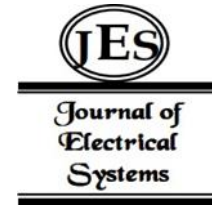


<sup>1</sup> Yuanyuan Dai  
<sup>2\*</sup> Heshuang Ye  
<sup>3</sup> Chengcheng Wu  
<sup>4</sup> Jie Zhang  
<sup>5</sup> Zhenhong Zhao

# Research on The Times Value of Village Public Sports Space Planning: Theoretical Logic, Practical Approach and Big Data Application Exploration in The Background of Rural Revitalization



**Abstract:** - It is the key to the implementation of the rural revitalization strategy and the inevitable way to use big data to help the spatial planning of village sports, improve the efficiency of spatial allocation of resources, and promote the high-quality development of rural sports. This paper mainly adopts research methods such as literature materials and logical analysis to explore the Times value of village public sports space planning, expound the theoretical logic and practical difficulties of village public sports space planning, and then propose practical approaches and big data application exploration. The research finds that the Times value of village public sports space planning is reflected in the aspects of increasing the effective supply of public sports space, stimulating the spillover value of public sports space, and satisfying the ardent yearning for a better life. Based on the theoretical logic of continuous co-construction, co-governance and sharing, dynamic improvement of suitable adaptation, long-term improvement of convenience and safety, and steady integration into livability and business. It is found that the planning of village public sports space is faced with such realistic difficulties as the imbalance of resource supply standards and allocation among villages, the weakening of residents' participation in planning, the lack of guidance in technical operation and planning layout, and the insufficient coupling degree between public sports space and village environment. It is proposed that the planning of village public sports space should follow the practice path of overall planning of inter-village sports service resource supply, mobilizing residents' enthusiasm to participate in spatial planning, enabling the layout and location of sports space with digital technology, and forming diversified public sports service supply.

**Keywords:** Rural Revitalization, Village Sports, Spatial Planning, Big Data Application, Time Value

## I. INTRODUCTION

Some scholars believe that: Spatial forms are places where people participate in the regulation of order differences and hierarchies, which not only cover the otherness and inequality relationship between villages and urban centers, but also involve the otherness and evaluation hierarchical forms of rural space and individual subjectivity "inside". In the context of the current application of big data, we can understand these spatial forms more accurately through data analysis and mining [1-3]. Villages are not only an important physical space for the reproduction, life and production of the Chinese nation, but also a unique "cultural space"[4]. With the development of new rural construction and rural revitalization strategies, scholars have gradually enhanced their research on village space. As an integral part of village cultural space, with the development of village economy and the improvement of farmers' material living standards, sports have gradually been valued for its unique role in village farmers' lives. Village public sports space planning is the systematic construction, comprehensive improvement and reasonable allocation of rural public sports resources, so as to give full play to the value objectives of rural public sports resources and promote rural development, rural construction and rural governance. In other words, the essence of village public sports space planning is the spatial allocation and layout planning of rural public sports resources in different dimensions[5]. The "Rural Revitalization Strategic Plan (2018-2022)" clearly states that "improve the rural public sports service system and promote the full coverage of village fitness facilities", and the "Opinions on Comprehensively promoting the key work of rural revitalization in 2023" will also "accelerate the development of modern rural service industries such as culture and sports." Continue to strengthen the construction of rural infrastructure "as an important work of rural revitalization [6]. At the same time, some meetings also proposed "comprehensively promoting rural revitalization, coordinating the layout of rural infrastructure and public services", "improving the level of rural infrastructure and public services",

<sup>1</sup> Physical Education Institute, Chizhou University, Chizhou, Anhui, China

<sup>2</sup> Physical Education Institute, Chizhou University, Chizhou, Anhui, China

<sup>3</sup> Business School, Chizhou University, Chizhou, Anhui, China

<sup>4</sup> Physical Education Institute, Chizhou University, Chizhou, Anhui, China

<sup>5</sup> Physical Education Institute, Chizhou University, Chizhou, Anhui, China

\*Corresponding author: Heshuang Ye

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and "improving the public service system for national fitness and promoting the construction of social sports venues and facilities"[7]. It can be seen that the planning of village public sports space is a deep fit between rural culture and natural environment, and also the value orientation of government policies, public resources and public requirements. To do a good job in planning village public sports space is a realistic requirement for optimizing the allocation of rural public sports resources, strengthening rural infrastructure and public service level. It is also the macro-decision-making and micro-practice of effectively integrating rural cultural form and cultural value.

From the current situation of village public sports spatial planning, due to the lack of overall awareness of spatial planning, lagging planning technology and low integration with the natural environment, there are still some problems in the planning of village public sports spatial planning in China, such as the weakening of sports facilities, the weakening of participants and the lack of richness of sports cultural activities. Moreover, the allocation of rural public sports resources has problems such as organization, region and factor imbalance, which seriously affects the improvement of rural infrastructure and public service level and the high-quality development of rural public sports[8]. Based on this, this paper uses literature, logical analysis and other methods to explore the theoretical logic of village public sports space planning under the rural revitalization strategy, and finds out the practical problems and difficulties of village public sports space planning. It is proposed that the planning of village public sports space should follow the practice path of overall planning of inter-village sports service resource supply, mobilizing residents' enthusiasm to participate in spatial planning, enabling the layout and location of sports space with digital technology, forming diversified public sports service supply, and exploring the application of big data. In order to provide theoretical basis and reference for the high-quality planning of village public sports space under the strategy of rural revitalization

## II. THE TIMES VALUE OF VILLAGE PUBLIC SPORTS SPACE PLANNING UNDER THE RURAL REVITALIZATION STRATEGY

### A. Make up for the Shortcomings of Public Services and Increase the Effective Supply of Public Sports Space

Village construction requires a deep understanding of rural population, rural development and the emotional mode of contact with them. Government power should not only invest in state institutions, but also be inclined to village construction[9]. According to the data of the 2022 National Sports Venues Statistical survey, the national sports venues area in 2022 is 3.702 billion square meters, and the per capita sports venues area is 2.62 square meters. Specifically at the village level (as shown in Figure 1), in 2022, the area of village committee sports venues will be 771 million square meters, the rural permanent population will be 491.04 million, and the per capita sports venue area will only be 1.57 square meters. There is still a big gap between it and the construction target of "national per capita sports venue area of 2.6 square meters or more by 2025" proposed in the implementation Plan for the National Fitness Facilities to make up for the shortcomings during the 14th Five-Year Plan Period. Optimizing the spatial planning of rural public sports has gradually become an effective supply of public sports space. It is also an important measure to promote the construction of a higher level of national fitness public service system and accelerate the construction of a sports power[10,11].

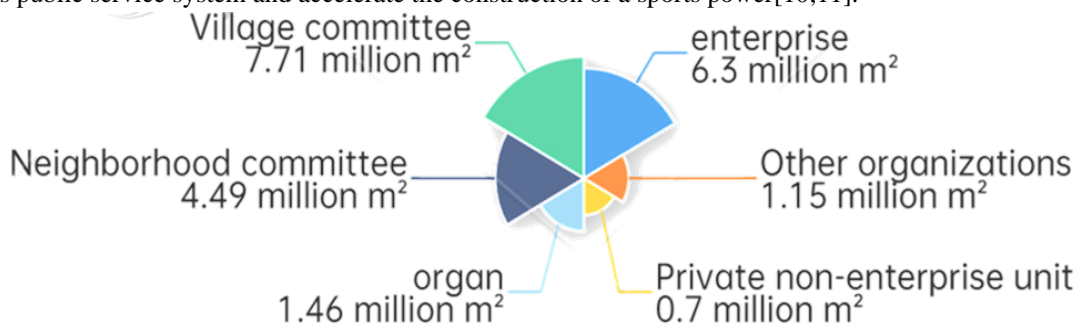


Figure 1: National Sports Venues in 2022

At the same time, the planning of village public sports space should adhere to the green, low-carbon and practical construction concept, implement the planning concept of "covering the whole people, innovation-driven and green development", constantly optimize the allocation of rural public sports resources, expand the supply of rural public sports services, and form a rural public sports service network with abundant supply, reasonable layout and perfect functions[12]. In order to achieve the above goals, it is necessary to make concerted efforts between macro-level guidance and micro-level operational guidance, use new technologies to improve the utilization efficiency of rural public sports resources, expand the service scope of rural public sports resources,

and fully integrate the planning of village public sports space with the natural environment, that is, the planning of village public sports space should be extended from the physical level to the human-object interaction level. Pay attention to the reproduction and reuse of rural public sports resources such as natural resources and humanistic values, constantly activate the new value of village public sports space, meet the diversified and personalized needs of residents for sports activities, and make up for the shortcomings of rural public sports services.

#### *B. Guide the Construction of Beautiful Countryside and Activate the Spillover Value of Public Sports Space*

Village public sports spatial planning and rural construction are interconnected and interdependent. The Rural Construction Action Implementation Plan clearly states that rural construction is an important task in the implementation of the rural revitalization strategy and an important part of the national modernization drive, and the planning of village public sports space is the focus of rural public infrastructure construction[13]. The "Guiding Opinions on Promoting the High-quality Development of Rural Sports in the 14th Five-Year Plan" pointed out that "the construction of rural public fitness facilities should be included in the five-year action plan to make up for weaknesses in the construction of local fitness facilities, accelerate the improvement of the network of rural public fitness facilities, and improve the utilization rate of site facilities"[14-16]. It can be seen that village public sports space planning is the guiding direction and strategic goal of macro policies at different levels, an important part of the implementation of rural revitalization strategy, and the core content of beautiful rural construction. Therefore, it is necessary to activate the spillover effect of village public sports space based on the new situation and direction of rural construction. First, the planning of village public sports space must pay attention to the construction of village appearance, repair the relevant areas that are not set off by the spatial order, deeply integrate the construction of sports venues and the renewal of sports facilities with the natural landscape environment, and at the same time, the village public sports space can become a symbol of the village appearance. Second, the improvement of land utility is the key to the planning of village public sports space. The transformation and development of the original village public sports space can improve the utilization efficiency of land resources, and at the same time, the organic combination of land ecological restoration and public sports space planning can effectively improve the efficiency of land occupation by village public sports space. Third, the planning of public sports space in villages needs to create highlights and characteristics, shape a unique rural sports atmosphere and brand, stimulate residents' enthusiasm and vitality to participate in sports, and guide the planning of public sports space to become an accelerator of rural drainage and rural construction[17].

#### *C. Shaping the Space Community to Meet the Ardent Yearning for a Better Life*

Village public sports space planning is not limited to traditional physical space or geographical location planning, but is a comprehensive expression of rural culture, rural history and other social elements. Village public sports space should be a spatial subject that gathers different regional culture, different human history and other elements[18]. The Guiding Opinions on Promoting the High-quality Development of Farmer Sports in the 14th Five-Year Plan clearly point out that "focusing on the goal of comprehensively promoting rural revitalization and building a strong sports country and a healthy China, improve the public service system for farmer fitness and innovate the development mode of farmer sports"[19]. First of all, the planning of village public sports space should start from the overall development of residents and the overall progress of the countryside. By joining the village public sports space, residents can eliminate depression, loneliness, anxiety and other negative emotions, so as to help residents establish a good interpersonal communication environment and emotional link, that is, village public sports space should gradually become a collection of interactive and effective communication between residents. Secondly, the planning of village public sports space should highlight the importance of history and culture, reflect the residents' love for daily life and sports activities, and inject elements of The Times into the village public sports space to give new vitality, stimulate the residents' passion and love for daily life and sports, and constantly meet the needs and aspirations of the people for a better life. Finally, the planning of village public sports space is an important link to improve the "last mile" public service system, and it is also a key task to optimize the allocation of sports resources and strengthen the construction of public fitness facilities. A perfect village public sports space helps to enrich People's Daily life and solve the dilemma of people's sports venues. Promoting the construction of beautiful countryside is more precise and temperature-oriented[20].

### III. THEORETICAL LOGIC OF VILLAGE PUBLIC SPORTS SPATIAL PLANNING UNDER THE RURAL REVITALIZATION STRATEGY

#### A. Continuous Co-Construction, Co-Governance and Sharing to Meet the Reasonable Demands of Multiple Subjects

Promoting village public sports space planning, co-construction, co-governance and sharing is the basic path to beautiful rural construction under the rural revitalization strategy, and is also a key link to promote the implementation of the strategy of sports power and healthy China, and it is an inevitable choice to adapt to the changes of major social contradictions at home and abroad[21]. The co-construction, co-governance and sharing of village public sports space is a continuous dynamic process of change, and its essence is the joint construction, co-governance and sharing of achievements by multiple subjects of "government-social organization-market-residents". The joint construction, co-governance and sharing promote and integrate with each other, and jointly construct a space governance order with people as the main body. Enhance people's sense of gain, happiness and belonging (as shown in Figure 2). From the perspective of co-construction, the co-construction of village public sports space is the basis for the construction of a beautiful countryside and the implementation of the strategy of rural revitalization. The co-construction requires government departments to establish and improve the channels for public participation in the planning of village public sports space, extensively solicit residents' suggestions on the planning of village public sports space, and guide residents to participate in the whole process of the planning of village public sports space. And increase residents' sense of identity to the results of public sports space planning in villages. From the perspective of co-governance, co-governance of village public sports space is a means to build a beautiful countryside and implement the strategy of rural revitalization. Co-governance requires gathering the collective wisdom of residents, adhering to the diversification of the main body of village public sports space planning, and giving full play to the enthusiasm of residents to participate in the governance and supervision of village public sports space. Truly achieve democratic centralism and people-centered village public sports space, and by establishing a feedback mechanism and correction system for village public sports space, timely evaluate, adjust, transform and amend village public sports space according to residents' participation experience and real feelings, so as to form a new development pattern of co-construction and co-governance with the participation of the majority of residents. Improve the fit degree of village public sports space and residents' sports needs. From the perspective of sharing, the sharing of village public sports space is the goal of the construction of a beautiful countryside and the implementation of the strategy of rural revitalization. Sharing emphasizes that the results of co-construction and co-governance of village public sports space should be shared by the residents, safeguarding the legitimate sports rights and interests of the residents, highlighting the reflection of the concept of shared development in the planning of village public sports space, and forming an effective governance order of shared space. Continuously improve residents' happiness, security and sense of belonging from the village public sports space.

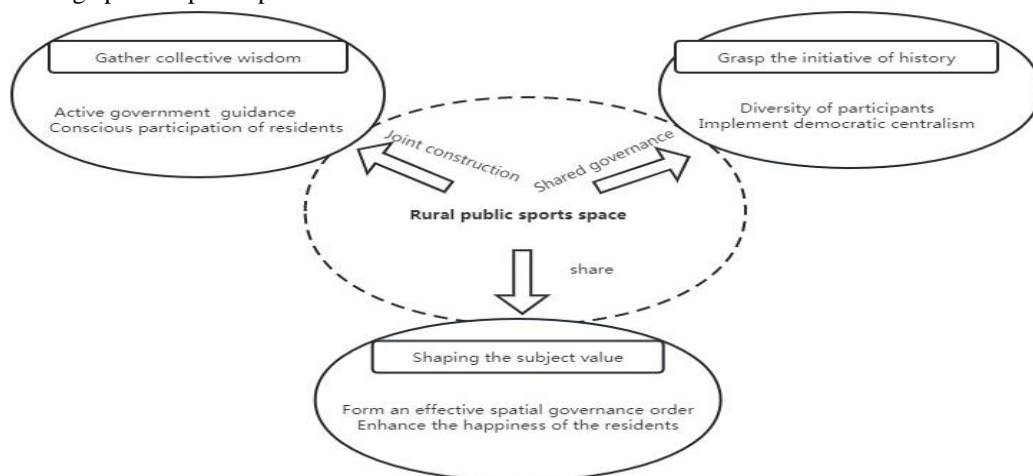


Figure 2: Theoretical Analysis Framework of Village Public Sports Space Co-Construction, Co-Governance and Sharing

#### B. Dynamically Improve Suitable Adaptation and Meet the Sports Needs of Residents

Adaptability is the key to the planning of public sports space in villages. It not only needs to meet the requirements of residents for the type, scale and structure of public sports space, but also needs to meet the

humanistic environment such as rural culture, rural history, village personnel distribution characteristics, and residents' activity rules, and more importantly, it needs to protect the ecological environment such as rural natural landscape. In other words, the planning of village public sports space should comprehensively consider the living environment, cultural environment and natural environment of residents, and coordinate the influence of different dimensions on the planning of village public sports space[22]. As one of the six counties of ancient Huizhou in southern Anhui Province, Yixian County of Anhui Province has six national famous historical and cultural villages and 44 traditional Chinese villages. In recent years, Yixian County of Anhui Province has vigorously implemented the "peasant sports and fitness project" and completed the construction of multiple rural sports infrastructure, such as national fitness plaza, small indoor fitness center, multi-functional ball playground, and demonstration morning and evening training points. We will innovate the "sports +" integrated development mode, constantly meet the basic needs of residents for rural sports facilities, and make up for the shortcomings of sports venue facilities and sports infrastructure construction during the implementation of the rural revitalization strategy. However, the fitness of rural sports facilities such as small indoor fitness centers and multi-functional ball stadiums is not high with the sports needs of residents, and the integration of the layout of public sports space in villages with the living habits and group distribution of residents needs to be improved. Based on this, the planning of village public sports space should focus on the residents' sports service demand as the core content, focusing on the suitability and adaptability of the supply of sports public service and the residents' sports demand. The planning of village public sports space should avoid homogeneity and homogenization, and should be based on the particularity of natural and cultural environment in different regions. According to local conditions, the type, scale and layout mode of village public sports space are formulated based on the differences of village spatial environment, so as to promote the construction of beautiful countryside and the high-quality development of rural sports undertakings.

#### *C. Long-term Improvement of Convenience and Safety, the Implementation of Rural Revitalization Strategy*

Convenience and safety are the basic bottom line of public sports space planning in villages, as well as the fundamental path to meet residents' different sports needs and yearning for a better life, and one of the effective ways to enhance residents' sense of security, happiness, sense of acquisition and sense of belonging[23]. First, the planning of village public sports space must adhere to the bottom line of ecological environmental protection, and integrate various sports forms such as rural fitness trails and sports venues into ecological environmental protection and restoration based on factors such as rural population gathering, mobility characteristics and residential regional characteristics, so as to form different types and levels of rural public sports life circles. Meet the needs of different residents for various kinds of sports, and improve the enthusiasm and initiative of residents to participate in sports. For example, Huaiyin District of Huaian City, Jiangsu Province, takes village-level sports infrastructure fitness as an important measure to promote the process of rural revitalization, and improves convenient and safe rural public sports services for residents by creating a "ten-minute fitness and leisure circle". In Nan 'an City, Fujian province, a "pocket sports park" is built by using scattered Spaces such as rural idle land and corner land to form a convenient and comfortable "15-minute leisure life circle". All of the above reflect the local conditions and reasonable layout of the planning of public sports space in villages. Second, the quality of supply and service level are important reference factors for the planning of public sports space in villages. For example, the corrosion and damage of sports facilities should be checked regularly and in time. In case of failure, timely maintenance and replacement should be carried out to ensure the safety and sense of gain of residents in sports activities and meet their yearning and pursuit for a better life. We will gradually implement the strategy of rural revitalization and the construction of a beautiful countryside. Therefore, the planning of village public sports space is not static, and it needs to implement a dynamic and long-term renewal mechanism, regularly maintain and repair rural public sports facilities, ensure that residents can use sports facilities with high safety factor, and improve the convenience and safety of rural public sports facilities.

#### *D. Steadily Integrate into a Livable and Suitable Business, and Promote the Construction of a Beautiful Countryside*

A report proposes to "coordinate the layout of rural infrastructure and public services, build a livable, viable and beautiful countryside", which requires that the planning of village public sports space should highlight the importance of village environmental protection and ecological restoration, and organically integrate and multifunction the planning of village public sports space with the village natural environment. With the help of village public sports space planning, we should promote the construction of livable, workable and beautiful villages. First, the planning of village public sports space should sort out the existing public sports resources such

as cultural squares, villagers' activity centers, and schools, and re-plan and integrate the existing public sports resources according to the actual situation, so as to build high-quality village public sports space supporting service facilities. To achieve high-quality village public sports space with organic integration of "people", "culture", "place" and "landscape", the above is not only the internal requirements of building a beautiful countryside and meeting the needs of residents for sports activities, but also the actual needs of the village public sports space planning to adhere to the protection and restoration of the ecological environment, but also the inevitable result of promoting the rural revitalization strategy and the construction of a beautiful countryside. Second, the planning of public sports space in villages needs to fully consider the perfection and quality of basic supporting facilities. It can rely on public service institutions such as village-level clinics and geriatric canteens to form a rural public basic service model with "integrated health care and medicine" to provide residents with "one-stop" information consultation and health guidance on sports, daily meals, medical care and health. The construction of village public sports space with compound functions promotes the construction of beautiful countryside through livable and suitable business, and extends The Times value of village public sports space.

#### IV. REALISTIC DILEMMA OF VILLAGE PUBLIC SPORTS SPATIAL PLANNING UNDER THE RURAL REVITALIZATION STRATEGY

##### A. *Imbalance of Resource Supply Standard and Allocation Among Villages*

The construction types, facility configuration and layout forms of village public sports space mainly exist in different kinds of village planning, such as the layout planning, renovation planning and development planning of different villages. Documents such as the National Basic Public Service Standards (2021 Edition) have not clearly regulated the construction scale, types, quantities, supporting services, operation and maintenance management of village public sports Spaces, resulting in unclear planning standards for village public sports Spaces. There are problems such as insufficient total amount of public sports space construction, unbalanced distribution of public sports space, and unreasonable regional distribution of public sports space, which affect the practice of rural revitalization strategy and the construction of beautiful countryside[24]. First of all, the total amount of village public sports space construction is insufficient. As the overall positioning of village public sports Spaces is not clear, most of them are mixed with other public basic service facilities such as land for education places and cultural places, resulting in unclear positioning of their overall scale, configuration mode and service mode, and bad phenomena such as "low quantity and low quality" of village public sports Spaces. Secondly, the regional distribution of village public sports space is unbalanced and unreasonable. First, the distribution of public sports space in the same village is unbalanced and the allocation of sports facilities resources is unreasonable. Judging from the current status of village public sports space planning, most public sports Spaces are based on village committees, showing a centralized distribution pattern with village committees as the center, and do not fully consider the characteristics of village population flow, personnel agglomeration and spatial accessibility, resulting in a low coupling degree and low utilization rate between village public sports Spaces and village human settlements. Second, the allocation of public sports space among different villages is unbalanced. Due to the different geographical advantages of different villages, the public sports space planning of most villages gives priority to towns, market towns and central villages, while insufficient consideration is given to villages with poor geographical locations such as far-suburban villages and remote rural villages, resulting in uneven allocation of public sports space among different villages, which is in contradiction with the rural revitalization strategy and the value goal of beautiful rural construction. Third, there are land use problems in the planning of village public sports space. The specific types of land used for village public sports space are not clear in the Implementation Opinions on Rural Construction Planning Permission, which limits the construction scale and service types of village public sports space. The construction of public sports facilities usually presents a high-density and centralized layout, which further results in unreasonable planning of village public sports space and unbalanced allocation of sports resources.

##### B. *The Subjectivity of Residents' Participation in Public Sports Space Planning Is Weakened*

Village public sports space planning should adhere to the people-centered bottom line, guide residents to participate in the whole process of village public sports space planning in the form of individuals or social organizations, and ensure that the planning of village public sports space is integrated into the thinking concepts and value orientation of the majority of residents[25]. Judging from the current situation of village public sports space planning, the enthusiasm and initiative of residents to participate in public sports space planning are not high, and the subject consciousness of residents needs to be strengthened and the subject status needs to be

improved, which results in the lack of endogenous driving force for the sustainable development of village public sports space. First, residents lack the subjective consciousness of participating in public sports space planning. Under the realistic background of the hollowing out of rural areas, the scale of rural left-behind population is gradually expanding, and left-behind groups are mainly elderly people, women and children, whose awareness and demand for public sports services are not high, and their willingness to participate in public sports spatial planning is not strong. Moreover, planning suggestions of most left-behind groups are easily replaced by a few stakeholders. As a result, it is difficult for the planning of village public sports space to obtain real and effective resource information, so as to meet the objective feelings and real needs of residents, resulting in a mismatch between the supply and demand of village public sports space, and problems such as the supply failure and supply failure of public sports services. Second, the channels for residents to participate in public sports space planning are limited. As a result of the traditional bureaucratic management model, the construction scale, service mode and supply type of village public sports space are mainly based on the policy opinions of government departments, and the opinions expressed by residents are more superficial formal and false expressions, and the actual needs and real suggestions of residents cannot be effectively transmitted and responded to. Thus, the endogenous power of residents' participation in the planning of village public sports space is reduced. Third, there is insufficient institutional guarantee for residents to participate in public sports space planning. Due to the lack of subjective consciousness and limited channels for residents to participate in public sports spatial planning, their opinions are mostly expressed as "formal participation" and "symbolic participation", and there is a lack of rules and regulations to clearly stipulate the content of residents' participation in sports service supply management and sports service quality evaluation. Residents cannot be guaranteed to express their real demands in the planning process of village public sports space, which makes it difficult to effectively guarantee the legitimate rights and interests of residents, the service quality and service compatibility of public sports infrastructure, and fails to give full play to the functional value and utility of village public sports space for rural revitalization and beautiful rural construction.

#### *C. Lack of Guidelines for Technical Operation and Layout of Public Sports Space Planning*

Village committee is the main carrier of opinions collection and expression of rural residents, and it should concentrate the strength of residents, public grass-roots organizations and other institutions to carry out the spatial planning of public sports in villages[26]. From the current situation of village public sports spatial planning, due to the imperfect planning management system and the lack of specific planning, the overall planning of village public sports spatial planning is in a scattered state, that is, information collection, maintenance management, quality evaluation and other processes have not been fully integrated into big data, Internet of things and other information technologies. The application of geographic information system(GIS) and other geographic information technologies in the aspects of location selection and spatial layout is blank, resulting in the lack of digital technology support for the planning of village public sports space, affecting the regional balance and availability of village public sports space, and easily causing the mismatch between the layout of village public sports space and the village environment and population living characteristics. As a result, there may be problems such as insufficient or excessive supply of public sports services between different villages. Relevant survey data show that 83.42% of residents reach the village public sports space within 30 minutes, which is still a certain distance from the planning standard of about 15 minutes' walk from the service radius. The planning of village public sports space still needs to be further improved in terms of service scope. From the perspective of the traditional administrative system, the public sports space of villages is mainly concentrated near the village committee, and the overall spatial layout is relatively simple, without considering the history and culture, population flow, population gathering and natural environment among different villages, which results in the imbalance between the efficiency and fairness of public sports service supply among different villages. If the geographical location of residents' residential areas is relatively dispersed, the village public sports space centered on the village committee may affect the accessibility and availability of public sports services, and thus fail to match the multi-level and multi-type sports needs of residents in different villages, resulting in the waste of resources and other adverse phenomena in rural public sports services.

#### *D. The Coupling Degree Between Public Sports Space and Village Environment Is Insufficient*

Under the strong promotion of government policies such as Healthy China and Sports power strategy, village public sports space has gradually improved, and the quality of rural public sports service has been significantly improved. Because the planning and layout of village public sports space is centered on the village committee, and the natural environment and spatial form are different among different villages, there are still problems such

as single service supply and low service quality in village public sports space. First, the coupling degree between village public sports space planning and village historical and cultural environment is insufficient. Because it is difficult to adopt the real opinions and objective ideas of residents in the planning process of village public sports space, and the social and cultural environment of different villages is quite different, the supply of public sports services is mainly in the form of basketball, table tennis, square dance, etc., and the village cultural sports such as dragon boat, dragon dance and lion dance have not been integrated into the planning of village public sports space. As a result, the supply of rural public sports services is separated from the sports needs of residents, and the scope and level of rural public sports services still need to be further improved. Second, the coupling degree between village public sports space planning and village natural environment is insufficient. The spatial planning of public sports in villages should fully consider the differences in form and environment between different villages, and the layout of public sports space in centralized, group and dispersed villages should be different. From the perspective of practical practice, the spatial planning of village public sports lacks consideration of village form environment, and the spatial layout centered on village committee affects the availability and convenience of residents' mass sports services[27].

## V. PRACTICE APPROACH OF VILLAGE PUBLIC SPORTS SPACE PLANNING UNDER RURAL REVITALIZATION STRATEGY

### A. *Make Overall Planning to Promote the Balanced Supply of Public Sports Service Resources Among Villages*

Village public sports space planning is a key link to implement the rural revitalization strategy and promote the construction of a beautiful countryside, and promoting the balanced supply of public sports service resources among different villages is an important premise of village public sports space planning. First, the establishment of provincial, city, county, township and village level village public sports space planning and coordination agencies, township and village level coordinating agencies responsible for public sports space opinion collection, specific site selection, planning implementation and quality supervision work, provincial, city and county level coordinating agencies responsible for the coordination of public sports space resources and technology between different villages. Work together to set goals, grade standards, scale of construction and spatial layout of village public sports spatial planning, give play to the synergistic effect of different levels of coordinating agencies, and provide organizational guarantee for high-quality village public sports spatial planning[28]. Second, establish and improve the standard documents and detailed rules for the planning of village public sports space, such as formulating the scale layout, construction standards, function allocation and other norms and standards of village public sports space, so as to ensure the standardization, institutionalization and fairness of village public sports space. Thirdly, establish the long-term dynamic renewal system of village public sports space to determine the quality and quantity of village public sports space. For example, the construction scale, service type and quality level of village public sports space are determined according to the sports service needs of residents, so as to ensure the relative balance of public sports service supply among different villages. Villages with relatively concentrated population can build village public sports space with larger scale and more service types. In villages where the population is relatively dispersed, small-scale village public sports space is mainly used, and the pertinence and availability of rural public sports services are constantly improved. At the same time, in combination with the social and cultural environment of different villages, different types of sports services are provided, such as the construction of folk sports venues such as dragon boat and dragon dance, to stimulate the enthusiasm and initiative of residents to participate in rural public sports activities. Fourth, improve the long-term planning and short-term planning of village public sports space. In the actual operation process of village public sports space, planning and overall planning agencies need to timely adjust and update the supply of public sports services according to the real opinions and evaluation feedback results of residents, do a good job in the monitoring and evaluation of the whole process of village public sports space planning, and ensure that the supply of rural public sports services is in a long-term dynamic adjustment and rolling extension state. Improve the operability and practicability of rural public sports services.

### B. *Determine the Main Status of Residents and Mobilize the Enthusiasm of Residents to Participate in Spatial Planning*

The planning of village public sports space should adhere to the basic principle of centering on the residents, fully consider the real opinions of the residents in the links of layout and site selection, construction scale, service type and evaluation and feedback, guide the residents to participate in the whole process of planning of village

public sports space, and constantly strengthen the main status and main consciousness of the residents. To mobilize the residents to participate in the planning of public sports space in villages. First, strengthen the main position of residents in the planning process of village public sports space. The service object of village public sports space is residents, so the actual sports demand of residents is one of the key factors to be considered in the planning of village public sports space, such as the service type of sports space, sports facilities, sports project guidance, venue opening time, lighting and other supporting facilities. Enhance the attraction of village public sports space for residents to participate in sports, and maximize the actual needs of residents for sports. Second, open channels for residents to express their opinions and give feedback. Residents are the main body of village public sports space planning. Planning and coordination agencies can collect residents' real opinions on the layout, site selection, construction scale and service content of village public sports space through forums and other means, and timely respond to residents' questions and concerns in the planning process of village public sports space. Give full play to residents' right to express their needs and feedback their opinions, and further improve the attraction of village public sports space to residents. Third, improve the evaluation and rectification mechanism of the residents. By introducing a third-party satisfaction evaluation institution to conduct an all-round evaluation of the service quality of village public sports space among residents, it is necessary to consider whether the construction of village public sports space conforms to the real needs of residents and the village space environment, and improve the co-governance mechanism of village public sports space. Guide the residents to take the initiative to participate in the multi-dimensional governance and evaluation of the village public sports space.

#### *C. Digital Technology Enables the Layout, Location, Operation and Management of Public Sports Space*

Digital information technologies such as big data, cloud computing, Internet of Things and blockchain are the accelerators for the construction of rural public infrastructure, and also the key supports for the implementation of rural revitalization strategy and beautiful rural construction. Therefore, the planning of village public sports space needs to fully rely on the value capabilities of digital information technology. First, strengthen the support of digital information technology for the location of public sports space layout. Through the introduction of digital information technologies such as big data, cloud computing, Internet of Things, and blockchain, combined with the wide application of GIS and other technologies, the application range of digital information technology in the planning of public sports space in villages will be increased. At the same time, by establishing a digital management platform for village public sports space and building a one-stop query platform for site selection, layout and facility services of village public sports space, residents can query the use of public sports space at any time through mobile phones and other clients to improve the applicability of village public sports space planning. Second, the use of digital information technology to enable the location layout of village public sports space. The construction of digital infrastructure is an important link in the planning of village public sports space, so as to improve the supply basis of digital technology for village public sports space. At the same time, digital information technologies such as the Internet of Things and blockchain are used to provide detailed geographic location information and spatial planning data for village public sports space planning, and digital technologies such as big data and cloud computing are used to dynamically monitor and evaluate the use efficiency of public sports space. In the actual operation process of village public sports space, digital technologies such as GIS, information point (POI), and global positioning System (GPS) are used to analyze the living characteristics and flow distribution of population in different villages, and then reasonably determine the location layout and service content of village public sports space, so as to improve the convenience and efficiency of rural sports infrastructure and other resources.

#### *D. Public Sports Space Planning Is Deeply Integrated into the Village Environment to Form a Diversified Sports Service Supply*

Due to the change of rural population flow and economic structure, village committee cultural square and activity center have gradually become the main carriers of village public sports space. Therefore, the planning of village public sports space needs to deeply integrate the spatial and environmental characteristics of different villages, and provide a comprehensive public sports space with the trinity of "sports + entertainment + recuperation". First, the planning of public sports space in villages should fully consider the actual needs of residents, such as building diversified activity places mainly for the elderly and children, building healthy public sports Spaces such as chess and card rooms and cultural squares for the elderly, and building interesting public sports Spaces such as basketball and playgrounds for children. And supporting the construction of basic service facilities such as canteens, medical rooms, express delivery centers, forming a multi-functional and

comprehensive service system to meet the diversified needs of residents. Second, based on the village cultural environment and natural environment to build a multi-functional public sports space. Villages are the main carriers of public sports space planning in villages, so it is necessary to fully consider the regional area, population living characteristics and population flow among villages, and build shady runways or roads to connect different public sports Spaces, so as to form a village public sports space system that takes into account convenience and safety, and enhance the cultural and ecological value of village public sports space.

## VI. CONCLUSION

Village public sports space planning is the key to balance the allocation of rural sports resources and alleviate the problems of insufficient or excessive supply of sports resources. Based on the actual needs of rural revitalization strategy and beautiful rural construction, this paper discusses The Times value and theoretical logic of village public sports space planning, and reveals the realistic difficulties faced by village public sports space planning. It is proposed to make overall planning for the supply of public sports service resources between villages, mobilize the enthusiasm of residents to participate in spatial planning, empower the location of sports space layout by digital technology, form diversified public sports service supply and explore the application of big data, and build a higher level of national fitness public service system, which is conducive to meeting the diversified sports needs of the people. Enhance people's happiness, sense of gain and sense of security, and then promote the implementation of rural revitalization strategy and the construction of healthy China and sports power.

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