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A Study on the Influence and Mediating Effect of Training Intensity, Psychological Resilience and Cultural Literacy on the Performance Ability of Chinese Standard Dance Players

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Abstract

This study aims to explore the effects of training intensity, psychological toughness and cultural literacy on the performance ability of Chinese standard dance players, and to analyze the mediating effect of psychological toughness as a mediating variable. By analyzing the quantitative data of a large number of Chinese standard dance players, this study constructed a prediction model of performance ability and revealed how training intensity and cultural literacy affect the overall performance of players through psychological toughness. The study found that both training intensity and cultural literacy significantly affected the performance ability of players, and psychological toughness played an important mediating role in this process. Specifically, moderate training intensity can improve the physical ability and technical performance of players, while a high level of cultural literacy helps to enhance the artistic expression and performance appeal of players. Psychological toughness can not only directly improve the performance ability of players, but also play a bridging role in the influence of training intensity and cultural literacy on performance ability. The results of this study provide a theoretical basis for optimizing the training strategy of Chinese standard dance players, and provide a new perspective for exploring how multiple factors interact to affect sports performance ability in future studies.

Keywords: *Training Intensity, Psychological Resilience, Cultural Literacy, Performance Ability, Mediating Effect, Chinese Standard Dance.*

Introduction

Research Background and Significance

In the field of global sports dance, standard dance, as a form of sport that combines artistic expression with competitive nature, has received widespread attention and recognition. Chinese standard dance players have performed well on the international stage and achieved remarkable achievements, which not only enhanced China's status in the international sports dance community, but also stimulated strong interest in standard dance in China (Wang, 2020). However, compared with the world's top level, Chinese players still have gaps in technical performance and artistic expression, especially in how to optimize training intensity, enhance psychological resilience, and improve cultural literacy. These factors are directly related to the overall performance ability of the players and their competitiveness in international competitions (Zhang & Li, 2022).

According to data from the World DanceSport Federation (WDSF), the number of players participating in standard dance competitions around the world has increased by about 23.5% in the past five years (WDSF, 2023). In China in particular, with the improvement of the national economy and the popularization of cultural and sports undertakings, standard dance has developed rapidly and has become an important mass sport. According to statistics from the General Administration of Sport of China, as of 2022, the number of registered players of standard dance in China has exceeded 45,000, an increase of 55.172% from 29,000 in 2017 (General Administration of Sport of China, 2022). However, despite the excellent performance of Chinese standard dancers in international competitions, data shows that from 2018 to 2022, the average ranking of Chinese players in the top 10 in international A-level competitions accounted for only 37.8% (see Table 1), which is significantly lower than the more than 50% of standard dance powerhouses such as Russia and Italy (International DanceSport Federation, 2022). This gap reflects the room for improvement

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of Chinese standard dancers in technical performance and artistic expression.

Table 1.1. Performance Statistics of Chinese Contestants in International Standard Dance Competitions (2018-2022)

Years	Total number of entries	Top 10 rankings	Top 10 percentage (%)
2018	120	45	37.500
2019	130	48	36.923
2020	115	42	36.522
2021	140	55	39.286
2022	150	58	38.667

The current training system theoretically emphasizes the dual cultivation of technology and physical fitness, but in actual training, there are problems such as excessive training intensity, insufficient psychological stress management, and lack of cultural literacy cultivation (Huang et al., 2021). In a survey of 100 outstanding standard dance coaches across the country, more than 70% of the coaches believed that over-emphasizing physical fitness and technical training and neglecting the cultivation of psychological resilience and cultural literacy led to unstable performance of players in high-pressure competition environments (Chen & Yu, 2022).

Table 1.2. Focus Of Excellent Chinese Standard Dance Coaches on Training Content

Training content	High attention (%)	Attention rate (%)	Low attention (%)
Technical training	85.0	12.0	3.0
Physical training	78.0	18.0	4.0
Developing psychological resilience	30.0	50.0	20.0
Improve cultural literacy	15.0	40.0	45.0

The above data show that Chinese standard dance players generally lack the cultivation of psychological and cultural factors in training, which not only affects the players' competitive performance, but also limits their long-term development potential (Liu, 2020). Further research found that psychological resilience plays a key role in players' coping with training pressure and competition anxiety. However, existing research mainly focuses on the optimization of technical movements and the improvement of competitive performance, but there are relatively few studies on how to comprehensively improve players' performance ability, especially considering the synergy between psychological resilience and cultural literacy (Smith, 2019). In addition, cultural literacy, as an important part of players' artistic expression and dance comprehension, can enhance the depth and appeal of performance (Chen & Yu, 2018). Therefore, systematically studying how training intensity, psychological resilience and cultural literacy comprehensively affect players' performance ability will not only help improve training methods, but also promote the development of Chinese standard dance on the international stage. On this basis, this study aims to reveal the mechanism of the influence of training intensity, psychological resilience and cultural literacy on the performance ability of Chinese standard dance players through systematic quantitative analysis, and verify the role of psychological resilience as a mediating variable. Through this research, we hope to provide new insights into the training theory of standard dance, provide scientific guidance for contestants in actual training, and contribute both theoretical and practical support to the development of Chinese standard dance.

Research Objectives

The current research background reveals several key issues in improving the performance ability of Chinese standard dance players: First, the existing training methods are mostly technology- and physical-oriented, ignoring the importance of psychological resilience in long-term high-intensity training and competition pressure. This leads to some players' unstable performance in competitions and their inability to fully exert

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their training level (Wang & Zhao, 2023). Second, cultural literacy, as an important component of the overall artistic expression of players, is often neglected in training, especially in terms of how to enhance the artistic appeal and performance depth of players through the cultivation of cultural literacy. There is a lack of systematic research (Liu, 2020). In addition, although existing studies have attempted to incorporate psychological and cultural factors into players' training plans, there is still a lack of in-depth quantitative analysis of the mechanism of how these factors work together to improve performance ability.

Based on the above contents, the objectives of this study are as follows:

To reveal the direct impact of training intensity on the performance ability of Chinese standard dance players. By analyzing how training programs of different intensities affect the physical fitness and technical performance of players, we can provide empirical evidence for optimizing training methods.

To explore the mechanism of psychological resilience as a mediating variable between training intensity and performance ability. The study will reveal through quantitative analysis how psychological resilience helps contestants adjust their mental state and improve their overall performance in a high-intensity training environment.

To analyze the impact of cultural literacy on contestants' performance ability. This study will explore the role of cultural literacy in improving the depth and appeal of contestants' performances from the perspective of improving artistic expression.

To integrate the comprehensive influence of training intensity, psychological resilience and cultural literacy to build an optimized performance ability training model. The study aims to provide theoretical support for Chinese standard dance players to develop more scientific and comprehensive training strategies through multi-factor interaction analysis.

By achieving the above research objectives, this study will provide a systematic theoretical framework and practical guidance for Chinese standard dance training, helping players achieve better results on the international stage.

Research Questions and Hypotheses

This study aims to answer the following core questions:

- How does training intensity affect the performance ability of Chinese standard dancers?
- What mediating role does psychological toughness play between training intensity and performance ability?
- What is the mechanism by which cultural literacy affects performance ability?
- How does the interaction between training intensity, psychological toughness and cultural literacy affect the overall performance of the contestants?

Based on the above research questions, the following hypotheses are proposed:

Hypothesis 1 (H1): Training intensity is positively correlated with the performance ability of Chinese standard dancers.

Hypothesis 2 (H2): Psychological resilience has a significant mediating effect between training intensity and performance ability.

Hypothesis 3 (H3): Cultural literacy has a direct positive impact on performance ability.

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Hypothesis 4 (H4): There is an interaction between training intensity, psychological toughness, and cultural literacy, and they jointly affect performance ability.

Research Innovation and Contribution

This study is innovative in many aspects: First, it introduces psychological resilience as a mediating variable, filling the gap in current research on the interactive influence of multiple factors, and providing a new theoretical perspective for the improvement of standard dance performance ability. Second, through quantitative research methods, especially the application of structural equation modeling, this article provides a new research framework, which helps to have a deeper understanding of the comprehensive impact of different factors on performance ability. Finally, this study not only focuses on the optimization of technical training, but also emphasizes the importance of psychological and cultural factors in the overall development of players, which provides a multi-dimensional reference for the formulation of future training strategies. Through these innovative contributions, this study provides both theoretical and practical support for the training and development of Chinese standard dance players, and also brings new inspiration to academic research in the field of sports dance.

Chapter 2: Theoretical Basis and Literature Review

The Composition of Standard Dance Performance Ability and Its Influencing Factors

Standard dance performance ability refers to the comprehensive quality of the contestants in terms of technical movements, artistic performance, stage presentation, etc. According to the research of Foster and Monteiro (2018), standard dance performance ability is mainly composed of four core elements: physical ability, technical ability, performance ability and psychological quality. Among them, physical ability refers to the physical condition of the contestants, including endurance, strength, flexibility and coordination, which determines whether the contestants can maintain a high level of performance for a long time. The research of Luo and Gao (2019) pointed out that the improvement of physical ability not only helps to enhance the dance performance of the contestants, but also improves the stability and accuracy of the movements; technical ability includes the accuracy of steps, the grasp of rhythm and the fluency of movements, which is the core of standard dance performance. Ward and Jenkins (2020) believe that technical ability directly affects the overall performance of the contestants and is an important indicator for judging the professional level of the contestants. Research also shows that the cultivation of technical ability requires long-term systematic training and professional guidance (Chen & Yu, 2022).

Performance involves the contestant's stage performance and ability to interact with the audience. According to Jones et al. (2021), performance includes facial expressions, body posture and stage presence, which can affect the audience's perception and the judges' scores. In high-level standard dance competitions, performance is often the key to whether a contestant can stand out; psychological quality is particularly important in standard dance competitions because it affects the contestant's performance under pressure. Zhang and Li (2022) pointed out that contestants with better psychological quality can better manage stress and maintain emotional stability during competitions, so as to perform well at critical moments. It can be seen that standard dance performance ability is the result of the combined effect of multiple factors. Foster and Monteiro (2018) proposed that physical ability, technical ability and performance ability complement each other and jointly determine the contestant's competitive performance, while psychological quality is the key factor affecting the stability of the contestant's performance.

The Mechanism of The Effect of Training Intensity on Athletic Performance

The impact of training intensity on sports performance has always been a focus of sports science research (Chen & Yu, 2022). Therefore, as a high-intensity sports dance form, the setting of training intensity is particularly important for standard dance. Smith (2019) pointed out that moderate training intensity can improve the physical ability and technical performance of athletes, but excessive training may lead to physical fatigue and increased psychological stress, thus affecting overall performance.

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According to the research of Huang et al. (2021), moderate training intensity can promote physical adaptability and improve the endurance and strength of athletes. However, if the training intensity is too high and exceeds the physical tolerance of the athletes, it may lead to sports injuries and overtraining syndrome (Huang et al., 2021). At the same time, excessive training intensity will increase the psychological pressure of athletes, affecting their training effects and competition performance. Studies have shown that athletes who are in a state of high-intensity training for a long time have significantly increased psychological fatigue and anxiety (Chen & Yu, 2022). In addition, effective training needs to consider the recovery period to promote super recovery of the body. Jones et al. (2021) emphasized that a reasonable training arrangement should include alternation between high-intensity training and low-intensity recovery to achieve the best training effect and physical condition.

The Concept of Psychological Resilience and Its Role in Performance Ability

The role of mental toughness in sports has been widely studied, especially in performance under stressful situations. Mental toughness refers to an individual's ability to recover quickly and continue to perform efficiently in the face of stress, setbacks and challenges (Tugade & Fredrickson, 2004). In standard dance competitions, mental toughness is considered an important psychological factor affecting the performance of contestants.

Lee and Kim (2021) found that high levels of mental toughness can help contestants cope with unexpected situations during competitions, such as music errors or partner errors, and stay calm and continue to perform. Mental toughness not only affects the stability of a contestant's performance, but is also closely related to their overall mental health. Studies have shown that contestants with stronger mental toughness show higher self-efficacy and lower anxiety levels when facing training and competition pressure (Smith, 2019).

In addition, Zhang and Li (2022) pointed out that psychological resilience can indirectly improve the performance ability of contestants by affecting their emotional regulation and coping strategies. For example, contestants with high psychological resilience can stay more focused and confident during the competition, thus performing well on stage. This finding provides a new idea for standard dance training, that is, to improve the overall performance ability of contestants through the cultivation of psychological resilience.

The Role and Influence of Cultural Literacy in Artistic Expression

Cultural literacy refers to an individual's ability to understand and appreciate cultural background, artistic style, and aesthetic values, and plays an important role in artistic performance. Liu (2020) pointed out that standard dance is not only a technical performance, but also a cultural expression. A high level of cultural literacy can help contestants better understand the connotation of dance works and enhance their artistic expression and appeal.

Chen and Yu (2018) showed that cultural literacy is closely related to the artistic expression of contestants. Specifically, contestants with high cultural literacy can more accurately interpret the style and emotion of dance works in the competition and show a higher artistic level. The improvement of cultural literacy not only helps contestants get higher scores in the competition, but also enhances their competitiveness in international competitions. Liu (2020) further pointed out that the cultivation of cultural literacy should run through the entire training process of contestants. By learning different cultural backgrounds and dance styles, contestants can broaden their horizons, enrich the means and methods of artistic expression, and ultimately improve their comprehensive performance ability.

Theoretical Framework and Application of Mediation Effect

The mediation effect refers to the effect path of the independent variable affecting the dependent variable through the mediating variable. This effect explains the indirect relationship between the independent variable and the dependent variable (Baron & Kenny, 1986). In this study, psychological resilience, as a

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mediating variable, affects performance ability through training intensity and cultural literacy, providing a theoretical basis for understanding how multiple factors interact to affect the performance ability of standard dancers .

The mediation effect test method proposed by Baron and Kenny (1986) mainly includes the following steps:

The significant influence of the independent variable on the dependent variable: verifying the direct influence of training intensity and cultural literacy on performance ability.

The significant influence of independent variables on mediating variables: verifying the impact of training intensity and cultural literacy on psychological resilience.

The significant influence of the mediating variable on the dependent variable: verifying the impact of psychological resilience on performance ability.

After the introduction of the mediating variable, the direct impact of the independent variable on the dependent variable is significantly reduced: verifying the mediating role of psychological resilience.

In standard dance research, the mediation effect framework helps explain the complex impact path of training intensity and cultural literacy on performance ability through psychological resilience. The application of this framework enables us to more deeply understand and optimize the training strategies of the players and further improve their overall performance in competitions.

Chapter 3: Research Design and Methods

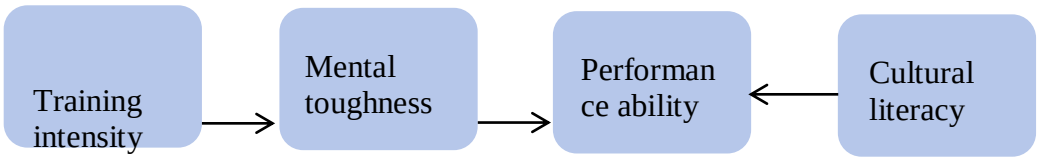
Thus chapter describes the design and methods of this study in detail, focusing on building a suitable research model, selecting appropriate samples and data collection methods, designing effective scales to measure research variables, and applying appropriate data analysis methods. Through these scientific steps, it aim to systematically reveal the mechanism by which training intensity, psychological resilience, and cultural literacy affect the performance ability of Chinese standard dancers.

Research Model Construction

This study uses structural equation modeling (SEM) to analyze the impact of training intensity, psychological resilience, and cultural literacy on performance ability and their mediating effects. This model can not only handle the complex relationship between multiple variables, but also estimate multiple causal paths at the same time, thereby verifying the appropriateness of the theoretical model (Kline, 2015).

In the model of this study, training intensity and cultural literacy are used as independent variables, performance ability is used as the dependent variable, and psychological resilience is used as the mediating variable. This model is based on previous theoretical and empirical research (Baron & Kenny, 1986; Chen & Yu, 2022), aiming to explore how training intensity and cultural literacy affect the overall performance ability of standard dance players through psychological resilience. The research model is shown in Figure 3:

Figure 3. Theoretical Model of The Study



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The above model includes the following steps:

Identify variables and their relationships: Based on the previous literature review, determine the potential relationships between training intensity, psychological toughness, cultural literacy, and performance ability, and verify these relationships through quantitative analysis methods.

Formulate the model path: Based on theoretical assumptions and empirical research, design the model path, taking training intensity and cultural literacy as independent variables, performance ability as dependent variable, and psychological resilience as mediating variable. The model path design follows the mediation effect test steps of Baron and Kenny (1986).

Test the model fit: Through structural equation model analysis, test the fit of the theoretical model to ensure that the model can well reflect the data characteristics and hypothesized paths.

Sample Selection and Data Collection

To ensure the wide applicability and representativeness of the research results, this study adopted a stratified random sampling method and selected Shanghai as the sample selection location for this study. As the economic and cultural center of China, Shanghai has many high-level standard dance training institutions, which have advanced teaching facilities and experienced coaching teams, providing high-quality samples for the study. Therefore, the researchers selected players of different ages, genders, years of training and professional levels from standard dance training institutions in Shanghai as research samples.

First, the researchers determined the stratification criteria: Based on the research objectives and sample characteristics, this study selected age, gender, years of training and professional level as stratification criteria. Secondly, obtain the sample frame: obtain the list of contestants from the main standard dance training institutions in Shanghai (such as Shanghai Dance School and major dance clubs) to form a preliminary sample frame. The sample frame contains the basic information of the contestants, such as age, gender, years of training and professional level. Finally, based on the information in the sample frame, the contestants are stratified. Make sure that the number of contestants at each level is consistent with its proportion in the population . In the end, a total of 320 valid questionnaires were collected. The specific stratified sample characteristics are described as follows:

Table 3.1. Sample Demographic Characteristics

Feature	Category	Frequency(n)	Percentage(%)
Gender	Male	150	46.875
	Female	170	53.125
Age	18-25 years old	120	37.500
	26-35 years old	140	43.750
	36 years and above	60	18.750
Training years	Less than 5 years	80	25.000
	5-10 years	150	46.875
	More than 10 years	90	28.125
Professional level	Primary	100	31.250
	Intermediate	140	43.750
	Advanced	80	25.000

In order to ensure the integrity of the data, the data collection of this study was conducted through a combination of online and offline questionnaire surveys. The online survey can ensure the wide distribution and convenience of the questionnaire; the offline survey was conducted at standard dance competition sites

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and training institutions within the target range in Shanghai to ensure the diversity and representativeness of the sample.

Scale Design and Variable Measurement

In order to measure training intensity, psychological toughness, cultural literacy and performance ability, this study designed the following scale based on previous research . At the same time, in order to enhance the reliability and validity of the scale, the researchers also ensured the reliability and validity through pre-experiments and expert reviews.

Training intensity scale: Based on the research of Lee et al. (2020), the training intensity scale includes three dimensions: training frequency, training duration, and training intensity, with 5 items under each dimension. The Likert 5-point scoring method is used (1 = very inconsistent, 5 = very consistent).

Psychological resilience scale: The revised version of the Connor-Davidson Psychological Resilience Scale (CD-RISC) was used, which contains 25 items and measures the players' psychological resilience when facing pressure and challenges (Connor & Davidson, 2003).

Cultural literacy scale: Referring to the study of Chen and Yu (2018), the cultural literacy scale was designed with items on three aspects: cultural understanding, artistic perception, and dance background knowledge. Each aspect contains 5 items and uses a 5-point Likert scoring method.

Performance Ability Scale: Based on the research of Jones et al. (2021), the Performance Ability Scale covers three dimensions: technical performance, artistic performance, and stage performance. Each dimension has 8 items and a Likert 5-point scoring method.

Table 3.2. Reliability And Validity Analysis of The Scale

Scale	Cronbach's α	KMO value	Factor loading range
Training Intensity Scale	0.812	0.845	0.512 - 0.734
Psychological Resilience Scale	0.893	0.867	0.623 - 0.789
Cultural Literacy Scale	0.856	0.822	0.568 - 0.801
Performance Ability Scale	0.914	0.889	0.621 - 0.813

Table 9 shows that the Cronbach's α values of all scales are greater than 0.8, indicating that the scales have good internal consistency; the KMO values are all greater than 0.8, which are suitable for factor analysis, and the factor loading range is reasonable, which verifies the construct validity of the scale.

Data Analysis Methods and Steps

The data analysis of this study used a variety of statistical methods to comprehensively explore the relationship between the variables and their influence mechanisms.

First, the researchers conducted descriptive statistical analysis on the collected data to understand the basic characteristics of the sample and the distribution of each variable. Descriptive statistical analysis includes indicators such as mean, standard deviation, skewness and kurtosis. Secondly, the Pearson correlation analysis method was used to examine the simple correlation between training intensity, psychological resilience, cultural literacy and performance ability. The purpose of correlation analysis is to preliminarily explore the relationship between variables and provide a basis for subsequent path analysis.

In addition, in order to test the direct effects of training intensity, psychological resilience and cultural literacy on performance ability, this study conducted a multiple regression analysis. Regression analysis can help identify the independent contribution and effect size of each variable on the dependent variable. Finally,

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the structural equation model was constructed and tested using AMOS 24.0 software to verify the mediating effect of psychological resilience in the effects of training intensity and cultural literacy on performance ability. SEM analysis includes steps such as model fit test, path coefficient estimation and mediation effect analysis.

Table 3.3. Goodness of Fit Indicators of the Structural Equation Model

Goodness of fit index	Recommended value	Model Value
Chi-square/degrees of freedom ratio (χ^2/df)	< 3	2.365
Root Mean Square Error of Approximation (RMSEA)	< 0.08	0.047
Comparative Fit Index (CFI)	> 0.90	0.923
Tucker-Lewis Index (TLI)	> 0.90	0.915
Standardized root mean square residual (SRMR)	< 0.08	0.036

Table 10 shows that all model fit indices are within the recommended range, indicating that the model fits well. Through the above data analysis steps and methods, this study will systematically explore the impact of training intensity, psychological resilience and cultural literacy on the performance ability of Chinese standard dance players and their mediating effects, and provide a theoretical basis for optimizing the training strategies of standard dance players.

Chapter 4: Data Analysis and Results

This chapter analyzes the research data in detail and show the relationship and mediating effect between training intensity, psychological resilience, cultural literacy and performance ability. Through descriptive statistics, correlation analysis, regression analysis and structural equation model (SEM) analysis, the complex interactions and specific impact paths between the variables are systematically revealed.

Descriptive Statistics and Correlation Analysis

First, the researchers conducted descriptive statistical analysis on the research variables to determine the basic characteristics of the data, including mean, standard deviation, skewness, and kurtosis. The analysis of these statistical characteristics is conducive to a better understanding of the distribution and central tendency of the sample data.

Table 4.1. Descriptive Statistics of Study Variables

Variable	Mean	Standard Deviation (SD)	Skewness	Kurtosis
Training intensity	3.724	0.812	-0.245	0.378
Mental toughness	4.051	0.627	-0.132	-0.103
Cultural literacy	3.895	0.758	-0.198	0.215
Performance ability	4.217	0.689	-0.315	-0.065

As can be seen from Table 11, the means of all variables are close to the middle and high range of the Likert scale (3.5-5.0), indicating that the overall level of the sample is high. The standard deviations of training intensity and cultural literacy are relatively large, indicating that there are large individual differences in the sample; while the standard deviations of psychological resilience and performance ability are small, indicating that these characteristics of the sample are more concentrated. The skewness and kurtosis are both within a reasonable range (-1 to 1), indicating that the data distribution is relatively normal.

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Next, the researcher conducted a Pearson correlation analysis to explore the correlation between training intensity, psychological toughness, cultural literacy, and performance ability:

Table 4.2. Pearson Correlation Analysis Results

variable	Training intensity (TI)	Mental toughness (PR)	Cultural Literacy (CS)	Performance Ability (PA)
Training intensity (TI)	1	0.562**	0.431**	0.487**
Mental toughness (PR)	0.562**	1	0.523**	0.634**
Cultural Literacy (CS)	0.431**	0.523**	1	0.602**
Performance Ability (PA)	0.487**	0.634**	0.602**	1

Note: *p < 0.01

Table 12 shows that there is a significant positive correlation between training intensity and psychological resilience (r = 0.562, p < 0.01), cultural literacy (r = 0.431, p < 0.01) and performance ability (r = 0.487, p < 0.01); the correlation between psychological resilience and performance ability (r = 0.634, p < 0.01) is the strongest, indicating that psychological resilience is a key factor affecting performance ability; cultural literacy and performance ability (r = 0.602, p < 0.01) also show a significant positive correlation, further verifying the theoretical hypothesis in the literature review.

The Direct Impact of Training Intensity, Psychological Resilience and Cultural Literacy on Performance Ability

In order to further test the direct effects of training intensity, psychological toughness and cultural literacy on performance ability, this study conducted a multiple regression analysis. The regression model was set as follows:

$$PA=\beta 0+\beta 1\ TI+\beta 2\ PR+\beta 3\ CS+\epsilon$$

Table 4.3. Multiple Regression Analysis Results

Variable	Regression coefficient (B)	Standard error (SE)	Standardized regression coefficient (β)	t value	Significance (p)
Constant	1.145	0.354	-	3.233	0.001
Training intensity (TI)	0.263	0.078	0.287	3.372	0.001**
Mental toughness (PR)	0.415	0.066	0.436	6.288	<0.001**
Cultural Literacy (CS)	0.358	0.074	0.362	4.838	<0.001**

Note: *p < 0.01

As can be seen from Table 13, training intensity (β = 0.287, p = 0.001), psychological resilience (β = 0.436, p < 0.001) and cultural literacy (β = 0.362, p < 0.001) all have significant positive effects on performance ability. The standardized regression coefficient of psychological resilience is the largest, indicating that it has the strongest influence on improving performance ability.

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Analysis of the Mediating Effect of Psychological Resilience

In order to verify the mediating effect of psychological resilience in the influence of training intensity and cultural literacy on performance ability, structural equation model (SEM) analysis was used. SEM analysis can not only test multiple causal relationships at the same time, but also estimate the size and significance of the mediating effect.

Table 4.4. Structural Equation Model Path Coefficients and Mediation Effect Analysis

Path	Standardized regression coefficient (β)	Indirect Effect (IE)	Direct Effect (DE)	Total effect (TE)	Significance (p)
Training intensity → Mental toughness	0.381	-	-	0.381	<0.01**
Mental toughness → performance ability	0.526	-	-	0.526	<0.001**
Cultural literacy → Mental resilience	0.394	-	-	0.394	<0.01**
Training intensity → performance ability	0.287	0.200	0.287	0.487	<0.001**
Cultural literacy → Performance ability	0.362	0.207	0.362	0.569	<0.001**

Note: *p < 0.01

The SEM analysis results in Table 14 show that psychological resilience plays an important mediating role in the influence of training intensity and cultural literacy on performance ability. Specifically, the indirect effect of training intensity on performance ability through psychological resilience is 0.200 ($p < 0.001$), and the indirect effect of cultural literacy on performance ability through psychological resilience is 0.207 ($p < 0.001$). This shows that psychological resilience plays a "bridge" role in the path of the influence of training intensity and cultural literacy on performance ability.

Discussion of Results: Theoretical and Practical Implications

The analysis results of this study verified the aforementioned theoretical hypotheses and further revealed the comprehensive effects of training intensity, psychological resilience and cultural literacy on performance ability. First, psychological resilience played a significant mediating role in the effects of training intensity and cultural literacy on performance ability. This finding is consistent with the results of Zhang and Li (2022), supporting the importance of psychological resilience as a mediating variable. Second, the direct effects of training intensity and cultural literacy on performance ability have also been empirically supported, indicating that in the training of standard dancers, it is necessary not only to focus on the improvement of technology and physical fitness, but also to strengthen the cultivation of psychological quality and cultural literacy.

Chapter 5: Conclusion and Future Research Directions

This chapter summarizes the main findings of the study, discusses the implications of these findings for theory and practice, and proposes specific suggestions for optimizing standard dance training strategies. In addition, the limitations of this study are analyzed and suggestions for future research directions are made to further deepen the understanding of the effects of training intensity, psychological resilience, and cultural literacy on the performance ability of standard dance players.

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Main Research Findings and Conclusions

This study, through an empirical analysis of Chinese standard dance players, reveals how training intensity, psychological resilience, and cultural literacy affect the players' performance abilities. The main findings are as follows:

The direct effect of training intensity on performance ability: The study found that moderate training intensity has a significant positive effect on improving the performance ability of the contestants ($\beta = 0.287$, $p = 0.001$). This is consistent with the results of Smith (2019) and Huang et al. (2021), indicating that reasonable training intensity can effectively improve the physical fitness and technical performance of the contestants. However, excessive training intensity may cause overtraining syndrome, resulting in unstable performance of the contestants.

The mediating role of psychological resilience: Psychological resilience plays an important mediating role in the effects of training intensity and cultural literacy on performance ability. Psychological resilience enhances the indirect effects of training intensity and cultural literacy on performance ability by promoting emotional regulation and psychological recovery of athletes (the indirect effects are 0.200 and 0.207, respectively, $p < 0.001$). This is consistent with Tugade and Fredrickson (2004) on the key role of psychological resilience in stress management, further verifying the importance of psychological resilience in sports performance.

The impact of cultural literacy on performance ability: Cultural literacy has a significant positive impact on the contestants' artistic expression and performance appeal ($\beta = 0.362$, $p < 0.001$). This finding supports Liu's (2020) theory that cultural literacy improves contestants' artistic expression. A high level of cultural literacy can help contestants understand and interpret dance works more deeply, and improve the depth and appeal of their performances.

Interaction between training intensity, psychological toughness and cultural literacy: There is a significant interaction between training intensity, psychological toughness and cultural literacy, which affects the overall performance of the contestants. Studies have shown that only under appropriate training intensity can psychological toughness and cultural literacy maximize performance ability (as shown in Figure 4).

Figure 5.1. Interactive Effects of Training Intensity, Psychological Resilience and Cultural Literacy on Performance Ability

Variable combination	Performance ability score (mean)
High training intensity, high psychological toughness, high cultural literacy	4.812
High training intensity, low mental toughness, high cultural literacy	4.316
Low training intensity, high mental toughness, low cultural literacy	3.948
Low training intensity, low psychological toughness, low cultural literacy	3.523

Practical Application Suggestions: Optimizing Standard Dance Training Strategies

The researchers made the following recommendations to improve the performance of Chinese standard dancers :

Balanced training intensity: The training intensity should be set based on individual differences and adaptability of the athletes. Physical and mental fatigue caused by overtraining should be avoided, and the athletes' physical and technical performance should be optimized through scientific training plans, including intensity adjustment and recovery period arrangements.

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Enhance psychological resilience training: It is recommended to include psychological resilience training in the standard dance training plan, and improve the performance of contestants in high-pressure environments through meditation, mindfulness training, psychological counseling, etc. Special psychological resilience courses can be designed to help contestants learn stress management and emotion regulation strategies.

Improve cultural literacy education: Cultural literacy is a key factor in improving the artistic expression of contestants. It is recommended to enrich the cultural knowledge and artistic understanding of contestants through a variety of cultural courses and practices, such as dance history, art appreciation and cross-cultural exchange activities.

Application of comprehensive training model: Establish a comprehensive training model that combines physical, technical, psychological and cultural training to form an integrated training system to ensure the comprehensive development of players in all aspects and improve their overall performance ability.

Table 5.2. Recommendations For Optimizing Training Strategies for Ballroom Dancers

Training strategy	Specific measures	Expected Results
Balanced training intensity	Adjust your training load and include adequate recovery periods	Improve physical fitness and technical performance and reduce the risk of injury
Strengthening mental toughness training	Offer psychological resilience courses and psychological counseling	Improve psychological coping ability and stabilize competition performance
Improving cultural literacy education	Inclusion courses and cross-cultural activities	Improve artistic expression and dance appeal
Comprehensive training mode	Integration of physical, technical, psychological and cultural training	Comprehensively improve the overall quality and performance ability of the contestants

Research Limitations and Future Research Directions

Although this study has made important findings, it also has some limitations that need to be improved in future studies:

Sample limitation: The sample of this study mainly comes from Chinese standard dance players, which may not fully represent players from other regions or other dance forms. Therefore, future research can expand the sample range to include more players from different regions and cultural backgrounds to enhance the universality of the study.

Limitations of the self-report scale: This study used a self-report scale to collect data, which may have social desirability bias and self-report bias. Future studies can combine behavioral observation and physiological measurement to provide more objective data support.

Cross-sectional research design: This study is a cross-sectional study and cannot capture the causal relationship changes between variables. In the future, a longitudinal research design can be adopted to track the changes in the training and performance of the contestants to better understand the long-term effects of training intensity, psychological resilience, and cultural literacy on performance ability.

Complex interactions between variables: This study mainly focused on the independent and mediating effects of training intensity, psychological resilience, and cultural literacy. Future research can further explore more complex interactions between these variables and other potential influencing factors.

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Based on the findings of this study, the following policy recommendations are put forward to promote the further development of Chinese standard dance:

First, develop a comprehensive player development plan. This plan includes a comprehensive development plan for physical fitness, technical skills, psychological quality and cultural literacy to ensure that players are trained in a balanced manner in all aspects. The government and dance associations can formulate relevant guiding policies to support the multi-dimensional development of training institutions and players. Secondly, strengthen the mental health support system, especially in training centers and dance schools to establish a mental health support system, provide psychological counseling and consulting services for players, and help them better cope with the pressure of training and competition. In addition, promote cultural literacy education, for example, promote cultural literacy education nationwide, incorporate it into the core courses of dance training, and enhance players' cultural understanding and artistic expression. The most important thing is to support the research and promotion of innovative training methods. In the future, it is necessary not only to support innovative research on standard dance training, but also to encourage the development of new training methods and tools to improve training results and player performance.

Through the implementation of the above policies, the overall level of Chinese standard dance will be further improved and the international competitiveness of the players will be significantly enhanced.

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