



Asian Journal of Environment & Ecology

13(3): 9-18, 2020; Article no.AJEE.60402
ISSN: 2456-690X

A Study of Tourism Development Influence on QoL – Perceptions of Alishan Indigenous Tribes in Taiwan

Hsiao-Ming Chang¹, Chiu-Hui Hung² and Yen-Chen Huang^{3*}

¹School of Physical Education, Putian University, China.

²Department of Tourism, Leisure and Entertainment Management, Tatung Institute of Technology, Taiwan.

³Department of Marine Leisure and Tourism, Taipei University of Marine Technology, Taiwan.

Authors' contributions

This work was carried out in collaboration among all authors. Author HMC designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author CHH managed the analyses of the study. Author YCH managed the literature searches. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJEE/2020/v13i330182

Editor(s):

(1) Dr. Wen-Cheng Liu, National United University, Taiwan.

Reviewers:

(1) Marzouq Al-qeed, Al Ain University, UAE.

(2) Syed Ali, Mulungushi University, Zambia.

(3) I. Wy. Dirgeyasa, M. Hum, Universitas Negeri Medan, Indonesia.

Complete Peer review History: <http://www.sdiarticle4.com/review-history/60402>

Original Research Article

Received 27 June 2020
Accepted 01 September 2020
Published 11 September 2020

ABSTRACT

The purpose of this study is to analyze the influence of indigenous people's perceived the quality of life (QoL) on the tribe in the process of tourism development. In the survey, 8 tribes in Alishan were selected as the research objects, and a total of 827 valid questionnaires were collected through random sampling based on the proportion of each tribe's households. After statistical analysis, the findings of this study are as follows: 1. In terms of the influence on QoL, indigenous people's perceived higher are "I am proud of our tribe". 2. Different demographic variables have an influence on the perceived QoL of indigenous peoples. 3. Those whose family work has nothing to do with the tourism industry have a higher perception of the influence on the QoL. Based on the above findings, this study not only gives suggestions to indigenous tribes and tourism sectors of the government, but also puts forward specific research reference directions for future tribal tourism researchers.

*Corresponding author: E-mail: cy5321@yahoo.com.tw;

Keywords: Quality of Life (QoL); tourism development; indigenous tourism; tribe; Alishan.

1. INTRODUCTION

Alishan is one of the important places for Taiwan Tourism Bureau to promote the in-depth tourism of indigenous tribes. This area is not only rich in natural and ecological resources, but also the Tsou indigenous people who live in Alishan. Natural resources and indigenous culture are the main reasons for attracting international and domestic tourists to visit the tribes. Alishan township is located in the eastern part of Chiayi County, Taiwan, from 360 meters to 3952 meters above sea level. There are eight Tsou tribes: Dabang, Tefuye, Leye, Laiji, Lijia, Shanmei, Xinmei and Chashan. In recent years, with the development of in-depth tourism (tribal culture experience, ritual experience, eco-tourism, indigenous knowledge interpretation, hunting experience, coffee experience, and mountain hiking), the number of domestic and foreign tourists who visit the indigenous tribes in Alishan during the holiday period is also increasing. The tribes manage accommodation and provide tourists with a journey to experience the Tsou culture, which also enables the indigenous tribes in Alishan to find more employment opportunities because of the tourism development. In addition, since 2014, in the tribal tourism project of "Tribal Heart Tour" promoted by Taiwan Council of Indigenous Peoples, Alishan Laiji, Shanmei, Jiayama (Chashan Village), and Tefuye tribe have been listed as important indigenous in-depth tourism tribes.

The measurement of QoL is an ever-changing topic, which aims to reflect people's living conditions. It can not only describe social status and people's well-being, but also serve as the basis for the government to formulate public policies to promote social development and people's well-being [1]. Andereck, Valentine, Vogt and Knopf [2] pointed out that tourism can not only promote the improvement of QoL facilities, but also help the community to achieve an ideal living environment, and also affect the local QoL [3,4,5]. However, most of the researches on the impact of tourism development on the community are less about the influence on the QoL [5], especially on the QoL of indigenous tribe, and few of them are in-depth analysis. Therefore, what are the most satisfactory aspects of the improvement of the QoL of the indigenous tribe since the comprehensive development of tourism in Alishan? However, what is the perception of the improve QoL among different tribes and

indigenous peoples of different background? Therefore, based on the above background and problem, the purpose of this study is as follows:

1. To analyze the improvement of indigenous people perceive tourism development on the QoL of the tribe.
2. To analyze the improvement of indigenous people perceive tourism development on the QoL in different background variables.

2. LITERATURE REVIEW

Andereck et al. [2] defined QoL as a person's life satisfaction, satisfaction or realization and experience in the world. It's how people see it, or how they feel about their lives. Generally, the content of QoL includes: well-being, welfare, utility, life satisfaction, prosperity, need for practice, ability improvement, destitution, empowerment, human poverty, land, happiness, living standard and development [6]. In terms of interpretation, QoL can be explained from both objective and subjective aspects, includes: economic well-being, consumer well-being, social well-being and health well-being [7]. These objective indicators include the measures for employment and working conditions, income, financial situation, GDP per capita, average annual inflation rate, public external debt, literacy, education, crime rate, divorce rate, life expectancy access to health care at birth, infant mortality and pollution. Subjective indicators of QoL include self-assessment understanding, self-record satisfaction, happiness, feeling safe, life fun, emotional happiness, and living a meaningful life [8]. Sirgy, Rahtz, Cicic, and Underwood [9] developed a method to evaluate residents' satisfaction with community-based services. Based on the theory of consumer satisfaction, they analyzed individual government services (such as police, fire fighting / rescue, and Library), business services (such as banking / savings, insurance, and department stores), and non-profit services (such as alcohol / drug abuse, crisis intervention, and religious services). The results show that the overall satisfaction of the community is not only limited to the above matters, but also related to other areas of life (such as work, religion, leisure), which will also affect the overall life satisfaction. According to the model developed by Sirgy et al [9], Sirgy and Cornwell [8] further research points out that in the model of overall community residents' satisfaction, there are other types of community,

such as the quality of environment, the proportion of natural landscape change, ethnic relationship, living expenses, crime, relationship with people, friendship of neighbors, and housing supply. Sirgy and Cornwell [8] reiterated once again that overall community satisfaction and other overall life areas (work, family, leisure) will affect overall life satisfaction.

In the study of community QoL by Parkins, Stedman, and Varghese [10], the indicators are divided into: natural comfort (reducing water pollution, regional peace, proximity to nature, maintenance of wild animals and plants, local wild land, natural landscape not damaged by human), service (fair and just property tax rate, food available in the community, health, education and maintenance) Community service ability), community sense (people's participation in community decision-making, feeling like a family, belong to the community, promote all activities of the community), recreation place (maintaining/promote the vacationer's economy, enhancing the management of recreation facilities, using opportunities of local recreation facilities, encouraging the artistic development of the community), and economic development (employment, income). Andereck and Nyaupane [3] divided the QoL into social well-being, urban problem, lifestyle, community pride and awareness, natural/cultural heritage protection, economic strength, leisure facilities and crime and drug abuse. In the tourism and QoL instrument developed by Andereck and nyaupane [4], the factors of QoL are divided into: personal and community life (which is also divided into community pride and community welfare), natural/cultural maintenance, tax and facility convenience, economic intensity, crime and deviant behavior.

Different demographic variables will affect the perception QoL, Cascante [11] found that under different biophysics, social culture, socio-demographic variables and socio-economic conditions, the results of influence on QoL in each community were different. In the empirical study of tourism impact, it is found that the variables will influence cognition of tourism impact, such as gender, marital status, age, education level, occupation, living area (distance from the center of tourist destination) and living time of residents confirm the existence of impact [12,13]. In addition, whether residents rely on tourism or not is an important variable that affects residents' cognition and attitude towards

tourism impact. In the study of related tourism impact and attitude, it is found that it will affect residents' cognition and attitude [12]. For example, travel agencies, tour guides, tour leaders, souvenir sales, restaurants, hotels, accommodation, scenic spot services, generally refer to the reception of tourists. Haralambopoulos and Pizam [14] studied the impact of tourism and residents' attitudes on Samos island in Greece. The result show that the residents whose economy depended on tourism not only had a positive attitude towards the development of tourism, but also had a higher attitude than the non-dependents. Andereck and Nyaupan [3] found that the perception of community residents' percept tourism impact will have an impact on the QoL. Usher and Kerstetter [15] also found that residents think that under the impact of tourism, it has a positive influence on their QoL. Based on the above analysis, the following hypotheses of this study:

Hypothesis 1: Indigenous peoples with different demographic variables have significant differences in their perception of QoL.

Hypothesis 2: Indigenous people's dependence on tourism has an influence on their perception of improving their QoL.

3. METHODOLOGY

3.1 Sample and Data Collection

This study adopted a questionnaire survey and treated indigenous peoples living in the eight tribes of Alishan Township as subjects. Based on households, it conducted a general survey and investigated one indigenous person aged at least 20 in every household of each tribe. During weekdays there were usually only elderly residents and children in the tribe because the young people mostly worked or studied in the cities, therefore this study conducted the surveys on holidays. Questionnaires were distributed to 50% of the population aged 20 years old or above in the Dabang, Tefuye, Leye, Laiji, Lijia, Shanmei, Xinmei and Chashan tribe. A total of 1000 questionnaires were distributed and 827 valid questionnaires were collected, including 78 questionnaires from Dabang, 92 from Tefuye, 107 from Shanmei, 89 from Laiji, 87 from Chashan, 82 from Xinmei, 203 from Leye, and 71 from Laiji were retrieved. The valid return rate was 82.7%.

3.2 Research Questionnaire

The research questionnaire included three parts. First is the questionnaire QoL of indigenous tribe, include 34 items and seven factors (indicators): sense of tribe, maintenance of nature and culture, public facilities, taxation and subsidy, economic power, public security, and tribal life. The scale was designed according to the QoL studies by Sirgy and Cornwell [8], Parkins, Stedman, and Varghese [10], Andereck and Nyaupane [3], and Andereck and Nyaupane [4]. The scales developed by previous scholars mostly focus on communities and the items do not match the lives of indigenous tribe in Taiwan. The researcher used the experience of training volunteer guides in the eight tribes to understand the tribal situations. Thus, in addition to the previous studies, the researcher designed the scale of the QoL according to practical experience. Scores for the three scales ranged from 1 to 5, with answers ranging from "strongly agree" (5 point) to "strongly disagree" (1 point). The second part is the demographic variables of indigenous peoples, includes: gender, marital status, age, education level, monthly income, and living tribe. The third part is about the degree of tourism dependence. There are two questions. I want to know whether the indigenous peoples themselves are related to tourism, and whether their families and jobs are related to tourism. This study is mainly based on the work of Lankford and Howard [13].

3.3 Data Analysis

The valid questionnaires collected in this study were analyzed using SPSS for Windows 22.0 software. The analysis steps are as follows: (1) Used to analyze the distribution of the indigenous people's demographic variables through frequency distribution and percentages of the descriptive statistics. (2) In terms of reliability test, the QoL research and scale constructed by Andereck and Nyaupane [4] has good validity. Therefore, Cronbach's α coefficient is used as the basis of reliability measurement in this study. (3) Use t-test to analyze the differences in the QoL of the indigenous people of different genders, marital status, and tourism dependence. (4) Use the One-way ANOVA statistical method, analyze the differences in the perception of the quality of life of the indigenous people with different demographic variables. When there are significant differences between the variables, this study will use the Scheffe' method to perform

post-hoc comparisons to understand those groups that are significantly different.

3.4 Reliability and Validity Analysis of the Questionnaire

In this study, that the validity and reliability of the questionnaire is done by triangulation judgment. First, three experts and scholars evaluated the appropriateness of the items. Secondly, five indigenous peoples were asked to check whether the questions listed in the scale could reflect the actual situation. According to Andereck and Nyaupane [4] developed QoL research and factor classification, respectively: tribal sense (questions: 1,8,15,12) (Cronbach's α =0.74), nature and culture maintenance (questions:2,9,16,22, and 28) (Cronbach's α =0.89), public facilities (questions:3,10,17,23,29,33, and 34) (Cronbach's α =0.81), taxation and Subsidies (questions: 4, 11, 18, 24, and 30) (Cronbach's α =0.88), economic power (questions: 5, 15, 25, and 31) (Cronbach's α =0.71), public security (questions: 6, 13, 19, and 26) (Cronbach's α =0.64), and tribal life (questions: 7, 14, 10, 27, and 32) (Cronbach's α =0.81). There are 34 questions in the total table, Cronbach's α =0.95. From the results of the above analysis, the reliability of the scale is good, and further analysis can be carried out.

4. RESULTS AND DISCUSSION

4.1 Characteristic Analysis of the Valid Samples

Among the 827 valid questionnaires retrieved, 368 were males (44.5%) and 459 were females (55.5%). As to marital status, 485 were married (58.6%) and 342 were unmarried (41.4%). As to age, most of the respondents were aged 21 – 30 (232 subjects; 28.1%). As to educational level, most of them had graduated from senior high schools (475 subjects; 57.4%). As to occupation, most of the respondents worked in the service industry (279 subjects; 33.7%). As to monthly income, most of the respondents (503 subjects; 60.8%) earned below NTD 25,000 (USD 833). In terms of tribal living time, this study refers to the study of residents' cognition of tourism development in Látková and Vogt [16], in which the definition of living time is analyzed in 10 years as a unit, with 205 people (24.79%) in 21-30 years as the highest. In addition, in terms of tourism dependence, 253 subjects answered that

their work was related to tourism, accounting for 30.6%, and 574 (69.4%) were unrelated. In terms of family work and tourism, there are 466 people whose family work is related to tourism, accounting for 56.3%.

4.2 Analysis on the Influence of Perceived QoL of the Indigenous Peoples in Alishan

According to the analysis results in Table 1, the top five items of the influence of tourism on the QoL of the indigenous peoples in Alishan are: "I am proud of our tribe" (M=3.80), "I feel that I belong to the tribe" (M=3.65), "Sense of security in the tribe." (M=3.64), "the tribe residents can operate restaurants, B&B and shops by themselves"

(M=3.60), and "I feel like our tribe is like a family" (M=3.48).

4.3 An Analysis of the Difference of Perceived QoL of the Indigenous Peoples in Alishan

According to the results of Table 2 T test analysis, there is no significant difference in the perception of the influence of QoL among the indigenous peoples of different genders (t=0.23, p>0.05) and the indigenous peoples whose personal work is related to tourism (t =-1.30, p>0.05). However, there were significant differences in marital status (t=-8.26, p<0.05), unmarried (M=107.75) was higher than married (M=97.14), and family work and tourism (t=-11.76, p<0.05) were also significantly different,

Table 1. Analysis on the influence of perceived QoL of the indigenous peoples in Alishan

Items	Mean	SD	Order
1. I am proud of our tribe.	3.84	0.88	1
8. I feel myself belong to tribe.	3.68	0.83	2
6. Sense of security in the tribe.	3.61	0.78	3
5. The tribe residents can operate restaurants, B&B and shops by themselves	3.58	0.79	4
15. I feel like our tribe is like a family.	3.50	0.85	5
7. Clean water and air in the tribe.	3.39	0.95	6
12. Abundant festivals, markets, and workshops.	3.38	0.89	7
2. Conservation of habitats and numbers of wild animals and plants.	3.31	1.01	8
22. Preservation of traditional culture.	3.30	0.90	9
25. Independent economic power of the tribe is enhanced.	3.21	0.81	10
3. Medical facilities of the tribe.	3.20	1.30	11
9. Conservation of primitive forest.	3.14	1.07	12
21. Residents can participate in the decision making of tribal public affairs.	3.13	0.79	13
26. Less fighting among residents in the tribe.	3.13	0.67	14
19. Less crime of residents in the tribe.	3.12	.94	15
27. Proper planning and use of land.	3.09	0.90	16
28. Conservation of the natural landscape.	3.06	1.03	17
16. Preservation of natural/cultural heritage.	3.06	0.99	18
13. Less alcohol abuse of residents in the tribe.	2.99	0.80	19
23. Recreational facilities of the tribe	2.97	0.97	20
31. Proper and sufficient job opportunities for tribal residents.	2.96	0.88	21
33. Refuge during tribal disasters.	2.93	0.81	22
10. Water and electricity of the tribe.	2.92	0.99	23
29. Disaster prevention of the tribe.	2.86	0.92	24
11. Governmental medical subsidies.	2.86	0.99	25
24. Governmental taxation on indigenous people.	2.82	0.90	26
32. Reduction of derelict buildings in the tribe.	2.80	0.87	27
14. Environment and tranquility of the tribe.	2.79	0.95	28
4. Governmental subsidies of life.	2.76	0.92	29
34. External access to the tribe (bridges and roads)	2.76	0.94	30
17. Educational facilities of the tribe	2.71	0.95	31
18. Governmental educational subsidies	2.67	0.97	32
30. Governmental welfare to the tribe	2.63	0.94	33
20. The casualty littering by residents has decreased.	2.62	0.98	34

Table 2. T-test summary of t-test analysis results

Variables		Mean	SD	T value	Sig
Gender	Male	101.70	18.25	0.23	0.82
	Female	101.40	18.15		
Marital status	married	97.14	17.22	-8.26*	.000
	unmarried	107.75	17.70		
Self depends on tourism	depend	100.25	15.32	-1.30	0.193
	not depend	102.11	19.32		
Household depends on tourism	depend	95.47	13.89	-11.76*	.000
	not depend	109.94	20		

*p< .05

Table 3. One-way ANOVA summary of t-test analysis results

Variables		SS	df	MS	F value	Sig	Post-Hoc
Tribe	Within group	63318.27	7	9045.47	36.29*	.000	1,3,7,8>2,6, 4>1- 8,
	Within group	187172.62	751	249.23			
	Sum	250490.89	758				
Age	Within group	21845.51	4	5461.38	6.67	18.01	
	Within group	228645.39	754	303.24			
	Sum	250490.89	758				
Time of living in a tribe.	Within group	20862.62	7	2980.37	9.75*	.000	2>6,7,8;3>7,8;4>7;
	Within group	229628.27	751	305.76			
	Sum	250490.89	758				
Educational level	Within group	5286.58	3	1762.19	5.43*	0.001	2,3>4
	Within group	245204.31	755	324.77			
	Sum	250490.89	758				
Month income	Within group	255.162	4	63.791	8.31*	.000	3>7
	Within group	5817.438	758	7.675			
	Sum	6072.600	762				
Occupation	Within group	17580.99	7	2511.57	8.10*	.000	2>9; 3,6,7>5,9
	Within group	232909.89	751	310.13			
	Sum	250490.89	758				

*p< .05

unrelated (M=109.94) felt higher than related (M=95.47). The results of One-way ANOVA analysis of variance in Table 3 show that there is no significant difference in the perception of QoL among indigenous peoples of different ages (F=6.67, p>0.05). However, there are significant differences in different tribes (F=36.29, p<0.05). Chashan, Shanmei, Tefuye and Lajji are significantly higher than Xinmei and Leye tribes, and Lijia is also significantly higher than Chashan and Lajji tribes. In terms of the living time of different tribes, the indigenous peoples who lived in 11-20 years had significantly higher influence on the QoL than those who lived in 51-60, 61-70 and over 71 years; in addition, the indigenous peoples who lived in 21-30 years were also significantly higher than those who lived in 61-70 and over 71 years; in addition, the indigenous peoples who lived in 31-40 years were also significantly higher than those who lived in 61-70 years. There is a significant

difference in education level (F=5.43, p<0.05). The indigenous peoples in senior high school and junior college were significantly higher than those in colleges and university. There is a significant difference in different income (F=8.31, p<0.05). The income of NT. 25001-40000 (about US\$.830-1330) is significantly higher than that of the people without income. In different occupations, service industry, manufacturing industry and students are significantly higher than materfamilias with retirees and engaged in agriculture workers.

5. CONCLUSION AND SUGGESTION

5.1 Conclusion

According to the results of the analysis, the indigenous peoples of Alishan believe that tourism development has the highest influence on the QoL in tribes. According to the results of

the analysis, the top five items that affect the QoL of the tribe are: "I'm proud of our tribe", "I feel that I belong to the tribe", "Sense of security in the tribe", "the tribe residents can operate restaurants, B&B and shops by themselves" and " I feel like our tribe is like a family ".

The above results support previous studies [11], and it can be found that the Tsou indigenous peoples believe that tourism development can improve the QoL of the tribe, and the most important aspect is the tribal sense. Because of the development of tourism, they think that they belong to this tribe and they have a strong sense of belonging. But more importantly, the results of this study are the same as those in the past [17,18], that is, when the indigenous people develop tourism, they are proud that their culture can be displayed in front of outsiders.

However, the indigenous peoples also tend to have a low degree of improvement in "external transportation (bridges, roads)", "educational facilities of the tribe", "government subsidies for education", "welfare granted by the government to the tribe" and " the casualty littering by residents has decreased ".

From the above results, due to the development of tourism and natural disasters, Taiwan government departments have given a lot of welfare to the indigenous peoples in Alishan. However, in the face of many natural disasters (typhoons and abnormal climate) in Taiwan, the roads in Alishan area are often interrupted, and the hillside land collapses, as well as the loss of agricultural products. In terms of educational facilities, the number of students in the tribe is not large, coupled with the outflow of population [19]. As a result, the government cannot invest more education resources in the primary schools of the tribe. For example, this problem occurs not only in the indigenous tribe, but also in the remote villages and towns where the Han people live.

As far as the above results are concerned, the indigenous people think that the situation of littering at will is reduced, and the improvement situation is not very good. However, after further research and interviews with other Tsou tribes, it is found that the situation of garbage generation is not affected by the development of tourism. The reason is that the number of people participating in tribal tourism is small, not as many as mass tourists. In addition, the situation of garbage generation is caused by the people of

a few tribes who do not abide by the living standards.

In terms of cognition of the influence of different demographic variables on the improvement of quality of life, there is no significant difference in the perception of the improvement of QoL in the development of tribal tourism among the indigenous people of different genders and ages. As there is no previous study on the influence of tourism development on the quality of life of Alishan tribe. In addition, the research on the influence of other areas on the quality of life, compared with this study, there will be great differences. Therefore, based on many years of experience in this area, the researcher thinks that different gender and age can be combined to discuss. The main reason is that on weekdays, only the elderly and children are left in the tribe, and the improvement of the quality of life of the tribe is the same, which is the result.

Secondly, the study found that unmarried indigenous peoples felt more about the improvement of their quality of life by developing tourism in their tribe than those who were married. The reason for the above results is that most of the unmarried people are not only younger, but also unemployed. In addition, they have been studying or working in the city for a long time, while most of the married people live in the tribe and work in the local area, or they are elderly retirees and farmers. According to research on tourism impact, demographic variables such as age, gender, income, education level and occupation may affect residents' perceptions of the impact of tourism over time [20]. So every once in a while, these young and unmarried tribes return to their tribes for the Spring Festival or vacation. It is found that because of the development of tourism, the environment and facilities of the tribe are better than those of the people who stayed in the tribe.

Third, the results of the analysis confirm that the time of indigenous people living in the tribe will affect their cognition of the improvement of the quality of life of tourism development. There are two main reasons why the indigenous people who have lived for a short time think that the QoL of the tribe has been improved more than those who have lived for a long time. One is that the people who have lived for a shorter time think that the way of life of the tribe is the same as that of the city, and that the natural environment is better than that of the city. And those who have lived for a long time are accustomed to the

former way of life, which is related to the present life of the tribe. Therefore, the cognition of improving the QoL is lower than that of the people who have lived for a short time.

Fourth, indigenous peoples with income of NT. 25001-40000 think that the reason for the improvement of QoL is that the development of tourism. Most of them are middle-level and high-level people in the service industry. They work outside every day, and they are more aware of the changes in their living environment. Therefore, they know that the QoL has improved because of the development of tourism. There are significant differences in education level. Those with junior high school (or below) and senior high school education level are significantly higher than those with university education level, so they think that their living environment and welfare have been improved because of the development of tourism. However, those with university education level do not have a clear feeling. They should have a wide range of contacts, and think that the development and improvement of tourism destinations have been improved QoL is a necessary condition, so the feeling is lower.

Fifth, in different occupations, service industry, manufacturing industry and students are significantly higher than family management with retirees and those engaged in agriculture. Because housewives and retirees are in the tribe every day, they don't feel the change of QoL deeply, so the above situation comes into being.

Sixth, the indigenous peoples of different tribes have different feelings about the QoL. The reason for the low QoL felt by Shanmei tribe lies in the fact that there is no unique scenic spot, and the tourist destination is to visit Tanayiku or Alishan National Forest Recreation Area. All kinds of vehicles of tourists only pass through Shanmei tribe, which does not bring any substantial positive impact on the tribe, but only environmental impact, which makes them feel low quality of life. Lijia tribe is the most remote tribe in Alishan area. There is only one way to get in and out. The reason why people feel that their quality of life is better than that of other tribes is that although the tribe is planned as one of the scenic spots of " Tsou cultural tribe", it is actually a distance from Alishan highway and needs to cross hills and mountains.

In addition, there is no unique tourist attraction, so there are not many visitors, and the negative impact is also low. Because they are one of the

most remote tribes in Alishan, they cannot benefit from the positive economic benefits brought by tourists. Therefore, the government has subsidized a lot of construction and welfare in the development of tribal tourism. As a result, the indigenous peoples of the tribe feel that their QoL has been significantly improved. The same is true of the Laiji tribe. Although it has unique Zou crafts and magnificent canyons, its geographical location is close to Nantou County, and it is also a distance from Fenqi Lake. Therefore, it supports the development of tourism. The results of the above analysis also confirm that the place of residence of residents will affect their supportive attitude towards tourism development [21].

Finally, in terms of the degree of tourism dependence, first of all, this study found that there was no significant difference in the influence of personal work and tourism on the QoL of the indigenous peoples. In addition, indigenous people whose families work with unrelated people feel that the influence of QoL is higher than that of related people. Previous studies have found that residents' dependence on tourism is an important variable affecting residents' cognition and attitude towards tourism impact. In the research on related impacts and attitudes [13], it has been found that residents' cognition and attitude are affected, but the results of this study are not the same as the above comparison.

The main reason is that in the questionnaire survey conducted by the researchers, not only during the Chinese New Year holiday, but also during the War Festival between Dabang and Tefuye. Most of the young people returned to the tribe and also participated in the questionnaire survey, so the above results came into being. Because these young indigenous people who come back to the tribe generally think that their QoL has improved significantly after comparing their previous living conditions.

Based on the above discussion, the two hypotheses proposed in this study are not fully supported. It can only be said that it is partially supported.

5.2 Suggestion

5.2.1 Management and practical implications

Because of the relationship between tourism development and indigenous people's " I'm proud

of our tribe " and "increased popularity of the tribe", the tribe should further strengthen the cultural construction of the tribe, such as the architectural appearance, image, sculpture, totem, with the aid of government resources. In this way, not only can the young people understand the culture of the tribe better, but also be abler to show the beautiful side of self-culture in front of tourists. In terms of QoL, indigenous peoples are places where the government can further strengthen and improve public facilities, such as tribal hydropower facilities, disaster prevention (earthquake, typhoon, flood, earth rock flow) facilities, medical subsidies, external transportation (bridges, roads) and education measures and subsidies.

5.2.2 Research limitations and suggest for future research

In the design of the questionnaire, because most of the indigenous peoples in the tribe are farmers, there are difficulties in filling in the "monthly income", so the follow-up researchers can change the design of the questionnaire to "annual income" or "monthly total income of the family", which is also easy for the subjects to fill in the questionnaire. In addition, this study found that there is no difference in the QoL between the indigenous peoples who depend on tourism or not, which is different from the previous study. Researchers suggest that future researchers should continue to explore the reasons in this direction, and adopt qualitative research methods to analyze the views of local tourists on tourism development, so as to better understand their problems and opinions.

CONSENT

As per international standard or university standard, respondents' consent has been collected and preserved by the author(s).

ACKNOWLEDGEMENTS

This study was supported by a grant from National Social Science Foundation of China (No.18BMZ130).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Tang-Sijia. The construction of quality of life indicators and the measurement of

- comprehensive quality of life index. Ph.D. Thesis, Mingchuan University; 2014.
2. Andereck K, Valentine LKM, Vogt CA, Knopf RC. A cross-cultural analysis of tourism and QOL perceptions, *Journal of Sustainable Tourism*. 2007;15(5):483-502.
 3. Andereck KL, Nyaupane GP. Exploring the nature of tourism and QOL perceptions among residents. *Journal of Travel Research*. 2010;50(3):248-260.
 4. Andereck KL, Nyaupane GP. Development of a tourism and quality-of-life instrument. In M. Budruk, R. Phillips (Eds.), *Quality-of-Life community indicators for Parks, Recreation and Tourism Management*. 2011;43:95-113.
 5. Uysal M, Sirgy M, Woo J, Kim EH. Quality of life (QOL) and well-being research in tourism. *Tourism Management*. 2016;53: 244-261.
 6. McGillivray M. *Human Well-Being, Concept and Measurement*. New York: Palgrave MacMillan; 2007.
 7. Sirgy MJ, Lee D, Miller C, Littlefield J. The impact of globalization on a country's QOL: Towards and integrated model. *Social Indicators Research*. 2004;68(3):251-298.
 8. Sirgy MJ, Cornwell T. Further validation of the Sirgy et al.'s measure of community QOL. *Social Indicators Research*. 2001; 56(2):125-143. Available:<https://doi.org/10.1023/A:1012254826324>
 9. Sirgy MJ, Rahtz D, Cicic RM, Underwood R. A method for assessing residents' satisfaction with community-based services: A quality-of-life, perspective. *Social Indicators Research*. 2000;49(3): 279-316.
 10. Parkins J, Stedman R, Varghese J. Moving towards local-level indicators of sustainability in forest-based communities: A mixed methods approach. *Social Indicators Research*. 2001;56:43-72.
 11. Cascante DM. Consequences of tourism-based growth on rural communities' QOL: A comparative study of Liberia and La Fortuna, Costa Rica. Ph.D. Thesis, Pennsylvania State University; 2008.
 12. Andereck KL, Vogt CA. The relationship between residents' attitudes toward tourism and tourism development options, *Journal of Travel Research*. 2000;39(1):27-36.
 13. Lankford SV, Howard DR. Developing a tourism impact attitude scale. *Annals of Tourism Research*. 1994;21(1):121-139.

14. Haralambopoulos N, Pizam A. Perceived impacts of tourism-The case of Samos. *Annals of Tourism*. 1996;23(3):503-526.
15. Usher L, Kerstetter ED. Residents' perceptions of QOL in a surf tourism destination: A case study of Las Salinas, Nicaragua. *Progress in Development Studies*. 2014;14(4):321-333.
16. Látková P, Vogt CA. Residents' attitudes toward existing and future tourism development in rural communities. *Journal of Travel Research*. 2012;51(1):50-67.
17. Whitney-Squire K. Sustaining local language relationships through indigenous community-based tourism initiatives. *Journal of Sustainable Tourism*. 2016;24:8-9,1156-1176.
18. Carr A, Lisa Ruhanen, Michelle Whitford M. Indigenous peoples and tourism: The challenges and opportunities for sustainable tourism. *Journal of Sustainable Tourism*. 2016;24:8-9,1067-1079.
19. Huang HC, Liu CH, Chang HM. Does tourism development bring positive benefit to indigenous tribe? Case by Dongpu in Taiwan. *Advances in Research*. 2015;4(4): 235-246.
20. Sharma B, Gursoy D. An examination of changes in residents' perceptions of tourism impacts over time: The Impact of Residents' Socio-demographic Characteristics. *Asia Pacific Journal of Tourism Research*. 2015;20(12):1332-1352.
21. Lawton LJ. Resident perceptions of tourist attractions on the Gold Coast of Australia. *Journal of Travel Research*. 2005;44(2): 188-200.

© 2020 Chang et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

*The peer review history for this paper can be accessed here:
<http://www.sdiarticle4.com/review-history/60402>*