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ABSTRACT: In recent years, with people's increasing interest in leisure activities and environmental protection, ecotourism has gradually become the leading trend. For this reason, this study chose ecotourism as research topic. The main purpose of this study is to investigate the involvement model of bird watching ecotourism and understand the relationship among the bird watchers' recreation motivation, andrecreation experiences. The results showed good fitness of model. The results are as follows: bird watchers' recreation motivation has significant influence on recreation experiences. Finally, this study made discussion and stated research implications. Suggestions to the government, planners of ecotourism, and future researches were also proposed.

KEYWORDS: Recreation motivation; Recreation experiences; Ecotourism

I. INTRODUCTION

According to World Travel and Tourism Council (WTTC), as the world's largest industry, the tourism industry has created more than 260 million work opportunities in 2012 and has made 9% contribution to the world's gross domestic products (GDP) (WTTC, 2015). With the implementation of the Taiwan government's tourism policy and increased travel demand by local people, ecotourism has become popular (Chen, 2017). Ecotourism provides responsible travel together with a natural leisure experience, includes critical functions such as reinforcing the local economy, strengthens local residents' life quality and respect, and maintains completeness of the local traditional culture (Gheorghe, 2012).

In terms of tourism purpose, the traditional leisure method and shopping tourism have changed to "experience-based tourism" having the deep learning and cognition in terms of culture and ecology (Hsu, Cai, & Wong, 2007). The tourism resources and the transformed tourism products are the main components of the tourist destination (Jaafar and Maideen, 2012). Kozak and Rimmington (2000) believed that the key to the successful recreational operation and management lies in knowing clearly about the tourist's demand and motivation. Dann (1977) indicated that human's initial recreational motivation is a kind of escape psychology to run away from the sense of alienation in the life, to get rid of the social environment filled with collapsed values and to leave the existing social norms. Through the experience, in addition to producing the deep impression and memory, people can resonate and communicate with the nature and other people and they can even have the deeper experience learning in the current environment (Sander, 2010). Ecotourism provides responsible travel together with a natural leisure experience, includes critical functions such as reinforcing the local economy, strengthens local residents' life quality and respect, and maintains completeness of the local traditional culture

(Gheorghe, 2012). Motivation is associated with the enduring involvement of recreationists or tourists (Leung & Bai, 2013).

Under the promotion of tourism industry, the ecotourism concept is packaged and consumers seek for differentiated and personalized tourism design. Through the connection of recreational experience, participant's benefits have been improved during the recreational process. Therefore, ecotourism is not merely a leisure activity and it is more important that the ecotourism can give play to its benefits by connecting the participant's recreational motivation, recreational experience and enduring involvement. Thus, it is very important for the ecotourism participants to understand the benefits produced in activity experience through recreational activities.

II. LITERATURE REVIEW

2.1Recreational motivation

Recreational motivation refers to a driving force to drive the tourists to satisfy their physiological and psychological needs and it is also the true cause of tourist's involvement in recreational activities (Iso-Ahola, 1989). When the internal motivation such as interest, attitude, etc. can affect participant's behavior and change the behavior, the motivation is also a stimulated demand and it is enough to promote the individuals to adopt the positive execution (Kotler, 1997). On the other hand, the tourist's reaction to the deep demand is also the basic driving force dominating the recreational behavior. When there is a gap between the actual condition and expectation, the demand will be produced. However, with the increase in the gap, the inspired power will also increase to further promote the tourists to meet their needs (Eagles, Bowman, & Tao, 2001).

2.2Recreational experience

Kelly(1987) indicated that tourists will choose and experience their favorable recreational activities to achieve the physical and psychological gratification to produce the positive experience. The positive tourism experience is usually produced when tourists are able to choose their recreational destination freely (Neulinger, 1980). However, the forming of experience has the time effect and the initial tourism planning, actual tourism experience and the reflection after the end of tourism are the factors affecting the final tourism experience (Neal, Sirgy, & Uysal, 1999). In terms of the connotation of experience, the experience of sightseeing tourism is very diversified and extensive. Csikszentmihalyi & LeFevre (1989) classified the recreational experience into the enhancement of emotion and vitality, improvement of creativity, stress relief and achievement of sense of satisfaction. Beard and Ragheb(1980) thought that the leisure experience contains the psychological experience such as release, finding pleasure and challenge and knowledge experience such as acquisition of new knowledge and exploration. It is the social experience to enhance interpersonal interaction through recreational activities. Due to the recovery experience such as stress release and physical and psychological recovery produced by the execution of tourism activities, tourists will produce the aesthetic feeling for the natural landscape, culture and art in the tourism destination (Huang & Chang, 2014).

2.3 Hypothetical inferences - Relationship between recreational motivation and recreational experience

Driver and Toucher (1970) indicated that the individuals produce the recreational demand through past experience and the impact on the environment at that time to gradually form the motivation and expectation to produce the recreational behavior; after the recreational experience, the past experience is associated to

produce a kind of physiologically and psychologically comprehensive feeling, namely the recreational experience. So, individual's recreational motivation will affect their recreational experience. According to Maddi and Kobasa (1981), individual's intrinsic motivation is the predictive indicator of individual behavior. In order to satisfy the intrinsic psychological reward such as gaining the experience or feeling of control, commitment and challenge, the individuals tend to choose the behavior which can satisfy the intrinsic motivation. Therefore, the tourists will feel the recreational experience such as control, commitment and challenge during the leisure time. In other words, the recreation itself is not the purpose and it is only aimed to satisfy the individual recreational motivation. As a result, individuals will firstly have the psychological and physiological motivation to drive them to participate in recreational activities to further pursue for recreational experience. Wight(1996) found that the ecotourism tourists have the special tourism motivation and he also found that the ecotourism tourists hope to complete the self-challenge through ecotourism, so as to improve the learning ability and gain more experience.

III. METHODOLOGY

3.1Research Framework

Based on the above motives, purposes and literature review, research framework is constructed, as shown in Figure 1.

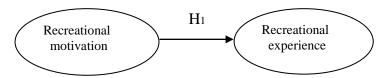


Figure 1 Research Framework

3.2 Measurement of research variables

This research analyzed the four variables, and the measurement of each variable is as follows.

3.2.1 Recreational motivation

Iso-Ahola(1982) pointed out that recreational motivation is an factor driving tourists to generate the tourism behavior and the motivation promotes tourists to take actions to gain the demand satisfaction to reduce the individual's anxiety and restlessness. This research defined recreational motivation and adjusted it to an issue suitable for this research, so as to measure the testee's thoughts in recreational motivation, respectively including 3 dimensions of physical and psychological expression, natural orientation and knowledge acquisition, with a total of 8 items.

3.2.2 Recreational experience

This research mainly adjusted the definition of recreational experience proposed by Schmitt(1999) to an issue suitable for this research to measure the testee's attitudes towards recreational experience, respectively including 2 dimensions of sensory experience and thinking experience, with a total of 6 items, so as to measure the bird-watching ecotourist's recreational experience.

3.3. Research scope and samples

This research subjects were those ever participating in the bird-watching ecotourism. After the online enquiry and the inquiry of the tourists participating in bird-watching ecotourism for a long time, with 14 Wild

Bird Societies in Taiwan area as the sampling file, this research adopted random sampling. In order to confirm that the questionnaire has the good reliability, the pre-test was done firstly and then the formal questionnaires were distributed; after the contact and confirmation by telephone, the contact person in the branch of the society was entrusted to assist with the questionnaire distribution. 327 formal questionnaires were distributed and there were 314 valid samples after deducting 13 invalid ones, with the recovery rate of 96.02%.

3.4. Pretest questionnaire reliability analysis

In terms of the sample collection of pre-test questionnaire, there were totally 40 pre-test questionnaires, with the effective recovery rate of 100%. The reliability coefficient Cronbach's α value was used to measure the consistency between "recreational motivation" and "recreational experience". After the reliability analysis, recreational motivation's Cronbach's α coefficient is 0.88, recreational experience's Cronbach's α coefficient is 0.90. Nunnally(1978) believed that when Cronbach's α coefficient is greater than 0.7, it belongs to high reliability. Therefore, after the reliability analysis of pre-test questionnaire in this research, the evaluation result shows that the research variables are all greater than 0.7 and the scales above all have the relevant literature as the theoretical basis, so the content validity is good.

IV. Results

4.1 Description of the sample structure

The basic data of samples covered eight aspects, including gender, marital status, age, educational level, occupation, average monthly income, bird-watching years and residential area whose distributions are described below in detail, shown in Table 1.

Table 1 Sample structure analysis table

	Demographic variables	Time	Percentage
Gender	Males	147	46.8
Gender	Females	167	53.2
Marital status	Unmarried	103	32.8
Maritai status	Married	211	67.2
	Less than 13 years old	2	0.6
Ago	13~31 years old	50	16.0
Age	32~43years old	120	38.2
	44 years old and over	142	45.2
Educational level	Junior high school and below	6	1.9
	Senior high school (higher vocational school)	26	8.3
	University (junior college)	197	62.7
	Graduate school (inclusive) and above	85	27.1
	Student	27	8.6
Occupation	Soldier, civil servant and teacher	132	42
	Industry and commerce	69	22
	Agriculture, fishery and animal husbandry	8	2.5
	Others	78	24.8

Average monthly income	NTD 20,000 (inclusive) and below	60	19.1
	NTD 20,001~ NTD 40,000	63	20.1
	NTD 40,001~ NTD 60,000	117	37.3
	NTD60,001 (inclusive)	74	23.6
Bird-watching years	Less than 1 year	64	20.4
	1~5 years	99	31.5
	6~10 years	64	20.4
	11~15 years	57	18.2
	More than 16 years	30	9.5
Residential area	North	69	22.0
	Middle	151	48.1
	South	88	28
	East	4	1.9

4.2 Reliability and validity analysis

This study used AMOS statistical software to carry out confirmatory factor analysis and structural equation model analysis for the dimensions of the questionnaire. First, the measurement model constructed by this study underwent testing for model fitness, reliability, and validity. In order to verify the relationship between each dimension and item, this study focused on the recreation motivation and recreation experiences in confirmatory factor analysis. According to Fornell and Larcker (1981), a composite reliability value (CR) over.6, and an average variance extracted (AVE) over.5 respectively demonstrate that the research variable scale has good convergent validity and reliability. Hatcher (1994) proposed that the confidence values formed by covariance and standard error do not include 1, which indicates good discriminant validity between the dimensions.

From the convergent validity and reliability of recreation motivation and recreation experiences shown in Tables 2 and 3, it was found that all of the completely standardized factor loadings in the scales were greater than 0.5. Each item also reached the level of significance, with the CRs between 0.769 and 0.902 and the AVEs between 0.528 and 0.754, which indicated that the three variables had good convergent validity and reliability. In addition, the potential construct discriminant validity analysis showed that the bracket formed by the covariance of variable's two dimensions and plus or minus two multiples of standard error shown in Tables 4 which conformed to the standard by Hatcher(1994). According to the analytical results, the dimensions of this study were obtained by weighting the factor loading of each item (the significance level of α was.05).

Table 2 Convergent validity and reliability analysis of recreation motivation scale

Dimension	Item number	Standardized factor loading	Composite reliability	Extracted variance
Physical and psychological expression	a1	.796*		
	a2	.867*	.873	.697
	a3	.840*		
Natural orientation	a4	.646*		
	a5	.797*	.807	.585
	a6	.838*		

Knowledge acquisition	a8	.801*	.775	.633
	a9	.790*		

Note: *p < .05, which reached a significant level;

Fitness: RMR =.021; GFI =.948; NFI =.943; CFI =.956; RMSEA=.098

Table 3 Convergent validity and reliability analysis of recreation experiences scale

Dimension	Item number	Standardized factor loading	Composite reliability	Extracted variance
Sensory experience	b1	.884*	.902	.754
	b2	.882*		
	b3	.839*		
	b4	.808*		
Thinking experience	b5	.738*	.769	.528
	b6	.622*		

Note: *p < .05, which reached a significant level;

Fitness: RMR =.014; GFI =.973; NFI =.975; CFI =.982; RMSEA=.086

Table4 Analysis of the latent facets validity of each scale

Scale	Pair comparison of dimensions	Confidence interval
	Physical and psychological expression<->Natural orientation	.069 ~.149
Recreation motivation	Physical and psychological expression<->Knowledge acquisition	.059 ~.163
	Natural orientation<->Knowledge acquisition	.097 ~.169
Recreationexperiences	Sensory experience<->Thinking experience	.168 ~.264

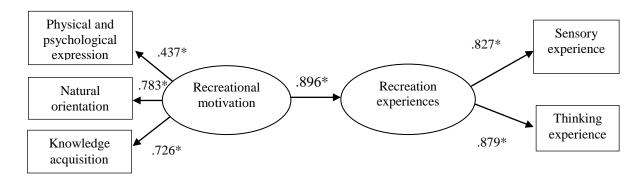


Figure 2 Initial structural equation model

V. CONCLUSION AND SUGGESTIONS

5.1. Conclusion

5.1.1 Effect of recreational motivation on experience

According to the research results, the intensification of recreational motivation willimprove the bird-watching ecotourists' recreational experience. In other words, when the bird-watching ecotourists have the high recreational motivation, they will also produce the higher recreational experience. It can be known from Fig. 2 that the effect of "natural orientation" is the most obvious in the measurement dimension of recreational motivation, showing that the motivation of bird-watching ecotourists focuses on appreciating and enjoying the natural beauty and they understand and attach importance to the discovered ecology and culture knowledge. In

bird-watching ecotourists' recreational experience, the values of dimensions of "sensory experience" and "thinking experience" are higher, showing that the bird-watching ecotourists also explore and think about the surrounding things observed in addition to valuing the sensory in-depth experience.

The bird-watching ecotourists' recreational motivation has the positive effect on recreational experience, which highlights that when bird-watching ecotourists' recreational motivation is higher, their recreational experience will also be higher to stimulate bird-watching ecotourists' motivation, so as to further enhance the sensory and thinking experience.

5.2 Suggestions

5.2.1 Promote bird-watching ecotourism

The government can combine the special natural features to hold the relevant promotional activities and ecological conservation curriculums to attract the public's recognition and participation, so as to enhance the tourists' leisure and tourism quality.

5.2.2 Plan bird-watching ecological environment

According to the research results, the bird-watching ecotourists' have the best reaction effect in the dimension of "natural orientation" of recreational motivation. The bird-watching ecotourists' are fond of nature and in terms of choice of bird-watching place, they often carry out the bird-watching activities in the mountain forest and wetland less damaged and developed. Some areas are very remote, so how to increase their accessibility and take consideration of protecting natural landscape and reducing the development needs to be properly planned by the governmental related units. In terms of the planning and maintenance of ecological environment, the concept of the ecological conservation should be considered first. The bird-watching ecological environment in Taiwan is diversified and rich and the protection and planning of bird-watching ecological environment need to be valued and invested by government. Otherwise, the ecological environment will be damaged easily.

5.3 Research Limitations

This research takes the bird-watching ecotourists' as the case, which may make the respondents produce the biased error. During the questionnaire distribution, the respondents will be inevitably disturbed by the environment to cause the error in filling in the questionnaires. Besides, the bird-watching ecotourists' understand the questionnaire items differently and their answers may be affected by external factors such as emotion, cognition or environment.

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