

Analysis of the Influencing Factors on the Development of Rural Folk Sports Culture in the Context of Rural Revitalization --Structural Equation Modeling (SEM) based studies

Xinyun Zhou¹, Yan Jiang^{2*}

¹Tianjin Agricultural University, Tianjin, China

^{*}Corresponding author: jiangy66@163.com

Abstract

The development of rural folk sports culture is an important part of the rural revitalization strategy, which is of great significance to the prosperity of rural culture and the enhancement of rural cohesion. With the help of structural equation modeling (SEM), this paper comprehensively applies various research methods to explore the influencing factors of rural folk sports culture development. By constructing a scientific and reasonable theoretical model, we quantitatively analyze the complex relationship between the potential variables and reveal their inherent mechanisms. It is found that multidimensional factors are intertwined and work together in the development process of rural folk sports culture. Based on this, systematic development strategies are proposed in terms of industrial integration, scientific and technological empowerment, and cultural cultivation, to provide new ideas for the high-quality development of rural folklore sports culture and help villages achieve cultural prosperity and comprehensive revitalization.

Keywords: Rural revitalization; Folk sports culture; Influencing factors; Structural Equation Modeling (SEM)

Suggested citation: Zhou, X., & Yan, J. (2025). Analysis of the Influencing Factors on the Development of Rural Folk Sports Culture in the Context of Rural Revitalization --Structural Equation Modeling (SEM) based studies. *Journal of Modern Social Sciences*, 2(2), 170–176. <https://doi.org/10.71113/JMSS.v2i3.207>

Introductory

Promoting the comprehensive revitalization of the countryside is an intrinsic requirement and a necessary path to the realization of Chinese-style modernization, covering a wide range of aspects, including economic, cultural, ecological, and governance aspects. As an important part of rural revitalization, rural cultural revitalization is not only the spiritual impetus for rural development, but also an important way to enhance rural cohesion and cultural confidence. Folk sports culture, as one of the core contents of rural culture, carries rich historical heritage, local sentiment and social value, and is an important carrier of rural cultural inheritance and development. In recent years, with the in-depth promotion of the strategy of rural revitalization, rural folk sports culture has gradually become a hot topic of concern in the academic and practical fields. However, its development faces many challenges, such as insufficient cultural identity, lack of inheritance subjects, low industrialization level, and other problems. How to effectively promote the high-quality development of rural folk sports culture has become an important topic to be solved.

Existing studies generally agree that rural folk sports culture has multiple values in rural revitalization. Lou Gao Yang et al. (2024)^[1] point out that folklore sports culture can promote rural industrial prosperity, help ecological livability, create civilization of countryside, advance effective rural governance, and help to promote affluent life. Peng Jianmin and Han Keli (2024)^[2] further emphasize its significance in promoting rural economic development, enhancing social cohesion, passing on rural culture, and improving residents' physical and mental health. However, the development of rural folk sports culture still faces many difficulties. Lou Gao Yang et al. (2024)^[1] pointed out that the problems of unsound local supporting policies, unoptimized selection of inheritance contents, unstable succession of inheritance talents, and

insufficient innovation of inheritance methods constrain its development. Sheng Keqing and Guo Lili (2024)^[3], on the other hand, analyzed the problems of weakening cultural identity, fading of rituals, slow development of organization, lack of capable people, and low level of industrialization from the theoretical level. Zhao Qingqing (2023)^[7] takes dragon and lion dance as an example, and further points out the specific problems such as insufficient cultural identity, lack of inherited subjects, and low industrialization level. In response to these dilemmas, scholars have proposed a variety of development paths and strategies. Lou Gao Yang et al. (2024)^[1] proposed the paths of improving policy support, digging deep into inheritance resources, building bridges of talents, and innovating inheritance methods. Sheng Keqing and Guo Lili (2024)^[3] proposed to explore the new path of "educating people through literature", explore the new advantages of "emotional energy", and create a new pattern of "pluralistic co-rule" and other strategies. The study also proposes to explore the new path of "educating people through literature", explore the new advantages of "emotional energy", and create a new pattern of "multi-government". Dong Fengwei et al. (2024)^[4] proposed to promote the high-quality integrated development of folk sports industry from the perspective of industrial integration. Ni Jun et al. (2024)^[5] proposed the modern development path of "changing the organization mode and retaining the core form and connotation" through case studies. Liu, Tanqing et al. (2023)^[6] proposed the practical paths of strengthening policy support, improving village self-governance organizations, and enhancing cultural identity from the perspective of rural governance.

Although some studies have comprehensively explored the value, dilemma, path and influencing factors of rural folk sports culture, most of them focus on qualitative analysis and lack quantitative

research on the complex relationship between influencing factors. On the basis of the above research results, this paper, with the help of Structural Equation Modeling (SEM), comprehensively applies various research methods to systematically analyze the influencing factors of the development of rural folk sports culture, constructs a scientific and reasonable theoretical model, quantitatively analyzes the complex relationship between the potential variables, reveals its inner mechanism, and puts forward a systematic development strategy in order to promote contribute to the the high-quality development of rural folk sports culture, and to prosperity and development of rural folk sports culture. It provides theoretical support and practical reference for the prosperity and comprehensive revitalization of rural folk sports culture.

Scale design and research hypotheses

Scale design

Dimension construction

In determining the dimensions of the relevant research results were fully referred to. Many scholars have focused on the policy environment, social participation, economic factors, cultural connotations, and scientific and technological development in their previous studies, which are all closely related to the inheritance and development of folk sports culture and have far-reaching impacts. Based on these research results, the questionnaire was designed around five dimensions: political support, social participation, economic development, cultural value, and scientific and technological application of folklore sports culture. In this study, these five dimensions were chosen to analyze the influencing factors in depth, in order to reveal the internal mechanism of folk sports culture inheritance and development comprehensively and precisely. A Likert scale was used to collect respondents' knowledge and opinions on the influencing factors of folklore sports culture inheritance.

Sample Selection

Residents of different ages, genders, occupations and living areas were selected as samples to ensure that the samples were representative. Stratified sampling was used to cover residents in urban, suburban and rural areas in order to gain a comprehensive understanding of different groups' knowledge of and participation in folklore sports culture.

Issuance and recovery

The questionnaires were distributed through the online platform and field visits, with a total of 370 questionnaires distributed and 315 returned, of which 308 were valid questionnaires, representing a recovery rate of 85%. Distributing the questionnaires through the online platform facilitated the expansion of the scope of the survey, while field visits ensured the quality of the questionnaires and increased the recovery rate of valid questionnaires.

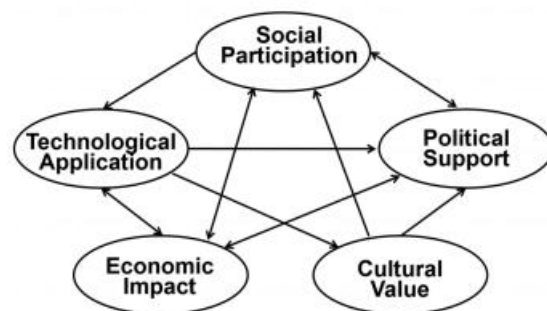
Research hypotheses

This paper proposes a model for analyzing the factors influencing the development of folk sports culture as shown in Figure 1. In the context of rural revitalization strategy, the inheritance and development of folk sports culture are influenced by several factors. This study summarizes these influencing factors into five main dimensions: political support, social participation, economic development, scientific and technological application, and cultural value.

Political support provides the necessary policies and funding and is the cornerstone of cultural transmission. Social participation, on the other hand, increases the vitality of cultural activities and facilitates their dissemination. Economic development drives economic growth through cultural activities and provides the material basis for transmission. Scientific and technological

applications utilize modern technology to increase the visibility and attractiveness of culture. Finally, cultural value is the core of inheritance, which enhances social recognition of folk sports culture. These factors promote each other to form a virtuous circle, jointly promoting the inheritance and development of folk sports culture and injecting vitality into rural revitalization.

Fig. 1 Analytical model of influencing factors for the development of folk sports culture



Based on the previous research, this paper proposes the following hypotheses for the relationship.

- H1: Political support is positively related to social participation.
- H2: Political support is positively related to economic development.
- H3: Social participation is positively related to political support.
- H4: Social participation is positively related to economic development.
- H5: Social participation is positively related to the use of science and technology.
- H6: There is a positive relationship between economic development and political support.
- H7: There is a positive relationship between economic development and social participation.
- H8: There is a positive relationship between economic development and the application of science and technology.
- H9: Cultural values are positively related to political support.
- H10: Cultural values are positively related to social participation.
- H11: There is a positive relationship between technology adoption and political support.
- H12: There is a positive relationship between the use of science and technology and economic development.
- H13: There is a positive relationship between the use of technology and cultural values.

Results of the questionnaire and statistical analysis

Reliability test and testability factor analysis

The Cronbach's Alpha reliability test yielded an overall Cronbach's Alpha value of 0.883 for the questionnaire scale, which indicates that the overall reliability of the questionnaire's scale is high and that the questionnaire was designed with good internal consistency. Based on the Cronbach's a value and the fit index, topic reliability (SMC), average variance extraction (AVE) and combined reliability (CR) provided in the validated factor analysis to determine the fit status of the model to the data, which provides a basis for judging the scale reliability and validity of the study, the detailed results are shown in Table 2.

Validation factor analysis showed that the unstandardized coefficients for each scale entry were significant ($p < 0.001$), and the standardized coefficients were all greater than 0.5, indicating that the question items of the latent variables were well represented. In terms of reliability indicators, the combined reliability (C.R.) of the five dimensions was greater than 0.7; in terms of average variance extraction (AVE), most dimensions were greater than or

close to 0.5, with only the social participation dimension being slightly lower. Overall, the research scales have good reliability and some convergent validity.

Table1. Dimensions and Indicators

Dimension	Item	Indicator
Political Support	1. Do you think the local government's policies for the protection of folk sports culture are comprehensive?	PS1
Political Support	2. How do you evaluate the local government's emphasis on folk sports culture?	PS2
Political Support	3. What is your evaluation of the scale and quality management of folk sports-related activities?	PS3
Social Participation	1. How would you assess the attention from public opinion and media on folk sports culture?	SP1
Social Participation	2. How do you evaluate the role of folk sports culture activities in enhancing community cohesion?	SP2
Social Participation	3. What is your assessment of the joint participation of various sectors in folk sports culture activities?	SP3
Economic Impact	1. Do you think the financial investment in folk sports culture is sufficient?	EI1
Economic Impact	2. How do you evaluate the cooperation effect between folk sports culture and related industries?	EI2
Economic Impact	3. What is your evaluation of the contribution of folk sports culture activities to local economic development?	EI3
Cultural Value	1. How important do you think folk sports culture is in the inheritance of national culture?	CV1
Cultural Value	2. How do you evaluate the role of folk sports culture in promoting cultural diversity?	CV2
Cultural Value	3. What is your evaluation of the impact of the fitness-for-all trend on folk sports culture?	CV3
Technological Application	1. How do you assess the application effect of intelligent devices or management in folk sports culture?	TA1
Technological Application	2. Have you ever used social media platforms like WeChat to book venues or purchase tickets for folk sports activities? If so, please evaluate your experience.	TA2
Technological Application	3. What is your evaluation of the promotional effect of digital dissemination on folk sports culture?	TA3

Table2.Summary of Confirmatory Factor Analysis (CFA) Results

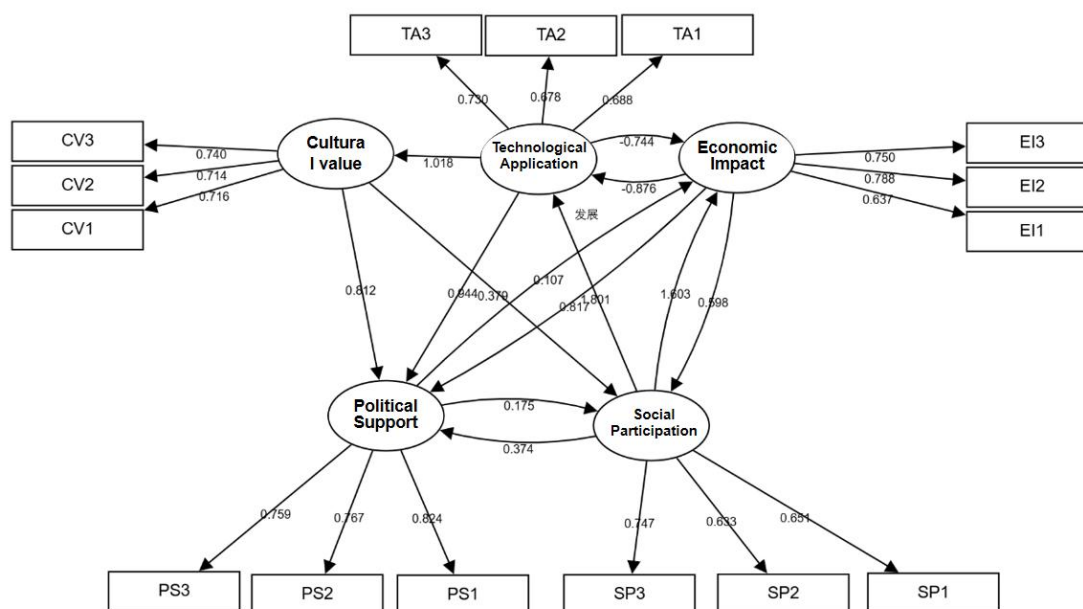
Dimension	Indicator	std.	unstd.	S.E.	P	C.R.(t-value)	SMC	C.R.	AVE
Political Support	PS1	0.321	0.258	-	-	-	0.679		
Political Support	PS2	0.411	0.398	0.096	0	10.651	0.589	0.827	0.614
Political Support	PS3	0.425	0.405	0.095	0	10.523	0.575		
Social Participation	SP1	0.576	0.467	-	-	-	0.424		
Social Participation	SP2	0.603	0.545	0.131	0	7.774	0.397	0.717	0.459
Social Participation	SP3	0.442	0.417	0.138	0	8.976	0.558		
Economic Impact	EI1	0.596	0.592	-	-	-	0.404		
Economic Impact	EI2	0.376	0.39	0.146	0	8.667	0.624	0.771	0.531
Economic Impact	EI3	0.436	0.412	0.137	0	8.369	0.564		
Cultural Value	CV1	0.487	0.44	-	-	-	0.513		
Cultural Value	CV2	0.491	0.344	0.098	0	8.938	0.509	0.767	0.523
Cultural Value	CV3	0.452	0.364	0.105	0	9.242	0.548		
Technological Application	TA1	0.533	0.459	-	-	-	0.467		
Technological Application	TA2	0.546	0.441	0.112	0	8.52	0.454	0.738	0.484
Technological Application	TA3	0.47	0.365	0.111	0	9.138	0.53		

Analysis of structural equations

On the basis of the model fit and the measurement model have reached the understanding effect, the path analysis model of the influencing factors of folklore sports culture inheritance and

development derived by using SPSSAU is shown in Fig. 2. According to the evaluation results of the model fit Table 3, it can be seen that the model fit effects have reached the standard, which indicates that the model fit is good.

Fig. 2 Diagram of model results



The standardized path coefficient in structural equation modeling is an important indicator of the degree of direct or indirect influence between variables. Its value ranges from 0 to 1. If the path coefficient value is between 0 and 0.3, the hypothesis is considered to be weakly supported. If the path coefficient value is 0.3~1, the hypothesis is considered to be strongly supported.

As shown in Figure 2, in this model of influencing factors, standardized regression coefficients are used to resolve the relationship between variables, based on the path coefficient results of the relationship model assumed that H3, H4, H6, H7, H9, H10, H11, and H13 passed the validation, the assumption is established; H1, H2, H5, H8, and H12 did not pass the validation and the assumption is not established, and the results are shown in Table 4.

Conclusions and recommendations

Conclusion

Based on the inheritance and development of folk sports culture, this paper extracts five major categories of influencing factors, namely, political support, social participation, economic development, cultural value, and scientific and technological application, and conducts a systematic empirical study, from which it constructs a structural equation model of influencing factors for the inheritance and development of folk sports culture.

The development of folklore sports culture is subject to the combined effects of multiple factors, including political support, social participation, economic development, cultural values and the application of science and technology. As shown in Table 4, the

standardized coefficient of social participation on economic development reaches 1.603, indicating that it has a significant role in promoting economic input in folklore sports and culture; the standardized coefficient of economic development on political support is 0.817, indicating that economic development can to a certain extent promote political support for folklore sports and culture; the standardized coefficient of cultural value on political support is 0.812, indicating that the enhancement of cultural value can effectively enhance government support for folklore sports and culture; the application of science and technology on cultural value has a comprehensive role. The standardized coefficient of cultural value on political support is 0.812, indicating that the enhancement of cultural value can effectively strengthen the government's support for folklore sports culture; the standardized coefficient of science and technology application on cultural value is 1.018, implying that the application of science and technology can vigorously promote the inheritance and promotion of folklore sports cultural value. These positive relationships provide an important path and direction for promoting the development of folk sports culture. It is possible to obtain more political support and thus promote the prosperity of folk sports culture by increasing social participation, promoting economic investment in folk sports culture, and exerting the leading role of cultural values and the helping role of science and technology applications.

However, the fact that some of the hypotheses were not supported also suggests some limitations of the study. For example, the hypothesis of a positive relationship between political support and social participation was not supported, with a standardized coefficient of only 0.175; the standardized coefficient of 0.107 for

political support and economic development also failed to confirm the positive relationship. The weak correlation of these hypotheses may be based on case study research, where respondents focused more on superficial phenomena. For example, respondents may generally believe that social participation plays a key role in the development of folklore sports and culture, and that economic development can provide strong support for this process.

In fact, in the context of comprehensive economic and social development in contemporary China, political support, as a key driving factor, runs through all aspects of production, life, economy, society, culture and ecological construction, and plays a fundamental, global and strategic role in top-level design, resource allocation and policy guidance, etc. Its influence not only radiates to all corners of the society, but also continues to exert force in the long-term development process, shaping the basic pattern and direction of development in various fields. Its influence not only radiates widely to all corners of society, but also continues in the long-term development process, shaping the basic pattern and direction of development in various fields. Although the results of the questionnaire survey do not fully verify this viewpoint, it does not negate the importance of political support in the development of folklore sports and culture.

Therefore, in the countermeasure suggestions in this paper, the actual problems reflected in the questionnaire cases are fully considered, and the multidimensional role of policy support in promoting the inheritance and development of folk sports culture is also emphasized. Future research should further deepen the exploration of the complex relationship between political support

and other factors to provide a more solid theoretical basis for the formulation of relevant policies. Future research needs to further optimize the research design, expand the sample scope, improve the measurement of variables, and deeply explore the potential relationship between variables, especially focusing on the possible mediating and moderating mechanisms. At the same time, in the development practice of folklore sports culture, the complex interactions among various factors should be fully considered, and more targeted and effective development strategies should be formulated to promote the sustainable and healthy development of folklore sports culture.

Table3.Model Fit Indices Evaluation Results

Commonly Used Indices	χ^2/d f	GFI	RMSE A	RMR	CFI	NNF I
Criteria for Acceptability	<3	>0.9	<0.10	<0.05	>0.9	>0.9
Values	1.99	0.91	0.072	0.045	0.94	0.922
		1			3	

Table4.Structural Equation Model Path Coefficient Test Results

Hypotheses	Path Relationship	Standardized Coefficient	Unstandardized Coefficient	p-value	Result
H1	Political Support→Social Participation	0.175	0.139	0.490	Not
H2	Political Support→Economic Impact	0.107	0.092	0.693	Not
H3	Social Participation→Political Support	0.374	0.472	0	Supported
H4	Social Participation→Economic Impact	1.603	1.739	0	Supported
H5	Social Participation→Technological Application	1.801	1.966	0.078	Not
H6	Economic Impact→Political Support	0.817	0.95	0	Supported
H7	Economic Impact→Social Participation	0.598	0.551	0.002	Supported
H8	Economic Impact→Technological Application	-0.876	-0.881	0.414	Not
H9	Cultural Value→Political Support	0.812	0.881	0	Supported
H10	Cultural Value→Social Participation	0.379	0.326	0.006	Supported
H11	Technological Application→Political Support	0.944	1.091	0	Supported

H12	Technological Application→Economic Impact	-0.744	-0.74	0	Not
H13	Technological Application→Cultural Value	1.018	1.084	0	Supported

The model fitting and hypothesis testing results of the structural equation model show that through the synergistic efforts of social participation, science and technology application and other factors, it can significantly enhance the people's attention to and love of folklore sports culture, and then create a strong atmosphere of folklore sports culture in society, which is conducive to fostering the people's awareness of active inheritance and promoting the vigorous development of folklore sports culture.

Recommendations

The ultimate purpose of the investigation in this paper is to make suggestions for the inheritance and development of folklore sports culture, and based on the results obtained from the previous research and analysis, suggestions are made in the following five areas.

Promoting industrial integration and strengthening economic support

Social participation plays a significant role in promoting economic development, which fully demonstrates that the inheritance and development of folklore and sports culture are closely related to economic activities. For regions that want to build folk sports culture and realize rural revitalization, it is necessary to promote the deep integration of folk sports culture with related industries and build a synergistic development mechanism. The government should actively guide the cross-border cooperation between folk sports culture and rural tourism, special culture and innovation, rural education and other industries, combined with local characteristics of folk sports projects, such as Guizhou village super, village BA, etc., to create a folk sports culture brand with a distinctive local identity, to form an industrial chain covering the organization of events, tourism experience, cultural product sales and other links, to enhance the impetus for economic development. At the same time, the use of policy guidance and market mechanism, to attract social capital investment, to promote the scale of folk sports and culture industry, market-oriented development, for rural economic growth to inject new vitality.

Strengthening scientific and technological empowerment to enhance cultural values

Scientific and technological innovation is a key force in promoting the inheritance and promotion of folk sports and cultural values. When developing folk sports culture, local villages should strengthen the application of science and technology to help modernize and transform. Using virtual reality (VR), augmented reality (AR) and other digital technologies, local folk sports culture is recorded, preserved and vividly displayed in an all-round way, so that visitors can feel the charm of folk sports in an immersive way. Technology integration mechanism is an important support for the modernization and development of folk sports culture.^[5] With the help of the Internet platform, broaden the dissemination channels of

folk sports culture and expand its influence in the country and even globally. Develop intelligent folk sports and cultural products, such as online folk sports teaching courses and interactive folk sports games, to enhance user experience. The government has increased financial support for scientific and technological innovation in folklore sports culture, encouraged cooperation between universities and scientific research institutions and local enterprises, and promoted the organic coupling of science and technology with folklore sports culture.

Optimizing social participation and stimulating endogenous dynamics

The active participation of multiple subjects is a core element in the development of folklore sports and cultural heritage. Folk sports help rural governance needs to strengthen policy support and institutional support, improve village self-governing organizations, form cultural consciousness and enhance cultural identity.^[6] Villages around the world should build a development model in which the government, social organizations, enterprises and villagers participate in a synergistic way. Through policy guidance and resource support, the government encourages social organizations and enterprises to participate in the protection and development of folklore sports and culture, such as introducing enterprises to invest in the location of folklore sports and cultural events. Through organizing folk sports and cultural festivals and carrying out village-level events, villagers' knowledge of and participation in local folk sports and culture can be enhanced. Folk sports categorization governance should focus on the consultation and common governance of multiple subjects, and promote the transformation of the main body of governance from the "government subject" to the "multiple subjects".^[8] Establish a sound social participation incentive mechanism, set up a folk sports culture inheritance fund, and reward individuals and groups with outstanding performance in the protection and innovation of folk sports culture.

Deepening cultural leadership and enhancing political support

The enhancement of cultural values can effectively increase government support for folklore sports culture. Villages in all regions should incorporate folklore and sports culture into local cultural development strategies and formulate special protection and development plans. Through local legislation and policy support, the status and role of folklore and sports culture in rural cultural revitalization should be clarified. Strengthen the international dissemination of folklore sports culture, organize rural folklore sports performance teams to participate in international cultural exchanges, and enhance international influence so as to gain more attention and support from the government. The government has increased its investment in research on folklore sports culture and supported the theoretical exploration and practical innovation of local folklore sports culture by academics.

Acknowledgments

The authors thank the editor and anonymous reviewers for their helpful comments and valuable suggestions.

Funding

This study was supported by grants from the Tianjin National College Students' Innovation Training Program (202410061020); the Major Social Science Project of Tianjin Municipal Education Commission (2021JWZD33).

Institutional Review Board Statement

Not applicable.

Informed Consent Statement

Not applicable.

Data Availability Statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Statements and Declarations

Statements and Declarations

No funding was received for conducting this study. The present study has no relevant financial or non-financial interests to disclose.

Publisher's Note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

Author Contributions

Not applicable.

About the Authors

Xinyun Zhou

Tianjin Agricultural University, Tianjin, China

Yan Jiang

Tianjin Agricultural University, Tianjin, China

References

- [1] Lou Gaoyang, Li Zhen, Xiong Jincai, Wang Yingjie, Zhang Suping, Zhao Huimin, Nie Qifan. Research on the Inheritance of Village Folk Sports under the Background of Rural Revitalization[J]. Sports Culture Guide, 2024, (10): 7-13.
- [2] PENG Jianmin, HAN Keli. Explanation of the significance of folk sports culture in contemporary rural revitalization[J].

Contemporary Sports Science and Technology, 2024, 14(28): 134-136+142.

- [3] Sheng Keqing, Guo Lili. Theoretical logic and realization path of folk sports for rural revitalization[J]. Sports Research and Education, 2024, 39(04): 1-7.
- [4] DONG Fengwei, TANG Xiaobo, GE Shuang, WANG Xiang. Opportunities, Values and Paths of Folk Sports for Rural Revitalization in the New Era[J]. Journal of Guangdong Technical Normal University, 2024, 45(03): 79-85.
- [5] NI Jun, TU Chuanfei, WU Lifang, HUANG Qinglin. Innovative Development of Folk Sports and Cultural Organization Models - A Case Study Based on Dragon Lantern Tour in L Village, Fujian Province[J]. Journal of Wuhan Institute of Physical Education, 2024, 58(04): 65-71.
- [6] LIU Tanqing, HE Qiling, XIA Jianchao, PAN Jiangjie. Historical Examination and Practical Path of Folk Sports Helping Rural Governance Develop in High Quality[J]. Sports Science, 2023, 43(12): 54-61.
- [7] Zhao Qingqing. The Dilemma and Development Path of Folk Sports Culture in the Context of Rural Revitalization--Taking Dragon and Lion Dance as an Example[J]. Sports World, 2023, (11): 24-26.
- [8] TAN Zhigang. Internal Logic, Theoretical Framework and Optimization Path of Classified Governance of Village Folk Sports in the Perspective of Rural Revitalization--A Field Study Based on Dragon Boat Racing in Biancheng[J]. Hunan Social Science, 2023, (04): 132-139.