

Public Health Research on Night Tourism of Tourist Destinations Based on Big Data: Takes the Ancient City of Lijiang as an Example

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Abstract: With the continuous development of China's tourism industry, the forms of tourism are also gradually diversified, among them, night tourism has become a widely popular way for tourists to travel. Compared with daytime travel, night travel has a more sense of atmosphere, but due to the dim light at night, it is easy to cause problems such as walking on air and stampede due to dense crowds. At the same time, due to the epidemic, night travel also increases the difficulty of managing tourists. Therefore, the study of night tourism helps to understand the trend of tourists' night tourism, and then maintain the public health of destinations and tourists. This article in the ancient city of Lijiang as the research object, through data crawl software to collect a certain time tourists comments on ctrip comments, and through the emotion analysis and content analysis method to tourists in the ancient city of Lijiang at night travel location preference is analyzed, and by strengthening the management of these sites to the maintenance of the ancient city of Lijiang public health. The study found that: first, through high-frequency word analysis, experience projects, ancient buildings and beautiful scenery can better attract tourists; second, through the emotional analysis of tourists, a strong sense of atmosphere can more resonate with tourists, thus causing tourists to gather.

1 INTRODUCTION

As a part of tourism, night tourism fills the time vacancy of carrying out tourism activities, and also promotes the rapid development of night economy, which is an important form to realize the development of China's tourism in China. With the active support of the government, night tourism has become a new way of tourism. In the study of night travel, influenced by the regional, economic and cultural factors, domestic and foreign for night tourism research differences, night travel has not been great attention by foreign scholars, related research is less, Bromley scholars first found in 1994 24 hours city has become the focus of many leisure and housing development (Bromley, 1994). The Lemelin's field surveys of insect tourist destinations have found that firefly travel is very popular overnight in Mexico (Lemelin, 2021). The above two scholars all found that night tourism can effectively drive the development of the local night economy, and showed a positive attitude towards promoting night tourism. At the beginning of this

century, some scholars in China carried out relevant research on night tourism, but they only stayed at the theoretical level. After night tourism was constantly praised by tourists, more scholars carried out various research and analysis on night tourism. Dai Bin believes that the development of night tourism can give new forms of tourism and bring new junction points for the integration of culture and tourism (Dai, 2019). From the perspective of the integration of cultural and tourism, Liu Yinjiang studies how the night tourism can drive the development of the cultural and tourism industry and then promote the development of the economy (Liu, 2019).

While night travel is increasingly popular with tourists, it also has some problems endangering public health. Due to the depth of the night, night tourism will bring a sense of mystery to the tourist destination. When tourists visit tourist destination at night, they will get a completely different viewing experience from during the day, but the night will also bring restrictions to the vision of tourists at night, making it prone to events harmful to their own health during the tour. At the same time,

because the epidemic control requires scanning the code and registration of tourists, it is easy for tourists to directly enter the sightseeing places while the managers do not pay attention. The large number of tourists is not conducive to epidemic prevention and control, and is prone to stampede, which endangers public health. We can also start from the emotional preferences of tourists to analyze the unpleasant things encountered by tourists during sightseeing, so as to prevent and control the places prone to accidents. Many scholars have analyzed the tourist destination from the perspective of tourists' emotions. Taking Hong Kong Ocean Park as an example, Huang Xiaoting studied the process of tourism emotional experience quantitatively, and put forward the concept of "tourism emotional path" (Huang, 2015). Liu Yi and others analyzed the emotional differences between Chinese tourists and international tourists based on the evaluation data released on three domestic tourism websites (Liu, 2017).

This paper takes Ctrip as the sample data acquisition object, and takes the ancient city of Lijiang as the case place, and analyzes preference for sightseeing of the tourists participating in the ancient city of Lijiang through data mining and data analysis, so as to provide guidance for maintaining the public health and safety of night tourism. First, the octopus crawler software was used to climb the comment data published on Ctrip, and then the data text was analyzed through ROST CM6.0. Finally, and preference for sightseeing of night tourists were summarized, so as to enrich the research scope of night tourism and promote the public health and safety of tourist destinations.

2 STUDY DESIGN

2.1 Case Sites and Their Data Sources

The old city of Lijiang has achieved good results in the development of night economy, so this paper selects the old city of Lijiang as a case site. In 2021, the list of the First Batch of National Night Culture and Tourism Consumption Cluster Areas published by the Ministry of Culture and Tourism plans to focus on the development of night economy in 120 projects, and the ancient city of Lijiang is among them. In the ancient city of Lijiang, the night tour is not a new concept. Night tour products such as bonfire jumping, river lights praying and a bar street have long existed for many years. In recent years, Lijiang ancient Town scenic spot and from the

supply side and the demand side of the two ends to work together, innovate night tour, night entertainment, night market, night shopping and other diversified business forms, the 31 entrances and exits of the ancient city scenic area are open 24 hours a year round, on the basis of the night scenery of the traditional heritage buildings, Add the Mufu Museum, Yanhe Tea and horse theme park, Sakura Square and other regional night view lighting belt, attract the "eyes" of tourists with distinctive scenes; at the same time, encourage the catering culture and entertainment operators to delay the operation, create the theme landscape night scene boutique catering, script kills immersive experience home stay, Such as the Lijiang Ancient Town Folk Music Festival, "Love in Lijiang Chinese Tanabata Love Poetry Festival", street art performance, reading club, music salon and other night cultural activities, catch the hearts of tourists with an aftertaste experience, let the ancient city of Lijiang night tour products supply more diversified, The types of products are even richer.

Ctrip travel can obtain rich data, so this paper selects Ctrip as the source of data mining. Ctrip is a platform that provides accommodation, transportation and other services, with hundreds of millions of users, which means that it is rich in big data information. As a leading comprehensive travel service company in China, Ctrip has successfully integrated the high-tech industry with the traditional tourism industry, providing a full range of travel services to more than 141 million members. Considering the richness and openness of the platform data, this study selected Ctrip as the data acquisition platform.

2.2 Research Technique

In the analysis of tourists' preference for visiting places, the emotion analysis method and the content analysis method are mainly used. First of all, the selected case in this paper is the ancient city of Lijiang, data source is ctrip, ctrip tourists tour Lijiang ancient city of comments as a data sample, and octopus crawler software data crawl, in order to get the most accurate information, the data collection time for January 2020 to January 2022, after screening the invalid comments and irrelevant comments, finally extract 325 valid comments, collected the total number of about 26000 words, and save it as txt documents for the next step. Secondly, with the help of ROST CM6.0 software, the document data previously saved in txt format is frequently analyzed, and the analysis results are

mainly presented in the form of word cloud map and semantic network graph. Finally, the ROST CM6.0 software was used to analyze the network text data for emotions, and the emotions were divided into three emotion types: positive, neutral, and negative emotions. Therefore, according to the mined data text, this paper conducts Word Cloud word and cloud map analysis, semantic network analysis and emotion analysis, and summarizes these analysis results, and then puts forward relevant suggestions, so as to analyze the influence of tourists' tour preferences, and provide effective guidance for the development of night tourism and the maintenance of public health in the ancient city of Lijiang.

3 INTERPRETATION RESULT

The mined text data is analyzed by high-frequency word and cloud map analysis, semantic network analysis and emotion analysis, so as to seek the tour preferences of tourists during the night tour.

3.1 Word Cloud Analysis

Make full use of Word Cloud word cloud map analysis to extract text keywords from 325 data collected. First of all, the octopus extraction about tourists in Lijiang night tour 325 valid comments with ROST CM6.0 word processing and word frequency analysis, in order to make the results more meaningful, and the "night", "Lijiang" and other high frequency word, at the same time, the other unrelated cities such as "Shanghai", "Beijing", "Guangzhou" to all, after the above operation, meet the requirements of the top 30 high frequency word extracted, and form Word Cloud word cloud graph, extraction results as shown in Figure 1.

High-frequency words can directly reflect the network image of the ancient city of Lijiang and the main location of tourists' night tour. According to the results of Figure 1, the "one bar street" appears the most frequently, reflecting that the bar is the project that tourists want to experience most when coming to the night tour. The ancient city of Lijiang should strengthen the management on this street, and take timely measures such as diversion and flow restriction when the crowd is dense. At the same time, "square street", "wood", "wood", "the" five phoenix building ", " snow mountain academy ", " antique "these building frequency is second only to" bar street ", this shows that the ancient buildings is tourists often go to sightseeing, buildings with local characteristics can attract tourists to experience and

stop, the ancient city of Lijiang can be in these places to strengthen management. Also can be seen from the figure "alley", "wooden" house ", " five-arched ", " shop ", " wall " attractions such as distinctive frequency is higher, combined with the previous frequency appears higher vocabulary can be seen, can bring visitors experience or bring visitors more novel location can attract tourists, and some performing arts products received less attention from tourists. In addition, we can get from the "wonderful", "beautiful", "gorgeous", "enjoy" describe the emotional words seen in the form of night tour of Lijiang, make the tourist body and mind by great pleasure, tourists' mood is mainly positive mood, it shows that tourists travel at night basic not meet affect the mood of events, the ancient city of Lijiang public health management in place.

To sum up, it can be seen from the high-frequency vocabulary that the ancient city of Lijiang attracts tourists more about experience projects and novel places, which can bring positive emotions to tourists. It can be seen that night tourism, as a new mode of tourism, has a fixed scenery for tourists to enjoy, and the probability of the occurrence of harm to to public health events is almost zero.

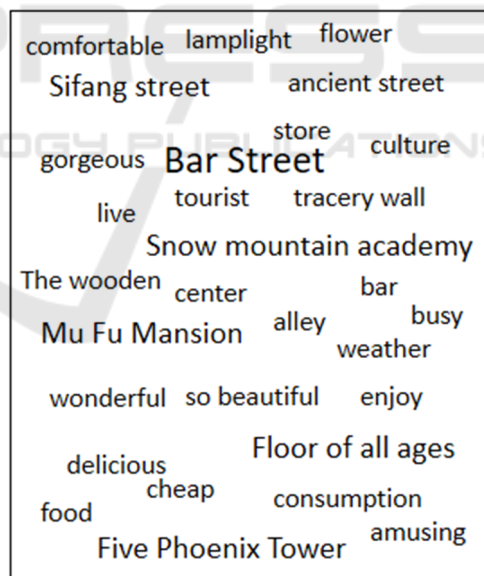


Figure 1: Word cloud map of effective high-frequency words.

3.2 Semantic Network Analysis

Semantic network analysis is a kind of high frequency word as nodes, with high frequency word combination common times for the relationship between nodes, and then by building semantic

network graph analysis of high frequency phrase semantic method in the text, through semantic network analysis can be more intuitive understanding of tourists emotional cognition of the ancient city of Lijiang, clear interaction between

high frequency words. In the semantic network analysis, the 325 valid comments of tourists attending the night tour of Lijiang Ancient City were processed and analyzed by ROST CM6.0, and the results are shown in Figure 2.

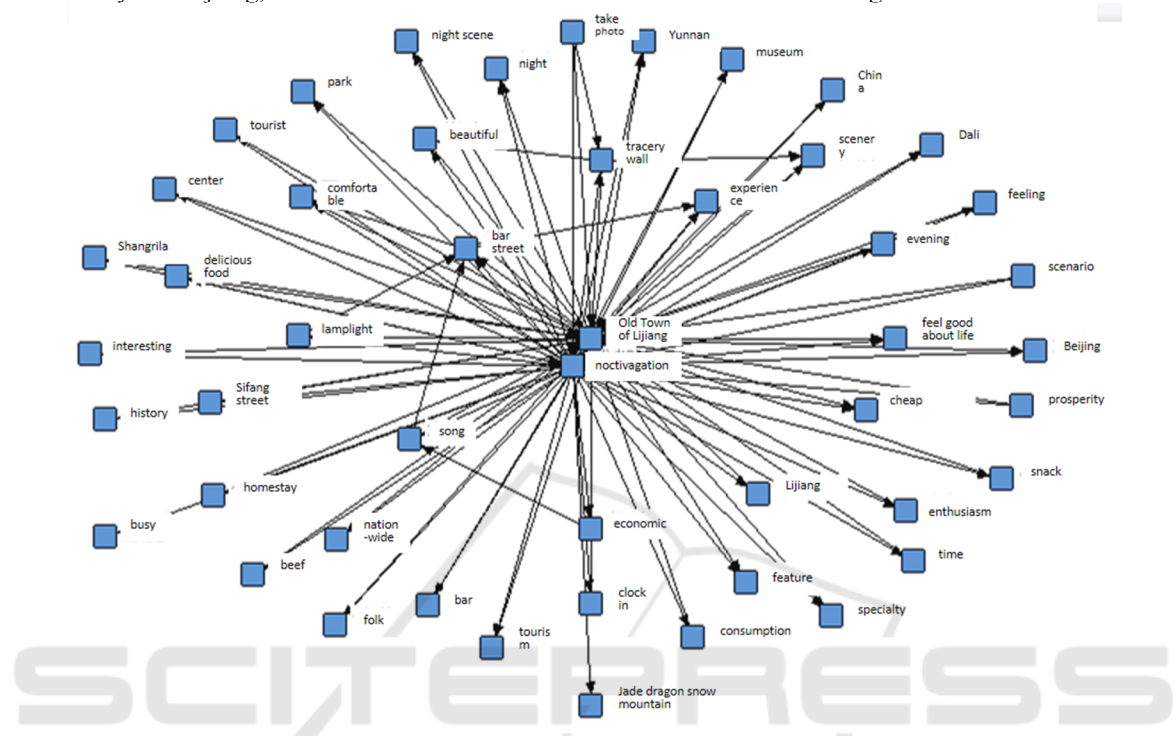


Figure 2: 325 valid comments semantic network diagram.

According to the results of Figure 2, the semantic network presents a multicenter structure and is dispersed into different networks. From the figure, we can clearly see that "The Old Town of Lijiang" and "night tour" are the core nodes, which are the first-level words, and which are the key words in these data, which is in line with the research object of this paper. "Bar street" for the secondary vocabulary, and the most closely related is the "experience", "comfortable", "light", "song", reflects the bar gorgeous lights and playing songs will attract tourists to stop, and got the recognition of most tourists, therefore, to strengthen the control of the bar street helps to maintain public health, prevent the occurrence of harm to public health events. At the same time, with the "wall" is "flower" most closely "photo", "scenery" and "beautiful", which reflects the tourists to flower wall motivation and purpose, you can see that the ancient city beauty for tourists has a strong attraction, therefore, the ancient city should be in such attractions protective measures, and to remind tourists slogan, prevent tourists because of photos and step empty, trample and other hazards to

their own health events. And "Sifang Street", "Wooden Street" and other buildings are also loved by tourists because of their strong sense of history. From here, we can see that the architecture, recreation methods and beautiful scenery in the ancient city of Lijiang are deeply loved by tourists. In addition, "snack", "specialty" and other peripheral words also just show that the food in the ancient city will also bring a good sense of experience to tourists, and the ancient city should also strengthen the management of food health in the city.

To sum up, bars, ancient buildings and punching points are the most popular places for tourists, and the semantic network map is mainly positive or neutral words, which express the tourists' overall emotional cognition of the ancient city of Lijiang during the night tour, indicating that the management of the ancient city is in place, and there are no incidents endangering public security.

3.3 Sentiment Analysis

Through emotional analysis, we can know the

emotional state of tourists during the night tour of the ancient city of Lijiang. Using ROST CM6.0 for tourists to participate in the ancient city of Lijiang night tour of article 325 valid comments emotional value calculation, then, according to the emotional value of Lijiang when emotional state, when the emotional value is positive, said tourists night tour

of Lijiang is with positive emotions, when the emotional value is negative, said tourists night tour of Lijiang is with negative emotions, when the emotional value is 0 said tourists night tour of the ancient city of Lijiang is with a neutral mood. The results obtained are shown in Tables 1 and Table 2.

Table 1: Statistical results of emotional tendencies.

Emotional tendency	Qty (article)	Percentage
Positive mood	217	66.8%
Neutral mood	39	12%
Negative emotions	69	21.2%
Amount to	325	100%

Table 2: Statistical mental results for positive and negative emotion.

Positive mood			Negative emotions		
Level	Qty	PP	Level	Qty	PP
General (0-10)	87	26.7%	General (0-10)	49	15.1%
Moderate degree (10-20)	69	21.2%	Moderate degree (10-20)	19	5.8%
Height (above 20)	61	18.9%	Height (above 20)	1	0.3%
Amount to	217	66.8%	Amount to	69	21.2%

According to the statistical results of emotional tendency in Table 1, there are 217 articles, neutral emotions and 69 articles of positive emotions, 39 articles of the tourists, accounting for 66.8%, 12% and 21.2% of the valid comments, respectively. The tourists are mainly positive when visiting the ancient city of Lijiang. According to this result can get tourists in the ancient city of Lijiang night is mainly positive mood, this is due to the ancient city of good experience project to meet the expectation of night tour, bring tourists positive emotional cognition, and tourists did not harm their own health events, shows the ancient city management in place.

The statistical analysis of table 2 is respectively in the positive emotions and negative mood related comments, and table 2 of positive and negative emotions segment statistical results show that tourists in the ancient city of Lijiang is general, moderate and high number of 87,69 and 61, respectively, the percentage of 26.7%, 21.2% and 18.9%, respectively, overall the number of the three degrees is little difference. According to this result, we can get tourists' positive emotions during the night tour of the ancient city of Lijiang. Since the main tourist points are bars, ancient buildings and artificial punching points, tourists can also have a good emotional cognition of these places. When tourists visit the ancient city of Lijiang, 49,19 and 1

were general, moderate and high, respectively, accounting for 15.1%, 5.8% and 0.3%, respectively. Overall, the number of general negative emotions, the number of moderate negative emotions and the number of high negative emotions vary greatly. According to this result, it can be found that very few tourists show extreme dissatisfaction with the ancient city of Lijiang, and most tourists on the negative feelings of the old city of Lijiang only stay in a slight dissatisfaction. The analysis of tourist comments on negative emotions found that the main sources of negative emotions were expensive prices, food quality, and unmaintained scenic spots.

To sum up, tourists are generally positive about the ancient city, which shows that the ancient city is in place and adequate measures have been taken to maintain the public health in the ancient city; the analysis of negative tourists shows that the ancient city should also be improved in terms of food safety and infrastructure maintenance.

4 CONCLUSIONS AND RECOMMENDATIONS

In order to study the public health of the ancient city of Lijiang, after the above data mining, processing and analysis, the following conclusions and related

suggestions are drawn: First, through the high-frequency word analysis, there are three main attractions in the ancient city: experience projects, ancient buildings and beautiful scenery. Most tourists will go to the bar, tourists will go to flower wall, square street, sightseeing, therefore, the management of the ancient city should be inclined to these places, should arrange staff at these points, and timely respond to the traffic attractions diversion, traffic limit measures, prevent stampede, to protect the life and health of tourists; second, the strong sense of atmosphere point can cause tourists to gather. The comment text data on Ctrip is the real evaluation of the tourists after a night tour of the ancient city, which can more intuitively reflect the tourists' emotional cognition of the ancient city, and will also make other tourists happy to go. Therefore, the ancient city in the construction of relevant scenic spots, should also do a good job of emergency plans, such as improving emergency lighting equipment. Third, generally speaking, the safety protection measures in the ancient city are done well, but food safety and scenic spot facilities are still the main reasons of endangering public health. For the tourists who travel at night, the lights can not fully cover all the scenic spots. When the facilities in the scenic spots are in trouble, the tourists are vulnerable to injury. At the same time, when the flow of people is too large, it will harm the public health. When food safety problems can threaten the health of tourists. Therefore, the ancient city should strengthen the management of these two aspects.

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