Examining the Coach-Athlete Relationship as a Predictor of High School Football Athlete Satisfaction

Mitchell P. Davis

Liberty University

A dissertation presented in partial fulfillment of the requirements

for the degree doctor of philosophy

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Abstract

The purpose of this quantitative study was to investigate the perceptions of high school football student athletes' quality of their current coach-athlete relationship and their ratings of overall satisfaction within their sport. Additionally, this study aimed to determine if athlete perceptions of the current coach-athlete relationship was predictive of their current ratings of satisfaction. A total of 97 high school football student athletes from six Pennsylvania District III schools completed measures of coach-athlete relationship quality and athlete satisfaction. Participants reported positive perceptions of their current coach-athlete relationship as well as high ratings of overall satisfaction within the athletic domain. Implications for sport coaches, high school athletic departments, and coaching education programs were also discussed.

Keywords: Athlete, coach, football, relationship, satisfaction

Dedication

To my mother, for always supporting me. To my father, for always guiding me. To my wife, for always believing in me. And to my son, my motivation.

Acknowledgments

To the many coaches who have inspired me to pursue a greater understanding of the power of coaching: Coach Will Trujillo, Coach Robert Miller, Coach Shane Manney, Coach Charles Harrison, and above all, Coach Bob Locker.

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CHAPTER ONE: INTRODUCTION

Overview

Youth participation in sport is associated with positive mental development, increased physical fitness, and positive social interactions (Wekesser et al., 2021). However, approximately 70% of student athletes dropout of sport by the age of 13. Many factors contribute to the likelihood of continued participation, including access to transportation, parental support, and subjective health (Rullestad et al., 2021). Satisfaction of physical activity (PA), whether through structured sport or exercise, is associated with an increase in participation in fitness activities (Leisterer & Gramlich, 2021). The individual athlete will have various additional attributes affecting satisfaction with sport, including socioeconomic status, genetic potential, and peer and parental influence. With many variables to consider, there is one common factor that has been shown to affect athlete satisfaction at all levels of sport: the coach (Belleza, 2021; Jin et al., 2022).

The coach has a significant influence on athlete satisfaction (Fan et al., 2023; Jin et al., 2022). Coaching leadership style, whether autocratic or democratic, has the potential to impact the coach-athlete relationship positively or negatively, which ultimately affects athlete satisfaction (Soto-Garcia et al., 2022). The coach-athlete relationship plays a mediating role in the coaches' leadership style, with democratic leadership behaviors showing positive influence on these relationships (Li et al., 2021). Relationship maintenance strategies employed by athletes may be negatively associated with athlete burnout and positively associated with athlete satisfaction (Gencer, 2021). Athlete perception of their coach's competence, their leadership behavior, and perceptions of justice also play a role in athlete satisfaction. Trust in coach is a mediator between coach-athlete relationship and athlete satisfaction, with such factors as coach-

athlete relationship, coach leadership style, and relationship strategies contributing to athlete satisfaction in various ways.

The coach is one of the most influential adults in an athlete's life (Ayer, 2015). The coach and athlete must work together for a shared interest, such as team or individual success, as well as the psychological needs of both athlete and coach (Monteiro et al., 2018). Therefore, athletic success can be defined as much more than just athletic performance. Instead, success can be viewed more holistically, to include the athletes' and coaches' satisfaction (Caliskan & Ozge Baydar, 2016; Jackson et al., 2009). Thus, it seems rational that an athlete's level of satisfaction is associated with the nature of the relationship with their coach. Although the correlates between athlete satisfaction and the coach-athlete relationship have been studied at the professional and collegiate levels, this phenomena has yet to be studied at the high school level. This study seeks to expand on previous literature by examining these correlates at the high school level.

Background

There is significant research suggesting that the coach-athlete relationship is highly correlated with athlete satisfaction at the college and professional level (Jin et al., 2022; Jowett & Slade, 2021) . Athlete satisfaction, as defined by Chelladurai and Riemer (1997), is a key factor for determining success in sport and is influenced by various factors including social support and coaching. Challadurai and Riemer (1997) propose that winning alone should not be the primary goal of collegiate athletic departments, but instead must focus on athlete satisfaction. Adie and Jowett (2010) postulate that the coach-athlete relationship can be defined as the coaches' and athletes' perceptions of the level of closeness, commitment, and complementarity (3 Cs). Coaches who are perceived as authentic are viewed as more trustworthy by athletes, which has been associated with increased levels of satisfaction and commitment in college athletes

(Bandura & Kavussanu, 2018).

Athletes participating at state, national, and Olympic level demonstrated an association between support from others, including their coach, and their well-being (Burns et al., 2022). Athletes participating at the professional level demonstrated an association between satisfaction with the coach, satisfaction with their team, and satisfaction with team performance (Caliskan & Ozge Baydar, 2016). At all levels of sport, satisfaction has thus far been associated with the coach-athlete relationship. Greater levels of the coach-athlete relationship, as expressed in the 3 Cs, has been associated with positive outcomes, including greater athlete autonomy, team success, and individual performance. Research must begin to determine if these associations exist at the high school level.

The coach-athlete relationship at the college and professional level has been extensively studied. However, little is known regarding the high school athlete. The modern high school athlete faces distinct challenges other populations do not, and little is known about how these challenges affect satisfaction (Watson & Kissinger, 2007). Issues such as balancing academic and athletic responsibilities can place student athletes at risk for lower levels of wellness compared to their non-athlete counterparts. Research also provides very limited insights into how the coach-athlete relationship affects athlete satisfaction among high school students.

As technology and research continue to advance, most emphasis is placed on determining the likelihood for individual/team success. Theories such as genetic potential (Varillas-Delgado et al., 2022), talent-identification (McAuley et al., 2021), and efficacy of sport-performance psychology (Lochbaum et al., 2022) have filled some gaps in our understanding of what makes for a successful athlete, but questions pertaining to athlete satisfaction remain. It is unlikely that solely focusing on determining the predictors of high

athletic achievement is useful in maintaining interest and commitment for high school athletes. The full experience of engaging in athletic endeavors must be understood.

Since many high school athletes discontinue sport post-graduation, research focused on factors that contribute or inhibit one's desire to continue participation in some form of PA would be valuable. Considerations such as an athlete's attitude toward physical education, perceived support from parents and coaches, levels of self-rated health, and peer support have been found to influence an athlete's continued participation in sport (Rullestad et al., 2021). Although winning is a desirable part of sport, other factors, including one's level of satisfaction, can influence the motivation to pursue fitness as a life-long investment. Therefore, research should focus on the connections between athlete satisfaction and the relationship they have with their coach in an attempt to determine if satisfaction, more so than success, is an indicator of an athlete's overall perception of their sporting environment.

Positive emotional well-being could be considered as an important psychological outcome and an important predictor of athletic performance. Due to the nature of sport, many factors are associated with heightened athletic performance. However, it is the coach that has an overarching impact on the athletes' level of satisfaction, with high quality coaching leadership behaviors being associated with higher overall ratings of satisfaction in athletes (Riemer & Chelladurai, 1998).

Of the various high school sports, football is associated with several unique challenges faced by the high school athlete. Football participation is declining, due in large part to the associated risk of head injury (Macy et al. 2021). Concerns have been raised regarding the potential for depression and suicidality among high school football athletes compared to non-athletes (Iverson & Terry, 2022). However, the inherent benefit associated with sport, including

football, must be considered as part of the risk/benefit analysis for participation in athletics.

As research continues to develop surrounding athletic success, the coach remains a central tenet of athlete satisfaction. If researchers wish to uncover the drivers of athletic success, they must determine what factors facilitate satisfaction. The coach-athlete relationship remains a key determinant of athlete satisfaction, and therefore must be considered for further study. Although the importance of success and satisfaction have been studied at the international, professional, and collegiate settings, much is yet to be uncovered regarding the impact of the coach-athlete relationship on athlete satisfaction and the possible long-term benefits of increased high school athlete satisfaction on both mental and physical health.

Problem Statement

Although substantive research has examined the associations between the coach-athlete relationship and athlete satisfaction in collegiate and professional athletes, there is a lack of this understanding at the high school level. Despite clear evidence suggesting the role a coach has in shaping the athletic environment and athletic performance, little research has been conducted exploring the many factors that the coach-athlete relationship influences within the specific context of the high school athletic domain. Lack of research on this topic impedes efforts to promote positive coach-athlete relationships and increased levels of athlete satisfaction. This lack of research may potentially lead to reduced motivation, increased drop-out, and a greater number of dissatisfied high school athletes. Thus, there is a pressing need for research that examines the relationship between the coach-athlete dyad and satisfaction among high school student athletes in an attempt to identify effective strategies and interventions that can contribute to their positive development.

Purpose Statement

The purpose of this study is to investigate high school football athletes' perceptions of the quality of their current coach-athlete relationship and whether positive perceptions are associated with higher student athlete satisfaction. The independent variable will be the athletes' perceptions of the quality of the coach-athlete relationship, as determined by the 3 Cs (closeness, commitment, and complementarity). The dependent variable will be athletes' ratings of satisfaction.

Significance of the Study

This study has several implications for the high school football student athlete, high school coaches and governing school bodies. Little research has been conducted on the relationship between athlete satisfaction and the coach-athlete relationship at the high school level. This study will expand upon the general body of knowledge in this area; however, it will specifically address the high school football student athlete. Moreover, this study could inform future research on the implications of recruiting coaches who are committed to developing and fostering positive relationships with adolescent high school athletes. The coach's role extends much further than team success as defined by number of wins.

Research Questions

1. What are high school football student athletes' perceptions of the quality of their current coach-athlete relationship?
2. What are high school football student athletes' perceptions of overall satisfaction within the athletic domain?
3. Are ratings of the quality of the coach-athlete relationship associated with student athletes' ratings of satisfaction?

Definitions

1. *Coach-Athlete Relationship:* "A situation in which a coach's and an athlete's cognitions, feelings, and behaviors are mutually and causally interrelated" (Jowett & Poczwardowski, 2007).
2. *Athlete Satisfaction:* "A positive affective state resulting from a complex evaluation of the structures, processes, and outcomes associated with the athletic experience" (Chelladurai & Riemer, 1998).
3. *Coach:* "A person who is expected to lead, instruct, and provide support" (Jowett & Nezlek, 2011).
4. *Athlete:* "The individual who is being coached and receiving instruction and support from the coach in the coach-athlete relationship" (Jowett & Nezlek, 2011).

CHAPTER TWO: LITERATURE REVIEW

Overview

The current study aims to add to the growing body of knowledge regarding the potential connection between the coach-athlete relationship and athlete satisfaction. Before further contributions can be made, a thorough understanding of previous work must be established. This review discusses the current literature surrounding this topic.

Studying athlete satisfaction as it relates to the coach-athlete relationship at the high school level is of importance as it may help ensure the holistic development of young athletes. High school athletics play a role in the physical and emotional development of athletes, which may impact their overall well-being and future (Strandjord & Rome, 2016). Understanding the factors that influence athlete satisfaction, including the coach-athlete relationship is necessary in identifying potential areas for improvement to enhance the athletic experience and create a healthy and positive athletic environment.

By examining these aspects, researchers can gain valuable insights into the needs of the high school athlete, which may contribute to the formation of effective strategies to enhance athletic performance, athlete mental health, and athlete satisfaction. Recognizing the importance of the coach-athlete relationship may allow coaches, support staff, and school administration to learn and implement effective coaching strategies enhancing the coach-athlete relationship, and therefore increasing athlete satisfaction. Ultimately, examining athlete satisfaction and the coach-athlete relationship at the high school level has the potential to positively impact the lives of young athletes and contribute to their long-term well-being.

Theoretical Framework

Until a phenomenon can be measured and quantified, scientific inquiry is not possible

(Chelladurai & Riemer, 1998). In order to study athlete satisfaction, a theoretical framework must be established. Prior to the work of Challedurai and Riemer (1998), the bounty of research surrounding satisfaction was based upon intuition. Factors such as effort needed for a task, length of stay with an organization, level of cooperation with team members, and one's overall happiness were loosely created constructs of satisfaction (Saal & Knight, 1988). Due to the voluntary nature of sport, satisfaction can be seen as a prerequisite to athletic performance, with satisfaction and performance being intuitively linked (Chelladurai & Riemer, 1998). Additionally, as athletes are considered the main beneficiaries of sport, the effectiveness of an organization may be due in large part to meeting the needs (satisfaction) of its athletes. Athlete satisfaction must therefore be likened to job satisfaction, where athlete satisfaction takes on a preeminent status from both a theoretical and practical standpoint (Broyles & Hay, 1979).

There are unique features of the athletic experience that warrant the need for a definition and quantification of athlete satisfaction (Chelladurai & Riemer, 1998). First, performance measures, such as wins and losses, are often contaminated with factors such as luck, opponent's ability, and officiating. Wins and losses may therefore not be an accurate predictor of team effort and coaching. Satisfaction is not bound to a team's performance and success and failure are not isolated events. Rather, success and failure are contingent upon an athlete's perceptions of goal attainment. We must therefore understand satisfaction and success as a psychological state. Athlete satisfaction is therefore an outcome of other psychological factors, such as leadership styles and team cohesion (Chelladurai & Riemer, 1998).

Athlete satisfaction has been correlated with motivation enjoyment (Scanlan et al., 1993). Additionally, research has looked at players' evaluations of attitudes toward coaches, teammates, and self (Smoll et al., 1978). However, these concepts lacked any significant antecedent or

outcome variable, with no effort in developing adequate measures of athlete satisfaction. Only single-item measures were used to attempt to assess one or more facets of athlete satisfaction, which made it impossible to estimate the reliability of those measures, especially with no prior information regarding athlete satisfaction being available (Chelladurai & Riemer, 1998). Therefore, it is paramount to establish a multidimensional, multi-item measure of the antecedents and independent variables of athlete satisfaction.

The theoretical framework of athlete satisfaction is based on the work of Chelladurai and Riemer's (1998) classification of facets of athlete satisfaction. The authors define athlete satisfaction as "a positive affective state resulting from a complex evaluation of the structures, processes, and outcomes associated with the athletic experience", and therefore athlete satisfaction must be assessed on numerous dimensions, with overall satisfaction being a primary goal of athletic departments. Factors such as luck, opponent talent and readiness, and game officials can influence competition results. Therefore, performance measures may not be as meaningful to athletes as subjective measures such as satisfaction. Coaches should adopt the mindset of athlete-centered coaching, which places the athlete first, and winning second (Griffin et al., 2017).

Chelladurai and Riemer (1998) used three criteria to search for and classify facets of satisfaction relevant to athletics. First, the identified facets could be categorized as relating to outcomes, such as winning or goal attainment, or those associated with the processes that result in outcomes. Second, the authors looked at team versus individual outcomes and processes. An individual athlete may seek outcomes and processes for himself or through the efforts and performance of team members. Third, the authors distinguished processes and outcomes as purely task-related or social in nature.

Processes have been shown to directly affect ratings of satisfaction as well as performance outcomes (winning). Chelladurai & Riemer, 1998 identified 15 facets of athlete satisfaction: Individual performance, team performance, ability utilization, strategy, personal treatment, training and instruction, team task contribution, team social contribution, ethics, team integration, personal dedication, budget, medical personnel, academic support services, and external agents. Four overarching themes emerge regarding athlete satisfaction. Coaching leadership, athlete characteristics, environmental factors, and consequences of athlete satisfaction should be discussed in order to 'paint the picture' of athlete satisfaction.

Athlete satisfaction in sport psychology aims to incorporate items related to an individual athlete's perceptions of autonomy, competence, and relatedness to coach and teammates in their sport setting (Trbojevic et al., 2020). When autonomy, competence, and relatedness needs are met, individuals are more likely to experience self-motivation driven by inherent interest and personal satisfaction (Lourenco et al., 2022). This autonomous motivation is associated with positive behavioral outcomes including positive perceptions of sport performance and greater levels of satisfaction (McLaren et al., 2014). In the sporting context, athletes choosing to participate may be explained by their views of athletic participation as satisfying (Lamont-Mills & Christensen, 2006). Athlete satisfaction may be seen as related to an individuals' perceptions of both rewards and costs of sport. These items include coaching behaviors, team cohesion, and coaching feedback, which are associated with satisfaction (Paradis & Loughead, 2009).

Athletes who are supported by coaches are more likely to experience autonomous motivation which can positively influence their perceptions of their sporting experience (Delrue et al., 2019). Athlete satisfaction includes perceived feelings of autonomy, competence, and relatedness with coach, teammates, and the sporting environment (Riemer & Chelladurai, 1998).

Athletes use cognitive appraisals in determining emotions during training and competition (Martinent & Ferrand, 2015). Cognitive appraisals include goal relevance, goal congruence, ego involvement, blame versus credit, coping, and expectations. These cognitive appraisals determine an athlete's emotions and are linked to emotions such as anger, anxiety, joy, and satisfaction. Satisfaction may be related to an athletes' perceptions of fairness, meaningfulness, and satisfaction associated with sport. Coach competency, authentic coaching leadership style, perceived justice, and athlete satisfaction with the coach are possible predictors of athlete satisfaction (Soto-Garcia et a., 2022).

The coach-athlete relationship can be viewed as a comprehensive framework which assesses and understands the dynamics of the coach-athlete relationship, focusing on the exchange of resources between the members of the dyad, rewards, and the emotional bonds and attachments formed between the coach and athlete (McShan & Moore, 2023). These resources are expressed through the 3 Cs of coaching: closeness, commitment, and complementarity (Jowett & Slade, 2021). In social relationships, the formation and maintenance of these relationships is based on an exchange of resources and rewards between the individuals in the relationships (Fan et al., 2023). Behavior is an exchange of resources in a relationship, focusing on aspects of trust, commitment, and the evaluation of rewards and benefits. In sport, the coach-athlete relationship consists of a dyad, with both parties contributing to the relationships, providing resources such as time, effort, and emotional support which enhance benefits and rewards for both parties (Powers et al., 2019). When both coach and athlete participate in this needs-supportive behavior, the coach-athlete relationship is strengthened (McShan & Moore, 2023).

The coach-athlete relationship can be depicted as the quality of coach- and athlete-

satisfaction in the coach-athlete relationship and is measured by the interpersonal constructs of the 3 Cs (Woolliams et al., 2021). The emotional bond and attachment formed by two individuals is found in any given relationship and early experiences with attachment figures such as parents will influence an individual's perceptions of relationships later in life. In the context of the coach-athlete dyad, this can help develop emotional bonds and trust in athletes toward their coach. This in turn can impact the athlete's motivation, performance, and overall satisfaction with sport participation (Braun & Tamminen, 2018).

Related Literature

The Student Athlete

Student athletes at both the college and high school level have unique experiences that differ from their non-athletic counterparts (Watt & Moore, 2001), including positive outcomes associated with sport. Athletic participation is linked to health and well-being of the student athlete (Cowley, 1999). Athletic participation is associated with opportunities for physical and personal development through team play (Cote et al., 2007). Competitive athletics provide advantages for athletes such as recreation, the development of self-discipline, concentration, and the opportunity to work toward a goal (Larimore & Chitiyo, 2007).

Additionally, sport is a cultural and community attraction that brings communities together through tradition (Varmus et al., 2020). Gayles (2009) showed that student athletes graduated at higher rates than non-athletes, suggesting that athletic participation has positive implications beyond competition results. Athletic participation can contribute to the learning experience as well as personal development. Academic support programs can assist these student athletes in managing both academic and athletic demands, which can enhance their overall experience of being a student athlete. Cooperative learning practices, active learning, and

positive interactions between students and faculty/coaches can help contribute to the positive impact of athletics (Comeaux et al., 2014). Of the many benefits of athletic participation, participating in something that gives the individual meaning, such as sport participation, can enhance the learning experience and personal development (Light, 2017).

Long-term adherence to athletics and fitness has a positive impact on the individual's physical and mental health. Elliott et al. (2022) found that higher levels of vigorous physical activity (PA) were associated with lower levels of depressive symptoms. Attributes such as mental toughness can be associated with an athlete's ability to succeed. Mental toughness should be considered as a multidimensional construct associated with self-belief, resilience, persistence, and effective coping strategies (Liew et al., 2019). Athletes with higher levels of mental toughness are more likely to maintain focus, stay motivated, and perform to their expectations during challenging circumstances (Elliott et al., 2022). In order for athletes to persevere and stay motivated to participate in athletics, they must develop the mental toughness characteristics through appropriate strategies, including proper goal setting, visualization, and positive self-talk (Liew et al., 2019). Developing self-confidence based on success in training, setting challenging goals, developing good communication between the athlete and coach, and building social support networks are all contributors of mental toughness (Guszkowska & Wojcik, 2021) and can be facilitated by the coach during training.

Along with the potential positive benefits of athletics, the student athlete may face certain challenges that the non-athlete does not. Gatson-Gayles (2004) suggests the need for coaches to understand the unique struggles faced by student athletes. When examining the possible associations between athlete satisfaction and the coach-athlete relationship, we must first understand the uniqueness of athletes as compared to their non-athletic counterparts and the

special challenges faced by athletes (Parham, 1993), including balancing academic and athletic commitments, managing time effectively, and the pressure to perform in both areas. Stress, social support, and competitive anxiety are all associated with athletic and academic performance (Palazzolo, 2020). Student athletes face the challenge of balancing student- and athlete-responsibilities; meaning they must manage their obligations to their coaches and teammates, and are responsible for understanding and abiding by the rules set forth by their governing body (Crocker et al, 2021). Additionally, athletes must cope with factors that distinguish them, such as playing level, ability, and sport (Ong, 2017).

Athletic motivation, such as playing at a higher level can impact an athlete's desire for academic and/or athletic success (Gatson-Gayles, 2004). Some athletes who aspire to play at the next level may minimize the importance of academic success, which can negatively impact their ability to balance academic and athletic demands. Coaches should be aware of the pressures associated with simultaneous athletic and academic success and be prepared to monitor academic performance (Avery et al., 2016).

In sport, both coaches and athletes are concerned with winning. Many researchers have attempted to determine individual attributes and physical traits that can predict the likelihood of success. Bisagno et al. (2019) proposed a model suggesting feasible measures that can evaluate individual performances in team-based sports, which could be useful in early talent identification of athletes. Other authors suggest the utility of in-game statistics and analysis to increase the chances of winning, such as developing training routines and exercises that improve in-game tactics (Brito de Souza et al., 2019). Individual performance in high-pressure situations has also been studied, attempting to determine the psychological attributes of athletes who are successful in game-deciding moments. Buhren and Krabel (2019) suggest that instances of crucial success

and/or failure will be countered by an increase or decrease in performance, thus regression toward the mean appears to be a determining factor of an athlete's increase or decrease in performance, as opposed to certain individuals possessing specific psychological and physical characteristics that produce higher likelihood of game-winning performances. Although these theories may explain some degree of success and failure within athletics, subjective measures, such as athlete satisfaction remain a crucial component of both individual and team performance (winning) as well as overall well-being.

Although long exposure to athletics may help strengthen athletes mentally, athletes also face other challenges including injuries, fatigue, stress, and other issues of mental health (Pluhar et al., 2019). There is a unique balance of positive and negative mental health behaviors associated with sport. Positive attributes include social support and enjoyment whereas some unhealthy behaviors such as unrealistic or unhealthy goal setting may manifest in individual athletes (Baker et al., 2002). Coaches can help foster a healthy relationship with sport and fitness through teaching athletes about self-management skills, promoting a healthy environment for the team, and creating a culture that is aware of both the physical and psychological needs of the athletes (Purcell et al., 2019).

When studying the coach's role in the coach-athlete relationship with high school athletes, it is important to understand how relationships are formed. Ainsworth and Bowlby (1991) developed an ethological approach to personality development that can be applied to the understanding and development of attachment relationships. Their findings can help guide researchers in promoting secure attachment relationships, which can be practical for coaches. Ainsworth and Bowlby's (1991) research highlighted the importance of early interventions that can aid and support caregivers in providing responsive care. These interventions may improve

attachment relationships that can promote healthy emotional development in children, which may have long-lasting positive effects on a child's well-being.

Other theoretical constructs, such as Organizational Leadership Behavior (OLB) can provide a unique perspective on team cohesion. OLB offers a measure of positive team behaviors which can be used by team coaches as a means for measuring team effectiveness and cohesion, as well as the understanding of how both task and social cohesion are developed at the team and individual level in sport. Regardless of the theoretical approach, one constant remains: The environment the coach creates has the power to positively or negatively impact the athlete-relationship (Beattie & Turner, 2022).

Coaches should employ a democratic, affective, and motivating leadership climate to facilitate significant rates of positive development in young athletes (de Albuquerque et al., 2021). Coaches who are perceived by their athletes as more democratic, motivating, and affective are shown to facilitate greater rates of positive development of student athletes. Democratic and motivating leadership styles from coaches can lead to positive development of cognitive skills, goal setting, and personal and social skills in athletes (Corti et al., 2023). The teaching method combined with the coach's leadership profile may influence positive development in younger athletes, with democratic leadership being positively associated with the length of stay in young athletes. With sport participation declining in US adolescents (Deng & Fan, 2022), attempts should be made to increase both athletic participation and duration of participation.

While many researchers attempt to define elite performance, research remains ambiguous regarding this subject. Raysmith et al. (2019) highlight the challenge of constructing a methodology that observes and defines performance. Subjectivity in the evaluation of

performance remains, making objective measures of elite performance difficult to define. This subjectivity makes it challenging to establish characteristics that could lead to increased performance and long-term athletic participation. Sport psychology interventions may have slight to moderate beneficial effects (Lochbaum et al., 2022), but evidence is not strong enough to confidently suggest that these interventions can strongly improve or hinder performance. While sport psychology interventions may have only moderate effect, the overall coach-athlete relationship may be an important element in athletic development and performance (Shanmuganathan-Felton et al., 2022).

The significance of the coach and his relationship with athletes is paramount at both the individual as well as the team level. Research suggests the importance of the coach in the relational aspects of team building. Salcinovic et al. (2022) determined that improved team function and performance is associated with team leadership, supportive behavior from teammates and staff, communication, and coaching feedback. If we are to attempt to generate long-term athletic development and continued pursuit of fitness upon graduation, coaches must be aware of the individual needs of their athletes, as well as the factors that affect team cohesion (Teixeira et al., 2022).

Coaches must understand their responsibility for long-term athletic development outcomes and must adhere to delivering developmental programs for young athletes (Till et al., 2022). Coaches must have a goal-oriented approach for the individual athlete, as well as understanding roadblocks that can occur, including governance of sport, resources available to the team and individual, as well as the importance of educating stakeholders involved in the program (Khorram, 2022). When teaching young coaches appropriate ways to build relationships, team-cohesion, and athletic performance, veteran coaches and educational

programs must rely on logical instruction, aiming to improve upon the current design and delivery of coaching and sport instruction (Mccullick et al., 2005).

Although it is the aim of this study to determine the role of the coach and their relationship with athletes as a predictor of athletic satisfaction, researchers must be aware of individuals' perceived notions regarding success and failure (Whitehead, 2004). Coaches should also be aware of the athlete's perceived feelings of success and failure, both from a team and individual perspective. Athletes tend to make greater internal and stable attributions for positive events as opposed to negative events (Mezulis et al., 2004). Teams with a higher win percentage may not attribute success to their coach, but instead to their own abilities. Inversely, teams with higher losing percentages may feel as if their coaching staff was at fault, undermining any positive coaching experiences that may have occurred (Van Puyenbroeck et al., 2019). In an attempt to increase the positives of sport, coaches must maintain an athlete-centered approach. This includes understanding who the athlete is, recognizing the unique struggles they face, and creating an environment that enhances satisfaction.

Athlete Satisfaction

Athlete satisfaction is the positive, affective state which results from the evaluation of structures and processes, along with outcomes associated with the athlete's unique experience and is considered a vital component of both success and productivity in athletic participation (Caliskan & Ozge Baydar, 2016). Athletes report higher levels of well-being, self-esteem, and satisfaction than their non-athlete counterparts (Weight et al., 2014). Competitive athletic participation can have positive effects on an individual's well-being. Authentic coach leadership can enhance athlete satisfaction and commitment (Bandura & Kavussanu, 2018) and coaches that are perceived as authentic are viewed as more trustworthy, which may enhance higher levels of

autonomy in athletes, thus furthering levels of satisfaction and commitment to the team and sport. By examining how relationships between coaches and athletes form over time, researchers and coaches can better predict how mediators such as trust and autonomy affect outcomes, such as athlete satisfaction and commitment (Li et al., 2021).

The mediating role of the coach-athlete relationship on athlete satisfaction and basic psychological needs of athletes was demonstrated by Contreira et al. (2019). Coaches must include psychological and social aspects in their training programs, focusing on promoting closeness, commitment, and trust while teaching athletes. This is of particular importance when coaching youth athletes, establishing safe environments that include social support and meeting the athlete's psychological needs (Bloom et al., 2020). When attempting to create a psychologically healthy team environment, coaches are tasked with demonstrating leadership traits across several functions: Task (assisting in achieving group goals), social (satisfying individual psychosocial needs) and external-related (representing the group) (Eys et al., 2007). Furthermore, when determining athlete leadership, coaches should choose team captains and leadership roles by assessing athletes who show greater levels of both informal and formal leadership qualities as opposed to talented athletes (Burkett et al., 2013). Teams with coaches and athletes in leadership roles who possess greater levels of leadership qualities across task, social, and external functions report greater levels of team satisfaction, suggesting that those individuals responsible for the well-being of the team have a greater impact on team satisfaction than does win-percentage alone (Eyes et al., 2007).

Regardless of the level of play, athletes require some level of social support (Burns et al., 2022). Elite level athletes reported that factors such as friends, family, support staff, and coaches contribute to heightened levels of satisfaction (Jawoosh et al., 2022). When working with

athletes at the high school level, an early milestone in a lifetime of fitness, school boards should focus on hiring coaches who are able to provide social support, leading with authenticity to enhance levels of autonomy, and are dedicated to mentorship (Cranmer et al., 2017; Iachini, 2013). By placing others-centered coaches in American high schools, key stakeholders can ensure a mentally and physically healthier future (Vella et al., 2020).

Athlete satisfaction is in part due to the relationship with their coach. This relationship, and the perceptions of this relationship are dependent on three variables: self-efficacy, other-efficacy, and relation-inferred self-efficacy (Jackson et al., 2009). Coaches and athletes must focus on developing positive perceptions of self, their relationship, and their partner in an attempt to enhance efficacy beliefs and thus improve levels of athlete satisfaction. Coaches must be aware of athletes' perceptions of their coaching and athletes' perceptions of self, and perceptions of the relationship, understanding that these factors can either hinder or enhance the coach-athlete dyad (Herbison et al., 2021).

In considering athlete satisfaction, an important area of study is compatibility of personality traits between coach and athlete (Jackson et al., 2011). Researchers can measure dissimilarity on personality traits which can be useful in identifying any obstacles that may occur during the formation and maintenance of relationships. Coaches must understand the social impact of sport in order to understand the relationship process that occurs in team dynamics (Sauer, 2016). Athletes' and coaches' perceptions of the relationship are underpinned by their own personality traits as well as their partners' traits, suggesting that the individuals' respective traits must be concordant to facilitate stronger connections, thus enhancing athlete satisfaction (Stanford et al., 2021).

To enhance the coach-athlete relationship, coaches must aim to develop strong-rooted

coaching partnerships by increasing the volume and frequency of communication with athletes (Jowett et al., 2012). Coaches must improve empathy skills in an attempt to better understand the individual needs of their athletes as well as to better understand their athlete's perspective of the relationship. Coaches and athletes can work together to improve their perceptions as well as the relationship, leading to higher levels of satisfaction in both coach and athlete (Contreira et al., 2019). Athletes report higher levels of satisfaction when in a relationship with more empathetic coaches (Soto-Garcia et al., 2022; Powers et al., 2019). This process must develop over time and coaches cannot aim for short-term development of relationships (Jowett & Nezlek, 2011).

Li et al. (2021) found that coaches should focus on building trust with their athletes in an attempt to improve the coach-athlete relationship and athlete satisfaction. Athlete satisfaction is associated with trust in the coach (Soto-Garcia et al., 2022). Athlete satisfaction can predict the coach-athlete relationship and a player's trust in their coach plays an intermediary role in this relationship (Fan et al., 2023). The coach-athlete relationship can enhance athlete satisfaction while simultaneously heightened levels of satisfaction can increase athlete's perceptions of the coach-athlete relationship (Li et al., 2021). This is an important factor when attempting to determine the mediating effects of the coach-athlete relationship on athlete satisfaction.

Part of developing trust is maintaining a level of clear communication with and relaying information to the athlete. By providing clear role information to athletes, coaches can increase athlete satisfaction, particularly in team-sport athletes (Davis et al., 2018). Athletes that experience role ambiguity demonstrate lower levels of satisfaction (Bray et al., 2005). This is especially true in athletes who express higher needs for role clarity. Coaches who provide clear expectations can help foster a safe team environment, increasing autonomy in athletes, and thus increasing athlete satisfaction.

Furthermore, Eys et al. (2003) examined the relationship between role ambiguity and athlete satisfaction, finding lower levels of ambiguity being associated with higher levels of athlete satisfaction. Coaches and support staff should aim to reduce role ambiguity in sport in an effort to increase both team and individual satisfaction (Kim et al., 2021). Coaches should provide clear and specific instructions on team and individual roles (Mohd Kassim & Broardley, 2018). Lower levels of role ambiguity at the start of the season were not associated with lower levels of satisfaction post-season. This would suggest that early season role ambiguity must be resolved by the dynamics of the coach-athlete relationship during the rest of the season to result in a positive correlation with athlete satisfaction (Bray et al., 2005). Coaches must be aware of negative feelings associated with the start of a given season, including nervousness, uncertainty, and athlete's need for role clarity. As the season progresses and team cohesion grows under the direction of the coach, athlete satisfaction increases (Amorose et al., 2009).

Athlete identity is another factor that can positively or negatively impact athlete satisfaction (Burns et al., 2012). Coaches must be aware of individual (exclusivity) and team (social identity) factors that contribute to levels of satisfaction. Often, athletes are grouped according to the sport they play (e.g. football player) as opposed to their individual characteristics, personalities, and likes/dislikes. When determining what creates a positive environment for the individual athlete, the coach must keep the athlete at the center of the equation, eliminating as much as possible the one-size-fits-all approach for enhancing individual satisfaction (Beauchamp & Eys, 2008).

Coaches who are attempting to maximize athlete satisfaction must be cognizant of the internal and external stressors athletes face, including academic, family, and financial hardships. Mental illness and athletic participation have been studied extensively. Potential risk factors for

depression include higher levels of competition, previous injuries, and concussions (Golding et al., 2020). Other mental health concerns include fear of failure among adolescent athletes when competing in higher-level competitions which can lead to higher rates of burnout (Gustafsson et al., 2016). Fear of failure is associated with higher levels of psychological stress; and athletes with higher levels of fear of failure reported higher levels of perceived stress, exhaustion and a reduction in sense of accomplishment. This information can provide researchers with valuable information regarding the psychology of the student athlete; and should be a catalyst for the development of high school coaches. An emphasis should be placed on understanding the challenges of the high school athlete, fostering healthy sporting environments, and creating higher levels of athlete satisfaction (Camire & Trudel, 2011).

Furthermore, external stressors experienced by athletes have an impact on athletic performance (Lopes Dos Santos et al., 2020). Early detection methods as well as the willingness to alter training plans can help mitigate the likelihood of burnout, stress, and a decrease in performance. Coaches must be aware of and understand the unique challenges that athletes face when attempting to foster healthy relationships in order to increase athlete satisfaction (Rumbold et al., 2011).

The coach's style of leadership plays a crucial role in determining an athlete's behavior, commitment to team, and their level of satisfaction (Granero-Gallegos et al., 2017). Coaches must create mastery-oriented environments that promote task-centered goal orientation, athlete satisfaction and enjoyment, and success-through-enjoyment belief (Edwards et al., 2021). Gomez-Lopez et al. (2020) examined the effects of motivational climate created by the coach and athlete perceptions of fear-of-failure and anxiety. The study highlights the importance of a supportive coach behavior which promotes task-oriented climate during training and

competition. Coaches should include athletes in decision-making processes in an attempt to foster autonomy among athletes and increase satisfaction (Burns et al., 2012; Grigaliunaite & Eimontas, 2018). Players who are given the chance to analyze both successes and failures by in-game performance report lower levels of pre-competition anxiety and reduction of fear of failure (Sanchez-Sanchez et al., 2023).

Coaches can increase athlete satisfaction through educational processes such as teaching positive self-narratives (Houltberg et al., 2018). Not only should coaches create autonomy-driven environments, but they must also educate their athletes how to be self-motivated (Duda & Appleton, 2016). Coaches working with athletes should consider the role of narrative identity in their athlete's psychological well-being in order to help athletes develop a purpose-driven narrative in order to increase athlete satisfaction (Allan et al., 2017). Athletes who report higher levels of performance-based narratives show greater signs of psychological disruptions, including depression, anxiety, and shame; along with the lowest levels of satisfaction. Purpose-based identity was associated with higher levels of satisfaction (high purpose, high self-worth, and positive view of self) (Houltberg et al., 2018). Although athletes have unique psychological makeup, the coach has the ability to foster positive thinking and purpose-based narratives, thus increasing athlete satisfaction and reducing negative psychological markers.

Coaches possess the ability to influence athlete motivation (Mageau & Vallerand, 2003). It is the coach's personal beliefs regarding the coaching context, as well as how they conduct themselves and their perceptions of their athletes' behaviors that can influence the coach's behavior. Coaches must not only aim to establish a highly motivated environment to enhance athletic satisfaction, they must also be aware of their own motivation and behaviors, as the coaching environment has a direct impact on the beliefs of the athletes (Rocchi & Pelletier,

2017).

Coaches should create environments that develop motivation toward sport to ensure a reduction in anxiety during the developmental phases of learning sport (Melguizo-Ibanez et al., 2022). Coaches should aim to create climates steeped in task-orientation, which can facilitate higher levels of enjoyment, satisfaction, and perceived achievement in athletes. Anxiety has a negative impact on the development of young athletes, and male athletes tend to orient their motivation toward the team climate, which may lead to higher levels of anxiety and lower levels of satisfaction (Boyd et al., 2014). In order to manage anxiety, coaches must aim to motivate athletes, which can help to control disruptive states in training and competition, as well as heighten an athlete's positive mental image, such as satisfaction with sport (Melguizo-Ibanez et al., 2022).

When attempting to establish team culture, coaches must be aware of personality types of individual athletes. Coaches must account for individual differences as well as team cohesion when creating a healthy environment for athletes. Piepiora & Piepiora (2021) found that athletes with higher levels of extraversion, openness to experiences, agreeableness, and conscientiousness, and lower levels of neuroticism reported greater likelihood of success in sport, including higher numbers of championships. Coaches who are concerned with the overall wellbeing of their athletes, as well as increasing the chances of team success, should be aware of personality characteristics of individuals that can increase the likelihood of team success (Raharjo et al., 2018).

Coaches must remain cognizant of their coaching behaviors and styles. Coaches who express higher levels of control have higher associations with anxiety among younger athletes (Ramis et al., 2017). High school sport coaches should attempt to create a team environment that

allows for individual and team-wide autonomy, allowing the athletes to freely express their beliefs and attitudes regarding the direction of the team. Even at the elite level of sport, anxiety is prevalent among athletes (Rice et al., 2019). Emotional responses such as fear, apprehension, worry, and tension in response to perceived or actual threat can decrease an athlete's level of satisfaction and game-time performance. Anxiety of any form modulates attentional networks, resulting in compromised execution, stimulus processing, and information screening. Decreasing anxiety and increasing athletic motivation and satisfaction appear to be correlated with team success (Reyes-Hernandez et al., 2020).

Athlete satisfaction and performance does not solely rely on the coach. Athletes who attempt to increase their emotional wellbeing prior to competition have shown associations with goal achievement (Tamminen et al., 2021). This emotional self-regulation and emotional regulation allows for athletes to monitor and reduce levels of anxiety during competition. Interestingly, emotional regulation between teammates is not as effective for controlling competition anxiety as one's ability to regulate their own emotions. However, as previously noted, coaches have an impact on athlete anxiety during games (Melguizo-Ibanez et al., 2022). This shows the gap between the effectiveness of coaching strategies and team-assisted coping strategies when monitoring and controlling for issues such as anxiety. Thus, the coach's ability to influence the outcome of a game, as expressed through appropriate leadership and the reduction in athlete anxiety and/or the increase in athlete satisfaction, indicates the importance of developing strong coach-athlete relationships.

Morales-Belando et al. (2021) examined whether winning or losing affects the motivational climate for teams, including levels of enjoyment, perceived competence, and intent to pursue fitness later in life. The study suggests that coaches should minimize the emphasis of

game outcomes and should focus on other factors such as athletic competence, athlete enjoyment, and promotion of positive experiences, especially in youth and adolescent sports. Team success is impacted by prior shared experiences, including prior success. Mukherjee et al. (2018) found that shared success among team members significantly improves the odds of a team winning in sport, regardless of the talent of individual athletes. Repeated and deliberate positive interactions among team members have a significantly stronger effect than individual talent, and therefore, coaches must be aware of the impact of shared success and team comradery (Beauchamp, 2018). Coaches must understand the impact of the relationships that are formed among teammates and coaching staff and be purposeful when establishing members of a given team.

College athletes in both high- and low-profile sports were surveyed about their satisfaction with support staff and athletic trainers (Unruh et al., 2005). High-profile athletes reported greater levels of satisfaction. Unruh et al. (2005) suggest that high-profile athletes received more attention which may impact their satisfaction levels. Giving athletes appropriate attention, whether by support staff or athletic trainers dealing with an injury, or a sport coach managing the team atmosphere, including team commitment and athlete autonomy, is associated with athlete satisfaction. Coaches must remain aware of the linkages between athlete satisfaction and their feelings of self-worth, which can be enhanced through appropriate levels of communication and attention (Gencer, 2021).

Satisfaction can be measured at both the individual and group level when studying teams. Karreman et al. (2009) found that group level effects present the same magnitude and direction of levels of satisfaction as individual level effects. Although coaching should focus on building individual relationships with athletes; group and team level satisfaction is also important.

Relationship factors, interpersonal interactions, developmental support, participation support, and coaching feedback all influence athletic satisfaction (McCann et al., 2021). The need for competent coaches who understand the breadth and depth of athletic support is necessary when creating a culture that fosters athletic development and satisfaction. Coaches must ensure that they meet the needs of their athletes, including social support (Teck Koh et al., 2019), sport-competency (Bersten et al., 2019), and tactical/technical needs of the athlete (Lu et al., 2015).

College athletes who are surveyed retrospectively report high levels of satisfaction with their athletic experience, as well as preparedness for life beyond athletic competition (Paule-Koba & Farr, 2013). Of the 229 athletes surveyed, the vast majority (89.92%) reported that their athletic experience was worthwhile (Paule-Koba & Farr, 2013). This study sheds light on the importance of athletics, with implications reaching beyond the scope of competition. Coaches at the college and high school level have the opportunity to help athletes prepare for life outside of sport (Bloom, 2013).

Athlete satisfaction and enjoyment have long-lasting implications. Zanatta et al. (2018) found that Finnish youth athletes had higher levels of enjoyment, autonomous motivation, and physical competency compared to non-athlete counterparts. In order to develop autonomous motivation and increase satisfaction, coaches must focus on promoting sport enjoyment and team cohesion (Aumand, 2004). Positive emotions such as satisfaction are associated with more flexible and creative thinking strategies and allow individuals a greater chance of achieving their goals (Yang et al., 2020).

Additionally, positive emotions associated with sport are correlated with greater ability to cope, goal attainment, sense of control, and higher levels of self-esteem and life satisfaction (Gavriel-Fried et al., 2015). Coaches can attempt to increase athletic enjoyment through practices

such as mindfulness (Vveinhardt & Kaspare, 2020). Through mindfulness practices, athletes expressed lower levels of stress and improved psychological state, which enhances athletic performance. The coach can enhance athletic satisfaction through appropriate understanding of unique daily worries, inter-team conflicts, relationship problems, and the demands of sport.

The Coach-Athlete Relationship

Researchers have found that the coach-athlete relationship has a significant impact on athlete satisfaction (Gonzalez-Garcia et al., 2023). Coaches must consider ways to enhance levels of commitment, closeness, and complementarity (3 Cs) in their relationships with individual athletes (Adie & Jowett, 2010). Athletes who view their coaches as cooperative, committed, and close in their relationship express higher levels of satisfaction (Mashuri et al., 2022). Factors such as coach-athlete dyad, task-oriented coping, and coach competency contribute to athlete satisfaction (Soto-Garcia et al., 2022). The coach-athlete relationship may mediate the relationship between coaching leadership styles and athlete satisfaction, with democratic leadership having a positive effect on the coach-athlete relationship and athlete satisfaction (Gonzalez-Garcia et al., 2023).

The dropout rate among youth athletes is significant, with roughly 70% of adolescents dropping out of sport by the age of 13 (Wekesser et al., 2021). Choi et al. (2020) found that coaching behavior does play a role in athlete burnout and that higher levels of effective communication between coaches and athletes can mitigate dropout rates. Coaches should adopt autonomy-supportive coaching behaviors that promote communication and the enhancement of the coach-athlete relationship. Higher levels of coach-athlete relationships lead to a decrease in athletic burnout (Ruser et al., 2021), and higher levels of athlete satisfaction (McShan & Moore, 2022).

In order to create and maintain high levels of athlete satisfaction, coaches must improve their relationship with athletes (Beattie & Turner, 2022). An athlete's perceived fit with their coach has a unique and important impact on the athlete's levels of satisfaction. There are positive and negative aspects of these relationships, and coaches must place appropriate limits on the coach-athlete relationship, especially at levels of sport where the coach has a greater level of authority, such as high school and college athletics (Bergmann Drewe, 2002). The coach-athlete relationship is a complex relationship that warrants attention and is a complex and dynamic interaction that may be influenced and is influenced by various factors (Behan et al., 2020). The coach-athlete dyad is a unique and multifaceted social situation in which feelings, thoughts, and behaviors of both coach and athlete are interdependent (Tshube & Hanrahan, 2018; Gilchrist & Mallett, 2016).

Coaches can enhance coaching competency by promoting supportive behaviors, including enhancing athlete autonomy, competency, and athlete satisfaction, leading to increased commitment and motivation (Pulido et al., 2020). Athletes who perceive their relationship with their coach as strong have higher levels of commitment to the coach and team, positively impacting their behavior and performance (Rezania & Gurney, 2014).

Coaches can create task-involving training environments that enhance the physical and psychological components of athleticism (Balaguer et al., 1999). In order to enhance the motivational climate, goal orientation, and perceptions of improvement and satisfaction, coaches should emphasize effortful involvement in training and competition (Liew Yi et al., 2018). Personal improvement and the collective contributions from both the athlete and coach aid in creating a task-involving environment, which improves coach ratings among their athletes (Balaguer et al., 2007). The motivational climate among athletes is an important predictor of the

perceptions of improvement and satisfaction of athletes and is correlated with higher levels of coach ratings (Balaguer et al., 1999).

Coaching behavior must meet the needs and expectations of athletes in order to enhance the coach-athlete relationship (Cumming et al., 2006). Coaches must improve their communication strategies and adjust their behaviors in order to align with their athletes' needs and expectations in order to create positive and supportive environments. Coaches should foster team cultures that support athlete mental health (Bissett et al., 2020). Effective coaching is grounded in the principles of coaching, teaching, and positive psychology (Cote & Gilbert, 2009). Effective coaching can be defined by three areas of competency: coaches' knowledge, athlete outcomes, and the coaching context. The coaches' knowledge refers to the understanding and application of coaching principles, strategies, and techniques of the game (Price et al., 2020). Coaches must possess a certain level of expertise to help guide and support athletes in their athletic development. Athletic outcomes can be defined as effective and positive outcomes associated with the coaches' practices and behaviors include factors such as athletic improvement, psychological well-being, and the athlete's individual growth (Cote & Gilbert, 2009). Coaching context refers to the specific sport, level of competition, and the individual athlete's characteristics. The effective coaching role is multifaceted and requires a unique blend of sport-specific knowledge as well as the ability to understand and foster healthy relationships (Lynn, 2010).

Athlete attachment styles have been associated with the quality of the coach-athlete relationship (Davis & Jowett, 2014). Issues of social support, depth of relationship, and dyad-conflicts have been studied in conjunction with athlete attachment style. Insecure attachment was found to be negatively correlated with the positive aspects of the coach-athlete relationship,

including closeness, commitment, and complementarity (Davis et al., 2021). Regardless of the athletes' attachment style, conflict management strategies have been found to enhance the quality of the coach-athlete dyad and can enhance athlete well-being. Coaches aiming to increase athlete well-being must understand the associations between positive coach-athlete relationships and higher levels of athlete well-being, regardless of attachment style Davis & Jowett, 2014).

There exists a positive relationship between the quality of the coach-athlete relationship and athletic performance and a negative association between the coach-athlete relationship and cortisol responses during competition among athletes (Davis et al., 2018). Coaches who focus on building positive relationships with athletes can reduce the risk of exhaustion during competition via lower levels of stress-response (cortisol) improving cognitive performance. Coaches should prioritize building positive relationships with athletes when attempting to improve both physical and cognitive capacities during competition (Davis et al., 2023). High-quality coach-athlete relationships have been associated with enhanced cognitive function in athletes, a reduction in acute stress responses during training and competition, and therefore promoting optimal athletic performance and wellness (Davis et al., 2018).

Communication is a key factor in positive coach-athlete relationships (Davis et al., 2019). Communication affects and is affected by the level of the coach-athlete relationship and some causal associations between communication strategies and relationship quality have been found. Communication strategies such as motivation support and conflict management have been associated with the athlete's perceptions of the coach-athlete relationship (Stanford et al., 2022). There exists a cyclical relationship between the communication and relationship quality between coach and athlete, where the strength of the relationship affects communication and in turn, the communication affects the quality of the relationship (Wachsmuth & Jowett, 2020).

Coaches must be able to communicate their vision for team success in a clear and positive manner, including athletes in decision making processes while applicable (Ekstrand et al., 2017). Focus should be placed on a shared vision, communication, support, encouragement, and role modeling. These factors are linked to positive psychological and behavioral aspects in athletes (Bae, 2023). Interactions between coach and athlete can have an impact on athlete satisfaction (Erickson et al., 2011). Deliberate and meaningful interactions between coach and athlete may be associated with more satisfied youth athletes (Fan et al., 2023) and coaches must pair technical correction and strategy with instances of positive reinforcement, leading to higher levels of athlete satisfaction (McLaren et al., 2022). The importance of building positive relationships with athletes suggests that coaches should not only prescribe technical components in training and competition, but should include an environment that fosters positive and healthy coach-athlete relationships (Foulds et al., 2019).

Coaching communication styles may affect athletes' perceptions of the relationship (Kassing & Infante, 1999). Aggressive coaching communication may negatively impact athlete's satisfaction and performance, as athletes may evaluate their coaches' communication styles unfavorably. Unfavorable evaluation of coaches' communication styles is associated with lower levels of individual satisfaction, less team cohesion and lower levels of team success, as expressed in win-loss percentage. On the other hand, favorable evaluations of coaches lead to higher levels of compatibility, which can increase levels of satisfaction and game performance (Kenow & Williams, 1999). Coaches should focus on creating a positive athletic environment, using appropriate communication styles, which includes an awareness of the athletes' perceptions of the relationship and how these perceptions can positively or negatively impact issues such as anxiety, enjoyment, and confidence.

Athletes' perceptions of their coach and the relationship can shift during a season, especially from game-to-game (De Backer et al., 2018). However, the coaching style and coaching behaviors can impact athletes' perceptions of justice. Justice should be viewed as the subjective evaluations from players pertaining to fairness and equity in the coach-athlete relationship and it is the athlete's perceptions of how their coach's actions and decisions promote support, autonomous decision making, and the collective treatment of athletes on the team. Factors that can influence the fluctuations of athlete perceptions include coaching style and behavior, the player's status on the team, as well as the game outcome. Coaching style, in particular, positively predicts athletic perceived justice, whereas the athlete's status on the team and game results negatively predict perceived justice (Soto-Garcia et al., 2022; De Backer et al., 2021). Studies such as these show the dynamic nature of athlete perceptions and are influenced by numerous factors both within and outside of the coach's control.

Engaging in individualized consideration, appropriate role-modeling, and fostering acceptance of group goals are positively correlated with the quality of the coach-athlete relationship (Lopez de Subijana et al., 2021). Athletes who view their coaches in a positive manner have higher levels of satisfaction, which leads to higher quality coach-athlete relationships (Harvey, 2017). Building high quality coach-athlete relationships can be expressed as athlete-centered coaching. Athlete-centered coaching emphasizes the importance of the coach-athlete relationship and is the active involvement of both coaches and athletes in shaping the athletes sporting experience (Moen & Federici, 2014). Athlete-centered coaching is analogous with self-determination theory, emphasizing the satisfaction of athletes' psychological needs for autonomy.

Coaching behavior can affect team efficacy, as defined as the team's shared beliefs and

their ability to accomplish goals and tasks together (Hampson & Jowett, 2012). By measuring team confidence, ability to achieve goals, and being united, self-report measures allow coaches to determine the collective efficacy of their team. Areas of importance include ability, effort, persistence, and unity which can reflect a team's belief in their collective capability. Coaches who demonstrate effective leadership behaviors have the potential to enhance team efficacy through building quality coach-athlete relationships among the team (Cho & Baek, 2020). The coach-athlete relationship has been found to contribute to an individual's collective efficacy by fostering positive relationships and creating a supportive environment (Hampson & Jowett, 2012).

Other-efficacy beliefs are beliefs that refer to an individual's confidence in their partner's abilities (Jackson et al., 2010). Other-efficacy in the coach-athlete dyad strengthens the relationship whereby both partners have a greater commitment and desire to interact with the other. By employing an other-efficacy belief structure, coaches can strengthen their relationship with their athletes through higher levels of commitment and effort from both parties (Stephen et al., 2022). The interpersonal relationships formed between athlete and coach is associated with athlete's well-being and performance (Jowett & Cockerill, 2003). The coach-athlete relationship provides a social situation in which the effective and harmonious relationship leads to positive interpretations and reactions of both the coach-athlete dyad and the collective team-efficacy (Jowett et al., 2012).

Interpersonal conflict may lead to differences in perceptions regarding the relationship and can lead to feelings of isolation, disagreements, and incompatibility between the coach and athlete (Jowett, 2003). These issues can arise as a result of training, perceptions of power, and the sporting environment. For athletes with an established relationship with a coach, their

perceived relationship with a coach is associated with feelings of physical self-concept (Jowett, 2008). Athlete's self-concept may be malleable in well-established coach-athlete dyads as the relationship is highly interdependent, allowing athletes to be more open to the coach's influence. Coaching feedback can allow for the potential increase in ability, effort, and success, increasing an athlete's self-concept (Bairachniy et al., 2021).

There is a significant positive correlation ($p = 0.019$) relationship between a coach's anxiety level and sport competition anxiety in their athletes (Mottaghi et al., 2013). Coaches with higher levels of anxiety have a significant negative relationship with athletic performance ($p = 0.012$) and an athletes' competitive anxiety level is negatively related to their athletic experience ($p < 0.001$). The coaches' anxiety can decrease athletic performance and decrease overall feelings regarding the athletic experience, such as enjoyment and satisfaction. With coaching anxiety being shown to negatively impact athletic performance, coaches should focus on building positive relationships with their athletes as this can help with stress management during training and competition for the coach (Nicholls & Perry, 2016). Building strong relationships with athletes has been shown to improve stress management in coaches, which can lead to higher perceptions of the coach-athlete relationship among athletes (Zhao & Jowett, 2022; Simons & Bird, 2022).

Poor coaching strategies can lead to a reduction in positive athletic experiences (Gearity & Murry, 2011). Coaches should avoid behaviors that inhibit an athlete's mental skills, including coping and concentration. Athletes who experience poor coaching may suffer from psychological effects, including self-doubt, demotivation, and decreased mental skills such as focus. Athletes who perceive the coach-athlete relationship as negative, have higher instances of burnout (Isoard-Gautheur et al., 2016). Coaches can play a crucial role in preventing athlete burnout by

fostering positive relationships with their athletes (Ruser et al., 2021).

Coach leadership has a significant impact on both task and team cohesion (Jowett & Chaundy, 2004). The athlete's direct perspective of their relationship with coach may contribute to better task cohesion with teammates and both direct and meta-perspectives of athletes' relationship with coach may predict social cohesion among teams. This suggests coach-athlete relationship quality may contribute to fostering cohesion among teams. Team cohesion may lead to greater propensity of satisfaction, performance, and athletes' affective needs (Horne & Carron, 1985).

Two coaching styles that have been studied relating to athlete satisfaction and intent to continue participation are autocratic and democratic coaching styles. Democratic coaching is the approach to coaching that provides athletes with rationales for tasks and considers the athlete's feelings and viewpoints, allowing athletes' the opportunities to make decisions and provide feedback (Kim et al., 2021). Autocratic coaching is centered in coach-only decision making and does not seek athlete opinions (Jin et al., 2022). Athletes who were coached under a democratic-style reported higher levels of satisfaction and intent to continue their athletic careers. Although there was a correlation between autocratic coaching style and intent to play, there was no correlation between athlete satisfaction and autocratic coaching, suggesting that coaches should encourage athletes to make suggestions, letting the team set goals, and ask athletes for their opinion on strategy and competition (Kim et al., 2021).

The coach's beliefs may influence athlete perceptions of the coach-athlete relationship (Moen et al., 2015). Coaches who understand individual differences in coaching styles and beliefs may help coaches tailor their coaching approach to meet the needs of their athletes. By meeting the needs of their athletes, coaches may increase satisfaction and commitment from

athletes (Mashuri et al., 2022). Trust in a coach has a direct effect on commitment to the coach, willingness to cooperate, and perceived performance in athletes (Zhang & Chelladurai, 2013).

By establishing open channels of communication and through the regular exchanges of information between coach and athlete, coaches can foster understanding between members of the dyad (Rhind & Jowett, 2011). Motivational strategies that enhance commitment and motivation from athletes can enhance athlete perceptions of their coaches as cooperative figures, enhancing both commitment and complementarity in the relationship. Conflict management, openness, motivation, positivity, advice, support, and social networks can improve and maintain the relationship quality between coach and athlete (Rhind & Jowett, 2010; Rhind & Jowett, 2012). The coach-athlete relationship quality is positively correlated with athlete well-being, regardless of sport (Simmons & Bird, 2022). Positive feelings associated with sport, especially when enhanced by the coach-athlete relationship, can improve the athletic experience for adolescents (Wilczynska et al., 2022).

In sport, especially in youth athletics, the coach-athlete relationship has long-term impacts on athlete well-being (Kuhlin et al., 2019). The coach-athlete relationship can have a positive or negative impact on athlete personal development. The coaches' passion toward coaching has the potential to shape the manner in which they interact with their athletes and can influence their athletes' perceptions of the relationship quality (Lafreniere et al., 2011). Coaches who display autonomy supportive behaviors fosters positive emotional bonds with athletes, whereas coaches with obsessive passion for coaching exhibit controlling behaviors toward their athletes (Kim et al., 2020).

Relationship health can be defined in terms of closeness, including dimensions of communication, trust, and mutuality (LaVoi, 2007). Issues of involvement, responsiveness, and

engagement are seen to a greater extent in healthy coach-athlete relationships than in non-close relationships. Athletes may define closeness with a coach as a combination of affective, cognitive and behavioral components. Athletes feel that a close relationship with their coach allows them to approach their coach, understands their coach and his methods, and that their coach understands how their emotions may affect their performance (Lee et al., 2023). Coaches can further increase athletes' perceptions of a healthy relationship through discussions regarding burnout, emotional management, and dropout prevention methods (Lisinkiene, 2018).

The coach-athlete relationship has long-term impacts on athletic development. Enhancing the coach-athlete relationship could help athletes achieve their goals more effectively, highlighting the importance of the coach-athlete relationship for adolescent athletes (Nicholls et al., 2017). Coaches should aim to minimize or eliminate unsupportive behaviors in an attempt to reduce stress and anxiety among athletes (Nicholls et al., 2016). Coaches can foster higher levels of closeness, commitment, and complementarity with their athletes, leading to higher levels of motivation, satisfaction, and performance in team sports (Olympiou et al., 2008).

Summary

The coach-athlete relationship plays a vital role in sport. It influences athletic performance, athletic development, and an athlete's overall well-being (Shanmuganathan-Felton et al., 2022). Coaches are responsible for providing guidance and technical instruction, support, and motivation in an attempt to enhance the athletic experience and allow athletes to achieve their goals (Sommerfeld & Chu, 2020). The coach-athlete relationship varies in several key factors, including closeness, commitment, and complementarity. The quality of the coach-athlete relationship significantly impacts an athlete's success and satisfaction with sport (Jowett & Slade, 2021).

Practical implications of the coach-athlete relationship include enhanced athletic performance, greater athletic development, higher levels of athlete well-being, and greater likelihood of continued participation (Simons & Bird, 2022; Kuhlin et al., 2020). Positive coach-athlete relationships enhance trust, communication and understanding between members of the dyad and coaches who develop strong connections with their athletes provide greater levels of guidance, feedback, and training strategies, all of which enhance the athletic experience. Higher quality coach-athlete relationships allow for greater levels of personal growth and development among athletes, with coaches as role models, an athlete's character, values, and life skills may be influenced by the coach, which has implications reaching far beyond sport (Jowett & Slade, 2021). Athletes who are valued, understood, and supported by their coaches will have greater likelihood of staying committed to sport. The stability that a coach creates allows the athlete to maintain commitment and set long-term goals over the course of their career.

Athlete satisfaction in sport refers to an individual's level of contentment during athletic participation. Performance outcomes, retention rates, and athlete well-being may all have an impact on athlete satisfaction (Gunnink, 2012; Thompson & Schary, 2021). Coaches and sport administration should be aware of the factors impacting athlete satisfaction in an attempt to minimize athlete burnout and enhance the athletic experience. Satisfied athletes tend to have higher levels of motivation and engagement, both of which enhance athletic performance. Athletes who are satisfied are more likely to participate in sport long-term and have lower attrition rates (Aumand, 2005). Athlete satisfaction and overall well-being are significantly correlated, with higher levels of happiness and self-esteem being associated with satisfaction in athletics (Gunnink, 2013).

The coach-athlete relationship can be seen as a dynamic interaction between coach and

athlete, with athlete satisfaction referring to one's perception of their contentment, fulfillment, and enjoyment with the sporting experience. The coach-athlete relationship and athlete satisfaction are interconnected and have practical implications for both coaches and athletes (Fan et al., 2023). The coach-athlete relationship aids in athletic development and performance, leading to higher levels of athlete satisfaction in sport. A positive and supportive coach-athlete relationship may lead to increased levels of athletic satisfaction, motivation, and adherence to training programs, aiding in performance (Jin et al., 2022). This relationship involves effective communication; high levels of closeness, commitment, and complementarity; as well as trust, support, and a mutual understanding between the members of the dyad (Shanmuganathan-Felton et al., 2022). Overall, the strong coach-athlete relationship may enhance athlete satisfaction and increase athletic performance. Through implementation, coaches can create a supportive and trusting environment, enhancing athlete satisfaction, fostering long-term athletic development and success.

Themes that persist in the literature surrounding the coach-athlete relationship and athlete satisfaction include communication, support and empathy, athlete-centered coaching, trust and respect, continued feedback, and relationship building. Coaches should prioritize effective communication with athletes, which includes regular feedback and clear instruction, a willingness to listen to athletes' concerns, and communication strategies that foster understanding and positivity (Kim et al., 2021; McShan & Moore, 2022). Coaches who display empathy during both success and failure may strengthen the coach-athlete relationship, as this helps the athlete feel valued and supported, enhancing athlete motivation and satisfaction.

Coaches should employ an athlete-centered coaching structure to enhance athlete satisfaction. Athlete-centered coaching consists of recognizing the athlete's unique set of needs

and abilities, motivations, and individual goals (Light, 2017). By acknowledging the diverse nature of athletes, coaches may enhance the athletic experience and athlete satisfaction. Coaches may continue to enhance the athletic experience and athlete satisfaction through a safe, trusted, and respectful environment, which involves treating athletes as partners in the decision-making process (Hebert & Newland, 2021; Larkin et al., 2022). Allowing for appropriate feedback and focusing on both athlete strengths and weaknesses can aid in goal-setting and enhance levels of satisfaction by fostering autonomy and personal investment from athletes. The coach-athlete relationship should be continually developed and coaches should recognize that the relationship is an ongoing process, requiring continual effort from both parties (Shanmuganathan-Felton et al., 2022; Jowett & Wachsmuth 2020). Regular communication, evaluation, and reflection from both coach and athlete may lead to higher levels of positivity that both coaches and athletes find mutually beneficial. While the research has shown the many benefits of satisfaction as it pertains to the coach-athlete relationship, there is little information on high school athlete satisfaction and the role the coach-athlete relationship plays in that.

Researching and examining the associations between the coach-athlete relationship and athlete satisfaction in high school athletes is of great importance for several reasons. First, the coach-athlete relationship has a significant impact on athlete satisfaction. A positive relationship with a coach, as expressed through the coach-athlete relationship, may enhance an athlete's levels of enjoyment in sport, their motivation, and overall levels of satisfaction within the athletic environment. Conversely, a negative coach-athlete relationship may lead to a dissatisfied or unmotivated athlete, which can lead to a higher potential for dropout from sport. Therefore, understanding the factors that may lead to a positive coach-athlete relationship can help improve athlete satisfaction levels and increase retention rates in sport at the high school level.

Second, studying the associations between the coach-athlete relationship and athlete satisfaction may provide valuable insights into effective coaching strategies. When coaches begin to understand specific behaviors and communication strategies, they will enhance their skills which lead to more productive and satisfying environments for their athletes. This will contribute to the development of evidence-based coaching practices that contributes to positive and healthy athletic environments.

Third, adolescence is a critical period of development as individuals begin shaping identity. For the athlete, their experiences within the sporting domain may significantly impact such factors as self-esteem, social interactions, and their overall well-being. Therefore, understanding the coach-athlete relationship and the influences on athlete satisfaction during an athlete's formative years is paramount for promoting positive youth development as well as helping young student athletes navigate the challenges they may face.

The findings from this research may help inform the design and implementation of interventions for coaches and support staff in order to increase positive coach-athlete relationships. Coaching training programs can be developed which can provide coaches with the necessary tools and skill sets to establish and maintain positive and healthy relationships with their athletes. Additionally, educational initiatives that target the high school athlete should focus on building effective communication skills as well as conflict resolution techniques, which may enable them to navigate challenges within the coach-athlete dyad and increase higher levels of satisfaction.

Studying the associations between the coach-athlete relationship and athlete satisfaction may help to contribute to a broader understanding of the psychological, social, and relational factors that may affect athlete performance and satisfaction. By recognizing the importance of

the coach-athlete relationship, researchers can promote a holistic approach to coaching and the relationships built with athletes. This approach goes beyond the physical component of sport participation and may contribute to greater athlete overall well-being. By understanding the relationship between the coach-athlete relationship and athlete satisfaction, coaches can create a positive and supportive environment that enhances the development, satisfaction, and therefore, success of their high school level athletes.

In summary, by researching the associations between the coach-athlete relationship and high school athlete satisfaction, coaches can begin to understand and appreciate the vital importance of improving and maintaining healthy, positive relationships with their athletes. By improving athlete experiences via enhanced coaching practices, coaches may begin to optimize youth development through a holistic approach of athlete well-being.

CHAPTER THREE: METHODS

Overview

The present study examined the association between the coach-athlete relationship and athlete satisfaction. The study is correlational, using a cross-sectional design. Participants are Pennsylvania high school football student athletes from PIAA District III. Criteria for participation in this study include current enrollment in high school and active participation in high school football and in good academic standing. Measures include two surveys; the Coach-Athlete Relationship Questionnaire (CART-Q) and the Athlete Satisfaction Questionnaire (ASQ). Both the CART-Q and ASQ have been found in previous research to have high levels of validity and reliability (Jowett, 2009; Riemer & Chelladurai, 1998).

Data was collected using online surveys that were administered electronically to the participants. Participants were given an access code to complete the surveys, which was electronically saved to a secure database. Prior to participation in the study, participants were required to read and sign informed consent, with parental approval/consent and child assent for participants under the age of 18. Due to the participants age, extra precautions were made to ensure participant anonymity. All survey responses, as well as school district names are kept anonymous. Pearson's correlation coefficient was used to determine the strength and direction of the relationship between the coach-athlete relationship and athlete satisfaction. Limitations of the study include sample size and demographics, self-report bias, and limited sports and sporting level. Additionally, the study was correlational in design and therefore causality cannot be established. Participant demographics were collected which included school year (grade), years of high school varsity football participation under the current head coach (1-3 years) and team record (winning or losing).

Research design correlating the coach-athlete relationship and athlete satisfaction may vary depending on the aims and objectives of the given study. This study used a correlational study design, which aims to examine the relationship between those variables without any manipulation or control of the variables (McShan & Moore, 2023). The present study involves collecting data from a sample of high school football student athletes through self-report measures (CART-Q and ASQ), assessing the quality of the coach-athlete relationship through subjective ratings, assessing the perceptions of student athletes on various subjects including communication, support, and trust.

The present study is a non-experimental quantitative study. Research was conducted using descriptive statistics on PIAA high school football student athletes' perceptions of their current coach-athlete relationship and their overall levels of satisfaction in sport. Data was collected using anonymous surveys.

Research Questions

1. What are high school football student athletes' perceptions of the quality of their current coach-athlete relationship?
2. What are high school football student athletes' perceptions of overall satisfaction within the athletic domain?
3. Are ratings of the quality of the coach-athlete relationship associated with student athletes' ratings of satisfaction?

Hypothesis

The null hypotheses for this study are:

$H_0$1: There is no difference in the perception of the quality of the coach-athlete relationship between high school football student athletes with more positive and less positive

relationships.

$H_0$2: High school football student athletes with a lower level of overall satisfaction within the athletic domain will not report positive perceptions of their experience and outcomes in their sport.

$H_0$3: High school football student athletes' ratings of the quality of the coach-athlete relationship are not positively associated with their ratings of satisfaction within the athletic domain.

Participants and Setting

High school football athletes were recruited to participate in the study. All participants were actively enrolled at their high school, had good academic standing, and were on the team roster. All high schools were recruited from south-east Pennsylvania in the United States. These schools are located in Pennsylvania Interscholastic Athletic Association (PIAA) District III (Adams, Berks, Cumberland, Dauphin, Franklin, Juniata, Lancaster, Lebanon, Perry, and York counties). PIAA enrollment classification ranges from Classification A to Classification AAAAAA. District III classifications are as follows: A (4), AA (7), AAA (15), AAAA (20), AAAAA (29), AAAAAA (16). Total schools in PIAA District III: 91.

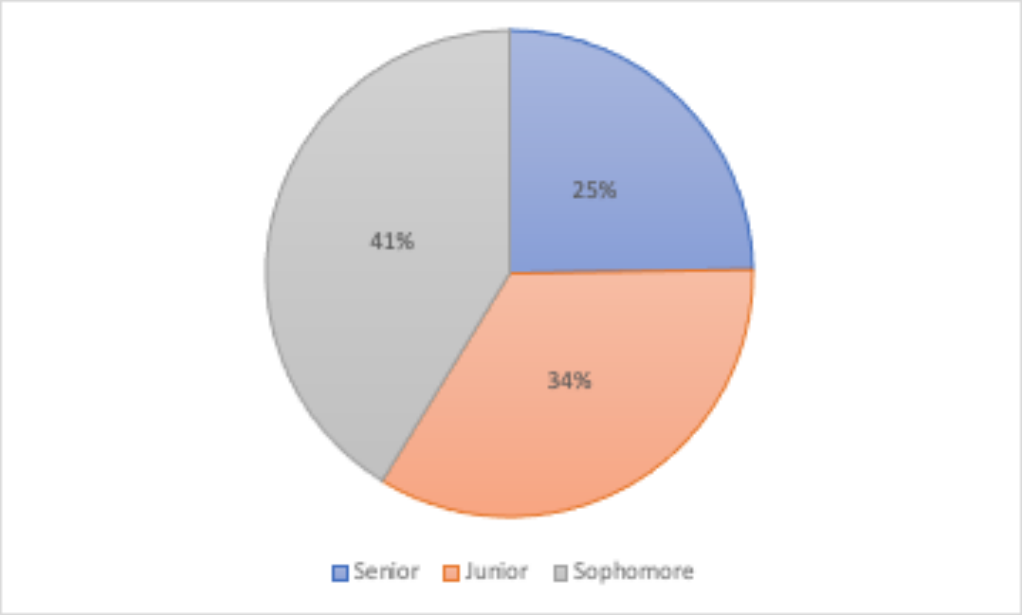
Upon IRB approval, an initial recruitment email was sent to 37 high schools and their respective head football coach. Of the 37 high schools, six schools agreed to participate in the study, resulting in a 16% response rate. Once approval from the head coach, athletic director, and/or school board was made, the head coach was sent the anonymous survey link, along with instructions on how to properly administer the anonymous questionnaires to their athletes. Instructions regarding anonymity, consent, and parental approval were also included.

171 student athletes responded from six high schools. After removing incomplete data

sets, 97 responses were fit for analysis. Of the 97 student athletes who participated, 40 were sophomores (41%), 33 were juniors (34%), and 24 were seniors (25%). Demographics by school year is shown in Figure 1. Power analysis was conducted to determine sample size for the present study. The sample size was calculated to be 134 participants. Although 171 participants responded to the survey, only 97 participants' data were usable in this study. The present study did not meet the required sample size for adequate statistical power as determined by the power analysis. Readers should consider this information when interpreting the results section.

Figure 1

Demographics by Year in School



Additionally, 39% of participants had played for their current head coach for one year, 39% played for their current head coach for two years, and 19% played for their current head coach for three years.

Participant School Year and Years Played were compared. The majority of sophomores (85%) played for their current head coach for one year, the majority of juniors (78%) played for their current head coach for two years, and the majority of seniors (62%) played for their current

head coach for three years. Full results are shown in Table 1.

Table 1

Demographics by Year in School and Years Played for Head Coach

School Year	1 Year	2 Years	3 Years	%
Sophomore	34	6	0	41.2
Junior	3	26	4	34.0
Senior	0	9	15	24.7
Totals (N = 97)	37	41	19	100.0

Participants were asked to report their team's win-loss record from the previous year. PIAA football plays ten regular season games. A winning record is considered when a team has more wins than losses. Of the six schools that participated in the study, three schools had losing records and three schools had winning records. Of the participant responses, 64% (N = 62) had a losing record the previous season and 36% (N = 35) had a winning record the previous season. Full results are shown in Table 2.

Table 2

Response Based on Record

Team Record	N	%
Losing Record	62	64
Winning Record	35	36
Totals (N = 97)	97	100

Instrumentation

Athlete Satisfaction Questionnaire

The Athlete Satisfaction Questionnaire (ASQ) was developed to assess athlete perception of satisfaction within multiple dimensions (Riemer & Chelladurai, 1998). The ASQ includes 56

items that assess important components of an athlete's experience in sport. These include performance, leadership, the team, the organization, and the individual.

The ASQ includes 15 subscales: Individual performance, team performance, ability utilization, strategy, personal treatment, training and instruction, team task contribution, team social contribution, ethics, team integration, personal dedication, budget, medical personnel, academic support services, and external agents. Responses are rated on a Likert scale from 1 ("strongly disagree") to 7 ("strongly agree").

Coach-Athlete Relationship Questionnaire

(CART-Q; Jowett & Ntoumanis, 2004). The CART-Q is a self-assessment tool that assesses coaches' and athletes' perceptions of the quality of the coach-athlete relationship. In the present study, only the athlete direct- and meta-perspective versions will be used.

The CART-Q is an 11-item survey which measures the quality of the coach-athlete relationship of three interdependence measures: closeness, commitment, and complementarity. Responses are rated on a Likert scale from 1 ("strongly disagree") to 7 ("strongly agree).

Procedures

Upon IRB approval from Liberty University, head coaches and athletic directors from individual schools were contacted asking to participate in the research study. If further approval was needed from school board members or other stakeholders, the researcher contacted them for approval. Information regarding the study, what the researcher attempted to uncover, and issues of individual and team anonymity were included in the initial email. The researcher's contact information was included in the email and coaches were encouraged to contact the researcher if they needed further clarification before committing to the research study.

The athletes were assigned a hyperlink and/or QR code that was directed to their

anonymous survey questions. The participants were informed by their head coach to complete the survey honestly. Coaches were not permitted to help/instruct their athletes in order to reduce the likelihood of athlete anxiety regarding their answers. Survey responses were saved on a password protected computer. Only the researcher and dissertation committee chair had access to the stored data.

Data Analysis

Descriptive statistics were conducted to address the research questions regarding the coach-athlete relationship quality and athletes' ratings of satisfaction. When establishing a relationship between the constructs, the number of variables must be determined. For the present study, the independent variable is the athletes' perceptions of the quality of the coach-athlete relationship, as determined by the 3 Cs (closeness, commitment, and complementarity). The dependent variable is athletes' ratings of satisfaction.

Levels of measurement must be considered in order to determine the use of parametric or non-parametric statistics. Velleman & Wilkinson (1993) discuss the four types of scales: nominal, ordinal, interval, and ratio, as developed by Stevens (1946). As both the Coach-Athlete Relationship Questionnaire (CART-Q) and the Athlete Satisfaction Questionnaire (ASQ) use Likert (1932) scales, either nominal or ratio scales could be used. However, Boone and Boone (2012) provide recommendations for analyzing Likert data, including descriptive statistics and specific analysis procedures for different types of Likert scales. Both instruments (CART-Q and ASQ) are interval data due to composite scores, rather than individual survey items. Therefore, the appropriate parametric test is a Pearson r correlation, establishing direction and magnitude of relationships between variables (Sriram, 2006). A Pearson r correlation was conducted determining relationships between the coach-athlete relationship (closeness, commitment,

complementarity) and overall ratings of satisfaction, as well as a composite score of the quality of the coach-athlete relationship (Boone & Boone, 2012).

Four of the 15 subscales of the ASQ refer to the coach: Ability Utilization, Strategy, Personal Treatment, and Training/Instruction (Riemer & Chelladurai, 1998), which may contribute to the observed association between the coach-athlete relationship and athlete satisfaction. These four subscales were removed from the ASQ overall score in an attempt to determine if an association between the coach-athlete relationship and athlete satisfaction still exists. The three constructs of the CART-Q (3 Cs) may indicate a predictive relationship with athlete satisfaction (Ahmad et al., 2021). These variables may be analyzed collectively and individually. A standard multiple regression was used to determine the aggregate influence of these factors on ratings of athlete satisfaction and to determine any unique variance in athlete satisfaction that may be explained by athletes' perceptions of the coach-athlete relationship.

Burns et al. (2012) used multiple regressions and Pearson correlation coefficients to examine the relationship between athlete identity and athlete satisfaction by compiling the 15 facets of the ASQ into one composite score for analysis. The present study used the same approach. Riemer & Chelladurai (1998) combined the 15 facets of the ASQ into one composite score using exploratory and confirmatory factor analysis, and the item-to-total correlations were examined to determine the relationship between each item and the overall satisfaction score. The results of these analyses helped the authors identify the underlying factors of athlete satisfaction and how they may contribute to the overall satisfaction score. Additionally, the authors found high internal consistency (Cronbach's alpha = .78 to .95). By considering the responses to the items across all 15 facets, the authors were able to calculate a composite score that represents overall athlete satisfaction. The present study did the same. The present study used statistical

analyses and item responses from participants to combine the 15 facets of the ASQ into one composite score, providing a comprehensive measure of athlete satisfaction.

CHAPTER FOUR: FINDINGS

Overview

The purpose of the present study was to investigate high school football athletes' perceptions of the quality of their current coach-athlete relationship and their ratings of athlete satisfaction, with the quality of the relationship with their current head coach being the predictor for overall satisfaction. Descriptive statistics are presented to address research questions one and two. A t-test was used to answer the first and second research question. A Pearson Correlation analysis was used to address the third research question. Post-hoc analyses were conducted to address additional variables.

Research Questions

RQ1: What are high school football student athletes' perceptions of the quality of their current coach-athlete relationship?

RQ2: What are high school football student athletes' perceptions of overall satisfaction within the athletic domain?

RQ3: Are ratings of the quality of the coach-athlete relationship associated with student athletes' ratings of satisfaction?

Null Hypotheses

$H_0$1: There is no difference in the perception of the quality of the coach-athlete relationship between high school football student athletes with more positive and less positive relationships.

$H_0$2: High school football student athletes with a lower level of overall satisfaction within the athletic domain will not report positive perceptions of their experience and outcomes in their sport.

$H_0$3: High school football student athletes' ratings of the quality of the coach-athlete relationship are not positively associated with their ratings of satisfaction within the athletic domain.

Descriptive Statistics

Descriptive statistics were collected to obtain a more comprehensive understanding of the population. Data recorded included: Academic year (sophomore, junior, senior), Years played for head coach (one, two, three), and win-loss. Most of the participants were sophomores (41%), with juniors reporting slightly less (34%), and finally seniors at 24%. Most athletes played for their current head coach for one (40%) or two (40%) years, with only 20% of athletes having played for the current head coach for three years. Winning-record and losing-record teams were evenly split (3 winning-record teams, 3 losing-record teams). However, 62 (64%) participants reported a losing record, with 35 (36%) participants reporting a winning record. These descriptive statistics provide context for understanding some of the demographics and experiences of the surveyed athletes, setting the stage for deeper exploration into their perspectives of the coach-athlete relationship.

Research Question One. What are high school football student athletes' perceptions of the quality of their current coach-athlete relationship? To address research question one, participants completed the Direct- and Meta-Perspective versions of the CART-Q. Combined, these questionnaires address the quality of their current coach-athlete relationship.

The direct perspective items measure an athlete's personal viewpoint regarding the relationship (e.g. "I like my coach"), whereas the meta perspective measures an athlete's perception of their coach's feelings regarding the relationship (e.g. "My coach likes me"). Scores were reported on a 7-point Likert scale. Higher scores indicate a better quality of relationship.

Direct Perspective responses yielded an overall mean score of 6.36 (SD = 0.52). Direct

Perspective consists of three subscales: Closeness (e.g., “I like my coach”), Commitment (e.g., “I am close to my coach”), and Complementarity (e.g., “When I am coached by my coach, I am at ease”). Four subscale questions pertain to Closeness, three subscale questions pertain to Commitment, and four subscale questions pertain to Complementarity.

Meta Perspective responses yielded an overall mean score of 6.01 (SD = 0.78). As with the Direct Perspective, Meta Perspective consists of three subscales: Closeness (e.g. “My coach likes me”), Commitment (e.g. “My coach is close to me”), and Complementarity (e.g. “My coach thinks that his sporting career is promising with me”). Four subscale questions pertain to Closeness, three subscale questions pertain to Commitment, and four subscale questions pertain to Complementarity.

Direct Commitment received the lowest mean score of 6.05 (SD = 0.78) of the three direct subscales. Direct Closeness and Direct Complementarity scored higher, with Direct Closeness mean score of 6.62 (SD = 0.49) and Direct Complementarity mean score of 6.34 (SD = 0.55). Meta Commitment received the lowest mean score of 5.72 (SD = 0.93). Meta Closeness and Meta Complementarity scored higher, with Meta Closeness mean score of 6.12 (SD = 0.86) and Meta Complementarity mean score of 6.12 (SD = 0.78). The results are displayed in Table 3.

Table 3

CART-Q Direct and Meta Perspective Scores

Subscale	Mean	Standard Deviation
Direct – Overall	6.36	0.52
Direct – Closeness	6.62	0.49
Direct – Commitment	6.05	0.78
Direct – Complementarity	6.34	0.55
Meta – Overall	6.01	0.78
Meta – Closeness	6.12	0.86
Meta - Commitment	5.72	0.93
Meta - Complementarity	6.12	0.78
Totals (N = 97)		

After initial analysis was run, the participant scores were divided into two categories: High Perception and Low Perception based on the average mean score of the CART-Q. Participants who fell below the average mean score were placed in the Low Perception group and participants who fell equal to or above the average mean were placed into the High Perception group. In the High Perception group, direct closeness had the highest mean (6.92, SD = 0.15) with meta commitment reporting the lowest mean (6.25, SD = 0.64). Mean scores were lower in the Low Perception group, with direct closeness reporting the highest mean (6.25, SD = 0.51) and meta commitment reporting the lowest mean (5.07, SD = 0.82). The results are displayed in Table 4.

Table 4

CART-Q Direct and Meta Perspective Scores by Perception Group

	Low Perception Group			High Perception Group		
	Mean	SD	N	Mean	SD	N
CART-Q Overall	5.40	.482	44	5.51	.495	53
Direct – Closeness	6.25	.517	44	6.92	.150	53
Direct – Commitment	5.48	.724	44	6.53	.445	53
Direct – Complementarity	5.90	.441	44	6.70	.350	53
Meta – Closeness	5.44	.807	44	6.67	.361	53
Meta – Commitment	5.07	.825	44	6.25	.645	53
Meta – Complementarity	5.51	.715	44	6.62	.355	53

Research Question Two. What are high school football student athletes' perceptions of overall satisfaction within the athletic domain? Overall satisfaction rating was 5.65 (SD = 0.82). The 15 subscales, comprising a total of 56 Likert-scale questions, were analyzed. Participants were most satisfied with Medical Personnel (M = 6.26, SD = 0.76). Athletes also appeared to be satisfied with Personal Treatment (M = 6.05, SD = 0.88), and Training and Instruction (M =

6.04, SD = 0.82). Team Performance (M = 4.27, SD = 1.99) scored lowest. Results shown in Table 5.

Table 5

ASQ Subscale Scores

Subscale	Mean	Standard Deviation
Overall Satisfaction	5.65	0.82
Individual Performance	5.68	1.16
Team Performance	4.27	1.99
Ability Utilization	5.25	1.38
Strategy	5.54	1.14
Personal Treatment	6.05	0.88
Training and Instruction	6.04	0.82
Team Task Contribution	5.73	0.95
Team Social Contribution	5.61	1.18
Ethics	5.44	1.17
Team Integration	5.52	1.18
Personal Development	5.64	0.98
Budget	5.93	0.90
Medical Personnel	6.26	0.76
Academic Support Services	5.75	0.92
External Agents	5.94	0.93
Totals (N = 97)		

After initial analysis was run, the participant scores were divided into two categories: High Satisfaction and Low Satisfaction based on the average mean score of the ASQ. Participants who fell below the average mean score were placed in the Low Satisfaction group and participants who fell equal to or above the average mean were placed into the High Satisfaction group. In the Low Satisfaction group, Medical Personnel ranked highest (M = 5.97,

SD = 0.74), with Team Performance ranked lowest (M = 2.80, SD = 1.60). Like the Low Satisfaction Group, the High Satisfaction group also ranked Medical Personnel high (M = 6.50, SD = 0.69). In both the Low Satisfaction and High Satisfaction groups, Ability Utilization (Low Satisfaction: M = 4.25, SD = 1.37; High Satisfaction: M = 6.08, SD = 0.67) and Team Performance (Low Satisfaction: M = 2.80, SD = 1.60; High Satisfaction: M 5.49, SD = 1.37) ranked lowest. See Table 6 for full results.

Table 6

ASQ Scores by Satisfaction Group

	Low Satisfaction Group			High Satisfaction Group		
	Mean	SD	N	Mean	SD	N
Overall Satisfaction	4.90	0.43	44	5.06	0.60	53
Individual Performance	4.95	1.20	44	6.29	0.68	53
Team Performance	2.80	1.60	44	5.49	1.37	53
Ability Utilization	4.25	1.37	44	6.08	0.67	53
Strategy	4.70	1.07	44	6.24	0.60	53
Personal Treatment	5.45	0.92	44	6.55	0.42	53
Training and Instruction	5.51	0.73	44	6.49	0.60	53
Team Task Contribution	5.01	0.85	44	6.33	0.51	53
Team Social Contribution	4.90	1.19	44	6.20	0.79	53
Ethics	4.56	1.19	44	6.18	0.65	53
Team Integration	4.55	1.00	44	6.33	0.54	53
Personal Dedication	4.95	0.93	44	6.22	0.57	53
Budget	5.34	0.88	44	6.43	0.55	53
Medical Personnel	5.97	0.74	44	6.50	0.69	53
Academic Support Services	5.15	0.79	44	6.26	0.69	53
External Agents	5.36	0.94	44	6.41	0.59	53

Results

Hypotheses

$H_0$1: There is no difference in the perception of the quality of the coach-athlete relationship between high school football student athletes with more positive and less positive relationships.

Hypothesis 1 was tested using a T-Test with reported perception of relationship as the independent variable and overall coach-athlete relationship as the dependent variable. Assumptions of the T-Test (e.g., normality, linearity, homogeneity of variance) were checked and results were found to be acceptable (Field, 2018). In order to examine any differences between the Low Perception and High Perception ASQ responses, an independent sample t-test was conducted.

Independent Samples T-Test of the means between high perception and low perception of the coach-athlete relationship showed that there was a significant difference ($p < .001$). Mean of the low perception group was 5.40 (SD = .482) and mean of the high perception group was 6.34 (SD = .234). Therefore, the null hypothesis was rejected. Results shown in Table 7.

Table 7

Group Statistics and One Sample T-Test: CART-Q Perception

	N	M	SD	F	Sig.
Low Perception	44	5.40	.482		
High Perception	53	6.34	.234		
CART-Q Overall				12.70	<.001

A post-hoc multiple regression analysis was conducted to examine associations between the Direct and Meta subcategories of the CART-Q and participant's perceptions of the overall CART-Q score. Direct Complementarity was found to have a greater impact on overall CART-Q

score for participants with high perceptions of their relationship quality (SE ß = .27) as compared to participants with lower perceptions of their relationship quality (SE ß = .15). See Table 8 for full results.

Table 8

Multiple Regression Results: CART-Q and Perception Groups

Low Perception Group	SE ß	High Perception Group	SE ß
Meta – Complementarity	.29	Meta – Commitment	.31
Meta – Commitment	.24	Direct – Complementarity	.27
Direct – Commitment	.21	Direct – Commitment	.27
Meta – Closeness	.20	Meta – Complementarity	.25
Direct – Closeness	.19	Meta – Closeness	.23
Direct – Complementarity	.15	Direct – Closeness	.10

$H_0$2: High school football student athletes with a lower level of overall satisfaction within the athletic domain will not report positive perceptions of their experience and outcomes in their sport.

Hypothesis 2 was tested using a T-Test with reported satisfaction as the independent variable and overall satisfaction as the dependent variable. Assumptions of the T-Test (e.g., normality, linearity, homogeneity of variance) were checked and results were found to be acceptable (Field, 2018). In order to examine any differences between the Low Satisfaction and High Satisfaction ASQ responses, an independent sample t-test was conducted.

Independent Samples T-Test of the means between high satisfaction and low satisfaction groups showed that there was a significant difference (p = .003). Mean of the low satisfaction group was 4.90 (SD = .543) and mean of the high satisfaction group was 6.27 (SD = .374). Therefore, the null hypothesis was rejected. Results shown in Table 9.

Table 9

Group Statistics and One Sample T-Test: ASQ

	N	M	SD	F	Sig.
Low Satisfaction	44	4.90	.543		
High Satisfaction	53	6.27	.374		
ASQ Overall				9.40	.003

A post-hoc multiple regression analysis was conducted to examine associations between the fifteen subcategories of the ASQ and participants with high and low ratings of satisfaction. Of the fifteen subcategories, Ability Utilization (SE ß = .22, .16), Team Performance (SE ß = .15, .19), and Strategy (SE ß = .21, .17) emerged as having a greater impact on Overall Satisfaction for both Low and High Satisfaction Groups. Budget (SE ß = .08, .07), Team Task Contribution (SE ß = .08, .07), Academic Support Services (SE ß = .07, .09), and Training and Instruction (SE ß = .07, .08) emerged as having a lesser impact on Overall Satisfaction for both Low and High Satisfaction Groups. High Satisfaction Group – Medical Personnel (SE ß = .13) was ranked higher than Low Satisfaction Group (SE ß = .09). See Table 10 for full results.

Table 10

Multiple Regression Results: ASQ and Satisfaction Group

Low Satisfaction Group	SE ß	High Satisfaction Group	SE ß
Ability Utilization	.22	Team Performance	.19
Strategy	.21	Strategy	.17
Team Performance	.15	Ability Utilization	.16
Personal Treatment	.15	Medical Personnel	.13
Team Integration	.13	Personal Dedication	.11
Personal Dedication	.12	Team Social Contribution	.11
External Agents	.12	External Agents	.11
Team Social Contribution	.11	Team Integration	.10

Low Satisfaction Group	SE ß	High Satisfaction Group	SE ß
Individual Performance	.11	Personal Treatment	.10
Ethics	.10	Individual Performance	.09
Medical Personnel	.09	Ethics	.09
Budget	.08	Academic Support Services	.09
Team Task Contribution	.08	Training and Instruction	.08
Academic Support Services	.07	Budget	.07
Training and Instruction	.07	Team Task Contribution	.07

$H_0$3: High school football student athletes' ratings of the quality of the coach-athlete relationship are not positively associated with their ratings of satisfaction within the athletic domain.

Research Question Three. Are ratings of the quality of the coach-athlete relationship associated with student athletes' ratings of satisfaction? The overall aim of this study was to examine the association between high school football athletes' ratings of their perceptions of the quality of the coach-athlete relationship and their ratings of overall satisfaction within their athletic domain.

CART-Q Overall and Overall Satisfaction. A Pearson correlation coefficient was used to determine associations between overall CART-Q scores and overall ASQ scores. CART-Q displayed a mean score of 5.92 (SD = .059). ASQ exhibited a mean score of 5.65 (SD = 0.82). Results indicate a correlation between athletes' overall perceptions of the coach-athlete relationship and overall athlete satisfaction ($r = 0.65$, $p < .01$). These findings suggest that 42% of the variance in athlete satisfaction scores are explained by athletes' perceptions of their current coach-athlete relationship ($R^2 = 0.42$), leading to the rejection of the null hypothesis. See Table 11 for full results.

Table 11

Results of Descriptive Statistics and t-tests: CART-Q and ASQ Overall Scores

	Mean	SD	N	r
CART-Q	5.92	.595	97	.653
ASQ	5.65	.823	97	.653

Note. Correlations are significant at the $p = 0.01$ level (2-tailed)

CART-Q Subscales. A Pearson correlation coefficient was used to determine any associations between the CART-Q subscales and Overall Satisfaction scores from the ASQ. Strong positive correlations were observed between Overall Satisfaction and all subcategories of the coach-athlete relationship. Additionally, Direct- and Meta- Closeness, Commitment, and Complementarity exhibited moderate to strong positive correlations with Overall Satisfaction. All correlations were significant at the $p < 0.1$ level, with higher ratings of coach-athlete relationship associated with higher levels of overall athlete satisfaction. Table 12 has full results.

Table 12

Pearson Correlation Coefficient Between CART-Q Subcategories and ASQ Overall

Scale	1	2	3	4	5	6	7	8	9
CART-Q									
1. Direct – Overall	1	.910	.887	.859	.835	.756	.762	.801	**.617**
2. Direct – Closeness		1	.747	.690	.747	.675	.642	.755	**.594**
3. Direct – Commitment			1	.591	.742	.652	.725	.690	**.538**
4. Direct – Complementarity				1	.727	.682	.648	.687	**.512**
5. Meta – Overall					1	.953	.904	.915	**.640**
6. Meta – Closeness						1	.811	.815	**.589**
7. Meta – Commitment							1	.717	**.600**
ASQ									
9. Overall Satisfaction									1

Note. All correlations are statistically significant at the $p < .01$ level

Of the 15 subcategories of the ASQ, four pertain directly to coaching: Ability Utilization, Strategy, Personal Treatment, and Training and Instruction. These coaching-specific subcategories may have contributed to the observable association between participants' perceptions of relationship quality and overall satisfaction. Therefore, these four subcategories were removed from the overall ASQ score and a new correlation was conducted to determine if the correlation between the two variables still exists. Pearson correlation coefficients were used to explore these associations.

Team Record Differences. Winning and Losing Team Record mean scores were compared across both versions of the CART-Q (Direct, Meta). The three subscales of both the Direct and Meta versions of the CART-Q were included in the analysis. Additionally, overall ratings of the ASQ were analyzed. Winning Team Record had a higher mean score for Overall Satisfaction ($M = 6.01$) compared to Losing Team Record ($M = 5.45$). Winning Team Record had higher overall mean scores on every subscale for the CART-Q except for Meta Complementarity (Winning Team Record $M = 5.45$, Losing Team Record $M = 6.03$). All differences reached the $p < .05$, except for Direct Complementarity ($p = .315$). Table 13 shows full results.

Table 13

Results of Descriptive Statistics and t-tests: CART-Q and ASQ by Team Record

	Team Record								
	Losing Record			Winning Record					
Measure	M	SD	n	M	SD	n	t	df	Sig.
CART-Q									
Direct - Overall	6.28	0.60	62	6.51	0.33	35	-2.06	95	<.001
Direct - Closeness	6.54	0.56	62	6.75	0.32	35	-2.05	95	.005
Direct – Commitment	5.89	0.87	62	6.34	0.49	35	-2.76	95	.001
Direct – Complementarity	6.31	0.60	62	6.39	0.47	35	-0.66	95	.315
Meta – Overall	5.91	0.90	62	6.17	0.48	35	-1.57	95	<.001
Meta – Closeness	6.03	.99	62	6.27	0.54	35	-1.29	95	.004
Meta – Commitment	5.60	1.03	62	5.92	0.70	35	-1.60	95	.016
Meta – Complementarity	6.03	0.51	62	5.45	0.87	35	-1.50	95	<.001
ASQ									
Overall Satisfaction	5.45	0.87	62	6.01	0.58	35	-3.38	95	.003

Note. Equal variances were assumed

Year in School Differences. A one-way ANOVA was conducted to compare responses on all measures of the CART-Q and ASQ ratings of Overall Satisfaction between school years (sophomore, junior, senior). CART-Q Direct Perspective scores revealed no statistical significance between school years ($F(2, 94) = 1.30$, $p = .275$). CART-Q Meta Perspective results were similar, with no statistically significant differences observed between school years ($F(2, 94) = .105$, $p = .900$). Additionally, the analysis did not reveal any significance in Overall Satisfaction between school years ($F(2, 94) = .698$, $p = .500$). Descriptive statistics indicated Direct Perspective mean score was 6.36 (SD = 0.52), Meta Perspective mean score was 6.01 (SD = 0.78) and ASQ Overall Satisfaction score was 5.65 (SD = 0.82). Table 14 shows full results.

Table 14

Results of ANOVA test statistics: CART-Q and ASQ by Year in School

Scale		Sum of Squares	df	Mean Square	F	Sig.
CART-Q						
Direct - Overall	Between Groups	.728	2	.364	1.309	.275
	Within Groups	26.155	94	.278		
	Total	26.884	96			
Meta - Overall	Between Groups	.134	2	.067	.105	.900
	Within Groups	59.728	94	.635		
	Total	59.862	96			
ASQ						
Overall Satisfaction	Between Groups	.953	2	.476	.698	.500
	Within Groups	64.162	94	.683		
	Total	65.114	96			

Years Coached Differences. To compare responses on all measures of the coach-athlete relationship quality and ASQ Overall Satisfaction, a one-way ANOVA was conducted. CART-Q Direct Perspective scores revealed no statistical significance between years coached ($F(2, 9)4 = 1.73$, $p = .182$). CART-Q Meta Perspective results were similar, with no statistically significant differences observed between years coached ($F(2, 94) = 0.39$, $p = 0.67$). Additionally, the analysis did not reveal any significance in Overall Satisfaction between the number of years coached ($F(2, 94) = 0.42$, $p = 0.54$). Two years playing for the current head coach had the highest mean score for both Direct ($M = 6.43$, $SD = 0.45$) and Meta ($M = 6.09$, $SD = 0.72$) perspectives of the CART-Q. Additionally, one year of playing for their current head coach had the highest

mean score for Overall Satisfaction (M = 5.75, SD = 0.84). Playing for their current head coach for three years produced the lowest mean score for both CART-Q Direct (M = 6.16, SD = 0.76) and Meta (M = 5.91, SD = 1.06) perspectives and Overall Satisfaction (M = 5.50, SD = 0.89). Table 15 has full results.

Table 15

Results of ANOVA test statistics: CART-Q and ASQ by Years Coached

Scale		Sum of Squares	df	Mean Square	F	Sig.
CART-Q						
Direct - Overall	Between Groups	.956	2	.478	1.732	.182
	Within Groups	25.928	94	.276		
	Total	26.884	96			
Meta - Overall	Between Groups	.499	2	.250	.395	.675
	Within Groups	59.363	94	.632		
	Total	59.862	96			
ASQ						
Overall Satisfaction	Between Groups	.849	2	.425	.621	.540
	Within Groups	64.265	94	.684		
	Total	65.114	96			

CART-Q and ASQ (No Coaching). Of the 15 subscales in the ASQ, four pertain to coaching: Ability Utilization, Strategy, Personal Treatment, and Training and Instruction. These coaching-specific subscales may contribute to the observed association between the CART-Q and ASQ scores. Therefore, these coaching-specific subscales were removed from the ASQ and a new correlation analysis was conducted to determine if any associations remained. A Pearson

correlation coefficient was used. The strength between variables was reduced, however, there still remained a moderate to strong positive correlation between all measures of the CART-Q and ASQ overall satisfaction score.

Strong positive correlations were observed between overall satisfaction and most dimensions of the coach-athlete relationship. Additionally, specific dimensions of the coach-athlete relationship demonstrated moderate to strong correlations with overall satisfaction. Each subscale showed a lower correlation between CART-Q and Overall Satisfaction (No Coaching) than the full version of the ASQ. Results are shown in Table 16.

Table 16

Pearson Correlation Coefficient Between the CART-Q and ASQ (No Coaching)

Scale	1	2	3	4	5	6	7	8	9
CART-Q									
1. Direct – Overall	1	.910	.887	.859	.835	.756	.762	.801	**.549**
2. Direct – Closeness		1	.747	.690	.747	.675	.642	.755	**.518**
3. Direct – Commitment			1	.591	.742	.652	.725	.690	**.466**
4. Direct – Complementarity				1	.727	.682	.648	.687	**.479**
5. Meta – Overall					1	.953	.904	.915	**.575**
6. Meta – Closeness						1	.811	.815	**.535**
7. Meta – Commitment							1	.717	**.532**
8. Meta – Complementarity								1	**.529**
ASQ									
9. Satisfaction – No Coaching									1

Note. All correlations are statistically significant at the $p < .01$ level

CART-Q and ASQ (Coaching Only). A Pearson coefficient correlation was used to assess whether a stronger relationship existed between the CART-Q and the coaching-specific ASQ Overall Satisfaction scores. There was a moderate positive correlation for all coaching

subscales of the ASQ and the CART-Q subcategories, indicating that higher ratings of coach-athlete relationship were associated with higher levels of overall satisfaction in athletes. Correlations were higher across all subcategories of the coach-athlete relationship when compared to both overall athlete satisfaction and athlete satisfaction (no coaching), except for Direct Complementarity (r = .507, $p < .01$). Direct Complementarity (ASQ Full version) (r = 5.12, $p < .01$). Table 17 shows full results.

Table 17

Pearson Coefficient Correlations Between the CART-Q and ASQ (Coaching Only)

Scale	1	2	3	4	5	6	7	8	9
CART-Q									
1. Direct – Overall	1	.910	.887	.859	.835	.756	.762	.801	**.656**
2. Direct – Closeness		1	.747	.690	.747	.675	.642	.755	**.649**
3. Direct – Commitment			1	.591	.742	.652	.725	.690	**.591**
4. Direct – Complementarity				1	.727	.682	.648	.687	**.507**
5. Meta – Overall					1	.953	.904	.915	**.687**
6. Meta – Closeness						1	.811	.815	**.627**
7. Meta – Commitment							1	.717	**.652**
8. Meta – Complementarity								1	**.630**
ASQ									
9. Satisfaction – Coaching									1

Note. All correlations are statistically significant at the $p < .01$ level

Regression Analysis

Multiple regression analysis was conducted to further address research question three and the relationship between the dependent variable (athlete satisfaction) and independent variable (quality of relationship). Specifically, how the measures of the coach-athlete relationship predict overall athletic satisfaction in the athletic domain. Direct and Meta Perspective subcategories

were used to determine any unique variance within athlete satisfaction.

CART-Q Direct and ASQ. Direct Perspective predictors explained 38% of the variance in athlete satisfaction (R^2 = .38, F = 19.57, p < .001). Furthermore, ratings of Direct Closeness made a statistically unique contribution to the variance in overall satisfaction (ß = .34, p < .01). Results can be found in Table 18.

Table 18

Multiple Regression Results: CART-Q Direct and ASQ

Predictor	B	SE B	ß
Direct – Closeness	.562	.228	.340*
Direct – Commitment	.194	.130	.185
Direct – Complementarity	.247	.168	.168

*p < .05

CART-Q Meta and ASQ. Meta Perspective predictors explained 41% of the variance in athlete satisfaction (R^2 = .41, F = 22.03, p < .001). Ratings of Meta Commitment made a statistically unique contribution to the variance in overall satisfaction (ß = .313, p < .01). Results are shown in Table 19.

Table 19

Multiple Regression Results: CART-Q Meta and ASQ

Predictor	B	SE B	ß
Meta – Closeness	.105	.158	.110
Meta – Commitment	.275	.120	.313*
Meta – Complementarity	.291	.146	.276

*p <.05

CART-Q Direct and ASQ (No Coaching). Direct Perspective predictors explained 30% of the variance in athlete satisfaction (no coaching) (R^2 = .30, F = 13.59, p <.001). However,

none of the subscales showed a unique significant contribution to explain the variance. Results shown in Table 20.

Table 20

Multiple Regression Results: CART-Q Direct and ASQ (No Coaching)

Predictor	*B*	*SE B*	ß
Direct – Closeness	.410	.227	.266
Direct – Commitment	.139	.129	.142
Direct – Complementarity	.290	.166	.211

CART-Q Meta and ASQ (No Coaching). Meta Perspective predictors explained 33% of the variance in athlete satisfaction (no coaching) (R^2 = .33, F = 15.44, p <.001). None of the subscales showed a unique significant contribution to explain the variance. Results shown in Table 21.

Table 21

Multiple Regression Results: CART-Q Meta and ASQ (No Coaching)

Predictor	*B*	*SE B*	ß
Meta – Closeness	.129	.157	.144
Meta – Commitment	.202	.120	.247
Meta – Complementarity	.230	.146	.234

CART-Q Direct and ASQ (Coaching Only). Direct Perspective predictors explained 45% of the variance in athlete satisfaction (coaching only) (R^2 = .45, F = 25.36, p <.001). Ratings of Direct Closeness made a significant unique contribution to the variance in coaching-only satisfaction (ß = .813, p <.001). Results shown in Table 22.

Table 22

Multiple Regression Results: CART-Q Direct and ASQ (Coaching Only)

Predictor	*B*	*SE B*	**ß**
Direct – Closeness	.813	.250	.424*
Direct – Commitment	.274	.142	.226
Direct – Complementarity	.138	.184	.081

**p* <.05

CART-Q Meta and ASQ (Coaching Only). Meta Perspective predictors explained 48% of the variance in coaching-only satisfaction (R^2 = .48, F = 28.78, p <.001). Ratings of Meta Commitment made a significant unique contribution to the variance in coaching-only satisfaction. Results shown in Table 23.

Table 23

Multiple Regression Results: CART-Q Meta and ASQ (Coaching Only)

Predictor	*B*	*SE B*	**ß**
Meta – Closeness	.099	.172	.089
Meta – Commitment	.377	.131	.371*
Meta – Complementarity	.355	.160	.291

*p <.05

CART-Q Direct and ASQ Across Team Record. Direct Perspective predictors explained 40% of the variance in athlete satisfaction across team record in participants with a losing record (R^2 = .40, F = 12.93, p <.001) and 21% of the variance in athlete satisfaction in participants with winning record (R^2 = .21, F = 2.83, p <.001). Ratings of Direct Closeness made a significant unique contribution to the variance in overall satisfaction among athletes with losing team records. Results shown in Table 24.

Table 24

Multiple Regression Results: CART-Q Direct and ASQ Across Team Record

	Team Record					
	Losing			Winning		
Predictor	*B*	*SE B*	**ß**	*B*	*SE B*	**ß**
Direct – Closeness	.608	.287	.390*	.267	.367	.148
Direct – Commitment	.106	.172	.106	.132	.206	.112
Direct – Complementarity	.275	.223	.190	.386	.238	.312

*p <.05

CART-Q Meta and ASQ Across Team Record. Meta Perspective predictors explained 46% of the variance in athlete satisfaction across team record in participants with a losing record (R^2 = .46, F = 16.45, p <.001) and 30% of the variance in athlete satisfaction in participants with winning record (R^2 = .30, F = 4.59, p <.001). Ratings of Meta Commitment made a significant unique contribution to the variance in satisfaction among participants with a losing team record. Additionally, Meta Closeness made a significant unique contribution to the variance in overall satisfaction among participants with a winning team record. Results shown in Table 25.

Table 25

Multiple Regression Results: CART-Q Meta and ASQ Across Team Record

	Team Record					
	Losing			Winning		
Predictor	*B*	*SE B*	**ß**	*B*	*SE B*	**ß**
Meta – Closeness	-.033	.194	-.037	.566	.246	.528*
Meta – Commitment	.386	.148	.458*	-.122	.179	.148
Meta – Complementarity	.291	.190	.296	.216	.202	.191

*p <.05

CART-Q Direct and ASQ Across School Year. For sophomores, CART-Q Direct Perspective predictors explained 37% of the variance in athlete satisfaction (R^2 = .37, F = 7.15, p <.001). For juniors, CART-Q Direct Perspective predictors explained 48% of the variance in athlete satisfaction (R^2 = .48, F = 9.14, p <.001). For seniors, CART-Q Direct Perspective predictors explained 47% of the variance in athlete satisfaction (R^2 = .47, F = 5.94, p <.001). Direct Closeness made a significant unique contribution to the variance in overall satisfaction among participants in their junior year of high school. Results shown in Table 26.

Table 26

Multiple Regression Results: CART-Q Direct and ASQ Across School Year

	School Year								
	Sophomore			Junior			Senior		
Predictor	*B*	*SE B*	**ß**	*B*	*SE B*	**ß**	*B*	*SE B*	**ß**
Direct – Closeness	.490	.495	.218	1.407	.384	.717*	.215	.405	.177
Direct – Commitment	.081	.241	.067	.182	.196	.152	.368	.242	.442
Direct – Complementarity	.665	.337	.384	-.235	.246	-.180	.166	.346	.120

*p < .001

CART-Q Meta and ASQ Across School Year. For sophomores, CART-Q Meta Perspective predictors explained 45% of the variance in athlete satisfaction (R^2 = .45, F = 10.00, p <.001). For juniors, CART-Q Meta Perspective predictors explained 39% of the variance in athlete satisfaction (R^2 = .39, F = 6.25, p <.001). For seniors, CART-Q Meta Perspective predictors explained 52% of the variance in athlete satisfaction (R^2 = .52, F = 7.23, p <.001). Meta Complementarity made a significant unique contribution to the variance in overall satisfaction among participants in their junior year of high school. Results shown in Table 27.

Table 27

Multiple Regression Results: CART-Q Meta and ASQ Across School Year

	School Year								
	Sophomore			Junior			Senior		
Predictor	*B*	*SE B*	**ß**	*B*	*SE B*	**ß**	*B*	*SE B*	**ß**
Meta – Closeness	.363	.284	.330	-.205	.274	-.248	.050	.312	.055
Meta – Commitment	.344	.214	.343	.115	.187	.135	.418	.257	.555
Meta - Complementarity	.055	.285	.041	.711	.270	.745*	.124	.244	.140

*p <.05

CART-Q Direct and ASQ Across Years Coached. For participants that were coached one year, CART-Q Direct Perspective predictors explained 31% of the variance in athlete satisfaction (R^2 = .31, F = 5.10, p <.001). For participants that were coached for two years, CART-Q Direct Perspective predictors explained 42% of the variance in athlete satisfaction (R^2 = .42, F = 9.27, p <.001). For participants who were coached for three years, CART-Q Direct Perspective predictors explained 54% of the variance in athlete satisfaction (R^2 = .54, F = 6.02, p <.001). Direct Closeness made a significant unique contribution to the variance in overall satisfaction among participants that were coached for one year by their current head coach. Results shown in Table 28.

Table 28

Multiple Regression Results: CART-Q Direct and ASQ Across Years Coached

	Years Coached								
	One Year			Two Years			Three Years		
Predictor	*B*	*SE B*	**ß**	*B*	*SE B*	**ß**	*B*	*SE B*	**ß**
Direct – Closeness	.657	.500	.294*	.875	.404	.420	.545	.413	.492
Direct – Commitment	.142	.270	.115	.143	.189	.125	.280	.249	.353
Direct - Complementarity	.388	.374	.219	.260	.236	.189	-.133	.339	-.103

*p <.05

CART-Q Meta and ASQ Across Years Coached. For participants that were coached one year, CART-Q Meta Perspective predictors explained 42% of the variance in athlete satisfaction (R^2 = .42, F = 8.05, p <.001). For participants that were coached for two years, CART-Q Meta Perspective predictors explained 36% of the variance in athlete satisfaction (R^2 = .36, F = 7.22, p <.001). For participants who were coached for three years, CART-Q Meta Perspective predictors explained 66% of the variance in athlete satisfaction (R^2 = .66, F = 9.93, p <.001). Meta Commitment made a significant unique contribution to the variance in overall satisfaction among participants that were coached for one year by their current head coach. Additionally, Meta Complementarity made a significant unique contribution to the variance in overall satisfaction among participants that were coached for three years by their current head coach. Results shown in Table 29.

Table 29

Multiple Regression Results: CART-Q Meta and ASQ Across Years Coached

	Years Coached								
	One Year			Two Years			Three Years		
Predictor	*B*	*SE B*	**ß**	*B*	*SE B*	**ß**	*B*	*SE B*	**ß**
Meta – Closeness	.318	.286	.292	.281	.241	.311	-.340	.376	-.393
Meta – Commitment	.436	.201	.445*	.229	.217	.231	.279	.242	.412
Meta – Complementarity	-.065	.311	-.052	.120	.243	.111	.667	.224	.813**

*p <.05, **p <.001

CHAPTER FIVE: CONCLUSIONS

Overview

Although past research highlights the correlation between the coach-athlete relationship and athlete satisfaction at the professional and collegiate levels, minimal research focused on these two variables at the high school level. The results of this study contribute to the general body of knowledge surrounding the coach-athlete relationship and can advance future study. High school athletes are a unique subgroup of the sporting population, yet they remain under-represented in the literature. This study sheds light on the high school football student athletes' perceptions of their current relationship with their head coach and their overall levels of satisfaction regarding their athletic experience. The results of this study suggest that an individual athlete's ratings of the relationship with their coach are predictive of their overall satisfaction within the athletic domain. These findings, along with implications, limitations, and suggestions for future research will be discussed in this chapter.

Discussion

The Coach-Athlete Relationship

The present study revealed a statistically significant difference between participants with low perceptions and high perceptions of the quality of their current coach-athlete relationship, indicating that athlete perceptions of the quality of their relationship significantly varies between these groups. Athletes with higher perceptions of their current coach-athlete relationship reported significantly higher relationship quality when compared to athletes with lower perceptions of their current coach-athlete relationship. These findings suggest the importance of an individual's perceptions of their current coach-athlete relationship as it pertains to the overall quality of the relationship, with higher perceptions being associated with a more positive relationship between

coach and athlete.

An athlete's perception of their current coach-athlete relationship is an important factor in predicting the overall quality of that relationship. The findings of the present study align with previous research that demonstrates the importance of athlete perceptions of the coach-athlete relationship. Jowett and Cockerill (2003) found that an athlete's perceptions of their current coach-athlete relationship are strongly associated with the overall quality of the relationship and that an athlete's perceptions of their coach's behaviors and attitudes is an important factor in determining these perceptions. Athletes that view their coach as supportive and committed report higher quality of the relationship. This positive perception may foster a conducive environment which allows for stronger relationships to form.

Rhind and Jowett (2010) explored the subcategories of the coach-athlete relationship (3 Cs) and found that athletes with higher perceptions of the quality of their coach-athlete relationship reported higher relationship quality with their coach. Athletes with higher perceptions of closeness, commitment, and complementarity with their coaches tend to have more positive relationships. Conversely, Felton and Jowett (2013) found that negative perceptions of the relationship, including critical and unsupportive coaching behaviors, were associated with lower relationship quality. When athletes perceive their coaches negatively, it can be detrimental to relationship quality between coach and athlete. These negative perceptions may lead to lack of trust or a reduction in communication from the athlete, which in turn can weaken the relationship between coach and athlete.

The present study aligns with previous research (Jowett & Cockerrill, 2005), suggesting that athletes with high perceptions of their relationship report higher scores of overall relationship quality when compared to athletes with lower perceptions of their current coach-

athlete relationship. High perceptions of the relationship may be due to such factors as better communication strategies employed by both parties, mutual respect between coach and athlete, and stronger emotional bonds between the pair. These factors may contribute to a more positive perception of the relationship, and therefore more effective and stronger relationship quality. These results highlight the importance for coaches to establish and maintain positive relationships with their athletes in an attempt to enhance the overall relationship quality. Coaches should focus on improving athlete perceptions through various means, such as building a supportive culture, which may lead to more positive relationships with their athletes.

Direct Complementarity. Results of the Regression Analysis revealed Direct Complementarity was the second strongest influence of Perceptions among the "High" group while it was the weakest influence of the CART-Q variables among the "Low" group. Jowett (2007) found that direct complementarity is a crucial component of the coach-athlete relationship as it involves reciprocity between the members of the coach-athlete dyad. Factors such as cooperation and a shared approach toward a goal attainment may enhance relationship quality. By exhibiting higher levels of complementarity, both athlete and coach signify their commitment to a well-coordinated relationship, with both individuals understanding and responding to their counterpart's needs effectively. These behaviors may lead to an enhancement of the overall relationship quality.

Jowett and Ntoumanis (2004) found that complementarity was strongly linked to an athlete's satisfaction and their motivation in sport. When athletes perceive their interactions with their coach as more positive, with higher perceptions of complementarity, intrinsic motivation is enhanced, which is a key factor in long term athletic satisfaction and development. The way that a coach interacts with their athletes can significantly influence the athlete's perceptions of the

relationship quality.

Jowett and Cockerill (2003) investigated the subcategories of the coach-athlete relationship and found that complementarity is a key factor in determining athlete success. Athletes who reported higher levels of complementarity through effective and harmonious interactions with their coach, reported more positive perceptions of their relationship. Additionally, Rhind and Jowett (2010) emphasized the role of complementarity in high quality coach-athlete relationships. Athletes that experience complementarity with their coach felt higher levels of support and understanding from their coaches, which contributed to more positive perceptions of the relationship.

In the context of the present study, the significance of direct complementarity in athletes with higher perceptions of their current coach-athlete relationship aligns with previous literature. Athletes with higher perceptions of their current coach-athlete relationship likely experience greater direct complementarity, indicating that their relationship with their coach is synchronized and mutually reinforcing. Harmonious interactions between coach and athlete may foster a positive environment that allows the athlete to feel supported, understood, and that their coach is working with them toward a shared goal. These interactions reinforce higher perceptions of the overall quality of the relationship.

Athletes with higher perceptions of complementarity may experience higher levels of communication and trust with their coach, which can be defined as mutual respect and cooperation between individuals. This creates a relationship where positive perceptions lead to better interactions, which in turn, leads to a reinforced belief of the positivity of the relationship. Previous research highlights the importance of direct complementarity in the coach-athlete relationship, with high levels of complementarity being associated with higher overall

relationship quality, satisfaction, and athlete motivation. The present findings demonstrate the critical role of cooperative relationships between coach and athlete and the importance of fostering strong and positive relationships.

Athlete Satisfaction

Comparisons of overall satisfaction ratings between participants with high and low satisfaction scores revealed a significant difference in satisfaction levels. This suggests that athletes with high satisfaction perceive their overall experience in sport more positively than those with low satisfaction ratings.

Results of the Regression Analysis revealed Ability Utilization, Strategy, and Personal Treatment were weaker influencers of ratings of satisfaction among the "Low" Satisfaction Group, while Team Performance and Medical Personnel were strong influencers of satisfaction in the "High" Satisfaction Group.

Athletes with low levels of satisfaction reported that their abilities (Ability Utilization) were not being effectively employed by their current head coach. Riemer and Chelladurai (1998) found that an athlete's satisfaction is strongly linked to their perceptions of their abilities being used by their coaches and how well their skills directly impact team success. Additionally, athletes with low satisfaction ratings reported dissatisfaction with their coach's strategy. Chelladurai & Reimer (1998) found that athletes who feel as if their coach's strategies are ineffective and do not align with their individual strengths and team goals report lower levels of overall satisfaction.

Athletes with lower levels of satisfaction also reported negative perceptions of personal treatment, which pertains to how the athlete feels they are treated. This includes areas of respect, fairness, and emotional support. Chelladurai and Riemer (1998) found that personal treatment is

paramount for athlete satisfaction and that negative perceptions of this dimension of satisfaction can significantly reduce overall satisfaction.

Athletes that reported higher levels of satisfaction placed significant importance on personal performance, suggesting that these individuals felt a heightened sense of competence and that their contribution to the team's success was impactful. Horn (2002) found that athletes who perceive themselves as contributing to team success via their personal performance are generally more satisfied. Additionally, medical support was found to be more influential in athletes with higher ratings of satisfaction. Effective medical support provides the athlete with a sense of wellbeing and safety, which is essential for overall satisfaction in sport (Wylleman et al., 2004).

The results of the present study highlight how different variables may impact overall ratings of satisfaction. Individuals who reported lower satisfaction believed that their abilities were misused by their coaches and that their coach's ineffective coaching strategies and poor treatment of the athlete lead to a reduction in overall satisfaction. Conversely, athletes who reported higher levels of overall satisfaction emphasized personal performance and medical support as key variables. This suggests that athletes likely benefit from a supportive environment where their health and safety are prioritized and their personal contribution and performance to the team's shared goals are recognized.

Understanding these differences can help coaches improve overall athlete satisfaction. For athletes with lower levels of satisfaction, coaches may focus on better utilization of an individual athlete's abilities, refining their training plans and strategies, and improving their relationship quality with athletes through improved personal treatment of athletes. For those athletes who are already experiencing higher levels of satisfaction, coaches should focus on

maintaining high standards of personal performance and ensure that the medical staff is equipped with the means that can best facilitate team safety and health.

The significant differences in overall satisfaction ratings between low and high perception groups indicates the importance of the various subcategories within the ASQ that influence an athletes overall satisfaction. The findings of the present study highlight the value of targeting and understanding the specific areas needed to enhance athlete satisfaction. Coaches should understand the multifaceted nature of athlete satisfaction and the important role of personalized and effective coaching strategies as they pertain to athlete satisfaction.

The Coach-Athlete Relationship and Athlete Satisfaction

The present study found a strong, positive correlation between the coach-athlete relationship quality and overall perceptions of satisfaction among high school football student athletes. Specifically, all subscales of the CART-Q were positively correlated with the overall scores of the ASQ at the $p < .01$ level. These findings are consistent with previous literature. Jowett and Ntoumanis (2004) found that high quality coach-athlete relationships were a predictor of athlete satisfaction and performance. Of the CART-Q subscales, Direct Closeness was the most strongly correlated with overall satisfaction, suggesting that the emotional bond between coach and athlete is of particular importance in high school football athletics.

The results provided insight into the predictive power of the CART-Q on ASQ scores. Direct perspective predictors explained 38% of the variance in athlete satisfaction with Direct Closeness making a unique significant contribution to overall satisfaction. Meta perspective predictors explained 41% of the variance, with Meta Commitment being significant.

ASQ Coaching-Only and No-Coaching Subscales

Overall, greater interdependence was linked with more satisfied athletes, which is similar

to previous findings (Jowett & Nezlek, 2011). The coach-athlete relationship is clearly linked to high school football student athlete satisfaction. However, four subscales within the ASQ (Ability Utilization, Strategy, Personal Treatment, and Training and Instruction) relate to coaching. These four subcategories may have inflated the association between the athletes' perceptions of the quality of their current coach-athlete relationship and overall ratings of satisfaction. Therefore, these four coaching-specific subscales were removed from the ASQ and new correlations were run.

When analyzing the CART-Q against the ASQ No-Coaching, Direct Perspective predictors explained 30% of the variance, with no unique significant contributors. Additionally, Meta Perspective predictors explained 33% of the variance, also with no unique significant contributions. These findings highlight the importance of specific aspects of the coach-athlete relationship in predicting overall satisfaction in high school football players. The reduced explanatory power of ASQ No Coaching suggests that a coach's role is integral to the athlete's overall levels of satisfaction.

When *only* the four subscales of the ASQ were compared with the CART-Q, Direct Perspective predictors explained 45% of the variance, with Direct Closeness being a unique significant contributor. Meta Perspective predictors explained 48% of the variance with Meta Commitment being a unique significant predictor of overall athlete satisfaction. These results help reinforce the critical role of the coach's emotional connection and commitment when building and fostering relationships with their athletes, especially in the context of their direct interactions with athletes and in an athlete's perceptions of the coach's dedication to the individual.

Team Record

When examining differences across Team Record (winning versus losing), the present study revealed some nuanced differences. For participants with a Losing Team Record, Direct Perspective predictors explained 40% of the variance in athlete satisfaction, with Direct Closeness making a significant unique contribution to the variance in overall athlete satisfaction. For participants with a Winning Team Record, Direct Perspective predictors explained 21% of the variance, with no significant unique contributions from any of the CART-Q subscales.

These findings suggest that an athlete's emotional bond with their head coach is more critical in athletes experiencing team challenges, such as a losing season, aligning with previous research from Isoard-Gautheur et al. (2012), who found that a supportive coach may counter the negative experiences associated with sport, such as losing and poor individual performance.

Similar to the Direct Perspective subscales, the Meta Perspective predictors explained 46% of the variance in overall satisfaction among participants with a losing record and 30% of the variance in overall satisfaction among participants with a winning record. Meta Commitment was uniquely significant for Losing Team Record participants while Meta Closeness was uniquely significant for Winning Team Record participants. Meta Perspective results indicate that athletes who experienced athletic hardships, such as losing, place a higher emphasis on their perceptions of a coach, placing importance on a coach's commitment to them as an individual. This perception is crucial in maintaining motivation and satisfaction during periods of difficult times or poor performance outcomes.

Academic Year

When comparing results across Academic Year (sophomore, junior, senior) the results showed that Direct Perspective predictors explained 37% of the variance in satisfaction for

sophomores, 48% for juniors, and 47% for seniors. Direct Closeness was a significant unique contributor for juniors, with no CART-Q subscales being a significant unique contributor for sophomores and seniors. Additionally, Meta Perspective predictors explained 45% of the variance in overall satisfaction for sophomores, 39% for juniors, and 52% for seniors. Meta Complementarity was a significant contributor for juniors, again with no unique significant Meta Perspective contributors in both sophomores and seniors.

These findings suggest that while the importance of the coach-athlete relationship remains consistent across an individual's high school career, specific elements such as emotional closeness and coach-athlete complementarity gain prominence during an individual's junior season. This could possibly be due to the individual being at a critical period of their athletic and academic career, facing challenges such as increased academic school load, increasing responsibility within the team, and preparing for senior leadership the following season. The emphasis on Direct Closeness and Meta Complementarity among juniors aligns with previous literature from Mageau and Vallerand (2003) who emphasized the importance of role clarity and emotional support in sustaining athletic motivation and satisfaction.

Years Coached

The present study found differences among Years Coached (one year, two years, three years) among participants. Direct Perspective predictors explained 31% of the variance in overall satisfaction for one year, 42% for two years, and 54% for three years. Direct Closeness was a unique significant contributor for individuals who were coached for one year. Meta Perspective predictors explained 42% of the variance in overall satisfaction for one year, 36% for two years, and 66% for three years. Meta Commitment was a unique significant predictor for one year, and Meta Complementarity for three years.

These results indicate that in an athlete's initial year working with their head coach, the perception of closeness between the coach and athlete is of particular importance and is necessary for athlete satisfaction. As the relationship between the two individuals grows and matures, the importance of commitment and an athlete's perceived dedication to their coach becomes significant in their first year, while complementarity and cooperation becomes more critical after three years of working together. These findings are consistent with previous research. Jowett (2005) emphasized the differences in facets of the coach-athlete relationship as a relationship grows, indicating that different facets of the CART-Q gain prominence.

Implications

The findings of this study provide evidence that high school football student athletes have positive relationships with their current head coach and that these positive perceptions of their relationship are predictors of overall satisfaction within the athletic domain. Varying subcategories of the CART-Q made significant unique contributions to the variance in overall satisfaction when analyzed across team record, academic year, and the number of years coached by their current head coach. The variance in responses across team record, academic year, and the number of years coached should be an indication to sport coaches that athletes are unique and their perceptions vary, even among athletes on the same team. The findings of the present study have several important implications for coaches, athletic programs, and key stakeholders in high school athletic programs. By understanding the predictors of athlete satisfaction, policymakers can implement strategies that can enhance and maintain positive experiences for high school athletes.

Coaches play a pivotal role in a high school athlete's experience and expectations of high school athletics. The results of the present study emphasized the importance of a healthy,

positive, and committed relationship between coach and athlete. Specifically, dimensions of Direct Closeness and Meta Commitment were found to be significant predictors of overall satisfaction among participants. Therefore, coaches should prioritize developing emotional closeness with their athletes by building trust and being authentic in their actions, which will further enhance athlete satisfaction, and potentially, motivation. This aligns with Jowett's (2005) assumptions that the quality of a coach-athlete relationship is a significant predictor of athletic experience and outcomes, including overall perceptions of satisfaction. Additionally, coaches should demonstrate dedication to the development of their athlete's emotional wellbeing which can lead to reciprocal commitment from both members of the relationship. This, in turn, leads to higher satisfaction in athletes (Mageua & Vallerand, 2003).

Athletic programs should invest in coaching development and additional resources necessary to support coaches in developing healthy, committed relationships with athletes. Workshops and seminars on relationship building and maintenance, effective communication strategies, and fostering motivational climates for athletes can equip coaches with the tools necessary for enhancing athlete satisfaction (Gilbert & Trudel, 2004). Additionally, athletic programs should provide mental health resources for both coaches and athletes, ensuring that positive athletic environments are maintained throughout a season and across an individual's sporting career (Horn, 2002).

Key stakeholders should consider the broader impact of the coach-athlete relationship on high school athletes' satisfaction, wellbeing, and success. Standards and guidelines should be established for coaching behaviors and interactions with individual athletes that can improve athlete satisfaction. These standards ensure that all athletes receive positive and supporting coaching throughout their high school athletic career (Smith et al., 2007). By allocating funds for

athletic programs that includes the implementation of training certifications and workshops and focusing on the psychological and emotional aspects of coaching and athletics will improve the overall atmosphere of high school athletics and therefore increase levels of overall satisfaction among high school athletes (Isoard-Gautheur et al., 2012).

Limitations

While the present study offers a unique contribution to the literature, there were some limitations that should be discussed. First, the sample size was small. The sample size of 97 high school football student athletes from six schools in South Central Pennsylvania may limit the generalizability of the findings. As the first study to use these methodologies with this population, replication studies are necessary to confirm the findings. Furthermore, additional research is needed that includes larger and more diverse samples, including athletes from various regions, sports, and competition level to enhance the external validity of the results.

Second, the study used a cross-sectional design, which may limit the ability to draw causal inferences about the relationship between the coach-athlete relationship and overall athlete satisfaction. Additional longitudinal research is recommended to better understand the direction and magnitude of this relationship (Maxwell & Cole, 2007). Due to the complexity of relationships, quantitative data may not depict the nuances associated with coach-athlete relationships and satisfaction. More research is needed that includes qualitative interviews with coaches and athletes that may provide deeper insights into the subtleties of these relationships (Creswell & Plano Clark, 2011).

The present study relied on self-report measures that are susceptible to bias, including social desirability and self-perception inaccuracies. More research is needed using a mixed-methods approach that would incorporate objective measures that would compliment the self-

report measures (Podsakoff et al., 2003).

The focus on high school football limits the applicability of the findings to other sports and competition levels. More research is needed comparing sport type (team versus individual), team groups (male versus female), and competition level (youth, high school, college, and professional) to examine if the observed relationship found in the present study remains consistent across varying contexts (Jowett & Lavallee, 2007).

Last, the present study lacked contextual factors which may have impacted the results. Contextual factors such as cultural background, ethnicity, coaching styles, and academic/community support were not analyzed in the present study. More research is needed that examines how contextual factors impact overall athlete satisfaction.

Recommendations for Future Research

The findings of this study provide some evidence that an athlete's perceptions of their relationship with their current head coach may be a predictor of overall athletic satisfaction. Specifically, athletes who perceive their relationship with their current head coach as positive have higher levels of satisfaction within their sport and the overall athletic domain. Coaches, athletic directors, and other key stakeholders in high school athletics may benefit from learning how to foster healthier, more positive relationships between coaches and high school athletes. In turn, this may produce athletes with greater relational perceptions with their head coach and therefore lead to improvements in overall satisfaction.

Future research should focus on longitudinal studies in an attempt to capture changes that occur in the coach-athlete relationship and satisfaction over time. Future research should study changes in athlete perception across an individual season as well as across an athlete's high school career. By conducting longitudinal studies, researchers may be able to better track and

understand the coach-athlete relationship's impact on athlete satisfaction. This approach may help to identify causal relationships and how these dynamics change over an athlete's career (Maxwell & Cole, 2007).

Larger and more diverse sample sizes should be studied and will enhance the generalizability of the present study. Team versus individual sport should be included in an attempt to understand the nuances of the coach-athlete relationship between varying kinds of sport. Expanding the sample size and the diversity of participants will improve the generalizability of findings and in turn allow for greater comparisons across groups (Jowett & Lavallee, 2007).

Future studies should implement a mixed-methods approach that combines both qualitative and quantitative data that will provide a richer, more in-depth understanding of the coach-athlete relationship (Creswell & Plano Clark, 2011). Additionally, more contextual factors should be examined that could lead to a more developed, more holistic, and in turn, more effective coaching strategies (Horn, 2002).

Both psychological and social outcomes should be studied in greater detail, expanding the scope of research of the present study. Future studies should examine how the coach-athlete relationship may impact other psychological measures, such as motivation and team performance. By incorporating a broader focus, future research may better understand the comprehensive impact of the coach-athlete relationship on various aspects of individual and team performance (Smith et al., 2007). Likewise, objective measures such as performance metrics should be analyzed which may compliment the present studies self-reported measures. Adding objective measures may help improve the understanding and assessment of the coach-athlete dynamic (Podsakoff et al., 2003).

Practical Recommendations for the High School Coach

The findings of this study emphasize the importance of quality coach-athlete relationships in high school sport and the critical role of a coach in enhancing athlete satisfaction. To translate the study's findings into practical "hands on", actionable steps, high school coaches should implement the following strategies into their current coaching practice.

Foster Emotional Closeness

In the present study, Direct Closeness was a significant predictor of overall athlete satisfaction. In an effort to enhance an athlete's feelings of closeness with their coach, several strategies may be employed

Regular One-On-One Meetings. Coaches should schedule regular one-on-one meetings with their athletes. These meetings should include discussions regarding goals, athlete's concerns, and any feedback from the athlete for the coach. By doing so, coaches may help build trust in their athletes by demonstrating genuine interest in the athlete's wellbeing and development (Jowett, 2005).

Positive Reinforcement. Coaches should constantly strive to reinforce positive behaviors, recognizing both effort and achievement. Coaches should consider verbal praise, establishing team "awards", team leaderboards, and showcasing athletes who have made a significant contribution to the team, such as a "team player of the week" (Mageua & Vallerand, 2003).

Open Communication. To further increase feelings of closeness, the coach should have an "open door" policy with his athletes. Coaches should encourage open and honest communication among teammates, ensuring athletes feel comfortable expressing themselves. Coaches may consider using team surveys or suggestion boxes in an attempt to gather insights

from their athletes and ensure that their athletes are feeling heard (Smith et al., 2007).

Enhance Commitment

Meta Commitment made a significant unique contribution to the overall variance in athlete satisfaction among participants in the present study. In order to establish higher levels of commitment from both coaches and athletes, coaches should consider implementing the following strategies into their coaching practices.

Goal Setting. When coaches and athletes work together to establish and define clear, tangible goals, commitment enhances. Short- and long-term goals should be discussed often and coaches should allow athletes to be a part of the team's overall goal-setting process in order to enhance feelings of ownership and commitment to/toward the team (Isoard-Gautheur et al., 2012).

Consistent Support and Encouragement. Coaches who provide unwavering support and encouragement may enhance an athlete's perceptions of the coach's commitment toward them, especially during challenging times, such as a losing season. Consistent support may be demonstrated by offering additional support outside of designated team practices, such as offering extra training sessions or providing resources for the athlete to improve their skill set (Horn, 2002).

Decision Making. Athletes should be involved in the decision making process when applicable and appropriate. Coaches should include athletes in the decision making process when making choices regarding team activities, team strategies, and even playcalling. By including athletes in the decision making process, coaches can increase athlete investment in the team's collective success (Gilbert & Trudel, 2004).

Build Complementarity

The present study found that Meta Complementarity made a unique significant contribution to the variance in athlete satisfaction. In an attempt to create a more complementary relationship between coach and athletes, coaches may consider the following strategies.

Clearly Defined Roles. By establishing an athlete's role on the team, coaches ensure that athletes understand how and to what degree their role contributes to the overall team success. This strategy helps athletes feel valued and that their role on the team is essential to team success and performance (Chlladurai & Riemer, 1998). This may be of particular importance for athletes who do not play in games or athletes on the "scout team".

Team Building. Coaches should find the time and unique ways to build and maintain teamsmanship, such as team-building exercises. This may help promote togetherness and cooperation (Jowett, 2005). Activities such as off-season retreats, team-challenges, and roundtable discussions may enhance harmony and respect among coaches and players.

Establish a Positive Team Culture

It was found that athletes on winning teams reported higher levels of overall satisfaction, indicating the importance of a positive team culture. Coaches invested in establishing a positive culture may consider the following.

Positive Environment. Coaches should emphasize a positive *team* environment, emphasizing respect, support, and positivity to and from each team-member. Coaches may establish a positive team climate through their actions and words and coaches should be aware of their tone in all their interactions with athletes. Additionally, coaches should ensure that their team culture is one of inclusivity that values the commitment of all members (Smith et al., 2007).

Shared Success. Teams should celebrate individual and team success as a whole. Individuals should be recognized for their hard work and their success should be showcased in

weekly team meetings. Additionally, the success of the collective unit should be shared regularly, ensuring that athletes feel committed to the positive direction the team is headed. By recognizing both individual and team success, coaches can foster a sense of accomplishment and team unity (Mageua & Vallerand, 2003).

Conflict Resolution. Coaches should address conflict among teammates promptly and fairly. This can ensure that coaches are maintaining team cohesion and togetherness among teammates. Coaches should use conflict resolution strategies that involve all parties and coaches should ensure that any conflict resolution is mutually beneficial to both athletes in conflict (Horn, 2002).

Effective Leadership

Leadership, as defined by the four coaching subcategories in the ASQ was clearly defined as an important factor for overall athlete satisfaction. Coaches who are committed to providing positive experiences for their athletes through purposeful and effective leadership strategies should consider the following.

Lead by Example. Coaches should lead by example by consistently demonstrating the behaviors they wish to see among their athletes. Coaches should remain positive and professional, demonstrating dedication, resilience, and strong work ethic (Gilbert & Trudel, 2004).

Mentoring. Coaches are not just responsible for teaching athletes how to play their sport. Coaches are responsible for the mentoring of young individuals as these athletes prepare to step into roles beyond that of sport and high school. Coaches should guide athletes through sport and life, leading to both athletic and personal development. Through this holistic approach, coaches will continually improve athlete satisfaction and individual growth (Jowett, 2005).

Feedback. Coaches should both accept and give appropriate and applicable feedback. Feedback should focus on the development of athletes and coaches should refrain from criticism-only feedback when communicating with athletes. Coaches should use a balanced approach when discussing areas in need of improvement, providing strengths and weaknesses in the same conversation (Isoard-Gautheur et al., 2012).

Through proper implementation of the previously mentioned strategies, high school coaches and their staff may be able to significantly improve athlete satisfaction and the relationship of the coach-athlete relationship. The findings of this present study, coupled with the strategies offered may help coaches establish a clear path toward successful and healthy relationships with their athletes thereby enhancing the athletic experience and satisfaction of all their athletes.

Summary

The findings of this study make a novel contribution to the existing body of literature on the coach-athlete relationship, athlete satisfaction, and coaching at the high school level. The present study provided a unique insight into the perceptions and beliefs of high school football athletes and demonstrated that among this population, the perceptions of the coach-athlete relationship were generally positive.

The results revealed that the quality of the coach-athlete relationship is a significant predictor of overall athlete satisfaction among high school football student athletes. Specifically, strong positive correlations were found between the subscales of the CART-Q and the ASQ overall rating, suggesting that higher ratings of the coach-athlete relationship quality were associated with greater perceptions of overall satisfaction in sport. Further, the subcategories of Direct Closeness and Meta Commitment were significant predictors of overall satisfaction,

particularly for athletes with losing team records and across years being coached.

The results of the present study contributes to the broader field of sport psychology by reinforcing the critical role of coaching and its impact on the lives of high school student athletes by enhancing their satisfaction in sport. The present study extends previous research as it provides a detailed examination of the coach-athlete relationship at the high school level. The present study emphasizes the importance of coach-athlete emotional closeness, commitment, and complementarity. The "3 Cs" are shown to foster positive athletic experiences in high school. These findings underscore the necessity for coaches to build and maintain strong, positive, and supportive relationships throughout an athlete's career in an attempt to enhance the athlete's overall perceptions of their high school experience and thus, overall levels of satisfaction.

This study provided substantial implications for coaches, athletic programs, and key stakeholders in high school athletic programs. Coaches should emphasize a positive and healthy sport environment through committed and close relationships with individual athletes. Coaches should recognize the varying needs of the individual, that extends across different stages of the relationship as well as across an athlete's high school athletic career. Athletic programs should incorporate coaching education programs that focus on relationship building strategies that may provide support for coaches seeking to improve and maintain interactions with their high school athletes. Moreover, key stakeholders should establish policies that create nurturing and supportive sporting environments for high school athletes that emphasize emotional and psychological wellbeing.

In conclusion, the present study highlights the significance of the coach in an athlete's high school sport career and the profound impact of the coach-athlete relationship on athlete satisfaction. By identifying key elements that contribute to a positive, healthy, and committed

relationship between coach and athlete, this research offers unique and actionable insights for improving coaching practices that enhance athlete experiences in high school. Future research should continue to explore these dynamics across various sports and competition levels, incorporating longitudinal designs and mixed-methods approaches to further understand and study this vital component of sport psychology.

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APPENDICES

Appendix A

IRB #: IRB-FY23-24-704

Title: Examining the Coach-Athlete Relationship as a Predictor of High School Football Athlete Satisfaction

Creation Date: 10-26-2023

End Date:

Status: Approved

Principal Investigator:
Mitchell Davis Review
Board: Research Ethics
Office Sponsor:

Study History

Submission Type Initial	Review Type Expedited	Decision Approved

Key Study Contacts

Member Mitchell Davis	Role Principal Investigator	Contact [redacted]
Member Mitchell Davis	Role Primary Contact	Contact [redacted]
Member Keith Randazzo	Role Co-Principal Investigator	Contact [redacted]

Appendix B

Participant Demographics

1. **School Year (Please Select One Response):**
    - **a.** Sophomore
    - **b.** Junior
    - **c.** Senior
2. **Number of Years Played for CURRENT Head Coach:**
    - **a.** One Year
    - **b.** Two Years
    - **c.** Three Years
3. **Team Record**
    - **a.**

Appendix C

The Coach – Athlete Relationship Questionnaire (CART-Q) - *Direct*

Perspective

This questionnaire aims to measure the quality and content of the coach-athlete relationship. Please read carefully the statements below and circle the answer that indicates whether you agree or disagree. There are no right or wrong answers. Please respond to the statements as honest as possible and relevant to how you personally feel with your principal coach.

	Strongly Disagree		Moderately			Strongly Agree
1. I am close to my coach	**1**	**2**	**3**	**4**	**5**	**6**	**7**
2. I am committed to my coach	**1**	**2**	**3**	**4**	**5**	**6**	**7**
3. I like my coach	**1**	**2**	**3**	**4**	**5**	**6**	**7**
4. When I am coached by my coach, I am at ease	**1**	**2**	**3**	**4**	**5**	**6**	**7**
5. I trust my coach	**1**	**2**	**3**	**4**	**5**	**6**	**7**
6. I feel that my sport career is promising with my coach	**1**	**2**	**3**	**4**	**5**	**6**	**7**
7. When I am coached by my coach, I am responsive to his/her efforts	**1**	**2**	**3**	**4**	**5**	**6**	**7**
8. I respect my coach	**1**	**2**	**3**	**4**	**5**	**6**	**7**
9. I appreciate my coach's sacrifices in order to improve performance	**1**	**2**	**3**	**4**	**5**	**6**	**7**
10. When I am coached by my coach, I am ready to do my best	**1**	**2**	**3**	**4**	**5**	**6**	**7**
11. When I am coached by my coach, I adopt a friendly stance	**1**	**2**	**3**	**4**	**5**	**6**	**7**

	items
Closeness	***3,5,8,9***
Commitment	***1,2,6***
Complementarity	***4,7,10,11***

Scoring System:

Jowett, S., & Ntoumanis, N. (2004). The Coach - Athlete Relationship Questionnaire (CART – Q): Development and initial validation. *Scandinavian Journal of Medicine and Science in Sports, 14,* 245-257.

The *Coach* – Athlete Relationship Questionnaire (CART-Q) – *Meta Perspective*

This questionnaire aims to measure the quality and content of the coach-athlete relationship. Please read carefully the statements below and circle the answer that indicates whether you agree or disagree. There are no right or wrong answers. Please respond to the statements as honest as possible and relevant to how you personally think your coach feels about you.

	Strongly Disagree		**Moderately**			**Strongly Agree**
1. My coach is close to me	**1**	**2**	**3**	**4**	**5**	**6**	**7**
2. My coach is committed to me	**1**	**2**	**3**	**4**	**5**	**6**	**7**
3. My coach likes me	**1**	**2**	**3**	**4**	**5**	**6**	**7**
4. My coach is at ease	**1**	**2**	**3**	**4**	**5**	**6**	**7**
5. My coach trusts me	**1**	**2**	**3**	**4**	**5**	**6**	**7**
6. My coach thinks that his/her sporting career is promising with me	**1**	**2**	**3**	**4**	**5**	**6**	**7**
7. My coach is responsive to my efforts	**1**	**2**	**3**	**4**	**5**	**6**	**7**
8. My coach respects me	**1**	**2**	**3**	**4**	**5**	**6**	**7**
9. My coach appreciates the sacrifices I have made to improve performance	**1**	**2**	**3**	**4**	**5**	**6**	**7**
10. My coach is ready to do his/her best	**1**	**2**	**3**	**4**	**5**	**6**	**7**
11. My coach adopts a friendly stance	**1**	**2**	**3**	**4**	**5**	**6**	**7**

	items
Meta Closeness	***3,5,8,9***
Meta Commitment	***1,2,6***
Meta Complementarity	***4,7,10,11***

Scoring System:

Jowett, S. (in press). Validating coach-athlete relationship measures with the nomological network. *Measurement in Physical Education and Exercise Science.*

Jowett, S. (in press). Factor Structure and Criterion Validity of the Meta-Perspective Version of the Coach- Athlete Relationship Questionnaire (CART-Q). *Group Dynamics: Theory, Research, and Practice.*

Appendix D

Athlete Satisfaction Questionnaire

This study is concerned with satisfaction of athletes. Athletics is an intense situation wherein individuals participate voluntarily and wholeheartedly. An individual may be satisfied to varying degrees with different types of experiences in athletic participation. In the following pages, several items related to athletic participation are listed. Against each item, a response format ranging from 1 (not at all satisfied) to 7 (extremely satisfied) is provided. You are requested to participate in the study and indicate the extent to which you are satisfied with the content of each item. Your honest and spontaneous response to each and every item is vital to the success of the study. Do not think about any one item for too long.

Example:

Not at all Moderately Extremely

I was satisfied with...	Satisfied		Satisfied		Satisfied	
the number of games we have won.	1	2 3	4	5	6	7

The respondent indicates that she is moderately satisfied with the number of games won.

For the purpose of this study, please recall your experiences during this particular season (or the one just completed), and record your reactions to those experiences.

It is extremely important that you provide a response to every question.

Your participation in this study is voluntary. You may refuse to participate and/or withdraw from participation at any time. You have the right to ask for the return of your responses. Please sign below to indicate your willingness to participate in the study. The anonymity of your responses is guaranteed. Thank you in advance for participating in this study.

Signature of Participant

Athlete Satisfaction Questionnaire

I am satisfied with.... Not at all | Moderately | Extremely Satisfied | Satisfied Satisfied
1. how the team works (worked) to be the best. 1 2 3 4 5 6 7
2. my social status on the team. 1 2 3 4 5 6 7
3. the coach's choice of plays during competitions. 1 2 3 4 5 6 7
4. the competence of the medical personnel. 1 2 3 4 5 6 7
5. the degree to which I do (did) my best for the
team. 1 2 3 4 5 6 7
6. the degree to which I have reached (reached)
my performance goals during the season. 1 2 3 4 5 6 7
7. the degree to which my abilities are (were)
used. 1 2 3 4 5 6 7
8. the extent to which all team members
are (were) ethical. 1 2 3 4 5 6 7
9. the extent to which teammates provide
(provided) me with instruction. 1 2 3 4 5 6 7
10. the funding provided to my team. 1 2 3 4 5 6 7
11. the media's support of our program. 1 2 3 4 5 6 7
12. the recognition I receive (received) from
my coach. 1 2 3 4 5 6 7
13. the team's win/loss record this season. 1 2 3 4 5 6 7
14. the training I receive (received) from the
coach during the season. 1 2 3 4 5 6 7
15. the tutoring I receive (received). 1 2 3 4 5 6 7
16. my dedication during practices. 1 2 3 4 5 6 7
17. my teammates' sense of fair play. 1 2 3 4 5 6 7
18. the academic support services provided. 1 2 3 4 5 6 7
19. the amount of money spent on my team. 1 2 3 4 5 6 7
20. the degree to which teammates share
(shared) the same goal. 1 2 3 4 5 6 7
21. the fairness with which the medical
personnel treats all players 1 2 3 4 5 6 7
22. the friendliness of the coach towards me. 1 2 3 4 5 6 7
23. the guidance I receive (received) from
my teammates. 1 2 3 4 5 6 7
24. the improvement in my performance
over the previous season. 1 2 3 4 5 6 7
25. the instruction I have received
from the coach this season. 1 2 3 4 5 6 7114

26. the level to which my talents
are (were) employed. 1 2 3 4 5 6 7
27. the role I play (played) in the social life
of the team. 1 2 3 4 5 6 7
28. the support from the university community. 1 2 3 4 5 6 7
29. the tactics used during games. 1 2 3 4 5 6 7
30. the team's overall performance this season. 1 2 3 4 5 6 7
31. coach's choice of strategies during games. 1 2 3 4 5 6 7
32. my enthusiasm during competitions. 1 2 3 4 5 6 7
33. my teammates' 'sportsmanlike' behavior. 1 2 3 4 5 6 7
34. team member's dedication to work
together toward team goals. 1 2 3 4 5 6 7
35. the coach's teaching of the tactics and
techniques of my position. 1 2 3 4 5 6 7
36. the constructive feedback I receive (received)
from my teammates. 1 2 3 4 5 6 7
37. the degree to which my teammates
accept (accepted) me on a social level. 1 2 3 4 5 6 7
38. the extent to which my role
matches (matched) my potential. 1 2 3 4 5 6 7
39. the extent to which the team is meeting
(has met) its goals for the season. 1 2 3 4 5 6 7
40. the fairness of the team's budget. 1 2 3 4 5 6 7
41. the improvement in my skill level. 1 2 3 4 5 6 7
42. the level of appreciation my coach
shows (showed) when I do (did) well. 1 2 3 4 5 6 7
43. the medical personnel's interest
in the athletes. 1 2 3 4 5 6 7
44. the personnel of the academic
support services (i.e., tutors, counselors). 1 2 3 4 5 6 7
45. the supportiveness of the fans. 1 2 3 4 5 6 7
46. how the coach makes (made) adjustments
during competitions. 1 2 3 4 5 6 7
47. my coach's loyalty towards me. 1 2 3 4 5 6 7
48. my commitment to the team. 1 2 3 4 5 6 7
49. the amount of time I play (played) during
competitions. 1 2 3 4 5 6 7
50. the extent to which teammates
play (played) as a team. 1 2 3 4 5 6 7
51. the local community's support. 1 2 3 4 5 6 7

52. the promptness of medical attention. 1 2 3 4 5 6 7115
53. coach's game plans. 1 2 3 4 5 6 7
54. the degree to which my role on the team
matches (matched) my preferred role. 1 2 3 4 5 6 7
55. the extent to which the coach is (was)
behind me. 1 2 3 4 5 6 7
56. the manner in which coach combines
(combined) the available talent. 1 2 3 4 5 6 7