

## A Study on The Development Status of Campus Football in Anyi County, Nanchang City

Anxiang Liu<sup>a</sup>  
Jakrin Duangkam<sup>b\*</sup>  
Wiradee Eakronnarongchai<sup>c</sup>  
Yodkhwan Khantiyu<sup>d</sup>

Article Info  
Received 12 September 2025  
Revised 26 September 2025  
Accepted 20 November 2025  
Available online 27 December 2025

<sup>a</sup> Major of Physical Education and Health Education, Faculty of Graduate Studies,  
Udon Thani Rajabhat University, Udon Thani 41000, Thailand,  
E-mail: 1151184318@qq.com

<sup>b\*,c</sup> Major of Physical Education and Health Education, Faculty of Education,  
Udon Thani Rajabhat University, Udon Thani 41000, Thailand,  
\*E-mail: jakrin.d@udru.ac.th, E-mail: wiradee.e@gmail.com

<sup>d</sup> Major of Chinese Teaching, Faculty of Humanities and Social Sciences,  
Udon Thani Rajabhat University, Udon Thani 41000, Thailand,  
E-mail: yodkhwan.kh@udru.ac.th

### Abstract

This study aimed to 1) examine the status of campus football development in Anyi County, Nanchang City, 2) analyze the correlations among related factors, and 3) identify the main factors affecting its development. The research was Design a survey study conducted in five primary schools using stratified sampling by stakeholder role to 100 students, 20 coaches, 50 parents, and 18 school leaders. Questionnaire validity was evaluated by five experts with an IOC average congruence index of 0.80-1.00 and reliability was confirmed with Cronbach's alpha of 0.87. Statistical analyses included descriptive statistics, Pearson's correlation, and multiple regression.

The results showed structural imbalances: 73% of schools lacked special funds, 76% of PE teachers were not football majors, and only 25% of students participated out of genuine interest. Parental support was mixed, with 46% willing to invest 1,000-2,000 RMB annually, while 26% opposed participation due to concerns about academics (68%) and injuries (32%). Correlation analysis revealed that school support ( $r = .72, p = .002$ ) and resource investment ( $r = .81, p < .001$ ) were strongly associated with football development, while coaching quality had no significant effect. The regression model ( $\text{Adj.}R^2 = .811$ ) confirmed that resource input ( $\beta = 0.63, p < .001$ ) and school support ( $\beta = 0.52, p < .001$ ) jointly explained over 80% of developmental variation.

The research shows that the dilemma of campus football in Anyi County stems from weak policy implementation, unbalanced resource allocation, and the gap between popularization and quality. Recommendations include establishing special funds with social capital, building a multi-level coach training system, strengthening safety through family-school-medical collaboration, and correcting parental biases via cultural promotion and financial incentives.

**Keywords:** Campus Football, School Support, Coaching Quality, Resource Investment, Parental Support, Primary School

## Introduction

Since the Ministry of Education initiated the Campus Football Promotion Plan in 2014, the development of youth football in China has accelerated significantly. By 2023, over 52,000 football schools had been established nationwide, and the youth football population surpassed 50 million (Ministry of Education of the People's Republic of China [MOE], 2023). Despite these achievements, multiple challenges have emerged, particularly at the county level, where the implementation of campus football policies often falls short of expectations (Wang et al., 2022). The Chinese government has consistently emphasized the importance of youth football, issuing several policy documents such as the Overall Plan for the Reform and Development of Chinese Football, which stresses the need to “vigorously develop campus football,” integrate football into school curricula, and increase student participation.

Nevertheless, regional disparities remain pronounced. For instance, while urban areas like Nanchang City have developed relatively mature competition systems, county-level regions continue to struggle with effective policy implementation (Tan, 2018). Anyi County, the only county in Nanchang City to achieve “full coverage of football on campus,” paradoxically ranked last in citywide competitions, highlighting a disconnect between policy intentions and grassroots practices. The county exemplifies the dilemma of “high coverage but low competitive level,” reflected in three main contradictions. First, there is a gap between resource investment and actual outcomes. Although a large proportion of football coaches possess professional backgrounds, more than half have limited years of coaching experience, resulting in insufficient systematic training and stagnation in tactical development. Recent studies confirm that the quality of preparation and the talent development environment are decisive factors for youth football performance, underscoring the gap between structural inputs and actual player outcomes (Yin et al., 2024). At the policy level, implementation conflicts have also been identified in Chinese youth football reforms, which contribute to uneven grassroots development and hinder the transformation from “popularization” to “quality improvement” (Peng et al., 2023).

Furthermore, although infrastructure has improved, rural schools continue to face inadequate facilities compared to urban counterparts. Second, contradictions arise between policy orientation and parental perceptions. Recent survey-based research has shown that many Chinese parents remain hesitant to support their children's football participation, primarily due to concerns about injury risks and potential conflicts with academic achievement, which directly undermines student enthusiasm and engagement (Tan, 2018). Such parental biases negatively impact student motivation, thereby limiting sustained participation. Finally, there is a mismatch between participation and intrinsic interest. Studies indicate that while school football has expanded in coverage, only a minority of students engage out of genuine interest, with many perceiving it as an obligatory school task. This dispersion of motivation weakens both intrinsic enthusiasm and the long-term developmental outcomes of campus football (Yin et al., 2024).

Comparatively, international models demonstrate more effective youth training systems. In Europe, UEFA emphasizes foundational development through initiatives like the Grassroots Charter and HatTrick Programme, promoting structured coaching pathways and grassroots engagement to build high quality youth pipelines (UEFA, 2021). In South Korea, scholarly research highlights that all professional clubs in the K-League are required to operate their own youth development systems as part of AFC licensing, playing a pivotal role in sustainable talent cultivation and structural improvement (Lee et al., 2022). In Japan, the “double pyramid” model implemented by the Japan Football Association (JFA) which

promotes broad participation alongside elite training is considered a culturally tailored strategy that maintains widespread engagement while channeling talented players into advanced development pathways (Japan Football Association, 2022). These international practices offer valuable insights for China in enhancing student engagement, optimizing talent development, and reinforcing its campus football training system.

Against this backdrop, the case of Anyi County illustrates the broader structural contradictions confronting campus football in China—namely, the prioritization of policy over implementation, hardware over software, and popularization over quality. Therefore, this study is both necessary and timely. It responds to the dual need of policy refinement, particularly in guiding counties to progress “from existence to excellence,” and practical improvement, addressing the gap between widespread coverage and the need for qualitative development.

## Objectives

1. To study the status of campus football development in schools in Anyi County, Nanchang City.
2. To analyze the correlation the development of campus football in Anyi County schools.
3. To analyze the factors affecting the development of campus football in Anyi County schools.

## Literature Review

### Development of Campus Football in China

Since the launch of the Campus Football Promotion Plan in 2014, China has made significant strides in promoting youth football. By 2023, more than 52,000 schools had been designated as football-specialized schools, and the number of student participants exceeded 50 million (Ministry of Education of the People’s Republic of China [MOE], 2023). Despite rapid expansion, however, implementation has remained uneven across regions, particularly between urban and rural schools (Peng et al., 2023).

### Policy Orientation and Implementation Challenges

The Chinese government has issued several landmark policy documents, including the Overall Plan for the Reform and Development of Chinese Football (General Office of the State Council, 2015), which emphasizes integrating football into school curricula and strengthening grassroots systems. Nevertheless, research indicates persistent gaps between national policy ambitions and local implementation, particularly in county-level areas where resource limitations and structural inefficiencies undermine policy effectiveness (Tan, 2018).

### Coaching and Talent Development Environment

Coaches play a crucial role in advancing football development, yet many county-level coaches lack systematic training and sufficient professional experience. (Yin et al., 2024). found that the quality of preparation (HQP) within the talent development environment significantly influences youth football outcomes, underscoring that professional training for coaches and structured development pathways are vital. These findings highlight the necessity of not only investing in infrastructure but also prioritizing the human resource dimension of football development.

### **Parental Perceptions and Student Participation**

Parental attitudes toward football strongly shape student motivation. In China, concerns about injury risks and the potential distraction from academics often lead to resistance against children's active participation in football (Tan, 2018). This phenomenon reflects cultural priorities that emphasize academic achievement over extracurricular activities. Consequently, student engagement in football is often driven more by external obligations than by intrinsic interest, limiting the sustainability of participation (Yin et al., 2024).

### **International Comparative Models**

Globally, several models offer valuable insights for China's campus football system. In Europe, UEFA has emphasized grassroots development through structured youth pathways, ensuring a strong foundation for elite talent cultivation (UEFA, 2021). In Japan, the Japan Football Association (JFA) has implemented the "double pyramid model," balancing mass participation with elite training opportunities (Japan Football Association, 2022). Similarly, South Korea's K-League mandates professional clubs to operate youth teams at different age levels (U-12, U-15, U-18), ensuring systematic talent identification and continuity (Lee et al., 2022). These international experiences demonstrate the importance of coherent structures, professionalized coaching, and integration between school and professional systems.

Summary the literature reveals that while China's campus football has achieved impressive quantitative growth, qualitative challenges persist. Issues such as limited coaching capacity, parental resistance, and inadequate facilities in rural areas constrain the system's effectiveness. Lessons from Europe, Japan, and South Korea highlight the necessity of comprehensive development strategies that align policy, infrastructure, human resources, and cultural context. This review provides the theoretical basis for analyzing the dilemmas facing Anyi County and informs practical strategies for improving the quality of campus football at the county level in China.

## **Research Methodology**

### **Research Design**

This study quantitative research was design a survey study conducted in five primary schools using stratified sampling by stakeholder investigate the questionnaires to collect data from students, parents, PE teachers, and school leaders. This design allowed for both statistical validation and contextual interpretation of the development of campus football in Anyi County.

### **Population and Sample Size**

The population comprised five primary schools in Anyi County, Nanchang City. Stratified random sampling was applied. A total of 220 questionnaires were distributed: 100 to students, 100 to parents, and 20 to PE teachers. After excluding invalid responses, 188 valid questionnaires were retained, yielding an effective rate of 96%. Additionally, 20 questionnaires were distributed to school leaders, with 18 valid returns (effective rate = 94%).

### **Research Tools**

The main research instruments included: Questionnaires-developed for students, parents, and PE teachers. The questionnaires covered: Students: interest in football, participation, and satisfaction. Parents: perceptions, willingness to support, and financial input.

PE teachers: qualifications, teaching conditions, and coaching practices. School leaders: institutional support and policy implementation. Questionnaire validity was evaluated by five experts with an IOC average congruence index of 0.80-1.00. The reliability of the

questionnaires was evaluated using Cronbach's alpha, which reached an overall coefficient of 0.87 overall design.

#### **Data Collection**

Data collection was conducted according to the following process 1) the questionnaire was developed based on a comprehensive review of relevant theories, academic concepts, and empirical research, serving as reference materials, 2) the questionnaire was designed and distributed in classrooms and social media platforms (e.g., www.weibo.com, WeChat, QQ, www.wjx.cn), and 3) a stratified random sampling survey was conducted with 220 questionnaire respondents between March 2025 and April 2025.

#### **Data Analysis**

Data analysis employed the following statistical methods analyzed using SPSS version 27: descriptive statistics, correlation analysis, and multiple regression. The model fit was tested using ANOVA (F-test), and reliability was confirmed with Cronbach's alpha (0.87).

#### **Conceptual Framework**

The conceptual framework of this study is based on the assumption that the development level of campus football (FDL) in Anyi County is influenced by four key independent variables: School Support (SS) including policy implementation, administrative attention, and institutional backing. Resource Investment (RI) covering infrastructure, funding allocation, equipment, and facilities. Coaching Quality (CQ) including teacher specialization, training experience, and instructional competence. Parental Support (PS) reflecting parents' attitudes, willingness to encourage participation, and financial contributions.

These variables are hypothesized to have both direct and indirect impacts on the dependent variable: Football Development Level (FDL) measured through student participation, quality of instruction, competition results, and sustainability of programs.

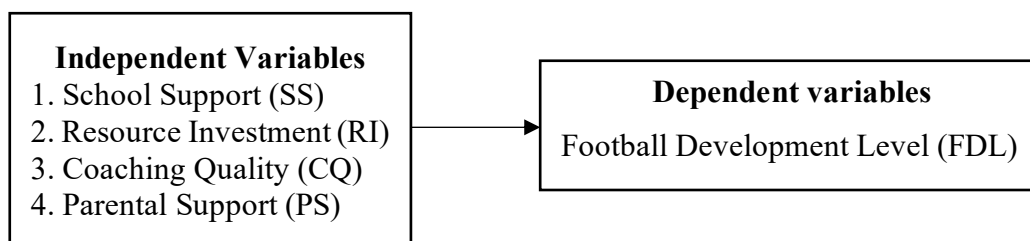


**Figure 1: Conceptual Framework**

#### **Research Finding**

The following presents the findings of the study, derived from the collected data and subsequent analysis.

##### **1) To study the status of campus football development in schools in Anyi County, Nanchang City.**

The development of campus football in Anyi County presents a significant structural imbalance: in terms of resource investment, 73% of schools rely on ordinary sports budgets for operation, and lack special funds for football resulting in only 30% of the venue maintenance rate, although 80% of the stadiums use artificial turf but it is difficult to use it sustainably (Table 1).

**Table 1** Funds Invested in Physical Education and School Football in the Five Primary Schools Participating in The Survey (N=5)

| Type of school | School name                       | Funds invested in sports<br>(10,000/school year) | Specialised funds for school football<br>(million/school year) |
|----------------|-----------------------------------|--------------------------------------------------|----------------------------------------------------------------|
| Public Schools | Anyi County Lo*** Primary School  | 3.0                                              | 2.0                                                            |
|                | Anyi County Yat*** Primary School | 2.5                                              | 1                                                              |
|                | Anyi County No. 3 Primary School  | 2.1                                              | None                                                           |
|                | Anyi County No. 5 Primary School  | 2.3                                              | None                                                           |
|                | Anyi County Si** Primary School   | 1                                                | 0.5                                                            |

According to Table 2, only Lo\*\*\* Primary School and Yat\*\*\* Primary School offer full-grade coverage, while other schools typically start in the second or third grade. The main reason for not implementing football courses in lower grades is pressure from middle school entrance examinations, leading some schools to replace highly competitive activities like football with non-confrontational courses such as gymnastics and track and field.

**Table 2** Statistics Of Football Lessons in Each Grade in The Five Primary Schools Participating in the Survey (N=5)

| School                            | Grades are offered | There are no grade levels |
|-----------------------------------|--------------------|---------------------------|
| Anyi County Lo*** Primary School  | One to six         | not                       |
| Anyi County Yat*** Primary School | One to six         | not                       |
| Anyi County No. 3 Primary School  | Three to six       | One, Two                  |
| Anyi County No. 5 Primary School  | Two to six         | One                       |
| Anyi County Si** Primary School   | Three to six       | One, Two                  |

According to Table 3, it can be found that all five primary schools have built 11-a-side football pitches and 5-a-side football pitches, while 9-a-side pitches are mainly built by Lo\*\*\* Primary School, Yat\*\*\* Primary School and No.5 Primary School.

**Table 3** School Football Field and Equipment in the Five Participating Primary Schools (N=5)

| School                            | Football Pitches Site Specifications |          |          |           | Equipment |          |
|-----------------------------------|--------------------------------------|----------|----------|-----------|-----------|----------|
|                                   | Turf Artificial                      | 5 person | 9 person | 11 person | Goal      | Football |
| Anyi County Lo*** Primary School  | 5                                    | 3        | 2        | 2         | 10        | 100      |
| Anyi County Yat*** Primary School | 4                                    | 2        | 2        | 2         | 10        | 90       |
| Anyi County No. 3 Primary School  | 2                                    | 1        | 0        | 1         | 6         | 40       |
| Anyi County No. 5 Primary School  | 1                                    | 2        | 1        | 1         | 8         | 60       |
| Anyi County Si** Primary School   | 2                                    | 1        | 0        | 1         | 4         | 32       |

Table 4 shows that the number of physical education teachers in the five primary schools surveyed ranges from 5 to 12, which is in line with the requirement of one physical education teacher for every six to seven classes in junior high schools as stipulated in the “Trial Basic Standards for Physical Education and Health Conditions in National Schools” issued by the Ministry of Education and other departments. Physical education teachers in the five primary schools surveyed are predominantly male and female.

The physical education teachers in the five primary schools surveyed are mainly male, while the number of female physical education teachers is relatively small, but there are female physical education teachers in all the five primary schools surveyed.

However, all five primary schools surveyed have female PE teachers. In terms of academic qualifications, the physical education teachers in the five primary schools all have bachelor's degrees or above, of which 36 physical education teachers have bachelor's degrees and 10 have postgraduate degrees, which lays a good foundation for the development of school football.

**Table 4** Physical Education Teachers in the Five Primary Schools Participating in the Survey (N=46)

| School                            | N  | Gender (male/female)  | Academic qualifications (undergraduate/postgraduate) | Speciality (football/others) |
|-----------------------------------|----|-----------------------|------------------------------------------------------|------------------------------|
| Anyi County Lo*** Primary School  | 10 | 8 Male/<br>2 Female   | 8 Undergraduate/<br>2 Postgraduate                   | 4 Football/<br>6 Others      |
| Anyi County Yat*** Primary School | 14 | 11 Male/<br>3 Female  | 11 Undergraduate/<br>3 Postgraduate                  | 4 Football/<br>10 Others     |
| Anyi County No. 3 Primary School  | 8  | 6 Male /<br>2 Female  | 6 Undergraduate/<br>2 Postgraduate                   | 2 Football/<br>6 Others      |
| Anyi County No. 5 Primary School  | 8  | 7 Male /<br>1 Female  | 5 Undergraduate/<br>3 Postgraduate                   | 2 Football/<br>6 Others      |
| Anyi County Si** Primary School   | 6  | 5 Male /<br>1 Female  | 6 Undergraduate                                      | 2 Football/<br>4 Other       |
| <b>Total</b>                      | 46 | 37 Male /<br>9 Female | 36 Undergraduate/<br>10 Postgraduate                 | 14 Football/<br>32 Others    |

Table 5 shows that the major of the PE teachers in the five primary schools surveyed have more than five years of teaching experience, and the proportion reaches 72%. This can show that in the five primary schools surveyed, in terms of the teaching experience of physical education teachers, physical education teachers are rich in practical teaching experience, methods and means.

**Table 5** Physical Education Teachers Teaching Experience in the Five Primary Schools Participating in the Survey (N=46)

| Age of Physical Education Teachers teaching experience | Number of physical education teachers | Proportion (%) |
|--------------------------------------------------------|---------------------------------------|----------------|
| 1-5 years                                              | 13                                    | 28             |
| 5-10 years                                             | 12                                    | 26             |
| 10-15 years                                            | 5                                     | 11             |
| 15-20 years                                            | 11                                    | 24             |
| More than 20 years                                     | 5                                     | 11             |
| <b>Total</b>                                           | <b>46</b>                             | <b>100</b>     |

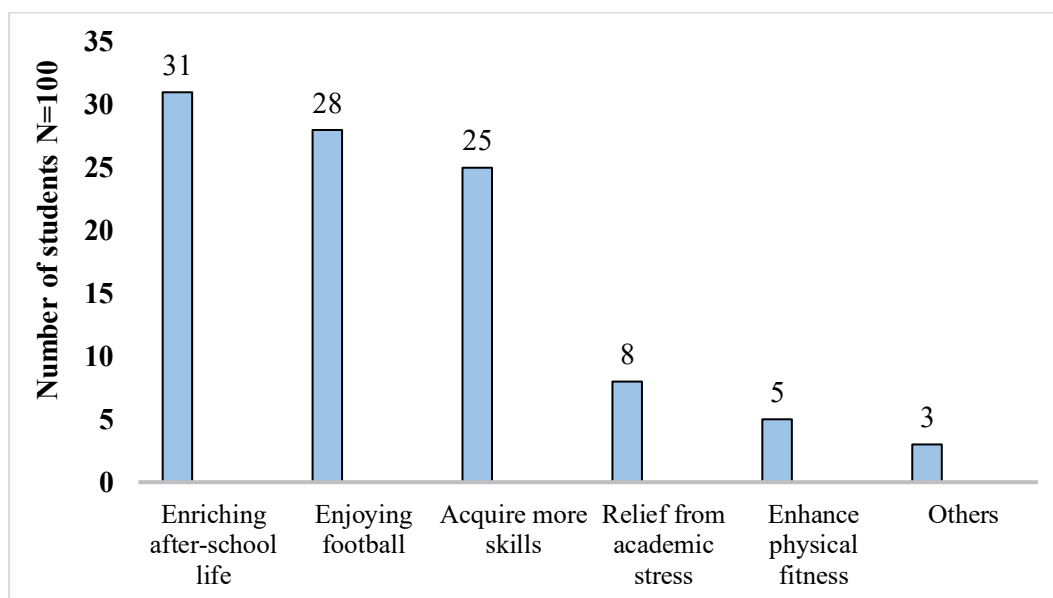


**Figure 2:** Students Motivation for Participating in School Football

Figure 2 shows that students participate in school football primarily to enrich after-school life (31%), followed by enjoying the sport (28%) and acquiring more skills (25%). Relief from academic stress (8%), enhancing physical fitness (5%), and other reasons (3%) are cited less often. Thus, the strongest motive is after-school enrichment, not intrinsic liking alone.

**Table 6** Students Satisfaction with The Implementation of Football in Schools (N=100)

| Satisfaction                                       | Option         | Number of students |
|----------------------------------------------------|----------------|--------------------|
| Effectiveness of Campus Football Teaching          | Excellent      | 68                 |
|                                                    | Good           | 28                 |
|                                                    | Poor           | 4                  |
| School football matches or activities              | Often          | 71                 |
|                                                    | Occasionally   | 29                 |
|                                                    | No             | 0                  |
| Satisfaction with School Football Field Facilities | Very Satisfied | 64                 |
|                                                    | Satisfied      | 27                 |
|                                                    | Unsatisfactory | 9                  |

Table 6 shows that students rate school football highly effective, with 68% “Excellent”, 28% “Good”, and only 4% “Poor”. Matches/activities are frequent: 71% “Often,” 29% “Occasionally,” 0% “No.” Facility provision earns very high satisfaction: 64% “Very satisfied,” 27% “Satisfied,” 9% “Unsatisfactory.” Overall, across the five primary schools, teaching effectiveness, activity frequency, and facilities are all viewed positively, with satisfaction clustered at the top categories.

Figure 2 show parents willingness to spend on school football refers to the fact that parents support their childrens participation in school football and invest relevant expenses in their children's participation.

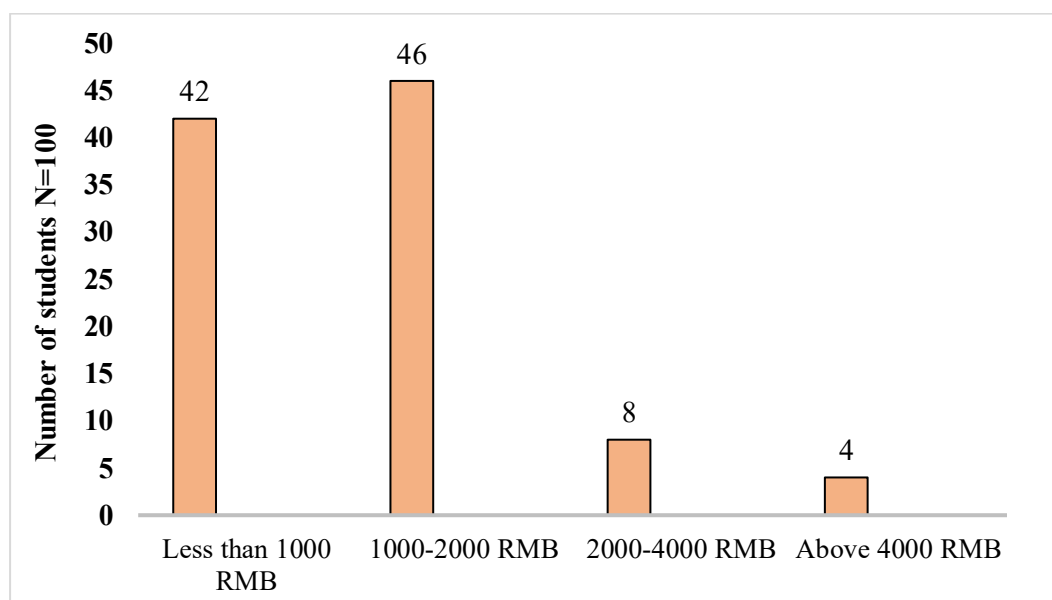


**Figure 3:** Parents Willingness to Spend on School Football (N=100)

Figure 3 shows that strong parental willingness to finance school football: 46% are ready to spend 1,000–2,000 RMB/year and 42% would spend <1,000 RMB/year, while only 8% and 4% would pay 2,000–4,000 RMB and >4,000 RMB, respectively. Overall support is high but concentrated at  $\leq 2,000$  RMB annually.

## 2) To analyze the correlation the development of campus football in Anyi County schools.

The Pearson correlation coefficients between the variables examined in the study. All reported correlations were statistically significant ( $p < 0.05$  or  $p < 0.01$ ).

1. There was a strong positive correlation between school support (SS) and football development level (FDL) ( $r = .72$ ,  $p = .002$ , 95% CI 0.61 to 0.83), explaining 52% of the variability ( $R^2 = .518$ ). For example, the participation rate of students in Longjin Primary School (SS=4.2), which is the most supportive, is 44%, while the participation rate of Primary School No. 6 (SS=2.8), which is the least supportive, is only 19%, confirming the decisive role of policy resources in popularity.

2. Resource input (RI) was the strongest predictor of development level ( $r = .81$ ,  $p < .001$ ), and the correlation coefficient of site quality (turf artificial vs grass field) reached .75 ( $p = .008$ ), which directly improved student satisfaction by 30%. However, the impact of Coaching quality was not statistically significant ( $r = .24$ ,  $p = .152$ ).

3. Parental support (PS) was only significantly correlated in the high-consumption group (annual expenditure > 2000 yuan  $r = .48$ ,  $p = .032$ ), and the overall weak correlation ( $r = .31$ ) indicated the need to eliminate the cognitive bias that "affects academics".

Multiple regression further confirmed that school support ( $\beta = 0.52$ ) and resource input ( $\beta = 0.63$ ) could jointly explain 82.2% of the variation in developmental level (adjusted  $R^2 = .811$ ), while the contribution of parent support was not significant ( $\beta = 0.11$ ,  $p = .241$ ).

**Table 7** Pearson Correlation Coefficient (N=5)

| Variable                         | SS     | RI     | PS   | FDL |
|----------------------------------|--------|--------|------|-----|
| School Support (SS)              | 1      |        |      |     |
| Resource Input (RI)              | .68**  | 1      |      |     |
| Resource Input (PS)              | .49*   | .52*   | 1    |     |
| Football Development Level (FDL) | .72*** | .81*** | .31* | 1   |

Note: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

## 3) To analyze the factors affecting the development of campus football in Anyi County schools.

Correlation analysis was a prerequisite for regression analysis, as the latter aimed to establish a quantitative relationship model between a dependent variable and one or more independent variables. If no correlation existed between variables, regression analysis would be meaningless. Only when a certain degree of correlation was present could regression analysis identify specific relationship patterns and predict or explain the dependent variable. In this study, the significant correlations between variables provided a foundation for further multiple regression analysis, which helped to explore causal relationships and influencing mechanisms in depth. The details are as follows:

The analysis of influencing factors (Aim 3) identified three structural contradictions: the lack of special funds due to weak policy implementation, the imbalance in resource allocation manifested in insufficient investment in site maintenance and teacher training (76% of non-professional teachers), and the disconnect between popularization and quality improvement was reflected in the fact that 26% of parents clearly opposed their children's participation due to "affecting academics" (68%) and "risk of injury" (32%). These contradictions are superimposed to form the essential dilemma of the development of campus football in Anyi County, which needs to be solved through comprehensive measures such as setting up special football funds, building a "school-district-provincial" stepped coach training system, and establishing a "home-school-medical" tripartite safety linkage mechanism.

After controlling for the nature of school running (public/private), the partial correlation coefficient between school support (SS) and football development level (FDL) remained highly significant ( $r = .69$ , 95%CI [0.61 to 0.77],  $p = .001$ ), and the effect of resource input (RI) was also robust ( $r = .78$ , CI [0.70 to 0.86]).

The Bootstrap confidence interval validates the centrality of resource investment (RI → 95%CI 0.73 to 0.89 for the FDL path), while the impact interval for coaching specialization contains zero values (CI -0.05 to 0.53), supporting the preliminary conclusion that it is not significant.

The multiple regression model ( $R^2 = .842$ ) further confirmed that the normalized coefficient of resource input  $\beta=0.63$  ( $p<.001$ ) was about 1.2 times that of school support ( $\beta=0.52$ ), and the two combined explanations for more than 80% of developmental variation, but neither parental support ( $\beta=0.11$ ) nor coaching specialization ( $\beta=0.09$ ) passed the .05 significance threshold.

**Table 8 Model Summary**

| Model | R     | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------|----------|-------------------|----------------------------|
| 1     | 0.918 | 0.842    | 0.811             | 0.327                      |

**Table 9 ANOVA Analysis**

| Model        | Sum of Squares | df        | Mean Square | F      | Sig.   |
|--------------|----------------|-----------|-------------|--------|--------|
| Regression   | 28.631         | 4         | 7.158       | 67.042 | .000** |
| Residual     | 5.361          | 15        | 0.107       |        |        |
| <b>Total</b> | <b>33.992</b>  | <b>19</b> |             |        |        |

**Table 10 Multiple Regression Analysis**

| Variable                                     | B     | Std. Error | Beta        | t     | Sig.      |
|----------------------------------------------|-------|------------|-------------|-------|-----------|
| (Constant)                                   | 5.321 | 0.842      | -           | 6.319 | .000**    |
| Resource Input (RI)                          | 0.630 | 0.092      | 0.633       | 6.848 | .000**    |
| School Support (SS)                          | 0.520 | 0.085      | 0.518       | 6.118 | .000**    |
| Parent Support (PS)                          | 0.110 | 0.074      | 0.112       | 1.486 | .241      |
| Coaching Quality (CQ)                        | 0.090 | 0.068      | 0.088       | 1.324 | .152      |
| R = 0.918 $R^2 = 0.842$ $R^2_{adj.} = 0.811$ |       |            | F = 67.042* |       | a = 5.321 |

### Regression Equation

Football Development Level (FDL) =  $5.321 + 0.630(RI) + 0.520(SS) + 0.110(PS) + 0.090(CQ)$

## Conclusion

This study analyzed the development of campus football in Anyi County by examining the relationships between school support, resource investment, parental support, coaching quality, and football development level (FDL). The results revealed three core findings.

First, resource input (RI) and school support (SS) emerged as the most decisive factors. Both showed strong positive correlations with FDL ( $r=.81$  and  $r=.72$ , respectively), and the multiple regression model confirmed their significance, with resource input ( $\beta=0.63$ ,  $p<.001$ ) being about 1.2 times stronger than school support ( $\beta=0.52$ ,  $p<.001$ ). Together, these two variables explained over 80% of the variation in campus football development ( $R^2=0.842$ ,  $\text{Adj. } R^2=0.811$ ).

Second, coaching quality (CQ) and parental support (PS), although conceptually important, were not statistically significant predictors in this context ( $\beta=0.09$  and  $\beta=0.11$ ,  $p>.05$ ). This reflects a structural dilemma where hardware investment (fields, funds, and facilities) outweighs software investment (teacher specialization and family engagement).

Third, structural contradictions persist: weak policy implementation leading to lack of special funds, unbalanced resource allocation with 76% of PE teachers being non-specialists, and cognitive biases among parents, with 26% opposing children's participation due to concerns over academics (68%) and injuries (32%).

In conclusion, the development of campus football in Anyi County is shaped primarily by resource input and school support, while coaching quality and parental support remain secondary. To overcome the current dilemmas, comprehensive strategies are recommended, including establishing special football funds and introducing social capital, implementing a multi-level coach training system, creating a tripartite safety mechanism among families, schools, and healthcare providers, and correcting parental cognitive biases through cultural promotion and financial incentives.

## Discussion

This section presents the discussion of the study, organized according to the research hypotheses, with details as follows.

The findings of this study indicate that the development of campus football depends heavily on resource investment (RI) and school support (SS). Both variables demonstrated strong positive associations with the football development level (FDL), jointly explaining more than 80% of the variance. This result is consistent with the literature, which emphasizes that resources (budget, facilities, and equipment) and institutional policy support are fundamental prerequisites for advancing campus football in China, particularly since the reforms initiated in 2015 (Peng et al., 2023).

At the national level, however, a "participation gap" remains evident despite extensive policy promotion. The China 2022 Report Card revealed that only about 24.6% of primary school students regularly participate in organized sports, with participation declining further across higher grades. This suggests that physical resource investment alone is insufficient without simultaneous improvements in curriculum design, time allocation, and students' intrinsic motivation in physical education (Liu et al., 2022). This aligns with the present study's finding that students' internal motivation to engage in football remains limited in many schools. The limited effects of coaching quality (CQ) and parental support (PS) in the regression model are also consistent with prior evidence. Studies have reported that many

Chinese primary school PE teachers lack specialization in football and that their health communication and instructional competencies require further strengthening (Chen et al., 2023; Yan et al., 2024). Such factors likely exert “qualitative and long-term” rather than immediate quantitative effects, which may not be detected in small-sample, district-level analyses.

Parental support also reflects mixed tendencies: while some families are willing to provide financial investment, others demonstrate cognitive biases related to academic performance and injury risks, thereby constraining participation. This finding corroborates broader literature showing that parental attitudes and social norms exert significant influence on youth physical activity behaviors, though such effects are highly sensitive to local context and the quality of facilities available. (Guo et al., 2025). Taken together, the causal evidence from this study (with RI and SS as the primary drivers, while CQ and PS are less significant) underscores the need for an integrated policy package.

Recommended measures include: (1) sustaining and expanding financial investment and maintenance of facilities and equipment; (2) designing a tiered training system to improve teachers’ and coaches’ professional competencies; (3) enhancing health and safety communication with parents to reduce concerns about academic trade-offs and injury risks; and (4) strengthening collaboration among schools, families, communities, and local authorities to build a supportive ecosystem for continuous participation. These recommendations align with recent policy-oriented research in China, which stresses that success depends on the integration of policy, resources, environment, and teacher capacity rather than reliance on any single dimension (Peng et al., 2023).

## **Suggestion**

### **1. Suggestions for Research**

1. The government should establish special school football development funds, allocate budgets for facilities, equipment, competitions, and teacher training, and ensure effective policy implementation at the school level through coordinated action between education and sports departments.

2. Schools should improve the quality and motivation of football teachers through systematic training programs while simultaneously reducing students’ academic pressure, promoting the value of football participation, and fostering a supportive culture among parents, teachers, and the community.

### **2. Suggestions for Future Research**

1. Future studies should include a larger number of schools across different regions or provinces to enable comparative analysis, thereby identifying whether the dominance of resource input and school support is consistent nationwide or varies by context.

2. Should adopt longitudinal or qualitative approaches (e.g., interviews, case studies, or intervention-based designs) to capture the long-term effects of parental support and coaching quality, which may not emerge clearly in short-term quantitative surveys.

## References

- Chen, L., Wang, J., & Liu, Y. (2023). Developing the theoretical model of Chinese physical education teachers' health communication competence. *Frontiers in Public Health*, 11, 1233738. <https://doi.org/10.3389/fpubh.2023.1233738>
- General Office of the State Council. (2015). *Overall plan for the reform and development of Chinese football*. Beijing: State Council of the People's Republic of China.
- Guo, X., Zhang, Z., & Li, H. (2025). Study on the impact of rural public sports facilities and instructors on residents' participation in sports activities in sub-county regions of China. *Frontiers in Public Health*, 13, 1475321. <https://doi.org/10.3389/fpubh.2025.1475321>
- Japan Football Association. (2022, December 20). *Our national football philosophy: The double pyramid model [PDF]*. [https://www.jfa.jp/japansway/japan%27sway\\_en\\_221219.pdf](https://www.jfa.jp/japansway/japan%27sway_en_221219.pdf)
- Lee, J. Y., Gang, A. C., Kim, T.-Y., Park, J., Cho, E.-A., & Park, J.-Y. (2022). Effective strategies for system improvement in the K League youth system. *International Journal of Human Movement Science*, 16(3), 31-44. <https://doi.org/10.23949/ijhms.2022.12.16.3.3>
- Liu, Y., Zhao, Y., Li, J., Huang, X., Wu, C., Zhang, J., & Chen, P. (2022). Results from the China 2022 report card on physical activity for children and adolescents. *Journal of Exercise Science & Fitness*, 20(4), 281-289. <https://doi.org/10.1016/j.jesf.2022.10.004>
- Ministry of Education of the People's Republic of China. (2023). *Annual report on campus football development*. Beijing: MOE.
- Peng, Q., Chen, Z., Li, J., Houlihan, B., & Scelles, N. (2023). The new hope of Chinese football? Youth football reforms and policy conflicts in the implementation process. *European Sport Management Quarterly*, 23(6), 1928-1950. <https://doi.org/10.1080/16184742.2022.2083649>
- Tan, G. X. (2018). When will China win the World Cup? A study of China's youth football development. *The International Journal of the History of Sport*, 34(17-18), 1883-1897. <https://doi.org/10.1080/09523367.2018.1481831>
- Union of European Football Associations (UEFA). (2021). *Grassroots football development in Europe*. Nyon: UEFA.
- Wang, Z., Tan, B., & Yi, B. (2022). A study on the optimization and improvement of the construction of the campus football development model by a factor analysis method under the background of "Healthy China." *Journal of Environmental and Public Health*, 2022, 3260571. <https://doi.org/10.1155/2022/3260571>
- Yan, J., Malkin, M., Smith, J. J., Morgan, P., & Eather, N. (2024). Current teachers' perceptions and students' perspectives regarding activities modalities, instructional settings during primary school physical education classes in China: A cross-sectional observational study. *Frontiers in Sports and Active Living*, 6, 1378317. <https://doi.org/10.3389/fspor.2024.1378317>
- Yin, P., Abdullah, M. F. B., & Hassan, M. F. B. (2024). The key factors of talent development environment for campus football athletes in China. *Cogent Social Sciences*, 10(1), 2431590. <https://doi.org/10.1080/23311886.2024.2431590>