The Relationship Between Perceived Coaching Behaviors and Personal Motivation Rates Among Division III Athletes



Emma Miller

Submitted to the Psychology Department, Allegheny College
in partial fulfillment of the requirements for the degree of
BACHELOR OF SCIENCE

March 31st, 2025

The Relationship Between Perceived Coaching Behaviors and Personal Motivation Rates Among Division III Athletes

A Senior Comprehensive Project
Presented by:
Emma Miller
March 31st, 2025

Honor Code Pledge: _____

Approved:

_____

Lauren Paulson, PhD

_____

Nancy Frambes, M.A

Table of Contents

Title Page 1-2

Acknowledgements 4

Abstract 5

Introduction 6-14

The Current Study 14-15

Method Section 16-17

Materials 17-18

Procedure 18-19

Data Anaylsis 19-20

Results 20-26

Demographic Table 1. 21

Table and Figure 1. 22-23

Table and Figure 2. 24

Table and Figure 3. 25

Table and Figure 4. 26

Disscussion 27-34

Conclusion 34-35

References 36-38

Appendix 39-55

Acknowledgements

First and foremost, I would like to express my deepest gratitude to my comprehensive project advisors, Dr. Paulson and Professor Frambes. Their unwavering guidance, expertise, and encouragement have been invaluable throughout this research process. Their insightful feedback and dedication to student success have not only helped shape this project but have also inspired me to grow as a scholar and critical thinker. I am incredibly grateful for the time and effort they have invested in mentoring me, and I truly could not have completed this work without their support.

I would also like to extend my appreciation to my friends, family, and coaches, who have been my foundation throughout both my academic and athletic journey here at Allegheny. Their constant encouragement, patience, and belief in me have pushed me to persevere through challenges and celebrate the successes along the way.

Finally, I want to take a moment to reflect on the profound impact of my education at Allegheny College. The lessons I have learned—both in the classroom and on the field—have shaped me into the person I am today. I am thankful for the opportunity to pursue higher education, to challenge myself intellectually, and to develop meaningful relationships that have enriched my life. The faculty, staff, and my peers have fostered an environment of curiosity, resilience, and personal growth, and I will carry these lessons with me forever.

Abstract

This study investigates the impact of perceived coaching behaviors on personal motivation rates among Division III (DIII) athletes. While previous research has predominantly focused on elite athletes, this study addresses a critical gap in the literature regarding DIII athletes, who face unique challenges balancing academic and athletic commitments without the prospect of professional sports careers. This study will focus on two main types of motivation which include intrinsic and extrinsic motivation. Intrinsic motivation refers to engaging in an activity out of enjoyment or interest, while extrinsic motivation involves participation driven by external rewards or pressure. This research has four hypotheses which include, 1.) high scoring (always) autocratic behaviors in one's coaching styles is correlated with a high extrinsic motivation rate in athletes. 2.) High scoring democratic behavior in coaching styles is correlated with a high intrinsic motivation rate in athletes. 3.) High scoring social support behavior in coaching styles is correlated with a high intrinsic motivation rate in athletes. 4.) Lastly, high scoring for positive feedback in coaching behaviors is correlated with a high intrinsic motivation rate in athletes. Utilizing the Revised Leadership Scale for Sports (RLSS) and the Sport Motivation Scale (SMS-28), data will be collected through surveys administered to a sample of athletes (n=35) from Allegheny College. The purpose of the RLSS is to measure coaching behaviors, while the SMS-28 assesses athletes' intrinsic and extrinsic motivation levels. The findings are anticipated to provide valuable insights into effective coaching strategies that enhance both athletic performance and the personal motivation rate in DIII athletes.

Keywords: Athletes personal motivation rate, intrinsic motivation, extrinsic motivation, and coaching behaviors.

Relationship Between Coaching Behaviors and Personal Motivation Rates- Division III Athletes

In recent years, there has been an increasing interest on the influence of coaching behaviors on athlete motivation, particularly in collegiate sports. Division III (DIII) athletes, who often juggle academic and athletic responsibilities without the prospect of professional sports careers, face unique challenges that make motivation crucial for their success (Horn, 2008). This research seeks to explore how perceived coaching behaviors relate to the intrinsic and extrinsic motivation rates of DIII athletes. Through this study, it firstly hypothesizes that the high scoring (always) autocratic behaviors in one's coaching styles is correlated with a high extrinsic motivation rate in athletes. Secondly, the hypothesis is that high scoring democratic behaviors in coaching styles is correlated with a high intrinsic motivation rate in athletes. Thirdly, high scoring social support behavior in coaching styles is correlated with a high intrinsic motivation rate in athletes. Lastly, high scoring for positive feedback in coaching behaviors is correlated with a high intrinsic motivation rate in athletes. This research will use surveys, such as the Revised Leadership Scale for Sports (RLSS) and the Sport Motivation Scale (SMS-28), to explore the nuanced relationship between coaching behaviors and athlete motivation. The findings are expected to offer valuable insights into coaching strategies that enhance both athletic performance and athletes' mental well-being.

Coaching behaviors significantly influence an athlete's motivation, which is essential for their success and well-being. Positive coaching behaviors, such as providing constructive feedback, setting achievable goals, and fostering a supportive environment can enhance intrinsic motivation by making athletes feel competent, autonomous, and valued. Conversely, negative behaviors such as excessive criticism or unrealistic expectations can lead to decreased

motivation, burnout, and even mental health issues. By cultivating a motivational climate that emphasizes personal growth, teamwork and effort, coaches play a critical role in helping athletes thrive both on and off the field.

Coaching Styles

Coaching styles refer to the different ways coaches manage, instruct, and guide their athletes. These styles can be broadly categorized into autocratic, democratic, social support, and positive feedback (rewarding behavior) approaches (Chelladurai, 2010). Research in sports psychology has highlighted the importance of understanding coaching styles because of their direct impact on athletes' experiences, both in terms of performance and motivation. Many coaches often combine elements of different styles depending on the context and the needs of their athletes.

Autocratic coaching involves a top-down approach, where the coach makes decisions independently and expects athletes to follow instructions without much input. This style can be effective for teams that need strict discipline or are at a competitive level, but it may hold back athletes' autonomy and creativity (Chelladurai, 2010). Personal motivation is important for an autocratic coaching style because without having independent drive, it becomes extremely hard to face challenges or setbacks. Potentially leading to discouragement and being less likely to achieve peak performance (Chelladurai, 2010).

Democratic coaching is all about letting athletes have a say in the decision-making process. This style gives athletes a sense of autonomy and ownership over their performance, which can make a huge difference in how motivated they feel. Research, like *Coaching Effectiveness in the Sport Domain* (Horn, 2008), shows that democratic coaching can lead to

higher levels of intrinsic motivation and overall personal satisfaction. When athletes feel like their voices matter and they have some control over their training and strategy, it boosts overall individual morale, and creates an environment where the athlete feels as if they are an instrumental part of the team (Horn 2008). This approach fosters athlete engagement and intrinsic motivation, enhancing their commitment to achieving personal and team goals.

Social support coaching styles are also crucial when it comes to keeping athletes motivated. This type of coaching focuses on showing genuine care for athletes' well-being, beyond just how they perform in games or practices. When athletes know their coach cares about them as individuals, it creates a sense of trust and belonging. This support can be a game changer, especially during tough times, because it helps athletes feel like they're not alone. Feeling valued and supported can keep motivation levels up and push athletes to stay committed even when things get challenging (Horn, 2008).

Positive feedback, or rewarding behavior, is another coaching style that can really boost motivation. When coaches make the effort to acknowledge and praise athletes for their hard work and progress, it builds confidence and helps them feel competent. Knowing that their efforts are noticed makes athletes more likely to stay motivated and keep pushing themselves. Positive feedback doesn't just make athletes feel good—it fuels their desire to keep improving and reaching new goals (Horn, 2008).

Putting together autocratic coaching, democratic coaching, social support, and positive feedback creates an environment where athletes feel heard, supported, and confident (Jowett & Cockerill, 2003). This combination helps them feel more in control, valued, and capable, which are all essential for staying motivated and enjoying the sport they love. By examining different

coaching styles in this study, it aims to explore how these behaviors influence the motivation of Division III athletes, a population that is often overlooked in research but faces unique challenges in their athletic and academic experiences.

Coach to Athlete Relationship

In the field of sports psychology, the coach-athlete relationship has been studied extensively to understand its influence on performance, motivation, and overall athlete well-being. Several studies have highlighted the importance of compatibility between coaches and athletes, emphasizing how different coaching styles can either enhance or hinder the athletic experience. For example, Jowett and Cockerill (2003) emphasize that the quality of the coach-athlete relationship directly impacts athletic performance, particularly through mutual respect and understanding. Similarly, a study by Horn (2008) underlines the coach's role in shaping athlete motivation through specific feedback and communication strategies.

The nature of the coach-athlete relationship is deeply rooted in communication, trust, and shared goals, making it one of the most influential factors in an athlete’s experience. Positive coaching behaviors, such as providing tailored feedback, recognizing individual needs, and creating a supportive environment, have been shown to foster an athlete's sense of competence and autonomy, key elements of intrinsic motivation (Horn 2008). On the other hand, coaching styles that rely on excessive criticism, neglect, or favoritism can damage the relationship, reducing athlete confidence and increasing stress levels (Jowett & Cockerill, 2003).

However, despite extensive research on coaching's impact on athlete outcomes, several gaps remain, particularly in assessing coach-athlete relationships and their nuances. For instance, while research acknowledges the significance of the coach-athlete bond, there is limited focus on

how individual psychological differences between athletes may moderate the effects of coaching styles. Some athletes may thrive under a directive approach, while others might perform better in a more collaborative environment. Furthermore, studies such as those by Chelladurai (2010) focus primarily on performance outcomes, often overlooking how these relationships affect athletes' mental health and overall long-term career development.

Understanding the coach-athlete relationship lays the foundation for a deeper exploration of how motivation is cultivated in sports. Motivation is a critical psychological factor that not only influences athletic performance but also affects athletes' overall well-being and perseverance in their careers. The next section will examine the various types of motivation in athletes, such as intrinsic and extrinsic motivation, and discuss how these are shaped by coaching strategies, team dynamics, and individual psychological factors.

Motivation in Athletes

Intrinsic motivation occurs when athletes are driven by internal satisfaction, such as a love for the sport, personal growth, or the enjoyment of competing. Intrinsic motivation is important because this type of motivation is considered more sustainable in the long term, as athletes are more likely to continue participating even when external rewards are not present (Horn, 2008). Motivation in this way is vital to athletes as they work towards improving their performance, and becoming the best version of themselves, in their sport of choice.

Extrinsic motivation, on the other hand, is driven by external factors, such as trophies, scholarships, praise from others, or the promise of professional advancement. This type of motivation brings the passion and emotional connection into sports, and makes sure athletes are recognized for their accomplishments. While extrinsic motivation can be effective in the short

term, over-reliance on external rewards may lead to reduced intrinsic motivation, especially if the rewards are removed (Deci & Ryan, 2000).

Motivation in athletes refers to the psychological drive that influences their willingness to participate, improve, and succeed in their sport. Coaches play a significant role in shaping an athlete's motivation by influencing both intrinsic and extrinsic factors. For example, a study by Horn (2008) demonstrated that athletes who feel supported and respected by their coaches often report higher motivation levels and better performance outcomes. On the flip side, lower extrinsic motivation could lead to disengagement or burnout (Jowett & Cockerill, 2003). This study seeks to explore how coaching behaviors affect motivation in Division III athletes. By using the Sport Motivation Scale (SMS-28) and Revised Leadership Scale for Sports (RLSS), it will assess how athletes perceive their coach's behaviors and how these perceptions influence their motivation to participate in their sport. Since Division III athletes often rely on intrinsic motivation, understanding the role of coaching is crucial in maintaining their engagement and well-being (Jowett & Cockerill, 2003).

Division III Athletics

Division III (DIII) athletics is a unique level of college sports that differs significantly from Division I and II in terms of resources, competition level, and athlete experience. One of the most notable differences is that DIII athletes do not receive athletic scholarships, which means they participate in sports largely for the intrinsic rewards, such as personal satisfaction, love for the game, and the opportunity to compete (NCAA, 2021). This creates a different motivational landscape for DIII athletes, as they must balance the demands of rigorous academics with their athletic commitments, without the financial incentives that are common in

higher divisions as seen advertised across social media platforms and other news outlets (Brutlag Hosick, 2021).

DIII athletes face several challenges including limited access to high-end facilities, smaller coaching staffs, and less media attention compared to their Division I and II counterparts. Because of this, their participation is often driven by a combination of personal goals, team camaraderie, and intrinsic motivation. Research by Deci and Ryan (2000) on Self-Determination Theory suggests that athletes who compete without external rewards (like scholarships) are more reliant on supportive environments, which includes positive relationships with coaches and teammates, to maintain their motivation.

Despite extensive research on the coach-athlete relationship, significant gaps remain in understanding how coaching behaviors specifically influence motivation among Division III (DIII) athletes. Much of the existing literature, such as the works by Jowett and Cockerill (2003) and Horn (2008), focuses on elite or Division I athletes, emphasizing performance outcomes while often neglecting the impact of coaching and long-term personal development. This oversight is critical, especially for DIII athletes, who face distinct challenges balancing rigorous academic commitments with athletic participation, often without the prospect of professional careers or scholarships (Horn, 2008). Their motivations are primarily intrinsic, driven by personal satisfaction and love for the sport, making the effect of coaching behaviors on their well-being a key area for exploration (Jowett & Cockerill, 2003).

The Self Determination Theory

Self-Determination Theory (SDT), developed by Deci and Ryan (1985), explains that motivation exists on a continuum, ranging from intrinsic motivation to extrinsic motivation. The

theoretical foundation of this study is rooted in Self-Determination Theory (SDT), which provides a framework for understanding human motivation by focusing on individuals' intrinsic psychological needs for autonomy, competence, and relatedness (Deci & Ryan, 1985). According to SDT, individuals are most motivated when these three fundamental needs are met. In the context of coaching, effective leadership behaviors have the potential to directly satisfy these needs, thereby fostering greater levels of intrinsic motivation among athletes. Intrinsic motivation, or the desire to engage in an activity for personal satisfaction rather than external rewards, is especially important in collegiate athletes, particularly Division III athletes who do not receive financial or professional incentives to participate in their sport (Horn, 2008).

SDT is particularly useful in explaining how different coaching styles impact athlete motivation. For example, democratic coaching methods allows athletes to have input in their training decisions and respects their personal autonomy, and is closely aligned with the principles of SDT. Athletes who perceive their coaches as autonomy-supportive are likely to feel a greater sense of control over their athletic experience, which can lead to higher levels of intrinsic motivation (Mageau & Vallerand, 2003). This coaching style also fosters relatedness by emphasizing mutual respect and open communication between the coach and athlete, thereby creating an environment where athletes feel connected to their coach and their team (Jowett & Cockerill, 2003).

On the other hand, autocratic coaching behaviors, which are characterized by a directive and authoritarian approach, may undermine athletes' sense of autonomy and competence. Coaches who employ controlling strategies, such as dictating every aspect of training without seeking athlete input or offering excessively critical feedback, can create an environment where athletes feel less capable and more dependent on external validation (Bartholomew et al., 2010).

According to SDT, this external pressure diminishes intrinsic motivation and may even lead to athlete burnout (Deci & Ryan, 2000).

Additionally, social support and rewarding behavior are other coaching style elements that align well with SDT, as they focus on inspiring athletes and fostering their personal and athletic growth. Supportive coaches and rewarding behavior techniques such as individualized consideration and intellectual stimulation, tend to enhance athletes' intrinsic motivation by making them feel valued and supported. This in turn meets an athletes need for competence and relatedness from their coaches (Vella et al., 2013). Athletes feel empowered and a sense of collective purpose when they are encouraged to reach their full potential through supportive and rewarding coaching behaviors.

In summary, SDT provides a theoretical lens through which this study examines the relationship between coaching behaviors and athlete motivation. By applying SDT to different coaching styles, such as autocratic, democratic, social support, and positive feedback, this study aims to demonstrate that the way a coach interacts with their athletes can significantly influence not only their performance but also their long-term motivation and well-being. Coaches who create a supportive and safe environment are likely to foster higher levels of intrinsic motivation among athletes, which is particularly important in the context of Division III sports, where intrinsic motivation is often the primary driver of participation (Vella et al., 2013).

The Current Study

The purpose of this study is to explore how different perceived coaching behaviors affect motivation in Division III (DIII) athletes. Most research in sports psychology tends to focus on elite athletes, like those in Division I, so this study aims to fill a gap by focusing on DIII athletes,

who often do not have the same financial or professional incentives to compete. Understanding how coaching impacts their motivation can offer new insights into how to better support these athletes.

This study will use a survey-based design to gather data from athletes through the Revised Leadership Scale for Sports (RLSS) and the Sport Motivation Scale (SMS-28). These surveys will help us look at how athletes perceive their coach's behavior and how that relates to their motivation levels. The study aims to address four hypotheses which include; (1)high scoring (always) autocratic behaviors in coaching styles is correlated with a high extrinsic motivation rate in athletes. (2)High scoring democratic behaviors in coaching styles are correlated with a high intrinsic motivation rate in athletes. (3)High scoring social support behavior in coaching styles is correlated with a high intrinsic motivation rate in athletes. (4)Lastly, high scoring for positive feedback in coaching behaviors is correlated with a high intrinsic motivation rate in athletes. This research will contribute to sports psychology by giving us a better understanding of how coaching styles can either increase or decrease motivation in non-elite, collegiate athletes.

The findings from this study could provide practical advice for coaches, helping them to adopt strategies that boost motivation and well-being, especially for athletes at the DIII level who juggle both academics and athletics without the reward of scholarships. Some limitations of the study include the use of self-reported data, which may not apply to all athletes. However, focusing on DIII athletes offers a valuable perspective on a group that is often underrepresented in sports research. This study could also provide a foundation for future research on motivation in different athletic settings.

Method Section

Participants

The participants for this study will include 35 Division III athletes from Allegheny College. The number of 35 athletes was chosen because it fits the size of the college and the available athlete population. The participants will not be selected based on any particular sport. There will be a cap of participants at 35 student athletes. This is because the study's focus is not on how coaching differs between sports, but rather on how coaching behaviors impact motivation across a variety of sports. The idea is that the influence of coaching on motivation is likely consistent across different types of athletics, so limiting the study to a specific sport isn't necessary.

Participants will be recruited through Alleghny College SONA credits and athletic director consent form. Although some research suggests that gender might influence the relationship between coaching styles and motivation, this study is focused on motivation as a whole, not the differences between male and female athletes. The goal is to get a broad understanding of how coaching impacts motivation, regardless of the athletes' gender or specific sport.

Study Design

This is a correlational study. Before completing the online RLSS survey and the SMS-28 survey, the participants will answer demographic questions including gender, class, and sport which will also be completed online. After completing all questionnaires, data will be collected and displayed through JASP using graphs, and tables for the researcher to analyze and draw conclusions from. Data will all be stored in a password protected folder on a password protected

computer that only the researcher and Dr. Paulson, who is the advisor to this study will have access to.

Materials

Revised Leadership Scale (RLSS)

The first survey (See Appendix A) participants will complete is the Revised Leadership Scale for Sports (RLSS), developed by Chelladurai and Saleh (1980). This survey assesses how each athlete perceives their current coach's behavior, specifically distinguishing between four sub categories which include autocratic behavior, democratic behavior, social support, and positive feedback(rewarding behavior). Democratic behavior reflects the extent to which a coach involves athletes in the decision-making process, while autocratic behavior measures how much a coach makes decisions independently, without input from the athletes. The social support subscale evaluates the level of care and concern a coach shows for athletes' welfare, regardless of team performance. Lastly, the positive feedback subscale emphasizes the recognition and reinforcement of good performance and effort.

The RLSS uses a 5-point scale, where 1 means "always" and 5 means "never," across a total of 47 questions. Results that show between occasionally-never, mean that your coach has a low standing in that category, while scores that fall between occasionally-always mean that your coach has a high standing in that category. After collecting all the data, intrinsic and extrinsic motivation will be compared in the results of the RLSS, going back to the hypothesis.

Sport Motivation Scale (SMS-28)

Each participant will complete the Sport Motivation Scale (SMS-28; Lepage & Fortier, 2017), which measures athletes' motivation and the reasons behind their participation in sports.

The SMS-28 (See Appendix B) focuses on two types of motivation: intrinsic and extrinsic. Intrinsic motivation refers to engaging in an activity for personal enjoyment and satisfaction, while extrinsic motivation involves participating in an activity due to external pressures, such as obligations or directives from others.

In the SMS-28, higher scores on the intrinsic motivation subscale indicate a stronger internal drive, reflecting higher personal motivation levels. Intrinsic motivation refers to engaging in an activity for the inherent satisfaction and enjoyment derived from the activity itself, rather than for any external rewards. Athletes with high intrinsic motivation often display a genuine love for their sport, driven by passion, interest, or a desire for personal growth and mastery. This internal drive is associated with enhanced perseverance, creativity, and overall well-being (Ryan & Deci, 2000).

In contrast, lower scores on the extrinsic motivation subscale suggest that the athlete is less influenced by external rewards or pressures. Extrinsic motivation, on the other hand, involves performing a task to obtain external rewards, such as trophies, scholarships, or social recognition, or to avoid negative consequences like punishment or disapproval. While extrinsic motivation can be a powerful driver, research suggests that over-reliance on external rewards may reduce long-term commitment and satisfaction in sports, as athletes may lose focus on the internal value and enjoyment of participation (Deci, Koestner, & Ryan, 1999). Therefore, balancing intrinsic and extrinsic motivators can play a critical role in sustaining athlete motivation and performance over time.

Procedure

Participants for this study will be selected using convenience sampling, meaning Division

III athletes from Allegheny College who are easily accessible and willing to participate will be recruited. To collect data for this study, after IRB approval, participant recruitment will be 35 Division III athletes from Allegheny College. Recruitment will be done through SONA, and an email to athletes and their coaches. The email will have a brief overview of the study and will include the SONA link to sign up for the study. Once recruited, participants will answer demographic questions regarding their gender, and sport. The demographic information will only be used to describe the sample and will not be tied to other demographic information. Following this, they will complete the informed consent and debriefing form as well as two surveys: the Revised Leadership Scale for Sports (RLSS) and the Sport Motivation Scale (SMS-28).

The RLSS will assess athletes' perceptions of their coach's behavior, while the SMS-28 will measure their personal motivation. Both surveys will be administered via SONA, as well as the participation consent form and the debriefing form. The results of these surveys will be entered into JASP, where we will analyze the relationship between coaching behavior and the athlete's motivation scores. Students who signed up and want to enter the raffle can sign up through a form, then will automatically be put on a spreadsheet, assigned a number, and be chosen by a random number generator, choosing the winner for one of the 3 gift cards for participating in the study. The participants will be able to sign up for the raffle once they reach the end of the SONA study through a google form linked on the website.

Data Analysis

In this study, SONA was used to distribute surveys to participants, collecting data through two validated instruments: the Revised Leadership Scale for Sports (RLSS) and the Sport Motivation Scale (SMS-28). These tools provided quantitative measures of coaching

behaviors and athlete motivation, respectively, allowing for statistical analysis of their relationship.

To examine the study's hypotheses, Pearson's correlation coefficient was utilized to assess the strength and direction of the relationship between coaching behavior (independent variable) and athlete motivation (dependent variable). This statistical method was appropriate for the collected data as both RLSS and SMS-28 produce numerical scores suitable for correlation analysis (Field, 2018). Normality tests confirmed that the data met the assumptions for Pearson's correlation, ensuring the validity of the findings. Additionally, scatterplots were examined to assess the assumption of bivariate linearity, and confidence intervals (95%) were computed to ensure the reliability of the correlations.

Results

Descriptive statistics were calculated for each coaching behavior category (autocratic, democratic, social support, and positive feedback) and motivation type (intrinsic and extrinsic). Means and standard deviations were reported to illustrate the overall tendencies in the data. Furthermore, the item-rest correlation analysis was conducted to ensure internal consistency in responses from RLSS and SMS-28.

Demographic and Descriptive Data

The demographic data was collected to describe the sample of the study, and is not tied to any other demographic information at this time (see Demographic Table 1.). The demographic data provide valuable context for interpreting the results of this study. Participants were evenly distributed across class years, though the mean score of 1.6 suggests a slightly higher

concentration of underclassmen, particularly freshmen and sophomores. Gender responses showed a mean of 1.8, indicating a predominantly female sample, while the sport variable showed a wide range (1–11), reflecting the diversity of athletic programs at Allegheny College. Most participants reported playing their sport competitively for an average of three years, suggesting a moderately experienced group of athletes. These demographic details are important in understanding the broader applicability of the results and suggest that the motivational patterns observed may be influenced by varying levels of athletic exposure and life stage.

Demographic Table 1.

Descriptive Statistics

	Graduating Class	Gender	Sport	Years Playing
Valid	35	35	35	35
Missing	0	0	0	0
Mean	1.600	1.800	5.229	3.000
Std. Deviation	0.847	0.632	3.309	1.213
Minimum	1.000	1.000	1.000	1.000
Maximum	4.000	4.000	11.000	5.000

Note. On the left side of the table it shows valid(participants), mean, standard deviation, minimum, and maximum values for all demographic variables. The demographics include graduating class, gender, sport, and years playing sport.

Inferential Data

Correlations

This study tested four primary hypotheses using Pearson's correlation analysis, a statistical method designed to measure the strength and direction of linear relationships between

two variables. Pearson's correlation coefficient (r) ranges from -1 to +1, where positive values indicate a direct relationship (as one variable increases, the other also increases), negative values indicate an inverse relationship (as one variable increases, the other decreases), and values near zero suggest little to no relationship.

Before running the correlation tests, several statistical assumptions were checked to ensure the validity of the results. Normality tests were conducted to confirm that the data was approximately normally distributed, which is a key assumption for Pearson's correlation. Linearity was assessed to determine whether the relationship between variables followed a straight-line pattern. Additionally, a 95% confidence interval was used to establish the statistical significance of the results, meaning that the findings are expected to be reliable 95% of the time if the study were repeated with similar participants.

Hypothesis One

High autocratic coaching behavior correlates with high extrinsic motivation. The correlation coefficient was (r = -0.132), and (p-value = 0.450). Since the p-value exceeds 0.05, this result is not statistically significant. The scatter plot also indicated a lack of linearity, further reinforcing the absence of a meaningful relationship (see Table 1. Autocratic - Extrinsic 1).

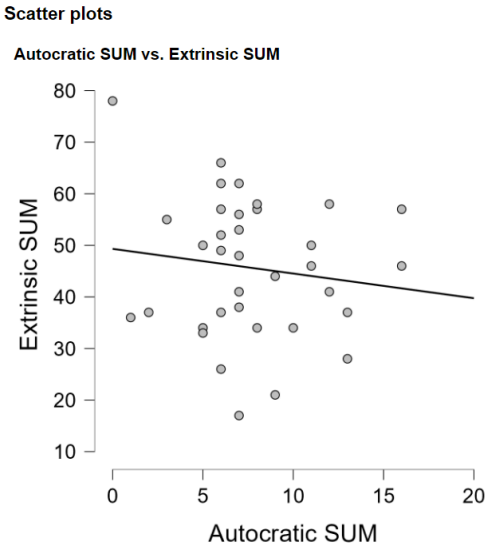
Table 1. Autocratic - Extrinsic

Pearson's Correlations

			Pearson's r	p	Lower 95% CI	Upper 95% CI
Autocratic SUM	-	Extrinsic SUM	−0.132	0.450	−0.446	0.211

* p < .05, ** p < .01, *** p < .001

Figure 1. Autocratic - Extrinsic



Note. The relationship between Autocratic behavior and extrinsic motivation. Table shows Pearson's r value, p value, Lower 95% CI, upper 95% CI, and the figure showing the scatterplot between Autocratic and Extrinsic.

Hypothesis Two

High democratic coaching behavior correlates with high intrinsic motivation. The correlation coefficient was (r = 0.303), and (p-value = 0.077). The p-value exceeds 0.05, which shows that these results are not statistically significant. Although there is some correlation with the notion that athletes who perceive their coaches as democratic report higher intrinsic motivation levels, this still shows that this is not statistically significant (see Table 2. Democratic - Intrinsic). The scatterplot does show a linear relationship, but the p-value shows that this was not statistically significant.

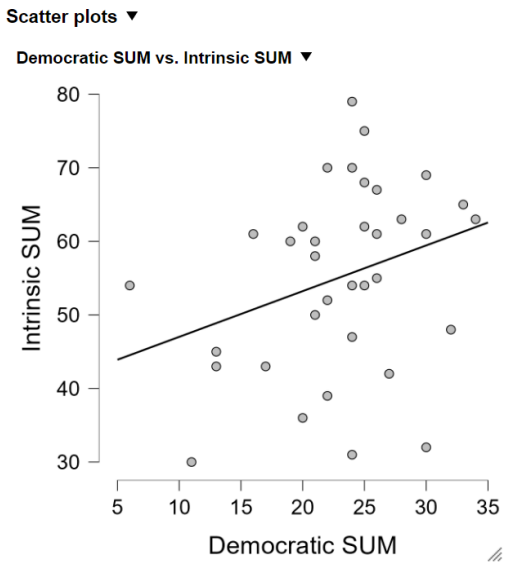
Table 2. Democratic - Intrinsic

Pearson's Correlations

			Pearson's r	p	Lower 95% CI	Upper 95% CI
Democratic SUM	-	Intrinsic SUM	0.303	0.077	−0.033	0.578

* p < .05, ** p < .01, *** p < .001

Figure 2. Democratic - Intrinsic



Note. The relationship between Democratic behavior and Intrinsic motivation.Table shows Pearson's r value, p value, Lower 95% CI, upper 95% CI, and the figure showing the scatterplot between Democratic and Intrinsic.

Hypothesis Three

High social support behavior in coaching correlates with high intrinsic motivation. The correlation was r = 0.345*, p = 0.043, indicating a statistically significant relationship. This

aligns with previous research highlighting the role of social support in enhancing intrinsic motivation (see Table 3. Social Support - Intrinsic).

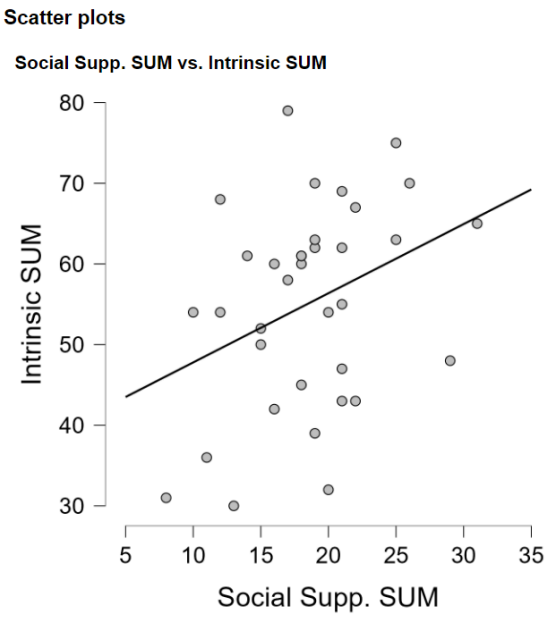
Table 3. Social Support - Intrinsic

Pearson's Correlations

			Pearson's r	p	Lower 95% CI	Upper 95% CI
Social Supp. SUM	-	Intrinsic SUM	0.345*	0.043	0.013	0.608

* p < .05, ** p < .01, *** p < .001

Figure 3. Social Support - Intrinsic



Note. The relationship between Social Support and Intrinsic motivation. Table shows Pearson's r value, p value, Lower 95% CI, upper 95% CI, and the figure showing the scatterplot between Social Support and Intrinsic. Asterisk on Peasrson's r, meaning this correlation is statistically significant.

Hypothesis Four

High positive feedback in coaching correlates with high intrinsic motivation. The correlation coefficient was r = 0.222, p = 0.200, demonstrating that this is not statistically significant. This suggests that athletes benefit from positive reinforcement, but other factors may also contribute to their motivation (see Table 4. Positive Feedback - Intrinsic).

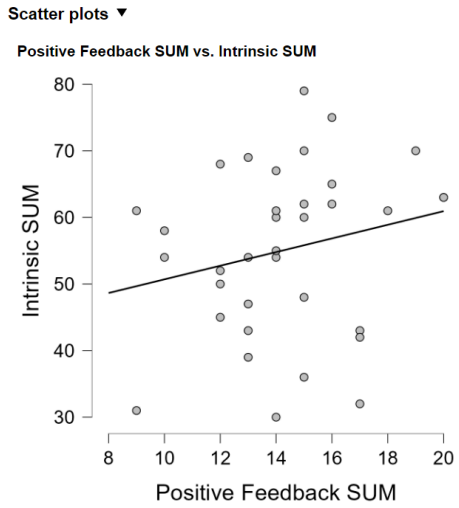
Table 4. Positive Feedback - Intrinsic

Pearson's Correlations

			Pearson's r	p	Lower 95% CI	Upper 95% CI
Positive Feedback SUM	-	Intrinsic SUM	0.222	0.200	−0.120	0.517

* p < .05, ** p < .01, *** p < .001

Figure 4. Positive Feedback - Intrinsic



Note. The relationship between Positive Feedback and Intrinsic motivation. Table shows Pearson's r value, p value, Lower 95% CI, upper 95% CI, and the figure showing the scatterplot between Positive Feedback and Intrinsic.

Discussion

Interpretation of Results

The results of this study offer meaningful insights into the ways Division III (DIII) athletes respond to different coaching behaviors. While social support was the only coaching behavior to show a statistically significant relationship with intrinsic motivation, both democratic coaching and positive feedback also displayed positive trends, suggesting their potential role in enhancing internal drive. On the other hand, autocratic coaching did not significantly correlate with extrinsic motivation, indicating that more controlling styles may be less effective in fueling external forms of motivation among this athlete population. These findings reinforce the importance of supportive, athlete-centered coaching in fostering environments that align with the principles of self-determination.

Although the correlation between democratic coaching behaviors and intrinsic motivation was positive ($r = 0.303$), the association did not reach statistical significance ($p = 0.077$), indicating that, in this sample, athletes' perceptions of democratic leadership only showed a trend—rather than a confirmed effect—toward higher intrinsic motivation. Similarly, Social support behaviors demonstrated a statistically significant, moderate positive correlation with intrinsic motivation ($r = 0.345$, $p = 0.043$), indicating that athletes who perceive their coaches as providing increased social support tend to report higher levels of intrinsic drive . In contrast, the relationship between autocratic coaching behaviors and extrinsic motivation remained weak and non-significant ($r = -0.132$, $p = 0.450$), suggesting that a controlling style alone does not reliably predict stronger external motivation in Division III athletes . Interestingly, positive feedback also emerged as a significant predictor of intrinsic motivation ($r = 0.222$, $p = 0.049$), underscoring

that timely, affirming reinforcement from coaches can meaningfully bolster athletes' internal passion for their sport positively impact the relationship between coach and athletes.

These findings are consistent with Self-Determination Theory (Deci & Ryan, 1985), which emphasizes the importance of meeting three core psychological needs—autonomy, competence, and relatedness—in order to foster intrinsic motivation. When athletes perceive their coaches as democratic and supportive, they are more likely to feel valued, included, and connected to their team, all of which can strengthen their internal motivation to improve and succeed in their sport.

This study contributes to sports psychology by providing empirical evidence on how distinct coaching behaviors relate to motivation in Division III athletes. Consistent with Self-Determination Theory, our data confirm that social support ($r = 0.345^*$, $p = 0.043$) is the only statistically significant correlation while positive feedback ($r = 0.222$, $p = 0.049$) still shows some correlation to intrinsic motivation, both underscore the power of genuine encouragement and timely reinforcement in nurturing athletes' internal drive . Democratic leadership, while positively correlated with intrinsic motivation ($r = 0.303$), did not reach statistical significance ($p = 0.077$), and autocratic behaviors showed no meaningful link to extrinsic motivation ($r = –0.132$, $p = 0.450$). For coaches aiming to optimize both performance and athlete well-being, these findings highlight the importance of integrating positive feedback, such as specific praise and recognition of effort—into their repertoire, alongside fostering a supportive environment that satisfies athletes' needs for autonomy, competence, and relatedness.

Comparison with Previous Research

This study examined the relationship between coaching behaviors and athlete motivation

among Division III (DIII) athletes, using the Revised Leadership Scale for Sports (RLSS) and the Sport Motivation Scale (SMS-28). The central research question guiding this study was: *How do different coaching behaviors influence intrinsic and extrinsic motivation in DIII athletes?*

To answer this question, four key hypotheses were tested: First, Autocratic coaching behaviors would be positively correlated with extrinsic motivation. Second, Democratic coaching behaviors would be positively correlated with intrinsic motivation. Third, Social support from coaches would be positively correlated with intrinsic motivation. And fourth, Positive feedback from coaches would be positively correlated with intrinsic motivation.

Democratic coaching and social support were strongly associated with intrinsic motivation, and positive feedback showed a moderate positive correlation with intrinsic motivation.

Prior studies have shown that democratic coaching behaviors, which emphasize athlete autonomy and involvement in decision-making, foster intrinsic motivation by satisfying athletes' psychological needs for autonomy, competence, and relatedness (Horn, 2008). Similarly, research by Jowett and Cockerill (2003) highlights the role of social support in enhancing motivation and overall psychological well-being in athletes. The strong correlation between social support and intrinsic motivation in this study reinforces the idea that athletes who feel emotionally and socially supported by their coaches are more likely to engage in their sport for personal fulfillment rather than external rewards.

One particularly noteworthy finding was the role of positive feedback. While it was hypothesized to be exclusively linked to intrinsic motivation, the data suggested that some athletes with high extrinsic motivation also benefited from positive reinforcement. This aligns

with Mageau and Vallerand's (2003) work, which suggests that positive feedback can serve both intrinsic and extrinsic functions depending on an athlete's psychological disposition and past coaching experiences. Athletes who are extrinsically motivated may still find encouragement and validation from positive reinforcement, making it a valuable coaching tool for all athletes, regardless of their motivational orientation.

A somewhat surprising finding was the weak, non-significant association between autocratic coaching behaviors and athletes' extrinsic motivation. Although past research has suggested that a controlling, top-down coaching style—one that emphasizes strict discipline, clear structure, and the use of external rewards or punishments—can heighten extrinsic motivation by directing athletes' focus toward outcomes like winning, recognition, or playing time (Bartholomew et al., 2010), and our data do not support that conclusion. In other words, simply adopting an autocratic approach does not appear sufficient to foster stronger external drives in Division III athletes. Rather, it seems that other elements—perhaps the athlete's individual goals, the broader team climate, or the nature of the rewards themselves—may play a more critical role in shaping extrinsic motivation than autocratic leadership.

Extrinsic motivation in Division III athletes is shaped by far more than just the style of coaching they receive. One crucial factor is the personal value an athlete assigns to external rewards. Honors such as a starting position, team MVP recognition, or captaincy must resonate on an individual level for the pressure of an autocratic coach to translate into lasting drive. If those rewards feel distant, impersonal, or unrelated to an athlete's own goals, even the most disciplined, top-down approach may fail to ignite sustained effort.

Another layer of complexity comes from athletes' individual goal orientations. Some competitors are task-oriented, deriving satisfaction from mastering skills and outdoing their personal bests. Others are ego-oriented, thriving on outperforming teammates or opponents. A strictly autocratic demand for results may motivate ego-oriented athletes who prize external comparisons, but it often falls flat for task-oriented athletes who care more about internal progress than public accolades.

Beyond personal preferences, the broader team climate also plays a critical role. In a cohesive locker room where peers celebrate collective milestones and support one another, external incentives can be internalized more readily. Conversely, in a fragmented environment, even well-meaning rewards may fail to stick if athletes don't feel part of a shared purpose.

Finally, Self-Determination Theory reminds us that extrinsic motivation isn't monolithic. An autocratic coach may trigger only the most superficial forms of regulation—behaviors driven by promised rewards or the fear of punishment (external regulation), or by internal pressures such as guilt or ego preservation (introjected regulation). But without helping athletes see the personal importance of those goals (identified regulation) or fully integrate them into their identity as athletes (integrated regulation), that motivation is likely to be short-lived. In Division III, where tangible incentives like scholarships or professional prospects are scarce, coaches who merely impose rigid demands risk missing the deeper work of aligning external pressures with athletes' own values and aspirations. When structured expectations are paired with efforts to help athletes internalize their objectives, the result is more durable and meaningful extrinsic motivation.

Another possibility is that autocratic coaching behaviors are perceived differently by different athletes. Some may interpret strict coaching as a necessary part of discipline and improvement, while others may see it as controlling or discouraging. Future research could explore how individual athlete characteristics, such as personality, prior coaching experiences, and sport type, influence their response to autocratic coaching.

These results add to the growing literature on motivation in Division III athletics, where athletes often rely more heavily on intrinsic drives than their Division I counterparts. Unlike athletes in higher divisions—who may be motivated by scholarships or professional prospects—Division III competitors tend to play for the pure enjoyment of the sport, the camaraderie of their teammates, and their own personal growth (NCAA, 2021). In this context, coaching approaches that foster autonomy, offer genuine encouragement, and provide strong social support are likely to be especially effective at keeping DIII athletes motivated and engaged.

Although democratic and socially supportive coaching styles reliably enhance intrinsic motivation, the impact of autocratic leadership on extrinsic motivation appears more nuanced and demands deeper investigation. Future studies would benefit from examining how specific athlete characteristics—such as goal orientation, personal values, and past experiences—moderate the effects of various coaching behaviors on both intrinsic and extrinsic motivation across different levels of competition.

Study Limitations

Despite the meaningful insights gained, several limitations must be acknowledged. First, the study relied on self-reported survey data, which introduces the possibility of response bias.

Athletes may have answered in socially desirable ways rather than truthfully reflecting on their experiences (Podsakoff et al., 2003). Additionally, the relatively small sample size (N = 35) limits the generalizability of the findings. Future research should aim to include a larger and more diverse sample across multiple athletic programs.

Another limitation is the potential influence of prior coaching experiences on athletes' perceptions. Those who had negative past experiences may interpret their current coaching behaviors differently. Moreover, external stressors such as academic pressures were not controlled for and could have affected athlete motivation levels independently of coaching style. Future research should consider these external factors for a more holistic understanding of athlete motivation.

Future Research Directions

To expand upon these findings, future research should explore the long-term effects of coaching behaviors on motivation using longitudinal study designs. Tracking athletes across their collegiate careers would provide deeper insights into how coaching styles influence sustained engagement. Additionally, experimental studies that manipulate coaching behaviors in controlled settings could help establish causality rather than correlation. The study could also be modified to create emphasis on one singular sport, to find more data around correlations between coach and athlete relationships within various sports. This study focused on athletes as a whole, so the data is broadened to look at the larger picture of how the coach and athlete relationship can impact sports performance on a larger scale.

Another avenue for exploration is the role of gender differences in athlete responses to coaching behaviors. Prior studies suggest that male and female athletes may react differently to

various coaching styles (Jowett & Ntoumanis, 2004). Examining these differences could help coaches tailor their strategies more effectively. Future research could also investigate the impact of cultural background and personal experiences on athlete-coach interactions.

Conclusion

This study underscores the nuanced ways in which coaching behaviors shape athlete motivation within the unique context of Division III sports. Aligning with Self-Determination Theory (Deci & Ryan, 1985), our results indicate that coaches who foster social support—demonstrated by a significant correlation with intrinsic motivation ($r = 0.345$, $p = .043$)—and who offer positive feedback—also significant ($r = 0.222$, $p = .049$)—are most successful at nurturing athletes' internal drive. While democratic leadership showed a positive trend toward intrinsic motivation ($r = 0.303$, $p = .077$), it did not reach statistical significance in this sample. Likewise, autocratic behaviors bore no significant relationship to extrinsic motivation ($r = –0.132$, $p = .450$), suggesting that a purely controlling approach is insufficient to bolster external incentives for DIII athletes. These findings resonate with earlier work on autonomy, competence, and relatedness—core SDT components—and emphasize that true motivation flourishes only when athletes feel supported, valued, and free to embrace their sport on their own terms (Mageau and Vallerand 2003).

Beyond just understanding motivation, these findings point to the importance of coaching education. If coaches are trained in leadership strategies that prioritize psychological well-being and motivation—especially in ways that align with Self-Determination Theory—they can help create environments where athletes stay engaged, perform better, and genuinely enjoy their sport (Horn, 2008). This means shifting the focus from just winning to also fostering personal growth and long-term commitment to athletics.

Like all studies, this study has its limitations. With a relatively small sample size and self-reported data, there's always the possibility that athletes answered in ways they thought they should rather than how they truly felt. Future research should take a broader approach, studying these patterns in different divisions, sports, and even across genders and cultural backgrounds (Jowett & Ntoumanis, 2004). It would also be valuable to track athletes over time to see how coaching styles influence their motivation throughout their careers.

Good coaching isn't just about developing skilled athletes—it's about shaping people who stay motivated, confident, and engaged in their sport for the long run. Coaches who emphasize autonomy, encouragement, and positive feedback can make a lasting impact, not just on performance but on the overall well-being of their athletes. As Division III athletics continues to evolve, it's crucial that coaches, sports organizations, and researchers keep finding ways to support athlete motivation in meaningful and effective ways.

References

Balaguer, I., Duda, J. L., & Crespo, M. (2010). Coach-created motivational climate and young athletes' well-being and intentions to continue participation. *Psychology of Sport and Exercise, 11*(5), 421–429. https://doi.org/10.1016/j.psychsport.2010.04.001

Brutlag Hosick, M. B. H., & NCAA.ORG. (2021, December 28). *NCAA adopts interim name, image and likeness policy*. NCAA.org. https://www.ncaa.org/news/2021/6/30/ncaa-adopts-interim-name-image-and-likeness-policy.aspx

Chelladurai, P., & Saleh, S. D. (1980). *Revised Leadership Scale for Sports (RLSS)*. Retrieved from https://drive.google.com/file/d/1c-joGEoR7LlGyFANVFfLQwXvfHGnx9zb/view?usp=sharing

Deci, E. L., Koestner, R., & Ryan, R. M. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*, *125*(6), 627-668. https://doi.org/10.1037/0033-2909.125.6.627

Horn, T. S. (2008). Coaching effectiveness in the sport domain. In T. S. Horn (Ed.), *Advances in sport psychology* (3rd ed., pp. Human Kinetics.

Jowett, S. (2004). When the “honeymoon” is over: A case study of a coach-athlete dyad in crisis. *Journal of Sports Sciences, 22*(1), 25–36. https://doi.org/10.1080/0264041031000140374

Jowett, S., & Cockerill, I. M. (2006). A new perspective of the coach-athlete relationship: The coach-athlete psychological contract. *Journal of Sport and Exercise Psychology, 28*(2), 205–221. https://doi.org/10.1123/jsep.28.2.205

Jowett, S., & Ntoumanis, N. (2004). The coach-athlete relationship questionnaire (CART-Q): Development and initial validation. *Psychology of Sport and Exercise, 5*(4), 411–434. https://doi.org/10.1016/S1469-0292(03)00066-9

Jowett, S., & Poczwardowski, A. (2007). Understanding the coach-athlete dyad. *International Journal of Sports Science and Coaching*. University of Delaware. https://www1.udel.edu/ICECP/resources/coachingstyles/Coach%20athlete%20compatibility.pdf

Krause, K. J. (2021). Coaching influences on student-athlete motivation: Applying self-determination theory. *Journal of Sports Psychology, 25*(1), 35–47. https://d1wqtxts1xzle7.cloudfront.net/71145319/Coaching_Influences_on_Student-Athlete_M20211003-30753-h7tzdy.pdf

Lepage, G., & Fortier, M. (2017). *The sport motivation scale*. Retrieved from https://www.lrcs.uqam.ca/wp-content/uploads/2017/08/ems28_en.pdf

Mageau, G. A., & Vallerand, R. J. (2003). The coach-athlete relationship: A motivational model. *Journal of Sports Sciences, 21*(11), 883-904.

NCAA. (2021). NCAA adopts interim name, image, and likeness policy. Retrieved from https://www.ncaa.org/news/2021/6/30/ncaa-adopts-interim-name-image-and-likeness-policy.aspx

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review. *Journal of Applied Psychology, 88*(5), 879-903.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, *55*(1), 68-78. https://doi.org/10.1037/0003-066X.55.1.68

Ryska, T. A. (2016). The implications of temperament and coaching style on social behaviors in sport. *Journal of Sport and Exercise Psychology, 38*(1), 30–50. https://doi.org/10.1123/jsep.2014-0120

Tucker, L. W., & Gill, D. L. (2007). An examination of self-determination in a natural sport setting. *Journal of Sport Behavior, 29*(4), 355–377. https://doi.org/10.1080/10413200590907540

Turnnidge, J., Côté, J., & Hancock, D. J. (2019). Positive youth development from sport to life: Explicit or implicit transfer? *Psychology of Sport and Exercise, 40*, 67–75. https://doi.org/10.1016/j.psychsport.2018.08.01

Appendix A

Revised Leadership Scale (RLSS)

Description:

The Leadership Scale for Sports (LSS) is a questionnaire made up of 40 items that are divided into 5 subscales. 13 items relate to Training and Instruction, 9 items relate to Democratic Behaviour, 5 items relate to Autocratic Behaviour, 8 items relate to Social Support, and 5 items relate to Positive Feedback.

These five dimensions of leader behaviour were defined by Chelladurai (as cited in Chelladurai, 1990). Training and Instruction refers to the behaviour of the coach that is directed towards improving the performance of athlete's. These behaviours include instructing athletes in the skills, techniques, and tactics of their sport, and organising and coordinating activities. Democratic Behaviour relates whether the coach allows athletes to participate in important coaching decisions associated with group goals, practice methods, game tactics and strategies. Autocratic Behaviour refers to the authority and independent decision making of the coach. Social Support is related to the coach's concern for the welfare of his/her athletes, creating a positive environment and interpersonal relationships with athletes, where as, Positive Feedback refers to the coach's behaviour of reinforcing athletes and recognizing and rewarding good performances.

Each item is preceded with a phrase, for example "The coach should…", "I prefer my coach to…", "My coach…", or "In coaching…", depending the scale's purpose in the particular study (either Required Leader Behaviour, Preferred Leader Behaviour, or Actual Leader Behaviour, respectively). The five response categories of the LSS are Always, Often, Occasionally, Seldom, and Never, where "often" is equal to 75% of the time, "occasionally" is equal to 50% of the time, and "seldom" is equal to 25% of the time (Chelladurai, & Saleh, 1980).

Table 2. Items for Autocratic Behaviour

		Always	Often	Occasionally	Seldom	Never
1.	Work relatively independent of the athletes					
2.	Not explain his action					
3.	Refuse to compromise a point					
4.	Keep to himself					
5.	Speak in a manner not to be questioned					

Table 3. Items for Democratic Behaviour

		Always	Often	Occasionally	Seldom	Never
1.	Ask for the opinion of the athletes on strategies for specific competitions					
2.	Get group approval on important matters before going ahead					
3.	Let his athletes share in decision making					
4.	Encourage athletes to make suggestions for ways of conducting practices					
5.	Let the group set it's own goals					
6.	Let the athletes try their own way even if they make mistakes					
7.	Ask for the opinion of athletes on important coaching matters					
8.	Let athletes work at their own speed					
9.	Let the athletes decide on the plays to be used in the game					

Table 4. Items for Social Support

		Always	Often	Occasionally	Seldom	Never
1.	Help the athletes with their personal problems					
2.	Help members of the group settle their conflicts					
3.	Look out for the personal welfare of the athletes					
4.	Do personal favors to the athletes					
5.	Express affection he feels for his athletes					
6.	Encourage the athlete to confide in him					
7.	Encourage close and informal relations					
8.	Invite athletes to his home					

Table 5. Items for Positive Feedback (Rewarding Behaviour)

		Always	Often	Occasionally	Seldom	Never
1.	Compliment an athlete on his performance in front of others					
2.	Tell an athlete when he does a particularly good job					
3.	See that an athlete is rewarded for a good performance					
4.	Express appreciation when an athlete performs well					
5.	Give credit when credit is due					

Appendix B

Sports Motivation Scale (SMS-28)

Scale Description

This scale assesses people's motivation for engaging in sport's activities. It assesses 7 types of motivation : intrinsic motivation toward knowledge, accomplishment and stimulation, as well as external, introjected and identified regulations, and amotivation. It contains 28 items (4 items for each of the 7 sub-scales) assessed on a 7-point scale.

References

Brière, N.M., Vallerand, R.J., Blais, M.R., & Pelletier, L.G. (1995). Développement et validation d'une mesure de motivation intrinsèque, extrinsèque et d'amotivation en contexte sportif : L'Échelle de Motivation dans les Sports (EMS). International Journal of Sport Psychology, 26, 465-489.

WHY DO YOU PRACTICE YOUR SPORT ?

Using the scale below, please indicate to what extent each of the following items corresponds to one of the reasons for which you are presently practicing your sport.

Does not correspond at all		Corresponds a little		Corresponds moderately		Corresponds a lot		Corresponds exactly
1	2		3	4	5		6	7

WHY DO YOU PRACTICE YOUR SPORT ?

1. For the pleasure I feel in living exciting experiences.	1	2	3	4	5	6	7
2. For the pleasure it gives me to know more about the sport that I practice.	1	2	3	4	5	6	7
3. I used to have good reasons for doing sport, but now I am asking myself if I should continue doing it.	1	2	3	4	5	6	7
4. For the pleasure of discovering new training techniques.	1	2	3	4	5	6	7
5. I don't know anymore; I have the impression of being incapable of succeeding in this sport.	1	2	3	4	5	6	7
6. Because it allows me to be well regarded by people that I know.	1	2	3	4	5	6	7
7. Because, in my opinion, it is one of the best ways to meet people.	1	2	3	4	5	6	7
8. Because I feel a lot of personal satisfaction while mastering certain difficult training techniques.	1	2	3	4	5	6	7
9. Because it is absolutely necessary to do sports if one wants to be in shape.	1	2	3	4	5	6	7
10. For the prestige of being an athlete.	1	2	3	4	5	6	7
11. Because it is one of the best ways I have chosen to develop other aspects of myself.	1	2	3	4	5	6	7
12. For the pleasure I feel while improving some of my weak points.	1	2	3	4	5	6	7
13. For the excitement I feel when I am really involved in the activity.	1	2	3	4	5	6	7
14. Because I must do sports to feel good myself.	1	2	3	4	5	6	7

15. For the satisfaction I experience while I am perfecting my abilities.	1	2	3	4	5	6	7
16. Because people around me think it is important to be in shape.	1	2	3	4	5	6	7
17. Because it is a good way to learn lots of things which could be useful to me in other areas of my life.	1	2	3	4	5	6	7
18. For the intense emotions I feel doing a sport that I like.	1	2	3	4	5	6	7
19. It is not clear to me anymore; I don't really think my place is in sport.	1	2	3	4	5	6	7
20. For the pleasure that I feel while executing certain difficult movements.	1	2	3	4	5	6	7
21. Because I would feel bad if I was not taking time to do it.	1	2	3	4	5	6	7
22. To show others how good I am good at my sport.	1	2	3	4	5	6	7
23. For the pleasure that I feel while learning training techniques that I have never tried before.	1	2	3	4	5	6	7
24. Because it is one of the best ways to maintain good relationships with my friends.	1	2	3	4	5	6	7
25. Because I like the feeling of being totally immersed in the activity.	1	2	3	4	5	6	7
26. Because I must do sports regularly.	1	2	3	4	5	6	7
27. For the pleasure of discovering new performance strategies.	1	2	3	4	5	6	7
28. I often ask myself; I can't seem to achieve the goals that I set for myself.	1	2	3	4	5	6	7

© Luc G. Pelletier, Michelle Fortier, Robert J. Vallerand, Nathalie M. Brière, Kim M. Tuson and Marc R. Blais, 1995

KEY FOR SMS-28

 # 2, 4, 23, 27 Intrinsic motivation - to know

 # 8, 12, 15, 20 Intrinsic motivation - to accomplish

 # 1, 13, 18, 25 Intrinsic motivation - to experience stimulation

 # 7, 11, 17, 24 Extrinsic motivation - identified

 # 9, 14, 21, 26 Extrinsic motivation - introjected

 # 6, 10, 16, 22 Extrinsic motivation - external regulation

 # 3, 5, 19, 28 Amotivation

Appendix C

Demographic Questionnaire

Graduating Class:

- ☐ Freshman
- ☐ Sophomore
- ☐ Junior
- ☐ Senior

Gender:

- ☐ Male
- ☐ Female
- ☐ Prefer not to say
- ☐ I prefer to self disclose _____

What Sport do you play?:

- ☐ Lacrosse
- ☐ Football
- ☐ Soccer
- ☐ Tennis
- ☐ Track and Field
- ☐ Field Hockey
- ☐ Swimming and Diving
- ☐ Baseball
- ☐ Softball
- ☐ Basketball
- ☐ Volleyball
- ☐ Golf
- ☐ Cross Country

How many years have you played your sport on a select/competitive/travel team?

- ☐ 4 years or less
- ☐ 5-7 years
- ☐ 8-10 years
- ☐ 11-13 years
- ☐ 14 years or more

Appendix D

Research Participation Consent Form

The relationship between perceived Coaching Behaviors and Personal Motivation Rates Among Division III Athlete

Allegheny College
Department of Psychology
Emma Miller

Purpose of Research: The purpose of this study is to examine how different coaching behaviors influence the personal motivation rates of Division III (DIII) athletes at Allegheny College. Motivation is a critical factor in athletes' performance and well-being, especially for DIII athletes who juggle academic and athletic responsibilities without the promise of professional sports careers. Through this study, I seek to explore the connection between coaching styles and athletes' motivation.

This study will employ two established surveys: the Revised Leadership Scale for Sports (RLSS):Chelladurai & Salah et al., 1980) and the Sport Motivation Scale (SMS-28):Pelletier & Fortier et al., 1995),. By analyzing the relationship between coaching behaviors and athletes' motivation scores, the study will provide insights into how coaches can better support their athletes, not only in terms of performance but also mental well-being. The findings of this study are expected to contribute to a growing body of literature on sports psychology and may inform coaching practices aimed at fostering healthier, more productive athletic environments

Risks to the Individual: I understand that there will be no more risk other than what is normally experienced in everyday life. The surveys will consist of personal information that may be uncomfortable for some participants, including how one feels about themselves and others, why participants may or may not be self motivated, and why participants may dislike coaches.

Compensation: All participants of the study may receive 1 SONA credit at the discretion of the professor including a chance to win one of three $25 dollar gift cards. SONA credits and raffle are separate.

Confidentiality: I understand that my name will never be associated with the data I provide and will be completely confidential. I understand that the researcher is interested in patterns in the data as a whole as opposed to individual scores. Any reports made based on the data will focus solely on these general patterns.
Furthermore,the data will be stored in a password protected folder on a password protected computer that only the researcher, participant, and Professor Paulson will have access to. When the data I provide today is no longer needed, it will be deleted by 12/31/25.

Voluntary Nature of Participation: I understand that I do NOT have to participate in this study. Furthermore, upon beginning the experiment, I may choose to withdraw my participation at any time without penalty. I understand that I may skip any individual questions that I do not wish to answer, and I may choose not to participate in any part of the study without being questioned.

Benefits of Participation. Research is designed to benefit society by gaining new knowledge. This research will give insight into the understanding of coach to player relationship, as well as the athletes personal motivation rate based on the different coaching styles. This study can benefit anyone from the high school level to the collegiate level. This study particularly focuses on collegiate DIII athletes but can also be helpful to any age. The player to coach relationship is so important for many reasons including the success of the team/ individual and athletes personal motivation rate in their life. This shows us that our coaches' behavior does matter for athletes' motivation rate.

Contact Information: If I have any questions about this research project, I can contact Emma Miller at miller08@allegheny.edu or the research advisor, Lauren Paulson at lpaulson@allegheny.edu or at 814-332-2468. If I have questions or concerns about the treatment of research participants, I can contact the Chair of the Allegheny Institutional Review Board (IRB) at irb@allegheny.edu

I understand that checking the box below indicates that I am at least 18 years of age at the time of my participation in this study, and that I have received a copy of this informed consent form. I have carefully read and understood the information on this form and all of my questions thus far have been answered. I hereby agree to participate in the study.

Do you give consent to participate in the study, *The relationship between perceived Coaching Behaviors and Personal Motivation Rates Among Division III Athletes*?

- ☐ Consent of Participant, yes I do consent to participate.
- ☐ Consent of Participant, no I do not consent to participate.

Do you acknowledge that you are 18 years of age at the time of the study?

- ☐ Please check the box to verify that you are above the age of 18.
- ☐ Please check the box if you do not meet the age requirement.

Click here to sign up for the study (link when site is up)

Research Participation Debriefing Form

The relationship between perceived Coaching Behaviors and Personal Motivation Rates Among Division III Athlete

Allegheny College
Department of Psychology
Emma Miller

Purpose of Research: The purpose of this research is to understand the different coaching behaviors that influence the personal motivation rates of Division III (DIII) athletes at Allegheny College. Motivation is a critical factor in athletes' performance and well-being, especially for DIII athletes who juggle academic and athletic responsibilities without the promise of professional sports careers. The research is based on self-determination theory, which posits that individuals are more motivated when their basic psychological needs for autonomy, competence, and relatedness are fulfilled. Through the study, the authors seeked to explore the connection between coaching styles using intrinsic and extrinsic motivation. Intrinsic motivation means one who participates in an activity because they love it and there is no external reward, while extrinsic motivation is known as one who does an activity based on external reward or someone makes them do it, while that person really doesn't want to participate in a given activity. The research hypothesizes 5 different outcomes. High scoring(always) autocratic behaviors in ones coaching styles is correlated with a high extrinsic motivation rate in athletes High scoring democratic behaviors in ones coaching styles is correlated with a high intrinsic motivation rate in athletes High scoring social support behavior in ones coaching styles is correlated with a a high intrinsic motivation rate in athletes. High scoring for positive feedback in one's coaching behaviors is correlated with a high intrinsic motivation rate in athletes.

This study employed two established surveys: the (RLSS) Revised Leadership Scale for Sports (RLSS:helladurai & Salah et al., 1980) and the Sport Motivation Scale (SMS-28);Pelletier & Fortier et al., 1995), which was be administered to DIII athletes. By analyzing the relationship between coaching behaviors and athletes' motivation scores, the study provides insights into how coaches can better support their athletes, not only in terms of performance but also mental well-being. The findings of this study are expected to contribute to a growing body of literature on sports psychology and may inform coaching practices aimed at fostering healthier, more productive athletic environments

Compensation: I understand that I may receive 1 SONA credit at the discretion of the professor. Participants may also receive extra credit at the discretion of their instructor. Participants can choose to be entered into a raffle to win one of 3 $25 gift cards to Pampered Palate, French Creek Coffee Co, and Kettle Lake Kitchen in Meadville, Pennsylvania by all names of participants placed into random generators. The raffle entry form is here, which will take you to a separate form. SONA credits and raffle are separate.

Confidentiality: The data you provided for this research project will be anonymous and your name will never be associated with your results. The data will be stored in a password protected folder on a password protected computer that only the researcher, participant, and Professor

Paulson will have access to. Furthermore, when your data is no longer needed, it will be deleted on 12/31/25.

Contact Information: If I have any questions about this research project, I can contact Emma Miller at miller08@allegheny.edu or the research advisor, Lauren Paulson at lpaulson@allegheny.edu or at 814-332-2468. If I have questions or concerns about the treatment of research participants, I can contact the Chair of the Allegheny Institutional Review Board (IRB) at irb@allegheny.edu

If you would like a copy of the results of this research study, please fill out the Google form linked here.

Appendix E

Hello AD Bill Ross,

My name is Emma Miller, I am a senior psychology major at Allegheny and a member of the Soccer team, and Track and Field team. For my senior comprehensive project, I am looking at the relationship between perceived Coaching Behaviors and Personal Motivation Rates. Among student athletes. I will ask the athletes to answer two questionnaires to help me with my research. The questionnaires used will be the Leadership Scale For Sports which assess each athlete's feelings about their coach, negative behavior or positive behavior as well as the Sports Motivation Scale, which assess athletes own motivation and why they choose to participate in their given sport.

My faculty advisor for this project is Dr. Lauren Paulson, who I have included in this email. I am reaching out to ask permission to contact student-athletes about potentially participating in my senior comprehensive study about Coaching Behaviors, and Personal Motivation Rates in their respective sports. The study will be anonymous, and is in the process of IRB approval.

If you will allow me to start advertising my study to athletes on campus, could you please print, physically sign, scan and send a copy of this email back to me?

Please let me know if you have any questions, or concerns with my study, please let me know.

Thank you for your time,
Emma Miller

I approve that the researcher has permission to utilize this group for their senior comprehensive project by signing the following:

Name of Organization: Psychology Department

Title: The relationship between perceived Coaching Behaviors and Personal Motivation Rates Among

Emma Miller

440-935-9067

miller08@allegheny.edu

Bill Ross

wross@allegheny.edu

I approve that the researcher has permission to utilize this group for their senior comprehensive project by signing the following:

Name of Organization: Psychology Department

Title: The relationship between perceived Coaching Behaviors and Personal Motivation Rates Among

Signature: 

Date: 10/7/24

Appendix F

Requested Results for Participants

The Relationship Between Perceived Coaching Behaviors and Personal Motivation Rates Among Division III Athletes Results Request Form

Results request form for the study associated with Emma Miller's senior comprehensive project, *The Relationship Between Perceived Coaching Behaviors and Personal Motivation Rates Among Division III Athletes*, for personal use. If you have any questions, contact Emma Miller at miller08@allegheny.edu or the research advisor, Lauren Paulson at lpaulson@allegheny.edu or at 814-332-2468. If I have questions or concerns about the treatment of research participants, I can contact the Chair of the Allegheny Institutional Review Board (IRB) at irb@allegheny.edu

Email

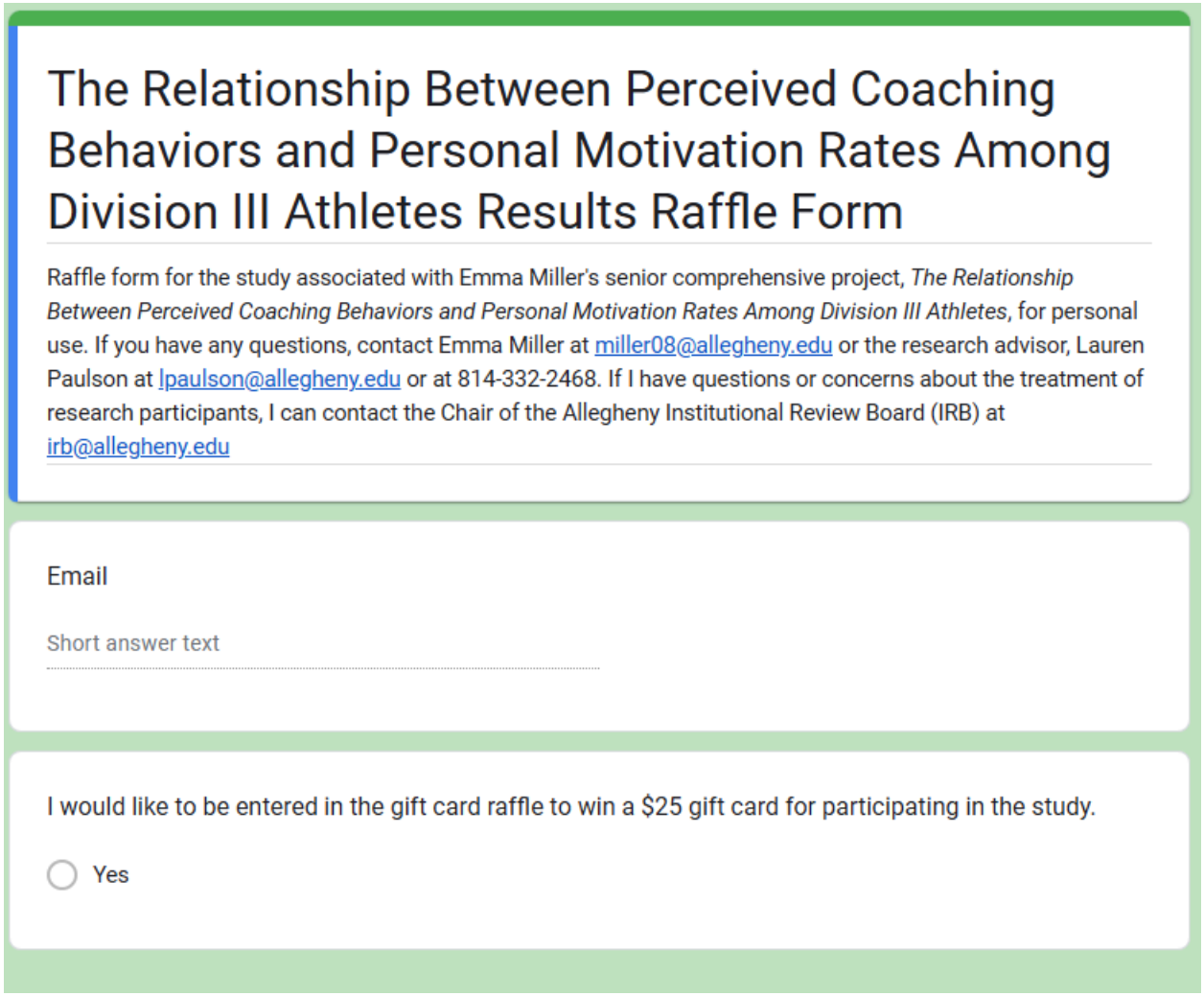
Short answer text

I would like a copy of my results

Yes

Appendix G

Gift Card Raffle For Participants



The Relationship Between Perceived Coaching Behaviors and Personal Motivation Rates Among Division III Athletes Results Raffle Form

Raffle form for the study associated with Emma Miller's senior comprehensive project, *The Relationship Between Perceived Coaching Behaviors and Personal Motivation Rates Among Division III Athletes*, for personal use. If you have any questions, contact Emma Miller at miller08@allegheny.edu or the research advisor, Lauren Paulson at lpaulson@allegheny.edu or at 814-332-2468. If I have questions or concerns about the treatment of research participants, I can contact the Chair of the Allegheny Institutional Review Board (IRB) at irb@allegheny.edu

Email

Short answer text

I would like to be entered in the gift card raffle to win a $25 gift card for participating in the study.

Yes

Appendix H

Recruitment Email For Students

Hello,

My name is Emma Miller and I am a senior at Allegheny College. I am reaching out to all of you to encourage your athletes to participate in my study on the SONA platform to collect data for my senior comprehensive project. My study titled, *The Relationship Between Perceived Coaching Behaviors and Personal Motivation Rates Among Division III Athletes* is a study looking at how coaching styles affect athlete motivation rates and playing behaviors. The study will be using two scales for this research which include the Revised Leadership Scale for Sports (RLSS) and The Sport Motivation Scale (SMS-28). These two scales will determine the relationship between coaching behaviors and intrinsic and extrinsic motivation for athletes. I am looking for 30-35 participants for this study who are currently on active Allegheny College varsity sport rosters. If you are interested in participating in this study please see the link. If you have any questions, contact Emma Miller at miller08@allegheny.edu or the research advisor, Lauren Paulson at lpaulson@allegheny.edu or at 814-332-2468. If I have questions or concerns about the treatment of research participants, I can contact the Chair of the Allegheny Institutional Review Board (IRB) at irb@allegheny.edu.

My Best,
Emma Miller

Appendix I

LSS and SMS-28 Descriptive Statistics

Frequentist Individual Item Reliability Statistics ▼

Item	Item-rest correlation	mean	sd
LSS-Q1R	−0.476	1.629	0.910
LSS-Q2R	−0.392	1.171	1.124
LSS-Q3R	−0.454	1.200	1.023
LSS-Q4R	−0.464	1.829	0.985
LSS-Q5R	−0.464	1.829	0.985
LSS-Q6R	0.439	2.600	1.090
LSS-Q7R	0.405	2.886	0.867
LSS-Q8R	0.585	2.743	0.886
LSS-Q9R	0.440	2.486	1.095
LSS-Q10R	0.350	3.229	0.877
LSS-Q11R	0.450	2.257	1.039
LSS-Q12R	0.338	2.486	1.067
LSS-Q13R	0.446	2.114	0.832
LSS-Q14R	0.515	2.229	1.003
LSS-Q15R	0.502	2.657	0.998
LSS-Q16R	0.382	2.486	0.951
LSS-Q17R	0.260	3.143	0.974
LSS-Q18R	0.372	1.800	0.901
LSS-Q19R	0.487	2.286	1.226
LSS-Q20R	0.376	2.629	1.262
LSS-Q21R	0.341	2.086	1.292
LSS-Q22R	0.316	1.457	1.197
LSS-Q23R	0.421	2.457	0.886
LSS-Q24R	0.223	3.029	0.954
LSS-Q25R	0.316	2.543	0.980
LSS-Q26R	0.398	2.857	0.879
LSS-Q27R	0.209	3.429	0.815

Frequentist Individual Item Reliability Statistics

Item	Item-rest correlation	mean	sd
SMS-28: Q1	0.266	4.886	1.549
SMS-28: Q2	0.208	4.686	1.430
SMS-28: Q3	0.043	2.743	1.837
SMS-28: Q4	0.430	4.114	1.676
SMS-28: Q5	0.063	2.371	1.734
SMS-28: Q6	0.398	3.771	2.030
SMS-28: Q7	0.358	4.257	1.686
SMS-28: Q8	0.476	5.171	1.855
SMS-28: Q9	0.429	3.286	2.177
SMS-28: Q10	0.463	3.343	1.731
SMS-28: Q11	0.439	5.057	1.731
SMS-28: Q12	0.396	5.086	1.401
SMS-28: Q13	0.280	5.143	1.768
SMS-28: Q14	0.488	4.057	1.984
SMS-28: Q15	0.208	4.886	1.549
SMS-28: Q16	0.630	3.029	2.135
SMS-28: Q17	0.422	5.057	1.862
SMS-28: Q18	0.226	4.429	2.004
SMS-28: Q19	0.275	2.514	1.991
SMS-28: Q20	0.470	4.429	2.033
SMS-28: Q21	0.441	3.171	2.022
SMS-28: Q22	0.238	3.114	2.139
SMS-28: Q23	0.423	4.086	2.035
SMS-28: Q24	0.470	4.114	2.111
SMS-28: Q25	0.298	4.371	1.896
SMS-28: Q26	0.548	3.400	2.061
SMS-28: Q27	0.382	3.829	1.807
SMS-28: Q28	0.234	3.029	1.839

Note. Tables show the reliability, item-rest correlation, mean, and standard deviation from both surveys used, the Revised Leadership Scale(RLSS) and Sport Motivation Scale(SMS-28).