2019-0951 IJOI
http://www.ijoi-online.org/

THE EFFECTS OF SERVICE CONTACT, EXPERIENCE VALUE, AND SERVICE QUALITY IN THE 2018 PENGHU "CHRYSANTHEMUM ISLAND BICYCLE TRIP" ON BEHAVIORAL INTENTIONS

Yeh, Wei-Ku
Department of Recreation and Holistic Wellness
Mingdao University, Changhua, Taiwan

Abstract

The objective of this study was to explore the effects of service contact, experience value, and service quality on behavioral intentions. The main subjects of this study were participants in the 2018 Penghu "Chrysanthemum Island" bicycle trip. Verification analysis was used to explore the effects of related variables on behavioral intentions. In this study, we used a purposive sampling method to select 500 users as the study samples. A questionnaire survey was conducted on the subjects. Overall, 485 valid questionnaires were returned, for a 97% valid return rate. This study's main results are as follows:

1. Service contact has a significant effect on service quality.
2. Service contact has a significant effect on experience value.
3. Service quality has a significant effect on experience value.
4. Service contact does not have a significant effect on behavioral intentions.
5. Service quality has a significant effect on behavioral intentions.
6. Experience value has a significant effect on behavioral intentions.
7. Experience value has a mediating effect on the relationship between service contact and behavioral intentions.
8. Experience value has a mediating effect on the relationship between service quality and behavioral intentions.

This study also provides relevant recommendations as reference for future studies.

Keywords: Service Contact, Experience Value, Service Quality, Behavioral Intentions

Introduction

As people's consumption patterns change, in-depth travel or tourism activities that emphasize experience value are gradually becoming more popular among the Taiwanese. Differing from traditional static tourism activities, dynamic tourism activities have a strong attraction for travelers and can generate diverse benefits for the participants' physiological, psychological, and social interactions. According to the 2017 statistics from the Tourism Bureau, MOTC, sports activity is ranked number three in travel and leisure activities for Taiwan residents. This is only behind viewing natural scenery and cultural experience activities. In other words, activities that combine sports and tourism not only provide Taiwanese with additional choices, but can also create synergy with local tourism and industries. According to Huang (2016), the increasing popularity of sports and leisure has promoted diverse development in the tourism industry. The added value produced by the combination of tourism and sports makes these activities more attractive, with people wanting to pursue tourism experience with added value, which has turned this field into the fastest growing field in the global tourism industry. As a result, sports tourism has become a globalized industry with limitless business potential. Taiwan has rich tourism resources and every county/city has its own cultural characteristics. Using bicycle rides to experience local culture has become a travel choice for the public. This kind of phenomenon has been validated by survey data from the Tourism Bureau, MOTC, which shows that bicycle activity is the biggest part of sports type activities (Tourism Bureau, 2018). Unsurprisingly, bicycle sports have become activities promoted by government agencies. Cycling Taiwan is a bicycling activity that has been promoted by the Sports Administration (Ministry of Education) since 2016. The objective of Cycling Taiwan is to expand the number of people who participate in bicycle sports in Taiwan. This activity integrates and promotes 10 classic bicycle routes, while encouraging the public to engage in cycling. In addition to the 10 classic bicycle routes, the Sports Administration has encouraged the public to use cycling to connect with local culture since 2017. These cycling events are coordinated with county/city festivals and linked with cultural, leisure, ecological, and scenic themes. The Sports

Administration has organized cycling and storytelling competitions. The goal is to promote people's continuous participation in cycling sports, by using different methods (Sports Administration, Ministry of Education; 2018). Penghu not only has abundant marine tourism resources, but its rich cultural resource is also suitable for a slow-traveling experience. Therefore, Penghu County has joined the Cycling Taiwan event and is hosting the "Chrysanthemum Island Bicycle Trip" activity where participants can explore Penghu. The Chrysanthemum Island Bicycle Trip is matched with the world's most beautiful marine carnival and cultural activities to give people a different image of Penghu.

The organization of bicycle events often requires the delivery of human services. Ma and Dube (2011) indicate that contact behavior between service personnel and customers are reliant on each other, regardless of whether the behavior appears during or after the process. On the other hand, key items in the initial contact between service personnel and participants often determine the participants' first impression. Both the service personnel's professional knowledge and service attitude can affect the participants' feelings. Bitner, Brown and Meuter (2000) assert that service contact plays a crucial role in different industries. In other words, taking advantage of the key items during the initial contact and providing appropriate service can produce a positive service contact experience and good experience value. Experience value refers to the tangible product value and intangible emotional value evaluated by consumers during the experience, which exceed their original expectations, thereby leaving them with a positive impressionable experience. Experience value expresses consumers' cognition and preference for products or services (Holbrook, 1996), i.e., the experience quality delivered to consumers or participants by the product via tangible or intangible services. When consumers or participants approve of the experience, the experience will produce emotion and value that they approve of, which will increase their approval of the service or activity. This shows that favorable service contact and good experience value is beneficial to service quality. Service quality is the gap between customers' expected service and the actual service experience (Parasuraman, Zeithaml & Berry, 1985), i.e., customers' or participants' comparison of perceived quality and expected quality after they subjectively assess their participation in the activity or received service. If the evaluation of the service quality is high, it means

that the perceived quality is higher than the expected quality. Conversely, a low evaluation indicates that the perceived quality is lower than the expected quality. Service quality has long been the focus of consumers and operators. However, the evaluation of service quality not only should consider the final result, but also consider the tangible and intangible aspects during the service process (Hussain, Nasser & Hussain, 2015; Dsouza, Subhash, Chen & Weiermair, 2018). The Theory of Planned Behavior (TPB) is a social psychology theory primarily used to explain human behavior and decision processes (Ajzen, 1991). Exploring whether people will or will not take a certain action when engaged in a certain behavior has become the main focus of behavioral intentions. TPB is based on the theory of reasoned action, as proposed by Fishbein and Ajzen (1975). The basic hypothesis of the reasoned action in the theory is that all human behaviors are generally reasonable and that people can use their individual will to sufficiently control their own behavior. Later, TPB was applied to the leisure activity field (Conn, Tripp-Reimer & Maas, 2003; Quintal, Lee & Soutar, 2010).

Bicycle tourism is becoming more popular in Taiwan and related bicycle paths are being built. In addition, activity participants are beginning to value the service and experience delivered by the activity itself more and more. As a result, the organizing agencies have also improved their service quality. However, Gibson (2005) maintains that previous studies related to sports tourism focus too much on who participated in sports tourism and did not explore why people participated in sports tourism. Therefore, the focus of this study is exploring people's behavioral intentions based on service industry characteristics while they participated in the Cycling Taiwan sports tourism event. In this study, we used service contact, experience value, and service quality as variables to explore their impact on TPB. Verification analysis was also conducted. Recommendations at the end of this paper can serve as a reference for management agencies and for Cycling Taiwan participants.

Literature Exploration

The delivery of service is based on the interactions of the buying and selling parties. Goldstein, Johnston, Duffy and Rao (2002) indicate that service contact is a type of process, and that the required service is provided to consumers by service personnel through appropriate reception skills. In other words, the roles that people

play at different contact points will produce different linking behaviors. Taking this study for example, the interaction between the bicycle activity participants and the Cycling Taiwan service personnel plays a crucial role. Whether service personnel can properly guide or explain the activity content at the appropriate activity site is related to customers' participation feelings. This shows that the measurement of service contact is multifaceted. Solomon, Surprenant, Czepiel and Gutman (1985) assert that the dimensions of service contact should cover the following: (1) service content that customers are aware of: objective, motivation, result, distinctive features, cost, recoverability, and risk; (2) service providers' features: professional skills, knowledge and attitude, and demographic characteristics; and (3) production reality: time, skill, location, content, complexity, formality, and purchasing unit.

Activity participants or customers will often have different experiences via their feelings and observation because of stimulus from the activity or because of interactions. This primarily signifies non-physical economic value. Mathwick, Malhotra and Rigdon (2001) assert that customers' consumption experience can add many values. Experience value is the relative cognition and preference consumers have towards product attributes and service performance produced by direct use or distant appreciation. This perspective is echoed by Grönroos (2001), who believes that what customers wish to have is not just the product or service, but the benefits and experience provided by the product or service. Experience value was later widely applied to the tourism and leisure field. For the purpose of measurement, Otto and Ritchie (1995) compiled six major dimensions of tourism service experience: pleasure, interaction, novelty, comfort, safety, and excitement.

Service quality is how well customers' needs and expectations are satisfied, i.e., customers' long-term judgment of physical companies' overall perceived performance. This can be evaluated using attitude (Andrew, Clayton & Charles, 2002). Lehtinien and Lenhitnien (1984) divided service quality into physical quality, interactive quality, and corporate quality based on the service process. Consumers' perspective is used to divide service quality into process quality and output quality. Thus, we see that service quality does not only involve one aspect. Rather, it is an evaluation produced by consumers' multiple interactions and transactions. Parasuraman, Zeithmal and Berry (1988) further used

tangibility, reliability, responsiveness, guarantee, and care to design the service quality scale.

The concept of behavioral intentions is still based on Ajzen's TPB. Ajzen (1985) maintains that TPB can effectively interpret and predict intention or behavior. Ajzen hypothesized that three predictive variables: attitude, subjective norms, and perceived behavioral control will mutually affect each other. Intention is affected by different levels of attitude, subjective norms, and perceived behavioral control. In other words, TPB consideration dimensions do not only involve individual internal factors, but also external affecting factors. When measuring the concept, Ajzen (1991) believes that attitude is formed by behavioral belief caused by an individual's engagement behavior multiplied by the individual's evaluation of these results. Subjective norms are formed by an individual's conviction stemming from behavior that the individual thinks he/she should not be engaged in, based on an important reference subject multiplied by the individual's motivation based on the important reference subject. Perceived behavioral control is formed by an individual's belief in the control he/she has over possessed resources or obstacles faced in the behavior the individual is engaged in multiplied by the individual's perceived ability to control these resources or obstacles.

Related domestic references can show the relationships among dimensions in this study. The authors' views are separately described below. Service contact and service quality have a positive effect (Lu, 2011; Lin, 2015). Service contact has a positive effect on experience value (Lin, 2010; Chin, 2014). Service quality has a positive effect on experience value (Ku, 2013; Tsai, Liao, Sun & Chang, 2017). Service contact and behavioral intentions have a positive effect (Lin, 2010; Hsu, 2011). Experience value and behavioral intentions have a positive effect (Yang & Chang, 2015; Wang, Tsai, Lee & Liu, 2017). Service quality and behavioral intentions have a positive effect (Wu & Pao, 2016; Chung, Cheng, Lu & Huang, 2016). Conversely, Yu and Lee (2013) maintain that Ajzen's TPB integrated the theoretical perspectives of multiple attributes. Interpreting from an individual's internal subjective perception and inspecting the individual's purchasing decision process can be affected by internal and external factors. This study also analyzes the mediating effects these internal and external factors have on behavioral intentions.

Research Methods

1. Research Framework

In this study, we explore the participants' behavioral intentions regarding service contact, experience value, and service quality in the 2018 Penghu "Chrysanthemum Island" bicycle trip. The service contact, experience value, and service quality were proposed by Chang et al. (2014), Chen (2014), and Chiu and Pi (2008) as the framework.

These items are combined with behavioral intentions for further analysis. We also explore whether experience value has a mediating effect on the relationship between service contact and behavioral intentions, and whether experience value has a mediating effect on the relationship between service quality and behavioral intentions, as shown in Figure. 1.

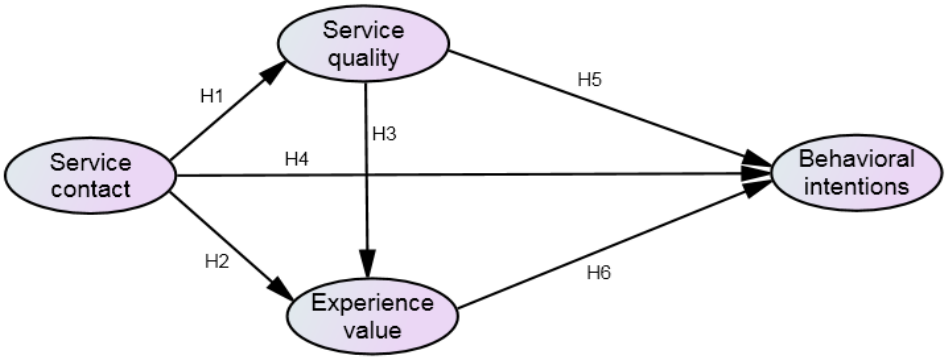

Figure 1. Research framework

2. Research Hypotheses

Hypothesis 1: Service contact has a significant effect on service quality.

Hypothesis 2: Service contact has a significant effect on experience value.

Hypothesis 3: Service quality has a significant effect on experience value.

Hypothesis 4: Service contact has a significant effect on behavioral intentions.

Hypothesis 5: Service quality has a significant effect on behavioral intentions.

Hypothesis 6: Experience value has a significant effect on behavioral intentions.

Hypothesis 7: Experience value has a mediating effect on the relationship between service contact and behavioral intentions.

Hypothesis 8: Experience value has a mediating effect on the relationship between service quality and behavioral intentions.

3. Research Tools

The questionnaire content in this study mainly references the question items proposed by Chang et al. (2014) that affect consumer service contact, question items proposed by Chen (2014) that affect participant experience value, and question items proposed by Chiu and Pi (2008) that affect participant service quality. The question items were revised according to the particular needs of this study. The scale includes the four factor dimensions: service contact, experience value, service quality and behavioral intentions, and a total of 43 questions. The scale in this study utilizes a Likert 5-point scale, where each question is given a score between 1 and 5 on a scale from "strongly disagree" to "strongly agree", respectively.

4. Research Subjects

This study aims to explore the participants' behavioral intentions regarding service contact, experience value, and service quality in the 2018 Penghu "Chrysanthemum Island" bicycle trip. Participants in Northern, Central, and Southern Taiwan were used as the study subjects. We used purposive sampling to select 500 users as this study's samples. A questionnaire survey was conducted and a total of 500 questionnaires were returned, which is a recovery rate of 100%. Overall, 485 questionnaires were valid, which is a questionnaire validity rate of 97%.

5. Data Processing and Analysis

After statistic calculation, invalid questionnaires were deleted. SPSS 20.0 statistical software was used to establish files for the data, and AMOS 20.0 statistical software was used to analyze the correlation between the variables.

Research Results

1. Sample Features

This study used participants in the 2018 Penghu "Chrysanthemum Island" bicycle trip as test samples. Overall, there were 485 valid samples, of which 279 were males (57.5%) and 206 were

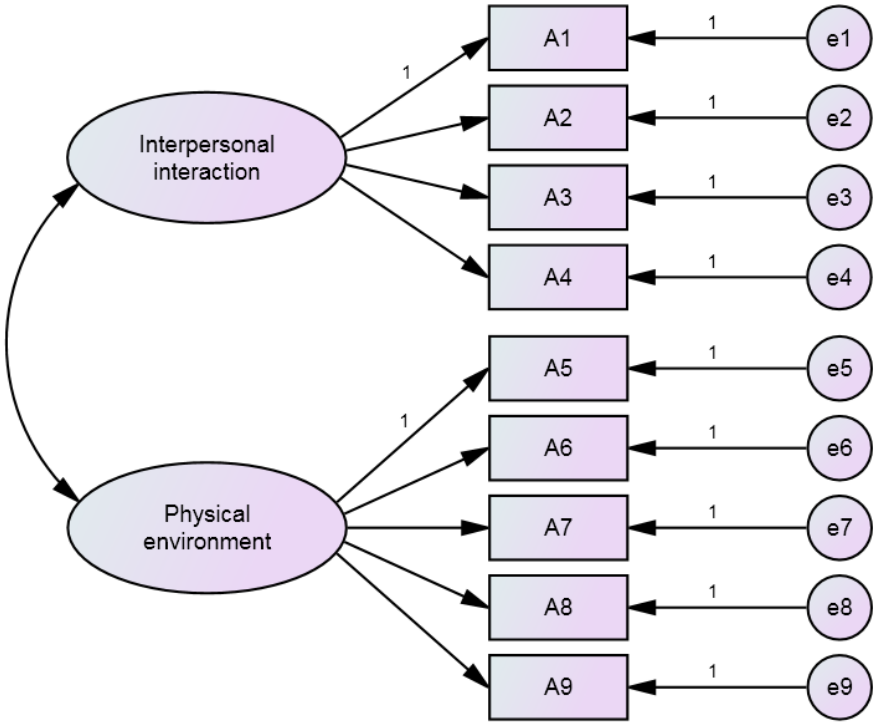

Figure 2. Service Contact Model Scale's Confirmatory Factor Analysis Framework

females (42.5%). In the age category, people younger than 20 years of age (including) were the most numerous (229 people; 47.2% of the valid samples). For occupation, the student category accounted for the most people (a total of 333; 68.7% of the valid samples). In education, university (college) accounted for the highest number (319 people; 65.8% of the valid samples). Among average monthly income, the NT$ 10,000 or less category had the most number of people (283; 58.4% of the valid sam ples). For area of residence, the outer island and overseas category had the most people (343; 70.7% of the valid samples). See Table 1.

2. Offending Estimate

Bagozzi and Yi (1988) believe that before conducting the overall goodness-of-fit test, the offending estimate should be checked. Because this study does not have an offending estimate (Hair, Anderson, Tatham & Black, 1998), we used the χ^2 (Chi-square), χ^2 and degree of freedom ratio, GFI, AGFI, RMSEA, CFI, and PCFI to analyze the goodness-of-fit. Tables 2 – 5 show that the error variance in this

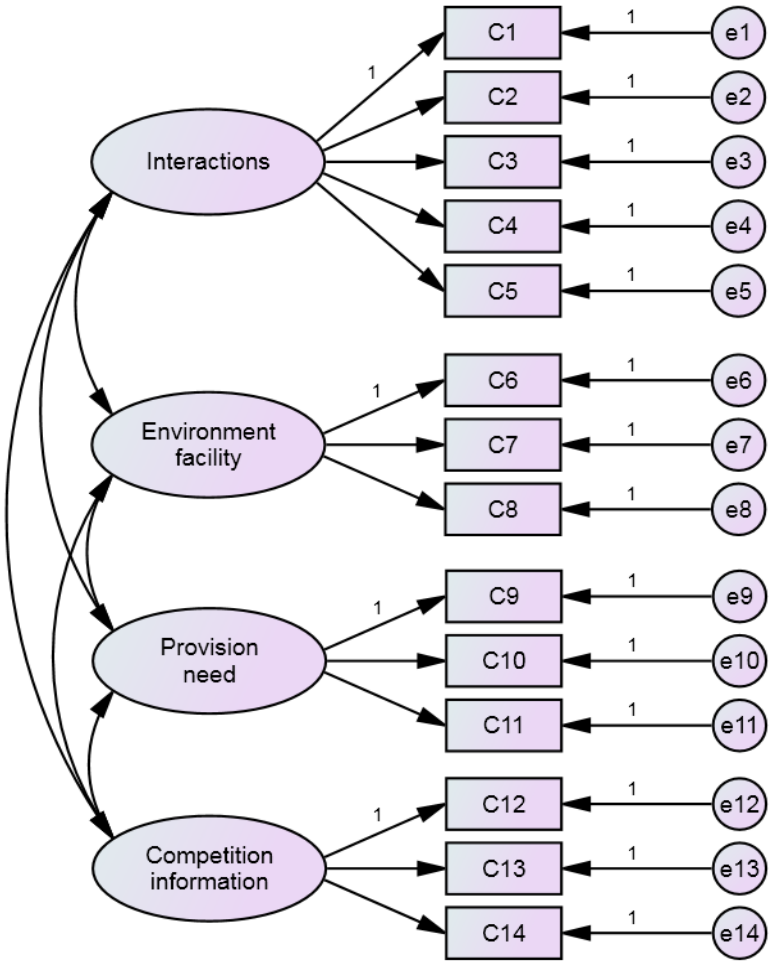

Figure 3. Service Quality Model's Confirmatory Factor Analysis Framework

study model is between 0.01 and 0.14, and the standardization coefficient is between 0.01 and 0.94. They have not exceeded the 0.95 standard value; thus, they could be used to conduct the goodness-of-fit test for the overall model.

3. Measurement Model Analysis

This study used CFA to analyze the questionnaire's reliability and

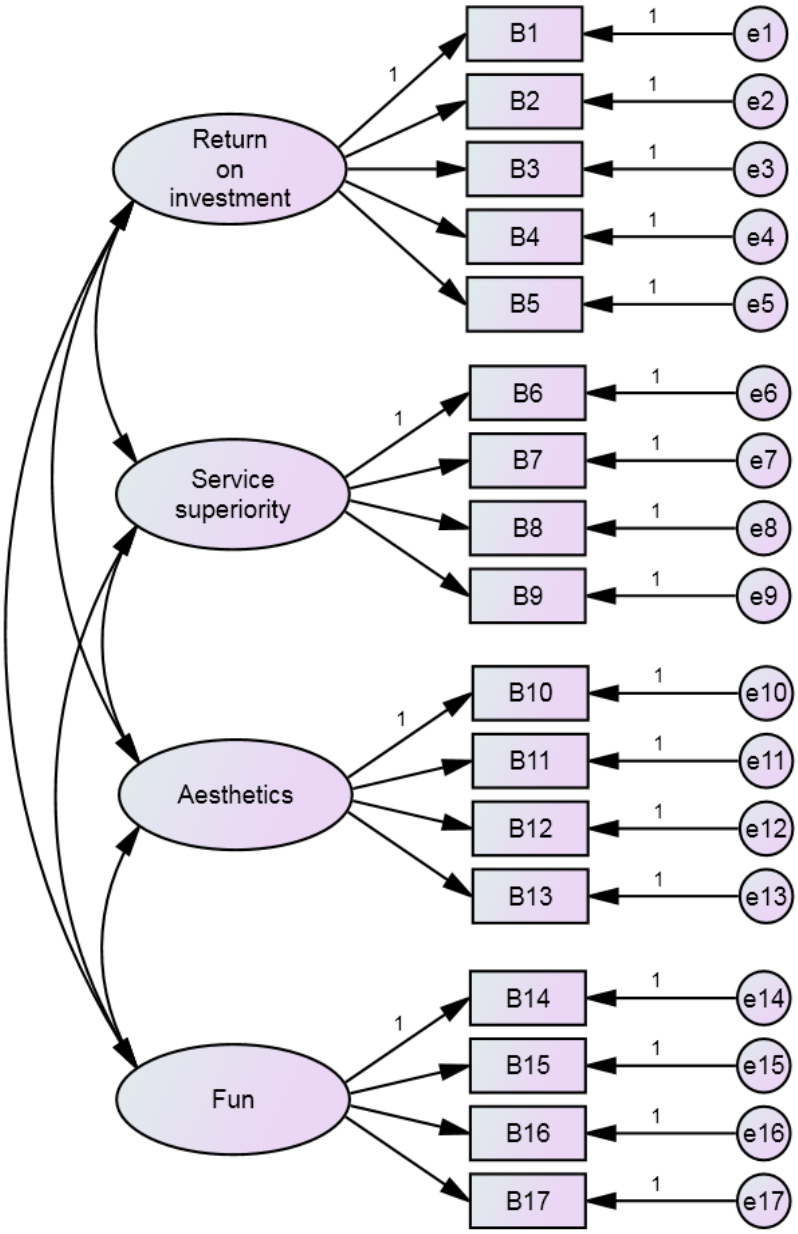

Figure 4. Experience Value Model's Confirmatory Factor Analysis Framework

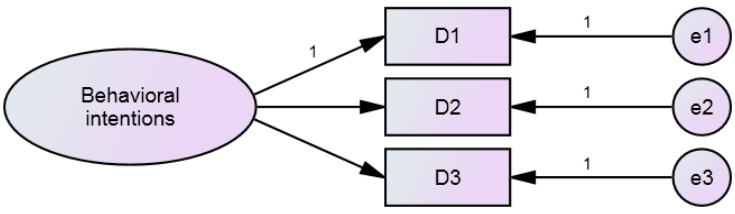

Figure 5. Behavioral Intention Model's Confirmatory Factor Analysis Framework

Table 1. Subject Features

Variables	Category	Number of times	Percentage %	Accumulated percentage %
Gender	Male	279	57.5%	57.5%
	Female	206	42.5%	100%
Age	20 years or younger (including)	229	47.2%	47.2%
	21-30 years	119	24.5%	71.8%
	31-40 years	34	7.0%	78.8%
	41-50 years	36	7.4%	86.2%
	51 years or older	67	13.8%	100%
Occupation	Student	333	68.7%	68.7%
	Police, military, public servant, or teacher	59	12.2%	80.8%
	Industry and commerce services	45	9.3%	90.1%
	Agriculture, forestry, fishery and animal husbandry	0	0%	90.1%
	Retired	35	6.6%	96.7%
	Other	16	3.3%	100%
Education	Junior high (including) or below	58	12.0%	12.0%
	Senior high	50	10.3%	22.3%
	University (college)	319	65.8%	88.0%
	Master's degree (including) or higher	58	12.0%	100%
Average monthly income	NT$10,000 or less	283	58.4%	58.4%
	NT$10,001 - NT$20,000	48	9.9%	68.2%
	NT$20,001 - NT$30,000	31	6.4%	74.6%
	NT$30,001 - NT$40,000	27	5.6%	80.2%
	NT$40,001 - NT$50,000	33	6.8%	87.0%
	NT$50,001	63	13.0%	100%
Area of	North	46	9.5%	9.5%

residence	Central	29	6.0%	15.5%
	South	65	13.4%	28.9%
	East	2	0.4%	29.3%
	Outer islands and over-seas	343	70.7%	100%

Table 2. Service Contact Model Scale's Offending Estimate Checklist

Item code	Standardized regression co-efficient	Error variance
A1	0.90	0.01
A2	0.91	0.01
A3	0.91	0.01
A4	0.81	0.01
A5	0.87	0.01
A6	0.78	0.03
A7	0.78	0.04
A8	0.89	0.01
A9	0.01	0.14

Table 3. Experience Value Scale's Offending Estimate Checklist

Item code	Standardized regression coefficient	Error variance
B1	0.82	0.02
B2	0.83	0.02
B3	0.92	0.01
B4	0.90	0.01
B5	0.83	0.01
B6	0.91	0.01
B7	0.85	0.01

B8	0.88	0.01
B9	0.84	0.02
B10	0.89	0.01
B11	0.88	0.01
B12	0.87	0.01
B13	0.88	0.01
B14	0.82	0.02
B15	0.90	0.01
B16	0.86	0.01
B17	0.86	0.01

Table 4. Service Quality Scale's Offending Estimate Checklist

Item code	Standardized regression coefficient	Error variance
C1	0.91	0.01
C2	0.92	0.01
C3	0.91	0.01
C4	0.92	0.01
C5	0.89	0.01
C6	0.85	0.02
C7	0.88	0.01
C8	0.87	0.02
C9	0.82	0.02
C10	0.88	0.02
C11	0.86	0.01
C12	0.87	0.01
C13	0.93	0.01
C14	0.90	0.01

Table 5. Behavioral Intention Scale's Offending Estimate Checklist

Item code	Standardized regression coefficient	Error variance
D1	0.93	0.01
D2	0.94	0.01
D3	0.85	0.01

validity test, and referenced the modification indices (M.I.) to implement the question revisions (Chen, 2007). In del scale's B1, B5, B10, B14, B16, and the service quality model scale's C2, C12 questions were eliminated.

(1) Convergent Validity Verification

The convergent validity was obtained from the dimension's component reliability (C.R.) and average variance extracted (AVE) measurements. To show that the questionnaire has convergent validity, it is recommended that the C.R. value should be greater than 0.7 (Bagozzi & Yi, 1988) and that the AVE value should be greater than 0.5 (Fornell & Larcker, 1981). We conducted a convergent validity test on the interpersonal interaction, physical environment, return on

this study, the service contact model scale's A4, A6, A9, the experience value mo
C8, C9,

investment, service superiority, aesthetics, fun, interactions, environment facility, provision need, competition information, and behavioral intentions in service contact, experience value, service quality and behavioral intentions. The factor loading of all the dimensions was from 0.76~0.94 and the C.R. value was from 0.76~0.95. The AVE value was from 0.71~0.93, which conformed to the standards set by Bagozzi and Yi (1988), Fornell and Larcker (1981), and Hair, Anderson, Tatham and Black (1998). The results showed that this study has convergent validity.

Table 6. Service Contact Model: Verification Analysis

Dimension	Index	Standardized load	Non-standardized load	S.E.	C.R. (t-value)	P	SMC	C.R.	AVE
Interpersonal interaction	A1	0.90	1.00				0.81	0.94	0.83
	A2	0.93	1.13	0.03	32.58	***	0.86		
	A3	0.90	1.18	0.04	30.25	***	0.81		
Physical en-vironment	A5	0.87	1.00				0.76	0.88	0.71
	A7	0.76	1.21	0.06	19.75	***	0.58		
	A8	0.90	1.06	0.04	25.80	***	0.81		

Table 7. Experience Value Model: Verification Analysis

Dimension	Index	Standardized load	Non-standardized load	S.E.	C.R. (t-value)	P	SMC	C.R.	AVE
Return on investment	B2	0.83	1.00				0.68	0.92	0.79
	B3	0.92	0.96	0.04	26.07	***	0.84		
	B4	0.92	1.02	0.04	25.75	***	0.84		
Service superiority	B6	0.91	1.00				0.82	0.76	0.93
	B7	0.85	1.00	0.04	27.66	***	0.73		
	B8	0.88	0.97	0.03	29.45	***	0.77		
	B9	0.84	1.02	0.04	26.30	***	0.70		
Aesthetics	B11	0.87	1.00				0.76	0.92	0.79
	B12	0.89	1.21	0.05	26.83	***	0.79		
	B13	0.90	1.12	0.04	27.99	***	0.81		
Fun	B15	0.91	1.00				0.83	0.87	0.78
	B17	0.85	1.09	0.04	25.59	***	0.73		

Table 8. Service Quality Model: Verification Analysis

Dimension	Index	Standardized load	Non-standardized load	S.E.	C.R. (t-value)	P	SMC	C.R.	AVE
Interactions	C1	0.91	1.00				0.82	0.95	0.82
	C3	0.90	0.99	0.03	31.70	***	0.81		
	C4	0.91	0.97	0.03	32.75	***	0.83		
	C5	0.90	0.97	0.03	31.55	***	0.81		
Environment facility	C6	0.83	1.00				0.69	0.86	0.76
	C7	0.91	0.94	0.04	23.80	***	0.84		
Provision need	C10	0.82	1.00				0.67	0.85	0.74
	C11	0.90	0.96	0.04	24.04	***	0.81		
Competition information	C13	0.94	1.00				0.89	0.92	0.86
	C14	0.91	0.95	0.03	33.86	***	0.83		

Table 9. Behavioral Intention Model: Verification Analysis

Dimension	Index	Standardized load	Non-standardized load	S.E.	C.R. (t-value)	P	SMC	C.R.	AVE
Interactions	D1	0.92	1.00				0.85	0.93	0.82
	D2	0.94	1.03	0.03	34.59	***	0.89		
	D3	0.86	0.83	0.03	28.41	***	0.74		

(2) Discriminant validity verification

Discriminant validity verification can show whether correlation and significant difference exist between two different dimensions (Wu, 2009). In this study, we used the bootstrap 95% confidence interval method (Torkzadeh, Koufteros & Pflughoeft, 2003) to test the related coefficient confidence intervals between dimensions. A value of

less than 1 means complete correlation and indicates discriminant validity. Tables 10 – 12 show that the value of 1 did not appear in the bootstrap related coefficient confidence interval, which means that this study has discriminant validity (Chang, 2011; Hsu, 2011).

Table 10. Service Contact Model: Bootstrap Related Coefficient 95% Confidence Interval

Parameters			Estimate	Bias-corrected		Percentile method	
				Lower limit	Upper limit	Lower limit	Upper limit
Interpersonal interaction	< - >	Physical environment	0.83	0.78	0.88	0.78	0.87

Table 11. Experience Value Model: Bootstrap Related Coefficient 95% Confidence Interval

Parameters			Estimate	Bias-corrected		Percentile method	
				Lower limit	Upper limit	Lower limit	Upper limit
Return on investment	< - >	Service superiority	0.90	0.85	0.94	0.86	0.94
Return on investment	< - >	Aesthetics	0.84	0.73	0.89	0.78	0.89
Return on investment	< - >	Fun	0.82	0.74	0.89	0.74	0.89
Service superiority	< - >	Aesthetics	0.90	0.85	0.94	0.85	0.94
Service superiority	< - >	Fun	0.89	0.83	0.94	0.83	0.94
Aesthetics	< - >	Fun	0.86	0.80	0.91	0.80	0.91

Table 12. Service Quality Model: Bootstrap Related Coefficient 95% Confidence Interval

Parameters			Estimate	Bias-corrected		Percentile method	
				Lower limit	Upper limit	Lower limit	Upper limit
Interactions	< - >	Environment facility	0.83	0.77	0.88	0.78	0.89
Interactions	< - >	Provision need	0.89	0.81	0.93	0.82	0.94
Interactions	< - >	Competition information	0.84	0.76	0.90	0.77	0.90
Environment facility	< - >	Provision need	0.90	0.83	0.97	0.83	0.96
Environment facility	< - >	Competition information	0.82	0.74	0.89	0.75	0.89
Provision need	< - >	Competition information	0.92	0.86	0.97	0.87	0.97

(3) Mediation Validity

This study is based on the effects of service contact and service quality on behavioral intentions. Experience value is the mediating variable. We verified that service contact has an indirect effect on behavioral intentions through experience value and that service quality has an indirect effect on behavioral intentions through experience value. The results are listed in Tables 13 and 14.

Mackinnon (2008) used SEM to analyze the mediating effect, he mainly used bootstrap as the confidence interval for indirect effect. If the confidence interval does not include 0, this indicates a mediating effect. Mackinnon's method of observing mediating effect is in the (1-a) 100% confidence interval (CI). Generally, 95% of CI does not include 0, which indicates significance in the *a* significance standard ($p<0.05$). During his analysis, Mackinnon proposed the SEM determination procedure.

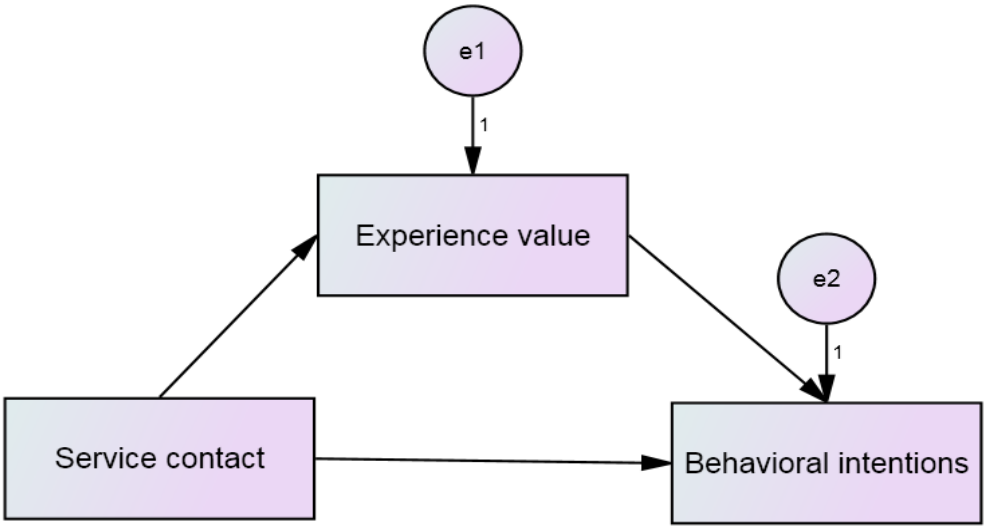

Figure 6. Service Contact Mediating Effect Analysis

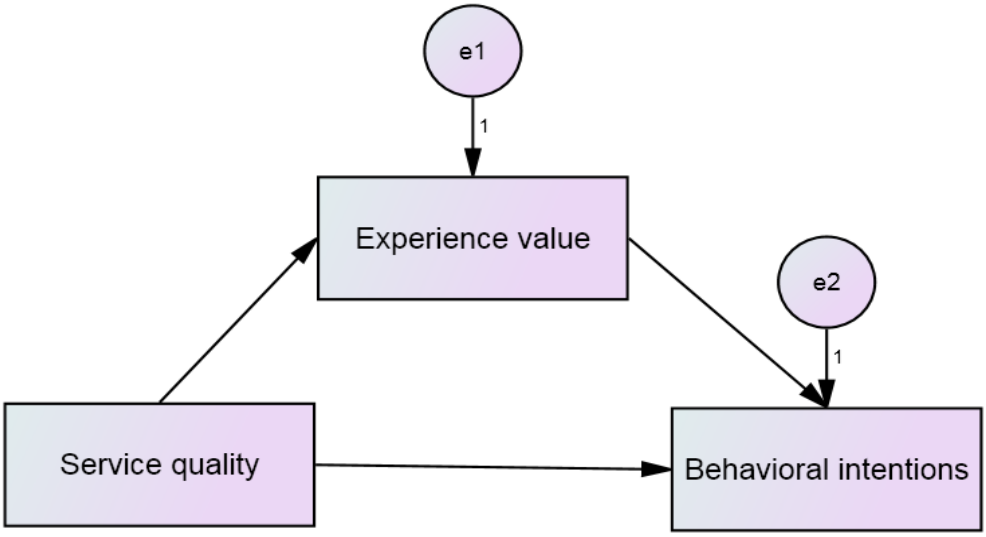

Figure 7. Service Quality Mediating Effect Analysis

When The first is that indirect effect in the 95% confidence interval includes 0 and does not reach the significance standard, which indicates no mediating effect. The second is that indirect effect in the 95% confidence interval does not include 0 and reached the significance standard, which indicates a mediating effect. Tables 12 and 13 show indirect effects (0.85*0.74=0.63 and 0.85*0.53=0.45). The confidence intervals (0.51-0.76

and 0.34-0.58) do not include 0, which all reached significant effects ($p<0.05$). The results show that experience value has a mediating effect. If direct effect in the 95% confidence interval includes 0, it indicates that the direct effect is not significant and is a complete mediating effect. Table 12 shows that the direct effect (0.04) and confidence interval (-0.10-0.18) include 0 without a significant effect (total effect of 0.67; direct effect + indirect effect = total effect; 0.63+0.04=0.67). This indicates that experience value has complete mediation between service contact and behavioral intentions. The third is that indirect effect and direct effect in the 95% confidence interval do not contain 0 and can reach the significance standard. The total effect in the 95% confidence interval does not include 0 and can achieve the significance standard, which is a partial mediating effect. Table 13 shows that the direct effect (0.29) and confidence interval (0.16-0.40) do not include 0 and can reach a significant effect (total effect of 0.74; direct effect + indirect effect = total effect; 0.45+0.29=0.74). This indicates that experience value has partial mediation between service quality and behavioral intentions. (χ^2), χ^2 and degree of freedom ratio, GFI, AGFI, RMSEA, CFI, and PCFI to test the overall model's goodness-of-fit. Regarding this study's goodness-of-fit index, Bagozzi and Yi (1988) indicated that the smaller the ratio of χ^2 to its degree of freedom, the better it is. This study's corrected ratio was 2.85. Hair et al. (1998) indicated that the closer the GFI and AGFI values to 1, the better it is. This study's corrected values were 0.90 and 0.84, respectively. Browne and Cudeck (1993) indicated that the closer the RMSEA value to 0.05 - 0.08, the better it is. This study's corrected RMSEA value was 0.06; the CFI standard value was greater than 0.90. This study's corrected CFI was 0.95. PCFI needs to be greater than 0.50, and this study's corrected PCFI was 0.86. This study's results indicate that the overall goodness-of-fit indicators are all within the acceptable range.

Table 16 shows the verified results for this study's hypotheses: Hypothesis 1 was supported; that is, service contact has a significant effect on service quality. The result of this study conformed to that of Lin's research (2015). The better the activity organizer masters key items in customer interaction, the better it is for improving the event's overall service quality.

Table 13. Service Contact Mediating Effect Summary

Parameters	Estimate	P value	Confidence interval
Indirect effect			
Service contact → experience value → behavioral intentions	0.63	<0.05	0.51-0.76
Direct effect			
Service contact → experience value	0.85	<0.05	0.81-0.88
Experience value → behavioral intentions	0.74	<0.05	0.61-0.88
Service contact → behavioral intentions	0.04	<0.05	-0.10-0.18
Total effect			
Service contact → experience value	0.67	<0.05	0.81-0.88

Table 14. Service Quality Mediating Effect Summary

Parameters	Estimate	P value	Confidence interval
Indirect effect			
Service quality → experience value → behavioral intentions	0.45	<0.05	0.34-0.58
Direct effect			
Service quality → experience value	0.85	<0.05	0.80-0.89
Experience value → behavioral intentions	0.53	<0.05	0.42-0.66
Service quality → behavioral intentions	0.29	<0.05	0.16-0.40
Total effect			
Service quality →experience value	0.74	<0.05	0.80-0.89

(4) Structural Model Analysis

This study referenced the structural model analysis of Hair et al. (1998), which uses Chi-squared value. This study's Hypothesis 2 was supported; that is, service contact has a significant effect on experience value. The result of this study conforms to that of Chin's research (2014). In other words, if the event organizer has good contact and interaction with participants before, during, and after the event, the participants' experience value will increase. This study's Hypothesis 3 was supported; that is, service quality has a significant effect on experience value. The result of this study conforms to that of Tsai, Liao, Sun, and Chang's research (2017). When the event organizer reaches a certain standard in the activity's hardware/software and event procedure, the participants will have a better participation experience and perceive the activity as worthy of participating in. This study's Hypothesis 4 was not supported; that is, service contact had no significant effect on behavioral intentions. This result did not conform to that of Hsu's research (2011). A possible reason may be that although the organizer had good interaction with the participants, most of the participants were local people. In other words, local participants may already be familiar with the biking route or surrounding activities; service contact did not significantly affect their behavioral intentions. This study's Hypothesis 5 was supported; that is, service quality had a significant effect on behavioral intentions. This result conformed to that of Wu and Pao's research (2016). The organizer can create a friendly and amicable atmosphere by matching software with hardware during the event delivery process so that participants will have a positive perception of the event, thereby further increasing their participation benefit. This study's Hypothesis 6 was supported; that is, experience value has a significant effect on behavioral intentions. This result conformed to that of Yang and Chang's research (2015). When participants perceive that the value of participating in this activity far exceeds their expectations, they will have a positive evaluation of the activity, whereby they will further participate in similar activities.

Table 15. Overall Model's Goodness-Of-Fit Analysis

Fit index	Tolerance range	Correction model	Model fitness determination
χ^2(Chi-square)	The smaller, the better	1192.39	
χ^2 and degree of freedom ratio	<3	2.85	Pass
GFI	>0.80	0.90	Pass
AGFI	>0.80	0.84	Pass
RMSEA	<0.08	0.06	Pass
CFI	>0.90	0.95	Pass
PCFI	>0.50	0.86	Pass

Table 16. Study Hypotheses Verification Results

Hypothesis	Path relationship	Path value	Hypothesis supported
1	Service contact → service quality	0.85	Yes
2	Service contact → experience value	0.61	Yes
3	Service quality → experience value	0.40	Yes
4	Service contact → behavioral intentions	-0.36	No
5	Service quality → behavioral intentions	0.22	Yes
6	Experience value → behav-ioral intentions	0.95	Yes

*p <0.05

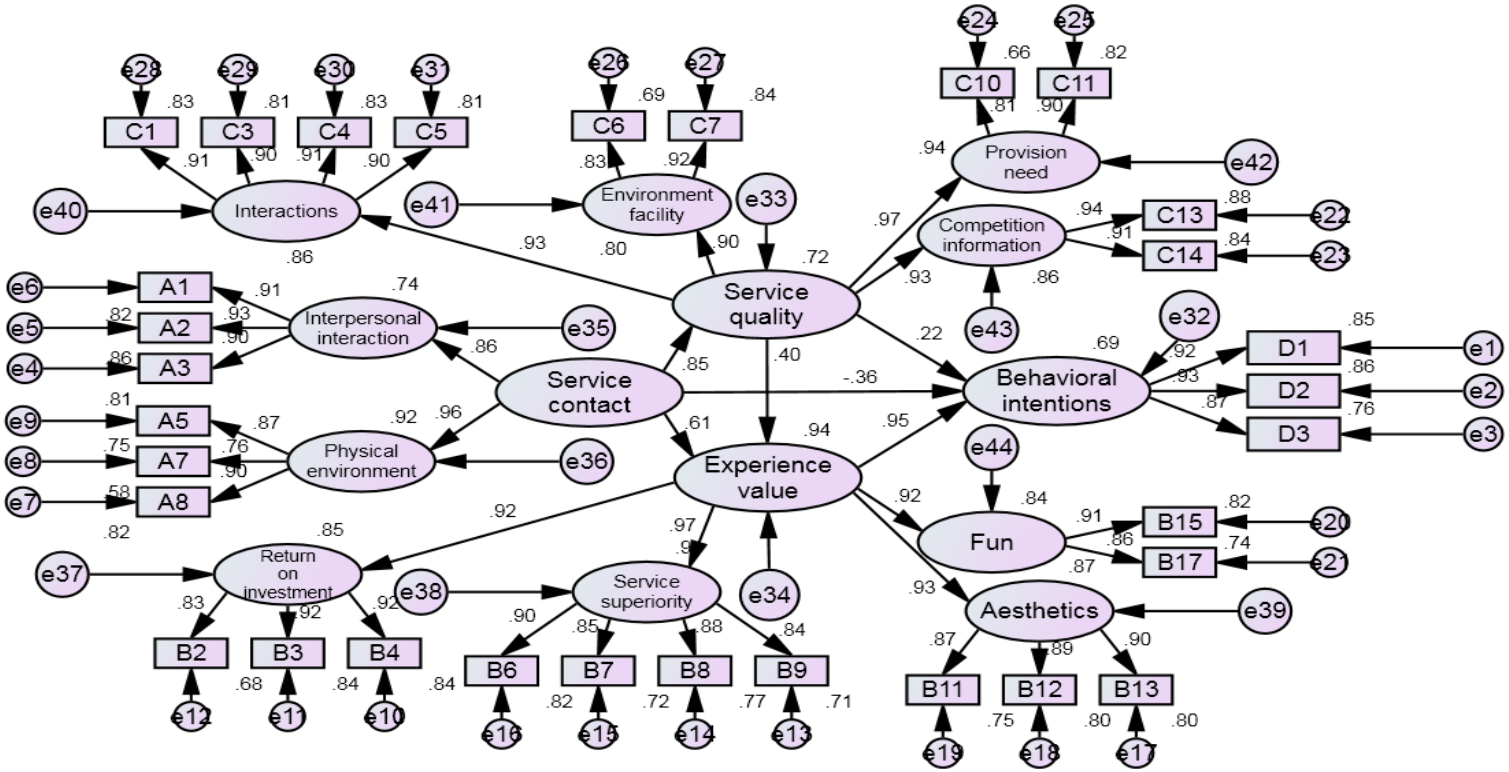

Figure 6. Model Diagram

Conclusion and Recommendations

1. Conclusions

An analysis of verification data resulted in the following conclusions:
(1) This study's Hypothesis 1 is supported; that is, service contact has a significant effect on service quality.
(2) This study's Hypothesis 2 is supported; that is, service contact has a significant effect on experience value.
(3) This study's Hypothesis 3 is supported; that is, service quality has a significant effect on experience value.
(4) This study's Hypothesis 4 is not supported; that is, service contact has no significant effect on behavioral intentions.
(5) This study's Hypothesis 5 is supported; that is, service quality has a significant effect on behavioral intentions.
(6) This study's Hypothesis 6 is supported; that is, experience value has a significant effect on behavioral intentions.
(7) This study's Hypothesis 7 is supported; that is, experience value produces a mediating effect on the relationship between service contact and behavioral intentions.
(8) This study's Hypothesis 8 is supported; that is, experience value produces a mediating effect on the relationship between service quality and behavioral intentions.

2. Recommendations

(1) Regarding activity participants
This study's results indicate that experience value has a significant effect on behavioral intentions. Therefore, we recommend that for similar bicycling activities in the future, participants should understand the purpose of the activity before registering. For example, participants should consider whether participating in the event can bring joy, whether the route is safe, and whether the supply is appropriate. In addition, participants need to consider whether the bicycling event's location presents enough attraction for them because this is the only way to create superior experience value. On the other hand, bicycling event participants need to have a basic awareness of bicycle sports, such as physical requirements and simple repair techniques. Appropriate learning and a balance between the pursuit of self-challenge and skill can enhance the participants' experience value and increase their willingness to participate in bicycling activities. In addition, this study's results indicate that service contact has a significant effect on experience value. Thus, we recommend that bicycle activity participants understand the event's objective and their own par-

ticipation motivation. After all, this is their perceived service content. If the service content is not clear, then the riding distance and difficulty may not be what the participants expected, which can easily cause poor interactions in key points of service delivery. This can result in a poor evaluation of the activity.

(2) Regarding the activity organizer
This study's results show that service quality has a significant effect on experience value. Thus, we recommend that the organizer focus on improving service quality in future competition planning. For example, we recommend that the organizer cooperate with local hotels and B&Bs to provide lodging discounts for participants in the software aspect. This event was held in September, which is still the peak travel season for Penghu, and demand for plane tickets and lodging is still at a peak. Discounted lodging can improve the participants' evaluation of the organizer's service quality. For hardware, we recommend that the organizer carefully plan the starting and finishing points. For example, the 2018 Penghu "Chrysanthemum Island" bicycle trip had free bicycle lending. The activity's starting and end points were both at the Global Ocean City Expo. This kind of route planning not only allows participants to ride bicycles but also connects them to local events, thereby increasing the activity diversity. This can increase the participants' intention towards future participation and improve the event organizer's word-of-mouth reputation..

(3) Regarding future research
In addition to expanding the application of behavioral intentions in outer island sport tourism, this study also touched on bicycling that has been less discussed in outer island sport tourism. This study enables future event organizers to clearly understand the characteristics of people who participate in outer island bicycling activities, as well as variables that affect activity delivery. This is the contribution of this study towards related theories. As sport tourism becomes more popular, the government is promoting the "Explore Taiwan 10+ Islands," which will play an important role in promoting outer island sport tourism. In a practical contribution, this study can provide organizers with a better understanding of why participants come to visit, for future activity planning. A better understanding can allow organizers to make the experience process more detailed, increase software and hardware facilities, and improve service quality, which can increase the value of the activity. Taiwan's outer islands have different tourism resources and cultures.

For example, Penghu has a vacation atmosphere while Matsu has military characteristics. Thus, future studies can include travel destination imagery and attraction variables to further explore activity participant behavior.

As the Tourism Bureau continues to promote the Tourism 2020 – Taiwan Sustainable Tourism Development Project, experience tourism will become the focus of people's leisure activity in the future. In addition, the government is funding the consolidation of coastal travel, leisure environment and service facilities. In the future, outer island sport tourism will attract the public's attention. In this study, we used planned behavior as the theoretical framework and 2018 Penghu "Chrysanthemum Island" bicycle trip participants as the main research subjects. Verification analysis was used to explore the subjects' behavioral intentions and the effects of related variables on behavioral intentions. This study also verified the overall model used in this study. Finally, this study provided recommendations for organizers, activity participants, and future studies based on the study results.

References

Ajzen, I. (1985). From intention to action: A theory of planned behavior, In J. Kuhl & J. Beckmann (Eds.). Action control: From cognition to behavior. N.Y: Springer-Verlag.

Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50, 179-211.

Andrew, J. D., Clayton, F. W., & Charles, P. D. (2002). The relationship between counselor satisfaction and extrinsic job factors in state rehabilitation agencies. Rehabilitation Counseling Bulletin, 45(4), 223-232.

Bitner, M. J., Brown, S. W., & Meuter, M. L. (2000). Technology Infusion in Service Encounters, Journal of the Academy of Marketing Sciences, 28(1). 138-149.

Browne, M. W. & Cudeck, R. (1993). Alternative ways of assessing model fit. In: Bollen, K. A. & Long, J. S. (Eds.) Testing Structural Equation Models. pp. 136–162. Beverly Hills, CA: Sage

Bagozzi, R. P., & Yi, Y. (1988). On the evaluation for structural equation models. Journal of the Academy of Marketing Science, 16, 74-94.

Conn, V. S., Tripp-Reimer, T., & Maas, M. L. (2003). Older women and exercise: Theory of planned behavior beliefs. Public Health Nursing, 20(2), 153-163.

Chang, W. H. (2011). Thesis Writing: SEM. Kaohsiung: Tutortristar.

Chen, S. Y. (2007). Structural Equation Modeling: Amos Operation. Taipei City: Psychological Publishing Co., Ltd.

Chang, Y. L., Huang, S. N., & Huang, M. R. (2014). The Relationship among Tourism Night Market Service Contact, Experience Value and Brand Experience. Journal of Tourism and Leisure Studies, 20 (1), 81-107.

Chen, Y. F. (2014). A Study on the Relationship among Service Quality, Experience Value and loyalty of Marine Travel and Leisure Activity Participants. Unpublished master's thesis, Department of Tourism and Leisure, National Penghu University of Science and Technology.

Chiu, J. C. & Pi, L. L. (2008). A Study on Service Quality and Satisfaction within Marathon Events in Taiwan. Journal of Taiwan Society for Sport Management, 6, 1-20.

Chung, C. C., Cheng, Y. T., Lu, C. Y., & Huang, C. Y. (2016). A Study on the Relationship among Motivation, Servicescape, Service Quality and Behavioral Intentions: Taking the 2015 Taiwan International Orchid Show as an Example. Journal of Management Practices and Principles, 10 (3), 31-46.

Chin, C. H. (2014). A Study on the Effects of Service Contact Elements and Experience Value on Customer Loyalty: Taking Chulu Ranch as an Example. Master's thesis, Department of Business Administration, National Dong Hwa University.

Dsouza, R.S. Subhash, K.B.; Chen, R.F., &Weiermair, K. (2018). Service quality and customer satisfaction: An empirical analysis of banking sector in Goa .International Journal of Banking, Risk and Insurance. 6(2), 1-22.

Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention and behavior: An introduction to theory and research: reading, MA: Addison-Wesley.

Fornell, C. R. & Larcker, F. F. (1981), "Structural Equation Models with Unobservable Variables and Measurement Error," Journal of Marketing Research, 18, pp.39-51.

Gibson, H. (2005) Towards an understanding of 'why sport tourists do what they do'. Sport In Society, 8(2), 198–217.

Grönroos, C. (2001). The perceived service quality concept – A mistake? Managing Service Quality, 11(3), 150-152.

Goldstein, S. M., Johnston, R., Duffy, J., & Rao, J., (2002). The service concept: The missing link in service design research. Journal of Operations Management, 20(2), 121-134.

Hartline, M. D., and Jones, K. C. (1996). Employee performance cues in a hotel service environment: Influence on perceived service quality, value, and word-of-mouth intentions. Journal of Business Research, 35 (3), 207-215.

Hussain, R. Nasser, A. Al, & Hussain, Y.K.(2015)Service quality and customer satisfaction of a UAE-based airline: An empirical investigation . 42, 167-175.

Hair, J. F. Jr., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). Multivariate data analysis(5th ed.). Upper saddle River, NJ: Prentice Hall.

Hsu, M.C., Pan, F.C., & Huang, C.M. (2011). Using TPB to Verify the Behavior Preference Model for Green Island Water Sport Tourists. Journal of Taiwan Society for Sport Management, 11 (2), 43-67.

Hsu, N. (2011). A Study on the Effects of Service Contact on Experience Value, Customer Satisfaction Level, and Behavioral Intentions: Taking Pet Restaurants as an Example. Master's thesis, Department of Business Management, National Chung Hsing University.

Huang, M. C. (2016). The Concept of the Sports Industry. Edited by Chen Hung-Yen, Sport Management, 2-3～2-35. Taichung City: Wagner Publishing Co., Ltd.

Ku, L. M. (2013). The Effects of Service Contact and Travel Quality on Experience Value and Intention for Return Travel: Taking

National Museum of Taiwan History as an Example. Master's thesis, Department of Marketing & Logistics Management, Southern Taiwan University of Science and Technology.

Lehtinen, U., & Lenhtinen, J.R.(1984). Service Quality: A Study of Quality Dimensions. Unpublished working paper, Helsinking Service Management Institute Finland.

Lin, C. Y. (2010). The Effects of Service Contact on Individual Experience, Experience Value, and Behavioral Intentions. Master's thesis, Department of Marketing & Logistics Management, Southern Taiwan University of Science and Technology.

Lin, Y. N. (2010). The Relationship among Service Quality, Experience Value, Relationship Quality and Customer Loyalty. Fu Hsing Kang Academic Journal, 99, 103 – 123.

Lu, C. M. (2011). The Effects of Service Contact on Service Quality and Customer Satisfaction. Master's thesis, Department of Marketing & Logistics Management, Southern Taiwan University of Science and Technology.

Lin, F. H. (2015). The Relationship among Service Contact, Service Experience, Service Quality and Willingness to Repurchase: Taking Aromatherapy Industry's Yea Shiuan Beauty Salon Customers as an Example. Master's thesis, Department of Business Administration, National Kaohsiung University of Science and Technology.

Ma, Z., & Dube, L. (2011). Process and outcome interdependency in frontline service encounters. Journal of Marketing, 75 (3): 83-98.

Mathwick, C., Malhotra, N., & Rigdon, E. (2001). Experiential Value: Conceptualization, Measurement andApplication in the Catalog and Internet Shopping. Journal of Retailing, 77,39-56.

MacKinnon, D. P. (2008). Introduction to statistical mediation analysis. Mahwah, NJ:Erlbaum.

Otto, J. E., & Ritchie, J. B. (1995). Exploring the quality of the service experience: A theoretical and empirical analysis. Advances in

Services Marketing and Management, 4, 37-61.

Parasurama, A., Zeithaml, V. A. and Berry, L. L., (1988). SERVQUAL: A Multiple item scale for measuring consumer perceptions of service quality. Journal of Retailing, 64(1), 12-40.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). Problems and strategies in services marketing. Journal of Marketing, 49(2), 33-46.

Quintal, V. A., Lee, J. A., & Soutar, G. N. (2010). Risk, uncertainty and the theory of planned behavior: A tourism example. Tourism Management, 31(6), 797-805.

Solomon, M. R., Surprenant,C.F., Czepiel. J. A., & Gutman,E. G. (1985). A role theory perspective on dyadic interactions: The service encounter. Journal of Marketing, 49, 99-111.

Sports Administration, Ministry of Education (2018). Cycling Taiwan. January 10, 2019; Data obtained from: http://www.cyclingtw.com.tw/info.asp

Torkzadeh, G., Koufteros, X., & Pflughoeft, K. (2003), Confirmatory analysis of computer self-efficacy. Structural Equation Modeling, 10(2), 263-275.

Tsai, G. Z., Liao, K. F., Sun, M. L., & Chang, C. M. (2017). A Study on the Effects of Swimming Pool Consumer Service Quality on Experience Value and Willingness to Re-purchase. NCYU Physical Education, Health & Recreation Journal, 16 (1), 1-13.

Tourism Bureau, MOTC (2018). Tourism Statistics. January 10, 2019; Data obtained from https://admin.taiwan.net.tw/BusinessInfo/TouristStatistics

Wu, M. L. (2009). Structural Equation Modeling: Methods and Practical Applications. Kaohsiung: Liwen Publishing Group.

Wu, C. H. & Pao, Y. F. (2016). Service Quality, Behavioral Intentions and Satisfaction Level for Traveling in the Leisure Agricultural Areas Along the Mountains of Wanluan Township, Pingtung County. Journal of Sports Research, 25 (2), 47-63.

Wang, M. Y., Tsai, C. C., Lee, C. H., & Liu, K. L. (2017). A Study on the Relationship among Service Quality, Satisfaction Level and Behavioral Intentions: Taking Kaohsiung Port's Duck Boats as an Example. Journal of Commercial Modernization, 8 (3), 327-341.

Yang, M. Y. & Chang, C. C. (2015). A Study on the Effects of Service Quality, Customer Perceived Value and Behavioral Intentions: Taking Miduoli Leisure Farm Restaurant as an Example. Leisure and Exercise, 14, 87-98.

Yu, C. L. & Lee, Y. H. (2013). Application of Theory of Planned Behavior to Sports Competition Observation. Quarterly of Chinese Physical Education, 27 (4), 297 – 307.