

The correlates of coach leadership behavior and athlete competence motivation towards a sports mentoring program

Baoyuan Wu *

Graduate School, Adamson University, CO 1000, Manila, Philippines

* Corresponding author: Baoyuan Wu (Email: wubaoyuan666@163.com)

Abstract: This study assessed the factors associated with coach leadership behavior and athlete competence motivation, focusing specifically on Chengdu Sport University. The ultimate goal was to suggest a sports mentoring program based on the findings of the study. The respondents of the study were 152 student-athletes engaged in leisure sports and martial arts at Chengdu Sport University, encompassing disciplines such as sport climbing, ice hockey, judo, taekwondo, wushu routine, wushu sanda, martial art qigong, dragon and lion dance, cheer dance, and dance. Based on the conclusions derived in this study, the following are the recommendations: Sports organizations should prioritize diversity and inclusivity to accommodate all student athletes, regardless of age or gender. Emphasize diverse leadership styles, including training and teaching methods, and teach coaches to balance authoritarian and democratic systems. Coaches should aim for consistency and adaptability in their coaching methods to suit varying demands. Programs should focus on increasing competence motivation among student athletes, particularly in cognitive and social dimensions. Comprehensive athlete development programs should cater to both male and female athletes. Coaches should demonstrate leadership qualities, including good training, social support, and constructive criticism. Schools should develop a coach leadership development program to improve coaching effectiveness and overall well-being.

Keywords: Coach leadership behavior; Athlete competence motivation; Sports mentoring program.

1. Introduction

In the realm of sports, the interaction between coaches and athletes is vital, and how coaches manage and communicate with their athletes can have an impact on a variety of performance factors, including motivation (Davis, et al, 2019). An important part of a coach's job as a team leader is helping his players perform and succeed at their best. Therefore, a coach has to exhibit leadership traits to successfully help his athletes do such difficult tasks.

According to Gu, et al, 2023, the foundation of a successful coach-athlete relationship is mutual respect and trust. Athletes are more inclined to follow the coach's advice and tactics when they have faith in his or her knowledge and motivations. A sense of security fostered by trust is crucial for an athlete's drive. Athletes who have faith in their coach are more likely to be inspired to act on advice and put in the necessary effort to succeed.

Extensive study has examined the crucial connection between coach leadership conduct and athlete motivation for the past three decades. Numerous studies have shown that coach leadership behaviors and styles can significantly impact an athlete's motivation, which in turn affects a variety of athlete outcomes.

The researcher, who is also a physical education teacher and coach, will conduct an extensive analysis of a specific target population, the athletes of Chengdu Sport University in Sichuan Province, China, and their respective coaches, in order to deepen our understanding of how coach leadership behavior affects athlete performance motivation. The main goal of this study is to acquire crucial information that can act as a catalyst for highlighting the significant relationship between coach leadership behavior and athlete performance motivation in the context of collegiate sports.

By advancing coaching techniques and elevating athlete experiences, research on the relationships between coach leadership behavior and athlete competence motivation contributes to society. It offers information that coaches may use to modify their leadership approaches and better assist athletes in their growth and success. By providing insightful information on how leadership behaviors affect players' motivation and performance, the study also advances sports psychology. The results can be used to guide the creation of policies and programs, resulting in sports initiatives that put the welfare of athletes and long-term careers first. The study's conclusions can also be used outside of athletics, providing guidance on motivation and leadership in professional and academic contexts.

2. Statement of the Problem

The primary objective of this research was to examine the factors associated with coach leadership behavior and athlete competence motivation, focusing specifically on Chengdu Sport University. The ultimate goal was to suggest a sports mentoring program based on the findings of the study. The study addressed the following main concerns in order to design appropriate solutions:

1. What is the profile of the student athletes in terms of the following variables?

- 1.1. Age
- 1.2. Sex
- 1.3. Sports Category

2. What is the student athletes' assessment of their coaches' leadership behavior based on the following:

- 2.1. Training and Instruction
- 2.2. Democratic Decision Making
- 2.3. Autocratic Decision Making
- 2.4. Social Support

2.5. Positive Feedback

3. Is there a significant difference in the student athletes' assessment of their coaches' leadership behavior when their profiles are taken as test factors?

4. What is the student athletes' assessment of their competence motivation in terms of

4.1. Physical Domain

4.2. Cognitive Domain

4.3. Social Domain

5. Is there a significant difference in the student athletes' assessment of their competence motivation when their profiles are taken as test factors?

6. Is there a significant relationship between the coaches' leadership behavior and student athletes' competence motivation?

7. What program may be proposed based on the result of the study?

3. Hypotheses

The following null hypotheses were considered in this study:

Ho1. There is no significant difference in the assessment of student athletes of their coaches' leadership behavior when their profiles are taken as test factors.

Ho2. There is no significant difference in the assessment of student athletes of their competence motivation when their profiles are taken as test factors.

Ho3. There is no significant relationship between the coaches' leadership behavior and the athletes' competence motivation.

4. METHODOLOGY

4.1. Research Design

The research design for this study was descriptive and comparative-correlational. The correlational study aimed to uncover relationships between variables and forecast future events using existing data. This study specifically investigated the relationship between coach leadership behavior and athlete competence motivation using two different assessment instruments. The questionnaire results were analyzed using quantitative survey techniques, ensuring a thorough inquiry into the relevant link between the research variables.

4.2. Research Locale

Chengdu Sport University is a prominent sports institution situated in the southwestern part of Chengdu's downtown district, within Sichuan Province, China. This university is under the joint administration of the State General Administration of Sports at the national level and the provincial government of Sichuan. The Hang Kong Gang Campus is conveniently located at a distance of approximately 1 kilometer (0.62 miles) from Chengdu Shuangliu International Airport.

Chengdu Sport University was originally established in 1942 and subsequently underwent several transformations. In 1953, it evolved into the Southwest Institute of Sports, and in 1956, it adopted the name Chengdu Sports University. It holds a prestigious status as one of the most renowned institutions for kinesiology studies in southwest China and ranks among the top five institutions of its kind nationally. The university has earned acclaim for its excellence in various sports disciplines, including gymnastics, martial arts, and

weightlifting. Additionally, it is widely recognized as an authoritative institution in the fields of sports medicine and the application of Traditional Chinese Medicine for preventing, treating, and aiding recovery from sports-related injuries and fatigue.

4.3. Research Instrument

This study's questionnaires have been carefully selected to examine both coach leadership behavior and athlete competence motivation. Their reliability and validity are unquestionable because they are closely comparable to previously employed instruments in research investigations.

The first component of the questionnaires evaluates athletes' perceptions of coach leadership behavior. This assessment is based on specific constructs from the Leadership Scale for Sport (LSS) tool, such as training and instruction, democratic decision-making, autocratic decision-making, social support, and positive feedback. The LSS has a well-documented history of use in a variety of scenarios to assess leadership in sports and its relationship to other variables. Chelladurai and Saleh in 1980 created the LSS to address specific issues related with measuring leadership in the sporting setting.

The second section of the questionnaire is designed to assess student-athletes' competency and motivation. This assessment is based on Susan Harter's theory, which was originally known as the Effectance Motivation Theory but is now more frequently known as the Competence Motivation Theory. Susan Harter's theory introduces the idea that an individual's motivation for competence might vary depending on the specific achievement areas in which they are involved. These dimensions are divided into three categories in this context: physical, cognitive, and social.

5. RESULTS AND DISCUSSIONS

In this section, the methodology of data collection is detailed, along with the subsequent findings and the researcher's analysis, all in accordance with the initially identified problem statement. The narrative extends to include a comprehensive explanation of the deductions and interpretations made by the researcher, incorporating factual evidence as well as insights derived from personal experiences.

1. The demographic makeup of the student athlete respondents in terms of age, sex and sports category.

Table 1 Frequency Distribution of the Student Athlete Respondents' Profile

Profile	Frequency	Percentage
Age		
18-20 years old	74	48.7%
21-23 years old	78	51.3%
Total	152	100%
Sex		
Male	90	59.2%
Female	62	40.8%
Total	152	100%
Sports Area		
Sport Climbing	15	9.9%
Ice Hockey	17	11.2%
Judo	15	9.9%
Wushu Routine	16	10.5%
Wushu Sanda	15	9.9%
Martial Art Qigong	8	5.3%
Dragon and Lion Dance	28	18.4%
Cheer Dance	18	11.8%
Dance Sport	20	13.2%
Total	152	100%

The findings show that male student athletes compose 59.2% of the number of participants. Furthermore, the majority of responders (51.3%) are between the ages of 21 and 23 years old. Notably, Dragon and Lion Dance have the highest presence in various sports area, with a total of 18.4% of all

participants.

2.The student athlete respondents' assessment of the leadership behavior of their coaches in terms of training and instruction, democratic decision making, autocratic decision making, social support and positive feedback

Table 2 Student Athlete Respondents' Assessment of their Coaches' Leadership Behavior in Terms of Training and Instruction

Training and Instruction	Mean	SD	Qualitative Description	Interpretation	Ranking
Our coach explains to us the techniques and tactics of the sport.	3.30	0.85	Agree	Highly Manifested	2
Our coach pays special attention to correcting our mistakes.	3.05	0.98	Agree	Highly Manifested	4
Our coach gives specific instructions to each of us as to what we should do in every situation.	3.26	0.87	Agree	Highly Manifested	1
Our coach explains how each of our contribution fits into the whole picture.	2.95	0.97	Agree	Highly Manifested	5
Our coach considers training as part of our strategy.	3.15	0.87	Agree	Highly Manifested	3
Composite Mean	3.14	0.72	Agree	Highly Manifested	

Legend: 3.51-4.00 Strongly Agree/Very Highly Manifested; 2.51-3.50 Agree/Highly Manifested; 1.51-2.50 Disagree/Lowly Manifested; 1.00-1.50 Strongly Disagree/Very Lowly Manifested

Student athlete respondents agree that their coaches give specific instructions to each of them as to what they should do in every situation and this was given the highest assessment of 3.26 interpreted as highly manifested. Likewise, they also agree that their coaches explain how each of their contribution fits into the whole picture, however, it was given the lowest assessment of 2.95 also interpreted as highly manifested. The result indicates that coaches' leadership behavior in terms of training and instruction was highly manifested among them based on the assessment of the student athlete respondents.

A composite mean value of 3.14 shows that training and instruction was highly manifested among the coaches based on the assessment of the student athlete respondents.

The research reveals that, while coaches excel at delivering clear instructions, there is room for improvement in supporting players' comprehension of their duties on the team. By targeting these areas for growth, coaches may increase their overall leadership effectiveness and promote the development of well-rounded student athletes.

According to Yenen et al. (2023), the results revealed that the coaches in this study had effective leadership behaviors, with training and teaching being the most perceived leader conduct, followed by democratic behavior, positive feedback, social support, and autocratic behavior. Training and teaching covered coaches' abilities to improve athletes' performance in terms of skills, methods, and strategies. As a result, the young athletes in this research found their coaches to be effective in teaching them the necessary skills, methods, and strategies. This outcome also verified that the young athletes recognized their coaches' successful role in assisting them in establishing good team connections.

Table 3 Student Athlete Respondents' Assessment of their Coaches' Leadership Behavior in Terms of Democratic Decision Making

Democratic Decision Making	Mean	SD	Qualitative Description	Interpretation	Ranking
Our coach asks for our opinion on strategies for specific competitions.	3.22	0.94	Agree	Highly Manifested	1
Our coach encourages us to make suggestions for ways of conducting our practices.	2.99	0.95	Agree	Highly Manifested	4
Our coach lets us share in decision making.	3.20	0.95	Agree	Highly Manifested	2
Our coach asks for our opinion on important coaching matters.	2.90	0.99	Agree	Highly Manifested	5
Our coach makes us feel more engaged in planning for the team.	3.11	0.97	Agree	Highly Manifested	3
Composite Mean	3.08	0.73	Agree	Highly Manifested	

Legend: 3.51-4.00 Strongly Agree/Very Highly Manifested; 2.51-3.50 Agree/Highly Manifested; 1.51-2.50 Disagree/Lowly Manifested; 1.00-1.50 Strongly Disagree/Very Lowly Manifested

Student athlete respondents agree that their coaches ask for their opinion on strategies for specific competitions and this was given the highest assessment of 3.22 interpreted as highly manifested. Likewise, they also agree that their coaches ask for their opinion on important coaching matters, however, it was given the lowest assessment of 2.90 also interpreted as highly manifested. The result indicates that coaches' leadership behavior in terms of democratic decision making was highly manifested among them based on the assessment of the student athlete respondents.

A composite mean value of 3.08 shows that democratic decision making was highly manifested among the coaches

based on the assessment of the student athlete respondents.

The data suggest that coaches show a commitment to democratic decision-making by gathering athlete feedback on competitive strategies. Coaches tend to favor incorporating players in decision-making processes, albeit to varying extents depending on the circumstance. However, there may be opportunity for greater athlete engagement in larger coaching topics in order to foster a culture of inclusion and collaboration within the team.

The researchers observed that implementing a democratic coaching style improved the quality of interactions between coaches and athletes. This leadership style also has an indirect influence on players' self-motivation and contentment. Furthermore, it means that coaches that use democratic practices foster trust and respect among their players Hao et al. (2023).

Table 4 Student Athlete Respondents' Assessment of their Coaches' Leadership Behavior in Terms of Autocratic Decision Making

Autocratic Decision Making	Mean	SD	Qualitative Description	Interpretation	Ranking
Our coach does not explain his action plans.	3.26	0.84	Agree	Highly Manifested	1
Our coach refuses to compromise a point.	3.02	0.89	Agree	Highly Manifested	4
Our coach works relatively independent of us athletes.	3.23	0.84	Agree	Highly Manifested	2
Our coach speaks in a manner not to be questioned.	2.92	0.87	Agree	Highly Manifested	5
Our coach decides on his own.	3.12	0.81	Agree	Highly Manifested	3
Composite Mean	3.11	0.62	Agree	Highly Manifested	

Legend: 3.51-4.00 Strongly Agree/Very Highly Manifested; 2.51-3.50 Agree/Highly Manifested; 1.51-2.50 Disagree/Lowly Manifested; 1.00-1.50 Strongly Disagree/Very Lowly Manifested

Student athlete respondents agree that their coaches do not explain their action plans and this was given the highest assessment of 3.22 interpreted as highly manifested. Likewise, they also agree that their coaches speak in a manner not to be questioned, however, it was given the lowest assessment of 2.92 also interpreted as highly manifested. The result indicates that coaches' leadership behavior in terms of autocratic decision making was highly manifested among

them based on the assessment of the student athlete respondents.

A composite mean value of 3.11 shows that democratic decision making was highly manifested among the coaches based on the assessment of the student athlete respondents.

González-García et al. (2020) studied young athletes in team and individual sports and found a link between autocratic patterns and negative emotional responses to sports participation. Furthermore, they found a relationship between autocratic behavior, training methods, positive reinforcement, and social support, as well as emotions related to satisfaction and seeking help, in a study of adult athletes from various sports.

Table 5 Student Athlete Respondents' Assessment of their Coaches' Leadership Behavior in Terms of Social Support

Social Support	Mean	SD	Qualitative Description	Interpretation	Ranking
Our coach helps us with our personal problems.	3.26	0.84	Agree	Highly Manifested	1
Our coach helps us settle our internal conflicts in the team.	3.01	0.97	Agree	Highly Manifested	4
Our coach looks out for our personal welfare.	3.21	0.85	Agree	Highly Manifested	2
Our coach encourages close and informal relations among us.	2.91	1.02	Agree	Highly Manifested	5
Our coach is like a friend to us.	3.11	0.97	Agree	Highly Manifested	3
Composite Mean	3.10	0.72	Agree	Highly Manifested	

Legend: 3.51-4.00 Strongly Agree/Very Highly Manifested; 2.51-3.50 Agree/Highly Manifested; 1.51-2.50 Disagree/Lowly Manifested; 1.00-1.50 Strongly Disagree/Very Lowly Manifested

Student athlete respondents agree that their coaches help them with their personal problems and this was given the highest assessment of 3.26 interpreted as highly manifested. Likewise, they also agree that their coaches encourage close and informal relations among them, however, it was given the lowest assessment of 2.91 also interpreted as highly manifested. The result indicates that coaches' leadership behavior in terms of social support was highly manifested among them based on the assessment of the student athlete respondents.

A composite mean value of 3.10 shows that social support was highly manifested among the coaches based on the assessment of the student athlete respondents.

The notion of coaches as providers of personal and social support among student athletes emphasizes the need of developing healthy coach-athlete relationships in the sports arena. Stakeholders can help players develop and succeed both on and off the field by recognizing and supporting coaches' supportive roles. Coaches act as mentors and trusted advisors, providing direction and support not just for sports endeavors but also for personal growth.

In Simons and Bird's (2022) study, they found a significant beneficial correlation between the coach-athlete relationship, social support, and sport-related well-being among players from various sports. Interestingly, no apparent shifts in outcome variables were found between different forms of sports. These findings highlight the critical role of coaches and other supporting people in impacting student-athletes' well-being in the athletic setting.

Table 6 Student Athlete Respondents' Assessment of their Coaches' Leadership Behavior in Terms of Positive Feedback

Positive Feedback	Mean	SD	Qualitative Description	Interpretation	Ranking
Our coach compliments us for a good performance in front of others.	3.10	0.89	Agree	Highly Manifested	1
Our coach gives credit when credit is due.	2.96	0.86	Agree	Highly Manifested	4
Our coach sees to it that we are rewarded for a good performance.	3.09	0.89	Agree	Highly Manifested	2
Our coach expresses appreciation when we perform well.	2.90	0.94	Agree	Highly Manifested	5
Our coach always boosts our confidence.	3.03	0.87	Agree	Highly Manifested	3
Composite Mean	3.02	0.68	Agree	Highly Manifested	

Legend: 3.51-4.00 Strongly Agree/Very Highly Manifested; 2.51-3.50 Agree/Highly Manifested; 1.51-2.50 Disagree/Lowly Manifested; 1.00-1.50 Strongly Disagree/Very Lowly Manifested

Student athlete respondents agree that their coaches compliment them for a good performance in front of others and this was given the highest assessment of 3.10 interpreted as highly manifested. Likewise, they also agree that their coaches' express appreciation when they perform well, however, it was given the lowest assessment of 2.90 also interpreted as highly manifested. The result indicates that coaches' leadership behavior in terms of positive feedback was highly manifested among them based on the assessment of the student athlete respondents.

A composite mean value of 3.02 shows that positive feedback was highly manifested among the coaches based on the assessment of the student athlete respondents.

Based on the results of the study of Garcia-Herrero et al. (2022), elite female handball players, low satisfaction with the coach and comparative positive feedback generate significant changes in the value given to the task, autonomous motivation, and throwing speed. In contrast, positive feedback did not affect psychological and performance variables in athletes who showed high satisfaction with their coach. Also, without considering the level of satisfaction with the coach, positive feedback generates a player's greater perception of competence than negative feedback. Furthermore, regardless of a player's contentment with the coach, positive feedback tends to improve a player's viewpoint of competence more than negative feedback. This shows that positive reinforcement is critical in improving athletes' self-perception of their talents, regardless of their satisfaction with coaching.

Table 7 Summary of the Student Athlete Respondents' Assessment of their Coaches' Leadership Behavior

Leadership Behavior	Mean	SD	Qualitative Description	Interpretation	Ranking
Training and Instruction	3.14	0.72	Agree	Highly Manifested	1
Democratic Decision Making	3.08	0.73	Agree	Highly Manifested	4
Autocratic Decision Making	3.11	0.62	Agree	Highly Manifested	2
Social Support	3.10	0.72	Agree	Highly Manifested	3
Positive Feedback	3.02	0.68	Agree	Highly Manifested	5
Over-all Mean	3.09	0.46	Agree	Highly Manifested	

Legend: 3.51-4.00 Strongly Agree/Very Highly Manifested; 2.51-3.50 Agree/Highly Manifested; 1.51-2.50

Disagree/Lowly Manifested; 1.00-1.50 Strongly Disagree/Very Lowly Manifested

The result shows that the most highly manifested leadership behavior of coaches was on training and instruction as this ranked first among the five indicators. Second in rank was on autocratic decision making, third on social support, and fourth on democratic decision making. While positive feedback was also highly manifested, it was given the lowest assessments by the athlete respondents. The over-all results indicate that leadership behavior of coaches was highly manifested as observed by the student athlete respondents.

Overall, the results indicate that student athletes view coaches' leadership behaviors to be highly manifested, implying a continuous and evident presence of leadership traits in coaching activities.

These findings have broad implications for coaching techniques and athlete development. Coaches may utilize these insights to reflect on their leadership actions and make changes that better correspond with athletes' preferences and

requirements. Prioritizing clear and effective communication, providing technical and emotional support, and incorporating players in decision-making processes as needed may all help to create a more positive and supportive coaching environment.

Yu (2023) found several significant correlations between coaches' leadership behaviors, psychological factors and athletic performance. Beginning with, authoritarian leadership behavior, democratic leadership behavior, training guidance behavior, social support behavior, and positive feedback conduct have all been shown to have a substantial favorable influence on athletic performance. This shows that different coaching techniques and supporting actions improve athletes' overall performance. By recognizing and resolving these linkages, coaches may create conditions that enhance athletes' emotional and physical well-being, resulting in better performance on the athletic field.

3. The significant difference in the athlete respondents' assessments of their coaches' leadership behavior when their profiles are taken as test factors

Table 8 Differences in the Assessment of Student Athlete Respondents of their Coaches' Leadership Behavior when their Sex is Taken as Test Factor

Coaches' Leadership Behavior	Sex	Mean	SD	Computed t-value	Sig	Decision on Ho	Interpretation
Training & Instruction	Male	3.16	0.72	0.32	0.75	Accepted	Not Significant
	Female	3.12	0.72				
Democratic Decision Making	Male	3.08	0.78	-0.18	0.86	Accepted	Not Significant
	Female	3.10	0.67				
Autocratic Decision Making	Male	3.17	0.63	1.35	0.18	Accepted	Not Significant
	Female	3.03	0.59				
Social Support	Male	3.11	0.73	0.25	0.81	Accepted	Not Significant
	Female	3.08	0.72				
Positive Feedback	Male	3.00	0.64	-0.47	0.64	Accepted	Not Significant
	Female	3.05	0.73				
Over-all	Male	3.10	0.48	0.34	0.74	Accepted	Not Significant
	Female	3.08	0.45				

The findings demonstrate that male and female student athlete respondents have similar assessments of their coaches' leadership conduct in terms of training and instruction, democratic decision making, autocratic decision making, social support, and positive feedback. This implies that gender has no substantial effect on how student athletes perceive their coaches' leadership actions. Male and female athletes grade their coaches similarly across several qualities of leadership, demonstrating a level of equality in their perspectives. In conclusion, the study's findings show a degree of consistency in how male and female student athletes evaluate their coaches' leadership characteristics. This emphasizes the need of fair coaching techniques and is a great

step toward creating inclusive and supportive athletic different cultures.

The study of Kim and Cruz (2022) show that coaches' transformational leadership has a large and favorable impact on player satisfaction and commitment. Notably, these impacts are stronger among female gamers than male players. Furthermore, all leadership traits tested in the study exhibited bigger effect sizes in women than in males. Intellectual stimulation and charismatic leadership were very important for satisfaction, whereas individual consideration and charismatic leadership were remarkable for commitment among female players.

Table 9 Differences in the Assessment of Student Athlete Respondents of their Coaches' Leadership Behavior when their Age is Taken as Test Factor

Coaches' Leadership Behavior	Age	Mean	SD	Computed t-value	Sig	Decision on Ho	Interpretation
Training & Instruction	18-20 y/o	3.17	0.70	0.43	0.67	Accepted	Not Significant
	21-23 y/o	3.12	0.74				
Democratic Decision Making	18-20 y/o	3.05	0.70	-0.49	0.62	Accepted	Not Significant
	21-23 y/o	3.11	0.77				
Autocratic Decision Making	18-20 y/o	3.23	0.58	2.29	0.23	Accepted	Not Significant
	21-23 y/o	3.20	0.64				
Social Support	18-20 y/o	3.08	0.76	-0.33	0.74	Accepted	Not Significant
	21-23 y/o	3.12	0.69				
Positive Feedback	18-20 y/o	3.08	0.60	1.05	0.30	Accepted	Not Significant
	21-23 y/o	2.96	0.74				
Over-all	18-20 y/o	3.12	0.45	0.78	0.44	Accepted	Not Significant
	21-23 y/o	3.06	0.48				

The result shows that student athlete respondents have relatively the same assessment on the leadership behavior of their coaches in terms of training and instruction, democratic decision making, autocratic decision making, social support, and positive feedback regardless of their age.

The comparable scores across age groups suggest that coaching techniques have a constant influence on athlete experience, regardless of age. This shows that athletes perceive and respond to coaching activities in a same way, regardless of developmental stage. The findings indicate that, regardless of age, student athletes view their coaches' leadership activities in comparable ways across several dimensions. This emphasizes the necessity of consistency and efficacy in coaching methods, as well as the possible impact of coaching behaviors on athlete experience and growth.

Conflicting results about how age affects athletes' views of leadership behaviors were found in the literature by Yenen et al. (2023). Nevertheless, the results of their study indicated that athletes' judgments of these actions are not greatly impacted by age. It's interesting to note that, when it comes to the sport, team sports players had more favorable opinions of their coaches' methods of education and training than did solo athletes. The scientific comprehension of pertinent literature in this topic is anticipated to be further advanced by this innovative result.

The result shows that student athlete respondents have relatively the same assessment on the leadership behavior of their coaches in terms of training and instruction, democratic decision making, autocratic decision making, social support, and positive feedback regardless of the sports category they belong.

The consistent assessments of coaching behavior across sports categories may indicate the effectiveness of coaches in meeting the needs and expectations of athletes from diverse sporting backgrounds. Coaches who exhibit consistent leadership behaviors may be better equipped to support athletes in achieving their goals, regardless of the sport they

play.

Consequently, Kao et al. (2015) emphasize how athletic directors affect player satisfaction by influencing coaches' actions. Athlete satisfaction may increase if athletic directors take the initiative and hold coaches responsible for upholding excellent coaching standards. Essentially, players are more likely to feel satisfied when their coaches are expected or pushed by their superiors to perform pro-actively.

4. The athlete respondents' assessment of their competence motivation in terms of physical domain, cognitive domain, and social domain.

Student athlete respondents agree that they excel in activities having physical contexts and this was given the highest assessment of 3.20 interpreted as highly manifested. Likewise, they also agree that they enjoy participating in activities with higher frequency and intensity of physical activity levels, however, it was given the lowest assessment of 2.89 also interpreted as highly manifested. The result indicates that student athletes' competence motivation in terms of physical domain was highly manifested among them based on their own assessment.

The results indicate that while student athletes show a high feeling of drive and skill in the physical domain, their satisfaction of physical activities may differ based on parameters like frequency and intensity.

Children frequently favor activities in which they think they excel and steer clear of those they find difficult. As a result, a soccer player may view their desire to play the game as a sign that they are competent at soccer, while a baseball player may read their lack of interest in the sport as a sign that they are not. According to Arthur Kramer (2013), elite athletes with Olympic medals in sports like volleyball have a distinct advantage in their chosen sport as well as in their capacity to process and react to new information quickly. These mental skills are essential both on and off the field of play.

Table 10 Differences in the Assessment of Student Athlete Respondents of their Coaches' Leadership Behavior when their Sports Category is Taken as Test Factor

Leadership Behavior	Sports Category	Mean	SD	Computed F-value	Sig	Decision on Ho	Interpretation
Training and Instruction	Sport Climbing	3.45	0.49	1.58	0.14	Accepted	Not Significant
	Ice Hockey	3.22	0.67				
	Judo	2.73	0.90				
	Wushu Routine	3.40	0.44				
	Wushu Sanda	3.16	0.70				
	Martial Art Qigong	3.25	0.61				
	Dragon and Lion Dance	3.19	0.74				
	Cheer Dance	2.94	0.75				
	Dance Sport	3.02	0.81				
Democratic Decision Making	Sport Climbing	3.08	0.77	0.53	0.83	Accepted	Not Significant
	Ice Hockey	2.99	0.71				
	Judo	2.83	0.74				
	Wushu Routine	3.33	0.48				
	Wushu Sanda	3.01	0.78				
	Martial Art Qigong	3.18	0.81				
	Dragon and Lion Dance	3.15	0.76				
	Cheer Dance	3.10	0.86				
	Dance Sport	3.08	0.74				
Autocratic Decision Making	Sport Climbing	3.32	0.46	0.82	0.59	Accepted	Not Significant
	Ice Hockey	3.00	0.66				
	Judo	2.92	0.76				
	Wushu Routine	2.99	0.73				
	Wushu Sanda	3.25	0.56				
	Martial Art Qigong	3.18	0.63				
	Dragon and Lion Dance	3.22	0.60				
	Cheer Dance	3.10	0.50				
	Dance Sport	3.01	0.66				
Social Support	Sport Climbing	3.21	0.58	0.65	0.74	Accepted	Not Significant
	Ice Hockey	3.13	0.84				
	Judo	3.01	0.61				
	Wushu Routine	3.08	0.72				
	Wushu Sanda	2.95	1.03				
	Martial Art Qigong	3.38	0.65				
	Dragon and Lion Dance	3.03	0.71				
	Cheer Dance	2.96	0.63				
	Dance Sport	3.32	0.71				
Positive Feedback	Sport Climbing	3.05	0.63	1.08	0.38	Accepted	Not Significant
	Ice Hockey	3.16	0.54				
	Judo	3.04	0.59				
	Wushu Routine	3.00	0.69				
	Wushu Sanda	2.56	0.75				
	Martial Art Qigong	3.13	0.72				
	Dragon and Lion Dance	3.11	0.67				
	Cheer Dance	3.06	0.61				
	Dance Sport	2.99	0.82				
Over-all	Sport Climbing	3.22	0.40	0.73	0.67	Accepted	Not Significant
	Ice Hockey	3.10	0.49				
	Judo	3.91	0.47				
	Wushu Routine	3.16	0.36				
	Wushu Sanda	2.99	0.56				
	Martial Art Qigong	3.22	0.48				
	Dragon and Lion Dance	3.14	0.45				
	Cheer Dance	3.03	0.34				
	Dance Sport	3.08	0.60				

Student athlete respondents agree that they appreciate feedback for simple task accomplishments and this was given the highest assessment of 3.30 interpreted as highly manifested. Likewise, they also agree that they always think of ways to improve their performance, however, it was given the lowest assessment of 2.97 also interpreted as highly manifested. The result indicates that student athletes' competence motivation in terms of cognitive domain was highly manifested among them based on their own assessment.

Overall, the results point to a profound sense of competence motivation in the cognitive domain among student athletes, which is supported by their desire to

participate in cognitively demanding activities and their appreciation of feedback. When it comes to continuously looking for methods to improve their performance through proactive reflection and self-development initiatives, there can be space for improvement.

According to Harter, people are driven to succeed in a variety of endeavors, such as academics, athletics, and interpersonal relationships. A sense of mastery in various fields inspires young individuals, who are especially motivated by this incentive. They are thus inspired to put out more effort in their pursuit of skill development and competency enhancement as a result of perceived mastery

(Ackerman, 2023).

Table 11 Student Athlete Respondents' Assessment of their Competence Motivation in Terms Physical Domain

Physical Domain	Mean	SD	Qualitative Description	Interpretation	Ranking
I excel in activities having physical contexts (e.g., physical education and sports).	3.20	0.88	Agree	Highly Manifested	1
have positive affective reactions when I engage in physical activities (e.g., pleasure, satisfaction, enjoyment).	2.99	0.91	Agree	Highly Manifested	4
I exhibit higher levels of effort, persistence, and preference for more challenging tasks.	3.15	0.84	Agree	Highly Manifested	2
I enjoy participating in activities with higher frequency and intensity of physical activity levels.	2.89	0.91	Agree	Highly Manifested	5
I have high motivation to be physically active.	3.07	0.90	Agree	Highly Manifested	3
Composite Mean	3.06	0.65	Agree	Highly Manifested	

Legend: 3.51-4.00 Strongly Agree/Very Highly Manifested; 2.51-3.50 Agree/Highly Manifested; 1.51-2.50 Disagree/Lowly Manifested; 1.00-1.50 Strongly Disagree/Very Lowly Manifested

Table 12 Student Athlete Respondents' Assessment of their Competence Motivation in Terms Cognitive Domain

Cognitive Domain	Mean	SD	Qualitative Description	Interpretation	Ranking
I appreciate feedback for simple task accomplishments.	3.30	0.84	Agree	Highly Manifested	1
I always think of the achievement of self-set goals.	3.08	0.90	Agree	Highly Manifested	4
I reflect on my coaches' evaluation of my performance.	3.28	0.80	Agree	Highly Manifested	2
I always think of ways to improve my performance.	2.97	0.97	Agree	Highly Manifested	5
I welcome constructive criticisms.	3.18	0.88	Agree	Highly Manifested	3
Composite Mean	3.16	0.67	Agree	Highly Manifested	

Legend: 3.51-4.00 Strongly Agree/Very Highly Manifested; 2.51-3.50 Agree/Highly Manifested; 1.51-2.50 Disagree/Lowly Manifested; 1.00-1.50 Strongly Disagree/Very Lowly Manifested

6. Conclusion

The researcher came to the following conclusions based on the study's stated findings.

1.The findings show that male student athletes made up the majority of respondents, making up 59.2% of the total number of participants, with a significant number of them falling between the ages of 21 and 23. Notably, Dragon and Lion Dance appeared as the most popular sports category.

2.The study discovered that coaches' leadership style was most prominent in training and teaching, followed by authoritarian decision-making, social support, and democratic decision-making. Positive comments had lower ratings from athlete responses but was still widely expressed overall. These findings indicate that student athletes regard coaches' leadership activities as continuously present and prominent. Overall, the findings show the significant and long-term presence of leadership attributes in coaching activities as viewed by student athletes.

3.The general assessment of coaching behavior across multiple sports categories may indicate coaches' success in meeting the requirements and expectations of players from diverse athletic backgrounds. This shows that coaching approaches stressing consistency and adaptation may help players in other sports achieve greater success and satisfaction.

4.The data indicate that student athletes have the highest levels of competence motivation in the cognitive domain,

followed by the social area, with the physical domain coming last. Despite variances between areas, student athletes are seen to have a high level of competence motivation. This demonstrates a strong internal drive and determination among student athletes, notably in cognitive and social areas, which contributes to their total competency motivation.

5.The data show that student athletes report comparable levels of competence motivation across physical, cognitive, and social dimensions, independent of their sport, age, or gender. This shows that athletes from all backgrounds have similar levels of motivation in important areas of sports performance and engagement. As a result, sports organizations and educational institutions are encouraged to create athlete development programs that address the holistic needs of both male and female athletes, emphasizing competence motivation in physical, cognitive, and social areas to promote overall athletic development and success.

6.The study found that coaches' leadership behaviors, such as training and instruction, democratic decision-making, and social support, had a fairly beneficial correlation with student athletes' competence motivation across physical, cognitive, and social domains. Autocratic decision-making also improves competence motivation in the physical and social domains, but to a lesser extent in the cognitive area. Positive feedback corresponds strongly with competence motivation in the physical and cognitive domains, but it has a lesser relationship with the social domain. Overall, coaches' leadership behaviors have a significant effect on student athletes' competency motivation across various domains.

7. Investing in coach development through a Sports Mentoring Program is fundamental for nurturing effective leadership within sports organizations. By enhancing coaches'

leadership skills, competence motivation, and mentoring abilities through this initiative, the program aims to raise the bar for coaching quality. Through the Sports Mentoring Program, experienced coaches serve as mentors to less experienced counterparts, providing guidance and support. This integrated approach is designed to drive improvements in athlete performance, development, and overall organizational success.

7. Recommendations

The following recommendations are based on the findings of this study:

1. Sports organizations should prioritize diversity and inclusivity to accommodate the needs of all student athletes, regardless of age or gender. Furthermore, programs should acknowledge and promote sports categories like Dragon and Lion Dance, which have proved prominent among participants.

2. Emphasize diverse leadership styles, particularly focusing on training and teaching methods. Coaches should also be taught to take a balanced approach to decision-making, using parts of both authoritarian and democratic systems.

3. Coaches should aim for consistency and adaptability in their coaching methods in order to suit the varying demands of players throughout sports categories. Coaches may assist athletes from all backgrounds achieve success and pleasure by having a continuous presence and displaying adaptable leadership qualities.

4. Programs and interventions should focus on increasing competence motivation among student athletes, particularly in the cognitive and social dimensions. Strategies could involve offering chances for skill development, creating a supportive team environment, and supporting self-improvement efforts.

5. Sports organizations and educational institutions must establish comprehensive athlete development programs that meet the multifaceted nature of competency motivation. These programs should focus on competency motivation in the physical, cognitive, and social domains, catering to the demands of both male and female athletes.

6. Coaches should be encouraged to demonstrate leadership qualities that improve student athletes' competency and motivation across several areas. This includes offering good training and teaching, giving social support, and providing constructive criticism. Coaches should be given with ongoing professional development opportunities to help them improve their leadership abilities and effectiveness.

7. Considering the link between coaches' leadership behaviors and student athletes' competence motivation, schools should ought to develop a coach leadership development program, which allows sports organizations to create a supportive coaching environment that promotes athlete motivation and success. Outcomes may assist coaches improve their coaching effectiveness and leadership abilities, as well as have a beneficial influence on athlete performance, satisfaction, and overall well-being.

References

- [1] Ackerman, C. E., MA. (2023). What is Self-Efficacy Theory? (Incl. 8 examples & scales). PositivePsychology.com. <https://positivepsychology.com/self-efficacy/>.
- [2] Almagro BJ, Sáenz-López P, Fierro-Suero S, Conde C. Perceived Performance, Intrinsic Motivation and Adherence in Athletes. *Int J Environ Res Public Health*. 2020 Dec 16;17(24):9441. doi: 10.3390/ijerph17249441. PMID: 33339278; PMCID: PMC7767293.
- [3] Carmichael, A. (2019). DEVELOPING THE CASE FOR PRO-ENVIRONMENTAL PRACTICES IN COMMUNITY-BASED ASSOCIATION FOOTBALL IN ENGLAND a. . . ResearchGate. <https://www.researchgate.net/publication/357769664>.
- [4] Cheung SY and Ng KY (2021) Application of the Educational Game to Enhance Student Learning. *Front. Educ.* 6:623793. doi: 10.3389/educ.2021.623793.
- [5] Corti, J. F., Raimundi, M. J., Celsi, I., Alvarez, O., & Castillo, I. (2023). The Moderating Effect of Athletes' Personal Values on the Relationship between Coaches' Leadership Behaviors and the Personal and Social Skills of Young Basketball Players. *Sustainability*, 15(5), 4554. MDPI AG. Retrieved from <http://dx.doi.org/10.3390/su15054554>.
- [6] Cotterill ST, Loughhead TM and Fransen K (2022) Athlete Leadership Development Within Teams: Current Understanding and Future Directions. *Front. Psychol.* 13:820745. doi: 10.3389/fpsyg.2022.820745.
- [7] Cotterill ST, Loughhead TM and Fransen K (2022) Athlete Leadership Development Within Teams: Current Understanding and Future Directions. *Front. Psychol.* 13:820745. doi: 10.3389/fpsyg.2022.820745.
- [8] Cowan N. Working Memory Underpins Cognitive Development, Learning, and Education. *Educ Psychol Rev.* 2014 Jun 1;26(2):197-223. doi: 10.1007/s10648-013-9246-y. PMID: 25346585; PMCID: PMC4207727.
- [9] Crozier, A.J., Loughhead, T.M., & Munroe-Chandler, K.J. (2013). Examining the benefits of athlete leaders in sport. *Journal of Sport Behavior*, 36 (4), 346-364.
- [10] Davis L, Jowett S and Tafvelin S (2019) Communication Strategies: The Fuel for Quality Coach-Athlete Relationships and Athlete Satisfaction. *Front. Psychol.* 10:2156. doi: 10.3389/fpsyg.2019.02156.
- [11] Davis L, Jowett S and Tafvelin S (2019) Communication Strategies: The Fuel for Quality Coach-Athlete Relationships and Athlete Satisfaction. *Front. Psychol.* 10:2156. doi: 10.3389/fpsyg.2019.02156.
- [12] Ellemers, N., van der Toorn, J., Paunov, Y., & van Leeuwen, T. (2019). The Psychology of Morality: A Review and Analysis of Empirical Studies Published From 1940 Through 2017. *Personality and Social Psychology Review*, 23(4), 332–366. <https://doi.org/10.1177/1088868318811759>.
- [13] Gu S, Peng W, Du F, Fang X, Guan Z, He X, Jiang X (2023). Association between coach-athlete relationship and athlete engagement in Chinese team sports: The mediating effect of thriving. *PLoS One*. 2023 Aug 17;18(8):e0289979. doi: 10.1371/journal.pone.0289979. PMID: 37590239; PMCID: PMC10434943.
- [14] Hampson, R., & Jowett, S. (2014). Effects of coach leadership and coach-athlete collective efficacy. *Scandinavian Journal of Medicine & Science Sports*, 24 (2), 454-460.
- [15] Harvard Business Review. Online. 6 Characteristics of an Effective Leader. (2018, October 4). Business Insights Blog. <https://online.hbs.edu/blog/post/characteristics-of-an-effective-leader>.
- [16] Hiemstra, D., Van Yperen, N. W., & Timmerman, M. E. (2019). Students' effort allocation to their perceived strengths and weaknesses: The moderating effect of instructional strategy. *Learning and Instruction*, 60, 180–190. doi:10.1016/j.learninstruc.2018.01.003 [Crossref], [Web of Science ®].
- [17] Hong, H. J., & Fraser, I. (2021). 'My Sport Won't Pay the Bills Forever': High-Performance Athletes' Need for Financial

- Literacy and Self-Management. *Journal of Risk and Financial Management*, 14(7), 324. MDPI AG. Retrieved from <http://dx.doi.org/10.3390/jrfm14070324>.
- [18] Ivashchenko, O., Yarmak, O., Yaroslav, G., Nakonechnyi, I., & Zoriv, Y. (2017). Leadership as a fundamental aspect of the performance of student-athletes in university men's sports teams. *Journal of Physical Education and Sport*, 2, 472- 480.
- [19] Jhangiani, R. (2022, January 26). 3.3 The Social Self: The Role of the Social Situation. Pressbooks. <https://opentextbc.ca/socialpsychology/chapter/the-social-self-the-role-of-the-social-situation/>.
- [20] Jin H, Kim S, Love A, Jin Y, Zhao J. Effects of leadership style on coach-athlete relationship, athletes' motivations, and athlete satisfaction. *Front Psychol.* 2022 Dec 12;13:1012953. doi: 10.3389/fpsyg.2022.1012953. PMID: 36578680; PMCID: PMC9791096.
- [21] Ke Wu, Jiwei Wang, Weisong Yang, Xuebing Ruan, "Cultural Differences of Basketball between China and the United States and Its Concept in Basketball Teaching under the Background of Wireless Network Intelligence Technology", *Scientific Programming*, vol. 2022, Article ID 1123535, 10 pages, 2022. <https://doi.org/10.1155/2022/1123535>.
- [22] Ke Wu, Jiwei Wang, Weisong Yang, Xuebing Ruan, "Cultural Differences of Basketball between China and the United States and Its Concept in Basketball Teaching under the Background of Wireless Network Intelligence Technology", *Scientific Programming*, vol. 2022, Article ID 1123535, 10 pages, 2022. <https://doi.org/10.1155/2022/1123535>.
- [23] Kim Y, Park I. "Coach Really Knew What I Needed and Understood Me Well as a Person": Effective Communication Acts in Coach-Athlete Interactions among Korean Olympic Archers. *Int J Environ Res Public Health.* 2020 Apr 29;17(9):3101. doi: 10.3390/ijerph17093101. PMID: 32365657; PMCID: PMC7246789.
- [24] Kramer A., Heloisa A. (2013) "Elite athletes also excel at some cognitive tasks" *Illinois News Bureau-Research News* (<https://news.illinois.edu/view/6367/204860>).
- [25] Lam, Eddie T. C.; Drcar, Stephanie S.J.; and Song, Xuan, "Predominant Coaching Leadership Behaviors of High School Head Basketball Coaches: A Pilot Study" (2021). *Business Faculty Publications*. 349. https://engagedscholarship.csuohio.edu/bus_facpub/349.
- [26] Lee C-C, Li Y-S, Yeh W-C and Yu Z (2022) The Effects of Leader Emotional Intelligence, Leadership Styles, Organizational Commitment, and Trust on Job Performance in the Real Estate Brokerage Industry. *Front. Psychol.* 13:881725. doi: 10.3389/fpsyg.2022.881725.
- [27] Lin, CH.V., Sun, JM.J. Chinese employees' leadership preferences and the relationship with power distance orientation and core self-evaluation. *Front. Bus. Res. China* 12, 6 (2018). <https://doi.org/10.1186/s11782-018-0027-9>.
- [28] Lu, Y., & Li, W. (2022). Psychological factors in training of basketball players to improve their shooting accuracy. *Mobile Information Systems*, 2022, 1–9. <https://doi.org/10.1155/2022/3012107>.
- [29] Mason RJ, Farrow D, Hattie JAC. Sports Coaches' Knowledge and Beliefs About the Provision, Reception, and Evaluation of Verbal Feedback. *Front Psychol.* 2020 Sep 15;11:571552. doi: 10.3389/fpsyg.2020.571552. PMID: 33041941; PMCID: PMC7522355.
- [30] Metrifit. (2021, February 2). Motivation – what drives athletes to succeed? Metrifit Ready to Perform. <https://metrifit.com/blog/motivation-what-drives-athletes-to-succeed/>.
- [31] Nagai Y, Nomura K, Nagata M, Kaneko T, Uemura O. Children's Perceived Competence Scale: reevaluation in a population of Japanese elementary and junior high school students. *Child Adolesc Psychiatry Ment Health.* 2018 Jul 11;12:36. doi: 10.1186/s13034-018-0241-4. PMID: 30008802; PMCID: PMC6042375.
- [32] Otte FW, Millar S-K and Klatt S (2019) Skill Training Periodization in "Specialist" Sports Coaching—An Introduction of the "PoST" Framework for Skill Development. *Front. Sports Act. Living* 1:61. doi: 10.3389/fspor.2019.00061.
- [33] Sierra-Díaz MJ, González-Víllora S, Pastor-Vicedo JC and López-Sánchez GF (2019) Can We Motivate Students to Practice Physical Activities and Sports Through Models-Based Practice? A Systematic Review and Meta-Analysis of Psychosocial Factors Related to Physical Education. *Front. Psychol.* 10:2115. doi: 10.3389/fpsyg.2019.02115.
- [34] Van Yperen, N. W. (2017). Competence and the workplace. In A. J. Elliot, C. S. Dweck, & D. S. Yeager (Eds.), *Handbook of competence and motivation: Theory and application* (2nd ed., pp. 635–654). New York, NY: Guilford Press.
- [35] Webber, D. (2021). Goal Setting in Sport - Importance of Goal Setting for athletes. *Webber Nutrition*. <https://webber-nutrition.co.uk/goal-setting-in-sport/>.
- [36] Wolff W, Bieleke M, Martarelli CS, Danckert J. A Primer on the Role of Boredom in Self-Controlled Sports and Exercise Behavior. *Front Psychol.* 2021 Mar 1;12:637839. doi: 10.3389/fpsyg.2021.637839. PMID: 33732197; PMCID: PMC7957048.
- [37] YunFei Lu, WenHao Li, "Psychological Factors in Training of Basketball Players to Improve Their Shooting Accuracy", *Mobile Information Systems*, vol. 2022, Article ID 3012107, 9 pages, 2022. <https://doi.org/10.1155/2022/3012107>.
- [38] Zhou, L. (2023, July 24). 11 Best Coaching Styles: The Ultimate Guide in 2023. Luisa Zhou. <https://www.luisazhou.com/blog/coaching-styles/>.
- [39] Zhou, Molly and Brown, David, "Educational Learning Theories: 2nd Edition" (2015). *Education Open Textbooks*. 1. <https://oer.galileo.usg.edu/education-textbooks/1>.