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## The Effects of Personal Growth Initiative, Grit, and Spirituality on Competition Anxiety in Student Athletes

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## ABSTRACT

Personal growth initiative (PGI) is an intrinsically motivated engagement in growth processes that contribute to their ability to excel in sporting performance (Robitschek, 1998), and PGI may also predict their grit as well. Like PGI, team cohesion influences both performance and well-being in athletes, and little research has explored how spiritually oriented coaching influences team cohesion. This study explored PGI, grit, competition anxiety, intrinsic motivation, and the impact of spiritual involvement in sports on team cohesion. A sample ( $N = 45$ ) of collegiate athletes at private Christian universities completed self-report measures in a survey. PGI was not a significant predictor of grit. While PGI was negatively correlated with competition anxiety ( $r = -.41$ ) and positively correlated with sport satisfaction ( $r = .41$ ), a moderation analysis showed no presence of PGI moderating the relationship between competition anxiety and sport satisfaction. Intrinsic motivation predicted about 16.8% of the variance in PGI. Spiritually oriented coaching and team activities did not predict team cohesion. I discuss implications of the findings and future directions for research.

The Effects of Personal Growth Initiative, Grit, and Spirituality on Competition Anxiety  
in Student Athletes

A Thesis

Presented to

The Faculty of the Department of Psychology

Abilene Christian University

In Partial Fulfillment

Of the Requirements for the Degree

Master of Science

By

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This thesis, directed and approved by the committee for the thesis candidate Taylor Smith, has been accepted by the Office of Graduate Programs of Abilene Christian University in partial fulfillment of the requirements for the degree

Master of Science in Psychology



Assistant Provost for Residential Graduate Programs

Date

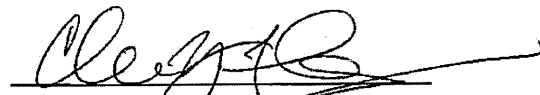
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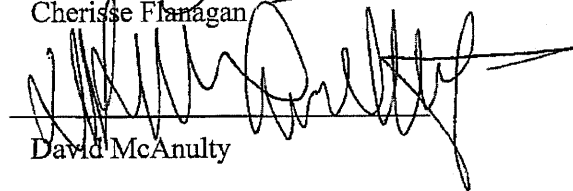


David Mosher, Chair

4-10-23



Cherisse Flanagan



David McAnulty

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## CHAPTER I

### INTRODUCTION

Athletes, coaches, and trainers have been seeking ways to improve athletes and athletic performance since the beginning of sport competition. With the rise of sport psychology, Personal Growth Initiative (PGI) is a promising theory that explores the mechanisms that underlie great sport performances (Frietas et al., 2016). As every great coach knows, athletes will encounter challenges along the way (e.g., self-doubt, anxiety, thoughts of quitting), thus researchers have explored ways to develop an athlete's grit and perseverance (Nothnagle & Knoester, 2022).

For example, athletes often experience adversity from being placed in the public eye during competitions. They are under scrutiny from scouts, other players, coaches, and sometimes themselves. This scrutiny can lead to anxiety and an increased pressure to perform, defined as competitive trait anxiety, which has a negative impact on sport satisfaction and performance (Ford et al., 2017). However, PGI could shield or buffer the negative effects of competition anxiety, and intrinsic motivation is key to developing an athlete's PGI. To that end, spirituality offers a unique avenue for connecting athletic performance to the Sacred, which could enhance intrinsic motivation, PGI, and team cohesion. Sport psychology has not fully explored the benefits of sport-infused spirituality or its potential downside. For instance, a disagreement between a coach and athlete's spiritual worldview could do more harm than good.

This thesis will serve multiple purposes. First, I will investigate if PGI can predict grit in student athletes. Second, I will test if PGI moderates the relationship between an athlete's competition anxiety and sport satisfaction. Third, I will explore if intrinsic motivation is a predictor of PGI in student athletes. Fourth, I will examine if spirituality-infused coaching promotes a positive environment, and if the athletes' own spiritual well-being moderates this relationship.

## CHAPTER II

### LITERATURE REVIEW

#### **Personal Growth Initiative**

Personal Growth Initiative (PGI) is an individual's active, intentional engagement in the process of personal growth (Robitschek, 1998), and it encompasses both cognitive and behavioral aspects associated with intentional development (Weigold et al., 2013). There are four main factors in PGI: readiness for change, planfulness, using resources, and intentional behavior (Robitschek, 1998). These factors contribute to adaptive adjustment, well-being, and resiliency, though some factors can be more relevant than others. For example, Weigold et al. (2013) examined these factors in college students and found that three factors (i.e., readiness for change, planfulness, intentional behaviors) were positively related to psychological well-being and negatively related to psychological distress. Further, researchers have observed PGI in multiple domains, including self-efficacy (Beri & Jain, 2016), body image (Botia, 2018), athletic and academic achievement (Malik et al., 2013; Saraswati, 2019), and sport performance (Nichols et al., 2019).

Self-efficacy, a well-established mechanism in hope theory (Synder, 2000) and psychotherapy interventions (Maddux & Kleiman, 2020), has been intricately linked with PGI. For instance, Sharma and Rani (2013) investigated the relationship between personal growth initiative and self-efficacy. Findings indicated a positive relationship between PGI and self-efficacy. Additionally, self-efficacy predicted PGI, specifically its

components of planfulness and intentional behavior. Thus, intentional self-change requires a person to believe in their capabilities to make that change (i.e., self-efficacy), as well as utilize plans and strategies to bring an intentional change in the behavior (i.e., PGI; Sharma & Rami, 2013). This also holds true for emotional self-efficacy. For example, Beri and Jain (2016) found a positive relationship between PGI, emotional self-efficacy, and general wellbeing in undergraduate students, with PGI as a strong predictor of well-being.

While PGI has been linked to benefits, recent studies seek to uncover the nuances and mechanisms of PGI. For example, Botia (2018) explored factors that promote positive body image in varsity athletes, specifically investigating the mediating effects of PGI and the relative strength of PGI's factors. Planfulness was the strongest mediator between self-compassion and positive body image. Overall, PGI promoted engagement in mindful awareness, which helped varsity athletes find positive body images through a self-compassionate stance (Botia, 2018). In a sample of technical training students, academic achievement positively correlated with planfulness, intentional behavior, and self-esteem (Malik et al., 2013). However, only the components of planfulness and intentional behavior predicted academic achievement (Malik et al., 2013).

Clearly, PGI has a positive effect on various aspects of well-being, though the specific components (i.e., readiness for change, planfulness, using resources, and intentional behavior) have varying effects. Thus, the mindful awareness component of planfulness and the intentional behavioral component could shift an athlete's focus away from competition anxiety and allow them to focus efforts on a sport they find intrinsically rewarding. For example, PGI positively correlated with improving one's competencies

and learning from mistakes and failures (Saraswati, 2019). This is likely because of the focus, dedication, and goal perseverance that are characteristic of goal achievement, as well as of PGI (Saraswati, 2019).

An athlete's growth from PGI goes beyond their level of skill. Division I athletes differ in their athletic ability, but athletes can achieve growth at all levels of athletic performance (Nichols et al., 2019). This growth can be at the individual and team level, and PGI could facilitate this, as well as contribute to overall team cohesion. For instance, time spent with teammates on and off the field creates opportunities to struggle and grow together (Aries et al., 2004; Nichols et al., 2019; Richards & Aries, 1999), and PGI could facilitate an athlete's growth from these bonding opportunities. Still, athletes experience high levels of stress and pressure, which highlights the need for grit and determination.

### **Grit**

Grit is the perseverance and passion to work strenuously and maintain effort towards long-term goals despite challenges, failure, and adversity (Duckworth et al., 2007). Grit has been examined across a myriad of domains, including the U.S. Military (Eskreis-Winkler et al., 2014), the National Spelling Bee (Duckworth et al., 2011), and academic performance (Duckworth et al., 2007). In these settings, individuals with high levels of grit had the tendency to work harder and longer, even after failure, leading researchers to believe that grit may help individuals persevere and dedicate more resources to performance than people with low levels of grit (Moles et al., 2017).

Grit has numerous benefits. It can enhance performance (Auerbach, 2018; Sant, 2013), increase perfectionistic strivings without detrimental perfectionism concerns (Dunn et al., 2021), increase motivation (De la Cruz et al., 2021), and reduce anxiety

(Auerbach, 2018; Criticos et al., 2020). A recent study examined differences in grit levels between male and female collegiate track and field throwers. Findings showed males had a higher overall grit score and lower overall anxiety score than females (Criticos et al., 2020). Thus, high levels of anxiety are detrimental to overall grit, and female athletes may be more susceptible to anxiety than male athletes (Criticos et al., 2020). Anxiety's detrimental effect on grit could be because anxiety breaks down key components of grit, such as resiliency, confidence, and courage (Perlis, 2013), all of which affect an athlete's overall performance.

Sport anxiety negatively impacts sport performance, but grit, mindfulness, and goal orientation can help athlete's maintain high levels of performance while under pressure (Auerbach, 2018). Specifically, high levels of grit intermixed with mindfulness lowers somatic anxiety by shifting an athlete's appraisals of sport-related somatic symptoms (Auerbach, 2018). Mindfully noting one's physiological arousal from a high stakes sporting event allows the athlete to shift their cognitive understanding to appraising muscle soreness or upset stomachs as challenges, rather than threats.

Further, Dunn et al. (2021) examined the relationship between grit and perfectionism in competitive sport. It was determined that athletes experience two types of perfectionism: perfectionistic concerns and perfectionistic strivings. Perfectionistic concerns are the degree to which athletes are preoccupied with the possibility of failing to meet a goal and while perfectionistic strivings are the degree to which athletes set and strive for the accomplishment of high personal performance standards (Gotwals et al., 2012). Results showed a positive correlation between grit and perfectionistic strivings, whereas perfectionistic concerns had a negative correlation with grit. This could be due to

the commonality between grit and perfectionistic strivings in emphasizing perseverance in pursuing a goal.

Grit's impact on performance goes beyond personality traits. For example, Lonel et al. (2022) investigated the relationship between Five-Factor Model of personality (FFM), grit, and performance in rock-climbing. Grit significantly predicted climbing performance over the FFM traits. Researchers believed grit, when defined as a trait, gave a unique contribution to explaining performance and a high explanatory value compared to the FFM model when assessing athletic performance (Lonel et al., 2022). Overall, high levels of grit, along with openness and agreeableness, had a positive impact on rock-climbing performance (Lonel et al., 2022).

In contrast to PGI, grit levels may be somewhat related to an athlete's skill level. In a sample of CrossFit athletes, advanced athletes displayed higher levels of grit and continued interest in the sport than novice athletes (DeBeliso & Cazayoux, 2019). In other words, CrossFit beginners may struggle to persevere through the challenge of pushing one's physical body in various workouts, but the grit in CrossFit veterans enables them to successfully keep participating in the sport. It is also possible that an athlete's grit develops over time and is the result of overcoming previous obstacles.

Like PGI, grit personality has been linked with self-efficacy and motivation. For instance, grit personality is positively associated with self-efficacy and autonomous motivation (De la Cruz et al., 2021). Grit as a personality trait is synonymous with high levels of passion and a determination to persevere, which relates to a person's perception of their self-efficacy (De la Cruz et al., 2021). In turn, grit, and self-efficacy promote higher quality motivational regulations, such as intrinsic, integrated, and identified

motivation (De la Cruz et al., 2021). Hence, grit is a helpful trait to have for perseverance through stress, such as an athlete's competition trait anxiety.

### **Competitive Trait Anxiety**

Competitive trait anxiety has been defined as the tendency to perceive competitive situations as threatening and respond to these situations with apprehension and tension (Turkmen et al., 2013). Competitive trait anxiety impacts athletes at every facet of their performance and well-being. There is some indication that female athletes experience trait anxiety at higher levels than male athletes, though observed differences tend to be small (Turkmen et al., 2013). Regardless, competitive trait anxiety hinders an athlete's ability to find intrinsic motivation and exhibit quality external regulation (behaviors regulated through rewards and constraints; Turkmen et al., 2013).

Like the broader body of literature on anxiety, the cultural impact of gender and social context can impact an athlete's levels of competition anxiety. For example, Kemarat et al. (2022) found that individual-sport athletes had slightly higher anxiety scores than team-sport athletes, as well as significantly higher competitive anxiety in women compared to men. Thus, women may be more susceptible to external factors such as stress, fear, and drama (Criticos et al., 2020). Personality also influences an athlete's competition anxiety. Specifically, high levels of neuroticism make athletes more susceptible to competitive anxiety (Kemarat et al., 2022).

Similarly, Judge et al. (2016) found a negative correlation between competitive anxiety scores and performance in collegiate powerlifters. Findings also showed that women reported higher anxiety scores than the men, further confirming the notion that female athletes are more prone to competition anxiety due to cultural and societal



pressures. In short, athletes experiencing high levels of anxiety tend to view competitive situations as a threat, which impairs their performance (Judge et al., 2016).

Similar to anxiety's impact on female athletes, those who engage in individual sports may be more susceptible to competitive anxiety (Pluhar et al., 2019). When compared to team-sport athletes, anxiety and depression were more commonly reported by individual-sport athletes, and individual-sport athletes were more likely to play their sport for goal-oriented reasons rather than intrinsically motivated reasons (Pluhar et al., 2019). Team sports may hold an inherent social bonding component that helps athletes cope with anxiety, whereas individual sports focus more heavily on an individual's track to success, which can diminish the joy of competition when one's focus is highly bent on success (Pluhar et al., 2019). Anxiety in athletes can amplify the intensity of their distress, with a particular detrimental effect on an athlete's self-confidence (Marin-Gonzales et al., 2022). Younger athletes report higher levels of competitive anxiety, with female athletes and individual-sport athletes reporting the lowest levels of self-confidence (Marin-Gonzales et al., 2022).

Sport-related anxiety negatively correlates with an athlete's motivation (O'Brian & Kilrea, 2021). In their study, O'Brian and Kilrea (2021) examined mental health associations among athletes who reported a unitive experience, which was described as spontaneously occurring states of consciousness characterized by a sense of unity or "oneness" that transcends sensory or cognitive apprehension. Results suggest unitive experiences predict higher levels of sport-related mental health in athletes, demonstrating that athletes who scored high on a unitive experience measure scored 1) lower on sport-

related anxiety, 2) higher on subjective well-being, 3) higher on intrinsic motivation, and 4) lower on amotivation (O'Brian & Kilrea, 2021).

### **Motivation**

A major undercurrent of PGI and grit is motivation, and there are three forms of motivation: intrinsic, extrinsic, and amotivation (Ratelle et al., 2007). Intrinsic motivation is characterized by the desire or urge to perform an activity for its own sake, to perform for enjoyment alone. On the other hand, people primarily motivated by external motivation perform an activity for an outside reason, such as money or fame. Intrinsic motivation often coexists with autonomous motivation, which is behavior governed by the self, whereas extrinsic motivation commonly relates to controlled motivation, or behavior not self-initiated or self-governed (Ratelle et al., 2007). Out of the three, intrinsic motivation is theorized to lead to well-being. For example, Silva et al. (2021) investigated the impact of intrinsic motivation on the anxiety of Wheelchair Handball athletes. Intrinsic motivation had a positive influence on competitive anxiety, and intrinsic motivation was a determining factor for controlling competitive anxiety in these athletes (Silva et al., 2021).

Certain motivational climates, namely a task-involving climate or ego-involving climate, can facilitate an athlete's motivational source (Benczenleitner et al., 2013). Task-involving climates measures how athletes perceive coaches' emphasis on their sport effort and improvement, while Ego-involving climates measure athletes' perceptions of punishment of mistakes, recognition of only the best players, and intra-team competition among athletes (Grant & Dweck, 2003). In a sample of elite hammer throwers, male

athletes reported higher levels of intrinsic motivation and lower levels of amotivation than female athletes (Benczenleitner et al., 2013).

Coaches can build intrinsic motivation in young players by mentoring them and developing their love and commitment to the sport. Coaches create the motivational climate for their players, and this climate develops over time. In a sample of 217 athletes, athlete's that perceived their coach to promote a task-involving motivational climate also reported higher intrinsic motivation and lower dysfunctional anxiety and anger during a three-month time period (Ruiz et al., 2019). However, ego-involving climates promoted external motivation and more dysfunctional anxiety and anger (Ruiz et al., 2019). Emotions, both functional and dysfunctional, mediated the pathway in which a motivational climate predicted an athlete's autonomous or controlled motivation across a three -month time period (Ruiz et al., 2019). These findings have been replicated in winter sport athletes, with task-oriented climates eliciting positive pathways to autonomous and controlled motivation, while ego-oriented climates had a negative association with controlled motivation (Wu et al., 2021). Further, the ego-oriented climate produced the most amotivation which increased the athletes' symptoms of psychological distress and burnout (Wu et al., 2021).

In all of these studies, an athlete's perception of their coach's style impacts the athlete's motivation, and other studies connected a coaching style to an athlete's grit. Athletes that perceive their coach to provide positive feedback, social support, and training or instructions also reported higher levels of grit perseverance (Braun, 2021). However, in this study, the coach's perceptions did not significantly correlate with overall grit, perseverance, or consistency (Braun, 2021).

## Coaching

Beyond the motivational climate coaches promote, there are two main styles of coaching: autonomy-supportive coaching and controlling coaching behaviors (Coatsworth & Conroy, 2009). Autonomy-supportive coaching includes practices such as 1) providing choice for athletes, 2) providing a rationale for tasks, 3) non-controlling competence feedback, 4) avoiding criticisms, controlling statements, or tangible rewards for tasks, 5) acknowledging the athletes' feelings and perspectives, and 6) providing opportunities for athletes demonstrate initiative and act independently (Coatsworth & Conroy, 2009). This coaching style promotes self-determination in athletes because it contributes to the satisfaction of their psychological needs, including autonomy, competence, and relatedness (Bartholomew et al., 2010). A controlling style includes coercion, pressuring, and authoritarianism to impose specific and preconceived ways of thinking and behaving on athletes. These coaches that apply external pressures undermine an athlete's psychological needs and sense of determination, leading motivation to be based more on coercive demands, reward contingencies, guilt, or obligation (Bartholomew et al., 2010).

Amorose and Anderson-Butcher (2015) tested the effects of perceived autonomy-supportive and controlling coaching behaviors on the motivational response of adolescent athletes. Autonomy-supportive and controlling behaviors significantly predicted each of the motivational variables (e.g., intrinsic regulation, integrated regulation, identified regulation, introjected regulation, external regulation, amotivation, perceived competence, perceived autonomy, perceived relatedness, and burnout). Positive motivational responses positively correlated with autonomy support, and the most

positive motivational outcomes were associated with the perceptions of relatively higher autonomy support and relatively lower controlling behaviors (Amorose & Anderson-Butcher, 2015).

Autonomy-supportive coaching promotes grit, mental toughness, and autonomous motivation in athletes (Scharneck, 2017). In short, a coach that focuses on what is strong versus what is wrong will build healthier, more intrinsically motivated players. Mental toughness develops through autonomous motivation, and this relationship is even stronger than the positive correlation between grit and autonomous motivation (Scharneck, 2017). Few studies have investigated how athlete's perceptions of coaching behavior affect performance. Keatholestwe and Malete (2019) examined if coaching efficacy is predictive of player perceptions of coaches' leadership styles, team atmosphere, and team performance. Both the coaches and athletes rated coaching behaviors and techniques. Coaches' self-ratings on technique predicted player perceptions of the coaches' leadership styles (Keatholestwe & Malete, 2019).

Similarly, an autonomy-supportive coaching style and athlete's autonomous motivation promotes an athlete's enthusiasm and desire to keep playing a sport (O'Neil & Hodge, 2019). In contrast, maladaptive motivational styles (i.e., controlling coaching style, controlled motivation) negatively impact an athlete's commitment and enthusiasm for their sport (O'Neil & Hodge, 2019). The combination of commitment and motivation is key to understanding an athlete's sport continuation (O'Neil & Hodge, 2019). Particularly in young players, coaches that encourage autonomy and commitment during training (i.e., autonomy-supportive coaching style) strongly contribute to the development of intrinsic motivation in young players (Ercegovac et al., 2020).

Ultimately, coaching style has a significant impact on athlete motivation, specifically autonomy-supportive coaching having the most positive impact on motivation and performance of athletes (Marcone, 2022).

### **Spirituality and Coaching**

Spirituality could be a unique factor in an athlete's perception of their coach's motivational climate or coaching style, and spirituality often prescribes inherent meaning in life, which could promote intrinsic motivation in athletes if they incorporate their spirituality into their sport. Vinson and Parker (2022) presented empirical evidence to explore the philosophies, intended practices, and sociocultural factors influencing how Christian coaches sought to lead in competitive sporting environments. They identified three main categories of 1) building the environment, 2) promoting holistic athlete development, and 3) service and calling (Vinson & Parker, 2022). Findings indicated a strong connection between the philosophies and intended practices of participants and the theoretical foundations of servant leadership. When coaches have a foundation of servant leadership, it is common for them to adopt an athlete-centered approach, translating into an intentional desire to develop and empower those with whom they work (Vinson & Parker, 2022).

In interviews with Christian University student-athletes, there were five ways athletes perceived care and support from their coaches (Schools et al., 2020). First, athletes perceived care when referring to their team and coach with a family metaphor, and their view of what caring means were largely learned from their own relational families. Second, athletes defined coach caring as involving holistic care and love, and they defined a lack of coach caring based on concerns about winning, lack of

communication, and negative coaching behaviors. Third, a caring climate involved coaching towards self-determination and transformation, collaborative learning, and positive relationships between the coach and players. Fourth, athletes reported their coaches embodied Christian principles and values, such as loving thy neighbor, valuing the holistic development of people, serving as a role model, and being responsible for those they are serving. Fifth, the athletes perceived their coach's caring practices and climates as positive and conducive to personal growth and development. In light of this, spirituality could play a large role in how religious athletes feel and perceive support from coaches, which could positively contribute to team cohesion.

Spirituality has been a factor traditionally associated with sound health, specifically its positive influence on physical and psychological health (Jirasek, 2015). Sport and religion have gone hand in hand for centuries. Sport embodies religious values, including character development, hard work, and perseverance. Like religion, sport inculcates these qualities and behaviors (Bryant & McElroy, 1997).

More recently, churches incorporate sports programs, such as church leagues and tournaments, as well as various other sports, fitness, and recreation program activities to encourage social bonding (Jeroh, 2012). Sport also frequently incorporates common aspects of spirituality, namely prayer by athletes for protection, good performance, or victory in competition (Lee, 2004). This has been found throughout all levels of sport, including professional, collegiate, interscholastic, and youth (Lee, 2004).

When the strength of religious faith in athletes and non-athletes was compared, non-athletes attending a religion affiliated institution reported stronger religious faith than athletes attending a non-religion affiliated institution (Bell et al., 2009). In this case,

participation in sports did not influence the level of religious faith in student-athletes, but it was an athlete's environment that had the greatest impact. Additionally, Evans and Petersen (2015) examined the religiosity of student and non-student athletes at the Division I level in faith based (FB) and non-faith based (NFB) institutions. There were no significant differences in the strength of religious faith between student and non-student athletes at FB institutions versus student and non-student athletes at a non-faith based (NFB) institutions (Evans & Petersen, 2015). However, there was a significant difference in religiosity between the student-athletes and non-student athletes at the faith-based institution (Evans & Petersen, 2015).

While spiritual well-being has been associated with aspects of good physical and mental health, few studies have examined how it relates to athletic coping skills. Spiritual well-being may positively influence other psychological variables, like athletic coping skills, that are necessary for sport performance (Ridnour & Hammermeister, 2008). Specifically, athletes who scored higher in spiritual well-being displayed better athletic coping skills, suggesting that spiritual wellbeing may be a helpful construct in developing enhanced coping aptitude necessary for sport performance (Ridnour & Hammermeister, 2008).

Sport is widely known for exhibitions of both superstition and religious ritual, specifically prayer, but little research has been done to differentiate the two. Superstitions in sport contexts are commonly the result of uncertainty or anxiety before competition and performing a particular superstition may become a tool to help athletes ease performance anxiety (Maranise, 2013). Ritual prayer, however, is not as individualized as superstitions. Prayer, besides alleviating anxiety, is also used for coping in uncertain



stressful situations, sanctifying athletes' commitment to sport, establishing a bond between teammates, and maintaining social control (Coakley, 2003). Thus, religious rituals have a greater positive impact on psychological well-being than superstitions (Maranise, 2013).

For example, Seitz et al. (2014) examined the perceptions of student athletes on how universities, coaches, administrators, and the social setting of school influence their religious well-being. Athletes indicated their athletic department created a positive culture towards religious growth and positively influenced their religious well-being, even though most of the impact was indirect. The department examined was not inherently faith based but held a positive climate and a spirit of neutrality towards religion, which fostered positive growth (Seitz et al., 2014). Even though the athletes were Christian and the university they attended was not faith-based, positive coaching styles and coaching climates allow for religious development and well-being, even indirectly.

### **Hypotheses**

This thesis will serve multiple purposes. My first hypothesis is that PGI will predict grit in student athletes. My second hypothesis is that an athlete's competitive anxiety will negatively affect sport satisfaction, but PGI will moderate sport satisfaction. My third hypothesis is that intrinsic motivation is a positive predictor of PGI in student athletes. My fourth hypothesis is that spiritual involvement in sport will positively predict team cohesion and this relationship will be moderated by the athlete's own spiritual well-being. Specifically, the relationship between spiritual involvement in sport and team cohesion will be stronger at high levels of an athlete's spiritual well-being.

CHAPTER III  
METHODOLOGY

**Sample**

Participants were selected from a convenient sample of college athletes at various universities in Texas. I sent recruitment emails to coaches of different sport teams to have their players complete. Participants were given the chance to provide consent to participate in the study. They completed the questionnaire with eight measures that altogether took around 15-20 minutes to complete. 45 college athletes responded to the questionnaire. Some responses were eliminated due to declining to participate in the study or failure to complete all of the measures, which brought the sample down to a total of 38 participants. The mean age of participants was 19.95 ( $SD = 1.45$ ), ranging from 18 to 24 years old. Of this sample, 73.8% reported identifying as female ( $n=28$ ), 23.6% as male ( $n = 9$ ), and 2% as non-disclosed ( $n = 1$ ). 52.6% identified as White/Caucasian ( $n = 20$ ), 7.8% as Black/African American ( $n = 3$ ), 2% as Native American ( $n = 1$ ), 2% as Asian/Pacific Islander ( $n = 1$ ), 31.5% as Latino/Hispanic ( $n = 12$ ), and 2% as non-disclosed ( $n = 1$ ). For sexual orientation, 89.4% reported to be heterosexual ( $n = 34$ ), 5.2% bisexual ( $n = 2$ ), 2% queer ( $n = 1$ ), and 2% reported preferring not to say ( $n = 1$ ). When asked about religious affiliation, 68.4% reported to be of various Christian traditions ( $n = 26$ ), 2% reported to be Buddhist ( $n = 1$ ), 18.4% reported to be non-religious ( $n = 7$ ), 5.2% reported to be other, and 2% reported to non-disclose ( $n = 2$ ).

## Measures

### Demographics

A 10-item questionnaire was used to collect demographic information from participants. I asked participants a variety of questions in multiple choice and short answer format, such as their assigned gender at birth, current gender, age, race/ethnicity, sexual orientation, religious affiliation, current sport participation, and their position on their current team.

### Personal Growth Initiative

Personal Growth Initiative was measured using the Personal Growth Initiative Scale-II (PGIS-II) developed by Christine Robitschek. (2008). The scale includes a total of 16 items. Participants will rate each item on a seven-point Likert scale ranging from 1 (Disagree Strongly) to 7 (Strongly Agree). There are four subscales used in the PGIS-II including: Readiness for Change (e.g., “I figure out what I need to change about myself”), Planfulness (e.g., “I set realistic goals for what I want to change about myself”), Using Resources (e.g., “I ask for help when I try to change myself”), and Intentional Behavior (e.g., “I actively work to improve myself”). In its validation study, the PGIS-II demonstrated strong reliability across a six-week period ( $\alpha = .90-.94$ ). Cronbach alpha internal consistency coefficients of the subdimensions changed from 0.81 to 0.89 and Cronbach alpha internal consistency coefficient for the whole scale was 0.92 (Robitschek et al., 2012). Test-retest reliability figures were .82, .67, .70, and .62 for the PGIS-II supported by confirmatory factor analysis (Robitschek et al., 2012). For this study, the Cronbach’s Alpha was .90.

## **Competitive Trait Anxiety**

Competitive Trait Anxiety was measured using the Sport Competition Anxiety Test (SCAT) developed by Martens (1977). The scale includes a total of 15 items. Participants will rate the frequency with which they experience each item on a three-point Likert scale including 1 (Rarely), 2 (Sometimes), or 3 (Often). Ten of the items measure symptoms associated with anxiety while the other five items are not scored to reduce the likelihood of response bias. An example of an item is “Before I compete, I get a queasy feeling in my stomach.” The internal consistency of the test was acceptable, as Kuder-Richardson coefficients were 0.90 and higher. The reliability coefficients for the test-retest technique were between .60 and .80. Concurrent validity as indicated by correlations of test scores with those on personality tests or selected parts of such tests and with other paper-and-pencil tests of anxiety yielded coefficients described as positive but low (Martens, 1977). For this study, Cronbach’s Alpha was .80.

## **Grit**

Grit was measured using the Grit Scale developed by Duckworth (2007). This scale includes a total of 12 items. Participants will rate each item on a five-point Likert scale ranging from 1 (Not like me at all) to 5 (Very much like me). An example of an item is “Setbacks don’t discourage me.” The internal consistency of the 12-point Grit and subscales has been reported to range from  $\alpha=0.68$  to 0.78 (Duckworth et al., 2007). The test re-test (stability reliability) of the 12-point Grit and subscales has been reported to range from ICC=0.76 to 0.91 (Cazayoux et al., 2018). For this study Cronbach’s Alpha was .78.

## **Motivation**

Intrinsic motivation was measured using the Sport Motivation Scale—II (SMS-II) originally developed by Briere et al. (1995) and then translated to English by Pelletier et al. (1995). This scale includes a total of 18 items that measure six subscales: intrinsic regulation, integrated regulation, identified regulation, introjected regulation, external regulation, and non-regulation. We are interested in intrinsic motivation items, which include: “Because it is very interesting to learn how I can improve”, “Because I find it enjoyable to discover new performance strategies,” and “Because it gives me pleasure to learn more about my sport.” Participants will rate each item on a seven-point Likert scale ranging from 1 (does not correspond at all) to 7 (corresponds completely). Results from a validity study have revealed that the SMS has adequate levels of validity and reliability. Additionally, the confirmatory factor analysis supported the seven-factor structure of the SMS and provided some support for the construct validity of the scale (Pelletier et al., 1998). The reliability of each subscale was found to range from 0.73 to 0.86. The mean alpha score for the SMS was .75 (Pelletier et al., 1995). For this study the Cronbach’s Alpha was .73.

## **Sport Satisfaction**

Athlete satisfaction was measured using the Satisfaction Scale for Athletes (SSA) developed by Caliskan and Ozge-Baydar (2016). This scale consists of 16 items that measure three subscales: satisfaction with coach, satisfaction with team performance, and satisfaction with teammates. Participants will rate each item on a seven-point Likert scale ranging from 1 (extremely dissatisfied) to 7 (extremely satisfied). An example item is “the relationship between the coach and the star athlete.” Results of exploratory factor

and confirmatory factor analyses proved the construct validity of the SSA. Reliability was tested using internal consistency and was found to have a score of 0.92 (Caliskan & Baydar-Arican, 2016). For this study Cronbach's Alpha was .94.

### **Team Cohesion**

Team cohesion was measured using the Group Environment Questionnaire (GEQ) developed by Carron et al. (1985). This scale consists of 18 items measuring four subscales: individual attractions to the group – social (ATGS), individual attractions to the group – task (ATGT), group integration – social (GIS), and group integration – task (GIT). Participants will rate each item on a nine-point Likert scale ranging from 1 (strongly disagree) to 9 (strongly agree). An example item is “Some of my best friends are on this team.” A validation study provided evidence for the multilevel factorial validity of the GEQ and suggests that group-level analysis and interpretation should be emphasized in future research. Confirmatory factor analysis found Cronbach's alpha of .85, indicating moderate internal reliability. The standardized factor loadings ranged from .09 to .86, with a moderate average of .48. Inter-factor correlations ranged from .48 to .92. (Whitton & Fletcher, 2013). For this study Cronbach's Alpha was .90.

### **Spirituality**

Spirituality's infusion into coaching was measured using the Spiritual Involvement Scale for Sport (SISS). This scale consists of 16 items with two subscales: the frequency of spiritual involvement from the coach (e.g., “My coach references scripture”) and the perceived importance of spiritual involvement with the coach (e.g., “Religious beliefs influence all my coach's dealings in life”). Participants rated each subscale item on a five-point Likert scale ranging from 1 (never) to 5 (always) and 1 (not

at all true) to 5 (totally true) for each subscale respectively. This scale was adapted from the Religious Commitment Inventory – 10, a self-report scale, to be an other-report scale. Scores on the RCI–10 had strong estimated internal consistency, 3-week and 5-month test–retest reliability, construct validity, and discriminant validity (Worthington et al., 2003). For this study Cronbach’s Alpha was .97.

## **Hypotheses**

My first hypothesis is that PGI will predict grit in student athletes. Specifically, I expect higher levels of PGI to predict higher levels of grit. I will test this hypothesis using a simple regression analysis in SPSS. I will standardize the predictor and outcome variable to aid interpretation.

My second hypothesis is that an athlete’s competitive anxiety will negatively affect sport satisfaction, but PGI will moderate this relationship. Specifically, it is expected that higher levels of competitive anxiety will correlate with lower sport satisfaction, but PGI will buffer the effects of anxiety. I will test this hypothesis using hierarchical regression as outlined by Aiken and West (1991). The predictor and moderator variables will be standardized to reduce multicollinearity and aid interpretation. If an interaction is significant, I will conduct a simple slopes analysis to interpret the interaction.

My third hypothesis is that intrinsic motivation is a positive predictor of PGI in student athletes. Specifically, I expect higher levels of intrinsic motivation to predict higher levels of PGI. I will test this hypothesis using a simple regression analysis in SPSS. The predictor and outcome variable will be standardized to aid interpretation.

My fourth hypothesis is that spiritual involvement in sport will positively predict team cohesion and that this relationship will be moderated by the athletes' own spiritual well-being. Specifically, higher levels of spiritual involvement will predict higher levels of team cohesion, and this relationship will be stronger for athletes with high levels of spiritual well-being. I will test this hypothesis using hierarchical regression as outlined by Aiken and West (1991). The predictor and moderator variables will be standardized to reduce multicollinearity and aid interpretation. If an interaction is significant, I will use a simple slopes analysis to interpret the interaction.



## CHAPTER III

### RESULTS

I originally started with 45 participants who answered the survey. Those who did not finish completing the survey or who opted not to participate were cut from the study. I ended with 38 participants who fully completed the survey and gave consent to participate. I checked for skewness, kurtosis, and normality. Out of all the measures, only one outlier was found and appropriately dealt with. I analyzed the means, standard deviations, and correlations among all study variables (see Table 1 and Table 2). Table 1 will outline the correlations amongst all variables while Table 2 lists the means and standard deviations for each variable.

#### **Hypothesis 1**

My first hypothesis was that Personal Growth Initiative (PGI) would be a significant, positive predictor of the variance in grit in student athletes. I tested this hypothesis using a simple regression analysis with grit as the dependent variable and PGI as the independent variable. This hypothesis was not supported. PGI predicted about 8.5% of the variance in grit ( $R^2 = .085$ ,  $F(1, 34) = 3.15$ ,  $p = .085$ ).

#### **Hypothesis 2**

My second hypothesis was that PGI would moderate the relationship between competition anxiety and sport satisfaction. Specifically, I expected that PGI would buffer the deleterious relationship between competition anxiety and sport satisfaction. I tested this hypothesis using hierarchical regression as outlined by Aiken and West (1991). The

predictor and moderator variables were standardized to reduce multicollinearity and aid interpretation. This hypothesis was not supported. In Step 1, PGI and competition anxiety predicted about 22% of the variance in sport satisfaction ( $R^2 = 0.18$ ,  $F(2, 32) = 4.61$ ,  $p = .017$ ). The addition of the interaction term in Step 2 was not a significant predictor of the variance in sport satisfaction ( $\Delta R^2 = .05$ ,  $\Delta F(1, 31) = 2.01$ ,  $p = .166$ ).

### **Hypothesis 3**

My third hypothesis was that intrinsic motivation would positively predict the variance in PGI. I tested this hypothesis using a simple regression analysis with PGI as the dependent variable and intrinsic motivation as the independent variable. This hypothesis was supported. Intrinsic motivation predicted about 16.8% of the variance in PGI ( $R^2 = .168$ ,  $F(1, 34) = 6.85$ ,  $p = .013$ ).

### **Hypothesis 4**

Due to a clerical error in Qualtrics, the athlete's spiritual well-being scale was not included in the survey sent out to participants. In response, I decided to still test the predictor (i.e., spiritual involvement in sport) and outcome variables (i.e., team cohesion) without the presence of the moderator (i.e., athlete's spiritual well-being). In this regard, I predicted spiritual involvement would positively predict the variance in team cohesion. I tested this hypothesis using a simple regression analysis with team cohesion as the dependent variable and spiritual involvement as the independent variable. This hypothesis was not supported. Spiritual involvement predicted about 0.3% of the variance in team cohesion ( $R^2 = .003$ ,  $F(1, 33) = .114$ ,  $p = .738$ ).

**Table 1**

*Correlations of PGI, Motivation, Competition Anxiety, Grit, Sport Satisfaction, Team Climate, and Spiritual Involvement*

	1	2	3	4	5	6	7
1. Personal Growth Initiative	-	0.41*	-0.41*	0.29	0.45**	0.18	0.17
2. Intrinsic Motivation	0.41	-	-0.06	0.25	0.26	0.34*	-0.08
3. Competition Anxiety	-0.41*	-0.06	-	-0.24	-0.22	0.07	-0.19
4. Grit	0.29	0.26	-0.24	-	0.42*	0.37*	0.002
5. Sport Satisfaction	0.45**	0.26	-0.22	0.42*	-	0.63*	-0.15
6. Team Climate	0.18	0.34*	0.07	0.37*	0.63**	-	-0.06
7. Spiritual Involvement Scale	0.17	-0.08	-0.19	0.002	-0.15	-0.06	-

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

**Table 2**

*Means and Standard Deviations of All Study Variables*

	Mean	Standard Deviation
1. Personal Growth Initiative	4.77	.58
2. Intrinsic Motivation	15.83	3.21
3. Competition Anxiety	2.09	.55
4. Grit	3.59	.47
5. Sport Satisfaction	4.37	1.19
6. Team Climate	6.34	1.47
7. Spiritual Involvement Scale	3.10	1.13

## CHAPTER V

### DISCUSSION

#### **Overview**

Personal growth Initiative is an individual's active, intentional engagement in the process of personal growth encompassing cognitive and behavioral aspects of intentional development (Robitschek, 1998; Weigold et al., 2013). PGI is a significant contributor to numerous psychological outcomes in sporting contexts. This study used a sample from Christian-affiliated universities to explore the impact of PGI on grit, to test PGI as a moderator of the performance-anxiety connection (Bali, 2015), and to explore an athlete's intrinsic motivation as a predictor of PGI. Further, this study examined how spirituality-infused coaching impacted team cohesion. Overall, the results of this study were largely counter to my hypotheses, each containing interesting takeaways.

#### **Personal Growth Initiative and Grit**

There have not been many studies done on PGI as a predictor for grit, or vice versa. While PGI entails adaptive adjustment and resiliency (Weigold et al., 2013), grit goes beyond that and includes maintaining effort towards a long-term goal (Duckworth et al., 2007). Contrary to my first hypothesis, higher levels of PGI did not predict grit in student athletes. There are many possible reasons my hypothesis was unsupported. First, PGI was largely conceived as a construct vital to the engagement and growth process (Robitschek, 1998), whereas grit as a construct may relate more to perseverance in adversity (Duckworth et al., 2007). Thus, PGI may be more about the starting of a task,

whereas grit is about maintaining effort through adversity. It is possible these constructs occur at different moments of time for an athlete, and the cross-sectional, survey design could not appropriately capture this. Second, it is possible there is a link but, because of the low sample size, this study was likely underpowered. There might have been a type II error made by accepting the null hypothesis. Third, there is a chance that PGI and grit do not share a relationship for my specific sample of athletes, who were largely White, female, Christians at the collegiate level. PGI and grit may be more connected to other variables not present in my limited sample collected through convenience sampling methods.

### **Personal Growth Initiative, Sport Satisfaction, and Competition Anxiety**

High levels of competition anxiety have a well-established theoretical link to sport satisfaction by way of if an athlete is highly anxious, this negatively impacts performance (Judge et al., 2016; Turkmen et al., 2013), and decreased an athlete's motivation for the sport, thus decreasing their overall satisfaction with the sport (O'Brian & Kilrea, 2021). Personal growth initiative was theorized to provide a buffer to competition anxiety's deleterious effects. However, this moderation hypothesis was not supported. While PGI was significantly correlated with competition anxiety ( $r = -.41$ ) and sport satisfaction ( $r = .45$ ), there was no presence of moderation. Further, counter to previous research, competition anxiety had no significant relationship to sport satisfaction ( $r = -.22$ ). My small sample of athletes, on average, reported "sometimes" experiencing competition anxiety ( $M = 2.09$ ,  $SD = .55$ ) and reported their sport satisfaction, on average, somewhere between "neutral" and "slightly satisfied" ( $M = 4.37$ ,  $SD = 1.19$ ). Anxiety is essential to competition; however, when anxiety gets too high or too low,

performance can be negatively impacted, which informs the inverted-U hypothesis of competition anxiety (Bali, 2015). Thus, it is possible my sample's competition anxiety fell within an average, normal range that had no negative impact on performance. It is possible that PGI would moderate the relationship between competition anxiety and sport satisfaction, but only when competition anxiety is reported at high or low levels.

### **Intrinsic Motivation and Personal Growth Initiative**

Previous research found intrinsic motivation to be a major undercurrent of PGI (Ratelle et al., 2007), and this study's results supported this link. Specifically, intrinsic motivation was positively correlation with PGI ( $r = 0.41$ ). Likely, this link demonstrates how a central tenant of intrinsic motivation is performing an activity for its own sake and for enjoyment alone, which contributes to the four main factors of PGI (i.e., readiness for change, planfulness, using resources, and intentional behavior) Robitschek, 1999). This study's sample included small Division I and Division III athletes, who may rely more heavily on intrinsic motivation since these athletes are not receiving external rewards (e.g., unpaid, limited scholarships) at these universities. Thus, to play sports at a small college requires a passion for the game and enjoyment in the game itself.

### **Spiritual Involvement and Team Cohesion**

Spiritual involvement in coaching and sports can create positive climates that encourage growth and well-being in athletes (Seitz et al., 2014; Vinson & Parker, 2022). Contrary to previous literature, spiritual involvement did not positively predict team cohesion ( $r = -.06$ ). Despite both universities sampled being private Christian universities, there was no link between the athlete's perception of closeness and cohesion in the team and their perception of their coach's incorporation of spirituality into practice,

games, and team activities. This finding may indicate that there are more factors other than shared religion or beliefs that play into team bonding. The original hypothesis included the athlete's own spiritual well-being as a moderator between spiritual involvement and team climate, but this would likely not be the case given the predictor and outcome variables showed no connection. Further, the correlation matrix showed that spiritual involvement in sports had no connection to any of the study's variables. Athletes at Christian universities are likely to be frequently exposed to spiritual content, which could habituate them into viewing spirituality-infused coaching as mundane or a non-factor. Indeed, habituation research clearly shows a link to which an innate response to a stimulus decreases over time after repeated or prolonged presentations of that stimulus (Rankin et al., 2009). In this case, athletes may find that spirituality -infused coaching or spiritual involvement in sports has no impact on their athletic performance since they are already exposed to many instances of spiritual content or activities from their university.

### **Limitations**

Limitations of the study first include a fairly homogeneous demographic population of participants regarding race/ethnicity and religious orientation (52.6% White/Caucasian, 68.4% Christian-Catholic), as well as a slightly homogeneous gender pool with 73.8% of participants identifying as female. The study also used a cross-sectional design instead of longitudinal, where we measured constructs in only one moment of time and it is possible that in a longitudinal design that these constructs could change. Using a cross-sectional research design also makes it impossible to make causal conclusions about the relationships found between variables.

The self-report nature of the measures used in this study impart another limitation. Participants did not have set experimental environments but had the freedom to complete the survey online. Various environmental settings could be reasonably assumed to alter testing reliability and validity. As mentioned above, the demographic homogeneity of participants provides a limited scope in which to view the interactions of the variables. A more diverse sample size could lead to a greater understanding of findings regarding the specific interactions of these variables. There could be a potential measurement error due to the creation of a new scale, the SISS. I adapted the scale from a similar measure, but the chance remains there was measurement error present (e.g., poor validity/reliability).

### **Future Directions**

Further research could benefit from a more heterogeneous sample in regard to race, religion, gender, and sport played. A longitudinal research design could better test for how PGI and grit develop over time in athletes. Additionally, a more appropriate scale measuring spiritual involvement as well as adding a spiritual well-being scale would be beneficial. Including more universities of different types including various divisions, different locations, and private religious-affiliated universities versus public state universities would also increase the sample size and diversity and provide insight to potential similarities and differences of different types and levels of collegiate athletes.

Other studies might investigate how habituation impacts an athlete's perception of spiritual involvement in sports, using a longitudinal design to capture the habituation process. Further, the literature could improve from qualitatively exploring how various coaches use spirituality and incorporate this into locker rooms, practices, team activities,



or games, as well as test for how these spiritual practices impact teams, athletic performance, or well-being.

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## APPENDIX A

### Institutional Review Board Approval Letter

Date: 3-26-2023

IRB #: IRB-2022-128

Title: The Effects of Personal Growth Initiative, Grit, and Spirituality on Competition Anxiety in Student Athletes

Creation Date: 11-29-2022

End Date:

Status: **Approved**

Principal Investigator: David Mosher

Review Board: ACU IRB

Sponsor:

#### Study History

Submission Type	Initial	Review Type	Exempt	Decision	<b>Exempt</b>
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#### Key Study Contacts

Member	David Mosher	Role	Principal Investigator	Contact	dkm20a@acu.edu
Member	David Mosher	Role	Primary Contact	Contact	dkm20a@acu.edu
Member	Taylor Smith	Role	Primary Contact	Contact	tms16i@acu.edu

## APPENDIX B

### Recruitment Email

Hello,

I am doing a research study entitled **The Effects of Personal Growth Initiative, Grit, and Spirituality on Competition Anxiety in Student Athletes**. The purpose of the study is exploring how athletes initiate change, persevere through adversity, and to explore various aspects of your sporting experience. To qualify to participate, you must be a student athlete that is 18 years old or older.

Participation would require about 10-20 minutes of your time, to complete an online survey. Your participation could help researchers better understand a student athlete's experience.

If you are interested in participating, please use this link <INSERT LINK> and you will be presented a Consent Form through Qualtrics, an online survey builder, with more info.

Sincerely,

Taylor Smith  
Student Investigator

## APPENDIX C

### Questionnaires

## Demographics

1. **What was your gender assigned to you at birth?**
  - a. Male
  - b. Female
2. **What is your current gender?**
  - a. Male
  - b. Female
  - c. Transgender Male
  - d. Transgender Female
  - e. Gender Queer
  - f. Other \_\_\_\_\_
3. **What is your age?** \_\_\_\_\_
4. **What is your race?**
  - a. White/Caucasian
  - b. Black/African-American
  - c. Asian/Pacific Islander
  - d. Latino/Hispanic
  - e. Native American
  - f. Multiracial \_\_\_\_\_
  - g. Other \_\_\_\_\_
5. **What is your current sexual orientation?**
  - a. Heterosexual
  - b. Gay
  - c. Lesbian
  - d. Bisexual
  - e. Queer
  - f. Other \_\_\_\_\_
6. **What is your current religious affiliation?**
  - a. Christian – Catholic
  - b. Christian – Evangelical Protestant
  - c. Christian – Mainline Protestant
  - d. Christian - Black Protestant
  - e. Latter-day Saints
  - f. Muslim
  - g. Buddhist
  - h. Hindu
7. **How long have you been a part of your current religious affiliation?**
  - i. Jewish
  - j. Atheist
  - k. Agnostic
  - l. None
  - m. Other \_\_\_\_\_
8. **What university do you attend?**
  - a. Abilene Christian University
  - b. McMurry University
  - c. Other \_\_\_\_\_
9. **What sport do you currently play?**
10. **How long have you been a part of your current team?**
  - a. 0-6 months
  - b. 6-12 months
  - c. 12-28 months
  - d. More than 18 months
11. **What is your lineup position on your team? Select all that apply.**
  - a. Starter
  - b. Back-up
  - c. First String
  - d. Second String

**Personal Growth Initiative Scale – II ©  
Christine Robitschek, Ph.D., 2008**

For each statement, please mark how much you agree or disagree with that statement.  
Use the following scale:

0	1	2	3	4	5
Disagree Strongly	Disagree Somewhat	Disagree a Little	Agree a Little	Agree Somewhat	Strongly Agree

- \_\_\_ 1. I set realistic goals for what I want to change about myself.
- \_\_\_ 2. I can tell when I am ready to make specific changes in myself.
- \_\_\_ 3. I know how to make a realistic plan in order to change myself.
- \_\_\_ 4. I take every opportunity to grow as it comes up.
- \_\_\_ 5. When I try to change myself, I make a realistic plan for my personal growth.
- \_\_\_ 6. I ask for help when I try to change myself.
- \_\_\_ 7. I actively work to improve myself.
- \_\_\_ 8. I figure out what I need to change about myself.
- \_\_\_ 9. I am constantly trying to grow as a person.
- \_\_\_ 10. I know how to set realistic goals to make changes in myself.
- \_\_\_ 11. I know when I need to make a specific change in myself.
- \_\_\_ 12. I use resources when I try to grow.
- \_\_\_ 13. I know steps I can take to make intentional changes in myself.
- \_\_\_ 14. I actively seek out help when I try to change myself.
- \_\_\_ 15. I look for opportunities to grow as a person.
- \_\_\_ 16. I know when it's time to change specific things about myself.



## Sport Competition Anxiety Test

Read each statement below, decide if you “Rarely”, “Sometimes” or “Often” feel this way when competing in your sport, and write the corresponding number in the blank.

1  
Rarely

2  
Sometimes

3  
Often

- \_\_\_ 1. Competing against others is socially enjoyable
- \_\_\_ 2. Before I compete, I feel uneasy
- \_\_\_ 3. Before I compete, I worry about not performing well
- \_\_\_ 4. I am a good sportsman when I compete
- \_\_\_ 5. When I compete, I worry about making mistakes
- \_\_\_ 6. Before I compete, I am calm
- \_\_\_ 7. Setting a goal is important when competing
- \_\_\_ 8. Before I compete, I get a queasy feeling in my stomach
- \_\_\_ 9. Just before competing, I notice my heart beats faster than usual
- \_\_\_ 10. I like to compete in games that demands a lot of physical energy
- \_\_\_ 11. Before I compete, I feel relaxed
- \_\_\_ 12. Before I compete, I am nervous
- \_\_\_ 13. Team sports are more exciting than individual sports
- \_\_\_ 14. I get nervous wanting to start the game
- \_\_\_ 15. Before I compete, I usually get uptight

### **12- Item Grit Scale**

Here are a number of statements that may or may not apply to you. Indicate which option applies to you the best.

1	2	3	4	5
Not like me at all	Not much like me	Somewhat like me	Mostly like me	Very much like me

- \_\_\_ 1. I have overcome setbacks to conquer an important challenge.
- \_\_\_ 2. New ideas and projects sometimes distract me from previous ones.
- \_\_\_ 3. My interests change from year to year.
- \_\_\_ 4. Setbacks don't discourage me.
- \_\_\_ 5. I have been obsessed with a certain idea or project for a short time but later lost interest.
- \_\_\_ 6. I am a hard worker.
- \_\_\_ 7. I often set a goal but later choose to pursue a different one.
- \_\_\_ 8. I have difficulty maintaining my focus on projects that take more than a few months to complete.
- \_\_\_ 9. I finish whatever I begin.
- \_\_\_ 10. I have achieved a goal that took years of work.
- \_\_\_ 11. I become interested in new pursuits every few months.
- \_\_\_ 12. I am diligent

### **Sport Motivation Scale**

Please think about why you practice your primary sport and respond to the questions below. Using the following scale, please indicate to what extent each of the following items corresponds to one of the reasons for which you are presently practicing your sport.

1	2	3	4	5	6	7
Does not correspond at all	Corresponds very little	Corresponds a little	Corresponds moderately	Corresponds quite a bit	Corresponds quite a lot	Corresponds completely

\_\_\_ 1. Because I would feel bad about myself if I did not take the time to do it.

\_\_\_ 2. I used to have good reasons for doing sports, but now I am asking myself if I should continue.

\_\_\_ 3. Because it is very interesting to learn how I can improve.

\_\_\_ 4. Because practicing sports reflects the essence of whom I am.

\_\_\_ 5. Because people I care about would be upset with me if I didn't.

\_\_\_ 6. Because I found it is a good way to develop aspects of myself that I value.

\_\_\_ 7. Because I would not feel worthwhile if I did not.

\_\_\_ 8. Because I think others would disapprove of me if I did not.

\_\_\_ 9. Because I find it enjoyable to discover new performance strategies.

\_\_\_ 10. I don't know anymore; I have the impression that I am incapable of succeeding in this sport.

\_\_\_ 11. Because participating in sport is an integral part of my life.

\_\_\_ 12. Because I have chosen this sport as a way to develop myself.

\_\_\_ 13. It is not clear to me anymore; I don't really think my place is in sport.

\_\_\_ 14. Because through sport, I am living in line with my deepest principles.

\_\_\_ 15. Because people around me reward me when I do.

\_\_\_ 16. Because I feel better about myself when I do.

\_\_\_ 17. Because it gives me pleasure to learn more about my sport

\_\_\_ 18. Because it is one of the best ways, I have chosen to develop other aspects of myself

### Satisfaction Scale for Athletes

Using the following scale, answer the following statements to indicate your current satisfaction level regarding your team, coach, and sport by writing the corresponding number.

1	2	3	4	5	6	7
Extremely Dissatisfied	Very Dissatisfied	Slightly Dissatisfied	Neutral	Slightly satisfied	Very Satisfied	Extremely satisfied

- \_\_\_ 1. The manner in which my talents are (were) employed
- \_\_\_ 2. The coach's choice of plays during competitions
- \_\_\_ 3. The level of considering athlete's idea about the game strategies
- \_\_\_ 4. The tactics used during games
- \_\_\_ 5. How the coach reads the game and makes (made) adjustments during the competitions
- \_\_\_ 6. The level to which my talents are (were) employed
- \_\_\_ 7. The degree to which my role on the team matches (matched) my preferred role
- \_\_\_ 8. The relationship between the coach and the star athlete
- \_\_\_ 9. The team's win/lose record in the season
- \_\_\_ 10. The extent to which the team is meeting (has met) its goals for the season
- \_\_\_ 11. Eliminating the failures that can affect the team performance
- \_\_\_ 12. The level of taking precautions to reach the team to the highest performance
- \_\_\_ 13. The level of giving opportunity to the athlete to show multidimensional performances in games
- \_\_\_ 14. The level of the athlete's cooperation with each other and commitment to each other
- \_\_\_ 15. The helping level of the athlete to ease the adaptation of the new joining athlete
- \_\_\_ 16. The level of all athletes to hide teammates' weakness or mistakes

## Group Environment Questionnaire

This questionnaire is designed to assess your perceptions of your team. There are no right or wrong answers, so please give your immediate reaction. Some of the questions may seem repetitive, but please answer ALL questions. Your personal responses will be kept in strictest confidence.

1	2	3	4	5	6	7	8	9
<b>Strongly Disagree</b>								<b>Strongly Agree</b>

The following statements are designed to assess our feelings about YOUR PERSONAL INVOLVEMENT with your team. Please write a number from 1 to 9 to indicate your level of agreement with each of these statements.

- \_\_\_ 1. I do not enjoy being a part of the social activities of this team
- \_\_\_ 2. I'm not happy with the amount of playing time I get
- \_\_\_ 3. I am not going to miss the members of this team when the season ends
- \_\_\_ 4. I'm unhappy with my team's level of desire to win
- \_\_\_ 5. Some of my best friends are on this team
- \_\_\_ 6. This team does not give me enough opportunities to improve my personal performance
- \_\_\_ 7. I enjoy other parties rather than team parties
- \_\_\_ 8. I do not like the style of play on this team
- \_\_\_ 9. For me, this team is one of the most important groups to which I belong

The following statements are designed to assess your perceptions of YOUR TEAM AS A WHOLE. Please write a number from 1 to 9 to indicate your level of agreement with each of these statements.

- \_\_\_ 10. Our team is united in trying to reach its goals for performance
- \_\_\_ 11. Members of our team would rather go out on their own than get together as a team
- \_\_\_ 12. We all take responsibility for any loss or poor performance by our team
- \_\_\_ 13. Our team members rarely party together
- \_\_\_ 14. Our team members have conflicting aspirations for the team's performance
- \_\_\_ 15. Our team would like to spend time together in the off season
- \_\_\_ 16. If members of our team have problems in practice, everyone wants to help them so we can get back together again
- \_\_\_ 17. Members of our team do not stick together outside of practice and games
- \_\_\_ 18. Our team members do not communicate freely about each athlete's responsibilities during competition or practice

### **Spiritual Involvement Scale for Sport**

Using the following scale, indicate how frequently you coach does each of the following statements by writing the corresponding number.

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

- \_\_\_ 1. My coach references scripture
- \_\_\_ 2. My coach prays with me and/or the team
- \_\_\_ 3. My coach facilitates or lead religious discussions
- \_\_\_ 4. My coach organizes a spiritually oriented community service for the team
- \_\_\_ 5. How often does my coach mention religious/spiritual things during my time with them
- \_\_\_ 6. My coach facilitates watching media or reading books about religion/spirituality

Using the following scale, indicate how true each of these statements are for your coach by writing the corresponding number.

1	2	3	4	5
Not at all true	Somewhat true	Moderately true	Mostly true	Totally true

- \_\_\_ 7. My coach often reads books and magazines about religion/spirituality
- \_\_\_ 8. My coach spends time trying to grow in their understanding of religion/spirituality
- \_\_\_ 9. Religion is especially important to my coach because it provides them answers about the meaning in life.
- \_\_\_ 10. My coach enjoys spending time with others affiliated with their religion/spirituality
- \_\_\_ 11. My coach finds it important to spend time in private religious thought and reflection
- \_\_\_ 12. My coach's religious beliefs underlie their whole approach to life
- \_\_\_ 13. Religious beliefs influence all my coach's dealings in life
- \_\_\_ 14. My coach enjoys working in the activities of their religious affiliation.
- \_\_\_ 15. My coach keeps well informed about their religious groups and have some influence in its decision