Student's Satisfaction of Learning in Body Fitness Course

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Abstracts

College students are the main body of college physical education courses. Their satisfaction can reflect the quality of university fitness and bodybuilding courses to a certain extent. To this end, this study borrows the theoretical model of customer satisfaction, adopts a hybrid research method, and builds a model satisfaction model of college students' fitness and bodybuilding courses through in-depth interviews, then verify the assumption proposed by the model. The study found:1. Teacher image has a positive impact on student expectation, Perceived quality, and student satisfaction; Students expect a significant positive impact on perceived value; Perceived quality has a positive and positive impact on perception value and student satisfaction. The study also found: Perceived quality and perceived value plays a part of the intermediary role in the path that the teacher image affects students' satisfaction; Student expectation and perceived values play a part of the intermediary role in the path of teacher's satisfaction.

Keywords: Student's satisfaction; Satisfaction of learning; Body fitness course

Introduction

Body fitness is one of the most popular sports in the world because of its ability to strengthen the body, build muscle and prevent disease (Wang & Du, 2019 : 55-57). College students are more popular with body fitness, and it has a unique advantageous condition to carry out body fitness sports in colleges and universities. Body fitness not only develop muscles and coordinate the proportion of the body, but also carve the body lines, shape a good physical form, and finally achieve the goal of strengthening the body and health (Cheng, 2019 : 80-86). College students are in the middle and late stages of physical development, and there is still a lot of room for improvement. It is necessary to offer body fitness course to improve the physical fitness and aesthetics of college students and personal image temperament. However, since the establishment of body fitness courses, due to the large-scale teaching system, westernization of teaching content, insufficient localization research, the use of single teaching practices, lack of teaching practice, and insufficient curriculum attraction, the role of body fitness course has not been played. Therefore, it is necessary to investigate the satisfaction of Chinese college students' "body fitness" course to improve the pertinence of the teaching of "body fitness", improve the quality of teaching and bodybuilding courses, and enhance the physical health of college students.

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Research Objectives

1. To study the factors of satisfaction of body fitness course.
2. To explore the relationship between satisfaction factors of body fitness courses.
3. To study the customer satisfaction index model and establish the student satisfaction index model and system.

Literature Review

Student satisfaction refers to the feeling of students' perception effect on the school compared with the expectations of the school. Specifically, it can be manifested as a psychological reflection, and is a comparison relationship between the inner expectations and realistic perception.

Since Cardozo (1965) proposed customer satisfaction, this concept has been widely used in various fields of social life. Student satisfaction is derived from the concept of customer satisfaction. Students' satisfaction is the result of two disciplines of education and management. American scholars draw on the theory of customer satisfaction and adapt the method of measurement of customer satisfaction to make a creative way to measure the satisfaction of student satisfaction. The introduction of customers in the field of sales in the field of higher education has formed the satisfaction of college students. The educational services provided by colleges and universities are regarded as commodities, and college students are consumers who enjoy higher education services. The service products of higher education are educational services provided by students' needs, and students act as "customers" in school, and have their own expectations and perceptions of services provided by higher education. A quantitative description of the satisfaction of students. A psychological state that appears after the student needs are met is the so -called student satisfaction. It can be used to determine whether students are satisfied with the school's education services, that is, whether they meet their own needs. Gabriela Ribes Giner (2016 : 53-65) argues that in the field of education, student satisfaction is an objective comment made by students based on their own learning experience and the final educational . If you want to get the high satisfaction of students, the school should understand the real needs of the students and provide it with excellent value. Yu (2018 : 42) studied the satisfaction of students with the teaching of moral education classrooms. Zhao (2020) conducted the satisfaction of students with modern education technology courses; Zhang (2021 : 6) based on the teaching of ideological and political theory curriculum, studied the satisfaction of students; Zhao (2021 : 44) conducted the satisfaction of students with geographical textbooks; Although the student satisfaction model has a certain application in curriculum teaching, it has not been used in fitness and bodybuilding courses. Recently, a research was found, Xu (2018 : 3) conducted a study of the satisfaction evaluation of students' satisfaction of students in general universities, but the study of student satisfaction of fitness and bodybuilding courses is lacking, Therefore, this article draws on customer satisfaction models to conduct research on fitness and bodybuilding courses.

Research Conceptual Framework

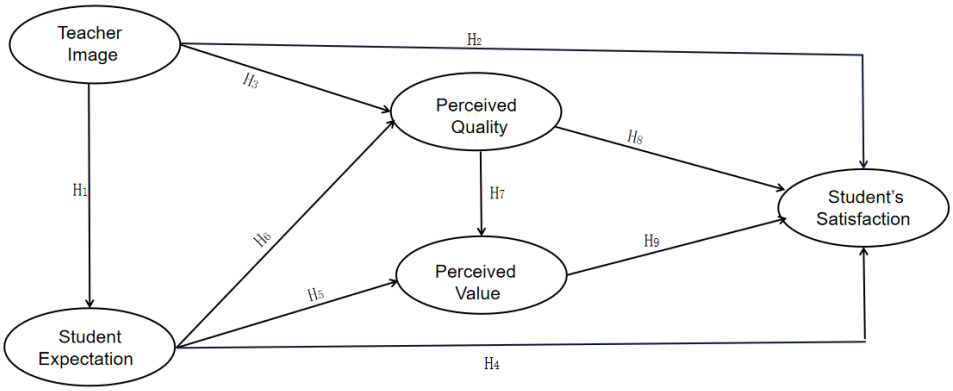

Figure 1 Research Conceptual Framework

Research Hypothesis

Hypothetical models are usually based on hypothetical relationships between variables. Therefore, determining the hypothetical relationship between variables is the premise of constructing a hypothetical model. This paper proposes 15 hypotheses:

Hypothesis 1: Teacher image has a positive impact on student expectation.

Hypothesis 2: Teacher image has a positive impact on student satisfaction.

Hypothesis 3: Teacher image has a positive impact on student perceived quality .

Hypothesis 4: Student expectation has a positive impact on student satisfaction.

Hypothesis 5: Student expectation has a positive impact on perceived value .

Hypothesis 6: Student expectation has a positive impact on perceived quality .

Hypothesis 7:Perceived quality has a positive impact on perceived value.

Hypothesis 8: Perceived quality has a positive impact on student satisfaction.

Hypothesis 9: Perceived value has a positive impact on student satisfaction.

Hypothesis 10: Perceived quality and perceived value play a mediating role in the effect of teacher image on student satisfaction.（As shown in Figure 2).

Hypothesis 11:Student expectation plays a mediating role in the effect of teacher image on student satisfaction.（As shown in Figure 2).

Hypothesis 12:Student expectation and perceived value mediate the effect of teacher image on student satisfaction.（As shown in Figure 2).

Hypothesis 13:Student expectation and perceived quality mediate the effect of teacher image on student satisfaction.（As shown in Figure 2).

Hypothesis 14:Student expectation, perceived quality and perceived value play a mediating role in the effect of teacher image on student satisfaction. (As shown in Figure 2).

Hypothesis 15:Perceived quality mediates the effect of teacher image on student satisfaction. (As shown in Figure 2).

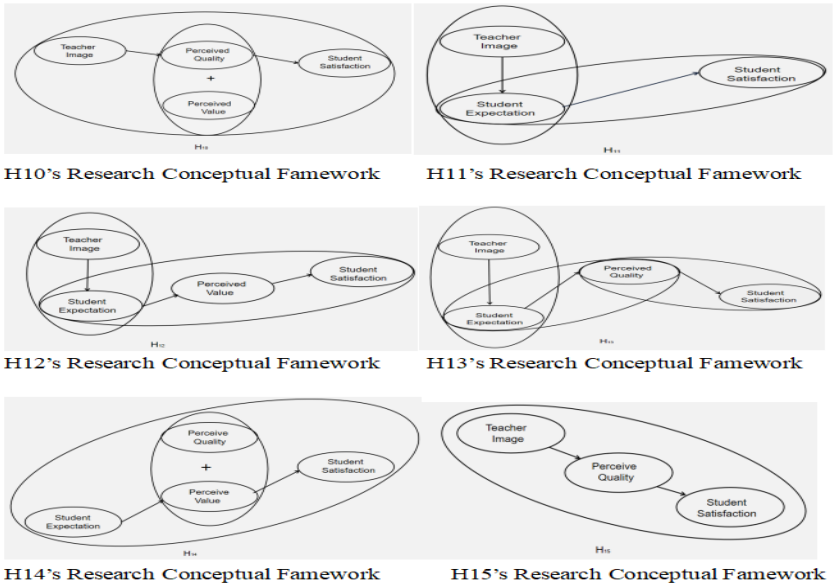

Figure 2 H11-H15's Research Conceptual Famework

Research Method

1.Research Design

The author have designed this study as a mixed study. Interviews were conducted using purposive sampling to collect data. Teaching directors with many years of experience in senior physical education teaching management in universities in Shanxi Province were selected as the study participants and interviewed face-to-face, by telephone and by WeChat to talk about the impact of teaching body fitness courses on student's satisfaction from the perspective of their physical education management experience. A questionnaire from the students' perspective was then designed with reference to the conceptual model of the relevant literature. Before the formation of the larger questionnaire, the author invited five management expert academics to conduct an IOC test, followed by a small-scale pre-test to provide a reliable basis for the formal development of the online questionnaire. Finally, the questionnaire used a simple sample sampling method to collect data from students aged 17-26 years in three universities in Shanxi Province, China, selected from students who were taking body fitness courses or had already taken body fitness courses. The data were analysed through structural equation modelling to obtain in-depth information. Finally, the research hypotheses were tested.

2. Population and Sample Size

Population: This study was a mixed study design. Author defined the target group as students from three universities in Shanxi Province, namely: Taiyuan Institute of Technology, Taiyuan Institute of Science and Technology and Shanxi Agricultural University, there are 70,000 students.

Sample: In a mixed methods study, there are two types of samples. First, design a sample of respondents for in-depth interviews, use of purposive sampling, the interviewee is 20 teaching directors in Shanxi Province, China, who has many years of senior physical education teaching management experience in colleges and universities. Second, a questionnaire sample was designed in a quantitative study. This study used simple random

sampling. 3 universities in Shanxi (Taiyuan Institute of Technology, Taiyuan University of Science and Technology and Shanxi Agricultural University).

3. Research Method

I use mixed methods: qualitative and quantitative research methods. Including in-depth interview method, questionnaire survey method and statistical analysis method.

Research Results

1. Common Methodological Deviation Test.

Using SPSS 24.0 regression analysis to test each variable, The results show that the VIF (variance inflation factor) is between 1.837 and 3.650, all less than 10,The tolerances are between 0.289~0.545, all greater than 0.1, indicating that there is no multiple linear relationship. The Harman single factor method was used to test and found that the first principal component obtained without rotation was within the acceptable range, and the sample data did not have the problem of common variance deviation.

2 .Reliability and Validity Test

This study tested the reliability and validity of the data. It can be seen from Table 1 that, The Cronbach's α coefficient values of teacher image, student expectation, perceived quality, perceived value and student satisfaction are all greater than 0.7,It shows that the internal consistency of the research data is good; The CR value of each variable is greater than 0.9, which conform to inspection standards; The AVE values of all variables are greater than 0.7, indicating that the convergent validity of the scale in this study is good; The square root of each variable AVE is greater than the correlation coefficient value between it and other variables (see Table 1), indicating that the research data has good discriminant validity.

Table 1 Reliability and Convergent Validity Test

Items			Estimate	S.E.	C.R.	P	Estimate	CR	AVE
TI	——	A1	1				0.863		
TI	——	A2	1.037	0.025	42.247	***	0.906	0.9550	0.8418
TI	——	A3	1.074	0.065	16.426	***	0.938		
TI	——	A4	1.096	0.066	16.716	***	0.96		
SE	——	B1	1				0.844		
SE	——	B2	1.1	0.053	20.722	***	0.953	0.831	0.567
SE	——	B4	0.523	0.034	15.241	***	0.641		
PQ	——	G1	1				0.93		
PQ	——	G2	0.919	0.027	33.841	***	0.915	0.943	0.848
PQ	——	G3	0.98	0.029	34.036	***	0.917		

PV	——	H1	1				0.866		
PV	——	H2	1.033	0.041	25.262	***	0.872	0.910	0.719
PV	——	H3	1.101	0.058	19.101	***	0.738		
PV	——	H4	1.024	0.038	27.056	***	0.905		
SS	——	I1	1				0.919		
SS	——	I2	1.012	0.03	34.04	***	0.92	0.948	0.858
SS	——	I3	1.051	0.029	36.092	***	0.94		

Note: TI=Teacher Image, SE=Student Expectation, PQ=Perceived Quality, PV=Perceived Value, SS=Student Satisfaction

Table 2 reports the Pearson correlation coefficients among the variables.From the results, The five variables concerned by this research, teacher image, student expectation, perceived quality, perceived value, and student satisfaction are all significantly correlated.This provides a preliminary basis for subsequent hypothesis testing to a certain extent.

Table 2. (Pilson) Related Analysis and Distinguishing Validity Analysis

Variables	**1**	**2**	**3**	**4**	**5**
1.TI	**0.917**				
2.SE	0.090	**0.753**			
3.PQ	.205**	0.086	**0.921**		
4.PV	.276**	.285**	.541**	**0.848**	
5.SS	.406**	0.064	.493**	.696**	**0.926**

**. Correlation is significant at the 0.01 level (2-tailed).

Note:TI=teacher image, SE=Student expectation, PQ=Perceived quality, PV=Perceived value, SS=Student satisfaction

3. Hypothetical Test.

In order to test the satisfaction model of fitness and bodybuilding courses, the research uses AMOS 26.0 to estimate the model,It can be seen from Table 3 that the fitting index results of the structural model show that: $x^2/df=3.260$，RMSEA=0.069，CFI=0.967，TLI=0.959，IFI=0.967，All indicators are in line with the requirements of the structural

model indicators, indicating that the model fit is good.

Teacher image had a significant effect on student expectations ($p < 0.05$), with a path coefficient of 0.204, and hypothesis H1 was validated; Teacher image had a significant effect on student satisfaction ($p < 0.05$), with a path coefficient of 0.214, and hypothesis H2 was validated; Teacher image has a significant effect on Perceived quality ($P < 0.05$), the path coefficient is 0.210, hypothesis H3 was verified. Student expectations had no significant effect on student satisfaction ($p > 0.05$), with a path coefficient of -0.063 and a p-value of 0.058, hypothesis H4 was rejected; Student expectations had a significant effect on perceived value ($p < 0.05$), with a path coefficient of 0.261, and hypothesis H5 was validated; Student expectations had no significant effect on perceived quality ($p > 0.05$), with a path coefficient of 0.056 and a p-value of 0.227, hypothesis H6 was rejected; Perceptual quality had a significant effect ($p < 0.05$) on the perceived value, with a path coefficient of 0.568, and hypothesis H7 was validated; Perceived quality had no significant effect on student satisfaction ($p > 0.05$), with a path coefficient of 0.076 and a p-value of 0.078, hypothesis H8 was rejected; Perceived value had a significant effect on student satisfaction ($p < 0.05$), with a path coefficient of 0.701, and hypothesis H9 was validated.

Table 3 Equation Model Path Parameter Table

			Estimate	Sd.Estimate	S.E.	C.R.	P
TI	→	SE	0.215	0.204	0.049	4.380	***
TI	→	SS	0.156	0.214	0.025	6.278	***
TI	→	PQ	0.220	0.210	0.051	4.315	***
SE	→	SS	-0.044	-0.063	0.023	-1.893	0.058
SE	→	PV	0.199	0.261	0.030	6.706	***
SE	→	PQ	0.056	0.056	0.046	1.208	0.227
PQ	→	PV	0.436	0.568	0.033	13.225	***
PQ	→	SS	0.053	0.076	0.030	1.764	0.078
PV	→	SS	0.638	0.701	0.045	14.031	***

Note： * * * = $p < 0.01$

Note:TI=teacher image, SE=Student expectation, PQ=Perceived quality, PV=Perceived value, SS=Student satisfaction

In summary, the hypotheses H1, H2, H3, H5, H7, and H9 mentioned above were all verified.

4 .Analysis of Intermediary Effects.

As shown in Table 4： Path 1: TI → PQ → PV → SS level. That is, the path of Teacher Image → Perceived Quality → Perceived Value → Student Satisfaction, the indirect effect is 0.083,two types of confidence interval are (0.036,0.095), and neither includes 0,it shows that the indirect effect is significant. After testing, H10 has been verified.

Path 2: TI → SE → PV → SS level. That is, the path of Teacher Image → Student Expecture → Perceived Value → Student Satisfaction, The indirect effect is 0.044, two types of confidence interval are (0.036,0.095), nothing includes 0, indicating that the indirect effect is significant. After testing, H12 has been verified.

Table 4 Mediating effect parameter table

Influence path	Estimated value	Bootstrap method (1000 times) 95% confidence interval (bias corrected) (lower limit, upper limit)
TI→PQ→PV→SS	0.083	（0.036,0.095）
TI→SE→PV→SS	0.044	（0.036,0.095）

Note: TI=Teacher Image, SE=Student Expectation, PQ=Perceived Quality, PV=Perceived Value, SS=Student Satisfaction

The results of the student satisfaction model of body fitness course are shown in Figure 3:

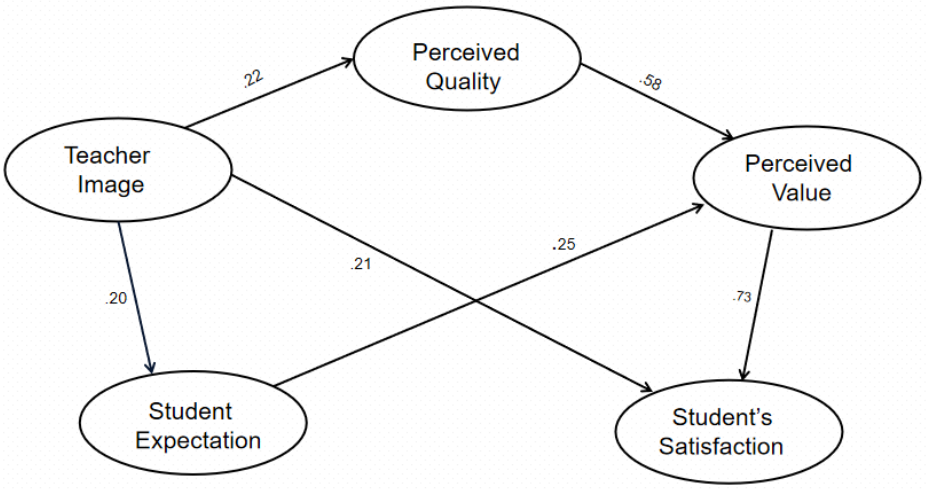

Figure 3 Student's Satisfaction Structural Equation Model Path Diagram

Discussion

1. Qualitative research: Through in-depth interviews, after manual coding, get it:the factors that affect student satisfaction are: teacher image, student expectation, perceived quality and perceived value. A conceptual framework for the study is established that lays the foundation for quantitative research.

2. Quantitative research: Body Fitness course teaching is very important for the development of university fitness and bodybuilding courses Actively explore the factors that affect student satisfaction clarify the mechanism of influence of each factor is very important. Therefore, In this study, among the total number of 70,000 of the three universities. Choose to take fitness and bodybuilding courses and students who have already taken as research objects, By establishing the structural equation model of students' satisfaction with the teaching of body fitness course, use statistical methods to conclude the following main conclusions， this can be derived from the analysis of the relevant data. By analyzing the path of the structural equation model, discovering the image of the teacher has a positive impact on the expectations of students， teacher image has a positive impact on student satisfaction, teacher image has a

positive impact on perceived quality, students' expectations have a positive impact on perception, Perceived quality has a positive impact on perceived value,perceived value has a positive impact on student satisfaction，the standardised path coefficient is：0.204、0.214、0.210、0.210、0.261、0.568 and 0.701. By comparing the standardized path of 5 potential variables，it is possible to conclude that：Perceived value factors have the most significant direct positive impact on student satisfaction. In addition, these factors also indirectly affect students' satisfaction by affecting other factors, perceived quality and perceived value play a mediating role in the effect of teacher image on student satisfaction, student expectation and perceived value mediate the effect of teacher image on student satisfaction，

Expected finding: **The new knowledge** of this article is as follows: Through research it was found that: Students expect no effect on students' satisfaction; Students expect no impact on the quality of perception; Perceive quality does not have an impact on student's satisfaction; Teacher image has no impact on student's satisfaction through student expectations；Teacher image has no impact on student's satisfaction through student expectations and perceived quality. Student expectations have no impact on student's satisfaction through perceived quality and perceived value. Teacher image has no impact on student's satisfaction through perceived quality.

Conclusion and Recommendations.

1.Conclusion

Teacher image can not only affect academic satisfaction directly, but also through perceived quality and perceived value, so recommendations are made based on the findings.

2. Recommendations

2.1 Emphasis on Improving the Image of Body Fitness Teacher.

1) Overall impression. Teacher image is students' initial impression of fitness and bodybuilding courses. Body fitness teacher should first improve their overall impression of students from the appearance, teaching actions and teaching methods.

2) Improve the ability of teachers. With the continuous upgrading and optimization of the modern teaching model, the restrictions and constraints of the traditional domestic teaching model on the ability of teachers and the development of students have gradually been broken,Teachers' teaching ability can be developed to the greatest extent, and students' personal comprehensive ability can also be improved to a certain extent Kang,Liu&Lv, 2020 : 115 - 116).Therefore, teachers should always maintain a learning attitude, and schools should also provide professional training for teachers so that teachers can continuously improve their professional abilities.

3) Teaching forms should be as rich and diverse as possible. As a teacher in a university, you should actively explore participatory teaching methods, improve classroom interaction, reform traditional teaching forms, actively promote new teaching modes such as PBL teaching method and flipped classroom to enhance students' learning initiative（Hu, 2019 : 216），can increase students' interest in learning.

2.2. Focus on meeting student expectations for body fitness classes. First, the arrangement of body fitness courses should meet the needs of students to the greatest extent; Second, the professional level of fitness and bodybuilding teachers can meet the needs of students. So as to improve students' satisfaction with fitness and bodybuilding courses.

2.3. Improve students' perceived quality of body fitness course. Textbooks are the

most direct way for students to learn knowledge. It is necessary to strengthen the construction of textbooks for body fitness course to make students interested in learning and improve their satisfaction with the course. It is also necessary to increase the investment in teaching venues and equipment, and sports venues need to be updated, repaired, and cleaned regularly, and sports consumables need to be filled in time to ensure the normal development of teaching.

2.4. Optimizing students' perceived value of body fitness course. Perceived valueis mainly reflected in students' enthusiasm for body fitness course and the impact of body fitness exercises on students' physical and mental health. Therefore, this requires the mutual cooperation of students, body fitness teachers and schools, so that students can learn something in the fitness and bodybuilding class and can apply what they have learned.

Reference

Cheng, L.M.(2019). Value and health promoting function of bodybuilding and fitness from the perspective of national health management. *Journal of Shenyang Institute of Physical Education*, (06), 80-86.

Giner,G.R.,&Peralt,R.(2016). Agustín. Structural equation modeling of co-creation and its influence on the student's satisfaction and loyalty towards university. *Comput. Appl. Math.*13 (1), 53-65.

Hu,X.(2019).Thinking about the school teachers in the new era- "Implementation and Implementing the Reading of the Undergraduate Education Work Conference of the New Era of the New Era" . *Course Teaching and Education*. (24), 216.

Xu,X.Q.F.(2018). *Research on the evaluation of college students' satisfaction on PE class in Hubei province.* Wuhan University of Technology, Hubei.

Yu,R.X.(2018). *A study on students 'satisfaction in the classroom teaching of middle vocational education*. Guangdong Technical Teachers College, Guangdong.

Kang,L.L.,Liu,L.L.,& L,Y. (2020). The exploration of college English online and offline mixed teaching method ——Take the online classroom during the new crown epidemic as an example. *Science and Education Guidance,*7(5),115 - 116.

Wang,Y.T.,&Du,S.H.(2019). Research on the Development of fitness and bodybuilding courses in universities in Shanxi province. *Fujian Sports Technology*,38(01),55-57.

Zhang,L.Y.(2021).*Investigation and research on student satisfaction of ideological and political theory course teaching in higher vocational colleges ——Take some higher vocational colleges in inner mongolia as an example.* Inner Mongolia Teaching University,Neimenggu.

Zhao,H.X.(2021). *A research of China higher education student satisfaction based on PLS-SEM model.*Hunan University of Science and Technology, Hunan.

Zhao,Z.H.(2020). *Study on the outcomeoriented influencing factors of student satisfaction in modern educational technology course.* Yunnan Normal University, Yunnan.