A Study on Current Situation of Cycling along Sichuan-Tibet Line

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Abstract. This paper takes Sichuan-Tibet Line cyclists as the research object, and adopts the methods of literature review, field investigation and questionnaire investigation to study the current situation of Sichuan-Tibet Line cyclists. Research results: Most of them are men, while women are on the rise. The age structure is jujube pit-shaped, with young people aged 18-25 accounting for the majority. It is widely sourced from east and southwest China, and other regions also account for a certain proportion. There are many students, and college and undergraduate education is the main body. The income is in the middle and upper levels, and the income is stable. They decided to ride with a variety of motives, traveling with friends, and most of them chose to ride from July to August. The Sichuan-Tibet Line is characterized by large ups and downs, poor road conditions, complicated and changeable weather and frequent geological disasters. It has a long riding distance, few people along the way, few supply points, few cycling events, and the government does not attach great importance to it. The purpose of this paper is to improve the influence of Sichuan-Tibet Line, bring sports tourism benefits along the Sichuan-Tibet Line, and realize the win-win policy of "sports + tourism”

1. Preface
China is not only a country with a large population, but also a kingdom of bicycles. Among our country's population of about 1.4 billion, about 78% of families own bicycles, and our country has 450 million bicycles. The per capita consumption of bicycles is 2000 yuan, and the per capita consumption of bicycle parts is 500 yuan. By 2020, the scale of China's bicycle industry is expected to exceed 400 billion yuan. The cycling market has a huge development space. In recent years, cycling has gradually become the third largest sports market after running and fitness. At the same time, the State General Administration of Sport has successively issued the National Fitness Program (2016-2020) and the 13th Five-Year Plan for the Development of Sports Industry. Among them, cycling is an important sport item in the national fitness program, which clearly defines the dominant position of cycling in the national fitness sports industry in the 21st century.

This paper hopes that through the author's own practical experience of riding into Tibet and the investigation of cyclists who ride into Tibet, the various factors affecting riding along Sichuan-Tibet Lines can be found out and analyzed, so as to put forward corresponding reasonable suggestions. And provide some theory and basis for future cyclists who are willing to ride the Sichuan-Tibet Line, and to assist cyclists to successfully complete the riding of the Sichuan-Tibet Line by combining their own practical experience. At the same time, it also provides cyclists with some basic riding knowledge for...
reference when choosing other riding routes or making riding safety precautions during other long-distance riding activities.

2. Research methods and objects

2.1. Respondents
Cyclists on Sichuan-Tibet Line of National Highway 318

2.2. Research methods

2.2.1. Literature method: Through the use of CNKI database (China National Knowledge Infrastructure), VIP Chinese Sci-tech Periodicals, Superstar e-books, Wan fang data resource bank and Sichuan University for Nationalities library, etc., the author consulted the theoretical research works, books and papers such as Outline of National Fitness Program, Lifetime Bicycle Program, Northern Open Space, Bike Bible on many aspects, so as to comprehensively discuss the feasibility of this paper in theory and provide reliable basis for the investigation and design of the paper.

2.2.2. Questionnaire survey method. According to the research needs, 200 questionnaires were issued and 178 were recovered, with a recovery rate of 89%. 170 effective questionnaires, the effective rate is 95.5%. Then the information and data fed back by the questionnaire are counted and analyzed.

2.2.3. Field investigation method: In order to grasp the first-hand information and ensure the authenticity of the data and content of the paper, the author conducted on-the-spot investigation and exchange, personally conducted Sichuan-Tibet cycling, collected data along the way and investigated the cyclists who rode Sichuan-Tibet cycling. It took more than 20 days to collect a large amount of empirical data through the investigation of cyclists on the Sichuan-Tibet Line, road conditions, weather conditions and distribution of supply points along the route.

3. Results and analysis

3.1. Development status of cycling on the Sichuan-Tibet Line
Sichuan-Tibet Line 318 starts from Chengdu and passes through Yaan, Kangding, Yajiang, Litang, Batang, Mangkang, Zuogong, Basu, Bomi, Nyingchi, Gongbo'gyamda, Maizhokunggar and Lhasa in turn, with a total distance of about 2150 kilometers. On the way, it passes over a dozen major rivers and climbed 14 4000+ mountains, of which Mira Mountain is 5013 meters and Dongda Mountain is 5130 meters. After crossing Erlang Mountain, it rides at high altitude all the way. The difficulties and dangers are self-evident.

The Sichuan-Tibet Line is also a Tea-Horse Ancient Road with a long history, rich in historical and cultural connotations, and is also a National Highway 318 with beautiful scenery, attracting numerous tourists. According to data provided by Ganzi Prefecture Tourism Bureau, Sichuan University for Nationalities, checkpoints and inns along the way: in 2014, more than 250,000 people rode on the Sichuan-Tibet Line; in 2015, there were more than 320,000 people; and in 2016, there were more than 270,000 people. According to incomplete statistics, the number of cyclists in Sichuan and Tibet reached nearly 400,000 in 2017.

On May 21, 2014, the first bicycle race with the entire section of Sichuan-Tibet Line as its route-"Eight-day Sichuan-Tibet Extreme Challenge" first appeared in people's eyes. With the hot development of cycling in various parts of the country, it also laid a good foundation for the development of the final "Eight-day Sichuan-Tibet Extreme Challenge". Since then, May 21st of every year has become the departure date of the "Eight-day Sichuan-Tibet Extreme Challenge" and has become more and more known to the public. Attention has been paid to this event, making the Sichuan-Tibet Line riding more and more popular.
In 2015, the first "VAUDE-318 Sichuan-Tibet Cycling Extreme Race" was born. Since then, every year, top domestic drivers and teams have gathered for the 10-day Sichuan-Tibet Line Extreme Race. The competition format is basically the same as that of the Tour de France, which is divided into single station competition and integral competition. However, unlike the Tour de France, the Sichuan-Tibet Line is more difficult, the race route is at a high altitude, and the race route is not protected by road closures. It is carried out in the same way with various automobiles and trucks, which is more dangerous. Despite these conditions, these drivers and teams are using their own capabilities to publicize this line and contribute to the development of cycling on the Sichuan-Tibet Line.

### 3.2. Basic situation analysis of cyclists along Sichuan-Tibet Line

#### 3.2.1. Gender structure of cyclists

| Gender | Number of people | Proportion |
|--------|-----------------|------------|
| Male   | 150             | 88.2%      |
| Female | 20              | 11.8%      |

According to Table 1: There are 150 male cyclists, accounting for 88.2%. There are 20 female cyclists, accounting for 11.8%. Generally speaking, people who like riding have the following characteristics: freedom, independence, organized life, strong execution, like outdoor beauty and so on. However, in terms of gender differences and personality differences, men are usually characterized by being active, curious, adventurous and emotional, but they are prone to impulse. Compared with men, women are more stable, quiet and herd-like in character, but they have the same perseverance to stick to the end.

However, in recent years, with the development of the national fitness program, the upsurge of national sports has been widely spread, and the crowds on the Sichuan-Tibet Line are increasing. More and more outdoor sports come into people's eyes frequently, so more and more women are also taking part in the sport of cycling. There are more and more female cyclists on the Sichuan-Tibet Line, but male cyclists still make up the majority. The proportion of women is about one tenth.

#### 3.2.2. Age structure of cyclists

| Age segmentation       | Number of people | Proportion |
|------------------------|-----------------|------------|
| 18 years of age and below | 11              | 6.5%       |
| 18-25 years old        | 68              | 40%        |
| 26-35 years old        | 17              | 10%        |
| 36-45 years old        | 25              | 14.7%      |
| 46-55 years old        | 30              | 17.5%      |
| 55 years of age and over | 19              | 11.3%      |

According to Table 2: cyclists under the age of 18 account for only 6.5% of the total; cyclists aged 18-25 account for 40% of the total; cyclists aged 26-35 account for 10% of the total; cyclists aged 36-45 account for 14.7% of the total; cyclists aged 46-55 account for 17.5% of the total; and cyclists over 55 account for 11.3% of the total. From the data analysis, it can be concluded that participants aged 18-25 account for 40% of the total, indicating that cycling along the Sichuan-Tibet Line has become a favorite outdoor cycling route for young people today.

Generally speaking, the age structure of Sichuan Tibet cycling population is not evenly distributed, showing the jujube nucleus structure in the middle of the small on both sides. However, it can also be
seen that there are many cyclists of all ages, indicating that Sichuan-Tibet cycling is a popular sport for all ages.

3.2.3. **Distribution of cyclists' origin**

| Source place     | Number of people | Proportion |
|------------------|------------------|------------|
| Northeast        | 13               | 7.5%       |
| North china      | 21               | 12.5%      |
| East china       | 45               | 26.5%      |
| Central china    | 16               | 9.5%       |
| South china      | 24               | 14%        |
| Southwest        | 29               | 17%        |
| Northwest        | 22               | 13%        |

According to Table 3, East China, South China and Southwest China have the largest number of people, and East China has a large population, so the number of people participating in cycling is large. Cycling in South China started early and there were many large-scale cycling events, such as the Tour of Hainan, which made the cycling atmosphere in South China good and there were many people who loved cycling. However, because of its proximity to the Sichuan-Tibet Line, southwest China is relatively convenient for carrying out the Sichuan-Tibet Line riding, especially for cyclists in Sichuan who can set off directly at the right time.

In other areas, the number of people taking part in cycling is small due to geographical location and small population base. However, all regions account for a percentage, which shows that cycling this sport has become a popular form of exercise and fitness in the new era. At the same time, it also shows that riding Sichuan-Tibet Line is popular with all Chinese cyclists.

3.2.4. **Professional status of cyclists**

| Occupation                          | Number of people | Proportion |
|-------------------------------------|------------------|------------|
| Student                             | 48               | 28.2%      |
| Civil servant                       | 15               | 8.8%       |
| Government-affiliated institutions  | 13               | 7.7%       |
| Corporate                           | 17               | 10%        |
| Teacher                             | 14               | 8.3%       |
| Freelancer                          | 21               | 12.4%      |
| Retired personnel                   | 24               | 14%        |
| Other occupation                    | 18               | 10.6%      |

According to Table 4, students account for 28.2% of the total number of students, which is the most numerous occupation among all the investigated occupation types. Compared with the people who work, college students do not have too much pressure on their life. At the same time, they have more holidays and more choices in their leisure life. Moreover, college students are curious about new things, have a relatively fast ability to accept new things, like to pursue challenging projects, and have a very strong desire for such activities as riding into Tibet.

On the whole, people from all walks of life participated in the cycling, which shows that cycling is a popular sport.
3.2.5. Cultural level of cyclists

Table 5. Cyclists' cultural level questionnaire (n=170).

| Cultural level                     | Number of people | Proportion |
|-----------------------------------|------------------|------------|
| Junior high school and below      | 15               | 8.8%       |
| Secondary and high schools        | 18               | 10.6%      |
| Junior college and undergraduate  | 99               | 58.2%      |
| Postgraduate or above             | 38               | 22.4%      |

According to Table 5, the survey results of cyclists' cultural level show that: among cyclists, 8.8% had junior high school education or below; the proportion of secondary school and high school education is 10.6%; college and undergraduate education accounted for 58.2%; the proportion of graduate students and above is 22.4%.

People with higher educational level have high cultural quality, strong comprehensive ability and quality, better understanding of strict traffic order, safe riding, strong sense of team cooperation, willingness to listen to other people's opinions and put forward their own opinions, and understanding of civilized riding and environmental protection. At the same time, cycling is a team sport, and people with strong team consciousness are more able to take care of their teammates during riding. Finally, the cyclists with high education level can drive the high-level development of the team and promote the popular development of Sichuan-Tibet Line cycling.

3.2.6. Income of cyclists

Table 6. Cyclists' income level questionnaire (n=170).

| Income level segmentation | Number of people | Proportion |
|---------------------------|------------------|------------|
| Under 3,000 yuan          | 11               | 6.5%       |
| 3,000-6,000 yuan          | 36               | 21%        |
| 6,000-8,000 yuan          | 60               | 35.3%      |
| 8,000-10,000 yuan         | 28               | 16.5%      |
| 10,000-20,000 yuan        | 20               | 11.8%      |
| ABOVE 20,000 yuan         | 15               | 8.9%       |

According to the survey on the income of cyclists in Table 6, it indicates that: the monthly income is less than 3,000 yuan, accounted for 6.5% of the total; the monthly income is 3,000-6,000 yuan, accounting for 21% of the total; the monthly income is 6,000-8,000 yuan, accounting for 35.3% of the total; the monthly income is 8,000-10,000 yuan, accounting for 16.5% of the total; the monthly income is 10,000-20,000 yuan, accounting for 11.8% of the total; and the monthly income is over 20,000 yuan, accounting for 8.9% of the total. The result shows that there are more high-income people riding on the Sichuan-Tibet Line.

The survey results indicate that: cyclists who bought bicycles under 2,000 yuan accounted for 11.2% of the total; cyclists who bought 2000-4000 yuan of bicycles accounted for 51.2% of the total; cyclists who bought 4,000-6,000 yuan of bicycles accounted for 28.2% of the total; and cyclists who bought bicycles more than 6,000 yuan accounted for 9.4% of the total.

Table 7. Bike price questionnaire for cyclists (n=170).

| Bicycle price range | Number of people | Proportion |
|---------------------|------------------|------------|
| Under 2,000 yuan    | 19               | 11.2%      |
| 2,000-4,000 yuan    | 87               | 51.2%      |
| 4,000-6,000 yuan    | 48               | 28.2%      |
| Above 6,000 yuan    | 16               | 9.4%       |
It can be seen from this that cyclists who buy bicycles of medium price make up the majority. Because riding on Sichuan-Tibet Line causes high losses to bicycles, and most of the quality at the low end of the price is not enough to support riding on Sichuan-Tibet Line, bicycles with medium price become the choice of most cyclists. However, fewer cyclists buy low-priced and high-priced bicycles.

From this, it can be seen that when a cyclist buys a bicycle, he or she will choose the bicycle suitable for him or her according to his or her own situation and economic situation, as well as the cost-effective performance of the bicycles. Experienced and long-term cyclists are looking for cars of a certain quality. High prices also represent better safety performance to a certain extent, thus improving their sense of security when riding.

3.3. Behavior analysis of Sichuan Tibetan cyclists

3.3.1. Motivation of Sichuan-Tibet cycling. Because there are many kinds of riding motives from cyclists, not only one, in this survey option, there are many choices and several others can be included. The surveyed cyclists can choose multiple options according to their own actual conditions. The main motives include exercising, following the trend, sightseeing, chasing dreams, challenging difficulties, sharpening the will, venting pressure, making friends, etc.

3.3.2. Time for Sichuan and Tibet cycling

| Month       | Number of people | Proportion |
|-------------|------------------|------------|
| June        | 30               | 17.7%      |
| July        | 54               | 31.8%      |
| August      | 38               | 22.4%      |
| April and May | 17              | 10%        |
| September and October | 17            | 11%        |
| Other months | 14              | 7.1%       |

According to Table 8, the survey of cyclist's time is single. According to the results of the survey, 71.9% of the people will choose to ride the Sichuan-Tibet Line in June, July and August. This is because among cyclists, college students are the main force and the summer vacation is long. Another reason is that the Sichuan-Tibet Line is the most beautiful scenery in summer, which satisfies the majority of people's curiosity hunting mentality. The other reason is that the weather is good and the temperature is high in summer, so most cyclists will set out in this period.

3.3.3. Organization of Sichuan Tibet cycling

| Organization mode | Number of people | Proportion |
|-------------------|------------------|------------|
| Friends in company| 100              | 58.8%      |
| Club              | 36               | 21.2%      |
| Alone             | 22               | 12.9%      |
| Fleet             | 12               | 7.1%       |

According to Table 9, the current organization of cycling activities is basically divided into the following categories: riding together with friends, riding alone, cycling club organization and cycling team organization. Among them: 58.8% of cyclists will go with friends, 21.2% of the participants chose
the cycling club to organize their cycling. Another 12.9% prefer to ride alone, and 7.1% of them rely on motorcades to organize their rides.

This is because cycling itself is a collective activity, and Sichuan-Tibet cycling has its unique integrity, teamwork and challenge. Moreover, because the Sichuan-Tibet Line is a long way, with many mountains and steep slopes, it is difficult to ride, and there is more motivation for teammates to encourage and support each other, so Sichuan-Tibet Line cyclists prefer to travel together.

3.3.4. Factors affecting cycling along Sichuan-Tibet Line. The Sichuan-Tibet G318 Line is called the most beautiful landscape avenue in China. It is different from the desolate Qinghai-Tibet Line and the steep Xinjiang-Tibet Line. However, with its unique geographical environment and original scenery, as well as the difficulty different from the usual riding route, it has become the most popular riding route into Tibet at present. However, the Sichuan-Tibet Line is characterized by large ups and downs, poor road conditions, complicated and changeable weather and frequent geological disasters. Moreover, the Sichuan-Tibet Line is a plateau area, which requires long-distance cycling for about one month. It is a very difficult test for the physical strength of cyclists. The difficulty of riding is much greater than that of ordinary roads, and the danger is also very great. Every year, news of the death of cyclists is reported on the Sichuan-Tibet Line. The long cycling distance, the small number of people along the route, the small number of supply points, and the low level of government's attention, as well as the small number of cycling events on the Sichuan-Tibet Line, make the Sichuan-Tibet Line cycling only a private self-organized activity.

4. Conclusions and recommendations

4.1. Conclusion

4.1.1. Most of the cyclists in Sichuan and Tibet are men. Forty percent of cyclists are between 18 and 25 years old. Students and freelancers are the main force in the pedestrians. The majority of cyclists have higher income. And the cultural level is generally high.

4.1.2. The motivation of Sichuan Tibetan cyclists is to challenge difficulties, and then to sightseeing. Most cyclists choose to ride the Sichuan-Tibet Line in June, July and August. The organization of cycling is mostly to form teams with friends, followed by cycling clubs and local cycling teams.

4.1.3. The factors that affect the development of cycling in Sichuan and Tibet mainly include the complicated and changeable weather conditions during long-distance cycling, the load on the body caused by long-term and high-intensity cycling in high altitude areas; the safety performance of bicycles, the long-term cycling, the safety of cyclists themselves and the safety of roads, the small supply area along the way, the low attention from the government, etc.

4.2. Recommendations

4.2.1. Tourism authorities and government sports departments should make use of various public riding resources and routes to promote cycling, stimulate local residents' interest in cycling and promote the publicity of cycling. Carry out the tourism policy of "tourism + sports", use the influence of the Sichuan-Tibet Line cycling movement to promote the development of Sichuan-Tibet Line tourism, to create a golden signboard for Sichuan-Tibet Line tourism, is conducive to improving the image of Sichuan-Tibet Line.

4.2.2. Sports administrative departments and the government shall give full play to their organizational functions and leadership abilities, hold cycling events regularly or irregularly, and provide sufficient safety guarantee, funds and certain bonus support for the development of cycling events. More publicity should be given to bicycle races that have already taken shape.
4.2.3. Establish an emergency rescue alliance of inns and bicycle shops along the road so that cyclists can contact the alliance in case of sudden accidents. The alliance can arrange the nearest rescue point for rescue in the first place to ensure personal and property safety.

Acknowledgments
This paper is the phased achievement of Sichuan Minzu College' 2019 self-organized scientific research project named Research on the Value and Transformation of Sports Tourism Resources Development in Ganzi Tibetan Areas in the Revitalization of Regional Villages (Project No.: XYZB19033SB)

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