptive Statistics of Religiously-Affiliated Attributes of Respondents

			μ				
	n	***%***	***Religiosity***	***Resiliency***	***Perceived Life Stress***	***Social Support***	***Athletic Identity***
Overall	646	-	17.98	22.65	26.41	71.56	30.33
Religious Preference							
Protestant Christian	314	48.6	19.94	22.77	26.65	72.53	29.89
Catholic	134	20.7	17.66	22.70	26.51	70.75	32.44
Non-denominational	55	8.5	21.53	22.62	25.42	74.38	26.24
No religion	27	4.2	8.59	23.81	25.67	64.37	32.93
Multiple religions identified	18	2.8	14.06	22.28	25.50	67.56	29.67
Agnostic	18	2.8	9.28	24.50	24.61	69.28	28.11
Atheist	13	2.0	7.62	22.46	24.31	67.77	31.85
Unitarian	4	0.6	11.75	24.50	22.75	71.25	21.25
Buddhist	3	0.5	11.33	21.00	25.67	68.33	35.67
Mormon	3	0.5	22.67	23.33	24.00	66.33	27.00
Muslim	3	0.5	14.33	16.00	36.33	66.00	38.67
Jewish	2	0.3	15.50	16.00	29.00	70.00	32.00
Hindu	1	0.2	8.00	22.00	26.00	65.00	34.00
Sport Chaplain Availability							
Sport chaplain is not available	345	53.4	17.64	22.46	26.81	71.55	30.50
Sport chaplain is available	292	45.2	18.49	22.93	25.90	71.60	30.06
Pray Collectively as a Team							
No	330	51.1	16.37	22.43	26.77	70.22	30.50
Yes	314	48.6	19.66	22.87	26.02	73.02	30.19

Note. All means reported are based on the final measurement model. Standard deviation values are not reported.

representation of all SEC athletes (Office of Postsecondary Education, 2013). More than 80% (*n* = 519) of respondents self-reported their ethnicity as white and 18.7% (*n* = 121) self-identified as a racial/ethnic minority (i.e., other than "white"), which is representative of a conference in which all athletic departments are situated within predominately white institutions. Domestic intercollegiate athletes comprised 89.3% (*n* = 577) of the sample compared to 10.5% (*n* = 68) who self-identified as citizens of a country other than the United States, which is representative of NCAA Division I participation in which 12.4% of intercollegiate athletes were non-resident aliens (Zgonc, 2010). Other demographics revealed the majority of respondents were out-of-state students (*n* = 365, 56.5%), did not self-report having a documented learning disability (*n* = 586, 90.7%), and more than two-thirds reported a GPA of 3.0 or greater (*n* = 455, 70.4%).

Respondents' year in school was distributed fairly evenly – 23.7% first-year (*n* = 153), 26.8% second-year (*n* = 173), 21.7% third-year (*n* = 140), and 27.4% fourth-year and greater (*n* = 177). Athletes competing in track and field (*n* = 139; 21.5%) and swimming and diving (*n* = 114; 17.6%) were the most represented in the sample. Almost half of the respondents were recipients of partial athletic scholarships (*n* = 307; 47.5%) whereas 28.5% (*n* = 184) reported they received a full athletic scholarship and 23.5% (*n* = 152) of the sample did not receive any athletically-related financial aid.

The greatest frequency of respondents from this sample self-identified as a Protestant Christian (*n* = 314; 48.6%) followed by adherents to the Catholic tradition (*n* = 134; 20.7%). A combined 9.0% (*n* = 58) of the sample identified they did not practice a religion or self-identified as agnostic or atheist. The majority of the sample reported a sport chaplain was not available for them (*n* = 345; 53.4%).

Confirmatory Factory Analysis

Before proceeding to analyze the results respective to each research question, it is necessary to evaluate the measurement model. The measurement model was assessed using SEM techniques in SPSS Amos 20. It is critical to begin with Confirmatory Factor Analysis (CFA) because it directly establishes the construct validity of the multiple variables used in this study (i.e., religiosity, resiliency, perceived social support, athletic identity, socioeconomic status, and perceived life stress). There are two elements which comprise construct validity – convergent validity and discriminant validity – and the apriori CFA model will be refined accordingly.

Apriori CFA model. The dataset originally included 44 manifest variables each scored according to their respective instruments. These 44 manifest variables measured five latent variables, and religiosity, social support, and perceived life stress were second-order factors. Based on the descriptions of each of the instruments in the survey, the apriori measurement model as illustrated in Figure 4.1 through Figure 4.6 was tested.

Upon initial investigation it was discovered socioeconomic status was uncharacteristically weakly correlated with all other latent constructs, which was symptomatic of a poorly-measured construct. This discovery necessitated a review of the socioeconomic construct. Socioeconomic status was operationally-defined according to hometown median annual household income (as described in the methodology). In hindsight, it is understandable why this operational definition was not an accurate measure of an individual's socioeconomic status. For instance, families living within the same zip code boundaries could range in annual household income; therefore, a community's median annual household income did not accurately represent a participant's socioeconomic status. Consequently, within the context of this study socioeconomic status was ineffective and dropped from statistical analysis since it was not an

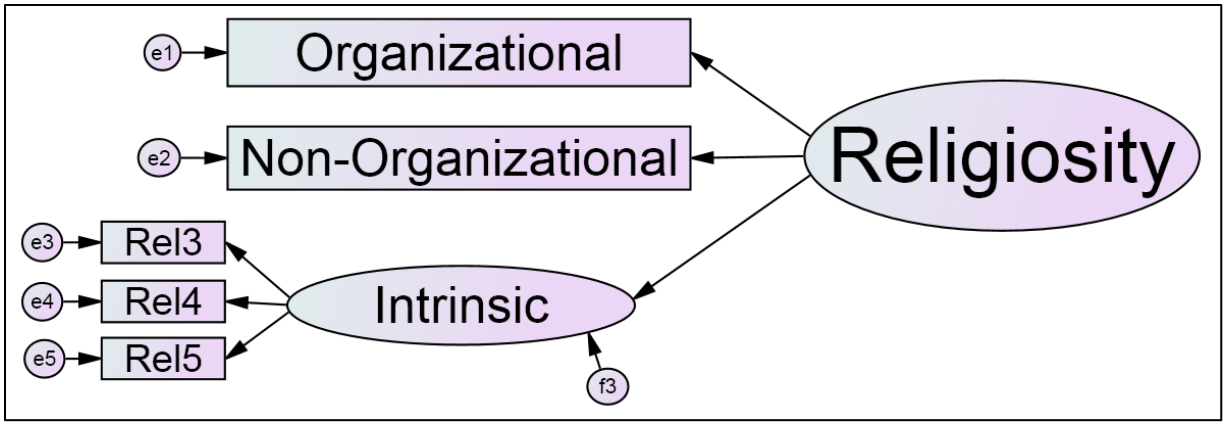


Figure 4.1. Apriori measurement model for religiosity.

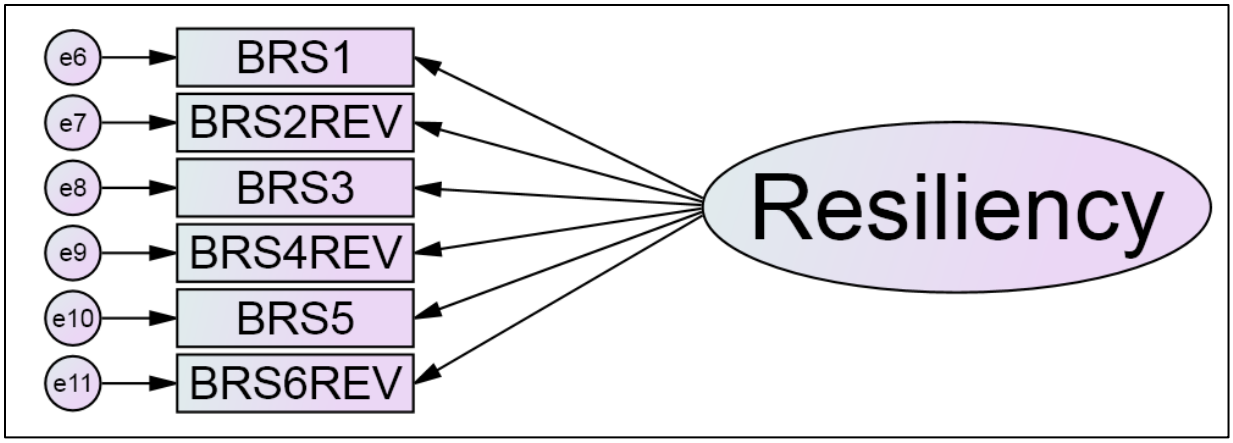


Figure 4.2. Apriori measurement model for resiliency.

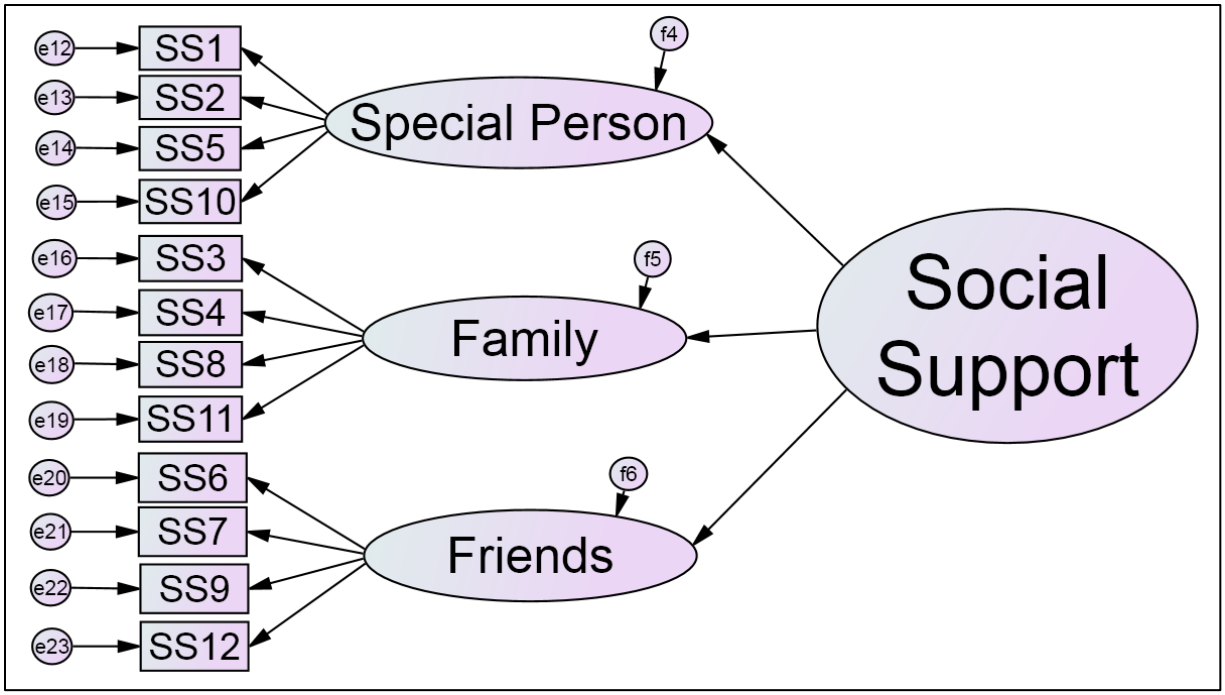


Figure 4.3. Apriori measurement model for social support.

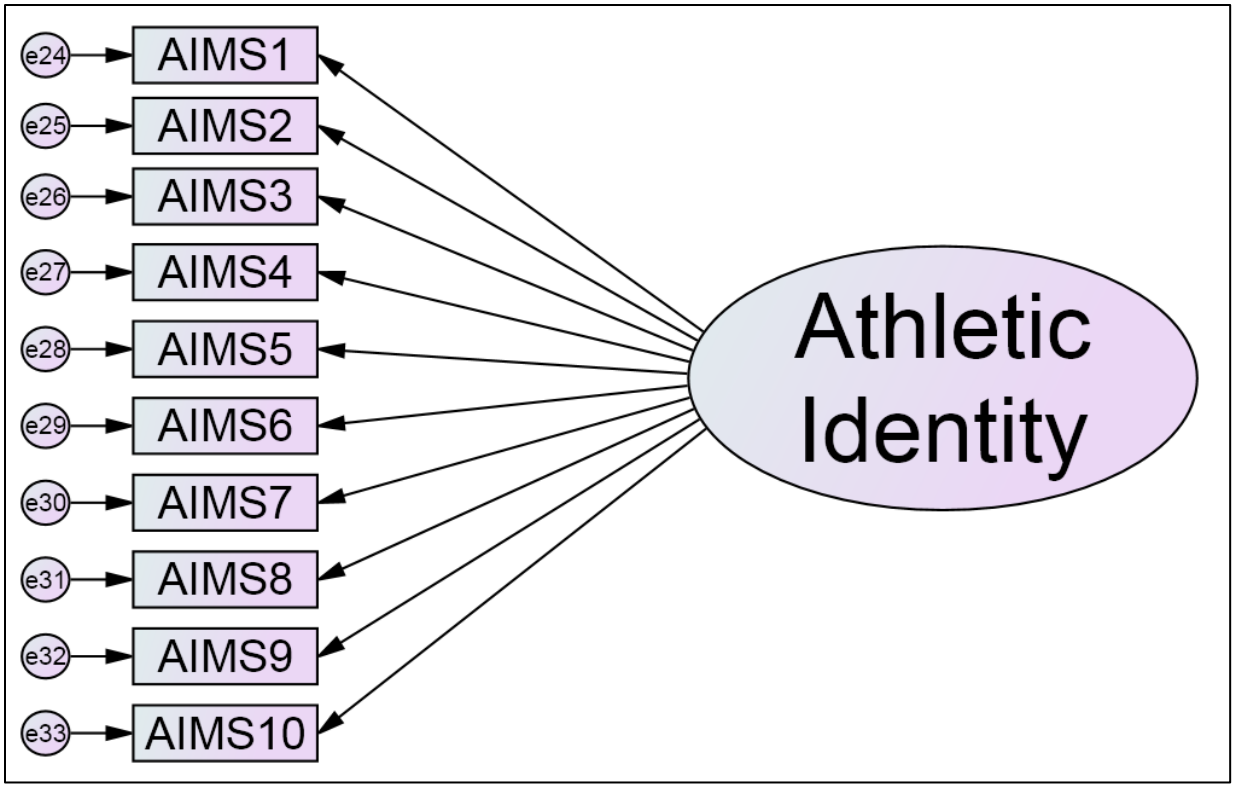


Figure 4.4. Apriori measurement model for athletic identity.

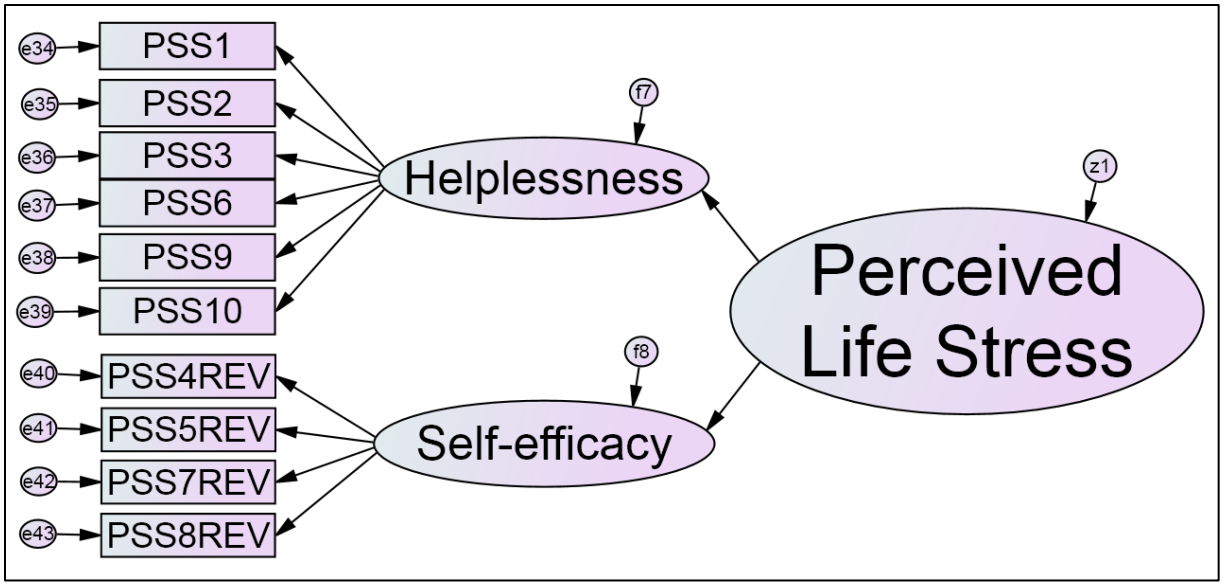


Figure 4.5. Apriori measurement model for perceived life stress.

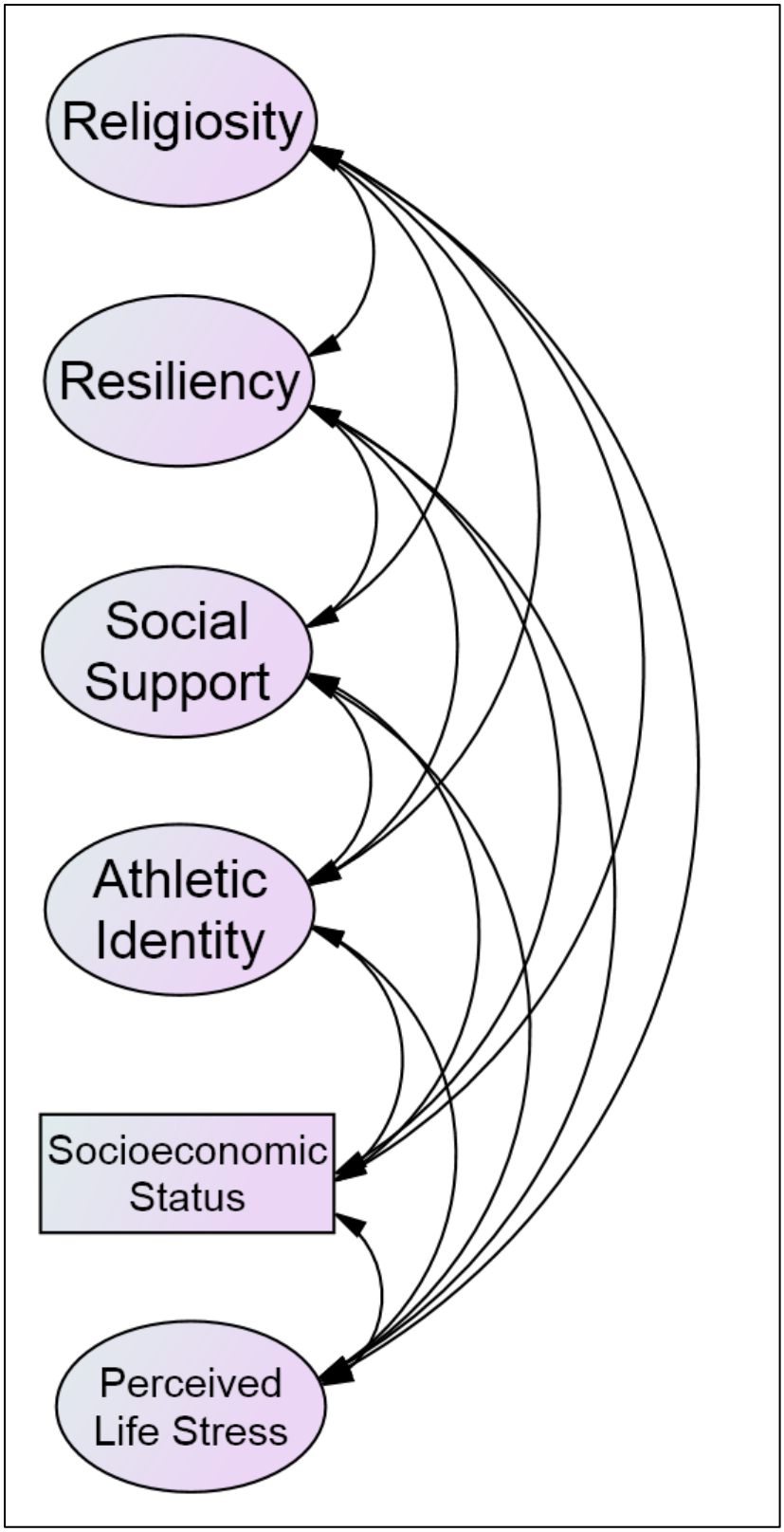


Figure 4.6. Abbreviated apriori CFA measurement model (comprised of Figure 4.1 through Figure 4.5).

accurate indicator of one's socioeconomic status. Listwise deletion procedures were re-administered (as described earlier) after dropping the socioeconomic variable and CFA techniques were employed.

For the apriori CFA model, the Chi-square (*CMin*) statistic was 2003.87 at 844 degrees of freedom (*df*) ($p < 0.001$) which resulted in *CMin*/*df* = 2.37. According to Byrne (1989), if this relative chi-square indicator (i.e., *CMin*/*df*) is greater than 2.0 then that is indicative of inadequate fit. Additionally, the comparative fit index (*CFI*) score was 0.925 (values closer to 1.0 are considered better fit) which bordered the subjective standard (0.90) for adequate fit as suggested by Bentler (1990). Similarly, the root mean square error of approximation (*RMSEA*) was 0.046 (*pclose* = 0.99) which Browne and Cudeck (1993) subjectively recommend as reasonable fit. Based on these collective indicators the apriori model can likely be refined to improve fit.

***Convergent validity*.** Convergent validity essentially refers to analyzing the items intended to measure the same construct – it is expected these items will have a relatively high correlation with one another. The first step was to confirm the latent variables were best measured according to their respective unidimensional or multidimensional constructs as suggested by previous literature.

Religiosity. A factor analysis of religiosity was performed in SPSS using principal components (PCA) dimension reduction techniques with varimax rotation. Results from the PCA and scree plot suggested a single factor existed contrary to the authors' suggestions for a three-factor multidimensional construct (Koenig & Büssing, 2010). The construct was explored by consolidating the manifest variables of religiosity into a unidimensional construct. The tentative construct produced a *CMin* statistic of 2034.19 at 845 *df* ($p < 0.001$) resulting in *CMin*/*df* = 2.41,

which was indicative of worse fit relative to the apriori model handling religiosity as multidimensional. The *CFI* score was 0.923 and *RMSEA* was 0.047, also indicating worse model fit and supporting religiosity was indeed better measured as a second-order factor in the CFA.

Next, the lambda weights of all five religiosity manifest variables were examined and it was discovered that all paths were statistically significant and well greater than the subjective benchmark of 0.40 standardized regression weights. There were also no elevated modification indices (M.I.) signaling no concern. The Cronbach alpha coefficient for the intrinsic religiosity loading was 0.91, indicating good reliability. Therefore, all five manifest items were retained for religiosity, measuring three factors: organizational religiosity, non-organizational religiosity, and intrinsic religiosity.

Resiliency. A PCA of resiliency with varimax rotation and accompanying scree plot suggested a single factor existed which confirmed the authors' recommendation (Smith et al., 2008). Next, the lambda weights of all six resiliency manifest variables were examined and it was discovered that all paths were statistically significant and greater than the subjective benchmark of 0.40 standardized regression weights. Also, there were no red flags caused by elevated M.I. within the resiliency construct. The Cronbach alpha coefficient for resiliency was 0.86, indicating good reliability. As a result, all six manifest items were retained to measure resiliency as a unidimensional construct.

Social support. A factor analysis of social support was conducted using PCA dimension reduction techniques with varimax rotation. Results from the PCA and scree plot suggested three factors existed, supporting the authors' suggestions for a multidimensional three-factor construct (Zimet, Powell, Farley, Werkman, & Berkoff, 1990). Similarly, each of the 12 manifest items loaded according to their expected factor (i.e., special person, family, friends). Cronbach's alpha

coefficients for special person, family, and friends were 0.94, 0.89, and 0.93, respectively, indicating excellent reliability. Next, the lambda weights of each of the 12 social support manifest variables were examined and it was discovered that all paths were statistically significant and well greater than the subjective benchmark of 0.40 standardized regression weights. There were two instances of a M.I. greater than the subjective benchmark of 10.0 (11.15 between SS3 and SS8; 10.93 between SS5 and SS8) but upon review it was not a cause for concern. Therefore, all 12 manifest items were retained for each of their respective factors.

Athletic identity. A PCA of athletic identity with varimax rotation and accompanying scree plot suggested two factors existed which was contrary to the authors' recommendation that the AIMS is a unidimensional measure (Brewer, Van Raalte, & Linder, 1993). This contradiction was a red flag so the standardized regression weights of the 10 athletic identity manifest variables were examined. Although all of the paths were statistically significant, three manifest items fell below the subjective benchmark of 0.40 (i.e., AIMS1 = 0.26; AIMS2 = 0.38; AIMS3 = 0.38). These same three AIMS manifest variables loaded into one factor according to the PCA. In light of these two concerns, AIMS1, AIMS2, and AIMS3 will likely be dropped; however, reliability tests and CFA statistics were examined before making a final decision.

The Cronbach alpha coefficient for athletic identity as a unidimensional construct was 0.84, indicating good reliability. When AIMS1, AIMS2, and AIMS3 were dropped from the construct the Cronbach alpha score improved slightly to 0.85, continuing to be reflective of good reliability. AIMS1, AIMS2, and AIMS3 were then dropped from the apriori CFA model and the refined *CMin* statistic was 1474.34 at 724 *df* ($p < 0.001$) resulting in *CMin*/*df* = 2.04, which was indicative of improved fit relative to the apriori model. The *CFI* statistic was 0.949 and *RMSEA* was 0.040 (*pclose* = 1.00), also indicating improved model fit. As a result, it was concluded to

drop AIMS1, AIMS2, and AIMS3 from the athletic identity construct when moving forward with assessing and refining the CFA measurement model.

Perceived life stress. A factor analysis of perceived life stress was performed using PCA dimension reduction techniques with varimax rotation. Results from the PCA and scree plot suggested one dominant factor existed. The authors' suggested a multidimensional construct with two factors (Roberti, Harrington, & Storch, 2006). The unidimensional construct was tested and revealed a *CMin* statistic of 1528.04 at 726 *df* ($p < 0.001$) resulting in *CMin*/*df* = 2.11, which was indicative of worse fit relative to the most recently refined measurement model. The *CFI* statistic was 0.946 and *RMSEA* was 0.041 (*pclose* = 1.00), also indicating worse model fit. As a result, the multidimensional model prescribed by Roberti, Harrington, and Storch (2006) was accepted. Cronbach alpha coefficients for the factors perceived helplessness and perceived self-efficacy were 0.81 and 0.71, respectively, indicating acceptable reliability.

Next, the lambda weights of each of the 10 PSS manifest variables were examined considering PSS as multidimensional. It was discovered that all paths were statistically significant and greater than the subjective benchmark of 0.40 standardized regression weights. There were no red flags caused by elevated M.I. within the perceived life stress construct. All 10 manifest items were retained for each of their respective factors.

***Discriminant validity*.** Discriminant validity essentially refers to examining differences between items intended to measure different constructs. As previously noted, it was clear SES had unusually low correlations with all other constructs. Given the systematically low correlations, there was little information which will be gained from the construct in its current form. This was evidence suggesting the construct of SES was measured poorly, so it was

dropped from the model. Ultimately the refined CFA did not include SES because it was a more parsimonious fit regarding the measurement model.

Upon further evaluation of covariances and correlations, none of the constructs had high positive correlations with one another. As a result, there was no need to test for independence of constructs as they appear to be distinct. This was not surprising since these constructs do not have a history of multicollinearity concerns. There were a few instances of relatively low correlations between specific constructs but these were not cause for concern, but rather will be interpreted in the structural model. Based on the collective examination of construct validity and reliability, the refined measurement model presented in Figure 4.7 through Figure 4.12 was adopted before proceeding to analyze the structural model.

RQ 1: Model Fit

Once the measurement model was refined it was then appropriate to test the model fit of the structural model. The first research question asked how well the proposed model fit the relationships between religiosity, resiliency, and perceived stress among intercollegiate athletes competing in the SEC. The structural model tested was based on the Holistic Transactional Stress Model (see Figure 2.3) which was grounded in the integrated model of the stress appraisal developed by Williams and Andersen (1998) and Wiese-Bjornstal et al. (1998) (see Figure 2.1 and Figure 2.2, respectively). The Holistic Transactional Stress Model is unique because it focuses on perceived stress as the outcome which extends beyond sport injury as the outcome and rehabilitation of sport injury as the outcome as presented in the aforementioned models, respectively.

For the purposes of this study, the independent variables religiosity, resiliency, social support, and athletic identity were teased out of the Holistic Transactional Stress Model to test

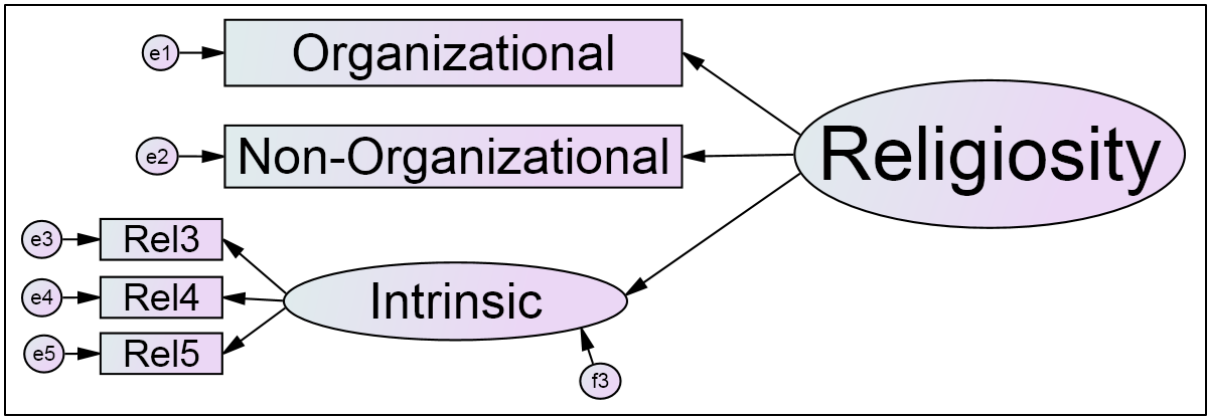


Figure 4.7. Refined measurement model for religiosity.

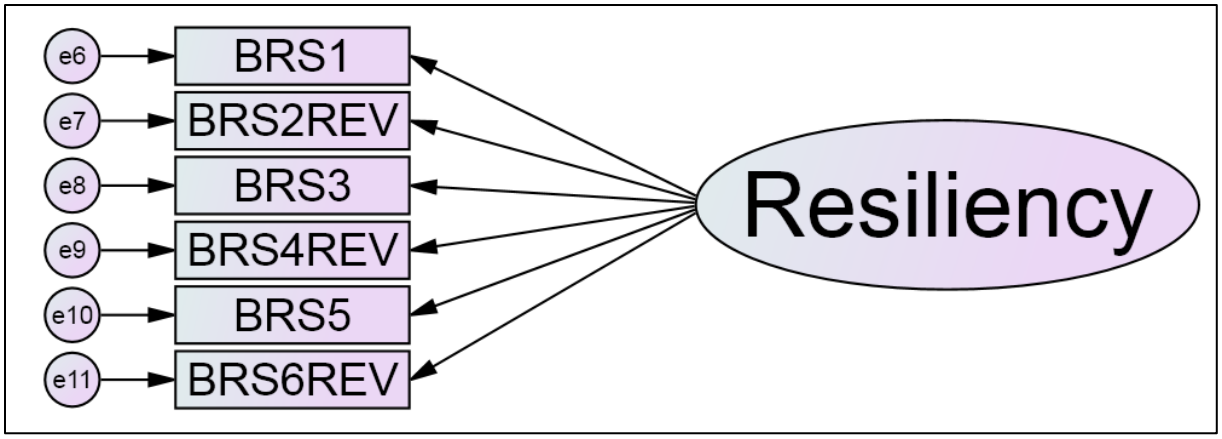


Figure 4.8. Refined measurement model for resiliency.

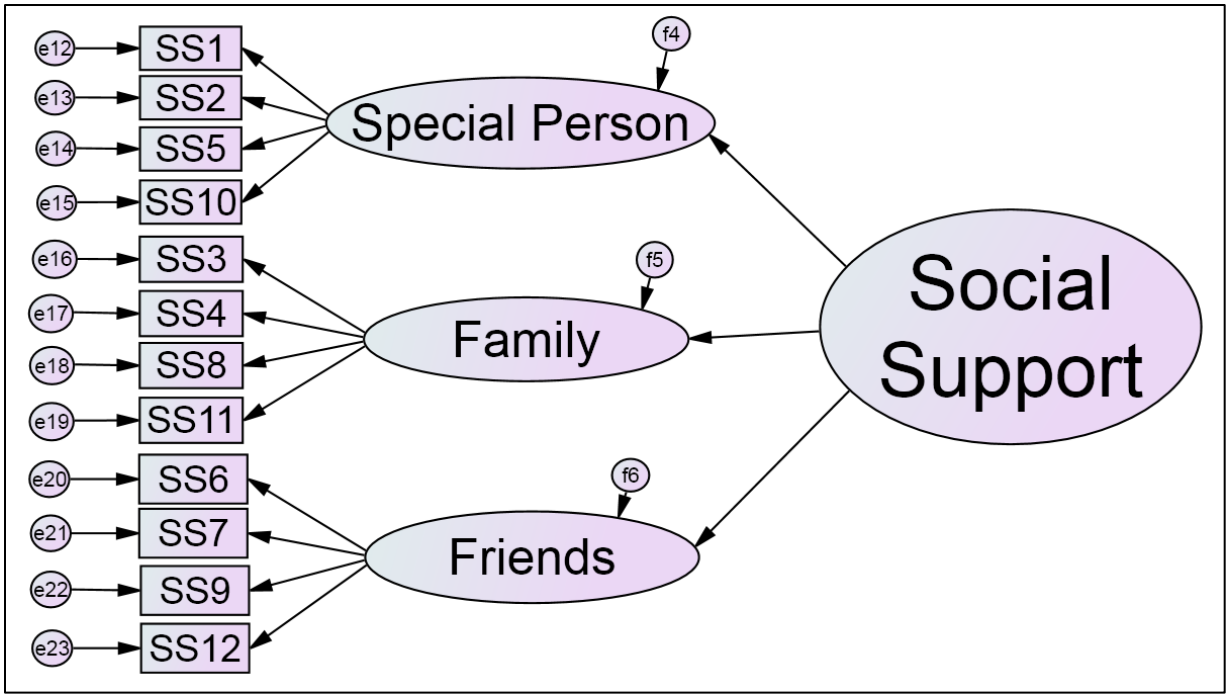


Figure 4.9. Refined measurement model for social support.

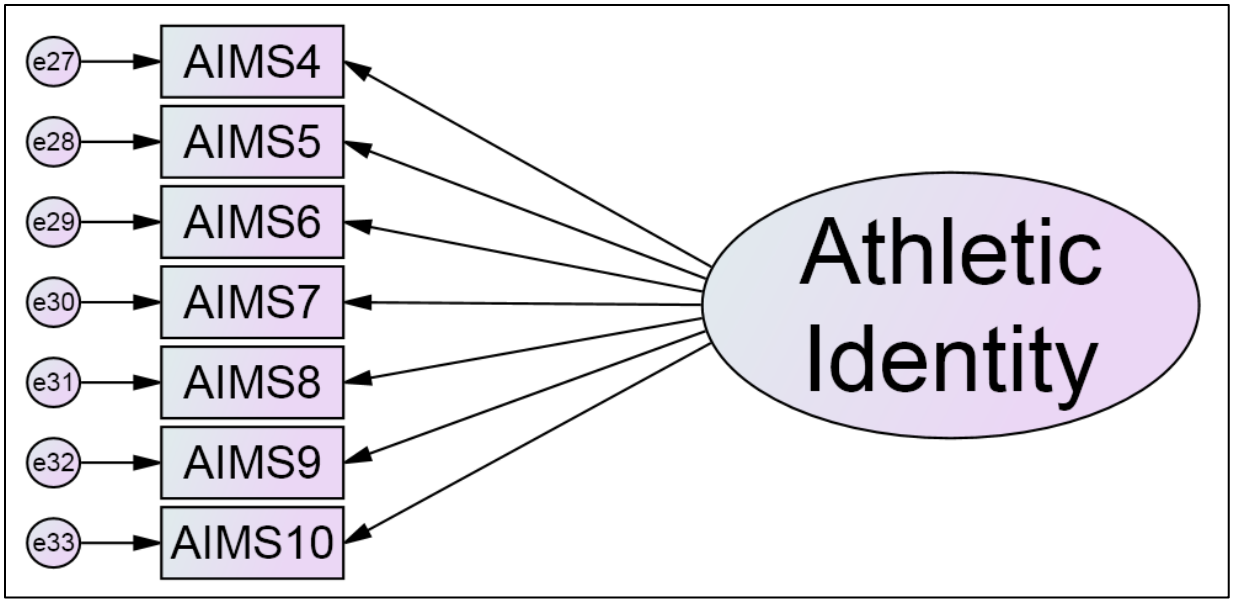


Figure 4.10. Refined measurement model for athletic identity.

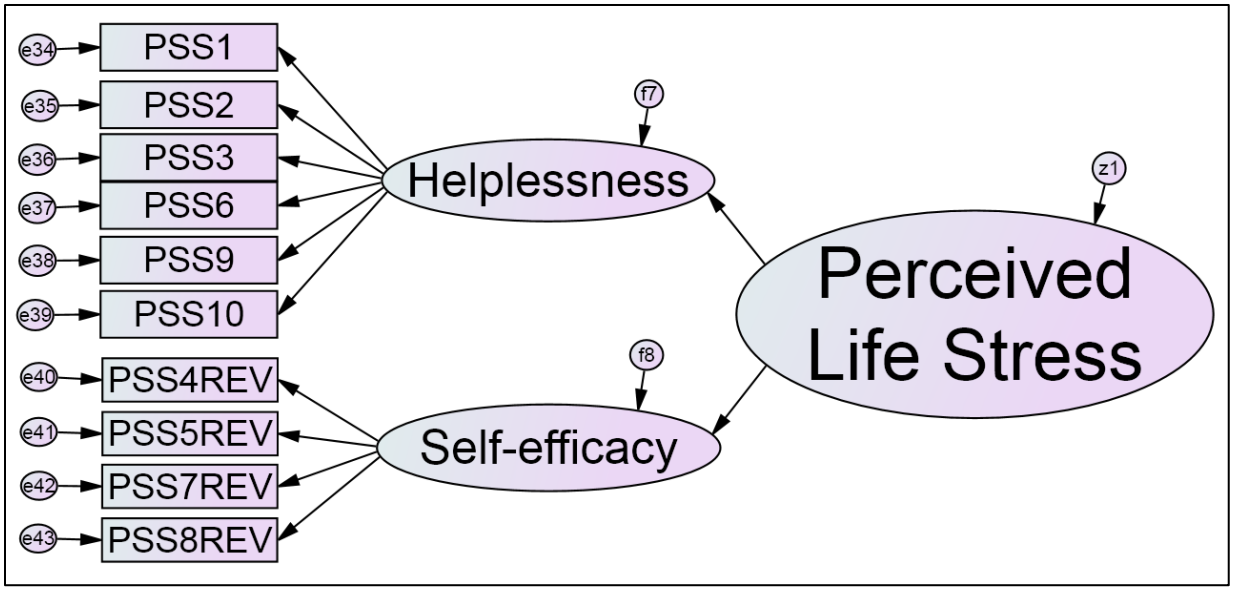


Figure 4.11. Refined measurement model for perceived life stress.

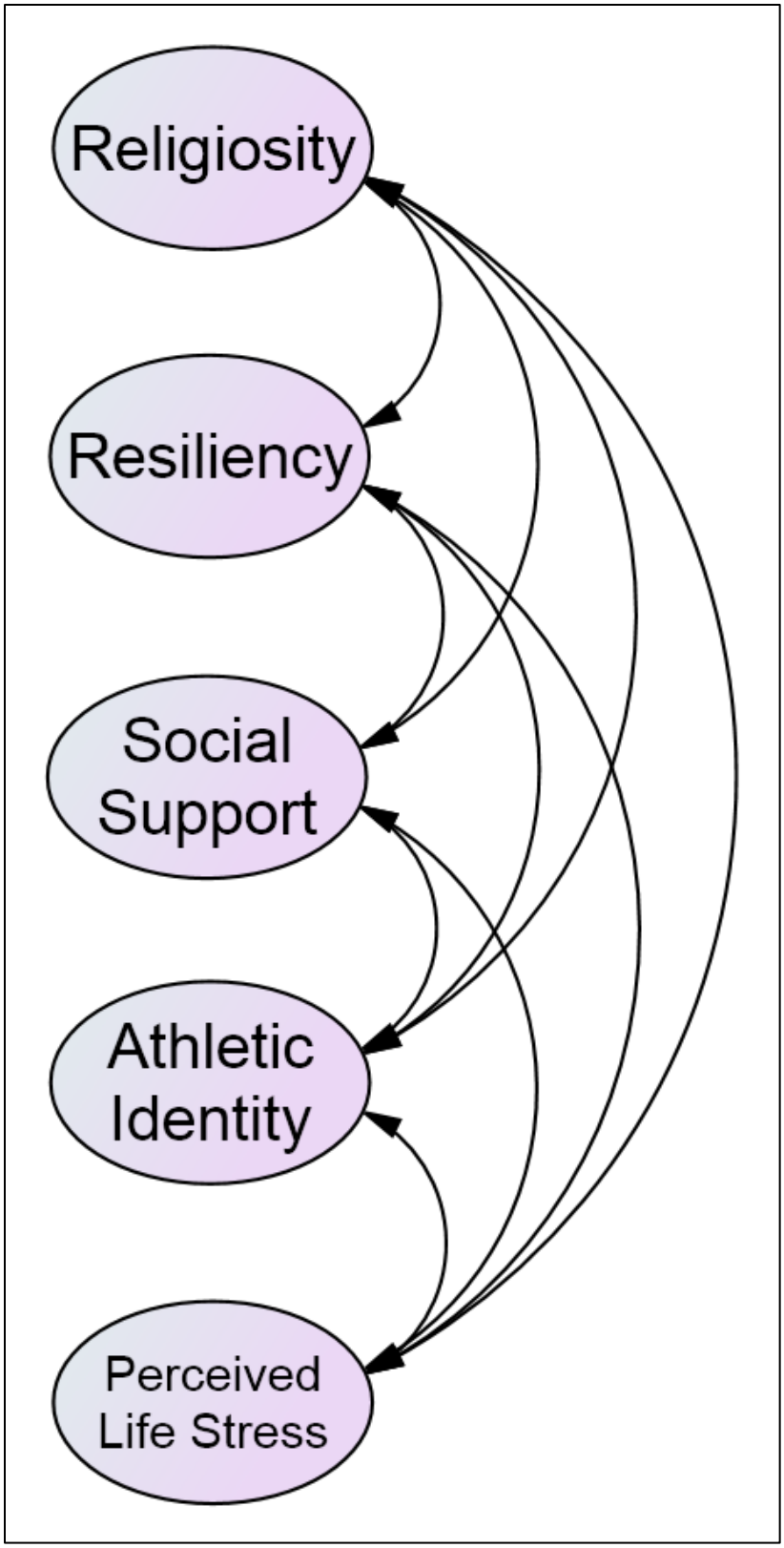


Figure 4.12. Abbreviated refined CFA measurement model (comprised of Figure 4.7 through Figure 4.11).

their interactive relationships with perceived life stress. Figure 4.13 illustrates the structural model tested for the first research question.

The structural model produced a *CMin* = 1474.34 at 724 *df* which resulted in a *CMin*/*df* = 2.04 with associated fit indices of *CFI* = 0.949 and *RMSEA* = 0.040 (*pclose* = 1.00), indicating good model fit. All path weights were significant except one, which was the relationship between religiosity and resiliency ($r = 0.09$, $p = 0.055$). Consequently, the model of interest was rejected since all paths were not statistically significant (see Figure 4.14); however, further investigation was warranted to analyze specific relationships.

It is necessary to note the partial standardized regression coefficients do represent percentage of partial variance explained in the model. These coefficients "represent expected changes in *y* as a result of manipulations in *x* in standard deviation units while controlling for the correlated effects of other predictors" (Grace & Bollen, 2005, p. 287). Total variance can only be explained as a collection of predictors rather than in partial terms because one "cannot guess how to apportion the variance explanation *shared* [italics added] among predictors" (Grace & Bollen, 2005, p. 287). Essentially, standardized regression weights allow for comparing relative effects across paths.

RQ 2: Interdependent Relationships Among Primary Variables

After testing the structural model for overall model fit attention was focused on examining the interdependent relationships among the primary constructs: religiosity, resiliency, and perceived stress. The first relationship examined was between religiosity and resiliency among SEC intercollegiate athletes. Religiosity and resiliency were both independent variables which covaried with one another and may help explain variance of the dependent variable of perceived life stress. The relationship between religiosity and resiliency had a standardized

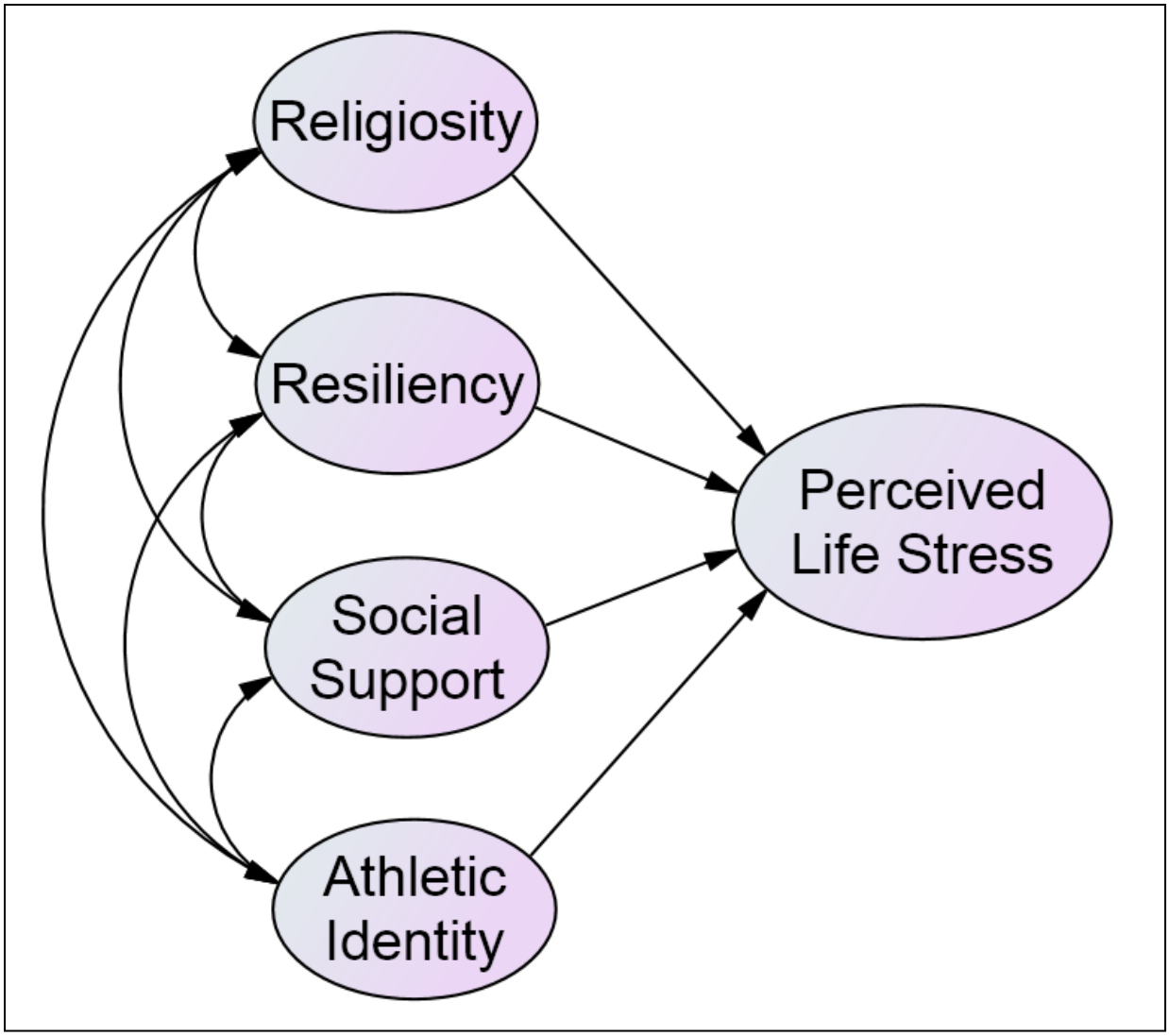


Figure 4.13. Abridged structural model tested (comprised of Figure 4.7 through Figure 4.11).

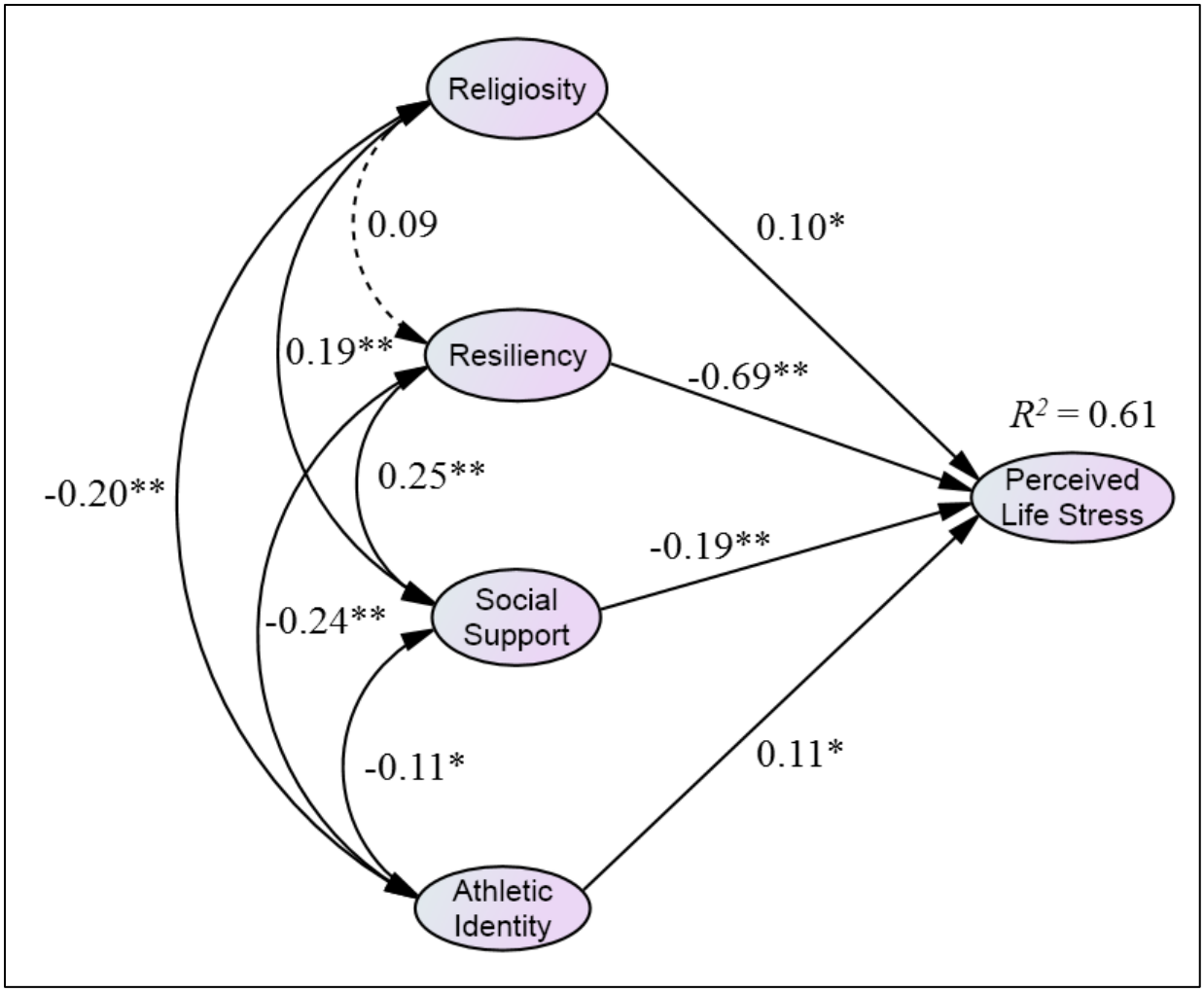


Figure 4.14. SEM analysis of apriori structural model with standardized regression weights. Non-significant paths are represented by dotted lines.

Note. * $p < 0.05$; ** $p < 0.001$

correlation of 0.085 which was not statistically significant ($p = 0.055$). It is important to note that the positive direction of the correlation was consistent with the literature.

The next relationship tested was the path weight between religiosity and perceived life stress. Results revealed the relationship between religiosity and perceived life stress was statistically significant ($\beta = 0.097$; $p = 0.011$), but the weakest direct effect among the variables tested. Also, the direction of the relationship was contrary to the literature and necessary to explore in the discussion.

The next relationship tested was between resiliency and perceived life stress. Results indicated a statistically significant inverse relationship existed between resiliency and perceived life stress ($\beta = -0.685$; $p < 0.001$) which was consistent with the literature. This finding suggested SEC intercollegiate athletes who self-identified as being more resilient were more likely to experience lower perceived life stress.

Based on these findings it was determined religiosity had weak relationships with resiliency and perceived life stress, whereas resiliency has a statistically significant relationship with religiosity. A review of the literature indicated other notable variables (i.e., social support and athletic identity) may have significant relationships with perceived life stress. Although social support and athletic identity were not the focus of this study, these ancillary variables provided further context and insights to the holistic transactional stress theory.

RQ 3: Interdependent Relationships Among Ancillary Variables

The original three ancillary variables included in the theoretical model included social support, athletic identity, and socioeconomic status. However, socioeconomic status was measured poorly so it was dropped from the final CFA model and subsequent structural model. Social support was found to have significant relationships with religiosity ($r = 0.19$; $p < 0.001$),

resiliency ($r = 0.25$; $p < 0.001$), perceived life stress ($\beta = -0.19$; $p < 0.001$), and athletic identity ($r = -0.11$; $p = 0.04$), although the relationship between social support and athletic identity was relatively weak. Respondents who reported greater social support were also more likely to report greater religiosity, greater resiliency, lower perceived life stress, and lower athletic identity, which were consistent with the literature.

As previously mentioned, athletic identity had a statistically significant, but relatively low, correlation with social support, but was found to have significant correlations with religiosity ($r = -0.20$; $p < 0.001$) and resiliency ($r = -0.24$; $p < 0.001$). Athletic identity was inversely related to perceived life stress but was not statistically significant ($\beta = 0.11$; $p = 0.01$). All respective directions of the relationships (i.e., direct or inverse) between athletic identity and other variables were consistent with the literature.

According to the current theoretical framework, resiliency had the strongest relationship with perceived life stress followed by social support, athletic identity, and finally religiosity. The insights gained from the various relationships tested in the structural model (see Figure 4.14) provide a point of departure for discussion within the context of the holistic transactional stress framework.

CHAPTER V: DISCUSSION

Results from the current SEM analysis provide substantial insights regarding the Holistic Transactional Stress Model for SEC intercollegiate athletes. Research has suggested religiosity may play a role in boosting resiliency as well as reducing perceived stress in the unique lives of intercollegiate athletes. However, according to results from this study, religiosity did not have a statistically significant correlation with resiliency nor a direct effect on reducing perceived life stress. On the other hand, results confirmed a statistically significant inverse relationship between resiliency and perceived life stress, which was consistent with the literature. Based on examination of the SEM analysis, it is appropriate to speculate on why religiosity had contradictory results as compared to the literature.

Interdependent Relationships Among Primary Variables

Religiosity and perceived life stress. The overall model fit, as tested in the first research question, was rejected due to the insignificant relationship involving religiosity. Results indicated religiosity had relatively weak relationships with resiliency ($R = 0.09$; $p = 0.06$) and perceived life stress ($\gamma = 0.10$; $p = 0.01$; statistically significant but not practically significant) among SEC intercollegiate athletes, which was contrary to the literature as cited in Barnette (2001), Galli and Reel (2012), Giacobbi and colleagues (2004), Hales (2007), Hufford and colleagues (2010), Shaw and colleagues (2005), Storch, Storch, Welsh, et al. (2002), and Yi and colleagues (2005). This is an important addition to the literature because this data suggested an athletes' choice to integrate religiosity into his or her life did not buffer against higher perceived life stress. However, this was not to say that religiosity does not have an impact on helping athletes' manage their perceived stress levels. Nonetheless, it was reasonable to conclude athletes who reported higher religiosity were not immune to stress, but additional research is needed to

investigate the role, if any, religiosity may play as a positive and/or negative coping agent in the lives of intercollegiate athletes.

Results from this study revealed the relationship between religiosity and perceived stress among intercollegiate athletes was contrary to literature involving other populations. One possible reason why athletes who reported higher religiosity may have been more likely to report greater perceived stress was due to time demands. Intercollegiate athletes have a uniquely busy extracurricular schedule so additional obligations stemming from religiosity (e.g., attending worship services, reading sacred texts, etc.) could pose greater perceived stress.

Another potential explanation for this unique relationship among intercollegiate athletes could be due to perceived public image demands. For instance, SEC intercollegiate athletes are a visible subgroup on a college campus and are susceptible to scrutiny due to their visibility. Athletes with greater religiosity may feel even greater scrutiny, pressure, and stress to constantly act in appropriate manner above reproach or be labeled as a hypocrite. The potential stress of preserving one's public image by "walking their talk" could explain why athletes with greater religiosity could also present greater perceived stress.

An additional conjecture to describe this unexpected relationship between religiosity and perceived stress could be the result of a unique dynamic of ethical dilemmas within the context of team environment. For instance, a power dynamic exists between coach and athlete. If the athlete's faith beliefs and/or ethical value system does not align with the coach's value system then that could present a potential stressor(s) to the athlete. A similar dynamic could strain relationships between teammates. In the general public it seems reasonable that people find friends and a sense of community based on shared values, which could include religiosity tendencies. However, teammates are a close community based on the common denominator of

athletic skillset rather than shared religiosity beliefs and/or practices. Consequently, athletes with greater religiosity could experience greater perceived stress due to potentially strained relationships on the basis of differing values.

Yet another explanation that may provide context to why the relationship between religiosity and perceive stress was contrary to literature is the fact there has been a societal trend in how individuals report religiosity versus spirituality. Specifically, there is a trend for individuals to claim to be more spiritual than religious (Astin, Astin, & Lindholm, 2011a; Astin et al., 2011b; Kaiser, 2000). Results from this study support the need to investigate this subject matter by collecting data on spirituality during future research.

Conclusions by Storch et al. (2003) revealed researchers must be careful in their assumptions regarding religiosity. The assumption within the context of this study is that religiosity would alleviate perceived life stress. However, it is plausible that some individuals' expressions of religiosity may encourage and embrace greater perceived life stress as a noble manifestation of devotion. Similarly, athletes who identified as exhibiting great religiosity may perceive greater life stress because of additional time demands to meet with religious obligations. A mixed-methods approach would provide insights to determine if this is in fact an accurate explanation.

The fact that religiosity did not buffer against stress could be symptomatic of societal norms which value compartmentalizing personal and professional attributes (Salisbury, 1962; Schwadel, 2011). The public education system across the United States, in general, does little to incorporate spiritual care, such as religiosity, into curriculum and programming. It seems easier to avoid potential legal issues rather than invest time, energy, and resources into constructing and implementing legally-sound policies, procedures, coursework, and programming which exposes

students to elements of religiosity and a larger dimension of holistic health (i.e., spirituality). Students attending public schools may be socialized into viewing religiosity as a taboo subject inappropriate to discuss or express in public settings. In their book *Cultivating the Spirit,* authors Astin and colleagues (2011b) advocate for integrating spirituality, such as religiosity, into higher education as a means to enhance students' inner lives. Educational administrators encourage students to utilize their college experience for introspection as they develop their career skillset as well as hone and integrated their personal values in order to become critical thinkers and contributing members of society; however, when elements of spirituality, such as religiosity and faith beliefs, are not explicitly encouraged as part of this introspection then there is a gap in the holistic educational experience.

Although religiosity had a relatively weak direct effect on reducing perceived life stress, it may fit as part of a larger mediating model (as supported by its statistically significant relationship). An alternative explanation regarding religiosity, resiliency, and perceived life stress will be proposed following a discussion of the relationships between the other primary and ancillary variable in the current model.

Religiosity and resiliency. Bonanno (2004) proposed approximately 35-55% of people exhibit resilient behavior, but there is much to understand regarding the population of intercollegiate athletes who are susceptible to experiencing a roller-coaster of emotional "ups and downs" throughout their college career. The current study was designed to add upon this body of knowledge to gain insights into the relationship between religiosity and resiliency, specifically among the intercollegiate athlete population. The results revealed there was not a statistically significant correlation between religiosity and resiliency which was contrary to the literature (Hufford et al., 2010; Yi et al., 2005). It was speculated that athletes who reported higher

religiosity would hypothetically have a clearer sense of purpose and understanding of a divine plan at work than those athletes with lower religiosity; thus it was expected athletes reporting higher religiosity would exhibit greater resilience than athletes who reported lower religiosity. However, there was apparently another dynamic(s) occurring than what was expected, which will be explored in the alternate theoretical model proposed later in the discussion.

One possible reason for the lack of a significant correlation between the two variables could partially be explained by analyzing their respective standard deviations. For instance, intercollegiate athletes scored relatively high on the resiliency scale complemented by a low standard deviation. This points to evidence suggesting intercollegiate athletes may naturally be more prone to resiliency due to a combination of their nature (i.e., genetics) and nurture (i.e., environment – including the services provided by the holistic care team). After all, athletes arguably experience "failure" at a higher rate than the common student population (e.g., losing in practice, losing in competition, not meeting weight goals, not meeting strength and conditioning goals, etc.). As a result, changes in religiosity scores would have virtually no systematic correlation with resiliency scores since resiliency had little variation across the sample.

Resiliency and perceived life stress. The relationship between resiliency and perceived life stress was consistent with the literature, confirming that intercollegiate athletes who self-identified as being more resilient were also more likely to report lower perceived stress (Brennan, 2008; Fletcher & Sarkar, 2013; Galli & Vealey, 2008; Gu & Day, 2007; Palmer, 2008; Riolli & Savicki, 2003). This statistically significant conclusion cannot be overlooked or unappreciated as it has extraordinary value to sport management professionals. Athletes who perceive greater life stress are more susceptible to suffer an injury or illness which can have far-reaching detrimental effects (e.g., greater depression, greater hopelessness, greater suicide

ideation, increased risk for social and psychological disorders, substance abuse, etc.) (Ciarrochi et al., 2002; Davidson et al., 2009; Ford et al., 2000; Glick et al., 2012; Johnson & Sarason, 1978; Kissinger & Watson, 2009; Kleinert, 2007; Malinauskas, 2010; Risch et al., 2009; Yusko et al., 2008). Conversely, if intercollegiate athletes are encouraged to perceive potentially stressful situations as challenges rather than threats, they are more likely to effectively manage the situation and maintain a more stable biopsychospiritual homeostasis (i.e., resilience) (Bonanno, 2004; Lazarus, 1966, 1977, 1993a, 1993b, 1999; Lazarus & Folkman, 1984). Employing techniques and strategies to boost athletes' aptitude toward resiliency are key to unlock enhanced and sustained performance in the classroom and in athletic competition. Similarly, sharpening a resilient skillset in college would pay dividends in life outside of sport.

Interdependent Relationships Among Ancillary Variables

When examining the relationships among the primary variables (i.e., religiosity, resiliency, and perceived life stress) it helps to add context by analyzing the relationships involving relevant ancillary variables (i.e., social support, athletic identity). The additions of social support and athletic identity provide a benchmark with which to compare the relative relationships between religiosity, resiliency, and perceived life stress. As expected, when social support increased, there was a statistically significant decrease in perceived life stress (Ferry et al., 2004; Ford et al., 2000; Gibson & Myers, 2006; Hales, 2007; Hufford et al., 2010; Kleinert, 2007; Koenig, 2009; Koenig et al., 2012; Malinauskas, 2010; Moore et al., 2013; Ornish, 2000; Osborn, 2005; Shaw et al., 2005; Yi et al., 2005; Yusko et al., 2008). The direction of the relationship between athletic identity and perceived life stress was also consistent with the literature but was not a significant finding. Perhaps the most practical discoveries provided by the inclusion of ancillary variables were their relationships with religiosity and resiliency.

Religiosity and ancillary variables. Religiosity was significantly directly correlated with social support as well as significantly inversely correlated with athletic identity. One explanation as to why there was a significant correlation between religiosity and social support is because religiosity has an element of community associated with it due to a shared belief system. People gravitate to surrounding themselves with people who share similar preferences. Therefore, athletes who reported greater religiosity may be more likely to inherently surround themselves with a group of people, both within and outside of athletics, or at least perceive this social support exists.

Insights into religiosity may help explain the occurrence of the statistically significant inverse correlation between religiosity and athletic identity. Individuals who exhibit greater religiosity are more prone to consistently practice introspection and may have a clearer sense of purpose pertaining to the multiple roles of their life (Astin et al., 2011b; Delaney & Madigan, 2009; Galli & Reel, 2012; Hales, 2007; Koenig et al., 1997; Shaw et al., 2005; Tanyi, 2002; Watson & Nesti, 2005). On the other hand, individuals who identify primarily with the athletic role of their life are more likely to assess self-worth chiefly on athletic performance. In fact, an individual who reports high athletic identity is less likely to pursue other endeavors and relationships, inclusive of religiosity-related undertakings, which can leave them susceptible to greater anxiety and depression (Adler & Adler, 1991; Ferrante et al., 1996; Gallagher, 2005; Hawkins, 2010; Hinkle, 1994; Lally, 2007; Martin et al., 1997; Potuto & O'Hanlon, 2007; Simons & Van Rheenen, 2000; Van Rheenen, 2012; Visek et al., 2010; Watson, 2005; Wylleman & Lavallee, 2004). Therefore, providing resources which encourage athletes to reflect on their religiosity is beneficial because it challenges them to view the world through a broader lens and can possibly buffer against the detrimental effects of anxiety and depression. This logic provides

rationale for testing religiosity as a covariate of [reduced] athletic identity among intercollegiate athletes.

Resiliency and ancillary variables. Social support has been cited in the literature as being a prevalent buffer against stress, but resiliency had a stronger inverse correlation with perceived life stress than social support among this population. Athletes who surround themselves with a core group of trustworthy and dependable individuals, such as friends, family, teammates, coaches, and/or holistic support staff, seem to be more likely to demonstrate greater resiliency. Perhaps this is because they have a support group in the face of adversity who can encourage them to "bounce back" when they encounter stress. Close friends and family members can also buffer against thoughts and feelings of loneliness. This logic provides rationale for testing social support as a predictor of resiliency among intercollegiate athletes.

Individuals who strongly identified as an athlete may have been less inclined to display resiliency when they perceived a stressful situation due to their relatively myopic lens. Individuals who exhibit high athletic identity have a tendency to habitually evaluate their current circumstances based on their athletic performance and athletic environment. When they do not perform to their personal standards they are more likely to remain dejected for a longer period of time as compared to their athletic peers who identify less strongly as an athlete (Adler & Adler, 1991; Ferrante et al., 1996; Gallagher, 2005; Hawkins, 2010; Hinkle, 1994; Lally, 2007; Martin et al., 1997; Potuto & O'Hanlon, 2007; Simons & Van Rheenen, 2000; Van Rheenen, 2012; Visek et al., 2010; Watson, 2005; Wylleman & Lavallee, 2004). This habit of dejection may carry over outside of the athletic environment which could explain the inverse correlation between athletic identity and resiliency. This logic provided rationale for testing athletic identity

as a predictor of [reduced] resiliency among intercollegiate athletes. The unique combination of these correlations led to speculation regarding an alternative theoretical model.

Alternative Theoretical Model

The collective interpretation of results points to a possible alternative theoretical model to explain holistic transactional stress appraisal among intercollegiate athletes. Essentially, the only proposed modification to adjust the alternative theoretical model was shifting resiliency to mediate the relationships between (a) religiosity and perceived life stress, (b) social support and perceived life stress, and (c) athletic identity and perceived life stress. Ultimately, the rationale for testing this alternative theoretical model is because all independent variables have statistically significant relationships with resilience, which could be evidence that resilience is a partially or fully-mediating variable. This rationale is supported by research from Fletcher and Sarkar (2013) who operationally defined resiliency as the desired outcome to "bounce back" resulting from meta-cognitions, essentially defining the Core Processing portion of the Holistic Transactional Stress Model as "resiliency" (see Figure 2.6). Another perspective is the alternative theoretical model posits religiosity, social support, and athletic identity have indirect relationships with perceived life stress (see Figure 5.1).

The alternative theoretical model proposed religiosity, social support, and athletic identity covary with one another as they boost resiliency, which in turn reduces perceived life stress. The resulting model had a *CMin* = 1500. 85 at 727 *df* (*CMin*/*df* = 2.06) and associated fit indices of *CFI* = 0.948 and *RMSEA* = 0.041 (*pclose* = 1.00), indicating a good model fit. The fit statistics associated with the alternative theoretical model were indicative of a slightly worse fit as compared to the original apriori structural model. Ultimately, the apriori structural model (see Figure 5.2) explained more variance of perceived life stress than the alternate model, so the

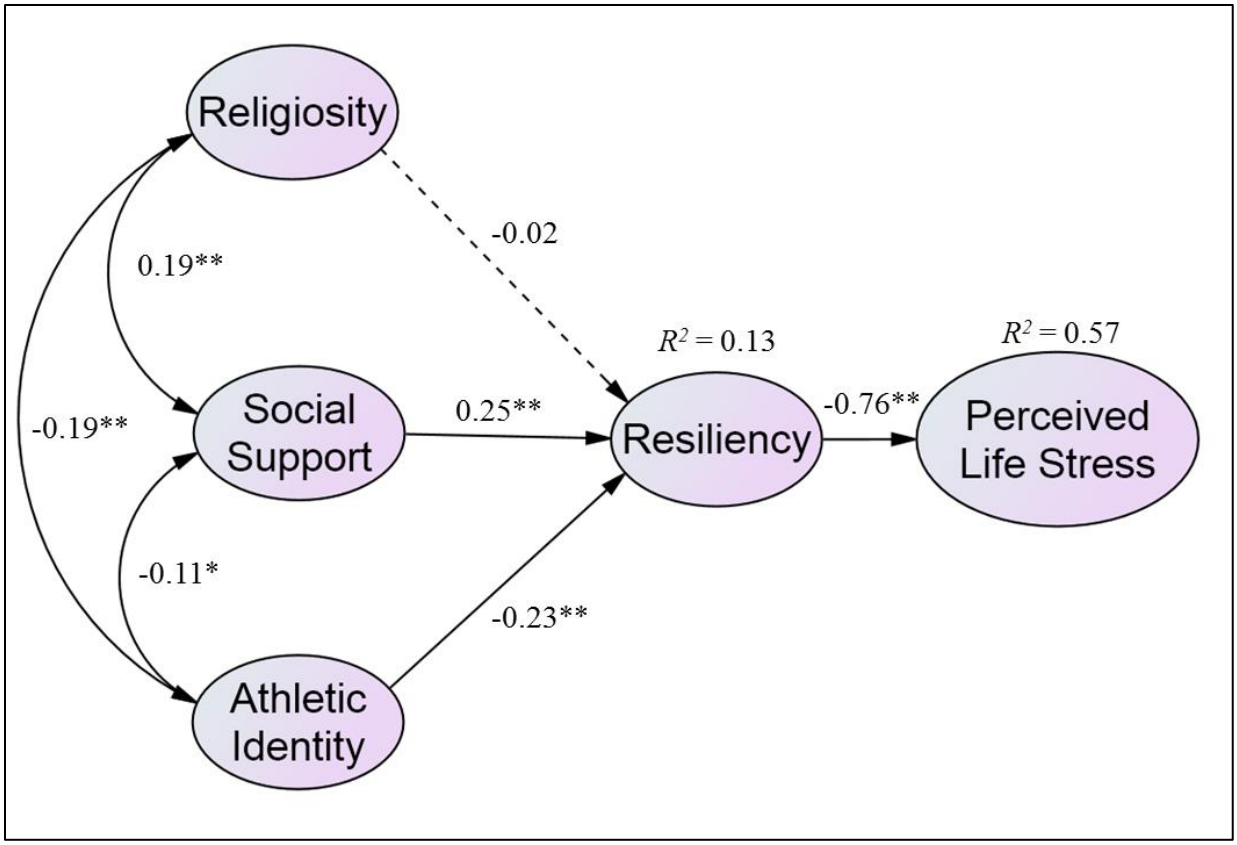


Figure 5.1. Alternative theoretical model and accompanying SEM analysis.

Note. * $p < 0.05$; ** $p < 0.001$

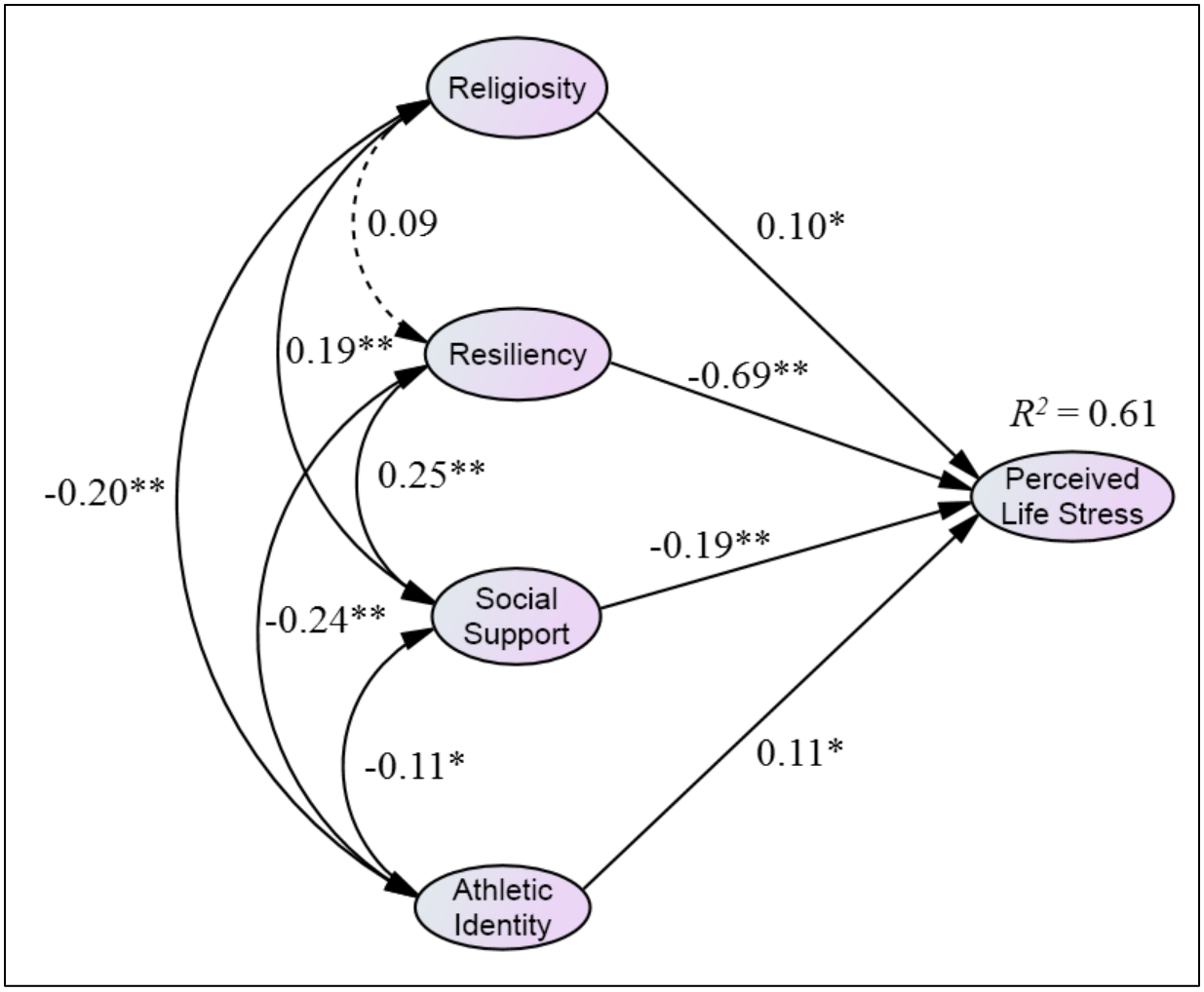


Figure 5.2. SEM analysis of apriori structural model with standardized regression weights. Non-significant paths are represented by dotted lines.

Note. * $p < 0.05$; ** $p < 0.001$

apriori model will serve as a benchmark when interpreting the results as well as moving forward with future research.

Implications for Athletic Administrators and Coaches

Cumulative results from this study warrant further discussion regarding holistic care of intercollegiate athletes. Intercollegiate athletic departments, in general, do a great job of providing resources to enhance the physical attributes and measurable of athletes (e.g., the "bigger, faster, stronger" motto) as well as mitigate the likelihood of sport injury. Exercise physiologists, among other professionals in the kinesiology discipline, have virtually perfected techniques to objectively measure these tangible attributes and outcomes. On the other hand, it is more difficult to quantify, objectively measure, and/or recognize issues associated with psychological, emotional, and/or spiritual attributes and characteristics (Mentink, 2002).

Nonetheless, in more recent years athletic departments have made strides in providing resources to care for the mental and emotional dimensions of intercollegiate athletes' lives as evidenced by hiring/contracting licensed mental health professionals, licensed social workers, and sport psychology consultants (SPC). Research suggests providing mental/emotional health resources as ordinary components of care reduces anxiety which mitigates other mental/emotional issues as well as decreases the likelihood of injury and illness (Blonna, 2005; Hales, 2007; Olpin & Hesson, 2010). The more these mental/emotional resources are integrated into the athletic department vernacular the more familiar, and less taboo, these services will become. The illustration of the holistic care team in Figure 5.3 suggests how these resources can be utilized to facilitate reduced perceived stress among intercollegiate athletes.

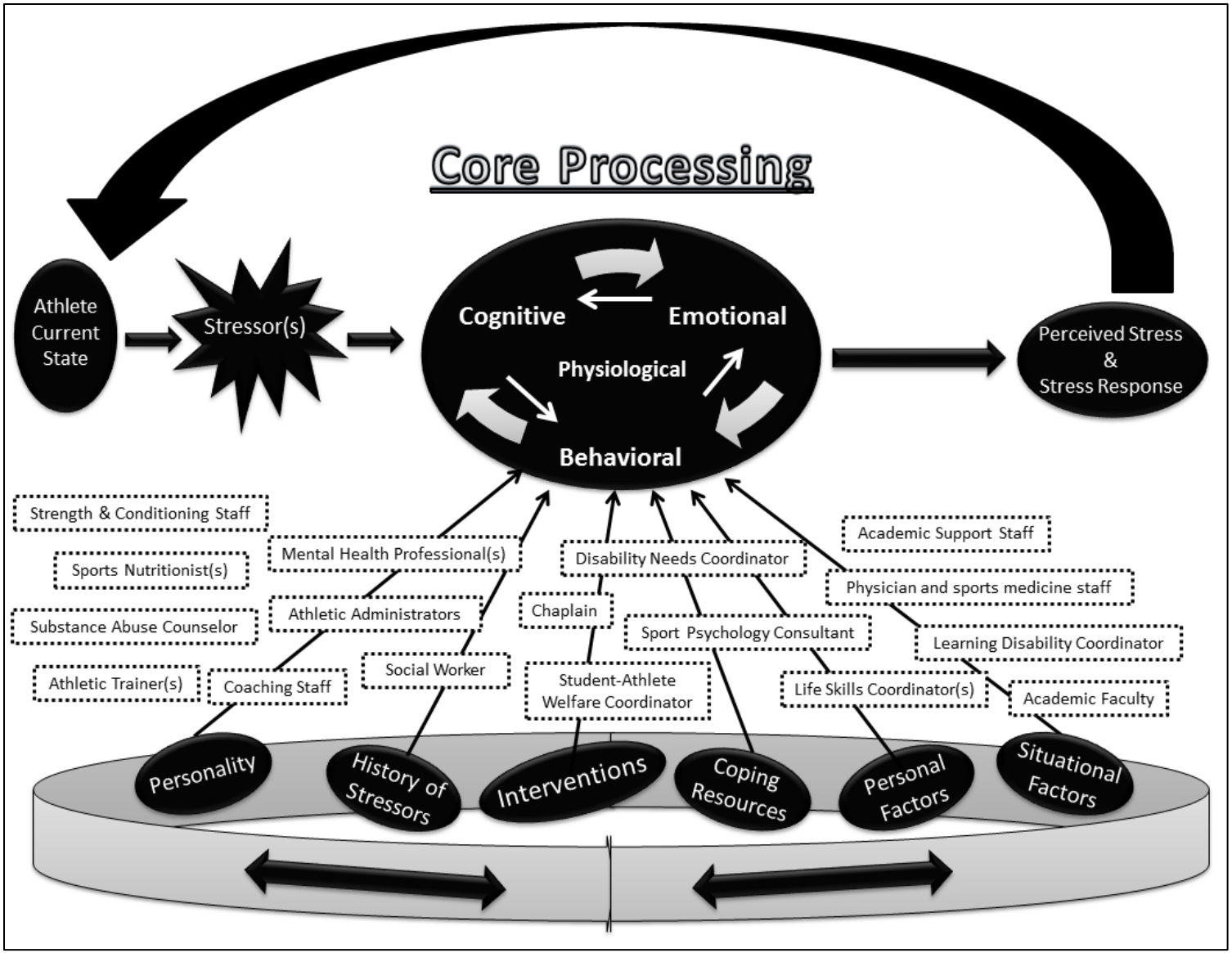


Figure 5.3. Holistic care model for intercollegiate athletic departments.

The final broad dimension of the holistic care puzzle concerns that of spirituality, so it is important to take a moment to briefly revisit the operational definitions of holistic care, spirituality, and religiosity before proceeding with the implications for athletic administrators, coaches, and spiritual health advisors. Holistic care pertains to addressing all dimensions of an individual's personal development broadly including physical, psychological (e.g., mental and emotional), and spiritual health and wellness (Hirko, 2009; Howard-Hamilton & Sina, 2001; Pascarella & Blimling, 1996; Watson & Kissinger, 2007).

Spirituality is an element of holistic care and partially defined as "the values that we hold most dear, our sense of who we are and where we come from, our beliefs about why we are here – the meaning and purpose that we see in our work and our life – and our sense of connectedness to one another and to the world around us" (Astin et al., 2011b, p. 4). Spirituality has also been described in conjunction with transcendence and integrative aptitude of one's physical, cognitive, emotional, social, and moral self (Fletcher & Sarkar, 2013). Spirituality is present in all human-beings but is subjective and cultivated individualistically. Essentially religiosity is situated under the broader umbrella of spirituality.

Religiosity is inclusive of various organizational and non-organizational spiritual practices such as prayer, meditation, reading sacred texts, and/or attending services, shared by a group of like-minded people (Delaney & Madigan, 2009; Hales, 2007; Koenig & Büssing, 2010; Koenig et al., 1997). Religiosity also includes an intrinsic element which fuels an individual's sense of meaning or purpose (Galli & Reel, 2012; Koenig et al., 1997; Shaw et al., 2005); therefore, spirituality and religiosity not mutually exclusive within the context of this study which accounts for speaking to both spirituality and religiosity in regards to holistic care in the

discussion. It should be clear that religiosity is a single option for how spirituality is cultivated, but far from the *only* option.

At the surface level of the discussion regarding spirituality and athlete health, literature supports the notion that athletes who reported greater spirituality and/or religiosity were more likely to report lower levels of perceived stress, resulting in reduced likelihood of suffering sport injury or illness (Galli & Reel, 2012; Giacobbi et al., 2004; Hales, 2007; Hufford et al., 2010; Koenig et al., 2012; Storch, Storch, Welsh, et al., 2002). This connection alone should catch the attention of athletic administrators and coaches who routinely seek to keep athletes healthy and on the active roster. Since spirituality characteristics, such as religiosity, are more intangible than physical attributes (e.g., "bigger, faster, stronger" measurables), the positive outcomes of athlete wellness tied to spirituality have been slower to be embraced. However, results from this study suggested religiosity did not reduce perceived stress among intercollegiate athletes. Therefore, offering spirituality resources according to the framework of religiosity may not be the most effective strategy and deserves further investigation.

In reference to the macrocosm of intercollegiate athletics, Taylor Branch (2011) warns against the trappings that intercollegiate athletes can potentially be exploited within the current intercollegiate model and experience dehumanization repercussions. Amidst this scrutiny, the welfare of intercollegiate athletes should not be ignored particularly as we become more informed of the context of the unique environment in which they are placed. As human beings all aspects of our body and spirit are interconnected so abandoning a dominant dimension of who we are (i.e., the spiritual domain) is a disservice to treating the individual as a whole person, not just an athletic commodity, with a purpose and future.

Nonetheless, athletic administrators and coaches seem content to remain strangely silent when the topic of spirituality and/or religiosity arises. It is at this crossroads of holistic care and spirituality that athletic administrators and coaches must determine how important athlete welfare is to their mission and core values. Spiritual wellness has advantages solely relating to wellness and thus athletic performance, but the benefits of holistic wellness extend far beyond one's athletic endeavors. If athletic administrators and coaches indeed decide holistic welfare is a genuine priority then they must be prepared to invest the time and energy necessary to familiarize themselves with culturally-sensitive, culturally-diverse, and culturally-inclusive spiritual resources, even amongst criticism they may receive from their peers. For instance, conclusions from this study could inform athletic administrators and coaches that religiosity directly boosts social support and reduces athletic identity, which indirectly enhances one's resiliency and reduces perceived life stress. The challenge for athletic administrators and coaches is there are no prescriptive strategies for offering resources intended to cultivate religiosity and, in turn, spirituality.

Rather than focusing attention on trying to answer "*what* strategies do we use to fuse spiritual care into the holistic care model for intercollegiate athletes?" the discussion seems best to begin with the "*who*" is best suited to program, manage, and deliver these resources. For instance, intercollegiate athletes are not expected to be solely responsible for developing their own strength and conditioning workout, creating an individualized nutrition plan, taping their own ankles and wrists, diagnosing their own mental health state, and/or developing their own mental training programs relating to athletic performance. Instead, athletic departments may employ an expert(s) in each of the areas to assist the athletes and better address their needs. It seems reasonable to expect the same standard of care regarding spiritual health instead of

deferring to a seemingly weak excuse such as: “a spiritual health advisor is not necessary because each individual is responsible for meeting his or her spiritual needs and fostering his or her spiritual development according to their own terms.” Results from this study revealed nearly a 50/50 split regarding whether or not a sport chaplain was made available to them. This is evidence that athletic administrators and coaches do not consistently and transparently offer deliberate spiritual health advising resources for their athletes. A mental health counselor or SPC could offer spiritual health advising as a component of their services, but they may not feel comfortable acting in this capacity if they did not receive formal training in spiritual care. A spiritual health advisor would likely have a specialized skillset to tend to the spiritual health needs of their clients.

Similarly, athletic administrators are encouraged to structure and package services from all holistic care personnel to boost resiliency. This requires buy-in from all support personnel to value the framework that athletes can be best cared for based on interaction, communication, and collaboration across health disciplines (e.g., physicians, athletic trainers, sport nutritionists, mental health professionals, SPCs, spiritual health advisors, etc.) (Cressey & Winbolt-Lewis, 2000). The holistic care team could collectively devise a unified treatment plan which incorporates tactics to boost resiliency which would be best if reinforced by all staff.

Although spiritual health advisors have a valuable skillset among the holistic care team, they should not be naïve to think their resources are a good fit for all athletes in which they are entrusted. Athletes gravitate to certain individuals and resources because of personal preferences. For example, Player A may seek additional sessions with a SPC because they like the advice given, notice improvements in athletic performance, enjoy the supportive relationship, and/or a combination of the three. However, Player A’s teammate tends to avoid the SPC because the

strategies provided do not result in better performance and their personalities clash. The same could be true for an athletic trainer, strength coach, or spiritual health advisors. A metaphor to visualize this dynamic involves viewing the holistic care team as offering a "buffet" of resources. Some individuals will choose certain dishes whereas other individuals will select other foods based on taste preferences. Athletes are also commonly advised to adhere to specific nutritional diets designed to meet their weight management goals – this may mean partaking of food which they do not prefer in order to meet their goals. When viewed through this lens spiritual health services may not be used by everyone or at the same rate, but the resources are publically and readily available should an individual pursue these resources. It is necessary to build on the discussion of best practices for a spiritual health advisor, such as those individuals coined as "sport chaplains" (Chapter II), by discussing the specific implications from this study.

Implications for Spiritual Health Advisors

The previous comments alluding to the individualized nature of spirituality and religiosity should not be taken lightly. Let it be clear that it is in no way appropriate, or legal at public institutions, for a spiritual health advisor, such as a sport chaplain, to use his or her position to proselytize (Sundt et al., 2002). As Fair (2009b) wrote, "The first tenet of chaplaincy is to do no further harm" (p. 75). Although spiritual health advisors are encouraged to have some formal education in theology, religious studies, or the like, they are expected to meet each individual where they are spiritually and help them foster their spirituality according to the athletes' respective belief system, not the belief system of the spiritual health advisor (Vanderwerker et al., 2008). Since spiritual health advisors operate within a potentially sensitive context they should be educated, prepared, and expected to embrace the wide variety of personal beliefs individuals will hold – particularly because they oversee the spiritual care of hundreds of

athletes. It is now appropriate to proceed with a discussion of implications for spiritual health advisors now that these preliminary expectations have been identified.

As a result of the aforementioned operational paradigms of spirituality and religiosity, it seems appropriate to offer *multi-faith* resources/services rather than *inter-faith* resources/services to better accommodate diverse faith and spiritual beliefs. Spiritual health advisors would be wise to familiarize themselves with multiple worldviews and embrace a culturally-sensitive, culturally-diverse, culturally-competent, and culturally-inclusive spiritual-advising philosophical framework. This paradigm seems to be a more practical approach to spiritual health advising and also serves to fulfill the diversity and inclusion values of higher education.

Spiritual health advising and sport chaplaincy were relevant considerations because this person(s) should likely have some formal theological training, and most educational programs are tied predominantly to a particular faith tradition rather than broader spirituality. By examining religiosity rather than spirituality the intent was the results would provide additional context to implications involving more formalized resources coordinated by a formally-educated spiritual health advisor. In a similar vein, the role of a spiritual health advisor and/or sport chaplain is more relevant to be evaluated in terms of religiosity as compared to the role of a "life skills coach" whose job responsibilities may not specifically target spiritual health.

In contemporary intercollegiate athletics, it is not uncommon for sport chaplains to be associated with Athletes in Action (AIA) and/or Fellowship of Christian Athletes (FCA). Staff associated with either AIA or FCA would be wise to heed the results and conclusions from this study when implementing programming designed to enhance spiritual health and development. The results from this study are conclusive that religiosity is correlated with social support and combats athletic identity among intercollegiate athletes. Chaplaincy has been described as a

"Ministry of Presence" (Fair, 2009b; Otis, 2009) which is confirmed by the results that religiosity boosts social support. Spiritual health advisors who make it a priority to consistently be present at athletic functions can build this sense of rapport and unfaltering social support. Also, spiritual health advisors need to be committed to building relationships with a network of individuals from multiple faith traditions. As a result, the spiritual health advisor will be comfortable referring athletes to these individuals when they require counsel and/or services beyond what the spiritual health advisor can provide for a specific individual. This accessible referral network can also consist of a small team of assistants to help the spiritual health advisor "shepherd" the hundreds of athletes on a regular basis. By having a small team surrounding the spiritual health advisor there will be more opportunities available for athletes to connect and build rapport with a spiritual advisor. This intricate team would provide accountability for one another as well to ensure everyone is acting as a "Ministry of the Presence" and "doing no further harm." It also seems reasonable that spiritual health advisors would be wise to utilize this inherent momentum to emphasize fostering social support via their programming for intercollegiate athletes. For example, there is evidence highlighting the effectiveness of group therapy to help with various transitions and rehabilitation (Sundt et al., 2002; Thomas & Zaitzow, 2006).

Spiritual health advisors can also heed conclusions from this research regarding religiosity and athletic identity. Intercollegiate athletes who identify strongly as an athlete are at a greater risk of experiencing greater anxiety, depression, and stress. When a spiritual health advisor begins to notice some of these symptoms he or she can intervene by offering religiosity-based advice and/or resources which can possibly reduce athletic identity perceptions and buffer against dehumanization, performance-based worth, anxiety, depression, and stress. Also, the

value of having a spiritual health advisor regularly interacting with intercollegiate athletes is that he or she can pinpoint symptoms of compromised holistic wellness and communicate those concerns to other members of the holistic care team, such as the licensed mental health professional and SPC. Spiritual health advisors are encouraged to collaborate with other health personnel to identify an individualized approach to enhance the athlete's wellness (Cressey & Winbolt-Lewis, 2000).

Although spiritual health advisors have a valuable skillset among the holistic care team, they should not be naïve to think their resources are a good fit for all athletes in which they are entrusted. Athletes gravitate to certain individuals and resources because of personal preferences. For example, Player A may seek additional sessions with a SPC because they like the advice given, notice improvements in athletic performance, enjoy the supportive relationship, and/or a combination of the three. However, Player A's teammate tends to avoid the SPC because the strategies provided do not result in better performance and their personalities clash. The same could be true for an athletic trainer, strength coach, or spiritual health advisors. A metaphor to visualize this dynamic involves viewing the holistic care team as offering a "buffet" of resources. Some individuals will choose certain dishes whereas other individuals will select other foods based on taste preferences. Athletes are also commonly advised to adhere to specific nutritional diets designed to meet their weight management goals – this may mean partaking of food which they do not prefer in order to meet their goals. When viewed through this lens spiritual health services may not be used by everyone or at the same rate, but the resources are publically and readily available should an individual pursue these resources.

Along these same lines entails broader considerations of service provision, particularly regarding perceptions of consultant effectiveness and satisfaction. There are parallels between

service provision of SPCs and spiritual health advisors. For instance, SPCs experience challenges and barriers based on athletic administrators', coaches', and athletes' perceptions of confidence in services provided (e.g., performance-related issues and life-related issues) (Wrisberg, Withycombe, Simpson, Loberg, & Reed, 2012; Zakrajsek, Martin, & Zizzi, 2011; Zakrajsek, Steinfeldt, Bodey, Martin, & Zizzi, 2013; Zakrajsek & Zizzi, 2007). Spiritual health advisors must acknowledge athletic administrators are likely to be reluctant to hire them as full-time employees despite positive perceptions. Integrating spiritual health advisors into athletic organizations will require a steady paradigm shift in holistic care resources.

Spiritual health advisors can also use the results from this study to indirectly enrich intercollegiate athletes' propensity to exhibit resiliency. The term resiliency is tossed around in sports by coaches and commentators so the immediate connection may not be made between the role of spiritual health advisors and boosting resiliency. However, when the framework of resilience as biopsychospiritual homeostasis it makes sense that spiritual health enhances social support and mitigates athletic identity which in turn boosts resilience. A metaphor to be used in this scenario is approaching spiritual advising as a technique to promote "spiritual fitness" or exercise one's "spiritual muscle" because of its connotations with tangible outcomes (Hufford et al., 2010). To build muscles mass there must be an appropriate amount of resistance applied – too little will not result in building muscles and too much can result in injury. When the spiritual health advisor effectively manages this balance of spiritual resources the athletes boost their "spiritual fitness" and exhibit greater resiliency in the face of adversity, crisis, and perceived life stress during and beyond athletic participation (Anandarajah & Hight, 2001; Astin et al., 2011b; Baker, 2003; Goddard, 2000; Hindman, 2002; Kaiser, 2000; Love & Talbot, 2009; Maimes,

2002; McSherry & Cash, 2004; Ravizza, 2002; Robinson, 2007; Vanderwerker et al., 2008; Wills, 2007).

Limitations

Throughout the process of conducting this study there were a few notable limitations that emerged. Although SEM statistical techniques imply a temporal path, this research design did not allow the researcher to determine causation. It was virtually impossible to conclude whether intercollegiate athletes who reported lower religiosity were more/less stressed, or if athletes with higher perceived life stress were more/less likely to seek religious involvement. A similar manner to view this limitation is asking oneself are individuals less stressed because they effectively manage perceived stress or because they do not encounter the stressor(s)? Additionally, there may be an extraneous factor(s) influencing the relationships between religiosity, resiliency, and perceived life stress that was not included in this study.

The research design employed self-report survey methodology, which was an area of concern. Self-report data is subject to social desirability, particularly when asked potentially sensitive questions. For instance, social desirability in this study could have biased respondents to report artificially-high religiosity, resiliency, and social support as well as artificially-low perceived stress and athletic identity. However, the assumption is respondents answered questions accurately and honestly.

A limitation occurred in regards to the instrumentation utilized. For example, most questionnaires fail to exhaustively measure the intended construct. If more items were included in the questionnaire then theoretically the scale would most likely be more valid. However, this is essentially impractical so it is an inherent limitation with survey methodology. More specifically, there were limitations regarding the Perceived Stress Scale. The PSS is interpreted

as a “snapshot” of perceived stress rather than a glimpse over a period of time such as 12 months. As a result, the respondent could be experiencing unusually high or unusually low perceptions of stress given current circumstances. In the case of intercollegiate athletes, some individuals were in-season while participating in the study whereas other respondents were out-of-season. The ebb and flow of their athletic schedule within the context of the academic year could have biased responses on the instruments, particularly the PSS.

Limitations may have emerged due to various connotations associated with the concept of religiosity. First of all, respondents could have interpreted the question(s) seeking to measure religiosity differently than how religiosity was intended to be measured and defined in this study. Also, the authors of the DUREL noted their instrument was designed to primarily measure Western religions (e.g., Christianity, Judaism, Islam) and may less accurately capture the essence of Eastern religions (e.g., Hinduism, Buddhism). This was not a cause for concern because the vast majority of the sample self-reported adhering to a Western religion. Overall, despite the limitations of the DUREL, it was an appropriate instrument for this study’s design to gain insight on the organizational, non-organization, and intrinsic dimensions of intercollegiate athletes’ lives. However, it will be critical to complement an instrument like the DUREL with a scale measuring spirituality in future research.

Possibly more problematic is the polarizing nature of religiosity could have impacted whether invitees chose to participate in the study. For example, when invitees read the invitation email the religiously-related subject matter could have immediately invoked polarizing emotions, attracting individuals who may be more inclined to voice strong opinions on the subject. Similarly, despite guarantees of anonymity, the potentially sensitive nature of the subject matter could have influenced invitees to avoid participating in the study.

One of the most prominent limitations from a methodological standpoint occurred in regards to collecting email addresses from the individual intercollegiate athletes. Access to students' email addresses was limited since each of the 14 SEC universities' public directories operated slightly differently. Specifically, five universities restricted access to their public directories to only individuals who have a university-affiliated username. Therefore, more than 1,000 individual athletes competing at these five universities were not personally invited to participate in this study, compromising the range of athletes who were invited to participate.

There was also a surprising low response rate from athletes competing in football and basketball. When considering these oft-referred "revenue sports," only 33 football players and 14 basketball players completed the survey out of the 935 football players and 231 basketball players individually emailed and invited to participate. Athletes competing in these sports are arguably subjected to increased demands and stressors due to the visibility, pressures, and financial implications associated with winning in the contemporary American intercollege collegiate sport environment (Adler & Adler, 1991; Byers & Hammer, 1995; Coakley, 2008; Eitzen, 2011, 2012; Ferrante et al., 1996; Gallagher, 2005; Gerdy, 2006; Hawkins, 2010; Hinkle, 1994; Lally, 2007; Sage, 1998; Martin, et al., 1997; Potuto & O'Hanlon, 2007; Simons & Van Rheenen, 2000; St Louis, 2009; Stokowski, 2013; Van Rheenen, 2012; Visek et al., 2010; Watson, 2005; Wylleman & Lavallee, 2004; Zimbalist, 1999, 2006). Therefore, the results of this study reflect limited information regarding the broader experience (e.g., religiosity, resiliency, perceived stress, social support, identity crisis, role engulfment, commodification, and/or dehumanization) of intercollegiate football and basketball athletes, which could substantially influence the results.

Intercollegiate athletes competing in the SEC are exposed to a variety of unique stressors as compared to intercollegiate athletes competing in other intercollegiate conferences, division, and associations. Member institutions comprising the SEC are understandably situated in the southeastern United States where the geographical culture (e.g., the "Bible Belt") is known for its pervasive religious influences. Consequently, these results are not intended to be generalized to all intercollegiate athletes. Finally, it is appropriate to note the primary researcher self-identified as an adherent to the Christian faith. Although all efforts were made to remove researcher biases during the study, the researcher's experiences could have influenced interpretation of the results.

Future Research

While the results from this study provided insights to a few select research questions, there is a vast opportunity to add to the body of knowledge. If this study was to be replicated it is recommended to include additional measures of socioeconomic status other than hometown median annual household income. Socioeconomic status was cited in the literature as a prevalent variable but was excluded from the measurement and structural models because it was a poor measure in this study. Also, utilizing a mixed-methods approach to answer the research questions would have provided qualitatively-rich content and more context to the relationships between religiosity, resiliency, and perceived stress.

The literature has also suggested the concept of wellness could be examined in conjunction with perceived stress. A measure of wellness could provide complementary information, such as whether or not greater wellness is correlated with lower perceived stress. In a similar vein, research could inquire about injuries or illnesses experience in the recent past.

This additional variable could confirm or refute literature which suggests individuals who report greater perceived stress are more likely to suffer injury or illness.

Another prevalent area of future research would involve investigating nuances between religiosity, spirituality, and faith. Additional instruments could be utilized to capture these interrelated but contrasting concepts. Research questions could be tailored to assess how athletes utilize religiosity, spirituality, and/or faith to manage and/or cope with stress, particularly investigating religiosity as a positive and/or negative coping agent. Similarly, research could explore if religiosity and/or spirituality presents as a stress reliever or stress inducer? An experimental design involving a type of intervention and control group could be employed to evaluate the (in)effectiveness of offering religiosity resources

Along these same lines of future research include collecting data regarding family socialization of religiosity prior to entering the higher education environment. This type of information would provide a baseline assessment of athletes' experiences with being "churched" or "unchurched." This line of questioning could inform a larger body of knowledge regarding spiritual (dis)integration and spiritual intake assessments for health-related environments.

Future research investing spirituality would provide great insights into where spirituality may be incorporated as an integral component within the Holistic Transactional Stress Model as depicted in Figure 2.3. Based on the review of literature it appears spirituality could emerge as an additional element within the "Core Processing" dimension as an integrative agent among human beings' cognitive, emotional, behavioral, and physiological lives – future research could confirm or refute this hypothesis. In a similar vein, authors could consider revising the Holistic Transactional Stress Model by renaming the "Core Processing" dimension to "Resiliency Appraisals" since the Core Processing encompasses cognitions, emotions, behaviors, and

biofeedback and resiliency has been operationally defined as biopsychospiriutal homeostasis resulting from desired facilitative appraisals.

When continuing with this line of research it would be wise to survey a broader sample of intercollegiate athletes to determine if the theoretical model upholds with various groups participating in multiple competitive divisions as well as across geographical boundaries. Additional context could be provided to the current results by comparing across subgroups and/or better controlling for extraneous demographic variables such as gender, sport (including Olympic versus revenue team), athletic scholarship status, GPA, proximity to hometown, family structure, pray versus do not pray collectively as a team, chaplain availability, and so forth. By stratifying better is would eliminate the "noise" and better isolate the effects of the primary independent variable(s), such as religiosity (which subsequently lends itself to a more causal model. Comparing various subgroups based on demographics would reveal intercollegiate athletes who are at-risk of experiencing detrimental phenomena such as low resiliency, low social support, high athletic identity, and high perceived stress. Similarly, it would be wise to focus on soliciting a better response rate from intercollegiate athletes competing in football and basketball since these athletes are commonly the subject of commodification and dehumanization as it relates to overall perceived stress and wellness.

This study would also be worthwhile to replicate in the spring. Intercollegiate athletes have reported experiencing greater time demands while in-season (López & Levy, 2013). It is reasonable to assume athletes who were in-season versus out-of-season at the time of the email invitation may have responded at different rates regarding electing to participate in research. Replicating the research in the spring would provide another opportunity for participation when athletes may have more discretionary time. Additionally, it would provide insights when

comparing perceived stress levels for in-season versus out-of-season athletes, particularly from a longitudinal perspective.

An extension of this line of research also includes studying the perspectives of athletic administrators to gain an understanding of their perceptions of holistic care and providing spiritual resources. Similarly, it would be appropriate to study spiritual advisors' perceptions of the characteristics of a "spiritually-well" athlete within the context of holistic wellness.

Finally, results from this study suggested more religious individuals exhibited greater social support and reduced athletic identity, so it is appropriate to examine how to structure resources so they foster religiosity, spirituality, and/or faith. Future research can investigate which spiritually-related services and resources would be most effective in intercollegiate athletic environments. This line of research into religiosity, spirituality, faith, and sport chaplaincy is a much-needed area of inquiry to ensure intercollegiate athletes' are being cared for from a holistic perspective.

Conclusion

The NCAA subscribes to principles promoting athlete well-being and health and safety. However, the current NCAA FBS environment consists of complex financial implications associated with winning which may compromise these principles of intercollegiate athletic departments. Holistic care personnel employed by athletic departments should be committed to enriching the lives of athletes and not merely managing their bodies for athletic performance. Resources promoting religiosity would not be utilized by everyone at the same rate, but there is a large contingent of intercollegiate athletes who could benefit from formalized spirituality services and/or resources. Providing resources to help just a single individual effectively cope and avoid illness, injury, hopelessness, and suicide ideation resulting from event-specific,

collective, and/or chronic stress must not be undervalued (Davidson et al., 2009; Glick et al., 2012).

Thompson (1995) commented "Suffering and tragedy seem to be powerful catalysts for moving people toward spiritual perspectives on life" (pp. 3-4), but this seems like a reactive approach to encourage spiritual development. Athletic departments would be wise to approach spiritual development in a proactive manner, such as formalizing spiritual health advising, such as sport chaplaincy services, as a step in a reformed direction. Science and spirituality are capable of coexisting but the general public's misconceptions often cause these constructs to collide.

In an NCAA's public service announcement they commented "this is not the finish line" regarding athletes exit from college. This can be perceived differently along the threat-challenge spectrum. Institutions of higher education are tasked with holistically preparing athletes for life after sport, and programming which excludes spiritual care is inadequate and a disservice. This proposed paradigm shift emphasizing the holistic educational mission of higher education, specifically spiritual development, will prepare intercollegiate athletes to exit college capable of effectively managing stress and life transitions as well as pursuing lifetime holistic wellness.

REFERENCES

Adler, P. A., & Adler, P. (1991). *Backboards and blackboards: College athletes and role engulfment*. New York, NY: Columbia University Press.

Anandarajah, G., & Hight, E. (2001). Spirituality and medical practice: Using the HOPE questions as a practice tool for spiritual assessment. *American Family Physician, 63*, 81-88.

Anderson, M. L. (2012). *The benefits of college athletic success: An application of the propensity score design with instrumental variables.* Cambridge, MA: National Bureau of Economic Research.

Andrews, B., & Wilding, J. M. (2004). The relation of depression and anxiety to life-stress and achievement in students. *British Journal of Psychology, 95*, 509-521.

Anshel, M. H., & Wells, B. (2000). Sources of acute stress and coping styles in competitive sport. *Anxiety, Stress, & Coping, 13*, 1-26.

Aries, E., McCarthy, D., Salovey, P., & Banaji, M. R. (2004). A comparison of athletes and non-athletes at highly selective colleges: Academic performance and personal development. *Research in Higher Education, 45*(6), 577-602.

Astin, A. W., Astin, H. S., & Lindholm, J. A. (2011a). Assessing students' spiritual and religious qualities. *Journal of College Student Development, 52*(1), 39-61.

Astin, A. W., Astin, H. S., & Lindholm, J. A. (2011b). *Cultivating the spirit: How college can enhance students' inner lives.* San Francisco, CA: Jossey-Bass.

Baker, D. C. (2003). Studies of the inner life: The impact of spirituality on quality of life. *Quality of Life Research, 12*(Suppl. 1), 51-57.

Baldacchino, D. R. (2006). Nursing competencies for spiritual care. *Journal of Clinical Nursing, 15*(7), 885-896.

Barnette, V. (2001). Chapter 3: Resolving PTSD through time limited dynamic psychotherapy. *Journal of College Student Psychotherapy, 16*(1-2), 27-41.

Beder, J., & Yan, G. W. (2013). VHA chaplains: Challenges, roles, rewards, and frustrations of the work. *Journal of Health Care Chaplaincy, 19*, 54-65.

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107*, 238-246.

Bertocci, P. A. (1972). Psychological interpretations of religious experience. In M. Strommen (Ed.), *Research on religious development: A comprehensive handbook* (pp. 3-41). New York, NY: Hawthorn.

Besterman-Dahan, K., Barnett, S., Hickling, E., Elnitsky, C., Lind, J., Skvoretz, J., & Antinori, N. (2012). Bearing the burden: Deployment stress among Army National Guard chaplains. *Journal of Health Care Chaplaincy*, *18*(3-4), 151-168.

Besterman-Dahan, K., Gibbons, S. W., Barnett, S. D., & Hickling, E. J. (2012). The role of military chaplains in mental health care of the deployed service members. *Military Medicine, 177*(6), 1028-1033.

Bisconti, T. L., Bergeman, C. S., & Boker, S. M. (2006). Social support as a predictor of variability: An examination of the adjustment trajectories of recent widows. *Psychology and Aging, 21*(3), 590-599.

Blonna, R. (2005). *Coping with stress in a changing world* (3rd ed.). New York, NY: McGraw-Hill.

Bohnert, A. M., Aikins, J. W., & Edidin, J. (2007). The role of organized activities in facilitating social adaptation across the transition to college. *Journal of Adolescent Research, 22*, 189-208.

Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist, 59*(1), 20-28.

Bonanno, G. A. (2005). Resilience in the face of potential trauma. *Current Directions in Psychological Science, 14*(3), 135-138.

Bonanno, G. A., Galea, S., Bucciarelli, A., & Vlahov, D. (2007). What predicts psychological resilience after disaster? The role of demographics, resources, and life stress. *Journal of Consulting and Clinical Psychology, 75*(5), 671-682.

Bonanno, G. A., & Keltner, D. (1997). Facial expressions of emotion and the course of conjugal bereavement. *Journal of Abnormal Psychology, 106*(1), 126-137.

Bonanno, G. A., Moskowitz, J. T., Papa, A., & Folkman, S. (2005). Resilience to loss in bereaved spouses, bereaved parents, and bereaved gay men. *Journal of Personality and Social Psychology, 88*(5), 827-843.

Bonanno, G. A., Rennicke, C., & Dekel, S. (2005). Self-enhancement among high-exposure survivors of the September 11th terrorist attack: Resilience or social maladjustment? *Journal of Personality and Social Psychology, 88*(6), 984-998.

Bonanno, G. A., Wortman, C. B., Lehman, D. R., Tweed, R. G., Haring, M., Sonnega, J., Carr, D., & Neese, R. M. (2002). Resilience to loss and chronic grief: A prospective study from pre-loss to 18 months post-loss. *Journal of Personality and Social Psychology, 83,* 1150-1164.

Bramwell, S. T., Masuda, M., Wagner, N. N., & Holmes, T. H. (1975). Psychosocial factors in athletic injuries: Development and application of the Social and Athletic Readjustment Rating Scale (SARRS). *Journal of Human Stress, 1*(2), 6-20.

Branch, T. (2011). The shame of college sports. *The Atlantic, 308*(3), 80-110.

Brennan, M. A. (2008). Conceptualizing resiliency: An interactional perspective for community and youth development. *Child Care in Practice, 14*(1), 55-64.

Brewer, B. W., Van Raalte, J. L., & Linder, D. E. (1993). Athletic identity: Hercules' muscles or Achilles heel? *International Journal of Sport Psychology*, *24*(2), 237-254.

Broughton, E., & Neyer, M. (2001). Advising and counseling student athletes. *New Directions for Student Services, 93,* 47-53.

Brown, T. M. (2012). A needs assessment of congregation and clergy roles in serving military families. *Journal of Religion & Spirituality in Social Work: Social Thought, 31*(4), 348-371.

Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136-162). Newbury Park, CA: Sage.

Bureau of Labor Statistics (2013, April 17). *College enrollment and work activity of 2012 high school graduates*. Retrieved from http://www.bls.gov/news.release/hsgec.nr0.htm

Byers, W., & Hammer, C. H. (1995). *Unsportsmanlike conduct: Exploiting college athletes.* Ann Arbor, MI: University of Michigan Press.

Byrne, B. M. (1989). *A primer of LISREL: Basic applications and programming for confirmatory factor analytic models*. New York, NY: Springer-Verlag.

Cadge, W., Freese, J., & Christakis, N. A. (2008). The provision of hospital chaplaincy in the United States: A national overview. *Southern Medical Journal, 101*(6), 626-630.

Campbell-Sills, L., Cohan, S. L., & Stein, M. B. (2006). Relationship of resilience to personality, coping, and psychiatric symptoms in young adults. *Behaviour Research and Therapy, 44*(4), 585-599.

Campbell-Sills, L., & Stein, M. B. (2007). Psychometric analysis and refinement of the Connor–Davidson resilience scale (CD-RISC): Validation of a 10-item measure of resilience. *Journal of Traumatic Stress, 20*(6), 1019-1028.

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology, 56,* 267-283.

Case, B., Greer, H. S., & Brown, J. (1987). Academic clustering in athletics: Myth or reality? *ARENA Review, 11*(2), 48-56.

Chang, B., Stein, N., Stewart, M., Hendricks, A., & Skarf, L. (2012). Spiritual needs of veterans: Healthcare implications for returning troops. *BMC Complementary and Alternative Medicine, 12*(Suppl. 1), 406.

Chickering, A. W., & Reisser, L. (1993). *Education and identity* (2nd ed.). Hoboken, NJ: Jossey-Bass.

Ciarrochi, J., Deane, F. P., & Anderson, S. (2002). Emotional intelligence moderates the relationship between stress and mental health. *Personality and Individual Differences, 32,* 197-209.

Cicchetti, D. (2010). Resilience under conditions of extreme stress: A multilevel perspective. *World Psychiatry, 9*(3), 145-154.

Coakley, J. J. (2008). *Sports in society: Issues and controversies* (10th ed.). Boston, MA: McGraw-Hill.

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24*(4), 385-396.

Cohen, S., & Williamson, G. M. (1988). Perceived stress in a probability sample of the United States. In S. Spacapan & S. Oskamp (Eds.), *The social psychology of health* (pp. 31-67). Newbury Park, CA: Sage.

Coll, J. E., Weiss, E. L., & Yarvis, J. S. (2011). No one leaves unchanged: Insights for civilian mental health care professionals into the military experience and culture. *Social Work in Health Care, 50*(7), 487-500.

Connor, K. M., & Davidson, J. R. (2003). Development of a new resilience scale: The Connor-Davidson resilience scale (CD-RISC). *Depression and Anxiety*, *18*(2), 76-82.

Corbin, C., Welk, G., Corbin, W., & Welk, K. (2011). *Concepts of fitness and wellness: A comprehensive lifestyle approach* (9th ed.). New York, NY: McGraw-Hill.

Covell, D., & Barr, C. A. (2001). The ties that bind: Presidential involvement with the development of the NCAA Division I initial eligibility legislation. *The Journal of Higher Education, 72*(4), 414-452.

Covell, D., & Barr, C. A. (2010). *Managing intercollegiate athletics*. Scottsdale, AZ: Holcomb Hathaway, Publishers, Inc.

Cressey, R. W., & Winbolt-Lewis, M. (2000). The forgotten heart of care: A model of spiritual care in the National Health Service. *Accident & Emergency Nursing, 8*, 170-177.

Crowley, J. N. (2006). *In the arena: The NCAA's first century.* Indianapolis, IN: NCAA Publishing.

Crust, L., & Azadi, K. (2010). Mental toughness and athletes' use of psychological strategies. *European Journal of Sport Science, 10*(1), 43-51.

Davidson, C. L., Wingate, L. R., Rasmussen, K. A., & Slish, M. L. (2009). Hope as a predictor of interpersonal suicide risk. *Suicide and Life-Threatening Behavior*, *39*(5), 499-507.

Delaney, T., & Madigan, T. (2009). *The sociology of sports: An introduction*. Jefferson, NC and London: McFarland & Company, Inc., Publishers.

Department of Veterans Affairs. (2012). VA mental health and chaplain initiative. Retrieved from http://www.mirecc.va.gov/mentalhealthandchaplaincy/

DeSensi, J. T., & Rosenberg, D. (2010). *Ethics and morality in sport management* (3rd ed.). Morgantown, WV: Fitness Information Technology.

Dillon, K., & Tait, J. (2000). Spirituality and being in the zone in team sports: A relationship? *Journal of Sport Behavior, 23*(2), 91-100.

Drescher, K., Foy, D., Kelly, C., Leshner, A., Schutz, A., & Litz, B. T. (2011). An exploration of the viability and usefulness of the construct of moral injury in war veterans. *Traumatology, 17*(1), 8-13.

Dumond, J. M., Lynch, A. K., & Platania, J. (2008). An economic model of the college football recruiting process. *Journal of Sports Economics, 9*(1), 67-87.

Dyson, J., Cobb, M., & Forman, D. (1997). The meaning of spirituality: A literature review. *Journal of Advanced Nursing, 26*(6), 1183-1188.

Dzikus, L., Hardin, R., & Waller, S. N. (2012). Case studies of collegiate sport chaplains. *Journal of Sport & Social Issues, 36*(3), 268-294.

Eitzen, D. S. (2011). *Sport in contemporary society: An anthology* (9th ed.). Cary, NC: Oxford University Press.

Eitzen, D. S. (2012). *Fair and foul: Beyond the myths and paradoxes of sport* (5th ed.). Lanham, MD: Rowman & Littlefield Publishers, Inc.

Eitzen, D. S., & Sage, G. H. (2003). *Sociology of North American sport* (7th ed.). Boston, MA: McGraw-Hill.

Ekedahl, M., & Wengströmy, Y. (2008). Coping processes in a multidisciplinary healthcare team – a comparison of nurses in cancer care and hospital chaplains. *European Journal of Cancer Care, 17*, 42-48.

ESPN (2013). SEC Network to broadcast 24/7. Retrieved from http://espn.go.com/espn/story/_/id/9235260/sec-espn-announce-sec-network-2014

Etzel, E. F., Ferrante, A. P., & Pinkney, J. W. (2006). *Counseling college student-athletes: Issues and interventions*. Morgantown, WV: Fitness Information Technology.

Fair, D. J. (2009a). Counseling cops: Learning how to navigate the law enforcement subculture. *Annals of the American Psychotherapy Association, 12*(4), 50-51.

Fair, D. J. (2009b). Why chaplaincy? *Annals of the American Psychotherapy Association, 12*(3), 75.

Fair, D. J., & Warden, L. S. (n.d.). *Law enforcement chaplaincy* [PowerPoint slides]. Retrieved from http://www.abchs.com/xsecure/chs/coursedocs/CMC/pdf/ABCMC3.pdf

Fernandez, A., Stephan, Y., & Fouquereau, E. (2006). Assessing reason for sports career termination: Development of the Athletes' Retirement Decision Inventory (ARDI). *Psychology of Sport and Exercise, 7*, 407-421.

Ferrante, A. P., Etzel, E., & Lantz, C. (1996). Counseling college student athletes: The problem, the need. In E. F. Etzel, A. P. Ferrante, & J. W. Pinkney (Eds.), *Counseling college student-athletes: Issues and interventions*. Morgantown, WV: Fitness Information Technology.

Ferraro, T., & Rush, S. (2000). Why athletes resist sport psychology, *Athletic Insight: The Online Journal of Sports Psychology, 2*(3), 9-14.

Ferry, L. L., Tobin, J., & Beesley, D. (2004). Relational predictors of psychological distress in women and men presenting for university counseling center services. *Journal of College Counseling, 7*(2), 12-140.

Fetzer Institute (2003). *Multidimensional measurement of religiousness/spirituality for use in health research*. Kalamazoo, MI: Fetzer Institute.

Fisher, B. (2009). Athletics success and institutional rankings. *New Directions for Higher Education*, *2009*(148), 45-53.

Fitchett, G., Murphy, P. E., Kim, J., Gibbons, J. L., Cameron, J. R., & Davis, J. A. (2004). Religious struggle: Prevalence, correlates and mental health risks in diabetic, congestive heart failure, and oncology patients. *The International Journal of Psychiatry in Medicine*, *34*(2), 179-196.

Flannelly, K. J., Handzo, G. F., Galek, K., Weaver, A. J., & Overvold, J. A. (2006). A national survey of hospital directors' views about the importance of various chaplain roles: Differences among disciplines and types of hospitals. *The Journal of Pastoral Care & Counseling, 60*(3), 213-225.

Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive developmental inquiry. *American Psychologist, 34*(10), 906-911.

Fletcher, D., & Fletcher, J. (2005). A meta-model of stress, emotions and performance: Conceptual foundations, theoretical framework, and research directions. *Journal of Sports Sciences*, *23*, 157-158.

Fletcher, D., & Hanton, S. (2003). Sources of organizational stress in elite sports performers. *The Sport Psychologist, 17*(2), 175-195.

Fletcher, D., Hanton, S., & Mellalieu, S. D. (2006). An organizational stress review: Conceptual and theoretical issues in competitive sport. In S. Hanton & S. D. Mellalieu (Eds.), *Literature reviews in sport psychology* (pp. 321-374). Hauppauge, NY: Nova Science.

Fletcher, D., & Sarkar, M. (2012). A grounded theory of psychological resilience in Olympic champions. *Psychology of Sport and Exercise, 13*(5), 669-678.

Fletcher, D., & Sarkar, M. (2013). Psychological resilience: A review and critique of definitions, concepts, and theory. *European Psychologist, 18*(1), 12-23.

Fletcher, D., & Scott, M. (2010). Psychological stress in sports coaches: A review of concepts, theory and research. *Journal of Sports Sciences, 28*(2), 127-137.

Florian, V., Mikulincer, M., & Taubman, O. (1995). Does hardiness contribute to mental health during a stressful real-life situation? The roles of appraisal and coping. *Journal of Personality and Social Psychology, 68*(4), 687-695.

Ford, I. W., Eklund, R. C., & Gordon, S. (2000). An examination of psychosocial variables moderating the relationship between life stress and injury time-loss among athletes of a high standard. *Journal of Sports Sciences, 18*, 301-312.

Fountain, J. J., & Finley, P. S. (2009). Academic majors of upperclassmen football players in the Atlantic Coast Conference: An analysis of academic clustering comparing white and minority players. *Journal of Issues in Intercollegiate Athletics, 2*, 1-13.

Fowler, J. W. (2001). Faith development theory and the postmodern challenges. *International Journal for the Psychology of Religion, 11*(3), 159-172.

Fredrickson, B. L., Tugade, M. M., Waugh, C. E., & Larkin, G. R. (2003). What good are positive emotions in crisis? A prospective study of resilience and emotions following the

terrorist attacks on the United States on September 11th, 2001. *Journal of Personality and Social Psychology, 84*(2), 365-376.

Gadzella, B. M., Baloglu, M., Masten, W. G., & Wang, Q. (2012). Evaluation of the Student Life-stress Inventory-Revised. *Journal of Instructional Psychology, 39*(2), 82-91.

Gallagher, R. P. (2005). *National survey of counseling center directors*. Alexandria, VA: International Association of Counseling Services.

Galli, N., & Reel, J. J. (2012). 'It was hard, but it was good': A qualitative exploration of stress-related growth in Division I intercollegiate athletes. *Qualitative Research in Sport, Exercise and Health, 4*(3), 297-319.

Galli, N., & Vealey, R. S. (2008). "Bouncing back" from adversity: Athletes' experiences of resilience. *The Sport Psychologist, 22*(3), 316-335.

Gayles, J. G. (2009). The student athlete experience. *New Directions for Institutional Research, 144*, 33-41.

Gayles, J. G., & Hu, S. (2009). Athletes as students: Ensuring positive cognitive and affective outcomes. *New Directions for Higher Education, 148*, 101-107.

Gerber, M., Kalak, N., Lemola, S., Clough, P. J., Perry, J. L., Pühse, U., Elliot, C., Holsboer-Trachsler, E., & Brand, S. (2013). Are adolescents with high mental toughness levels more resilient against stress? *Stress and Health, 29*, 164-171.

Gerdy, J. R. (1997). *The successful college athletic program: The new standard*. Westport, CT: The Oryx Press.

Gerdy, J. R. (2006). *Air ball: American education's failed experiment with elite athletics*. Jackson, MS: University Press of Mississippi.

Giacobbi, P. R., Lynn, T. K., Wetherington, J. M., Jenkins, J., Bodendorf, M., & Langley, B. (2004). Stress and coping during the transition to university for first-year female athletes. *The Sport Psychologist, 18*(1), 1-20.

Gibson, D., & Myers, J. E. (2006). Perceived stress, wellness, and mattering: A profile of first-year Citadel Cadets. *Journal of College Student Development, 47*, 647-660.

Glaser, R., Friedman, S. B., Smyth, J., Ader, R., Bijur, P., Brunell, P., Cohen, N., Krilov, L. R., Lifrak, S. T., Stone, A., & Toffler, P. (1999). The differential impact of training stress and final examination stress on herpes virus latency at the United States Military Academy at West Point. *Brain, Behavior, and Immunity, 13*, 240-251.

Glick, I. D., Stillman, M. A., Reardon, C. L., & Ritvo, E. C. (2012). Managing psychiatric issues in elite athletes. *The Journal of Clinical Psychiatry, 73*(5), 640-644.

Gochman, I. R. (1979). Arousal, attribution, and environmental stress. In I. G. Sarason & C. D. Spielberger (Eds.), *Stress and anxiety, Vol. 6* (pp. 67-92). Washington, DC: Hemisphere.

Goddard, N. C. (2000). A response to Dawson's critical analysis of "spirituality" as integrative energy. *Journal of Advanced Nursing, 31*(4), 968-979.

Gold, M. A., & Friedman, S. B. (2000). Cadet basic training: An ethnographic study of stress and coping. *Military Medicine, 165*, 147-152.

Gore, S. (1981). Stress-buffering functions of social supports: An appraisal and clarification of research models. In B. S. Dohrenwend & B. P. Dohrenwend (Eds.), *Stressful life events and their contexts* (pp. 202-222). New York, NY: Prodis.

Gould, D., Udry, E., Bridges, D., & Beck, L. (1997). Stress sources encountered when rehabilitating from season-ending ski injures. *The Sport Psychologist, 11*(4), 361-378.

Grace, J. B., & Bollen, K. A. (2005). Interpreting the results from multiple regression and structural equation models. *Bulletin of the Ecological Society of America, 86*(4), 283-295.

Gu, Q., & Day, C. (2007). Teachers resilience: A necessary condition for effectiveness. *Teaching and Teacher Education, 23*(8), 1302-1316.

Gucciardi, D. F., Gordon, S., & Dimmock, J. A. (2009). Development and preliminary validation of a mental toughness inventory for Australian football. *Psychology of Sport and Exercise, 10*(1), 201-209.

Gurney, G. S., Tan, D., & Winters, C. (2010). Specially admitted student-athletes: Their academic performance, persistence, and graduation from an NCAA Football Bowl Subdivision university. *International Journal of Sport Management, 11*(3), 477-491.

Hale, B. D., & Waalkes, D. (1994). *Athletic identity, gender, self-esteem, academic importance, and drug use: A further validation of the AIMS*. Paper presented at the North American Society for the Psychology of Sport and Physical Activity annual conference, Clearwater Beach, FL.

Hales, D. (2007). An invitation to wellness: Making healthy choices. Belmont, CA: Thomson Wadsworth.

Hall, L. K. (2008). *Counseling military families: What mental health professionals need to know*. New York, NY: Routledge Taylor & Francis Group.

Handzo, G. F., Flannelly, K. J., Kudler, T., Fogg, S. L., Harding, S. R., Hasan, Y. H., Ross, A. M., & Taylor, B. E. (2008). What do chaplains really do? II. Interventions in the New York Chaplaincy Study. *Journal of Health Care Chaplaincy*, *14*(1), 39-56.

Harding, S. R., Flannelly, K. J., Galek, K., & Tannenbaum, H. P. (2008). Spiritual care, pastoral care, and chaplains: Trends in the health care literature. *Journal of Health Care Chaplaincy, 14*(2), 99-117.

Hatch, R. L., Burg, M. A., Naberhaus, D. S., & Hellmich, L. K. (1998). The Spiritual Involvement and Beliefs Scale: Development and testing of a new instrument. *The Journal of Family Practice, 46*(6), 476-486.

Hawkins, B. (2010). *The new plantation: Black athletes, college sports, and predominantly white NCAA institutions*. New York, NY: Palgrave Macmillan.

Hicks, A. M. (2008). Role fusion: The occupational socialization of prison chaplains. *Symbolic Interaction, 31*(4), 400-421.

Hill, P. C., Pargament, K. I., Hood, R. W. Jr., McCullough, M. E., Swyers, J. P., Lawson, D. B., & Zinnbauer, B. J. (2000). Conceptualizing religion and spirituality: Points of commonality, points of departure. *Journal for the Theory of Social Behavior, 30*(1), 51-77.

Hindman, D. M. (2002). From splintered lives to whole persons: Facilitating spiritual development of college students. *Religious Education, 97*(2), 165-182.

Hinkle, J. S. (1994). Practitioners and cross-cultural assessment: A practical guide to information and training. *Measurement and Evaluation in Counseling and Development, 27*, 103-115.

Hirko, S. (2009). Intercollegiate athletics and modeling multiculturalism. *New Directions for Higher Education*, *2009*(148), 91-100.

Hoge, C. W. (2010). *Once a warrior always a warrior: Navigating the transition from combat to home: Including combat stress, PTSD and TBI*. Guilford, CT: Globe Pequot Press.

Holmes, H. T., & Rahe, H. R. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research, 11*, 213.

Howard-Hamilton, M. F., & Sina, J. A. (2001). How college affects student athletes. *New Directions for Student Services*, *2001*(93), 35-45.

Hudd, S., Dumlao, J., Erdmann-Sager, D., Murray, D., Phan, E., Soukas, N., & Yokozuka, N. (2000). Stress at college: Effects on health habits, health status, and self-esteem. *College Student Journal*, *34*, 217-227.

Huffman, L. T., & Cooper, C. G. (2012). I'm taking my talents to…An examination of hometown socio-economic status on the college-choice factors of football student-athletes at a southeastern university. *Journal of Issues in Intercollegiate Athletics*, *5*, 225-246.

Hufford, D. J., Fritts, M. J., & Rhodes, J. E. (2010). Spiritual fitness. *Military Medicine, 175*(Suppl. 1), 73-87.

Humphreys, B. R., & Mondello, M. (2007). Intercollegiate athletic success and donations at NCAA division I institutions. *Journal of Sport Management, 21*(2). 265-280.

Irick, E. (2013). *1981-82 – 2012-13 sports sponsorship and participation rates report*. Indianapolis, IN: National Collegiate Athletic Association.

Johnson, J. H., & Sarason, I. G. (1978). Life stress, depression and anxiety: Internal-external control as a moderator variable. *Journal of Psychosomatic Research*, *22*, 205-208.

Johnson, U., & Ivarsson, A. (2011). Psychological predictors of sport injuries among junior soccer players. *Scandinavian Journal of Medicine and Science in Sports, 21*, 129-136.

Jozsa, F. P., Jr. (2013). *College sports inc.: How commercialism influences intercollegiate athletics*. New York, NY: Springer.

Kaiser, L. R. (2000). Spirituality and the physician executive. *Physician Executive, 26,* 6-14.

Kanner, A. D., Coyne, J. C., Schaefer, C., & Lazarus, R. S. (1981). Comparison of two modes of stress measurement: Daily hassles and uplifts versus major life events. *Journal of Behavioral Medicine, 4*(1), 1-39.

Keating, J. (1979). Environmental stressors misplaced emphasis. In I. G. Sarason & C. D. Spielberger (Eds.), *Stress and anxiety, Vol. 6* (pp. 55-66). Washington, DC: Hemisphere.

Kim, M., & Duda, J. L. (2003). The coping process: Cognitive appraisals of stress, coping strategies, and coping effectiveness. *The Sport Psychologist, 17*(4), 406-425.

Kimball, A., & Freysinger, V. J. (2003). Leisure, stress, and coping: the sport participation of collegiate student-athletes. *Leisure Sciences, 25,* 115-141.

Kissinger, D. B., & Watson, J. C. (2009). Promoting student-athlete mental health: The role of campus counseling services. In D. B. Kissinger & M. T. Miller (Eds.), *College student-athletes: Challenges, opportunities, and policy implications* (pp. 93-108). Charlotte, NC: Information Age Publishing.

Kleinert, J. (2007). Mood states and perceived physical states as short-term predictors of sport injuries: Two prospective studies. *International Journal of Sport & Exercise Psychology, 5,* 340-351.

Knight Commission on Intercollegiate Athletics (1991). *Keeping faith with the student athlete*. Retrieved from http://www.knightcommission.org/images/pdfs/1991-93_kcia_report.pdf

Knight Commission on Intercollegiate Athletics (2001). *A call to action: Reconnecting college sports and higher education*. Retrieved from http://www.knightcommission.org/images/pdfs/2001_knight_report.pdf

Knight Commission on Intercollegiate Athletics (2010). *Restoring the balance: Dollars, values, and the future of college sports*. Retrieved from http://www.knightcommission.org/images/restoringbalance/KCIA_Report_F.pdf

Knight Commission on Intercollegiate Athletics (2012). *Mission and statement of principles*. Retrieved from http://www.knightcommission.org/about/mission-statement

Kobasa, S. C., Maddi, S. R., & Kahn, S. (1982). Hardiness and health: A prospective study. *Journal of Personality and Social Psychology, 42*(1), 168-177.

Koenig, H. G. (2008). *Medicine, religion, and health: Where science and spirituality meet.* West Conshohocken, PA: Templeton Foundation Press.

Koenig, H. G. (2009). Research on religion, spirituality, and mental health: A review. *Canadian Journal of Psychiatry, 54*(5), 283-291.

Koenig, H. G., & Büssing, A. (2010). The Duke University Religion Index (DUREL): A five-item measure for use in epidemiological studies. *Religions, 1*, 78-85.

Koenig, H. G., King, D., & Carson, V. B. (2012). *Handbook of religion and health*. New York, NY: Oxford University Press.

Koenig, H. G., McCullough, M., & Larson, D. B. (2001). *Handbook of religion and health*. New York, NY: Oxford University Press.

Koenig, H. G., Parkerson, G. R., & Meador, K. G. (1997). Religion index for psychiatric research. *American Journal of Psychiatry, 154*(6), 885-886.

Kohn, P. M., Lafreniere, K., & Gurevich, M. (1990). The inventory of college students' recent life experiences: A decontaminated hassles scale for a special population. *Journal of Behavioral Medicine, 13*(6), 619-630.

Kuuppelomäki, M. (2002). Spiritual support for families of patients with cancer: A pilot study of nursing staff assessments. *Cancer Nursing, 25*(3), 209-218.

Lally, P. (2007). Identity and athletic retirement: A prospective study. *Psychology of Sport and Exercise, 8,* 85-99.

LaRocca-Pitts, M. (2006). Agape care: A pastoral and spiritual continuum. *PlainViews, 3*(2).

LaRocca-Pitts, M. A. (2009). FACT: Taking a spiritual history in a clinical setting. *Journal of Health Care Chaplaincy, 15*(1), 1-12.

Lazarus, R. S. (1966). *Psychological stress and the coping process*. New York, NY: McGraw-Hill.

Lazarus, R. S. (1977). *Stress and coping*. New York, NY: Columbia University Press.

Lazarus, R. S. (1993a). Coping theory and research: Past, present, and future. *Psychosomatic Medicine, 55,* 234-247.

Lazarus, R. S. (1993b). From psychological stress to the emotions: A history of changing outlooks. *Annual Reviews in Psychology, 44,* 1-21.

Lazarus, R. S. (1999). *Stress and emotion: A new synthesis*. New York, NY: Springer.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York, NY: Springer.

Lee, J., & Opio, T. (2011). Coming to America: Challenges and difficulties faced by African student athletes. *Sport, Education and Society, 16*(5), 629-644.

Lepore, S. J., & Revenson, T. A. (2006). Resilience and posttraumatic growth: Recovery, resistance, and reconfiguration. In L. G. Calhoun & R. G. Tedeschi (Eds.), *Handbook of posttraumatic growth: Research and practice* (pp. 24-46). Mahwah, NJ: Lawrence Erlbaum Associates.

Levine, M., & Perkins, D. V. (1980). Tailor making life events scale. Paper presented at the meeting of the American Psychological Association, Montreal, Canada.

Levy. M. A., & Gordon, L. (2005). Career transitions for athletes. In J. Taylor & G. Wilson (Eds.), *Applying sport psychology: Four perspectives*. Champaign, IL: Human Kinetics.

Lewis, K. L. (2010). *African American athletes and the negotiation of public spaces: An examination of athletic capital and African American perception of success*. (Doctoral dissertation). Scholar Commons (University of South Florida, Tampa, FL).

Litman, J. A. (2006). The COPE inventory: Dimensionality and relationships with approach-and avoidance-motives and positive and negative traits. *Personality and Individual Differences, 41*(2), 273-284.

Loehr, J., & Schwartz, T. (2003). *The power of full engagement: Managing energy, not time, is the key to high performance and personal renewal.* New York, NY: The Free Press.

Loewy, R. S., & Loewy, E. H. (2007). Healthcare and the hospital chaplain. *The Medscape Journal of Medicine, 9*(1), 53.

López, R. L., & Levy, J. J. (2013). Student athletes' perceived barriers to and preferences for seeking counseling. *Journal of College Counseling, 16*(1), 19-31.

Loughran, M. J., & Etzel, E. F. (2008). Ethical practice in a diverse world: The challenges of working with differences in the psychological treatment of college student-athletes. *Athletic Insight: The Online Journal of Sports Psychology, 10*(4).

Love, P., & Talbot, D. (2009). Defining spiritual development: A missing consideration for student affairs. *NASPA Journal, 46*(4), 614-628.

Lu, F. J. H., Hsu, Y. W., Chan, Y. S. Cheen, J. R. & Kao, K. T. (2012). Assessing college student-athletes' life stress: Initial measurement development and validation. *Measurement in Physical Education and Exercise Science, 16,* 254-267.

Lubker, J. R. (2006). Athletes' feelings of isolation and separation as determined by campus design: A theoretical perspective. *The Academic Athletic Journal, 19*(1), 56-65.

Luthar, S. S. (2006). Resilience in development: A synthesis of research across five decades. In D. Cicchetti & D. Cohen (Eds.), *Developmental psychopathology: Risk, disorder, and adaptation* (pp. 739-795). New York, NY: Wiley.

Luthar, S. S., & Cicchetti, D. (2000). The construct of resilience: Implications for interventions and social policies. *Development and Psychopathology, 12*(4), 857-885.

Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development, 71*(3), 543-562.

Maguen, S., Cohen, G., Cohen, B. E., Lawhon, G. D., Marmar, C.R ., & Seal, K. H. (2010). The role of psychologists in the care of Iraq and Afghanistan veterans in primary care settings. *Professional Psychology: Research & Practice, 41,* 135-142.

Maimes, S. (2002). Spirituality and healing in medicine. *Healthcare Review, 15,* 7.

Major, B., Richards, C., Cozzarelli, C., Cooper, M. L., & Zubek, J. (1998). Personal resilience, cognitive appraisals and coping: An integrative model of adjustment to abortion. *Journal of Personality and Social Psychology, 74*(3), 735-752.

Malinauskas, R. (2010). The associations among social support, stress, and life satisfaction as perceived by injured college athletes. *Social Behavior and Personality, 38*(6), 741-752.

Martin, J. J., Eklund, R. C., & Adams-Mushett, C. A. (1997). Factor structure of the Athletic Identity Measurement Scale with athletes with disabilities. *Adapted Physical Activity Quarterly, 14*(1), 74-82.

Maslow, A. H. (1964). *Religions, values, and peak-experiences*. Columbus, OH: Ohio State University Press.

McCarroll, J. E., Castro, S., Nelson, E. M., Evans, P. K., ZiZhong, F., & Rivera, A. (2008). Characteristics of domestic violence incidents reported at the scene by volunteer victim accidents. *Military Medicine, 179*, 865-870.

McNally, V. J., & Solomon, R. M. (1999). The FBI's critical incident stress management program. *FBI Law Enforcement Bulletin, 68*(2), 20-26.

McSherry, W., & Cash, K. (2004). The language of spirituality: An emerging taxonomy. *International Journal of Nursing Studies, 41,* 151-161.

Mentink, J. W. (2002). Major depression in collegiate student-athletes: Case study research. (Doctoral dissertation, Washington State University). *Dissertation Abstracts International Section A, 62*(8-A), 2697.

Milam, J. E., Ritt-Olson, A., & Unger, J. B. (2004). Posttraumatic growth among adolescents. *Journal of Adolescent Research, 19*(2), 192-204.

Mixon, Jr., F. G., Trevino, L. J., & Minto, T. C. (2004). Touchdowns and test scores: Exploring the relationship between athletics and academics. *Applied Economics Letters, 11,* 421-424.

Moore, E. W., Berkley-Patton, J. Y., & Hawes, S. M. (2013). Religiosity, alcohol use, and sex behaviors among college student-athletes. *Journal of Religion and Health, 52*(3), 930-940.

Murphy, G. M., Petitpas, A. J., & Brewer, B. W. (1996). Identity foreclosure, athletic identity, and career maturity in intercollegiate athletes. *The Sport Psychologist, 10*, 239-246.

Murray, M. A., Joyner, A. B., Burke, K. L., Wilson, M. J., & Zwald, A. D. (2005). The relationship between prayer and team cohesion in collegiate softball teams. *Journal of Psychology and Christianity, 24*(3), 233-239.

National Collegiate Athletic Association (2011). CBS Sports, Turner Broadcasting, NCAA reach 14-year agreement. Retrieved from http://www.ncaa.com/news/basketball-men/2010-04-21/cbs-sports-turner-broadcasting-ncaa-reach-14-year-agreement

National Collegiate Athletic Association (2012). History. Retrieved from http://www.ncaa.org/wps/wcm/connect/public/NCAA/About+the+NCAA/History

National Collegiate Athletic Association (2013). *2013-14 NCAA Division I manual*. Indianapolis, IN.

Nicholls, A. R., & Polman, R. C. J. (2007). Coping in sport: A systematic review. *Journal of Sports Sciences*, *25*(1), 11-31.

Norwood, F. (2006). The ambivalent chaplain: Negotiating structural and ideological difference on the margins of modern-day hospital medicine. *Medical Anthropology*, *25*, 1-29.

Office of Postsecondary Education (2013). The equity in athletics data analysis cutting tool. Retrieved from http://ope.ed.gov/athletics/

Olpin, M., & Hesson, M. (2010). *Stress management for life: A research-based, experiential approach* (2nd ed.). Belmont, CA: Wadsworth, Cengage Learning.

Oriard, M. (2009). *Bowled over: Big-time college football from the sixties to the BCS era*. Chapel Hill, NC: The University of North Carolina Press.

Ornish, D. (2000). *Love and survival: The scientific basis for the healing power of intimacy.* New York, NY: Harper Collins.

Osborn, C. (2005). Research on college student wellness. In J. E. Myers & T. J. Sweeney (Eds.), *Wellness in counseling: Theory, research, and practice* (pp. 77-88). Alexandria, VA: American Counseling Association.

Otis, P. (2009). An overview of the U.S. military chaplaincy: A ministry of presence and practice. *The Review of Faith & International Affairs, 7*(4), 3-15.

Palmer, C. (2008). A theory of risk and resilience factors in military families. *Military Psychology, 20*(3), 205-217.

Papanikolaou, Z., Nikolaidis, D., Patsiaouras, A., & Alexopoulos, P. (2003). The freshman experience: High stress-low grades. *Athletic Insight: The Online Journal of Sports Psychology, 5*(4).

Pargament, K. I. (1997). *The psychology of religion and coping.* New York: Guilford Press.

Pargament, K. (1999). *Multidimensional measurements of religiousness/spirituality for use in health research*. Kalamazoo, MI: Fetzer Institute/National Institute on Aging Working Group.

Pargament, K. I., Smith, B. W., Koenig, H. G., & Perez, L. (1998). Patterns of positive and negative religious coping with major life stressors. *Journal for the Scientific Study of Religion, 37*(4), 710-724.

Parks, S. D. (2000). *Big questions, worthy dreams: Mentoring emerging adults in their search for meaning, purpose, and faith.* San Francisco, CA: Jossey-Bass.

Pascarella, E. T., & Blimling, G. S. (1996). Students' out-of-class experiences and their influence on learning and cognitive development: A literature review. *Journal of College Student Development, 37*(2), 149-162.

Passer, M. W. & Seese, M. D. (1983). Life stress and athletic injury: Examination of positive versus negative events and three moderator variables. *Journal of Human Stress, 9,* 11-16.

Pearson, R. E., & Petitpas, A. J. (1990). Transitions of athletes: Developmental and preventative perspectives. *Journal of Counseling and Development, 69,* 7-10.

Peterson, A. L., Baker, M. T., & McCarthy, K. R. (2008). Combat stress casualties in Iraq: Part I behavioral health consultation at an expeditionary consultant group. *Perspectives in Psychiatric Care, 44,* 146-158.

Petrie, T. A. (1992). Psychosocial antecedents of athletic injury: The effects of life stress and social support on female collegiate gymnasts. *Behavioral Medicine, 18*(3), 127-138.

Pinkerton, R., Hinz, L., & Barrow, J. (1989). The college student-athlete: Psychological considerations and interventions. *Journal of American College Health, 37,* 218-226.

Plante, T. G., Vallaeys, C. L., Sherman, A. C., & Wallston, K. A. (2002). The development of a brief version of the Santa Clara Strength of Religious Faith Questionnaire. *Pastoral Psychology, 50*(5), 359-368.

Poczwardoswski, A., Barott, J. E., & Henschen, K. P. (2002). The athlete and coach: Their relationship and its meaning. *International Journal of Sport Psychology, 33,* 116-140.

Pope, D. G., & Pope, J. C. (2009). The impact of college sport success on the quantity and quality of student applications. *Southern Economic Journal, 75*(3). 750-780.

Potuto, J. R., & O'Hanlon, J. (2007). National study of student-athletes regarding their experiences as college students. *College Student Journal, 41*(4), 947-966.

Powers, E. (2007, June 28). *When prayer reaches the locker room.* Retrieved from http://www.insidehighered.com/news/2007/06/28/faith

Rader, B. G. (2008). *American sports: From the age of folk games to the age of televised sports* (6th ed.). Upper Saddle River, NJ: Pearson Education Inc.

Ravizza, K. (2002). A philosophical construct: A framework for performance enhancement. *International Journal of Sport Psychology, 33,* 4-18.

Renger, R. F., Midyett, S. J., Soto-Mas, F. G., Erin, T. D., McDermott, H. M., Papenfuss, R. L.,

Richardson, G. E. (2002). The metatheory of resilience and resiliency. *Journal of Clinical Psychology, 58*(3), 307-321.

Richardson, G. E., Neiger, B. L., Jensen, S., & Kumpfer, K. L. (1990). The resiliency model. *Health Education, 21*(6), 33-39.

Riolli, L., & Savicki, V. (2003). Information system organizational resilience. *Omega: The International Journal of Management Science, 31*(3), 227–233.

Risch, N., Herrell, R., Lehner, T., Liang, K. Y., Eaves, L., Hoh, J., Griem, A., Kovacs, M., Ott, J., & Merikangas, K. R. (2009). Interaction between the serotonin transporter gene (5-HTTLPR), stressful life events, and risk of depression. *The Journal of the American Medical Association, 301*(23), 2462-2471.

Roberti, J. W., Harrington, L. N., & Storch, E. A. (2006). Further psychometric support for the 10-item version of the Perceived Stress Scale. *Journal of College Counseling, 9,* 135-147.

Robinson, S. (2007). Spirituality: A story so far. In J. Parry, S. Robinson, N. J. Watson, & M. Nesti (Eds.), *Sport and spirituality: An introduction* (pp. 7-37). London, UK: Routledge.

Rushall, B. S. (1990). A tool for measuring stress tolerance in elite athletes. *Journal of Applied Sport Psychology, 2*(1), 51-66.

Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry*, *57*(3), 316-331.

Sage, G. H. (1998). *Power and ideology in American sport: A critical perspective* (2nd ed.). Champaign, IL: Human Kinetics.

Salisbury, W. S. (1962). Religiosity, regional sub-culture, and social behavior. *Journal for the Scientific Study of Religion, 2*(1), 94-101.

Sarason, I. G., Johnson, J. H., & Siegel, J. M. (1978). Assessing the impact of life changes: Development of the Life Experiences Survey. *Journal of Consulting and Clinical Psychology*, *46*(5), 932-946.

Schwadel, P. (2011). The effects of education on Americans' religious practices, beliefs, and affiliations. *Review of Religious Research*, *53*(2), 161-182.

SEC Digital Network (2013). About the SEC. Retrieved from http://www.secdigitalnetwork.com/SECSPORTS/THESEC/AbouttheSEC.aspx

Seddon, R. L., Jones, E., & Greenberg, S. C. N. (2011). The role of chaplains in maintaining the psychological health of military personnel: An historical and contemporary perspective. *Military Medicine, 176*(12), 1357-1361.

Seiple, C. (2009): Ready…or not?: Equipping the U.S. military chaplain for inter-religious liaison. *The Review of Faith & International Affairs, 7*(4), 43-49.

Selye, H. (1956). *The stress of life*. New York, NY: McGraw-Hill.

Selye, H. (1974). *Stress without distress*. New York, NY: Signet Classics.

Sharts-Hopko, N. C. (2003). Spirituality and health care. In J. T. Catalano (Ed.), *Nursing now: Today's issues, tomorrow's trends* (2nd. ed., pp. 347-371). Philadelphia: F. A. Davis.

Shaw, A., Joseph, S., & Linley, P. A. (2005). Religion, spirituality, and posttraumatic growth: A systematic review. *Mental Health, Religion, and Culture, 8*(1), 1-11.

Shurts, W. M., & Shoffner, M. F. (2004). Providing career counseling for collegiate student-athletes: A learning theory. *Journal of Career Development, 31*(2), 95-109.

Sigmund, J. A. (2003). Spirituality and trauma: The role of clergy in the treatment of posttraumatic stress disorder. *Journal of Religion and Health, 42*(3), 221-229.

Simmons, C. A., & Decoster, V. (2007). Military social workers at war: Their experiences and the educational content that helped them. *Social Work Education*, *43*, 497–513.

Simons, H., & Van Rheenen, D. (2000). Noncognitive predictors of student athletes' academic performance. *Journal of College Reading and Learning, 30*(2), 167-181.

Smith, B. W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The Brief Resilience Scale: Assessing the ability to bounce back. *International Journal of Behavioral Medicine*, *15*, 194-200.

Smith, R. A. (1990). *Sports and freedom: The rise of big-time college athletics.* Cary, NC: Oxford University Press.

Smith, R. A. (2011). *Pay for play: A history of big-time college athletic reform*. Champaign, IL: University of Illinois Press.

Sohn, S. (2008). A structural equation modeling of alcohol use among young adults in the U.S. military: Complexities among stress, drinking motives, impulsivity, alcohol use and job performance. *Alcoholism: Clinical & Experimental Research Supplement*, *32*, 368A.

Sperber, M. A. (1990). College sports, inc.: The athletic department vs. the university. New York, NY: Henry Holt & Company.

Sperber, M. A. (2000). *Beer and circus: How big-time college sports is crippling undergraduate education*. New York, NY: Henry Holt & Company.

Steffen, K., Pensgaard, A. M., & Bahr, R. (2009). Self-reported psychological characteristics as risk factors for injuries in female youth football. *Scandinavian Journal of Medicine and Science in Sports, 19,* 442-451.

St Louis, B. (2009). Post-marxism, black marxism and the politics of sport. In B. Carrington and I. Mcdonald (Eds.), *Marxism, Cultural Studies and Sport*. New York, NY: Routledge (pp. 109-130).

Stokowski, S. E. (2013). *I know I can learn. The experiences of NCAA Division I – FBS student-athletes with learning disabilities and/or ADHD in higher education*. (Doctoral Dissertation). Retrieved from Trace: Tennessee Research and Creative Exchange (University of Tennessee, Knoxville, TN).

Stokowski, S. E., Huffman, L. T., & Aicher, T. J. (2013). A comparative analysis of sport participation motivations of NCAA Division I student-athletes: An international focus. *Journal for the Study of Sports and Athletes in Education, 7*(2), 131-148.

Storch, E. A., Kovacs, A. H., Roberti, J. W., Bailey, L. M., Bravata, E. A., & Storch, J. B. (2004). Strength of religious faith and psychological adjustment in intercollegiate athletes. *Psychological Reports, 94*(1), 48-50.

Storch, E. A., Roberti, J. W., Bravata, E. A., & Storch, J. B. (2004). Psychometric investigation of the Santa Clara Strength of Religious Faith Questionnaire Short-Form. *Pastoral Psychology, 52*(6), 479-483.

Storch, E. A., & Storch, J. B. (2002a). Correlations for organizational, nonorganizational, and intrinsic religiosity with social support among intercollegiate athletes. *Psychological Reports, 91*(1), 333-334.

Storch, E. A., & Storch, J. B. (2002b). Intrinsic religiosity and aggression in intercollegiate athletes. *Psychological Reports, 91*(3), 1041-1042.

Storch, E. A., Storch, J. B., & Adams, B. G. (2002). Intrinsic religiosity and social anxiety of intercollegiate athletes. *Psychological Reports, 91*(1), 186.

Storch, E. A., Storch, J. B. Kolsky, A. R., & Silvestri, S. M. (2001). Religiosity of elite athletes. *The Sports Psychologist, 15*(3), 346-351.

Storch, E. A., Storch, J. B., Kovacs, A., Okun, A., & Welsh, E. (2003). Intrinsic religiosity and substance abuse in intercollegiate athletes. *Journal of Sport and Exercise Psychology, 25*(2), 248-252.

Storch, E. A., Storch, J. B., Welsh, E., & Okun, A. (2002). Religiosity and depression in intercollegiate athletes. *College Student Journal, 36*(4), 526-531.

Sundt, J. L., Dammer, H. R., & Cullen, F. T. (2002). The role of the prison chaplain in rehabilitation. *Journal of Offender Rehabilitation, 35*(3-4), 59-86.

Sweeny, H. (2008). Domain of the human spirit. In D. Snider & L. Matthews (Eds.), *Forging the Warrior's Character* (pp. 23-50). New York, NY: Learning Solutions.

Synovitz, L. Gillan, W., Wood, R., Nordness, M. M., & Kelly, J. (2006). An exploration of college students' complementary and alternative medicine use. *American Journal of Health Education, 37*(2), 87-96.

Tanyi, R. A. (2002). Towards clarification of the meaning of spirituality. *Journal of Advanced Nursing, 39*(5), 500-509.

Thomas, J., & Zaitzow, B. H. (2006). Conning or conversion? The role of religion in prison coping. *The Prison Journal, 86,* 242-259.

Thompson, M. J. (1995). *Soul feast: An invitation to the Christian spiritual life* (1st ed.).Louisville, KY: Westminster John Knox Press.

Tracey, J. & Cortlett, J. (1995). The transition experience of first-year university track and field athletes. *Journal of the freshman year experience, 7*(2), 82-102.

United States Census Bureau. (2013). Retrieved from http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml

Vaishnavi, S., Connor, K., & Davidson, J. R. (2007). An abbreviated version of the Connor-Davidson Resilience Scale (CD-RISC), the CD-RISC2: Psychometric properties and applications in psychopharmacological trials. *Psychiatry research*, *152*(2), 293-297.

Vanderwerker, L. C., Flannelly, K. J., Galek, K., Harding, S. R., Handzo, G. F., Oettinger, M., & Bauman, J. P.(2008). What do chaplains really do? III. Referrals in the New York chaplaincy study. *Journal of Health Care Chaplaincy, 14*(1), 57-73.

Van Rheenen, D. (2012). Exploitation in college sports: Race, revenue, and educational reward. *International Review for the Sociology of Sport*, *0*(0), 1-22.

Van Vliet, K. J. (2008). Shame and resilience in adulthood: A grounded theory study. *Journal of Counseling Psychology, 55*(2), 233-245.

Visek, A. J., Watson, J. C., Hurst, J. R., Maxwell, J. P., & Harris, B. S. (2010). Athletic identity and aggressiveness: A cross-cultural analysis of the Athletic Identity Maintenance Model. *International Journal of Sport and Exercise Psychology*, *8*(2), 99-116.

von Guenthner, S, & Hammermeister, J. (2007). Exploring relations of wellness and athletic coping skills of collegiate athletes: Implications for sport performance. *Psychological Reports, 101*(3F), 1043-1049.

Wagnild, G. M., & Young, H. M. (1993). Development and psychometric evaluation of the Resilience Scale. *Journal of Nursing Measurement, 1*(2), 165-178.

Walker, N., Thatcher, J., & Lavallee, D. (2007). Psychological responses to injury in competitive sport: A critical review. *The Journal of the Royal Society for the Promotion of Health, 127*(4), 174-180.

Watson, J. C. (2005). College student athlete's attitudes toward a help-seeking behavior and expectations of counseling services. *Journal of College Student Development, 46*(4), 442-449.

Waston, J. C. (2006). Student-athletes and counseling: Factors influencing the decision to seek counseling services. *College Student Journal, 40*(1), 35-42.

Watson, J. C., & Kissinger, D. B. (2007). Athletic participation and wellness: Implications for counseling college student-athletes. *Journal of College Counseling, 10*(2), 153-163.

Watson, N. (2011). Theological and psychological reflections on identity in sport. *The Journal of Religion and Popular Culture, 23*(2), 182-200.

Watson, N. J., & Nesti, M. (2005). The role of spirituality in sport psychology consulting: An analysis and integrative review of literature. *Journal of Applied Sport Psychology, 17*, 228-239.

Weil, M., & Rosen, L. (1998). *TechnoStress: Coping with technology @WORK @HOME @PLAY.* New York, NY: John Wiley & Sons.

Wiese-Bjornstal, D. M., Smith, A. M. Shaffer, S. M., & Morrey, M. A. (1998). An integrated model of response to sport injury: Psychological and sociological dynamics. *Journal of Applied Sport Psychology, 10*(1), 46-69.

Williams, J. M., & Andersen, M. B. (1998). Psychosocial antecedents of sport injury: Review and critique of the stress and injury model. *Journal of Applied Sport Psychology, 10*(1), 5-25.

Wills, M. (2007). Connection, action, and hope: An invitation to reclaim the "spiritual" in health care. *Journal of Religion & Health, 46*(3), 423-436.

Wilson, G., & Pritchard, M. (2005). Comparing sources of stress in college student athletes and non-athletes. *Athletic Insight: The Online Journal of Sport Psychology, 7*(1), 1-8.

Wilson, J. P., & Moran, T. A. (1998). Psychological trauma: Posttraumatic stress disorder and spirituality. *Journal of Psychology and Theology, 26*(2), 168-178

Wong, P. T. P. (1993). Effective management of life stress: The Resource-Congruence Model. *Stress Medicine, 9*, 51-60

Worchel, S. (1978). Reducing crowding without increasing space: Some applications of an attributional theory of crowding. *Journal of Population, 1*(3), 216-230.

Worchel, S., & Teddlie, C. (1976). The experience of crowding: A two-factor theory. *Journal of Personality and Social Psychology, 34*(1), 30-40.

Worthington, E., Kurusu, T., McCullough, M., & Sandage, S. (1996). Empirical research on religion and psychotherapeutic processes and outcomes: A 10-year review and research prospectus. *Psychological Bulletin, 119*, 448-487.

Wrisberg, C., Withycombe, J. L., Simpson, D., Loberg, L. A., & Reed, A. (2012). NCAA Division-I administrators' perceptions of the benefits of sport psychology services and possible roles for a consultant. *The Sport Psychologist, 26*(1), 16-28.

Wylleman, P., Alfermann, D., & Lavallee, D. (2004). Career transitions in sport: European perspectives. *Psychology of Sport and Exercise, 5*(1), 7-20.

Wylleman, P., & Lavallee, D. (2004). A developmental perspective on transitions faced by athletes. In M. Weiss (Ed.), *Developmental sport and exercise psychology: A lifespan perspective*, 507-527. Morgantown, WV: Fitness Information Technology.

Yerkes, R. M., & Dodson, J. D. (1908). The relation of strength of stimulus to rapidity of habit-formation. *Journal of Comparative Neurology and Psychology, 18*, 459-484.

Yi, J. P., Smith, R. E., & Vitaliano, P. P. (2005). Stress-resilience, illness, and coping: A person-focused investigation of young women athletes. *Journal of Behavioral Medicine, 28*(3), 257-265.

Yost, M. (2010). *Varsity green: A behind the scenes look at culture and corruption in college athletics*. Stanford, CA: Stanford University Press.

Yusko, D. A., Buckman, J. F., White, H. R., & Pandina, R. J. (2008). Risk for excessive alcohol use and drinking-related problems in college student athletes. *Addictive Behaviors, 33*, 1546–1556.

Zakrajsek, R. A., Martin, S. B. & Zizzi, S. J. (2011). American high school football coaches' attitudes toward sport psychology consultation and intentions to use sport psychology services. *International Journal of Sport Science & Coaching, 6*, 461-478.

Zakrajsek, R. A., Steinfeldt, J. A., Bodey, K. J., Martin, S. B., & Zizzi, S. J. (2013). NCAA Division I coaches' perceptions and preferred use of sport psychology services: A qualitative perspective. *The Sport Psychologist, 27*(3), 258-268.

Zakrajsek, R. A., & Zizzi, S. J. (2007). Factors influencing track and swimming coaches' intentions to use sport psychology services. *Athletic Insight: The Online Journal of Sport Psychology, 9*(2). Retrieved from http://www.athleticinsight.com/Vol9Iss2/CoachesIntentions.htm

Zgonc, E. (2010). *1999-2000 – 2009-10 student-athlete ethnicity report*. Indianapolis, IN: National Collegiate Athletic Association.

Zimbalist, A. (1999). *Unpaid professionals: Commercialism and conflict in big-time college sports*. Princeton, NJ: Princeton University Press.

Zimbalist, A. (2006). *The bottom line: Observations and arguments on the sports business*. Philadelphia, PA: Temple University Press.

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

Zimet, G. D., Powell, S. S., Farley, G. K., Werkman, S., & Berkoff, K. A. (1990). Psychometric characteristics of the Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment, 55*(3-4), 610-617.

Zinnbauer, B. J., Pargament, K. I., Scott, A. B. (1999). The emerging meanings of religiousness and spirituality: Problems and prospects. *Journal of Personality, 67*(6), 889-919.

Zohar, D., & Marshall, I. (2004). *Spiritual capital: Wealth we can live by*. San Francisco, CA: Berrett-Koehler.

APPENDICES

Appendix A: Resilience Definitions and Summaries

Table A.1

Definitions of Resiliency

Factors which protect by adapting, enhancing and/or altering a person's response to an environmental threat or challenge (Rutter, 1987, p. 316).
"The process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances" (Masten, Best, & Garmezy, 1990, p. 426).
"A dynamic process encompassing positive adaptation within the context of significant adversity" (Luthar et al., 2000, p. 543).
"A class of phenomena characterized by good outcomes in spite of serious threats to adaptation or development" (Masten, 2001, p. 228).
"The personal qualities that enables one to thrive in the face of adversity" (Connor & Davidson, 2003, p. 76).
"The ability of adults in otherwise normal circumstances who are exposed to an isolated and potentially highly disruptive event such as the death of a close relation or a violent or life-threatening situation to maintain relatively stable, healthy levels of psychological and physical functioning, as well as the capacity for generative experiences and positive emotions" (Bonanno, 2004, pp. 20-21).
"Complex repertoire of behavioural tendencies" (Agaibi & Wilson, 2005, p. 197).
"The capacity of individuals to cope successfully with significant change, adversity or risk" (Lee & Cranford, 2008, p. 213).
"An individual's stability or quick recovery (or even growth) under significant adverse conditions" (Leipold & Greve, 2009, p. 41).

Appendix A: Resilience Definitions and Summaries

Table A.2

Summary of Resilience Theories

Author(s) (Year)	Theory / Model	Description
Patterson (1988)	Family adjustment and adaptation response model	Describes the process of families balancing demands and capabilities as they interact with family meanings. The outcome is either family adjustment or adaptation.
Richardson et al. (1990) and Richardson (2002)	The resiliency model	Posits the presence of biopsychospiritual homeostasis within an individual which is influenced by adversity, life events, and protective factors. Following disruption of homeostasis there is a reintegration process leading to one of four outcomes: resilient reintegration, reintegration back to homeostasis, reintegration with loss, or dysfunctional reintegration.
Polk (1997)	Nursing model of resilience	Resilience conceived as the result of a synergistic relationship between four patterns: dispositional, relational, situational, and philosophical.
Riolli and Savicki (2003)	Model of organizational resilience in the information systems field	Integrates organizational and individual levels of response. Sources of stress protection include dispositions and skills (individual level) and organizational structures and processes (organizational level). Outcomes of these processes are resilience, productivity, retention, and burnout.
Haase (2004)	Adolescent resilience model	Based on the interaction of concepts that are categorized as one of three factors: protective (e.g., family protective, social protective), risk (e.g., individual risk, illness-related risk), and outcome (e.g., resilience, quality of life).
Agaibi and Wilson (2005)	Generic model of resilience in response to psychological trauma	An integrative, person-environment model, emphasizing the interaction between five interrelated variables: personality, affect modulation, ego defenses, coping style and mobilization, and utilization of protective factors.

Table A.2. Continued.

Author(s) (Year)	Theory / Model	Description
Gillespie, Chaboyer, Wallis, and Grimbeek (2007)	A revised resilience model in operating room nurses	Five variables that explain (60% of the variation in) resilience are hope, self-efficacy, control, coping, and competence.
Brennan (2008)	Conceptual model for community and youth resiliency	Communities and youth are often faced with a variety of vulnerabilities. These create an environment requiring social support and community agency. Community agency is the principal condition that enhances resiliency and advances well-being.
Denz-Penhey and Murdoch (2008)	A grounded theory of personal resiliency	Personal resiliency as the main theme in the stories of people who had survived unexpectedly from a serious disease. Resiliency consists of five dimensions: connectedness to one's social environment, one's family, one's physical environment, one's experiential inner wisdom, and one's strong psychological self.
Dunn et al. (2008)	The "coping reservoir": A conceptual model of medical student well-being	A range of inputs, both positive ("filling the reservoir") and negative ("draining the reservoir") combined with personality and temperament factors ("the internal structure of the reservoir"), can lead to positive (e.g., resilience) and negative (e.g., burnout) outcomes.
Galli and Vealey (2008)	Conceptual model of sport resilience	Adversity, sociocultural influences, and personal resources were factors discussed by athletes as being at the center of the resilience process (agitation), which consequently lead to positive outcomes (e.g., learning and perspective).
Palmer (2008)	A theory of risk and resilience factors in military families	The effects of military risk and resilience factors on child outcome are proposed to follow an indirect pathway involving parental stress and psychopathology, with parent-child interactions considered to be vital for military children.
Paton et al. (2008)	The stress shield model of resilience	The model of police officer resiliency integrates a range of person, team, and organizational factors that lead to empowerment, which, in turn, lead to a number of outcomes (e.g., adaptive capacity, growth, and job satisfaction).
Van Vliet (2008)	A grounded theory of shame and resilience in adulthood	Rebuilding of the self as the main category that signifies the process of recovering from a shame event. Self-reconstruction occurs through five main processes: connecting, refocusing, accepting, understanding, and resisting.

Table A.2. Continued.

Author(s) (Year)	Theory / Model	Description
Leipold and Greve (2009)	An integrative model of coping, resilience, and development	Resilience is proposed to result from coping processes (e.g., assimilation and accommodation), which are influenced by personal and situational conditions. Resilience is considered to be an important part of the conceptual bridge between coping and development.
Mancini and Bonanno (2009)	Hypothesized model of resilience	Individual differences (personality, a priori beliefs, identity complexity, positive emotions, and comfort from positive memories) are proposed to have direct and indirect effects on coping with loss. Appraisal processes and social support play a critical role as shared mechanisms of resilience.
Fletcher and Sarkar (2012)	A grounded theory of psychological resilience and optimal sport performance	Numerous psychological factors (relating to a positive personality, motivation, confidence, focus, and perceived social support) protect the world's best athletes from the potential negative effect of stressors by influencing their challenge appraisal and meta-cognitions. These processes promote facilitative responses that precede optimal sport performance.

Note. Taken from Fletcher & Sarkar, 2013, pp. 18-19

Appendix B: IRB Approval

THE UNIVERSITY of TENNESSEE
KNOXVILLE
Office of Research & Engagement
INSTITUTIONAL REVIEW BOARD (IRB)

1534 White Ave.
Knoxville, TN 37996-1529
865-974-7697
fax 865-974-7400

March 14, 2013

Title: "Too blessed to be stressed": Examining the relationships between religiosity, resiliency, and stress among intercollegiate athletes

Landon T. Huffman
Kinesiology, Rec., & Sport Studies
354 HPER Bldg.
Campus

Robin Hardin, Ph.D.
Kinesiology, Rec., & Sport Studies
354 HPER Bldg.
Campus

The above human subjects research protocol has been reviewed and determined to be exempt from the federal regulations that govern the use of human subjects in research under 45CFR46.101.b Exempt Category 2: *Research involving the use of education tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior,* **unless:** *(i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects;* ***and*** (ii) *any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.*

Unless there are major changes in the experimental methods or project design, no further reporting to this office is required. The responsibility for oversight of this project becomes that of the Principal Investigator(s) and the Departmental Review Committee.

We wish you success in your research endeavor.

Sincerely,

Brenda Lawson

Brenda Lawson
Compliance Officer and IRB Administrator
Office of Research
FWA #00006629

Appendix C: Email to Director of Operations

Dear <First Name of Director of Operations>,

My name is Landon Huffman and I am a doctoral student at the University of Tennessee. I am conducting research examining the relationships between religiosity, resiliency, and perceived stress among intercollegiate athletes competing in the Southeastern Conference (SEC). I am contacting staff on each individual team to request they take a moment to help with the distribution of the online survey. Please forward this email to members of your team encouraging them to participate in this study.

The purpose of this research is to gain an understanding of how specific factors affect perceived stress. The insight gained through this research will inform athletic administrators regarding wellness and holistic development of intercollegiate athletes as a part of the educational experience.

The online questionnaire will take approximately 10 minutes to complete. Participation in the research is voluntary and all precautions will be made to protect respondents' confidentiality. By clicking the link to the survey below, you give your informed consent to participate in this research.

<INSERT SURVEY LINK>

*if you are having trouble accessing the survey by clicking the link, please copy and paste the URL into a web browser

Thank you for your time participating in this research – <INSERT TEAM MONIKER>!

Sincerely,

Landon T. Huffman
Doctoral Candidate
University of Tennessee, Sport Management
landon.huffman@utk.edu

Dr. Rob Hardin, Advisor
Associate Professor
University of Tennessee, Sport Management
robh@utk.edu

Appendix D: Email to Intercollegiate Athletes

Dear <First Name of Intercollegiate Athlete>,

My name is Landon Huffman and I am a doctoral student at the University of Tennessee. I am conducting research examining the relationships between religiosity, resiliency, and perceived stress among intercollegiate athletes competing in the Southeastern Conference (SEC). As an intercollegiate <INSERT SPORT> player, I am inviting you to participate in this study.

The purpose of this research is to gain an understanding of how specific factors affect perceived stress. The insight gained through this research will inform athletic administrators regarding wellness and holistic development of intercollegiate athletes as a part of the educational experience.

The online questionnaire will take approximately 10 minutes to complete. Participation in the research is voluntary and all precautions will be made to protect respondents' confidentiality. By clicking the link to the survey below, you give your informed consent to participate in this research.

<INSERT SURVEY LINK>

*if you are having trouble accessing the survey by clicking the link, please copy and paste the URL into a web browser

Thank you for your time participating in this research. I wish you the best of luck in your <INSERT SPORT> career – <INSERT TEAM MONIKER>!

Sincerely,

Landon T. Huffman
Doctoral Candidate
University of Tennessee, Sport Management
landon.huffman@utk.edu

Dr. Rob Hardin, Advisor
Associate Professor
University of Tennessee, Sport Management
robh@utk.edu

Appendix E: Online Questionnaire

Thanks in advance for participating in this study. The purpose of this research is to gain an understanding of how religiosity and resiliency affect perceived stress. The insight gained through this research will promote wellness and holistic development of intercollegiate athletes as a part of the educational experience. The online questionnaire will take approximately 10 minutes to complete. Participation in the research is voluntary and all precautions will be made to protect respondents' confidentiality. By clicking the "next" button you give your informed consent to participate in this research. Thanks again for your time and best of luck this season!

What is your age (in years)?

If What is your age (in years)? Is Less Than 18, Then Skip To End of Survey
If What is your age (in years)? Is Empty, Then Skip To End of Survey

How often do you attend church, synagogue, or other religious meetings?
- ❍ Never (1)
- ❍ Once a year or less (2)
- ❍ A few times a year (3)
- ❍ A few times a month (4)
- ❍ Once a Week (5)
- ❍ More than once a week (6)

How often do you spend time in private religious activities, such as prayer, meditation, or studying sacred text(s)?
- ❍ Rarely or never (1)
- ❍ A few times a month (2)
- ❍ Once a week (3)
- ❍ Two or more times a week (4)
- ❍ Daily (5)
- ❍ More than once a day (6)

In my life I experience the presence of the divine (e.g., God)
- ❍ Unsure (1)
- ❍ Definitely not true (2)
- ❍ Tends not to be true (3)
- ❍ Tends to be true (4)
- ❍ Definitely true of me (5)

My religious beliefs are what really lie behind my whole approach to life.
- ❍ Unsure (1)
- ❍ Definitely not true (2)
- ❍ Tends not to be true (3)
- ❍ Tends to be true (4)
- ❍ Definitely true of me (5)

I try hard to carry my religion over into all other dealings in life.
- ❍ Unsure (1)
- ❍ Definitely not true (2)
- ❍ Tends not to be true (3)
- ❍ Tends to be true (4)
- ❍ Definitely true of me (5)

Please indicate the extent to which you agree with each of the following statements by using the following scale:

	Strongly Disagree (1)	(2)	(3)	(4)	Strongly Agree (5)
I tend to bounce back quickly after hard times (1)	❍	❍	❍	❍	❍
I have a hard time making it through stressful events (2)	❍	❍	❍	❍	❍
It does not take me long to recover from a stressful event (3)	❍	❍	❍	❍	❍
It is hard for me to snap back when something bad happens (4)	❍	❍	❍	❍	❍
I usually come through difficult times with little trouble (5)	❍	❍	❍	❍	❍
I tend to take a long time to get over set-backs in my life (6)	❍	❍	❍	❍	❍

During the last month…

	Never (1)	Almost Never (2)	Sometimes (3)	Fairly Often (4)	Very Often (5)
...how often have you been upset because of something that happened unexpectedly? (1)	❍	❍	❍	❍	❍
...how often have you felt that you were unable to control the important things in your life? (2)	❍	❍	❍	❍	❍
...how often have you felt nervous and "stressed"? (3)	❍	❍	❍	❍	❍
...how often have you felt confident about your ability to handle your personal problems? (4)	❍	❍	❍	❍	❍
...how often have you felt that things were going your way? (5)	❍	❍	❍	❍	❍
...how often have you found that you could not cope with all the things that you had to do? (6)	❍	❍	❍	❍	❍
...how often have you been able to control irritations in your life? (7)	❍	❍	❍	❍	❍
...how often have you felt that you were on top of things? (8)	❍	❍	❍	❍	❍
...how often have you been angered because of things that were outside of your control? (9)	❍	❍	❍	❍	❍
...how often have you felt difficulties were piling so high that you could not overcome them? (10)	❍	❍	❍	❍	❍

Select your level of agreement for each of the following statements:

	Very Strongly Disagree (1)	(2)	(3)	(4)	(5)	(6)	Very Strongly Agree (7)
There is a special person who is around when I am in need. (1)	❍	❍	❍	❍	❍	❍	❍
There is a special person with whom I can share my joys and sorrows. (2)	❍	❍	❍	❍	❍	❍	❍
My family really tries to help me. (3)	❍	❍	❍	❍	❍	❍	❍
I get the emotional help and support I need from my family. (4)	❍	❍	❍	❍	❍	❍	❍
I have a special person who is a real source of comfort to me. (5)	❍	❍	❍	❍	❍	❍	❍
My friends really try to help me. (6)	❍	❍	❍	❍	❍	❍	❍
I can count on my friends when things go wrong. (7)	❍	❍	❍	❍	❍	❍	❍
I can talk about my problems with my family. (8)	❍	❍	❍	❍	❍	❍	❍
I have friends with whom I can share my joys and sorrows. (9)	❍	❍	❍	❍	❍	❍	❍
There is a special person in my life who cares about my feelings. (10)	❍	❍	❍	❍	❍	❍	❍
My family is willing to help me make decisions. (11)	❍	❍	❍	❍	❍	❍	❍
I can talk about my problems with my friends. (12)	❍	❍	❍	❍	❍	❍	❍

Select you level of agreement for each of the following statements:

	Strongly Disagree (1)	(2)	(3)	(4)	(5)	(6)	Strongly Agree (7)
I consider myself an athlete. (1)	❍	❍	❍	❍	❍	❍	❍
I have many goals related to sport. (2)	❍	❍	❍	❍	❍	❍	❍
Most of my friends are athletes. (3)	❍	❍	❍	❍	❍	❍	❍
Sport is the most important part of my life. (4)	❍	❍	❍	❍	❍	❍	❍
I spend more time thinking about sport than anything else. (5)	❍	❍	❍	❍	❍	❍	❍
I need to participate in sport to feel good about myself. (6)	❍	❍	❍	❍	❍	❍	❍
Other people see me mainly as an athlete. (7)	❍	❍	❍	❍	❍	❍	❍
I feel bad about myself when I do poorly in sport. (8)	❍	❍	❍	❍	❍	❍	❍
Sport is the only important thing in my life. (9)	❍	❍	❍	❍	❍	❍	❍
I would be very depressed if I were injured and could not compete in sport. (10)	❍	❍	❍	❍	❍	❍	❍

Currently, what are your three (3) greatest sources of stress?
1.) _____
2.) _____
3.) _____

Are you a citizen of the United States of America?
- ❍ Yes (1)
- ❍ No (2)

If Yes Is Selected, Then Skip To What is your hometown zip code?
If No Is Selected, Then Skip To Please identify your country of origin.

Please identify your country of origin. _____

If Please identify your country... Is Not Empty, Then Skip To On which varsity collegiate sport team...
If Please identify your country... Is Empty, Then Skip To On which varsity collegiate sport team...

What is your hometown zip code? (ex: 37996) _____

On which varsity collegiate sport team do you participate? If you participate in more than one sport, please select the sport which pays for your athletically-related financial aid (athletic scholarship).

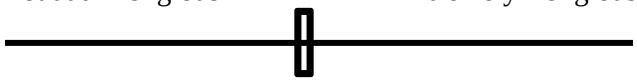
- ❍ Baseball (1)
- ❍ Basketball (2)
- ❍ Bowling (3)
- ❍ Cross Country (4)
- ❍ Equestrian (5)
- ❍ Fencing (6)
- ❍ Field Hockey (7)
- ❍ Football (8)
- ❍ Golf (9)
- ❍ Gymnastics (10)
- ❍ Handball (11)
- ❍ Ice Hockey (12)
- ❍ Lacrosse (13)
- ❍ Rifle (14)
- ❍ Rowing (15)
- ❍ Rugby (16)
- ❍ Sand Volleyball (17)
- ❍ Skiing (18)
- ❍ Soccer (19)
- ❍ Softball (20)
- ❍ Swimming & Diving (21)
- ❍ Tennis (22)
- ❍ Track & Field (23)
- ❍ Volleyball (24)
- ❍ Water Polo (25)
- ❍ Wrestling (26)
- ❍ Other (27) _____

Are you currently receiving any amount of athletically-related financial aid (athletic scholarship)?
- ❍ No (1)
- ❍ Partial athletic scholarship (2)
- ❍ Full athletic scholarship (3)

How religious do you consider yourself?

Slide the bar to indicate your rating.

Not at all religious — Extremely Religious



Which of the following best describes your religious preference?

- ❑ **Protestant Christian** (such as Baptist, Methodist, Wesleyan, Lutheran, Presbyterian, Pentecostal, Episcopalian, Anglican, Church of Christ, Assembly of God, Church of God, United Church of Christ, etc.) (1)
- ❑ **Catholic** (2)
- ❑ **Mormon / Latter-Day Saints** (3)
- ❑ **Jehovah's Witness** (4)
- ❑ **Seventh-Day Adventist** (5)
- ❑ **Jewish** (6)
- ❑ **Muslim / Islam** (7)
- ❑ **Buddhist** (8)
- ❑ **Unitarian / Universalist** (9)
- ❑ **Hindu** (10)
- ❑ **Non-denominational** (11)
- ❑ **Atheist** (12)
- ❑ **Agnostic** (13)
- ❑ **No religion** (14)
- ❑ Other (please specify) (15) _____
- ❑ Prefer not to answer (16)

Do you pray before games collectively as a team?
- ❍ Yes (1)
- ❍ No (2)

Is a sport chaplain available to your team?
- ❍ Yes (1)
- ❍ No (2)

What is your gender?
- ❍ Male (1)
- ❍ Female (2)
- ❍ Self-identify (3) _____
- ❍ Prefer not to answer (4)

What is your ethnicity?
- ❑ Alaskan Native (1)
- ❑ Asian (2)
- ❑ Black (3)
- ❑ Hispanic (4)
- ❑ Native American (5)
- ❑ Pacific Islander (6)
- ❑ White (7)
- ❑ Multi-ethnic (8)
- ❑ Self-identify (9) _____
- ❑ Prefer not to answer (10)

What is your current year of athletic eligibility?
- ❍ Freshman (1)
- ❍ Redshirt Freshman (2)
- ❍ Sophomore (3)
- ❍ Redshirt Sophomore (4)
- ❍ Junior (5)
- ❍ Redshirt Junior (6)
- ❍ Senior (7)
- ❍ Redshirt Senior (8)
- ❍ Graduate Student (9)

What is your current cumulative college Grade Point Average (GPA)?
- ❍ 2.49 or lower (1)
- ❍ 2.5-2.99 (2)
- ❍ 3.0-3.49 (3)
- ❍ 3.5-4.0 (4)
- ❍ No GPA (first semester enrollee) (5)

Do you have a documented learning disability?
- ❍ Yes (1)
- ❍ No (2)
- ❍ Prefer not to answer (3)

How does your institution currently classify your residency status?
- ❍ In-state (1)
- ❍ Out-of-state (2)
- ❍ I do not know (3)

If you have any comments pertaining to your experiences with religiosity, resiliency, and/or perceived stress please write those here.

_____

VITA

Landon T. Huffman, originally from Icard, NC, is the youngest of three children to the parents of Earl and Cheryl Huffman. While pursuing his doctorate at The University of Tennessee he taught introductory courses to Sport Management, Intercollegiate Athletics, and Sport Marketing. Throughout his graduate studies he was fortunate to serve in a variety of university and community service opportunities, including serving as the graduate assistant for Partners in Sports (student organization providing opportunities for students pursuing careers in the sport industry), assisting with the NEST Foundation (for Korean students), coordinating the College Sport Research Institute's Case Study Competition, as well as serving with Project GRAD (programming for students attending low-income, inner-city high schools).

Before beginning his studies under advisor Dr. Rob Hardin at UTK, Landon graduated with both his bachelors and masters degrees in Sport Administration from the University of North Carolina at Chapel Hill, as well as attaining a minor in Coaching Education. He has worked and volunteered in a variety of roles in intercollegiate athletics, including football operations, sport marketing, event operations, compliance, academic mentoring, and student-athlete development.

Landon's research interests include examining the role of faith and spirituality in the holistic care model for intercollegiate athletes, and investigating life beyond sports for athletes, coaches, and athletic administrators. Outcomes of his research aim to provide resources and programming to assist athletes, coaches, and athletic administrators with cultivating their spirituality so they are better able to exhibit resilience when confronted with adversity, stress, and life transitions. His active research agenda resulted in him being awarded a Chancellor's Research Fellowship and ESPN Doctoral Fellowship during the 2013-14 academic year. He was

also awarded a Technology Grant to redesign and enhance course delivery for the Sport Marketing course.

Landon graduated in May 2014 with a Doctorate of Philosophy in Kinesiology and Sport Studies (Sport Management) and intends to pursue a faculty position. Landon is married to Tabatha Fox Huffman.