

Research Article

Exploring Tourists' Cognition of Crisis Management on Leisure Farms

¹Hsiu-Chin Huang, ¹Yi-Hsuan Lai, ²Ko-Chia Chen and ³Chia-Ming Chang

¹Department of Technology Management, Chung-Hua University, Hsin-Chu 300, Taiwan

²Department of Physical Education, National Kaohsiung University of Hospitality and Tourism, Kaohsiung 812, Taiwan

³Department of Physical Education, National Chiayi University, Chiayi 621, Taiwan

Abstract: The population for this study was tourists from four leisure farms in Southern Taiwan. Out of 400 distributed questionnaires, 347 usable responses were received, indicating a valid response rate of 87%. Regarding the ranking of tourists' cognition toward crisis event seriousness, the statistics results show that the possibility of "getting attacked by wild bugs" ranked first, followed by "the lack of maintaining and checking children playing facilities causes injuries". However, low cognition was observed on the item "get attacked by raised animals". In terms of the ranking of tourists' cognition toward crisis event precautionary capability, the best capabilities were "the lack of maintaining and checking children playing facilities causes injuries" and "getting attacked by wild bugs". On the contrary, the worst precautionary capability was "dangerous trails (e.g., roadways are easy to cause slip and fall/too steep/dangerous topography)". In addition, the findings indicate that different background variables (e.g., gender, age, educational background and marital status) exert significant differences on tourists' cognition toward crisis event seriousness and precautionary capability on leisure farms.

Keywords: Crisis management, leisure farm, tourists

INTRODUCTION

With constant changes in all issues over time, people have continually promoted the cognition on realizing and dealing with crisis management, which in turn makes this issue become a critical concern worldwide. Pearson and Clair (1998) address that crisis negatively brings about loss, damages reputation and causes market share reduction on industries. In the 20th century, crisis management has been considered one of the most popular research issues in the field of Management Science. Nonetheless, this novel concept has not yet been placed in the field of leisure farm management with high concern. Missing from the extant literature is the crisis management on leisure farms. In addition, current organizations are facing with crisis management in the overall environment which cannot be compared with that in the past due to constantly changing environment. For an effective response toward this turbulent environment that brings about numerous demands, the industries need to appropriately adjust their operational strategies to better cope with various external problems (Chang *et al.*, 2006).

In the extant literature, crisis management related to leisure industries has been divided into four main categories, namely:

- Low risk, low severity
- Moderate risk, low severity
- Moderate risk, high severity
- High risk, high severity

These crises have been widely applied to explore the frequency of possibly happened crises and their seriousness (Nilson and Edginton, 1982; Swarbrooke, 2002). Specifically, Nilson and Edginton (1982) explain the above four crisis types as follows:

- **Low risk, low severity:** This kind of crisis is perceived to seldom happen, even not to be so serious once happening. Hence, supervisors should adopt precaution attitude to better prevent and face with these crisis. Hence, the cost will be than their benefits. It is also noted that the less probability for happening of this crisis also cause difficulties in anticipating once it happens.
- **Moderate risk, low severity:** This type of crisis is observed to constantly happen, yet the result is not serious. Hence, supervisors are recommended to conduct approaches of making ready answer lists to remind employees while facing this crisis type. The cost will be higher than their benefits.
- **Moderate risk, high severity:** The probability of happening of this crisis type is higher and the result is also serious. Therefore, on facing this kind of

crisis, supervisors are suggested to use the approach of insurance for prevention is the best treatment.

- **High risk, high severity:** This type of crisis frequently happens and would be serious in case no precautionary measure is prepared in advance. As a result, supervisors must have good guidance and insurance policy to deal with this kind of crisis. It is also suggested that the best way to cope with this crisis is to effectively prevent it from happening.

Further elaborating crisis management issues, Ke (1997) proposes that in the government or organizations, overall crisis management is continually modified and adjusted through implementing planned, continued and dynamic managerial approaches for facilitating the prevention of serious threats from crisis. Consequently, it has been observed that crisis management focuses not only on post-event treatment but also on pre-event problem prevention. However, in addition to effective prevention approaches, it is necessary to review the post-event treatment (Wu *et al.*, 2012).

A review of the extant literature has shown that crisis management is an important research topic in the leisure industry. In this era of turbulent environment and frequently happening crises, it is crucial for supervisors or operators to have good strategies for effectively solving emergent problems in the travel environment and reducing damage on tourists. Taking this point, this study aims to take Taiwan leisure farms as cases to explore tourists' cognition of crisis management on the travel environment and to find appropriate treatments. As such, the achieved findings can not only promote managerial management on leisure farms but also help operators effectively cope with any emergency once happening.

METHODOLOGY

Data collection and sampling: Survey questionnaires were utilized to collect data. The population for this study was visitors from four leisure farms in Southern Taiwan. One hundred questionnaires were delivered to each farm. Out of 400 questionnaires distributed, 347

usable responses were returned, indicating a high valid response rate of 87%.

Research instruments: The questionnaire was divided into two parts. The first part aims to collect tourists' basic information including gender, age, educational background, marital status and average monthly income. In the second part, based on leisure farm crisis management scales by Nilson and Edginton (1982) and Chang *et al.* (2006), a total of 10 questions were partly modified. The seriousness of possible happened crisis events in leisure farms was assessed using scales of no serious, a bit serious, very serious and totally serious. Similarly, the precaution capability of leisure farms toward these crises was evaluated using scales of not good, average, very good and totally good.

Data processing: The current study used SPSS for Windows 12.0 to analyze the data. The statistical methods included frequency, percentage, t-test, one-way ANOVA analysis and Scheffe method. The significant level of statistic test was based on $\alpha = 0.05$.

RESULTS

Tourists' demographic analysis: The demographic analysis results showed that out of 347 respondents, 47% (163) were male and 53% (184) were female. Concerning age, 25.9% (90) belong to the 18-25 year-old group, 25.1% (87) were from the 26-35 year-old group, 26.5% (92) were from the 36-45 year-old group and 22.5% (78) were above 46 years old. In terms of marital status, 70.9% (246) were married and 29.1% (101) were single. Regarding educational background, 18.7% (65) were under junior high school level, 35.2% (122) graduated from senior high (vocational) schools, 32.6% (113) graduated from colleges or universities and 13.5% (47) graduated from graduate schools. Finally, referring to average monthly income, 29.4% (102) were under 20,000\$NT, 33.1% (115) were between 20,001 and 40,000\$NT, 23.1% (80) were between 40,001 and 70,000\$NT and 14.4% (50) were above 70,001\$NT.

Table 1: Descriptive statistics of the possible happened leisure farm crisis event seriousness and tourists' precaution capability and their ranking (R)

Items	Seriousness		Precautious capability	
	M±S.D.	R	M±S.D.	R
1 Too many tourists cause crowded/injurious situations	2.71±0.98	4	2.43±0.99	6
2 Get attacked by raised animals (cow, duck, etc.)	2.40±0.94	10	2.91±0.86	4
3 Food poisoning happens on tourists	2.75±1.02	3	2.60±1.06	5
4 Family members and children get lost	2.48±1.02	7	2.35±1.07	8
5 Lavatory's wet ground cause slip/fall	2.46±1.06	8	2.36±1.13	7
6 Dangerous trails (e.g., roadways are easy to cause slip and fall/ too steep/ dangerous topography)	2.43±0.95	9	2.31±0.96	9
7 The implementation of grass skiing and bundling causes injuries	2.60±0.99	5	3.26±0.87	3
8 Animal performances cause tourists' injuries	2.59±0.98	6	3.32±0.84	2
9 The lack of maintaining and checking children playing facilities causes injuries	2.83±0.96	2	3.50±0.77	1
10 Get attacked by wild bugs (e.g., bees)	2.87±0.98	1	3.50±0.78	1

Table 2: Gender of participant

Dimensions	Items		Male	Female	t
Seriousness cognition	1	M	2.55	2.90	-3.38*
		S.D.	0.98	0.96	
Precautious capability	1	M	2.21	2.63	-3.94*
		S.D.	0.99	0.95	
	6	M	2.18	2.43	-2.51*
		S.D.	0.97	0.94	
9	M	3.40	3.58	-2.15*	
	S.D.	0.86	0.67		

N: 347

The analysis of tourist’s cognition toward crisis event seriousness and precautionous capability on leisure farms: Table 1 showed the finding of tourist’s cognition toward the seriousness of ten possible happened crises on leisure farm. The results indicated that the possibility of getting attacked by wild bugs (e.g., bees) ranked first, followed by “the lack of maintaining and checking children playing facilities causes injuries”. On the contrary, low cognition was observed on the possibility of getting attacked by raised animals (e.g., cow, duck, etc.). Regarding tourist’s precautionous capability toward these ten possible happened crises on leisure farms, the precautionous capabilities toward the possibility of getting attacked by wild bugs and the lack of maintaining and checking children playing facilities which causes injuries ranked first while the precautionous capability toward dangerous trails (e.g., roadways are easy to cause slip and fall/too steep/dangerous topography) ranked last.

ANALYSIS ON DIFFERENCES AMONG THE IMPACTS OF VARIOUS BACKGROUND VARIABLES ON TOURIST’ LEISURE FARM CRISIS EVENT SERIOUSNESS COGNITION AND PRECAUTIOUS CAPABILITY

Differences regarding various gender groups’ impacts on tourists’ seriousness cognition and precautionous capability: The t-test analysis results of tourists’ leisure farm crisis event seriousness cognition showed that different gender groups exerted significantly different impact on the item “too many tourists cause crowded/injurious situations” and female tourists were serious than males (Table 2). Regarding crisis event precautionous capability cognition on leisure farms, the findings indicated significant differences among impacts of “too many tourists cause crowded/injurious situations”, “dangerous trails (e.g.,

roadways are easy to cause slip and fall/too steep/dangerous topography)” and “the lack of maintaining and checking children playing facilities causes injuries”. Female tourists were found to take these three precautionous capabilities into deeper consideration than males (Table 2).

Differences regarding various age groups’ impacts on tourists’ seriousness cognition and precautionous capability: The one-way ANOVA analysis results of tourists’ leisure farm crisis event seriousness cognition showed different age groups exerted no significant difference regarding the impact on the item “getting attacked by wild bugs”. Meanwhile, other 9 items all reached significant differences. Then, from Scheffe posteriori comparison analysis, this study found that seriousness cognition of 18-25 year-old tourists were higher than those above 46 years old (Table 3). Regarding crisis event precautionous capability cognition on leisure farms, the items “family members and children get lost”, “lavatory’s wet ground cause slip/fall”, “dangerous trails (e.g., roadways are easy to cause slip and fall/too steep/dangerous topography)” and “the implementation of grass skiing and bundling causes injuries” had significant differences. The Scheffe posteriori comparison analysis results proposed that precautionous capability cognition of 18-25 year-old tourists were higher than those above 46 years old (Table 4).

Differences regarding various educational background groups’ impacts on tourists’ seriousness cognition and precautionous capability: The one-way ANOVA analysis results of tourists’ leisure farm crisis event seriousness cognition showed different educational background groups exerted significantly different impact on the item “food poisoning happens on tourists” and female tourists were serious than males. Then, from Scheffe posteriori comparison analysis, this study found that seriousness cognition of tourists with educational background under junior high school was lower than those with from graduate schools (Table 5). Concerning crisis event precautionous capability cognition on leisure farms, the items “food poisoning happens on tourists” and “getting attacked by wild bugs” reached significant difference. The Scheffe posteriori comparison analysis results demonstrated that

Table 3: One-way ANOVA analysis of age

Dimensions	Items		S.S.	d.f	M.S.	F	Scheffe
Seriousness cognition	1	Between groups	10.29	3	3.43	3.66*	1>4
		Within groups	321.79	343	0.94		
		Total	332.07	346			
	2	Between groups	10.42	3	3.47	4.07*	1>4
		Within groups	292.90	343	0.85		
		Total	303.32	346			
3	Between groups	9.65	3	3.22	3.15*	1>4	
	Within groups	350.03	343	1.02			
	Total	359.68	346				

Table 4: One-way ANOVA analysis of age

Dimensions	Items		S.S.	d.f	M.S.	F	Scheffe
Seriousness cognition	4	Between groups	12.67	3	4.22	4.14*	1>4
		Within groups	349.95	343	1.02		
		Total	362.63	346			
	5	Between groups	32.29	3	10.76	10.32	1>4
		Within groups	357.76	343	1.04		
		Total	390.06	346			
	6	Between groups	9.08	3	3.03	3.44*	1>4
		Within groups	302.07	343	0.88		
		Total	311.16	346			
	7	Between groups	12.28	3	4.09	4.32*	1>4
		Within groups	325.04	343	0.95		
		Total	337.32	346			
8	Between groups	15.64	3	5.21	5.65*	1>4	
	Within groups	316.43	343	0.92			
	Total	332.07	346				
9	Between groups	13.01	3	4.34	4.83*	1>4	
	Within groups	307.96	343	0.90			
	Total	320.97	346				
Precautious capability	4	Between groups	15.48	3	5.16	4.69*	1>4
		Within groups	377.33	343	1.10		
		Total	392.81	346			
	5	Between groups	43.85	3	14.62	12.66	1>4
		Within groups	395.84	343	1.15		
		Total	439.69	346			
	6	Between groups	14.81	3	4.94	5.57*	1>4
		Within groups	303.96	343	0.89		
		Total	318.76	346			
	7	Between groups	10.26	3	3.42	4.68*	1>4
		Within groups	250.88	343	0.73		
		Total	261.14	346			

N: 347; *: p<0.05; 1: 18~25 years old; 2: 26~35 years old; 3: 36~45 years old; 4: 46 years old and above

Table 5: One-way ANOVA analysis of educational background

Dimensions	Items		S.S.	d.f	M.S.	F	Scheffe
Seriousness cognition	3	Between groups	14.99	3	5.00	4.97*	1<4
		Within groups	344.69	343	1.00		
		Total	359.68	346			
Precautious capability	3	Between groups	14.97	3	4.99	4.60*	1<4
		Within groups	372.35	343	1.09		
		Total	387.32	346			
	10	Between groups	7.740	3	2.58	4.36*	1<2 1<4
		Within groups	203.01	343	0.59		
		Total	210.74	346			

N: 347; *: p<0.05; 1: Junior high school, or under; 2: Senior high school; 3: College; 4: Graduate school

precautious capability cognition toward the possibility of getting attacked by wild bugs of tourists with educational background under junior high school was lower than those with from graduate schools (Table 5).

Differences regarding various marital status groups' impacts on tourists' seriousness cognition and precautionary capability:

The t-test analysis results of tourists' leisure farm crisis event seriousness cognition showed that different marital status groups exerted significantly different impact on the items "too many tourists cause crowded/injurious situations", "food poisoning happens on tourists" and "animal performances cause tourists' injuries". Married tourists were found to display higher seriousness cognition toward three above items than unmarried tourists (Table 6). Concerning crisis event precautionary capability cognition on leisure farms, the results indicated that four items of "too many tourists cause crowded/injurious situations", "food poisoning happens on tourists", "animal performances cause tourists' injuries" and "the lack of maintaining and checking children playing facilities causes injuries" exerted significant differences. Additionally, married tourists presented higher precautionary capability cognition toward four above items than unmarried tourists (Table 6).

Table 6: Marital status of participant

Dimensions	Items		Married	Unmarried	t
Seriousness cognition	1	M	2.80	2.55	2.18*
		S.D.	0.98	0.96	
	3	M	2.83	2.53	2.50*
		S.D.	1.01	1.02	
	8	M	2.67	2.40	2.35*
		S.D.	0.97	0.98	
Precautious capability	1	M	2.54	2.17	3.24*
		S.D.	0.99	0.93	
	3	M	2.72	2.30	3.47*
		S.D.	1.04	1.05	
	8	M	3.39	3.15	2.49*
		S.D.	0.80	0.91	
9	M	3.59	3.27	3.65*	
	S.D.	0.69	0.89		

N: 347

CONCLUSION AND RECOMMENDATIONS

Through investigation, this study has beneficially found out 10 possible crisis events happening to tourists of leisure farms. Worth noticing, the first-ranked two items regarding cognition of seriousness and precautionary capability are consistent with leisure farms' current preventive management priorities in order to cope with tourists' crisis event concerns. Hence, the achieved results have effectively met tourists' perception, which in turn promote tourists' safeguard confidence toward leisure farms, thus help increase tourists' willingness of bounding for a specific leisure farm. In addition, from obtained 10 items on tourists' seriousness cognition, this study suggests that tourists' cognition is almost sided with seriousness to a totally serious level, implying that four examined leisure farms in southern Taiwan should pay more attention to seek effective preventive management for these 10 crisis events.

Concerning tourists' gender background variable, this study finds that although females have placed more focus on the items of "too many tourists cause crowded/injurious situations", they remain a lack of confidence on precautionary capability of leisure farms. Therefore, it is suggested that leisure farms should reinforce deeper explanation of how leisure farms prevent and handle the problems of injurious situations caused by too crowded tourists to female tourists.

In terms of age, the findings indicate that 18-25 year-old tourists exert significantly different viewpoints on cognition toward seriousness and precautionary capability of leisure farms than those above 46 years old. Specifically, while younger tourists consider these 10 crisis events to have certain level of seriousness and acknowledge that leisure farms have good precautionary capability, elder tourists display lower cognition toward leisure farms' crisis event seriousness and perceive that leisure farms' precautionary capability is also lower.

In the educational background aspect, tourists from graduate schools are found to show higher seriousness cognition toward the item "food poisoning happens on tourists" and higher precautionary capability cognition than those graduating from junior high schools. Therefore, the results imply that current crisis management of leisure farms has met the expectation and cognition of tourists with higher educational background.

Finally, in the aspect of marital status, married tourists are found to have more opportunities to visit leisure farms with family members, especially they would bring along their children. Therefore, they would definitely put more focus on possible happened events of "too many tourists cause crowded/injurious situations", "food poisoning happens on tourists", "animal performances cause tourists' injuries" and "the lack of maintaining and checking children playing facilities causes injuries". Hence, it is recommended that leisure farms should enhance and provide family groups with the publicity related to dietetic hygiene management, caution notes of touching animals, simultaneously offer playground facilities with high safety degree and conduct frequently periodical maintenance in order to avoid married tourists from anxiety on leisure farms. These results can serve as beneficial references for leisure farm operators in developing and strengthening strategies for maintaining and attracting more tourists.

This research recommends future studies to combine crisis management with marketing strategies in order to better explore and establish effective management plans as well as emergency strategies in accordance with tourists' crisis event priorities. Simultaneously, future studies can analyze whether the achieved solutions can efficiently promote tourist confidence and satisfaction on visiting leisure farms.

REFERENCES

- Chang, L.H., S.Y. Lin and N.F. Tseng, 2006. Facilities danger recognition and willingness to revisit of leisure farm visitors. *J. Sport Recreat. Res.*, 1(2): 65-83.
- Ke, C.C., 1997. Applying crisis management in school management. *Educ. Res.*, 5: 113-1134.
- Nilson, R. and C. Edginton, 1982. Risk management: A tool for parks and recreation administrators. *Parks Recreat.*, 17(8): 34-37.
- Pearson, C.M. and J.A. Clair, 1998. Reframing crisis management. *Acad. Manag. Rev.*, 23(1): 59-76.
- Swarbrooke, J., 2002. *Development and Management of Visitor Attractions*. Butterworth-Heinemann, Oxford, UK.
- Wu, G.S., W.C. Chu and H.C. Lu, 2012. Applying crisis management in physical education course. *Taiwan Sports Forum*, 4: 1-10.