





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Empirical analysis of tourist satisfaction of leisure farms: evidence from Qing Jing Farms, Taiwan

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Tourist satisfaction is an important factor in improving the operating efficiency of leisure farms, which is of great significance in improving the service quality and management level of tourist destinations. In this paper, a Questionnaire survey was adopted to investigate the satisfaction degree of tourists to the products and services of Qingjing Farm and to verify the index system. It is one of the most widely used and important research methods. We discussed the satisfaction difference of tourists on various influencing factors of Qingjing Farm. The results show: (1) leisure farms provide tourists with popular tourism products with universal applicability. (2) Tourists of Qingjing Farm have a high degree of satisfaction with leisure farm resources, ticket prices and services. Leisure farms can improve the service level by increasing the richness and safety of tourists' experience activities. (3) Tourists generally believe that the commodity price in scenic spot is high. The product is relatively simple and requires innovation. Most tourists think that the ticket price is reasonable. In the end, we clarified which aspects are worth learning from and which need to be improved in operation management. The research has certain enlightenment and reference significance for the development of Chinese rural tourism.

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Introduction

As one of the main types of sightseeing agriculture, leisure farm is a comprehensive leisure agriculture area (Oliver, 1987). The leisure activities provided by the farm generally include pastoral scenery viewing, agricultural experience, children's play activities, natural ecological interpretation, fishing, game tasting, etc. (Chiodo et al., 2019). In addition to sightseeing, collecting and picking fruits, experiencing farming, understanding farmers' lives and enjoying local tastes, tourists can also enjoy accommodation, vacation and recreation. Leisure farms can help tourists free themselves from busy work, make tourists choose to coexist with nature, relax their body and mind, and seek spiritual pleasure through the arrangement of leisure activities. It is a creative experience activity that cannot only meet the diversified needs of tourists, but also greatly improve the quality of tourists' experience (Fan et al., 2018). With change of human production and lifestyle and the deepening of rural urbanization and urban-rural integration, leisure farms are developing rapidly and have broad prospects. In response to the development in tourism, and to attract tourists, the agricultural authorities in Taiwan have promoted leisure agriculture and have developed rural tourism with the expectation of improving farmers' income and encouraging new development in the agricultural sector (Yang and Yang, 2018). We firmly grasp the factors and cultural characteristics that affect the development of leisure agriculture and rural tourism. To develop the leisure farm construction planning scientifically, economical and intensive use of resources, and realize the close connection between leisure farm construction and China's leisure farm construction planning. The research is a strong response to actively promote the construction of leisure farms. It is also a new mode, new business form and new path to give full play to the unique function and role of leisure farms in rural construction with Chinese characteristics, comprehensively promote the all-round development of rural economy and society, and accumulate experience for further exploring ways to comprehensively deepen rural reform.

Studies on leisure farms at home and abroad mainly focus on the concept, characteristics, spatial evolution, development path, management strategy, creative development and planning of leisure farms (Boz et al., 2018; Midgett et al., 2020; Buckley et al., 2014; Phillip et al., 2010; De Castris and Di Gennaro, 2020; Doh et al., 2017). Most leisure farms are stuck in the short-term market form of putting up stalls to promote agricultural products on weekends and lack selling points. Leisure farm is only a place that makes use of good natural ecological environment resources and characteristic agricultural production and operation landscape, integrates farm life and agricultural culture, and provides agricultural production, operation and leisure tourism experience (Scott, 2021). Matei (2015) thinks that the operation and management of leisure farms in Taiwan often has the problem of unclear theme positioning, stagnating in the short-term market form of selling agricultural products on weekends, which is not attractive. However, with the transformation of agriculture in Taiwan, leisure agriculture is booming. Most leisure farms adopt theme-based management, and most operators set farm themes according to their cultural backgrounds to provide tourists with different forms of agricultural experience. Kline et al. (2016) proposed that operators of leisure farms should devote themselves to maintaining the environment, provide fresh air, clean water, non-toxic fruits and vegetables, design health catering and fitness exercises, in line with the trend of a green diet, so as to help tourists maintain their physical and mental health. Therefore, leisure farms take green as the core of operation, strengthen training on green diet indicators and other relevant policies for employees internally, and respond to the public's pursuit of green diet and health externally. Thirumalesh Madanaguli et al. (2021)

pointed out in their research on the consumption value of consumers choosing leisure farms that "the elements of leisure farms include farm environment, agricultural activities, sightseeing and tourism activities, and reception facilities in operation", meaning that leisure farms rely on agriculture and tourism, namely leisure agriculture. Sadowski and Wojcieszak (2019) studied the difference between the first tour and the re-tour of leisure farm tourists. LaPan and Barbieri (2014) believe that the competitive advantage of leisure agriculture should be based on giving full play to its resource characteristics, which refers to agriculture, rural landscape and natural resources. On this basis, high-quality services are added to the competitive advantage of leisure farms. Memili et al. (2020) studied the influencing factors of tourists' return to leisure farms under the background of rural revitalization. Pérez-Olmos and Aguilar-Rivera (2021) analyzed the marketing strategy of leisure farms. According to the present research, the sightseeing agriculture of Taiwan Province ranks the leading position in the world. However, there is little research on tourists' satisfaction in leisure farms, especially those that grasp the characteristics of the tourism industry and establish an index system in combination with the actual situation of scenic spots. Therefore, this study from the perspective of tourism elements seizes the characteristics of tourism industry combining the reality of the scenic area to build the leisure farm tourists satisfaction evaluation index system. The research helps us find clear conditions of leisure farm products and services to perfect products and services targeted. It can improve the service quality and management level and the experience of tourists to provide references.

The introduction of leisure farm case study

From the 1970s to the end of the twentieth century, Taiwan Province adopted the policies of "agricultural development to realise the enterprise of agricultural production, the modernisation of farmers' lives and the naturalisation of rural ecology" and formed the "three-production-tourism agriculture", which combines production, life and ecology and develops in a balanced way. In this way, a number of problems such as agricultural shrinkage, surplus agricultural products and the dumping of foreign products in Taiwan were solved. The level of agricultural production improved rapidly and became the best in the world.

Founded in 1961, Qingjing Farm is located in Ren'ai Township, Nantou County, Taiwan Province. It is known as the Peach Land on the Fog with lush green, fresh air, flowers and pleasant scenery. In 1965, the Premier of Taiwan Province, Mr Chiang Ching-kuo, made frequent visits to the countryside in consideration of the people's feelings. Inspired by the fresh scenery, pleasant climate and natural mountains, he changed the original name of Jianqing Farm to Qingjing Farm. It consists of the Green Grassland, the Livestock Centre, the Ecological Area of Shoushan Garden, the Small Swiss Green Garden, the Tourist Service Centre, the Tourist and Leisure Centre and the State Hotel. It skillfully combines natural landscape resources with agricultural and animal husbandry production resources for the development of leisure agriculture. Since 1985, Qingjing Farm has gradually shifted from agricultural production to tourism and developed into a leisure farm. In the process of transformation, the farm has always adhered to the service attitude of "customer-oriented" and actively created a high-quality image of the tourism industry. Its business philosophy is to focus on customer satisfaction and quality service as the core to enhance its overall competitiveness. In addition, since the 1990s, the tourism industry in the Qingjing area has developed rapidly, attracting a large number of tourists. In particular, during the sheep show in the holidays, a large number of traffic flows into Qingjing grassland at the same time. And under

clean conditions, the most attractive activity is the “torch festival”. It moved to clear the residents also derived unique throughout the “torch festival” activities. The activities include native Dai dance, song and dance performances such as water pipe series, barbecue, earth campfire and so on. Tourists can experience alternative and diverse ethnic customs at that time. Given the uniqueness of Qingjing Farm’s development history, resources and management, it was selected as a case for analysis and verification.

Construction of a satisfaction index system for leisure farms

Theories related to tourist satisfaction. Studies on tourist satisfaction mainly focus on the connotation, formation mechanism, behavior results, evaluation methods, model construction and other aspects of tourist satisfaction. Going back to its origin, research on tourist satisfaction is promoted by the theory of customer satisfaction and service quality management. Therefore, in order to better understand customer satisfaction, it is necessary to integrate the relevant theories of customer satisfaction. In fact, Cardizo and Miller explored the theory of expectation disconfirmation and the role of product performance in the formation of customer satisfaction, which laid the foundation for subsequent research in this area.

The formation mechanism of tourist satisfaction. The Formation mechanism of tourist satisfaction is not only affected by tourist motivation and tourist type, but also by expectation, expectation difference, perceived quality, perceived value and tourist destination image. In addition, tourists’ emotions, the relationship between host and guest and tourists’ experience also have an impact on tourists’ satisfaction.

Behavioral outcomes of tourist satisfaction. It focuses mainly on two aspects: customer satisfaction and customer loyalty, tourist complaints or grievances. When studying the relationship between satisfaction and tourist loyalty, tourist loyalty should be understood as the unity of behavioral loyalty and emotional loyalty. If customers are not satisfied, there will be complaints or dissatisfaction. At present, although the negative correlation between customer satisfaction and customer complaints has been confirmed in the field of

marketing, whether the relationship between the two is established in the field of tourism remains to be further explored.

Evaluation of tourist satisfaction. The choice of evaluation indicators and the use of evaluation methods. Customer Satisfaction Index (CSI) is a very hot and frontier topic in the field of quality and economy at home and abroad. Sweden was the first country to establish the Customer Satisfaction Index model in 1989. Later, more than 20 countries and regions have established national or regional customer satisfaction index models, such as Germany and Canada. The customer satisfaction evaluation system in the United States is mature, while the customer satisfaction index evaluation system in China is still in the establishment stage.

Tourist satisfaction model. It has become the mainstream research mode of customer satisfaction to use the structural equation model for modeling and constructing structural equation model with causal relationship. The causal relationship between various variables is mainly discussed from one or more factors, including the expectation difference model, perceived quality, perceived value, destination image, tourism motivation and tourist loyalty.

In general, the above studies mostly analyze the internal relationship between tourist satisfaction and factors affecting tourist visit effect from tourists’ perspective.

Construction of index system. The satisfaction evaluation index system is an organic whole composed of a series of interrelated elements that can reflect the satisfaction of tourists. The study takes into account the various factors that affect tourist satisfaction. It combined with the characteristics of the tourism industry and comprehensively considered the actual operation and management of QingJing Farm. From the products, personnel, services, image and experience of five aspects, we follow the principle of scientific, controllable, practical, comprehensive and cognition of the importance of tourists. The detailed index system is shown in Table 1.

You can see from Table 1, the first-level indicators of satisfaction research on leisure farms are set as tourism resources, tourism

Table 1 Tourist satisfaction index system of leisure farm.

Primary indicator	Secondary indicator	Content description
Tourist resources	Scenic spot environment	Transportation catering environment clean and comfortable The neat comfort of the natural landscape
	Natural environment layout	Suitable aesthetics of natural environment layout
Tourist facilities infrastructure	Ecological environment	Clean and beautiful
	Information facilities	The ease of guided facilities in basic scenic spots
	Ease of transportation	Security and convenience of hardware resources and facilities
Tourism services	Ease of transportation facilities	Security and convenience of network communication facilities
	Service personnel	Hospitality of service care and attitude of tourism Professionalism of service
Tourism consumption	System service	Information service perfection
	Ticket price	Rationality The coverage of ticket marketing
	Goods	The reasonable price of tourist Uniformity of quality and price of goods
	Food quality and price	Coordination between the quality and price of food packages Reasonable price
Visitors experience	Program	The newness
		Richness
		Irritating
	Performance	Security Diversity Interesting
Subject feeling	Release	

services, tourism facilities, tourism consumption and tourism experience. The second-level indicators are specific aspects closely related to the first-level indicators, such as experience items, service attitudes, ticket prices, etc. The specific description of the second-level index on satisfaction is the third-level index.

Study design and questionnaire delivery

Questionnaires distributed on site. In this study, the tourists of Qingjing Farm in Nantou County were selected as the subjects of the questionnaire distribution. The sampling method was convenience sampling using non-probability sampling method. The questionnaires were mainly distributed in Qingjing Farm, Nantou County. A total of 200 questionnaires were distributed, of which 167 were collected and 167 were valid, with an effective rate of 83.5%. A survey was conducted by Tian Dongmei, an exchange student from Taiwan, during her study in Taiwan in October 2018. The sampling method was performance sampling using non-probability sampling method. The questionnaire was designed according to the suggestions and data from experts.

Questionnaire design and sample. The questionnaire was designed as follows: demographic characteristics variables of tourists, Qingjing farm satisfaction evaluation system and overall evaluation and suggestions. The first part mainly starts with the demographic characteristics of the respondents to understand the specific structure of the sample. The second-level indicators are specific aspects closely related to the first-level indicators, such as experience items, service attitudes, ticket prices, etc. The specific description of the second-level satisfaction index is the third-level index. The third part evaluates the overall satisfaction of Qingjing Farm.

Sample and data collection. The demographic characteristics of the sample mainly include gender, age, level of education, marital status, occupation and monthly income of the respondents, as shown in Table 2.

From Table 2, as in terms of gender, the majority of respondents are female, accounting for 55.69%. In terms of age composition, leisure farms cannot only meet the needs of young people for entertainment and leisure, but also meet the needs of middle-aged people to relieve work pressure. In terms of education level, the proportion of tourists from large to small in order to large (vocational), high vocational school, secondary school, doctorate, master’s degree, with the largest number of college (vocational) students, the comprehensive proportion of 70.66%. It can be seen that tourists have a high level of education. In terms of family and marital status, 62.87% of respondents are married and 37.13% are unmarried, reflecting that married respondents are more enthusiastic about leisure farm experience than unmarried respondents. The proportion of students was the highest at 32.34%, followed by workers (14.37%), businessmen (14.37%) and professionals (13.17%). From the monthly income, the monthly income of 20,000 Yuan is the most, accounting for 37.13%; more than 30,000 Yuan, accounting for 26.35%.

Empirical analysis of leisure farm satisfaction

Empirical analysis of tourists’ satisfaction with tourism experience activities

Experience activities. Experiential activities are the most important way for tourists to participate in the farm leisure experience. Tourists’ satisfaction with experiential activities is reflected by indicators such as the degree of satisfaction with the freshness, richness, stimulation and safety of the experiential activities, as shown in Fig. 1.

Table 2 The population statistics feature of Qingjing farm.

Project	Category	Ticket number (sheet)	The proportion %	
Gender	Male	74	44.31	
	Female	93	55.69	
Age	Under the age of 20	22	13.17	
	21-30	72	43.11	
	31-40	32	19.16	
	41-50	29	17.37	
	51-60	3	1.80	
	More than 61 years old	1	0.60	
	The degree of education	The national middle school	14	8.38
High school		25	14.97	
A college or university		118	70.66	
A master’s degree		4	2.40	
Dr		6	3.59	
Marital status	Unmarried	62	37.13	
	Married	105	62.87	
Professional	Military teach	13	7.78	
	Farmers	7	4.19	
	Students	54	32.34	
	Workers	24	14.37	
	The merchant	24	14.37	
	Freelance	22	13.17	
	Retired and retired persons	5	2.99	
	Other	18	10.78	
	Monthly income (10,000 Yuan)	2	62	37.13
		3	44	26.35
4		18	10.78	
5		14	8.38	
6		11	6.59	
7		5	2.99	
More than 7		13	7.78	

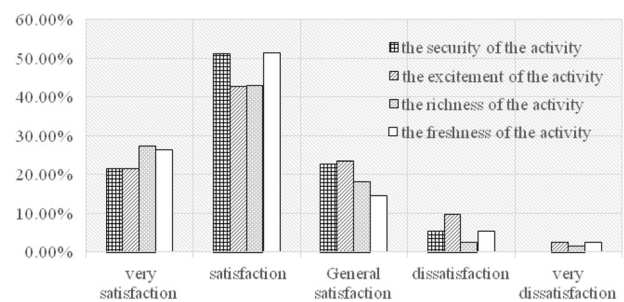


Fig. 1 The experience activities Satisfaction percentage frequency histogram.

According to Fig. 1, satisfaction with novelty is the highest at 77.7%. In the index of satisfaction with richness, the percentage of very satisfied tourists is 27.3%. The highest dissatisfaction index was the stimulation of the experience with 12.4%. Tourists believe that the stimulation of experience activities at Qingjing Farm cannot meet their psychological needs well, and the richness of experience activities needs to be increased. For example, the content of the “Qing Boundary Torch Festival” will be enriched, including Dai dance, Aboriginal song and dance performance, water pipe competition, barbecue, earth campfire, etc. Tourists

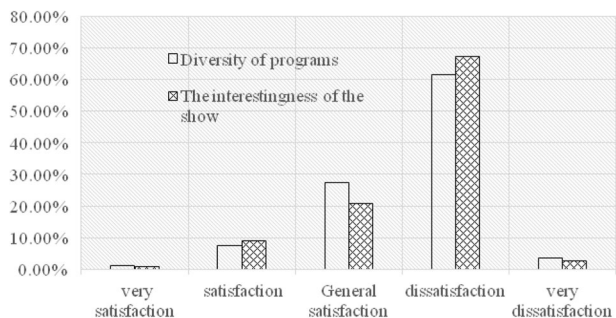


Fig. 2 The show satisfaction percentage histogram.

can experience more alternative multi-ethnic customs. In general, the overall satisfaction of tourists with the experience activities of Qingjing Farm is relatively high. However, the safety of the experience activities needs to be improved, probably because of the high altitude. The safety of some hardware facilities needs to be strengthened.

The performances. Performance is one of the important measures to increase tourist satisfaction. The wonderful performance of the scenic spot will leave a deep impression on tourists. It is also an important content of the scenic spot’s brand building. The famous performances of Qingjing Farm include “Sheep Show”, “Culture and Art Festival” and other cultural-themed activities. The variety and attractiveness of the performances are analyzed as shown in Fig. 2.

Figure 2 shows that the overall satisfaction of tourists with the performance programs is not high. The level of satisfaction is around 65%. Satisfaction with the interest of the programs is higher than satisfaction with the variety. The survey showed that visitors were interested in the “sheep show” at Qingjing Farm, such as the sheep shearing show and the lamb show. But the shows are not held every day. The shows are scheduled for Wednesday and Friday of each week. Although the diversity of the farm’s programs is highly appreciated, the programs are relatively fixed and lack further innovation. The diversified development of activities is the trend of future activity organization, which is conducive to increasing the selectivity of tourists for activities and the rate of return visits.

Farm experience. Satisfaction with the experience is close to 80% and the proportion of very dissatisfied is very low. Most tourists believe that the experience activities of recreational farms can wash their minds and cultivate their feelings. The theme atmosphere of the experience activities is relatively strong, but the activities are relatively single. There are few other interesting themed activities apart from the sheep-themed activities. Among the three secondary indicators, satisfaction with the experience is the highest and satisfaction with the program performance is the lowest. Managers should increase the thematic nature of the experience activities to further increase tourist satisfaction.

Empirical analysis of tourist satisfaction with tourism resources

Scenic spot environment. Most areas of recreation farms have beautiful ecological environment and fresh air. It highlights the development direction of the recreation farm, which focuses on the interaction between natural landscape and tourist experience. Firstly, tourists’ satisfaction with the play environment on the farm is much higher than their satisfaction with the dining environment. Second, tourists’ satisfaction with transportation, catering, and clean and comfortable environment all reached 80%, which indicates that tourists pay special attention to the tourism

activities they experience themselves. Tourists think that the farm is very clean and comfortable, with complete garbage disposal facilities and a pleasant playing atmosphere. Windmill Restaurant, Snack Restaurant environment is comfortable, clean and hygienic.

Environment layout. Leisure Farm takes advantage of its superior natural resources, terrain, regional advantages, and the reasonable combination of various resources. The overall layout of the Leisure Farm reflects a clean, spacious, quiet and beautiful environment, which can leave a deep impression on tourists. Tourists’ satisfaction with the layout of the natural environment is very high, reaching 86%. The whole park is divided into seven areas: Qingqing Grassland, Animal Husbandry Centre, Shoushan Garden Ecological Zone, Qingjing Small Swiss Garden, Tourist Service Centre, Tourist Leisure Centre and National Hotel. Each area has specific functions, and the layout is clear and impressive.

Ecological environment. According to the survey, the tourists’ satisfaction with the ecological environment of Qingjing Farm is relatively high, reaching 80%, and only 17.2% of the tourists are not satisfied.

Empirical analysis of tourist satisfaction with tourism facilities

Infrastructure tour. Infrastructure is the most basic resource for the development of recreational farms. Qingjing Farm has a large area and its visitor center is dedicated to the tour. In addition, there are many directional maps and signs inside the farm to ensure that visitors can see the attractions at a glance. The survey shows that 83.80% of tourists are satisfied with the tour.

Hardware resource facilities. The hardware facilities at Qingjing Farm include not only a rest area and a windmill building, but also some facilities that focus on humanistic care. For example, the farm is equipped with umbrellas, baby carriages, medical assistance stations, storage facilities and other convenient facilities. The survey shows that tourists are highly satisfied with the hardware facilities at Qingjing Farm and think that its hardware services are relatively perfect.

Convenient transportation facilities. Transport convenience is an important factor in tourist satisfaction. Convenient transportation not only includes the convenience of tour buses to Qingjing Farm, but also includes the convenience and reasonable degree of parking. Qingjing Farm area is 378 hectares wide, elevation between 1700 and 2100 m, there is almost no tour bus and planned parking lot due to the high terrain. Most tourists travel by road. Tourists have a high degree of dissatisfaction with the convenient transportation of Qingjing Farm. The difficulty of parking is a major source of dissatisfaction.

Information service facilities. The farm offers free Wi-Fi, hotspot sharing and other information services in the rest area. In particular, the rest area, entrance area and shopping points are covered. The survey showed that the satisfaction of tourists with the information facilities of recreation farms reached 72.4%. However, the network of the farm is slow and the signs are not obvious. There are almost no projects to promote the tourist experience using Internet multimedia.

An empirical analysis of tourist satisfaction with tourism services

Leisure farms need not only good hardware facilities, but also support software facilities. We examined the satisfaction degree of tourists to tourism services from three aspects. That is from the service attitude of Qingjing Farm staff, the professional

degree of the narrator and the information perfection in the service process.

Empirical analysis of tourists' satisfaction with tourism consumption

Tourist goods. Tourism commodity consumption is the consumption generated by tourists' purchase of leisure farms in the process of farm experience. The special products in Qingjing Farm include Mianyang oil, sheep's milk ice cream, milk ice cream, Baa Baa key chain and other sheep-themed commemorative handicrafts. Tourists' satisfaction with tourism commodities is more than 40%, and the price satisfaction is lower than the satisfaction with the characteristics of tourism commodities. It indicates that tourists are not satisfied with the price of tourism commodities. Many tourists think that the price of the goods on the leisure farm is too high, which is much more expensive than the similar goods outside the farm. The price of the goods is not proportional to the value of the goods. In addition, the diversity of commemorative commodities still needs to be strengthened, and the existing commodities are mostly small commodities with the theme of sheep. The product is relatively simple. It needs to strengthen the creative souvenir product development.

Ticket prices. Ticket prices are one of the most important factors affecting the return rate of tourists. If the ticket price is too high, tourists will have fewer consumer groups, and the re-visit rate will be lower. The short-term increase in earnings is not conducive to the long-term development of the farm. In the survey, 60% of tourists are satisfied with the reasonableness of the ticket price, while only 3.4% of them are dissatisfied with the price, which indicates that most tourists think the ticket price is reasonable. An adult ticket to Qingjing Farm costs only NT \$180, roughly equivalent to about ¥36, while a student costs NT \$100, equivalent to only ¥20. Tourists' satisfaction with the promotion of ticket prices is less than 40%, and the promotion of tickets to Qingjing Farm is only carried out during specific activities such as the "Torch Festival". More marketing activities should be launched in the off-season to attract more tourists.

Foods. Tourists food consumption proportion is also higher in the process of playing. The factors that affect food consumption include not only food prices, but also the level of hygiene and food marketing. These are important factors affecting satisfaction. The survey found that the tourists were not satisfied with the food, with a dissatisfaction of 30% in Qingjing Farm. The reason for the dissatisfaction is related to the high price of food in the rest area, which is difficult for consumers to accept. In addition, the food consumers taste is relatively simple, and there are few discounts. The tourists think that the reasonable price of food and the promotion of food need to be improved.

Overall evaluation of tourists' satisfaction with tourists. In order to understand the overall satisfaction of tourists with the leisure farm experience, several evaluation questions were set in the last part of the questionnaire. The main indicators are the re-visit rate and the overall evaluation of tourists. The analysis of the results of the re-visit rate of tourists is one of the most important data in this questionnaire survey, because the re-visit rate is the lifeline of experiencing the farm and the final standard of testing the operation of the leisure farm. The decline of the re-visit rate will undoubtedly lead to the damage of the economic benefits of the leisure farm. The overall satisfaction is shown in Fig. 3.

Among 167 respondents, 3.60% of tourists were still not satisfied with the farm experience. Further investigation revealed that the reasons for dissatisfaction lie in the farm theme and the

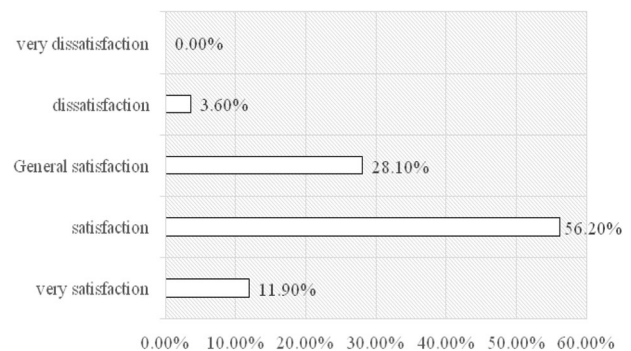


Fig. 3 The overall satisfaction evaluation histogram.

high price of food and beverage. The overall satisfaction was 68.1%. There was no very unsatisfactory situation in the survey, 56.2% were satisfied, and 11.9% were very satisfied. The percentage of tourists willing to re-visit reached more than 80%. It indicates that most tourists believe that the leisure farm experience can meet their need for physical and mental relaxation. However, more than 12% of tourists are still reluctant to return. Some dissatisfied tourists put forward the lack of education in tourism products. Qingjing Farm can add cultural education modules. Therefore, tourists can obtain learning experiences while having leisure and entertainment. They also constantly improve their scientific and cultural literacy in terms of tourism product development. Some tourists think that the theme of the farm experience activity is not clear enough, and some tourists think that the farm service is not enough.

Conclusions and suggestions

Conclusions. Leisure farms provide tourists with universal mass tourism products, which can meet the needs of tourism consumers with different age categories, genders, education levels, marital status, monthly income levels and occupations (Eyisi et al., 2021). Firstly, we seize the characteristics of tourism industry, combining the reality of the scenic area to establish the index system of tourist satisfaction research. Secondly, we verified the index system and to found the weak links of tourism experience, tourism resources, leisure farm service, tourism facilities, tourism consumption. Finally, we put forward the targeted strategy for improving the products and services of leisure farms. This study is of great significance to improve the service quality and management level of tourism enterprises and enhancing the experience level of tourists. In addition, the majority of the experienced visitors believe that the leisure farm experience meets their need for physical and mental relaxation. Leisure farming is a characteristic industry that combines agriculture and leisure services, and it is the best choice for tourism consumers to get close to nature and get leisure experience (Lee et al., 2004). The research conclusions are as follows:

- (1) Female tourists are more interested in the amusement experience of leisure farms than male tourists from the perspective of demographic characteristics. Most of the tourists on Qingjing farm are students. Married respondents were more interested in farm leisure experiences than unmarried ones. The salary for the highest tourists is 20,000 Yuan per month. It can be seen that leisure farms provide tourists with popular tourism products that are suitable for the needs of tourism consumers of different ages and occupations.
- (2) Tourists are highly satisfied with leisure farm resources, ticket prices and services from the aspects of tourism experience, tourism resources, leisure farm services, tourism facilities and

tourism consumption services. The farm needs to further increase the richness of visitor experience activities, the safety of experience activities and constantly increase the theme of experience projects. Regarding facilities, the main aspects are to further improve the farm traffic conditions and the farm information management level. The farm should enhance the marketing of tickets to attract more tourism consumers. Tourists are not satisfied with the price of tourism commodities. We should further increase the types, prices and characteristic services of tourism commodities. Leisure farms need to put forward constructive measures to improve food consumption and comprehensively enhance the satisfaction level of tourists with leisure farm experience.

- (3) Overall satisfaction evaluation research shows that most tourists believe that the leisure farm experience can meet their needs for physical and mental relaxation. They have great satisfaction with leisure farm tourism products and services. According to the research, leisure farms are a characteristic industry born from the combination of agriculture and leisure service industry. It is based on traditional agriculture, pastoral and ecological landscape. Leisure farms have become the best choice for consumers to get close to nature and obtain leisure experience with the urbanization development of the tourism industry.

Suggestions. This study implemented an analysis of actual proof through a survey of the causation between tourism resources, tourism experience, tourism facilities, tourism services, tourism consumption and satisfaction. First of all, this study fully supports the hypothesis that tourism experiences activity factors freshness and activity richness have a significant positive impact on entertainment experience. However, the stimulation of farm experience activities cannot meet the psychological needs of tourists, and the safety of experience activities needs to be improved. Show performance is one of the important measures to increase the satisfaction of tourists. If the show performance of leisure farm is very wonderful, it will leave a deep impression on tourists and become an important factor in shaping the brand of leisure farm (Byrd and Gustke, 2007). The experience activities of leisure farm have the function of washing the soul and edifying sentiment (Halim et al., 2020). The theme atmosphere of the experience activity is relatively strong, but also relatively simple. Secondly, tourists have a high degree of satisfaction with the environment of the leisure farm, ecological environment and environmental layout. Thirdly, the survey found that the satisfaction of tourists on the guided tour reached 83.80%, and the satisfaction with the information facilities of leisure farms reached 72.4%. Tourists think the leisure farm hardware service is relatively perfect. However, the tourists are not satisfied with the transportation of the Qingjing Farm. The main reason for the tourists' dissatisfaction is the lack of a parking lot. Fourthly, tourists have a high degree of satisfaction with tourism services. Tourists think that the commodity prices in the scenic spots are high and the products are relatively simple, which require innovation. According to the survey, tourists are not satisfied with the food provided by Qingjing Farm. Finally, the overall satisfaction evaluation research shows that most tourists think the leisure farm experience can meet their needs for physical and mental relaxation. They have great satisfaction with leisure farm tourism products and services.

Combined with the above conclusions and based on the supply-side reform, people's yearning for a better life and the overall requirements for the development of modern leisure tourism (Adamov et al., 2020). This paper believes that promoting the modern service level of leisure farms and

improving the satisfaction level of tourist experience are the key and difficult points of tourism supply-side reform.

Improve the supply level of tourism public service supporting facilities to meet the operation needs of leisure farms. The research shows that the safety performance of tourism public service facilities needs to be strengthened due to the high altitude of leisure farms. In fact, the quantity, quality, configuration, suitability and safety of tourism public service facilities are all important factors affecting tourists' satisfaction, which are closely related to the tourism attraction of leisure farms (Flanigan et al., 2014; Pandit, 2020). Leisure farms should pay more attention to the effective supply of tourism facilities (Bhatta and Ohe, 2020). For example, in the Guidance and Management Measures for Leisure Agriculture revised in 2013, it is clearly stipulated that leisure farms must set up 5 types of experiential purposes, operational purposes, convenience purposes, safety purposes and environmental protection purposes, including accommodation, catering, agricultural products and rural cultural relics display and educational interpretation center, with a total of 22 supporting facilities. Leisure farm operation should pay special attention to operational purpose facilities (Lee et al., 2022). Such as homestays, tree houses, houseboats and other supporting facilities for the sustainable development of leisure farms to provide solid support.

Focus on leisure brand building and promote the sustainable development of leisure farms. Research shows that leisure farms need to continuously increase the theme of experience projects and build characteristic brands. Leisure tourism is an important way to reach the highest level of tourism activities. Leisure can fully reveal the essence of tourism (Ammirato et al., 2020). Therefore, to obtain a high level of tourism experience, tourists must seize the "leisure". Leisure is the way of free existence and the state of the free life of people. It fully embodies the essence of people and is the return to human nature. The development of leisure farms has adapted to the requirements of The Times. Leisure tourism originated from the leisure and rich class, and gradually formed a social identity. And with the development of the social economy into the stage of mass leisure tourism. The arrival of the era of tourism consumption popularization provides a broad market space for leisure tourism (Askarpour et al., 2020). The brand building of leisure farms should be designed from macro, meso and micro levels. The development of leisure farms should not only focus on today's service groups, but also lay the foundation for cultivating the future mass leisure tourism market.

Strengthen the in-depth development of tourism resources and improve the service level of leisure farms. Research shows that leisure farms need to further increase the variety of activities experienced by visitors. Therefore, leisure farms should be good at exploring tourism resources from the three-dimensional perspective of "ecology, production and life", so as to lay the foundation for the development of recreational activities. From the perspective of "ecology", in addition to paying attention to natural resources such as landform, hydrology and climate, it also pays special attention to the in-depth development of animal and plant resources (Lak and Khairabadi, 2022). For example, Qingjing Leisure Farm in Taiwan is good at highlighting the characteristics of animal husbandry industry and takes "sheep show" as the core tourism resource. From the perspective of production, leisure farms should be good at highlighting the characteristics of different agricultural industries. For example, observe the secret of life from a seed, dress up in colorful life with flowers, guide tourists to deeply experience the growth of wild flowers on the farm. From the perspective of industrial characteristics, the development of "agriculture, animal husbandry, fishing and

forestry” from multiple perspectives, from orchard picking, vegetable harvesting to herb manor and medicinal plant cultivation, dislocation development of resources to avoid homogeneous competition. From the perspective of “life”, it pays attention to diversified development, especially in the development of rural cultural resources to form characteristics and design diversified experience products. The recreation function of leisure farm is essentially a manifestation of agricultural experience economy, which is mainly realized through the design and development of experiential tourism products. The leisure experience products of leisure farms should be good at combining with popular science education, regional characteristics and environmental atmosphere to promote tourists “good feeling”. The vibrant fields and spring scenery are the common aspiration of tourists to return to nature (Sadowski and Wojcieszak, 2019). It is the consistent pursuit of leisure farm to enhance tourists’ diversified experience effect and expression of humanistic feelings to improve tourists’ participation, entertainment, learning and enjoyment, integrate culture and tourism, to meet tourists’ growing tourism and cultural needs, to improve tourists’ satisfaction level and tourists’ quality of life.

Data availability

The datasets generated during and/or analyzed during the current study are available in the attached files and in the Figshare repository: <https://doi.org/10.6084/m9.figshare.23591985>.

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Author contributions

Conceptualization: CW and YH; methodology: CW and YH; software: CW; validation: CW and YH; formal analysis: CW; investigation: CW and YH; data curation: CW; writing—original draft preparation: CW; writing—review and editing: CW; visualization: CW and YH; supervision: YH. Both authors have read and agreed to the published version of the manuscript.

Competing interests

The authors declare no competing interests.

Ethical approval

This research was not required to receive any ethical approval because it did not involve human research participants and no primary data were collected. It uses data collected by the Questionnaire Statistics Organization.

Informed consent

This article does not contain any studies with human participants performed by any of the author(s).

Additional information

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