

# Development of Tourism Resources of Baimai Spring Park in Jinan City and Its Path Optimization

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**Abstract** Tourism is gradually becoming one of the pillar industries of China's economy. Tourism resources are the premise and foundation of tourism development. It is of great significance to study the exploitation of tourism resources to promote the development of tourism. Jinan is famous for water, and Baimai Spring Park is a collection of springs in one place, with rich tourism resources. Coupled with the local government's attention to tourism, Baimai Spring Park, as a representative, has accumulated a rich tourism market foundation. With the support of policies, unique spring ecological and cultural resources and increasingly perfect location conditions, the high-quality development of tourism resources in Baimai Spring Park is particularly urgent. In this study, the present situation and problems of development of tourism resources in Baimai Spring Park were analyzed by questionnaire survey method, and corresponding optimization suggestions were put forward.

**Key words** Baimai Spring Park; Development of tourism resources; Questionnaire survey method; Optimization suggestions

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With the acceleration of the urbanization process and the increasing pressure of people, people have been living in cities for a long time and begin to yearn for nature, so rural tourism and forest tourism are highly sought after<sup>[1]</sup>, making the emerging tourism gradually occupy an increasingly important position in the social economy<sup>[2]</sup>, and its influence is also expanding. In the *Notice of The State Council on the Issuance of the 14<sup>th</sup> Five-Year Plan for Tourism Development* (Guofa [2021] No. 32) issued in 2021, the outlook goal is that by 2025, the level of tourism development will be continuously improved, and the modern tourism system will be further improved; tourism effective supply, high-quality supply, and flexible supply will be more abundant, and the mass tourism consumption demand will be better met. With the advent of the national tourism era, it is urgent to develop the tourism resources in the tourist areas reasonably.

In China, Jinan is a rare city characterized by spring water resources and a famous historical and cultural city recognized by the State Council. The region is rich in historical relics, and has ten spring groups and abundant spring resources<sup>[3]</sup>. Baimai Spring Group has rich cultural tourism resources and spring tourism resources. Baimai Spring Park is built around Baimai Spring Group, and has been selected as a 4A scenic spot. It is one of the key points of the construction of global tourism in Zhangqiu. In recent years, the Zhangqiu government has accumulated and integrated more than 700 million yuan of special financial funds, and introduced relevant policies to promote the construction of global tourism, including measures for the management of discount interest subsidy funds for key tourism construction projects and preferential policies for tourism investment promotion, etc. The intro-

duction of these policies to promote tourism development has ensured the investment of global tourism in Zhangqiu. In this context, the research on the development of tourism resources in Baimai Spring Park will help the construction of Zhangqiu<sup>[4]</sup>. Baimai Spring has unique cultural and natural tourism resources, ranking first among the eight scenic spots in Zhangqiu, and its tourism resources were not inferior to Baotu Spring. It has unique spring culture, but its development degree and popularity are far lower than Baotu Spring.

At present, the existing research on spring tourism is more focused on the development of spring tourism resource products. For instance, Ren Xiaoquan used hierarchical analysis, case analysis and other methods to study problems in spring water tourism products of Jinan, and found that spring water tourism products in Jinan had problems such as lack of brand fame and serious product homogeneity<sup>[4]</sup>. Led by the main line of context, Xu Cai designed the development of "spring culture" series of tourist souvenirs<sup>[8]</sup>, namely making differentiated design and developing tourism souvenirs with cultural connotations according to the individual needs of tourists. Yu Tong creatively studied the development and utilization of spring water archive resources<sup>[9]</sup>, and proposed specific optimization methods, such as conducting compilation and research, enriching cultural methods, holding cultural activities, and integrating archive resources to apply for the world heritage listing of the spring city. Lin Qian *et al.* found that there were problems such as no sign of famous springs set up, inadequate supervision measures, unclear road signs, and unreasonable admission price of the famous spring in the scenic spot, and it is needed to renovate the environment, design tourist routes, and build theme hotels<sup>[10]</sup>. As for the research on tourism development of Baimai Spring Park, Li Yuping established a scenic satisfaction index evaluation model based on tourists' perceived satisfaction,

and evaluated the current situation of Baimai Spring Park<sup>[11]</sup>. Some scholars studied the garden culture, errors in the translation of public signs into English, and tourism marketing of Baimai Spring Park, but lack timeliness. In this paper, based on the general situation of Baotu Spring Park, by using the questionnaire survey method, the characteristics and satisfaction of tourists in Baimai Spring Park are analyzed from aspects of food, housing, travel, playing, shopping, and entertainment, and then the current situation and problems in the development of tourism resources are studied. Finally, some optimization suggestions are put forward accordingly.

1 General situation of the study area and research methods

Baimai Spring Park is one of the five major spring veins in Jinan. It is located at Huiquan Road No. 2017, Zhangqiu District, Jinan City, Shandong Province. It was founded in 1986, and covers an area of about 25 hm<sup>2</sup>. Baimai Spring Park is located in the Mingshui spring area. The spring water mainly comes from the abundant fissure karst water formed by atmospheric precipitation and surface runoff infiltration in the southern limestone outcrop and fissure karst development area<sup>[12]</sup>. The scenic spot has beauti-

ful mountains and rivers and pleasant scenery, and the group springs gather together. As one of the seventy-two springs in Jinan, Baimai Spring has been recorded in parallel with Baotu Spring. In addition to Baimai Spring, there are also Mo Spring, Shaizi Spring, Jinjing Spring and other springs in the park. With the unique spring water resources as the carrier, the profound Longshan culture as the heritage, the Baimai Spring cultural garden which integrates ecological spring view, spring water landscape and cultural landscape has been formed based on the distinct regional characteristics of Zhangqiu and the Qingzhao culture on the spring water<sup>[13]</sup>.

1.1 Analysis of conditions for tourism development

1.1.1 Classification of tourism resources. Tourism resources are the material basis of tourism activities and the object of tourism activities. The reasonable development of Baimai Spring Park must depend on the proper development and utilization of tourism resources. Tourism resources can be mainly divided into natural tourism resources and cultural tourism resources. In this paper, the tourism resources of Baimaiquan Park were classified and sorted out from Dianping, Baidu Baike, journals of Zhangqiu and news information of Sogou website with the keyword of Baimai Spring Park (Table 1).

Table 1 Classification of tourism resources

Classification		Specific content
Natural tourism resources	Water scenery	Baimai Spring, Mingshui Lake, Longwan Spring, Jinjing Spring, Meihua Spring, Mo Spring, Dongma Bay, Xima Bay, Yanming Spring, Wanquan Lake, and Shaizi Spring
	Biological landscape	<i>Salix babylonica</i> L. , <i>Magnolia denudata</i> , <i>Platanus × acerifolia</i> (Aiton) Willd. , <i>Sophora japonica</i> Linn. , <i>Albizia julibrissin</i> Durazz. , <i>Ginkgo biloba</i> L. , <i>Jasminum nudiflorum</i> Lindl. , <i>Prunus persica</i> ‘Duplex’ , <i>Iris tectorum</i> Maxim. , <i>Nelumbo</i> sp. , <i>Nymphaea</i> L. , <i>Scirpus validus</i> f. "Mosaic" , <i>Iris pseudacorus</i> L. , <i>Cedrus deodara</i> (Roxb. ) G. Don, <i>Salvia splendens</i> Ker Gawl. , <i>Viola tricolor</i> L. , <i>Rosa chinensis</i> Jacq. , <i>Forsythia suspensa</i> (Thunb. ) Vahl, <i>Yucca gloriosa</i> , and <i>Cornus alba</i> L.
Cultural tourism	Humanistic tourism resources	Qingzhaoqi Garden
	Religious cultural resources	Longquan Temple (the existing audience hall of the Vatican Palace) , buddha images, and murals
	Urban and rural landscape	Zhangqiu ancient city (under construction)
	Modern man-made facilities	Zhuoying Pavilion, Yiyi Pavilion, Huiquan Pavilion, Zhangqiu ancient city (under construction) , Hehua Park, Hehua Square, Yanmingquan Park, five fountains, three stone arch bridges, Jinshi Garden, Wenmai Hanfeng, Shangzhu pavilion, Yinfeng Pavilion, Bei Gallery, Suyu Hall, Yanqin Ningxiang, and Yi'an Building
	Diet	Zhangqiu green onion, Mingshui fragrant rice, Longshan millet, Huangjia barbecue, Hongtangling baked sweet potato, and Baimai Spring ecological wine
	Historical celebrities	Yuan Haowen, Wang Shizhen, Pu Songling, Li Kaixian, Li Qingzhao, and Fang Xuanling
	Historical sites	Longquan stone carving, and records of re-repaired Longquan Temple

Note: The above data is collected online.

1.1.2 Analysis of factors of tourism development. As shown in Table 2, Baimai Spring Park has relevant elements for tourism development. Jinan Zhangqiu Mingshui Ancient City Tourism Development Co. , Ltd. invests in the construction of Mingshui ancient city based on the spring water resources of Baimai Spring<sup>[14]</sup>, aiming to build an international "spring water tourism resort". In the project, the spring water ecological park is based on architecture in the Ming and Qing Dynasty, and the core scenic area covers an area of more than 160 hm<sup>2</sup>. The total investment is more

than 6.5 billion yuan, and the project is mainly planed to build German-style leisure area, Mingshui ancient city core area, hotel conference resort and so on. Baimai Spring Park is located in the planed core area of Zhangqiu ancient city, that is, it is "Baimai Spring area" in the construction of the ancient city. It will uphold the "water-based" core concept, aiming to create a water-themed life and culture industry, and it will contain a variety of functions such as leisure, vacation, entertainment and so forth. The construction of the ancient city not only broadens the area of the scenic

spot, but also seamlessly connects the Baimai Spring group with the Yanming Spring system located in the west of Mingshui ancient city and Xiujiang River Park located in the north of the ancient city. It is also conducive to the development of tourism resources

in Baimai Spring Park, so that the ancient city can become a carrier of cultural and tourism integration to meet the leisure tourism needs of tourists and realize the protection of cultural monuments and economic development.

Table 2 Factors of tourism development

Factors	Concrete content
Natural factor	The land of Baimai Spring Park is relatively flat and open, which is conducive to the construction of recreational facilities and the laying of highways. It has a warm temperate sub-humid continental monsoon climate, which is characterized by four distinct seasons, rain and heat appearing in the same season. Water sources include Mingshui Lake, Moquan Spring, Jinjing Spring, <i>etc.</i> , with gurgling water.
Labour force	It has dense population and rich labor force, and is suitable for the development of the tertiary industry.
Industrial agglomeration	There are shopping malls, large shopping centers and other these service industries around the park and Hehua Square, Taohuashan Park and other tourist attractions nearby, and it has a good prospect for the development of tourism.
Economic factors	In terms of market, Zhangqiu District is densely populated, while Mingshui Town, where Baimai Spring Park is located, is a central area surrounded by many villages and towns, with a broad market. Nearby, there are hospitals and residential areas, and they are mostly the retired elderly, with a strong willingness to travel. In respect of transportation, Jiaoji Railway, Jiqing Highway, Jiqing Expressway, Jing-shi East Road, Zhanglai Road, and Panwang Road intersect, and it is located at the junction of Longquan Road, Chezhan Street, and Shuangquan Road, so it has good conditions for the development of tourism.
Policy	National policy: Zhangqiu encourages the construction of all-regional tourism and the development of tourism.
Culture	It has unique spring culture, Qingzhao Garden, and rural culture.

Note: The above data is collected online.

**1.2 Research method** In this paper, Baimaiquan Park is selected as the survey site, and questionnaires are distributed online through questionnaire star and social platforms such as wechat and QQ to obtain data. The questionnaire is divided into two parts: tourists' basic characteristics and tourists' satisfaction with the current status of Baimaiquan Park. In the questionnaire, questions 1 – 13 are designed to survey the basic characteristics, and question 14 uses a 5-point Likert scale, in which 1 indicates very dis-

satisfied and 5 means very satisfied. Tourists select scores according to their own experiences to reflect their satisfaction, and then the current status of development of tourism resources is evaluated. Baimai Spring Park is a multi-functional tourist scenic spot integrating food, housing, travel, playing, shopping, and entertainment. Therefore, the development degree of Baimai Spring Park is evaluated from the aspects of food, housing, travel, playing, shopping, and entertainment.

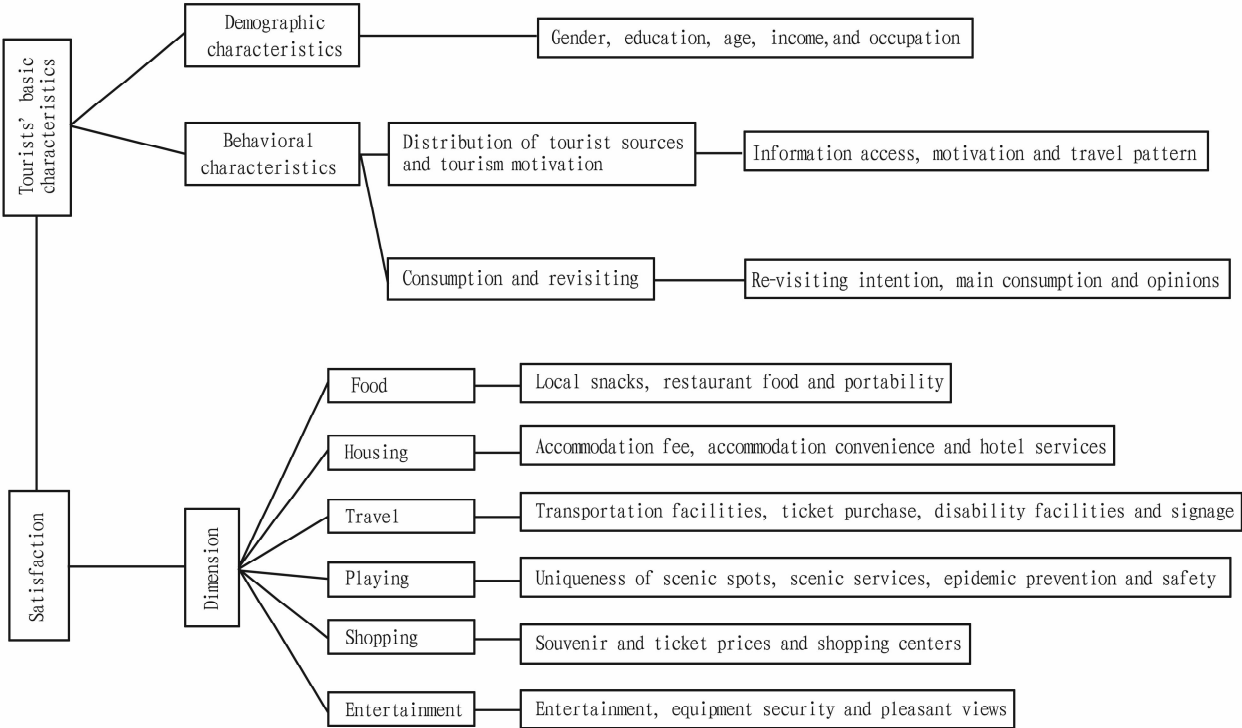


Fig.1 Design idea of the questionnaire

2 Results and analysis

2.1 Analysis of tourists’ basic characteristics

2.1.1 Demographic characteristics of tourists. According to the results of the questionnaire (Table 3), the surveyed tourists have a high educational level, and are mostly college students and undergraduates, accounting for 84.31%. The proportion of tourists 18 – 30 years old is the largest, up to 78.43%. Their monthly income is mostly below 3 000 yuan, accounting for 52.94%. For occupation composition, the proportion of students is the largest, reaching 60.78%.

Table 3 Demographic characteristics of tourists

Characteristics	Classification	Proportion // %
Gender	Male	31.37
	Female	68.63
Education	High school, technical secondary school and below	5.88
	College and undergraduate	84.31
	Postgraduate and above	9.80
Age	18 and below	5.88
	18 – 30	78.43
	30 – 40	11.76
	40 – 50	3.92
	50 and above	0
Monthly income	3 000 and below	52.94
	3 000 – 5 000	21.57
	5 000 – 7 000	13.73
	7 000 – 10 000	5.88
	10 000 and above	5.88
Occupation	Students	60.78
	Peasants	5.88
	Personnel of enterprises and public institutions	21.57
	Freelancers	11.76
	Retirees	0

2.1.2 Tourism behavior characteristics of tourists. As shown in Fig. 2, the most common modes of transportation for tourists are buses, walking and so forth, followed by trains, planes or ships with better accessibility, comfort and speed. Seen from Fig. 3, tourist destinations are mainly recommended by relatives and friends, and 17.65% of tourists live nearby. The proportion of the two ways accounts for 62.75%, and less than 1/3 of tourists know the relevant information of Baimai Spring Park through the Internet and other information channels.

Seen from in Fig. 4, the proportions of entrance fees, entertainment projects and food consumption are roughly the same. About 1/3 of tourists spend only entrance fees in the park, and no tourists choose to buy tourist souvenirs. Seen from Fig. 5, most tourists come to the park for relaxing and enjoying the scenery and architecture, accounting for 88.23% in total. There are also a small number of tourists to feel the characteristic culture, and almost no one will come to the park because of too much boredom.

As shown in Table 4, tourists think that the attractions in Baimai Spring Park are common and unattractive, and lack characteristics. The proportion is the highest, up to 56.90%. Besides, the high cost of tickets, accommodation and entertainment items, and the lack of characteristics of special products and souvenirs also account for a high proportion, reaching 54.90% and 49.00%, respectively.

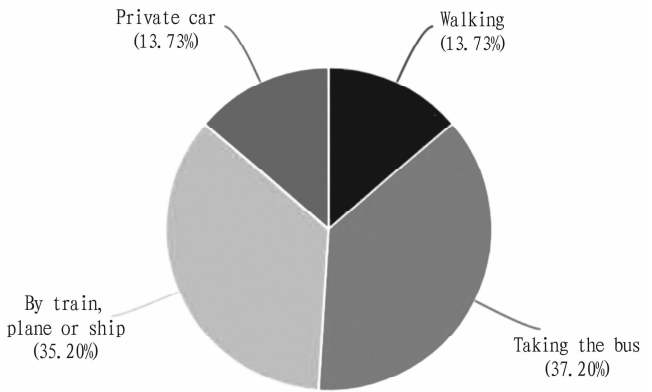


Fig. 2 Travel modes

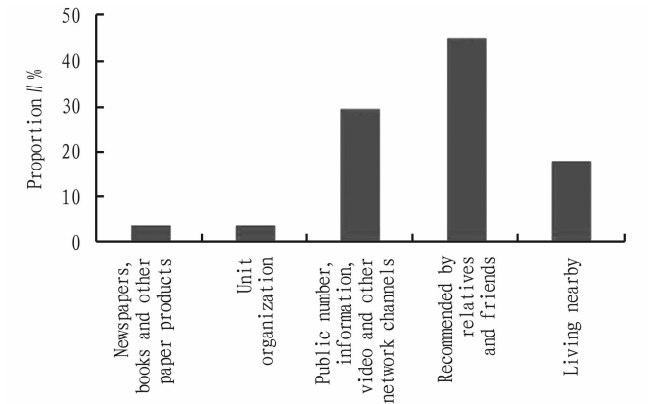


Fig. 3 Methods of information acquisition

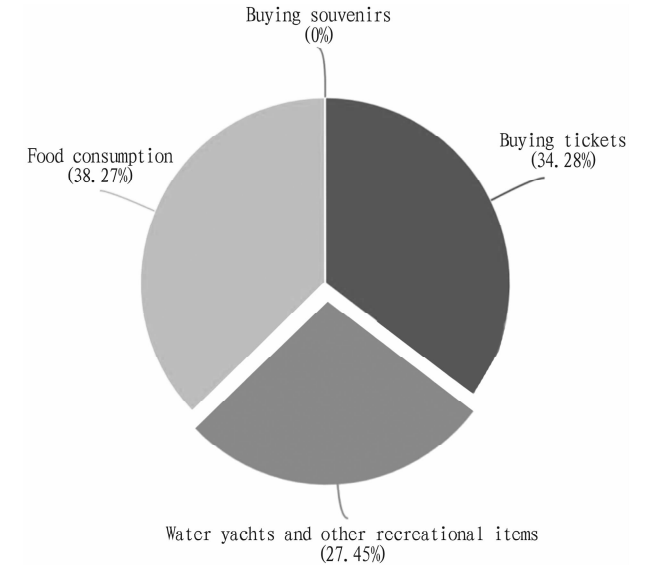
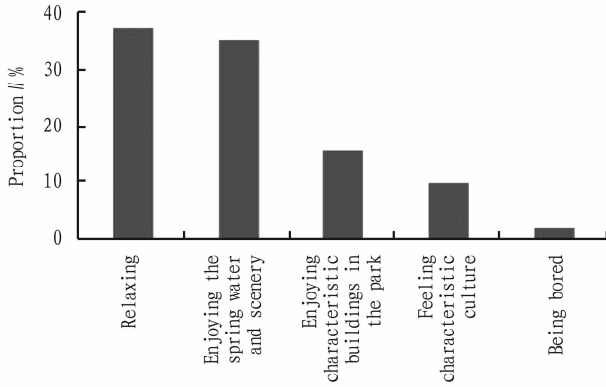


Fig. 4 Tourists' consumption items



**Fig.5 Tourist purposes**

## 2.2 Analysis of tourists' satisfaction

**2.2.1 Reliability analysis of scale.** Seen from Table 5, tourists' satisfaction is surveyed by the questionnaire from six dimensions, including food experience (food or dimension *A*), accommodation

perception (housing or dimension *B*), travel convenience perception (travel or dimension *C*), play experience in scenic spots (tourism or dimension *D*), shopping experience (shopping or dimension *E*), and entertainment experience in the scenic spot (entertainment or dimension *F*). Firstly, the reliability and validity of the questionnaire are analyzed to test whether the questionnaire data is qualified.

Cronbach's  $\alpha$  coefficient is most commonly used to measure the reliability and validity of the questionnaire. If the calculated  $\alpha$  coefficient is greater than 0.7, it is considered to be reliable. This method is used to measure the reliability of this survey scale. The  $\alpha$  coefficient of shopping and entertainment is less than 0.7, and the reliability is not good. After removing these two dimensions, the  $\alpha$  coefficients of food, housing, travel and tourism are all greater than 0.7, close to 0.8. It is seen that the reliability is good, and the reliability of the data is good.

**Table 4 Problems in Baimai Spring Park**

Problems	Number of cases	Proportion // %	Proportion of cases // %
The cost of tickets, accommodation and entertainment items is high	28	23.90	54.90
The attractions in Baimai Spring Park are common and unattractive, and lack characteristics	29	24.80	56.90
Special products and souvenirs lack characteristics	25	21.40	49.00
The directions in the scenic spot are not obvious	19	16.20	37.30
Tourists have not fully experienced the spring water culture	16	13.70	31.40
Total	117	100.00	229.40

**Table 5 Reliability analysis**

Items	Number of items	$\alpha$
<i>A</i>	3	0.791
<i>B</i>	3	0.782
<i>C</i>	4	0.824
<i>D</i>	3	0.777
<i>E</i>	3	0.673
<i>F</i>	3	0.696
Total	19	0.932

**2.2.2 Analysis of tourists' satisfaction.** Table 6 shows that the satisfaction of tourists ranges from 3 to 4 points. In the survey scale, 3 points indicate that it is normal, and 4 points mean that they are not satisfied with the current situation of Baimai Spring Scenic Spot, so it is necessary to develop and optimize tourism resources.

**Table 6 Results of tourists' satisfaction**

Dimensions	<i>N</i>	Minimum	Maximum	Average	Standard deviation
<i>A</i>	51	2.00	5.00	3.424 7	0.859 03
<i>B</i>	51	2.00	5.00	3.542 0	0.780 38
<i>C</i>	51	2.00	5.00	3.720 6	0.734 25
<i>D</i>	51	1.67	5.00	3.765 5	0.846 43
Total	51	2.16	5.00	3.619 6	0.656 59

**2.2.3 Analysis of correlation.** As shown in Table 7, the correlation of four dimensions and tourists' satisfaction was analyzed. The results show that food, housing, travel and playing are significantly

correlated with tourists' satisfaction, among which tourism is the most significantly correlated with their satisfaction.

**Table 7 Correlation of four dimensions and tourists' satisfaction**

Dimensions	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	Total
<i>A</i>	1.00				
<i>B</i>	0.683 **	1.00			
<i>C</i>	0.649 **	0.683 **	1.00		
<i>D</i>	0.635 **	0.742 **	0.681 **	1.00	
Total	0.830 **	0.842 **	0.857 **	0.866 **	1.00

Note: \*\* means the correlation was significant at 0.01 level (two-tailed).

Seen from Table 8, multiple linear regression analysis was carried out on the scale data, and it was found that the linear regression models between the four dimensions (food, housing, travel and tourism) and tourists' satisfaction has a good degree of fitting,  $R^2 = 0.952 > 0.6$ . The calculation results can truly and reliably reflect the influence of food, housing, travel and tourism on tourists' satisfaction.

The following equations are obtained: satisfaction = 0.384 + 0.288  $\times$  food + 0.180  $\times$  housing + 0.323  $\times$  travel + 0.329  $\times$  tourism. Tourists' food experience in Baimai Spring Park can significantly positively affect their satisfaction ( $\beta = 0.288 > 0$ ,  $P = 0.000 < 0.05$ ), and tourists' accommodation experience in Baimai Spring Park can significantly affect their satisfaction ( $\beta = 0.180 > 0$ ,  $P = 0.002 < 0.05$ ). Tourists' travel experience in Baimai Spring Park can significantly positively affect their satisfaction ( $\beta = 0.323 > 0$ ,  $P = 0.000 < 0.05$ ), and tourists' play experience

in Baimai Spring Park can significantly positively affect their satisfaction ( $\beta = 0.329 > 0$ ,  $P = 0.000 < 0.05$ ).

**Table 8** Results of multiple linear regression analysis

Model	Unstandardized coefficient		Standardized coefficient	<i>t</i>	Significance
	<i>B</i>	Standard error	$\beta$		
( Constant )	0.293	0.115		2.556	0.014
Food	0.220	0.036	0.288	6.066	0.000
Housing	0.152	0.046	0.180	3.325	0.002
Travel	0.289	0.044	0.323	6.589	0.000
Playing	0.255	0.040	0.329	6.316	0.000
<i>R</i> <sup>2</sup>					0.952
<i>F</i>					229.825
<i>P</i>					<0.001

### 3 Path optimization of tourism development of Baimai Spring

**3.1 Carrying out research and study tourism to stimulate students' interest in tourism** It can be found from this survey that students have the largest proportion in the occupational structure of this survey. In today's society, people pay more and more attention to quality education, and attach importance to inspiring students' independent thinking, cultivating collaborative ability and logical thinking<sup>[15]</sup>. Therefore, it is needed to develop the research and study tourism of Baimai Spring Park, so that students can learn knowledge in the relaxing and pleasant travel activities and beautiful natural scenery. Baimai Spring Scenic Spot can cooperate with nearby Mingshui Primary School and staff school to provide preferential conditions for students and encourage them to travel. In addition, Baimai Spring Scenic Spot can plan research tour routes, design the project of "half-day tour of Qingzhao's former residence", lead students to visit Qingzhao's former residence, carry out recitation competition of Qingzhao's poetry, train professional tour guides who focus on introducing Li Qingzhao's stories and explaining Longshan culture, and carry out special services for students.

**3.2 Developing novel, interesting, adventurous and exciting entertainment projects** At present, there are fewer entertainment projects in Baimai Spring Park. 56.90% of the tourists think that the current scenic spots lack characteristics, and entertainment facilities are monotonous. In this survey, more young people are 18–30 years old, accept new things quickly, and like novel things. It is necessary to develop a variety of novel, interesting, adventurous and exciting entertainment projects. For instance, scripts related to spring water themes can be built in the pavilions built near the water, so that visitors can bring a sense of full, and their fatigue can be eliminated. Presently, like the ancient city, tourists can be encouraged to wear ancient clothes in the natural scenery areas, Longquan Temple District, Qingzhao Park of Baimai Spring Scenic Spot, and the projects passing through Qingzhao Park and Longquan can be created.

**3.3 Flexibly using a variety of publicity methods** In this

survey, tourists' information is mainly recommended by relatives and friends, and only 29.41% of tourists obtain information from public accounts, information and other network channels, reflecting the lack of publicity of the scenic spot and publicity on the network. Besides, fewer tourists understand Baimai Spring Scenic Spot through newspapers and other paper products, accounting for only 3.92%. Although the current paper reading is not as popular as before, it also reflects the shortcomings of publicity of Baimai Spring Park.

To solve the problem of insufficient publicity, the popular video platform can be used. Recently, Ding Zhen's popularity on the Douyin platform has driven the development of tourism in Xitang, and the popularity of Xitang has been greatly increased. Baimai Spring Park can also use the similar way to clip videos about Baimai Spring, and shoot promotional videos by combining the local wine culture. In addition, with the popularity of online novels and the popularity of movies and TV series, the phrase "Xia Yuhe beside Daming Lake" in Qiong Yao's novel has made Daming Lake a household name. Baimai Spring Park can also improve its popularity in the similar way. Writers can be invited to write novels under these background, or Baimai Quan Scenic Spot can be as the shooting place for programs like "Yearning Life". At the same time, the offline publicity should be grasped, and an advertising billboard of Zhangqiu tourism can set up in places with high traffic.

**3.4 Creating a leisure tourism environment atmosphere** According to the survey, most tourists come here to relax and enjoy the scenery and architecture, accounting for 88.23%. The unique tourism atmosphere of the scenic spot is a key factor affecting tourists' travel choices<sup>[16]</sup>. In order to attract most of these tourists, Baimai Spring Scenic Spot can focus on creating a spring leisure tourism environment, such as building waterside pavilions for tourists to rest, renting boats, playing soothing and melodious music, increasing green plants, *etc.* Through these methods, visitors can slow down and fully feel the spring scenery.

**3.5 Creating unique cultural products** Seen from multiple response analysis, tourists think that scenic spots are common and unattractive. Compared with Baotu Spring, which is also based on spring water tourism as its core attraction, the popularity, location conditions, and tourism development of Baotu Spring are not as good as Baotu Spring, so it lacks competitiveness. Besides, there is Yuquan Lake Park and Xiujiang River Park near the park, which also have spring attractions. The homogeneity of tourism products is high, so it is easy to make tourists feel tired. By learning from the characteristic folk custom and cultural tourism projects of Zhuquan Village<sup>[17]</sup> and using the methods of spring water tourism resources construction, Qingzhao culture, Longshan culture, and wine culture can be integrated with the construction of spring water tourism products, so as to build the spring water culture brand. Through the artistic appreciation of water of Baimai Spring, Longshan culture experience, Qingzhao former residence visit, spring water family hostel and other ways, cultural tourism can be coordinated, and characteristic spring water cultural products can be created.

**3.6 Construction of special snack experience projects** The survey shows that tourists' experience of food has a significant posi-

tive impact their satisfaction, so a special snack experience project can be created. Zhangqiu, where Baimai Spring Park is located, is famous for green onions, and Shandong pancakes are also famous outside. Therefore, DIY projects of special food can be created to encourage foreign tourists to experience pancake making and make a variety of small ingredients, so that tourists can choose special ingredients by themselves and put them into the freshly made pancakes for tasting, so as to cash out local special foods. It also allows visitors to experience the production process, which not only reflects the local special food, but also allows visitors to experience the production process. In addition, the DIY project of baked sweet potato can also be built in Hongtangling, that is, baking sweet potato with high sweetness in Zhangqiu is used as a DIY project. Tourists can choose their favorite sweet potatoes firstly, and then put them into the local special tin mud oven. After the end of visiting the park, the sweet potatoes are baked, and tourists can enjoy the food while leaving the park, which deepens the impression of tourists on the tour and meets the needs of tourists who like food.

**3.7 Increasing the construction of tourist projects in the scenic spot** Among the four dimensions that affect tourists' satisfaction in this survey, playing has the most significant positive correlation with their satisfaction, and a variety of playing items can be developed. Baimai Spring Scenic Spot is large, so tourists can choose easy cross-country walking<sup>[18]</sup>. Cross-country walking is long-term walking, and it is very easy to achieve the bull's eye rate of aerobic exercise. It has a certain fitness function, and allows tourists to strengthen their body while sightseeing easily, which reduces the wear and tear on joints during long-term sightseeing. Cross-country walking can be combined with spring sightseeing, so that tourists can visit the various spring attractions in the park in a relaxed way.

## 4 Conclusions

(1) In this survey, tourists are mainly college and undergraduate students, with a higher education level. The proportion of young people aging 18–30 is the highest, and tourists' income is below 3 000 yuan.

(2) Tourists' travel methods are mostly buses or trains, *etc.* Most information is mainly recommended by relatives and friends, and only about 1/3 of information is obtained from the Internet. The consumption structure is relatively balanced, and the main purpose of tourism is to relax and appreciate the scenery and architecture for leisure experience. Only 9.8% of tourists come here to feel the characteristic culture of Baimai Spring Scenic Spot. Tourists believe that the main problems of Baimai Spring Scenic Spot are common attractions, monotonous and unattractive entertainment projects. In addition, about half of the tourists think that the entrance fee in the scenic spot is high, and the special products and souvenirs lack characteristics.

(3) In this survey, tourists are generally dissatisfied with the current situation of tourism in Baimai Spring Scenic Spot. Tourists believe that the attractions are common and unattractive, so the scenic spot needs to create spring cultural products with unique

characteristics of Baimai Spring.

(4) Tourists' perception and experience of food, housing, travel and playing have a significant positive impact on tourists' satisfaction with Baimai Spring Scenic Spot, among which tourists' playing experience has the most significant positive correlation with the satisfaction of the scenic spot.

## References

- [1] WANG XQ. Research on the development of eco-tourism in the Daluo Mountains under the background of global tourism[D]. Guilin: Guangxi Normal University, 2021.
- [2] LI YC. Research on the evaluation and development of coastal tourism resources in Yingkou golden coastal zone under the background of global tourism[D]. Shenyang: Shenyang Normal University, 2021.
- [3] HAN YQ. Research on the protection and development of cultural resources of Baotu Spring Group under the "integration of culture and tourism"[D]. Nanjing: Nanjing University of the Arts, 2019.
- [4] REN XQ. Research on the differentiated supply of spring water tourism products in Jinan[D]. Jinan: Shandong Normal University, 2020.
- [5] YOU SS, FENG BG, WANG SH. Evaluation, protection and development of tourism resources of Peng'an, Nanchong[J]. Acta Geologica Sichuan, 2021, 41 (S2): 134–142.
- [6] ZHU XQ. Study on the development of Xinwu cultural tourism from the perspective of regional tourism[J]. Territory & Natural Resources Study, 2022(2): 58–60.
- [7] JIANG YP. Research on the development of rural tourism in Huangzhugang in Gongcheng County[D]. Guangxi Normal University, 2021.
- [8] XU CAI. Design and development of "spring culture" tourist souvenirs[J]. Chinese Art, 2018(Z1): 104–107.
- [9] YU T. Research on the value and development of spring water archive resources in Jinan City[J]. Humanities World, 2019(18): 55–62.
- [10] LIN Q, LI ZT, XU YJ. Measures and suggestions for deep development of spring water tourism resources in Jinan[J]. Contemporary Tourism, 2019(8): 270.
- [11] LI YP. Research on tourists' satisfaction in the spring water scenic spot based on tourists' perception[D]. Guilin University of Technology, 2018.
- [12] YU CC, CHEN RH, HU SJ, *et al.* Analysis of precipitation interannual and intraannual variability impact on spring dynamic by using SPSS software: A case from Baimai spring groups of Mingshui spring area in Jinan[J]. Shandong Land and Resources, 2017, 33 (3): 52–58.
- [13] SHANG H, YANG R. Discussion on garden culture in Baimai Spring Park[J]. Journal of Shandong Forestry Science and Technology, 2016, 46(6): 102–104.
- [14] YUAN ZJ, MENG FG, LIU Y. Major projects prop up the development dream of Zhangqiu[J]. Openings, 2018(17): 58–61.
- [15] FU J. Analysis and research on the brand development path of "education + tourism" rural study tourism camp[J]. PR World, 2022(3): 72–73.
- [16] LU XJ. Research on attraction of leisure tourism demonstration village in Lishui City based on tourists' perspective[D]. Northwest Normal University, 2020.
- [17] LI L, CAO JR. The hometown of Zhuge is featured by bamboos in Yimeng. People live beside the spring and manufacture the house with stones; Zhuquan Village, a village rarely seen in north with the type of the Peach Garden[J]. Chinese & Overseas Architecture, 2021(8): 60–64.
- [18] PANG Y. Research on the development of sports tourism project in Hainan under the background of international tourism island[D]. Haikou: Hainan Normal University, 2011.