Cross-cultural models of customer services: The case of Taiwan and U.S. forest recreation visitors

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Introduction

Nature recreation destinations such as national forest recreation areas have received significantly increasing visitation globally. Given increasingly diverse visitor populations, including changes in racial and ethnic composition, the topic of diversity has become important to national forest resource managers. Previous studies have found differences between cultural/ethnic groups in parks and recreation areas (e.g., Li et al. 2010; Manning, 2010). Why did these differences exist between cultural/ethnic groups? Understanding factors affecting visitor satisfaction can help managers provide niche recreation opportunities for their culturally diverse clientele (Burns and Graefe 2005). The purposes of this study were to explore the influences of four concepts including values, socio-demographics, crowding, and past recreation experience on visitor satisfaction in different cultural groups (i.e., Taiwanese Hoklos, Taiwanese Hakkas and Anglo Americans), and to provide research implications for the management of outdoor recreation and tourism.

Methods

In 2011, we surveyed visitors to Basianshan National Forest Recreation Area and Aowanda National Forest Recreation Area in central Taiwan, as well as the Timberline Lodge Recreation Complex in the Mt. Hood National Forest in Oregon, U.S.A. Because the national forest areas were vast, a simple random sample of all visitors within the setting would not yield an adequate number of respondents for comparisons. Therefore, we used a purposive on-site convenience sampling approach at sites known to be heavily used by visitors. In Taiwan, we focused mainly on locations such as the visitor centers, nature centers, picnic areas, parking lots and trail heads. In the U.S. surveys, we interviewed visitors at the Timberline Lodge Recreation Complex; a setting with similar survey points (visitor gathering areas, and parking lots). We adopted a systematically random selected approach. At each site, every third visitor was asked to complete the on-site questionnaire to maintain a random selected manner (Salant and Dillman 1994). Overall, we obtained 1251 usable questionnaires, with 525 Taiwanese Hoklos, 102 Taiwanese Hakkas and 624 Anglo-Americans.

We first used exploratory factor analysis (EFA) to reduce the 16 satisfaction items into factors and derived 4 factors in each groups, respectively. Multiple regression analysis was then used to test the predictive power of 4 value dimensions, socio-demographics, crowding and past recreation experience on each satisfaction factors resulting in 16 multiple regression models.

The satisfaction factors derived from EFA in each cultural group served as the dependent variable in the regression testing. The four LOV dimensions (respect, harmony, achievement, and hedonism), four socio-demographic variables (age, gender, education, and income), crowding and two recreation behavior variables (first time visit and visit days of other recreation area) served as the independent variables in the multiple regression testing.

Results

In the overall sample, the four regression models were all significant at the .001 level, with R-square ranged from .12 to .12. The significant independent variables ranged from 2 to 9 variables across the models. The crowding variable was the most important factor affecting satisfaction, followed by the hedonism dimension. In the Hoklo group, the four regression models were all significant at the .001 level with the R-square ranging between .06 and .32. The significant independent variables ranged from 2 to 3 variables across the models. The crowding variable and first time visit variable were the most and second important factors affecting satisfaction across the four models.

In the Hakka group, 3 out of the 4 models were significant from the .05 to .001 level with R-square ranged from .17 to .21. The significant independent variables ranged from 2 to 3 variables across the models. The crowding variable and harmony dimension were the most and second important factors affecting satisfaction across four models. In the Anglo-Americans group, the four regression models were all significant from .05 to .001 level with R-square ranged from .02 to .15. The significant independent variables ranged from 4 to 5 variables across the models. The crowding variable and harmony dimensions were the most and second important factors affecting satisfaction across the four models. The detailed model statistics were shown in Table 1.

Discussion and conclusion

We found that the crowding variable was the most powerful predictor across all of the multiple regression models. The results showed that as crowding increased, satisfaction decreased. The results were consistent with the findings of previous research. For instance, Shelby (1980) reported a significant negative relationship between crowding and satisfaction. We also found the hedonistic and harmonious values tended to positively affect satisfaction, reflecting the saliently predictive power of values on satisfaction.

In conclusion, this study revealed a few significant independent variables regarding crowding, socio-demographics, values and past recreation experience in predicting satisfaction for different cultural groups. However, we found the

Table1. The significant and most/second important factor predicting visitor satisfaction in different cultural groups models

	Model1 First Satisfaction factor	Model2 Second Satisfaction factor	Model3 Third Satisfaction factor	Model4 Fourth Satisfaction factor	Most important/ second factor
Overall	crowding	crowding	age	crowding	crowding
Model1 Model2	harmony	education	hedonism	education	hedonism
F= 13.83*** F=22.08***	hedonism	income		income	
Model3 Model4	gender	respect		harmony	
F=12.31*** F=21.26***	visit other area	achievement			
		hedonism			
		gender			
		visit other area			R^2 ranged from .12
		first time visit			
Total sig factors	5	9	2	4	to .20
Hoklos	crowding	crowding	crowding	crowding	crowding
Model1 Model2	education	respect	age	first time visit	first time visit
F= 5.70*** F=5.34***		first time visit	first time visit		
Model3 Model4					R^2 ranged
F=2.91*** F=14.79***					from .06
					to .32
Total sig factors	2	3	3	2	
Hakkas	crowding	age	crowding	None	crowding
Model1 Model2	age	gender	harmony	significant	age
F= 2.20*** F=2.53*	income				
Model3					R^2 ranged
F=2.65**					from .17
Total sig factors	3	2	2		to .21
Anglo-Americans	crowding	crowding			crowding
Model1 Model2	education	harmony			harmony
F=7.42*** F=6.79***	income	hedonism			
Model3 Model4	harmony	first time visit			R^2 ranged
F=1.87* F=2.44**	first time visit				from .02
Total sig factors	5	4			to .15

explanatory power in testing was relatively weak, as indicated by the model R-square values. We suggest two points in future research to improve the predictive power of satisfaction. The first is to improve the measurement of variables. For instance, we advocated to developing additional value measures to predict satisfaction in each cultural group to increase the model significance. The other is to develop more advanced statistical method, e.g., using structural equation modeling or non-linear model testing to examine the models. We expect more explanatory findings in predicting visitor satisfaction in the future with more reliable and valid measures of variables as well as more sophisticated statistical testing.

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