

Influence of Leadership Behavior of Basketball Coaches on Athletes' Motivation and Training Satisfaction in Applied College Basketball Teams in Yunnan Province

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Abstract: Understanding how the coach's behavior affects the mental state of athletes can help improve the training environment and improve the performance of athletes. In the context of sports in this study, data on the sample population of applied college sports teams in Yunnan Province were collected in the form of questionnaires. The questionnaire includes survey items related to sports motivation and training satisfaction, as well as questions that directly measure coach leadership behavior. Structural equation modeling is used to analyze the original data, and the relationship between the coach-led active participation behavior, support and encouragement behavior, and individual attention behavior and athletes' sports motivation and training satisfaction is discussed. The research results show that the active participation behavior led by coaches has a significant positive impact on athletes' sports motivation and training satisfaction.

1. Introduction

Basketball, as a widely watched and participated sport, has a significant impact on athletes' performance and development. In basketball training, coaches' leadership behaviors are considered to be one of the key factors in shaping athletes' psychological state and improving their performance. Therefore, it is of great theoretical and practical significance to study the effects of coaches' leadership behaviors on athletes' motivation and training satisfaction.

In this paper, by using the questionnaire survey method, we are able to collect a large amount of self-reported data from the athletes so as to obtain their subjective evaluations of the coaches' leadership behavior. Secondly, the basketball team of applied colleges and universities in Yunnan Province is chosen as the research object, which can make the research results more representative and targeted. Finally, through statistical analysis and regression analysis, we are able to explore the relationship between different types of coach leadership behaviors and athletes' motivation and training satisfaction, thus providing empirical support and theoretical insights.

This paper first reviews the relevant literature and summarizes the existing research on the understanding of coaches' leadership behavior and athletes' psychological state. Then this paper

describes the research method in detail, including sample selection, questionnaire design and data analysis methods. Then this paper shows the research results, and discusses and explains them. Finally, the paper presents the conclusions and discusses the limitations of the study and suggests directions for future research.

2. Related Work

Many people have studied sports motivation, Li Weijie summarized a variety of training means through the psychological characteristics of athletes in training, combined with sports psychology, so as to provide a reference for stimulating athletes' training motivation, and for athletes to better devote themselves to training [1]. Xu Lei used a questionnaire to measure the perfectionism, autonomy and control motivation and sports ethics orientation of 243 young athletes. The results showed that perfectionism pursuit had a significant positive predictive effect on sports ethics orientation, and perfectionism worry had a significant negative predictive effect on sports ethics orientation[2]. Li Qingqing investigated 411 active athletes using the Sport Leadership Behavior Scale, the Sport Behavior Regulation Questionnaire, the Athlete Self-Efficacy Scale, and the Core Self-Evaluation Scale. The results showed that coaches' democratic behaviors, authoritarian behaviors, social supportive behaviors, and rewarding behaviors were all significantly correlated with self-determined motivation [3]. Tang Xiaofeng investigated some Chinese grassroots swimmers and their parents by using literature method, questionnaire survey method, interview method and mathematical analysis method to study the training motivation of grassroots swimmers, which can strengthen the cultivation of swimming reserve talents in Chinese competitive sports [4]. He Yuanmei believes that self-sacrificing motivation and dedication to the collective good transcends the realm of sport, that athletes and coaches must be ready to give up winning and external rewards for the sake of fairness in the game itself, and that sport teaches us that the individual can transcend the limitations of the environment to open up new possibilities for the collective good [5]. Rodrigues F aimed to test the light and dark sides of motivation as predictors of pleasure, intention to continue exercising, and exercise persistence based on self-determination theory [6]. Dohnalov áL argued that an important factor stimulating participation in competitive and recreational exercise was the motivational pleasure that came from prolonged physical activity [7]. Turner A R explored the nursing-related exercise concept of intrinsic motivation [8]. Vancampfort D explored the link between motivational reasons for participating in physical activity and time spent exercising, walking, and firefighter accident PA [9]. Ha Y aimed to determine the effects of psychological need fulfillment in exercise and motivation to exercise on physical activity [10]. These studies have greatly facilitated the work of this paper, which will conduct further research on athletes' motivation to exercise through coaching leadership behaviors.

3. Method

3.1 Influencing Factors of Athletes' Sports Motivation

Athletes' sports motivation refers to their intrinsic driving force and motivational factors for participating in sports activities and sports training. There are myriad factors that affect an athlete's motivation to participate in sport. First, the intra-individual factors play the most important role in determining sport motivation[11-12]. Athlete's intrinsic characteristics, such as personal traits, goal orientation, self-efficacy and autonomy, can considerably influence an athlete's motivation to participate in sports. Second, external environmental factors, such as external family support, coaching attitude, interactions with peers, and the socio-cultural background of athletes, can also positively or negatively influence the motivation of the athlete. An athletes' past athletic experiences,

competition results and feedback, and rewards and incentives can all exert influence over an athlete's motivation. In summary, sport motivation is a complex psychological process that is influenced by a host of internal individual characteristics, external environmental factors, an athlete's past experiences. Knowing and understanding these factors is critical in promoting athletes' active participation, training efficacy, and feelings of accomplishment. Thus, researchers and coaches should study athletes' overall situation comprehensively, and take the necessary steps to inspire and sustain a positive sport motivation among athletes so that the athletes can strive toward the highest level of their individual and team performance in sport activities.

3.2 Methods of Assessing Training Satisfaction

One of the essential ways to understand the satisfaction of athletes with training is to assess athletes' training satisfaction. To assess the training satisfaction of athletes, a variety of methods can be used. One of the more common ways is through the use of questionnaires. Through the use of a well-designed questionnaire, athletes can evaluate various aspects of their training, such as training content, training methods, coaches' feedback, and teamwork. These questionnaires typically contain satisfaction ratings, in addition to athletes' perceptions and suggestions regarding various aspects of training. Moreover, individual interviews are also effective ways to assess athletes' training satisfaction. Through personal interviews, the researcher or coach can gain a deeper understanding of the athlete's experiences and perspectives and can ask the athlete to explain the specific reasons why they are satisfied (or dissatisfied) with their training and can monitor and record the athlete's behaviors and performances on the training field, which can also be a method of assessing satisfaction with the training, and the coach can be able to rate the athlete's level of participation, motivation, and performance by observing the athlete's level of participation, motivation, and performance, by combining qualitative and quantitative methods, we can conduct a comprehensive assessment for a more complete and in-depth understanding [13-14]. There are many methods to evaluate the satisfaction of training, and based on the research's goals and the actual situation, reasonable and appropriate methods or a combination of methods can be chosen to comprehensively evaluate. These evaluation methods will provide valuable information for coaches and researchers on the effectiveness and the areas that need improvement regarding the training courses, so coaches can optimize training programs to improve the satisfaction of the players' training experience and overall athletic performance.

3.3 The role of Leadership Behavior in a Basketball Team

Leadership behavior plays a vital role in basketball teams and has a powerful impact on teamwork, team performance, and purpose. Leadership behaviors are integral in fostering a positive team climate by motivating athletes, increasing cooperation, communication, and creating high team spirit among team members. Secondly, leadership behaviors are important in establishing and communicating goals and expectations so that coaches can work together to help athletes achieve common goals and motivate and inspire athletes' efforts and motivation through clear goals and clear expectations [15]. Third, leadership behaviors are key to providing individualized support and coaching. A coach's concern, support and specific help can boost an athlete's self-confidence and improve his or her skill level and ability to perform, while the coach's feedback and evaluations are important in helping the athlete improve his or her performance and skill level. Leadership behaviors are important in dealing with conflicts and issues within the team, by dealing with the team in a fair, impartial and professional manner, the coach can keep the team calm and balanced and work to resolve any team conflicts. Therefore, coaches should have good leadership skills and be able to utilize their abilities to influence others, motivate and guide athletes to create an excellent

basketball team that can achieve excellent results and achieve a good demonstration effect.

3.4 Participant Recruitment

Posters and flyers were distributed on campus to advertise the recruitment of the basketball team. They show the name of the basketball team, practice times and locations, conditions for recruiting new members, and contact information. Utilizing the school's online platforms or social media pages to post recruitment information and attract the attention of potential participants. Collaborating with local basketball clubs or community organizations to seek their support. They can collaborate with these organizations to organize basketball training camps or competitions, attract more basketball enthusiasts to participate, and promote recruitment information for the basketball team during the activities. Utilizing online platforms, such as the school's website, social media groups, or basketball forums, recruiting information was posted, engaging recruiting posts were written, and interactions and conversations were held with interested individuals to answer their questions and provide further contact information. A number of volunteers were recruited through the above methods, and some of the volunteer information is shown in Table 1:

Table 1: Partial Volunteer Information

No.	Name	Gender	Age	Height (cm)	Weight (kg)	Team Experience (years)	Phone Number	Email
1	Zhang San	Male	20	185	75	5	123-456-7890	zhangsan@example.com
2	Li Si	Male	22	190	80	8	987-654-3210	lisi@example.com
3	Wang Wu	Male	19	180	70	3	456-789-0123	wangwu@example.com
4	Zhang Xiaohong	Female	21	175	65	6	789-012-3456	zhangxiaohong@example.com
5	Zhao Liu	Male	20	188	78	4	234-567-8901	zhaoliu@example.com

4. Results and Discussion

4.1 Investigation Design

Through the experiment, we hope to better understand the impact of coaches' behavior during training on athletes' psychological and emotional state, and how to improve athletes' participation, motivation level and training satisfaction through positive leadership behavior. In order to achieve the purpose of the experiment, we have recruited a certain number of college basketball team athletes as experimental subjects and randomly divided them into experimental and control groups. Coaches in the experimental group will use leadership behaviors of active participation, supportive encouragement, and individual attention during training, while coaches in the control group will use leadership behaviors of directive, harsh criticism, and overall attention. During the experiment, we will use questionnaires to assess athletes' motivation and training satisfaction. In order to minimize the effect of subjective bias, we will adopt a blind design, i.e., the purpose of the experiment and the group to which the participants belong will not be disclosed during the implementation of the experiment. Through this experiment, we expect to be able to compare the effects of different leadership behaviors on athletes' motivation and training satisfaction, and to assess their performance and effectiveness. The results of the experiment will provide valuable guidance to college basketball team coaches on how to promote active participation, motivation levels, and training satisfaction through positive leadership behaviors. Figure 1 shows the results of recruiting basketball players whose motivation changed with training time:

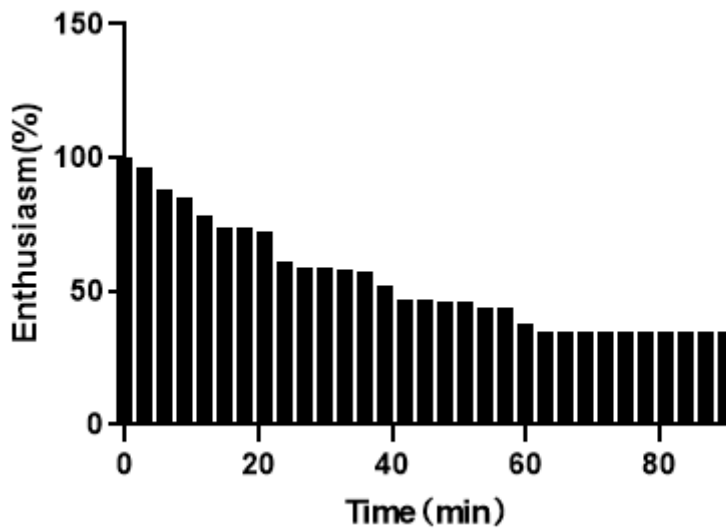


Figure 1: Changes in motivation over time

It can be seen that the motivation of the athletes started to decrease with time, and after one hour, their motivation dropped to the lowest point of 35%. At this point, the athletes were divided into experimental and control groups, and after the leadership of the coaches, a survey was started on their motivation and training satisfaction. Table 2 shows the questionnaire form:

Table 2: Survey questionnaire

<p>Start a survey on exercise motivation and training satisfaction</p> <p>1.How interested and enjoyable was basketball to you after the training? (A) Very low (B) Low (C) Average (D) High (E) Very high</p> <p>2.How did you perceive your competence and skills in basketball after the training? (A) Very low (B) Low (C) Average (D) High (E) Very high</p> <p>3.How much effort and dedication did you put into basketball after the training? (A) Very low (B) Low (C) Average (D) High (E) Very high</p> <p>4.Did the coach actively engage and interact with you during the training? (A) Not at all (B) Rarely (C) Sometimes (D) Often</p>

- (E) Always
5. Did the coach provide you with support and encouragement?
- (A) Never
(B) Rarely
(C) Sometimes
(D) Often
(E) Always
6. Did the coach pay attention to your individual training progress and needs?
- (A) Never
(B) Rarely
(C) Sometimes
(D) Often
(E) Always
7. Are you satisfied with the current training plans and content?
- (A) Not satisfied at all
(B) Somewhat unsatisfied
(C) Average
(D) Somewhat satisfied
(E) Very satisfied
8. How much do you think the coach's leadership behavior has influenced your training performance?
- (A) Very little influence
(B) Some influence
(C) No significant influence
(D) Significant influence
(E) Very significant influence

After the coaches had conducted the leadership exercise, the aforementioned questionnaires were distributed to the basketball players present and their results were collected, subsequently organized and the findings were visualized for data analysis.

4.2 Results of the survey

Figure 2 shows the level of effort and commitment that basketball players put into participating in basketball after being known by the coaches:

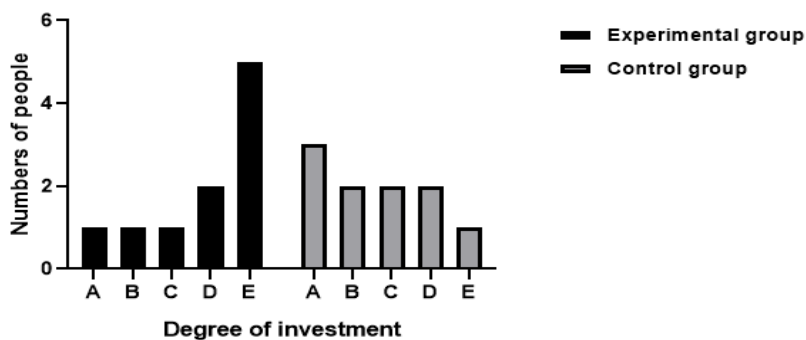


Figure 2: Investment level

In the questionnaire, the level of commitment was categorized into 5 ratings, A,B,C,D,E, where A is low level of commitment and E is very committed. It can be seen that the experimental group

had a very high level of commitment after their leadership behaviors of active participation, supportive encouragement and individual attention, with five people rated E, two people rated D and one person rated ABC. After the control group underwent directive, severe criticism, and overall attention leadership behavior, their motor motivation decreased, with only 1 people rated as E, 2 people rated as BCD, and 3 people rated as A. It can be seen that the leadership behaviors of active participation, supportive encouragement and individual attention can effectively enhance athletes' training motivation.

Figure 3 shows the survey results on whether the current training plan and content are satisfactory:

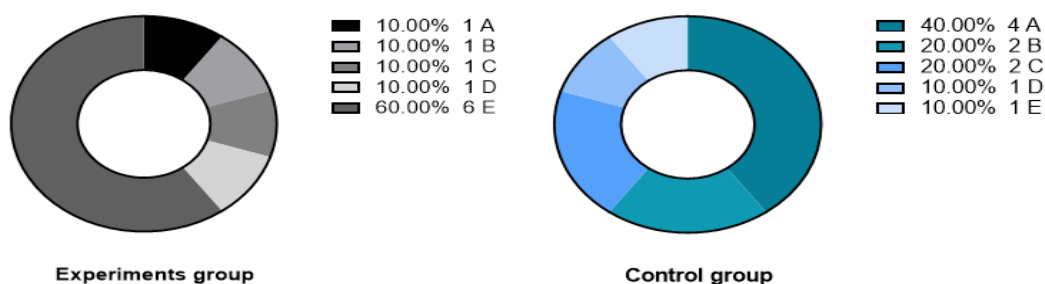


Figure 3: Satisfaction survey

In the satisfaction survey of one's own training, satisfaction was also divided into five levels: A, B, C, D, and E. From A to E, satisfaction is increasing. There are 6 people in experimental group E, and one people each in ABCD. Control group A consists of 4 people, BC consists of 2 people, and DE consists of one people each. In that same investigation, it was found that leadership behaviors of active participation, supportive encouragement, and individual attention increased training satisfaction, and leadership behaviors of directive, harsh criticism, and overall attention decreased training satisfaction.

5. Conclusion

The results of this study emphasize the significant influence of leadership behaviors of coaches of basketball teams in applied colleges and universities in Yunnan Province on athletes' sport motivation and training satisfaction. Leadership behaviors of active participation, supportive encouragement and individual attention contribute to athletes' sport motivation and training satisfaction. Therefore, in the process of developing basketball team athletes, coaches should adopt positive leadership behaviors, establish positive interactions with athletes, and provide individualized instruction and support to promote active participation and satisfaction. At the same time, coaches should avoid over-reliance on directives and commanding styles and try to avoid behaviors of harsh criticism and overall concern in order to avoid negatively impacting athletes' motivation and training satisfaction.

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References

- [1] Li Weijie. *The Influence of Training Motivation on Athlete Training Participation [J]*. *Contemporary Sports Technology*, 2022, 12 (15): 60-63.
- [2] Xu Lei, Sun Qilin. *The relationship between perfectionism and sports moral orientation in adolescent athletes: the mediating role of autonomy and control motivation [J]*. *Sports Research*, 2021, 35 (4): 45-51.
- [3] Li Qingqing. *The impact of coach leadership behavior on athlete self-determination motivation: a moderated mediating effect [J]*. *Shandong Sports Science and Technology*, 2021, 43 (6): 36-43.
- [4] Tang Xiaofeng, Ma Jun. *Investigation and Study on Training Motivation of Grassroots Swimmers [J]*. *Contemporary Sports Technology*, 2021, 11 (3): 227-230+235.
- [5] He Yuanmei. *Research on Moral Motivation and Sports Participation under Game Rules [J]*. *Sports Science and Technology Literature Bulletin*, 2021, 29 (3): 13-14.
- [6] Rodrigues F, Teixeira D S, Neiva H P, et al. *The bright and dark sides of motivation as predictors of enjoyment, intention, and exercise persistence [J]*. *Scandinavian Journal of Medicine & Science in Sports*, 2020, 30(4): 787-800.
- [7] Dohnalová L, Lundgren P, Carty J R E, et al. *A microbiome-dependent gut-brain pathway regulates motivation for exercise [J]*. *Nature*, 2022, 612(7941): 739-747.
- [8] Turner A R, Reed S M. *Intrinsic motivation in exercise: A concept analysis[C]*. *Nursing Forum*. 2022, 57(1): 136-143.
- [9] Vancampfort D, De Soir E, Ramos-Sanchez C P, et al. *Autonomous motivation for exercise is key to an active lifestyle in firefighters[J]*. *Workplace Health & Safety*, 2023, 71(5): 238-244.
- [10] Ha Y, Han S. *Relationships between psychological need satisfaction in exercise, motivation for exercise, and physical activity of female workers in retail and health service sectors[J]*. *Korean Journal of Occupational Health Nursing*, 2020, 29(2): 97-105.
- [11] Schootemeijer S, Van Der Kolk N M, Ellis T, et al. *Barriers and motivators to engage in exercise for persons with Parkinson's disease[J]*. *Journal of Parkinson's disease*, 2020, 10(4): 1293-1299.
- [12] Park S, Yang F. *A Study on The Motivation of Chinese University Students to Exercise in The Context of COVID-19 and The Impact of a Healthy Lifestyle on Their Willingness to Continue Exercise[J]*. *International Journal of Advanced Culture Technology (IJACT)*, 2022, 10(3): 244-252.
- [13] Feltz D L, Hill C R, Samendinger S, et al. *Can Simulated Partners Boost Workout Effort in Long-Term Exercise?[J]*. *The Journal of Strength & Conditioning Research*, 2020, 34(9): 2434-2442.
- [14] Bitrián P, Buil I, Catalán S. *Gamification in sport apps: the determinants of users' motivation[J]*. *European Journal of Management and Business Economics*, 2020, 29(3): 365-381.
- [15] Anres A, Hidayat R, Riswanto A. *The Urgency of Motivation for Pergatsi's Athletes in Palopo [J]*. *The Urgency of Motivation for Pergatsi's Athletes in Palopo*, 2023, 8(1): 91-98.