

THE RELATIONSHIP BETWEEN SPORTSMAN PERFORMANCE AND SPORTSMAN PSYCHOLOGICAL FACTOR IN WUXI CITY JIANGSU PROVINCE, CHINA

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Abstract

Purpose: This study explores the effects of five factors in the sportsman psychological factor on sportsman performance.

Theoretical framework: The Embodied Cognition Theory (ECT) was applied in this study.

Design/methodology/approach : The object of the study is the national second-level athlete of Wuxi City, Jiangsu Province, China. The unit of analysis in this study is the individual athlete. Through the random sampling method, 300 athletes were selected as the research object of this study. This study adopts the questionnaire method, edits the survey scale, and collects the questionnaire data. Finally, the basic information of the research subjects and the influence of five Sportsman psychological factors in Sportsman performance were obtained.

Findings: The results of the study showed that sportsman psychological factors contained five factors, Positive emotions, Spirituality, Self-efficacy, Intrinsic motivation, and Goal orientation. These factors all showed significant positive correlations for sportsman performance. It is inferred from these results that sportsman psychological factors present a positive correlation with sportsman performance.

Research, Practical & Social implications: This study will be of great help in enhancing the performance of athletes in competition. By analyzing the influencing factors in sportsman psychological factors order to clarify the correlation between different factors and sportsman performance. At the same time, to find out in the athlete's daily training and competition, using a reasonable way to strengthen the effect, to achieve the purpose of reasonably improving the athlete's ability to compete.

Originality/value: The present study then provides valuable insights into enhancing athletes' daily training effectiveness and playing ability by examining the effects of different sportsman psychological factors on sportsman performance.

Keywords: cultural physical sport; sportsman performance; embodied cognition theory

1. Introduction

The development of sport is very closely related to the country's political, economic, and cultural development (Chadwick, 2022). In different countries worldwide, different eras of cultural, and physical sports have endowed societies with different mentalities, economic structures, and cultural values. The influence of many aspects of the world has led to significant differences in sports development in different times and countries. Moreover, these differences enhance the overall strength of society and provide a strong impetus to the development of the

state and society. During the development of sports in modern China, Chinese Cultural Physical Sport has been influenced by the sports culture of the Western world, and sports programs have changed dramatically, with sports activities mainly focusing on physical exercise and competition. The value of sports activities has become the enrichment of people's daily lives, the promotion of the spirit of competition, and the propagation of the will to be courageous and to overcome oneself (Jin et al., 2023). In the view of a large number of researchers (Wu Xu, 2022; Wang Shuiquan, 2022). Cultural physical sport mainly focuses on competitive sports. As a result, sportsmen are affected by different factors in the development of cultural physical sports. Self-psychological factors have the most significant impact (Yang Mei, 2022; Popovych et al., 2022). Identify the psychologically influencing factors of sportsmen in developing Cultural Physical sports from the perspective of physical education, physical activity, and sport. The correlation study of factors can provide a reference value for the development of sports.

In this study, we selected sportsmen from Wuxi City, Jiangsu Province, China. There are several factors in a sportsperson's psyche during a game; judging by Embodied Cognition Theory (Cerulo, 2019), these factors can influence the outcomes in matches mainly reflected in sportsman performance. Thus, on the one hand, the sportsman is influenced by certain psychological factors in himself, which seriously affect the sportsman's performance. On the other hand, with different psychological factors, the degree of influence on sportsman performance is not the same. It is necessary to find out which factors have a high degree of influence and which factors have a low degree of influence, and through different degrees of enhancement of the degree of interference of these influencing factors, can enhance sportsman performance. In order to address both of these issues, this study takes Cultural Physical Sport as its entry point from competitive physical education. Through theoretical analyses, the influences on Sportsmen's psychological factors are identified, and these influences are combined with sportsman performance to investigate the extent to which different factors affect sportsman performance.

In terms of historical literature. This study reviewed relevant historical literature regarding the influencing factors of Sportsmen's psychological factors and the correlation between the influences of Sportsmen's psychological factors and sportsman performance. Wang Ziyi (2022) took men's soccer as an example. Through the interview method, questionnaire survey method, mathematical statistics method, and other research methods, the psychological factors affecting sportsman's game are mainly the athlete's self-emotion regulation ability, sportsman's Spirituality, and the perception ability of the sport. Jayanthi and Venkatesh (2022) described the effect of Self-efficacy and Intrinsic motivation on self-efficacy in the context of sportsmen's self-efficacy. Among them, Self-efficacy affects sportsmen's self-evaluative ability and motor efficiency, and Intrinsic motivation affects sportsmen's aggressiveness and latent motivation. Mohammad Hasan Khorram (2023) From sportsman's Goal orientation as a study, Starting from the psychological factors of 252 professional athletes in four different sports, the sport structural equation modeling describes the relationship between sportsman Goal orientation, sportsman satisfaction, and team cohesion, from this, it is judged that sportsman goal

orientation is effective in promoting individual skills and can contribute to the overall performance of the team. Perveen, Khan, and Fazaldad (2023) analyzed the correlation between Positive emotions and Quality of Life in sports in 200 college athletes in a study, and Research has shown that increasing the positive emotions of college sportsmen can counteract college students' anxiety about exercise, It can effectively enhance the Quality of Life of college students. Smith (2023) analyzed the relationship between spirituality, Intrinsic Motivation, and team cohesion using sportsman's personal initiative growth as the primary research object, and ultimately, it was concluded that Sportsman's Spirituality and Intrinsic Motivation were positively correlated with team cohesion. Yang and Mojtahe (2023) conducted a study on the correlation between sportsman's Self-efficacy and sportsman's performance by using SPSS software to analyze the data obtained. It was finally concluded that Self-efficacy is effective in enhancing the self-confidence of telemobilizers as a way to improve sportsman performance. However, after the athlete's Self-efficacy reaches its highest value, there will be a negative correlation between the two. Shala, Emini, Stankovska, Nikqi, Gontarev, and Kostovski (2023) the relationships between goal orientation, self-esteem, satisfaction, and situational motivation with adolescent karate athletes as the target of a research study by analyzing 100 athletes. This led to the conclusion that goal orientation is positively correlated with situational motivation that is more self-determined, i.e., the more precise the goal, the stronger the sportsman's self-identification and the more influential the sportsman's performance is.

In summary, by collating and analyzing the historical literature, it has been found that many researchers have studied the correlation between sportsmen's psychological factors and sportsman performance. A wealth of research results have been achieved. This study utilizes Embodied Cognition Theory (ECT), through a historical literature review, to observe the influencing factors affecting sportsman performance. After summarizing, Sportsmen's psychological factor mainly contains Positive emotions, Spirituality, Self-efficacy, Intrinsic motivation, and Goal orientation. This study will also analyze the effect of the five psychological factors mentioned above on sportsman performance by the athletes. In the existing historical literature, many scholars have used various research methods such as SPSS, AMPST, PLS, etc. In this study, SPSS will be used to analyze the reliability of the data, and a Structural Equation Model will be established through SmartPLS (SEM). Therefore, in this study, the main focus is to find out five kinds of sportsmen's psychological factors based on historical literature by taking sportsmen in Wuxi City, Jiangsu Province, China, as an example to study the correlation of sportsman performance through the five kinds of psychological factors of athletes and to establish the related SEM, explore the degree of influence of different psychological factors on sportsman performance, to provide a theoretical basis for promoting the development of athletes and sports in Wuxi City, Jiangsu Province.

2. Theoretical models and research hypotheses

2.1 Theoretical models

Aidan P. Moran (2004) in *SPORT AND EXERCISE PSYCHOLOGY* stated that sportsman psychological factoring is a critical factor for athletes in the training process; these factors can

affect the ability of athletes to achieve excellence in training and sport and can also reflect the performance of the athletes themselves; therefore it is valuable to study the correlation between the two in various ways.

Combined with historical literature, through Attribution Theory, this study proposes the following five influences: Positive emotions, Spirituality, Self-efficacy, Intrinsic motivation, and Goal orientation. Regarding positive emotions, emotions correlate very strongly with personal psychological factors in sports, and the influence of positive and negative emotions can severely impact sportsman performance. The correct use of emotion regulation strategies can effectively play the value of athletes. The correct use of emotional regulation strategies can effectively utilize the value of athletes. From the point of view of spirituality, it is a kind of ability of athletes to explode emotionally during the competition and play at a level beyond daily training, which can bring greater self-confidence to the athletes. The strengths and weaknesses of spirituality can seriously affect a sportsman's performance, especially during competition, and the mental ability of athletes determines spirituality and a sportsman's performance. In terms of self-efficacy, it is the sportsman's accurate perception of what he is already capable of and the level at which he can cope with the competition. In sports competitions, self-efficacy can effectively reflect the sportsman's stress level on the field, improve the sportsman's technical level through daily self-efficacy, and reflect the sportsman's psychological quality. In terms of intrinsic motivation, it focuses on how a sportsman can accomplish a task proactively. In sports competitions, intrinsic motivation can fundamentally reflect a sportsman's self-will and self-perception and stimulate a sportsman's source motivation by stimulating internal motivation. From the perspective of goal orientation, it is mainly used to stimulate the athletes' sense of winning and self-confidence. It can set reasonable goals through the athletes' continuous participation in training, thus promoting the prevention of athletes' fatigue and frustration, which encourages the athletes to continue to play their maximum level of performance in training and economy.

In summary, in this study, the sportsman's psychological factor was set as the independent variable, and the sportsman's performance was the dependent variable. The correlation study of sportsman performance (Y) was done by analyzing the five independent variable factors, Positive Emotions (X1), Spirituality (X2), Self-efficacy (X3), Intrinsic motivation (X4), and Goal orientation (X5) in the Sportsman psychological factor in (X). Accordingly, the sportsman performance and psychological factor correlation hypothesis model is proposed. As shown in the figure below.

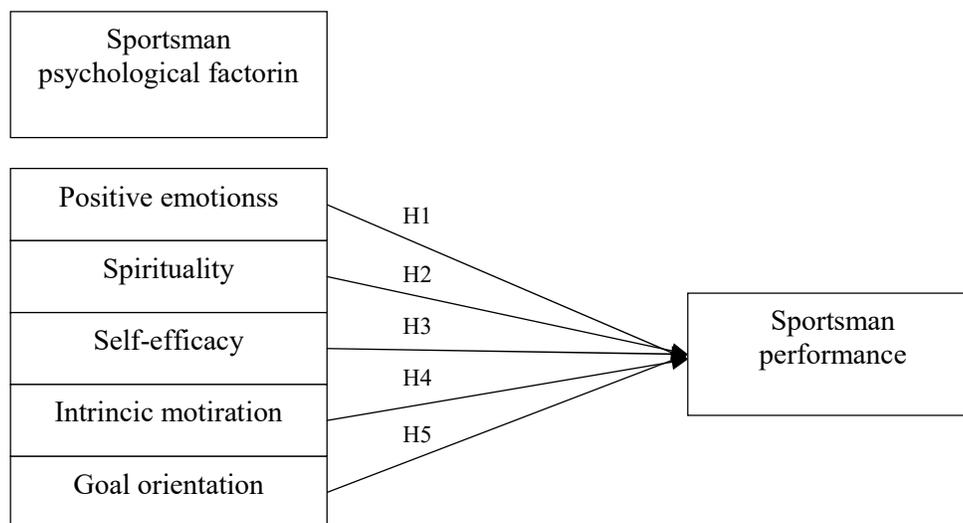


Figure 2-1 Research hypothesis model

2.2 Research hypotheses

In this study, the sportsman's psychological factorin can be interpreted as the aggregation of the sportsman's psychological dynamics to form the psychological factorin, and these psychological dynamics can take on different forms. Sportsman performance can be interpreted as the results of a sportsman's daily training or the results achieved by a sportsman in sports competition, which can directly reflect the value and performance of athletes. The healthier the athlete's psychological factors, the stronger the athlete's performance (Li Yankun, 2022). From this, it can be inferred that athlete psychological factors can positively contribute to athlete performance, and the two show a positive correlation. Therefore, the original hypothesis is proposed in this paper.

H0: There is a positive correlation between sportsman psychological factorin and sportsman performance.

In this study, according to Attribution Theory, by reviewing historical literature, the sportsman's psychological factors are mainly categorized into Positive Emotions, Spirituality, Self-efficacy, Intrinsic motivation, and Goal orientation. A historical literature review reveals that the more positive sportsman emotions are presented, the faster a sportsman's performance improves. If a negative state is presented, a sportsman's performance improves slowly. Only the positive emotions were examined in this study (Guo et al., 2022). Therefore, positive emotions and sportsman performance showed a correlation.

One's ability determines a sportsman's spirituality; the more capable the athlete is, the higher the spirituality, and the faster the sportsman's performance improves (Smith, 2023). Therefore, spirituality and sportsman performance showed a positive correlation. Sportsman self-efficacy is a valid measure of a sportsman's ability and level of competence, and the more accurately a sportsman can measure self-efficacy, the faster the

sportsman's performance improves (Hartoto et al., 2023) . Thus, self-efficacy showed a positive correlation with sportsman performance.

Sportsman intrinsic motivation is determined by training and competition results. The better the sportsman's training and competition results, the stronger the intrinsic motivation, and the faster the sportsman's performance improves (Mercader-Rubio et al., 2023). Thus, intrinsic motivation showed a positive correlation with sportsman performance. The sportsman's goal orientation is related to their goal-setting match. The higher the match, the more accurate the goal orientation, and the faster the sportsman's performance improves. (Meenakshi, Sharma, 2022). Thus, goal orientation showed a positive correlation with sportsman performance.

It is inferred that there is a positive correlation between the five influencing factors and sportsman performance. Therefore, the following hypotheses are proposed in this paper:

H1: There is a positive correlation between positive emotions and sportsman performance.

H2: There is a positive correlation between spirituality and sportsman performance.

H3: There is a positive correlation between self-efficacy and sportsman performance.

H4: There is a positive correlation between intrinsic motivation and sportsman performance.

H5: There is a positive correlation between goal orientation and sportsman performance.

3. Research methodology

3.1 Scale design

The scale of this study was modified and refined by the researcher mainly based on the indicators proposed by previous researchers after reviewing the historical literature. At the same time, the directions and questions in the research questionnaire were adjusted to take into account the main content of this study. Finally, the content of the questionnaire for the formal research was determined.

In this study, since the questionnaire was prepared by the researcher independently, this questionnaire was distributed to the experts of the universities in Wuxi City, Jiangsu Province for review and modification of the questions in the questionnaire. Finally, the experts agreed to use the questionnaire.

Subsequently, a pre-survey was conducted in this study on national second-level athletes of Wuxi City, Jiangsu Province (the standard is based on the ATHLETE TECHNICAL CLASS STANDARD issued by the General Administration of Sport of China, which will be implemented in July 2021), projected 2,000 people (data from Wuxi City School District as of December 2022). According to the ATHLETE TECHNICAL CLASS STANDARD, national second-level athletes have participated in urban, provincial, and national-level competitions, so they have a wealth of experience in competitions. They can accurately reflect the characteristics of psychological changes in athletes during training and competition. Therefore, 20 national second-level athletes from Wuxi City, Jiangsu Province, were randomly selected to participate in the research, and 20 valid questionnaires were recovered. Subsequently, the collected data were analyzed statistically, mainly using project analysis and exploratory factor analysis, and according to the test results, the items with a load less than 0.5 were excluded. Finally, 18 research questions were obtained, thus forming the research scale.

Meanwhile, the main research scale used in this study was the 5-point Likert scale. From 1-5 correspond to Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree. The specific content of the scale is shown below.

Table 3-1 Scale indicators and literature sources

Variant	Code	Indicator content	Literature sources
Positive emotions (X1)	X1-1	I implemented the training according to the set goals in my daily training, and I had almost no anxiety symptoms.	Murray, et al. (2022)
	X1-2	I controlled my emotions reasonably well during the race and followed the established plan to race seriously.	
	X1-3	I feel happy and excited during the races and look forward to every race.	
Spirituality (X2)	X2-1	I was able to understand the coach's intention in daily training quickly.	Motz, Rathwell, Young, Callary(2023)
	X2-2	During the game, I could predict my opponent's intentions accurately.	
	X2-3	I was able to quickly adjust my strategy and find the best way to compete in the competition.	
Self-efficacy (X3)	X3-1	In my daily training, I can customer service many difficulties and keep moving forward.	Zhou Yang(2022)
	X3-2	I had a challenging race, but I persevered and accomplished my goal.	
	X3-3	In competitions, I often have the confidence to win the race.	
Intrinsic motivation (X4)	X4-1	In my daily training, I like to compete with other people.	Allan, Blair Evans, Latimer-Cheung, Côté(2020)
	X4-2	I believe that participating in sports enhances my experience and stimulates my potential.	
	X4-3	I kept convincing myself to stick with the finish line during the race.	
Goal orientation (X5)	X5-1	In my daily training, I could accomplish my set goals on time.	Liu, Yu, Chen Xuehui, Zhang Bowen . (2011)
	X5-2	I can achieve my goals at the level I want to in the competition.	
	X5-3	During the competition, I will allow	

		myself to learn more new skills to increase the chances of results in the next competition.	
Sportsman performance (Y)	Y1	In my daily training, my coach is more satisfied with the results of my training.	Miao Xiuying, Cao Lizhi. (2022)
	Y2	In the competition, I could utilize my true performance level fully.	Liu Xuan. (2023)
	Y3	In competitions, I give my best effort in every competition to cope with the competition.	Gao Yuan. (2022)

3.2 Data collection

This paper mainly adopts the method of the network questionnaire survey, The object of research is the national second-level athlete of Wuxi City, Jiangsu Province, China. Wuxi City has 1,356 registered athletes. Requirements according to the "Sample Size Determination Using Krejcie and Morgan Table" (Krejcie & Morgan, 1970). The sample size is 297-302. Therefore, this study used a random sampling method to randomly select 320 athletes for the study. In this study, a total of 320 questionnaires were distributed, some incomplete and misinformed questionnaires were presented, and a total of 300 valid questionnaires were obtained, and the validity rate of the questionnaires reached 93.8%.

3.3 Sample situation

Based on the above, it can be seen that the valid sample of this study is 300, so these sample data are for the basic situation of statistical analysis to derive the relevant content, as shown in the table below.

Table 3-2 Basic statistics of the researched subjects

statistical characteristic	Disaggregated indicators	quorum	Percentage (%)
Genders	male	195	65.0%
	female	105	35.0%
Age	20-25 years old	32	10.7%
	25-30 years old	132	44.0%
	31-35 years old	106	35.3%
	More than 36 years old	30	10.0%
Time spent in sports	0-3 years	25	8.3%
	4-6 years	72	24.0%
	6-9 years	105	35.0%
	10-15 years	74	24.7%
	More than 16 years	24	8.0%

Number of participation in provincial and above competition programs	1-3 times	23	7.7%
	4-6 times	132	44.0%
	7-9 times	93	31.0%
	More than 10 times	52	17.3%

The above analysis shows that Wuxi City's registered sportsman is significantly more male than female in terms of gender characteristics. This is mainly because a large number of people in the city believe that learning and competing in sports, is more strenuous, and a great number of sports are suited to boys, and many girls do not wish to pursue a career in sports training and sports training themselves.

In the age profile, the number of people in middle age is high, followed by a smaller number of people on both sides, which indicates that the age of registered athletes' personnel shows a normal distribution trend, and Wuxi City athlete registrations show healthy growth. Of these, 25-30 years old and 31-35 years old accounted for a large number of people, totaling 79.3%. It shows that the young and middle-aged sports groups have occupied a more important position and can successfully drive the development of the sports industry in Wuxi City.

Among the characteristics of time spent in the sports industry, the largest number of people are in the 6-9 years, followed by 10-15 years and 4-6 years. This illustrates the fact that the amount of time athletes spend in the industry also shows a normal distribution, providing a greater incentive for athletes to develop their careers.

In the characterization of the number of times participating in the program at the provincial level or above, the highest number of participants was in 4-6 times, followed by participation in 7-9 times. Those who participated more than 4 times amounted to 92.3% of the total percentage, indicating that these registered athletes already have a significant amount of competition experience and were able to provide a reference value for this study.

Through the above analysis, it can be seen that the researched group presents the following four characteristics: more males, moderate age, longer time engaged in sports, and more participation in large-scale competitions at the provincial level and above. These characteristics are in line with the basic profile of registered athletes in Wuxi City and are capable of steadily advancing the sports industry in the city. They have extensive experience in competitions and therefore can fulfill the research needs of this study.

4. Empirical test results and analysis

4.1 Descriptive analysis

There are five independent variables and one dependent variable, totaling six variables, that make up the central part of this study. The scale has a total of 18 research items. A descriptive analysis was conducted for the research data. It is shown in the table below.

Table 4-1 Descriptive statistics of variables

Variant	N	Minimum	Maximum	Average	Standard
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		Values	Values	Value (M)	Deviation (SD)
Positive emotions	300	1	5	3.67	0.94
Spirituality	300	1	5	3.88	0.96
Self-efficacy	300	1	5	3.65	0.95
Intrincimotiration	300	1	5	3.74	0.89
Goal orientation	300	1	5	3.75	0.96
Sportsman performance	300	1	5	3.90	0.94

Descriptive statistics of the variables show that Positive emotions (M=3.67, SD=0.94), Spirituality (M=3.88, SD=0.96), Self-efficacy (M=3.65, SD=0.95), Intrinsicmotivation (M=3.74, SD=0.89), Goal orientation (M=3.75, SD=0.96) and Sportsman performance (M=3.90, SD=0.94) were greater than the theoretical median value of 3, which indicates a high level of scores for each variable.

4.2 Reliability analysis

This study was statistically analyzed using SPSS 26.0 data analysis software for the 6 factors and 18 items of this study. First, the fixed-distance scale was measured using Cronbach's values, with larger Cronbach's coefficients indicating greater reliability. After statistical analysis, the results of statistical data related to the reliability test of this questionnaire were obtained. The results are shown in the table, the Cronbach value of each dimension is greater than 0.7, which indicates that the questionnaire has good consistency. The test results are shown in the table below.

Table 4-2 Statistics of Reliability Test Results for Factors

Variant	Code	Factor Load	Cronbach'a	CR Value	AVE Value
Positive emotions (X1)	X1-1	0.777	0.821	0.856	0.665
	X1-2	0.841			
	X1-3	0.827			
Spirituality (X2)	X2-1	0.785	0.825	0.844	0.643
	X2-2	0.804			
	X2-3	0.817			
Self-efficacy (X3)	X3-1	0.782	0.800	0.854	0.661
	X3-2	0.816			
	X3-3	0.840			
Intrinsicmoti vation (X4)	X4-1	0.804	0.802	0.842	0.640
	X4-2	0.790			
	X4-3	0.805			
Goal orientation (X5)	X5-1	0.809	0.818	0.862	0.675
	X5-2	0.835			
	X5-3	0.821			

Sportsman	Y1	0.774			
performance	Y2	0.767	0.809	0.810	0.587
(Y)	Y3	0.757			

In this paper, validity was tested by conducting Exploratory Factor Analysis (EFA) on the questionnaire, measured by KMO test value, Bartlett test of sphericity, and cumulative variance contribution rate. From the table, it can be seen that the KMO value of the questionnaire is 0.864, which is greater than 0.5, Chi-Squared Test=2269.747, Degree of Freedom=120, and is significant (Sig=0.000), which indicates that the overall validity of the questionnaire can be better and each variable can be used for further factor analysis. The common factor of the questionnaire data was extracted by utilizing varimax rotation and Eigenvalue greater than 1. According to the Principal Component Analysis (PCA) greater than 1 criterion extracted hcf=5, the Accumulated Variance Contribution Rate reaches 73.359% > 50%, which indicates that the common factor can explain all variables and Factor analysis results are promising. In addition, the CR value of each measurement dimension ranges from 0.837-0.866, which is greater than 0.7, and the AVE value ranges from 0.587-0.675, both of which are greater than 0.5, indicating a good degree of convergence.

4.3 Relevance analysis

The six variables in this study have interrelationships with each other, and after analyzing them through SPSS software, the following table is derived.

Table 4-3 Correlation coefficients between latent variables (AVE square root)

	1	2	3	4	5	6
Positive Emotions (X1)	0.815					
Spirituality (X2)	.355**	0.802				
Self-efficacy (X3)	.303**	.320**	0.813			
Intrinsic Motivation (X4)	.336**	.394**	.290**	0.800		
Goal orientation (X5)	.299**	.336**	.220**	.316**	0.822	
Sportsman performance (Y)	.420**	.502**	.388**	.451**	.402**	0.766

The results of correlation analysis showed that Positive emotions ($r=0.420$, $p=0.01$), Spirituality ($r=0.502$, $p=0.01$), Self-efficacy ($r=0.388$, $p=0.01$), Intrinsic motivation ($r=0.451$, $p=0.01$), Goal orientation ($r=0.402$, $p=0.01$) and sportsman performance showed a significant positive correlation (positively related) at 1% level. , $p=0.01$), and Goal orientation ($r=0.402$, $p=0.01$) appeared significantly positively related to sportsman performance at the 1% level.

4.4 Overall research model

The reliability and validity tests described above were able to determine the reliability and validity of the scales, and the correlation analysis laid the foundation for structural equation modeling. In order to further explore the relationship between Sportsman psychological factor in and sportsman performance, this paper uses SmartPLS.3 software to conduct structural equation modeling test (PLS-SEM). As shown in the figure below.

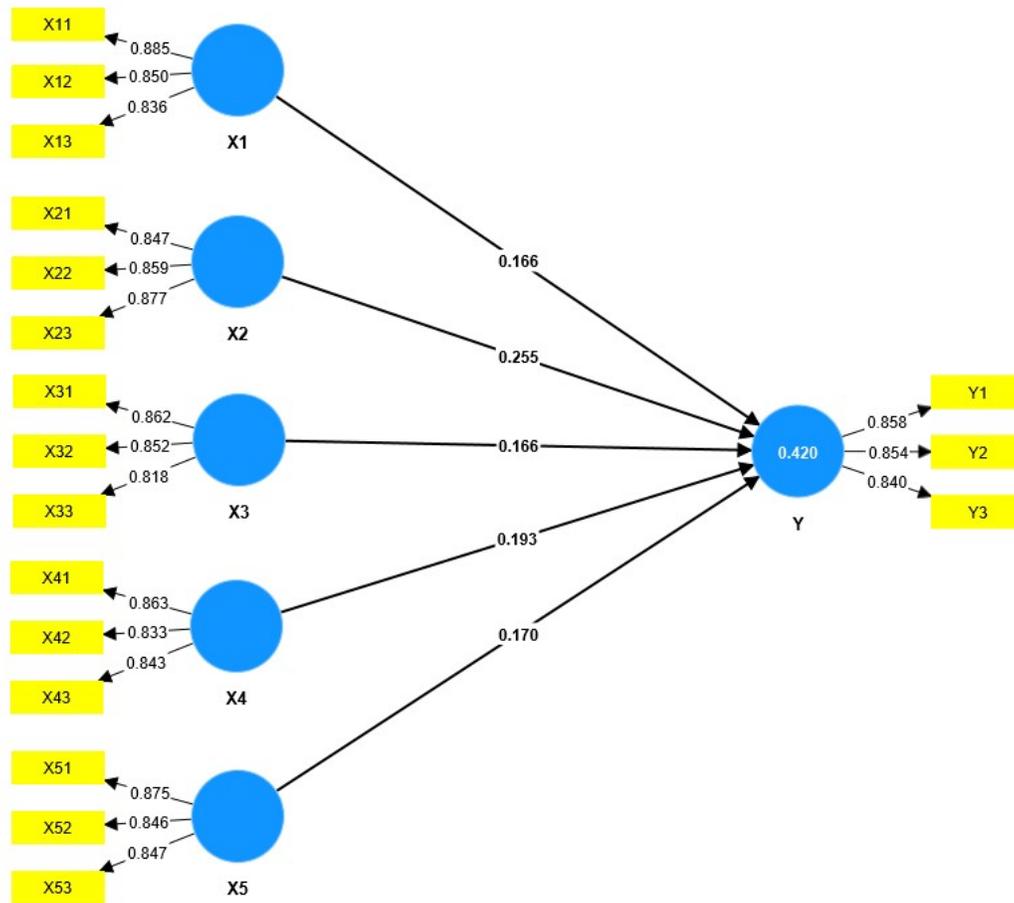


Figure 4-1 Structural equation modeling diagram for the overall study

4.5 Analysis of fitted metrics

In this study, Partial Least Square (PLS) was used for statistical analysis to test the degree of fitting of the factors, and the following six metrics of model fitting were included in SmartPLS: SRMR, d_ ULS, d_ G, Chi-square, NFI, and RMS-theta, which were used to test the fitness of the model. According to the criterion of Hu and Bentler (1998), SRMR <0.1 is acceptable, while the more stringent criterion is SRMR <0.8; NFI was proposed by Bentler and Bonett (1980), which takes a value between 0 and 1, the closer it is to 1 indicates that the better the model is fitted, and it is generally greater than 0.9 as a criterion for judging, and 0.8 is acceptable; d_ ULS, d_ G are all less than <0.95, indicating that the model is well fitted. acceptable; d_ ULS, d_ G are less than <0.95, indicating a good model fit.

4.4 Fit indicators for model hypothesis validation (n=300)

fitness index	Test	test	Test
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	Standard	value	results
Chi-square	-	479.21	-
		7	
SRMR	<0.08	0.054	Fit
d_ ULS	<0.95	0.502	Fit
d_ G	<0.95	0.259	Fit
NFI	>0.9	0.794	Unsatisfactory

The model was tested and the results of the model fit data showed that SRMR = 0.054 < 0.08, d_ ULS = 0.502, d_ G = 0.259 < 0.95, and NFI = 0.794 < 0.09, which suggests that the model has an overall good fit to the data for this set of samples.

4.5 Path analysis and hypothesis testing

The results of the Structural Equation Model (SEM) path test analysis include standardized regression weights, standard error, T-test, and P-value of each latent variable. The positive and negative values of the path coefficient indicate the direction of the influence relationship between the variables, and the P-value mainly indicates the significance of the influence relationship, in which "****" means that the P-value is less than 0.001, and usually when the P-value is less than 0.05, it means that the two variables are significantly related at 95% confidence level, and it is considered that there is a strong and significant influence relationship between the two variables. There is a strong and significant relationship between the two variables. The details are shown in the table below.

Table 4.5 Results of the validation of the overall study model hypotheses

Paths		β	S.E.	C.R.	P	LLCI	ULCI
Sportsman performance (Y)	<--- Positive emotions (X1)	0.166	0.053	3.125	0.002	0.059	0.267
Sportsman performance (Y)	<--- Spirituality (X2)	0.254	0.052	4.882	***	0.150	0.356
Sportsman performance (Y)	<--- Self-efficacy (X3)	0.168	0.053	3.139	0.002	0.065	0.272
Sportsman performance (Y)	<--- Intrincimotiration (X4)	0.192	0.052	3.725	***	0.091	0.293
Sportsman performance (Y)	<--- Goal orientation (X5)	0.171	0.048	3.543	***	0.074	0.262

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

According to the results of the path test analysis, the path coefficient value of Positive emotions (X1) on Sportsman performance (Y) is 0.166>0. This path presents a significant level

of 0.01 ($p=0.002<0.01$), which indicates that Positive emotions (X1) have a positive and significant effect on Sportsman performance (Y), and hypothesis H1 is valid.

The path coefficient value of Spirituality (X2) on Sportsman performance (Y) is 0.254 >0 and this path presents a significant level of 0.001 ($p=0.000<0.001$), which indicates that Spirituality (X2) has a positive and significant effect on Sportsman performance (Y) (BRC), and Hypothesis H2 is valid.

The path coefficient value of Self-efficacy (X3) on Sportsman performance (Y) is 0.168 >0. This path presents a significant level of 0.01 ($p=0.002<0.01$), which indicates that self-efficacy (X3) has a positive and significant effect on Sportsman performance (Y) (BRC), and hypothesis H3 is valid.

The path coefficient value of intrinsicmotivation (X4) on Sportsman performance (Y) is 0.192>0. This path presents a significant level of 0.001 ($p=0.000<0.001$), which indicates that Intrinsicmotivation (X4) has a positive and significant effect on Sportsman performance (Y) (BRC), and hypothesis H4 is valid.

The path coefficient value of Goal orientation (X5) on Sportsman performance (Y) is 0.171>0. This path presents a significant level of 0.001 ($p=0.000<0.001$), which indicates that there is a positive and significant effect of Goal orientation (X5) on Sportsman performance (Y) (BRC), and Hypothesis H5 is valid.

5. Research findings and policy recommendations

5.1 Conclusions of the study

In this study, 300 registered athletes of Wuxi City were taken as the research subjects, and the correlation between the research factors was explored by using embodied cognition theory. The study analyzed the validity and reliability of the questionnaire through SPSS software, constructed structural equation modeling through SmartPLS, and explored the relationship between the factors through correlation analysis and path analysis. The hypotheses were tested through empirical analysis. Specific conclusions were drawn as follows.

(1)Positiveemotions, Spirituality, Self-efficacy, Intrinsicmotivation, and Goal orientation, the five factors showed significant positive correlation with sportsman performance.The higher the positive emotions, the better the sportsman's performance. the higher the Spirituality, the better the sportsman's performance. the higher the Self-efficacy, the better the sportsman's performance. the higher the intrinsicmotivation, the better the sportsman's performance. the higher the Goal orientation, the better the sportsman performance. The higher the intrinsicmotivation, the better the sportsman performance performance. the more precise and higher the Goal orientation, the better the sportsman performance performance. It should be

further noted that this study can only verify that the hypotheses are valid in the positive direction, but not in the negative direction.

(2) Since positive emotions, spirituality, self-efficacy, intrinsic motivation, and goal orientation, these 5 factors are part of the content in sportsman psychological factors, It can be inferred that enhancing these 5 factors can enhance sportsman psychological factors, and the same time enhance sportsman performance. Therefore, this study can infer that sportsman psychological factors show a positive correlation with sportsman performance. It should be further noted that other factors are included in the influencing factors of sportsman psychological factors, therefore enhancing sportsman psychological factors does not mean that these five factors will be enhanced. This shows that this study can only show that the hypothesis of verifying the positive phase is valid and the negative hypothesis is not verified.

5.2 Policy recommendations

Based on this conclusion it can be seen that sportsman psychological factors are influenced by positive emotions, spirituality, self-efficacy, intrinsic motivation, and goal orientation, which are five factors. Enhancing these five factors can significantly improve sportsman performance; therefore, sportsman performance can be enhanced by promoting positive emotions, spirituality, self-efficacy, intrinsic motivation, and goal orientation. orientation, to enhance sportsman performance.

In sports psychology research, a large amount of information can illustrate that athletes' emotions have a very strong influence on game status and sportsman performance (Liang, Junyu, 2022). During the competition, whether the athletes can achieve excellent results depends mainly on the dominance of the positive emotions of the distance mobilizers before the competition and the stability of their emotions. A large number of psychologists have proposed a series of solutions to the two problems of relatively low positive emotions before the game and unstable emotions during the game. This study suggests that, on the one hand, athletes can resist the development of anxiety by reinforcing the implementation of set goals in their daily training. On the other hand, being able to follow a set plan and gradually implement the game plan during the game, thus maintaining a stable game mood. Finally, by increasing one's sense of enjoyment and excitement about the game, the value of the athlete's anticipation of the game is enhanced, which in turn enhances the setting of one's own positive emotions.

Athlete's spirituality mainly refers to the athlete's ability to perceive sports skills, satisfaction with the effect of the sport, their regulation ability, and the degree of integration with the team. These have a very strong impact on the performance of athletes (Dilshodbek, 2022). Athletes' SPIRITUALITY is mainly derived from the guidance of the coach, their sense, and the care of the team. The following areas are targeted for the improvement of athletes' spirituality skills. On the one hand, increases the collaboration between athletes and coaches, and

promote the tacit understanding between the two, so that the athletes can quickly read and understand the intentions of the coaches. On the other hand, to increase their ability to anticipate, through advance prediction to grasp the rhythm of the game, to strengthen the controllability of the game. Finally, through the help of the team, quickly find their strategic position in the team, in the game, to find the most suitable game plan, as a way to strengthen the overall performance of the athletes in the game.

In the process of athletes' training and competition, all will encounter a variety of setbacks and failures, in the case of the same training methods and the same training equipment, different people's training effect and competition effect but the difference is very big, which is the result of the different self-efficacy of athletes (Ma Chao, 2022).

This will produce a lot of psychological shadow for athletes if they are not prepared for it, which will be unfavorable to later training and competition. Therefore, to address the problem of athletes' self-efficacy perception with obstacles and insufficient self-efficacy beliefs, this study proposes the following solutions. Firstly, in daily training, it is necessary to continuously strengthen the athletes' resistance to trials and tribulations and setbacks, to promote the athletes' smooth customer service when encountering difficulties. Secondly, in the competition, maintain a stable mentality, even if the process of the game is very difficult, but also adhere to the end, to maintain the athlete's psychology in every game to maintain stability, and subsequently complete the game. Finally, strengthens the athlete's self-confidence, thus enhancing the sense of efficacy, thus bringing greater expectations for the athlete's game, prompting the athlete to be able to face the game with confidence.

Intrinsic motivation is the necessary force of positivity and stabilization of forward movement that exists in the athlete himself (Lopez, Martin, McGuire, Côté, 2023). Intrinsic motivation promotes athletes to maintain a sense of responsibility and mission so that they can constantly customer service difficulties and maintain high standards and high levels of sports. The production of these forces requires reasonable external stimulation and proper guidance to establish a healthy mental state for the athlete. A lack of intrinsic motivation and insufficient intrinsic motivation will be extremely stressful to the athlete's psyche. Therefore to address the above problems, this study proposes the following solutions. Firstly, strengthen the number of matches of athletes, in the daily training, constantly increase the number of matches to ensure that the athletes always keep the state of the game, to increase their Intrinsic motivation. secondly, constantly teach the game skills and experience, to improve the athletes' ability to control the field, improve the athletes' self-confidence in the game, and enhance their intrinsic motivation. Finally, psychological guidance guides the athletes in the game to win the heart, thereby strengthening the athletes in the growth of thinking, to providing athletes with strong psychological support.

Goal orientation is a necessary condition for every athlete to be able to serve the difficulties and keep moving forward. Accurately setting goal orientation can prompt athletes to accurately recognize their abilities and help coaches reasonably grasp the rhythm of athletes' training and competition (Wu Chao, Hou Qingkun, 2022). Therefore, Goal Orientation is the best way to improve athletes' skills in a staged, continuous and stepwise manner. Therefore, in order to accurately grasp the process of athletes' goal orientation, this study has the following recommendations. First of all, athletes in daily training, do a good job of target positioning, can ensure that athletes can try their best to complete the goal, and need to "jump a jump" to be able to reach the target, positioning can not be too low, not too high. Secondly, through the target positioning, match the athletes with reasonable competition items and competition contents, to encourage the athletes to give full play to their maximum strength in the competition. Finally, correctly guiding the athletes in each game, all to give their best, all to play their best efforts, can not form the effect of the blow, not to form the effect of easy to win the game, to accurately grasp the ability of the athletes, to do a good job of reasonable positioning for the athletes to do a good job of paving the way for the mental health of athletes, but also for the athletes of the psychological development of laying the foundation.

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