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Research on the relationship among immersion experience, positive emotion and tourist satisfaction in theme park tourism

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Abstract

As global economies and incomes grow and tourism booms, people are more interested in immersive experiences during travel. To construct an intrinsic relationship model of the interaction among three variable and to verify the rationality of the immersion experience scale in theme park tourism experience, expanding the research field of theme park tourism and immersive experiences. The results showed that the immersion experience has a significant positive effect on visitor satisfaction. Immersion experience has a significant positive effect on positive emotions. Positive emotion partially mediates the relationship between immersion experience and visitor satisfaction.

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1. Introduction

From a worldwide perspective, the first modern theme park was born in the United States and is known to us as Disneyland. After that, research related to theme parks began to increase, and a variety of theme parks began to emerge worldwide, showing a strong momentum of development. With global economic and income growth, a booming tourism industry, and technological advances underpinning the entertainment economy, people are no longer satisfied with walkabout tourism activities, but prefer immersive experiences. Csikszentmihalyi(1975)'s "immersion experience" refers to a state in which an individual devotes so much energy to an activity that he or she is oblivious to the presence of external objects, often referred to as the "optimal experience". And Drengner J(2008) found the same pattern in event marketing activities, when customers have an immersion experience in the event their positive emotions will also increase, which also indicates that immersion experience will improve the positive emotions of tourists, using immersion experience theory can better understand the tourist experience and provide new ideas and directions for tourism experience research. Although the theme park market seems to be booming, the phenomenon of homogenization is serious, the brand effect is low, and the revisit rate of visitors is low (Kexin, Q,2020). In order to attract more tourists and promote the prosperity and development of tourism, tourism-related enterprises, scenic spots and experts and scholars have started to pay attention to the survey of tourists' satisfaction. Wang Enxu and other scholars showed that every 100 satisfied customers brings 25 new customers, and the cost of winning a new customer is 5 times more than the cost of keeping an old one (Enxu.W, 2009). Nowadays, visitor satisfaction has become the core index

to measure the development level of scenic spots. In general, with the help of satisfaction measurement, theme parks and tourists can grasp more effective information in advance, which can be a good reference basis when making management decisions and choosing the way to visit.

Based on the above background, we construct an inner relationship model of the interaction among three variables of immersion experience, positive emotion and visitor satisfaction in theme parks, and verify the rationality of the immersion experience scale in theme park tourism experience to expand the research field of theme park tourism and immersion experience, with a view to further supplementing related theoretical studies, providing a certain reference value for subsequent related studies, and providing a certain reference for the management of theme parks.

2. Literature Review

2.1 Theme Park

As an important tourism resource, theme parks have greatly satisfied people's demand for leisure and entertainment, and since 1952, when the Dutch 'Madurodam' was introduced, it has been widely loved by people all over the world. In 1955, Walt Disney's investment in Disneyland in California marked the birth of the modern theme park (Linyun. L, 2020). Chinese scholar Jigang. B.(1994), a pioneer in theme park research, has provided the most important definition of a theme park as a man-made rather than a natural formation, and he believes that a theme park is a project that creates a special environment and atmosphere around a set theme. According to Chinese scholar Guanzhi. D (2005), a theme park is a tourist place that highlights creativity, environmental protection, innovation, uniqueness and thematization in order to meet the demand of tourists for a wide range and multiple levels of visits. This study finds that a theme park can be broadly defined as a leisure and entertainment space built by people to

meet the diversified leisure and entertainment needs of visitors and to select one or several established themes, combining environment, landscape, entertainment facilities, exhibitions and performances, etc.

2.2 Immersive Experience

Immersion theory, proposed by the American psychologist Csikszentmihalyi (1990), states that when people enter a state of immersion, they spontaneously and unconsciously engage in the activity they are in, forgetting the existence of time and automatically filtering out irrelevant perceptions. The immersion experience is a more participatory, satisfying and rewarding experience, and some scholars even consider the immersion experience as the highest level of the tourism experience (Zatori, A, 2018). In this study, we reviewed the literature and selected a study by scholars Wu, C. H. J., & Liang, R. D. (2011) to measure the immersion experience of theme park visitors at night from three dimensions: 'sense of control', 'concentration', and 'time distortion'.

2.3 Positive Emotions

Positive emotion means that the individual feels that what he or she is doing is more meaningful and fulfilling, thus producing a more specific psychological experience, which includes joy, satisfaction and happiness (Fredrickson, B. L, 2001). In his study, Hongwei. T & Baomin. L.(2021) pointed out that positive emotion is a psychological state characterized by pleasure, enjoyment and surprise, and will also influence individuals' behavior. Positive emotions significantly increase tourist satisfaction and loyalty, and they occupy an important place in the minds of tourists and in tourism research (Yuhua. H, 2021). This study considers positive emotion as an emotional state with positive psychological characteristics such as happiness, joy, elation and pleasure based on the views of several scholars.

2.4 Tourist Satisfaction

In the 1970s, Pizam first introduced the concept of customer satisfaction in the field of service marketing to tourism research, defining tourist satisfaction as the comparison of the difference between tourists' experiences and expectations (Abraham Pizam, 2005). Swan, J. E., & Trawick, I. F. (1981) argue that tourists have expectations of what a destination can offer and are satisfied when the actual experience value is higher than this expectation. In this study, tourist satisfaction refers to the evaluation of the difference between the expectations of the tourism subject before the tourism activity, the destination environment and the real perception after the tourism activity, if the real perception is higher than the expected content, then the whole tourism activity will be evaluated higher and the satisfaction will be formed accordingly.

3. Method

3.1 Research Model

The theoretical model in this paper uses immersion experience as the independent variable, positive emotion as the mediating variable, and satisfaction as the dependent variable. The overall theoretical model is shown in Figure 1.

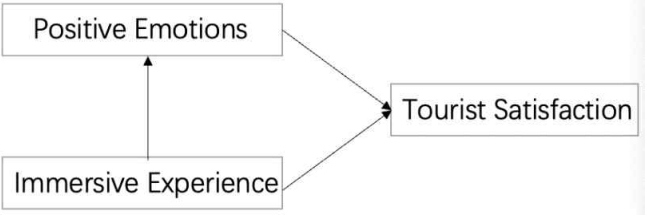

Figure 1. Research Model

3.2 Research Hypothesis

Based on the literature review section, the following hypotheses are made:

H1: Immersion experience has a positive effect on tourist satisfaction.

H2: Positive emotion has a positive effect on tourist satisfaction.

H3: Immersion experience has a positive effect on positive emotion.

H4: Positive emotion mediates the relationship between immersion experience and tourist satisfaction.

Operational Definition and Measurement of Variables

In this study, the scales Yuhua. H (2021) of immersion experience, positive emotion, and satisfaction of Yimeng. Z (2019) were modified with the theme park as the background and designed as shown in Table 1.

Facet	Code	Question
Immersive Experience	IE1	When I'm working on a game project in a theme park, I feel like I'm in control.
	IE 2	When I'm working on a game project in a theme park, I'm totally focused.
	IE 3	Time seems to fly by quickly when I'm working on a game project in a theme park.
Positive Emotions	PE1	When you are in a theme park, you are active.
	PE2	You are happy when you are in a theme park
	PE3	When you're in a theme park, you're full of enthusiasm.
Tourist Satisfaction	TS1	You will come back to this theme park again.
	TS2	You will recommend this theme park to friends or family.
	TS3	You are promoting this theme park positively.

Table 1. Measurement Dimensions and Questionnaire Settings

3.4 Materials Collection and Analysis Methods

The data of this study was collected from July 13 to July 16, 2022. The survey links were distributed to the respondents through the Internet. A total of 286 questionnaires were collected, and 256 valid questionnaires were recovered. The questionnaire effectiveness rate was 89.5%. For data analysis, reliability analysis, exploratory factor analysis, confirmatory factor analysis, and model fit test were performed by AMOS 24.0 and Mediation analysis was performed by SPSS 21.0.

4. Result

4.1 Reliability Analysis

It can be seen from Table 2: for the "CITC value" greater than 0.4, it indicates that there is a good correlation between the analysis items, and after any item is deleted, the reliability coefficient will not increase significantly, so it indicates that the item should not be deleted processing. The reliability coefficient value is 0.919, which is greater than 0.9, indicating that the reliability of the research data is of high quality.

Items	CITC	Cronbach Alpha if Item Deleted	Cronbach α
Immersive Experience	0.620	0.768	
Positive Emotions	0.689	0.696	0.806
Tourist Satisfaction	0.651	0.736	

Table 2. Reliability Statistics (Cronbach Alpha)

4.2 Confirmatory Factor Analysis

In order to test the validity of the questionnaire, The model shown in Figure 2 this paper uses AMOS 24.0 for confirmatory factor analysis, and the convergent validity of the scale is

tested by combining reliability (CR) and average extraction of variance (AVE).

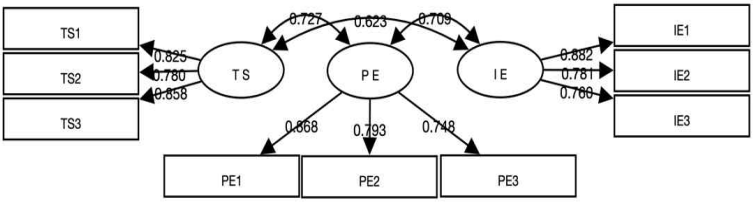

Figure 2. Confirmatory Factor Analysis Model Diagram

It can be seen from Table 3 that CMICMIN/DF is 1.961, which is less than 3 or less, GFI, NFI, NNFI, and CFI all reach the standard of 0.9 or more, and RMSEA is 0.063, which is less than 0.1. Each fitting index is in line with general research standards, so it can be considered that This model consists of a good fit.

Fit	χ2	(p	χ2/df	GFI	RMSEA	RMR	CFI	NFI	NNFI
Criteria	-	>0.05	<3	>0.9	<0.10	<0.05	>0.9	>0.9	>0.9
Model	47.073	2 0.003	1.961	0.961	0.063	0.050	0.981	0.962	0.971

Default Model: χ2(36)=1250.375, p=1.000

Table 3. Confirmatory Factor Analysis Model Fit

This time, confirmatory factor analysis (CFA) analysis was carried out for a total of 3 factors and 9 analysis items. It can be seen from Table 4 that the AVE values corresponding to the three factors are all greater than 0.5, and the CR values are all higher than 0.7, which means that the data in this analysis have good convergent validity.

Factor	AVE	CR
Immersive Experience	0.655	0.850
Positive Emotions	0.647	0.846
Tourist Satisfaction	0.675	0.862

Table 4： Model AVE and CR Index Results

4.3 Correlation Analysis and Discriminant Validity

The results of the correlation analysis in Table 5 show that there is a significant positive correlation between immersion experience, positive emotions and tourist satisfaction. The bold font is the square root of AVE of the corresponding variable, and the unbolded font is the correlation coefficient of the corresponding variable. The bold font is all greater than the absolute value of the unbolded font, indicating that the discriminant validity is good, that is, there is a certain degree of discrimination between variables.

	Immersive Experience	Positive Emotions	Tourist Satisfaction
Immersive Experience	0.809		
Positive Emotions	0.583	0.804	
Tourist Satisfaction	0.534	0.623	0.822

Remarks: The numbers in bold font with diagonal lines are the square root value of AVE

Table 5. Validity and Correlation Analysis of Classification

4.4 Model Testing and Hypothesis Testing

Before empirical testing, a structural equation model must be constructed. This paper sets three latent variables of immersion experience, positive emotions and tourist satisfaction. Studying the relationship and function of various latent variables is the key to constructing structural equation models.

Calculations are performed using AMOS 24.0, resulting in Figure 3 and Table 6.

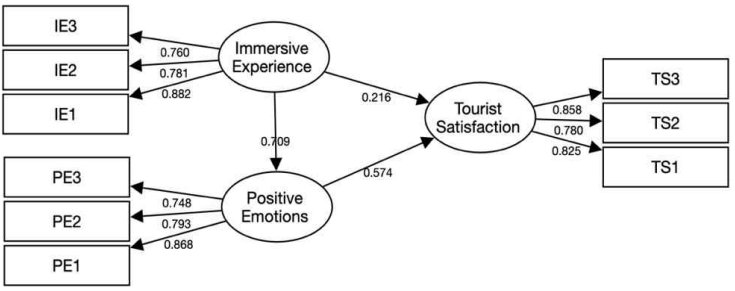

Figure 3. Structural Equation Model Diagram

Fit	χ2	df	p	χ2/df	GFI	RMSEA	RMR	CFI	NFI	NNFI
Criteria	-	-	>0.05	<3	>0.9	<0.10	<0.05	>0.9	>0.9	>0.9
Model	47.073	24	0.003	1.961	0.961	0.063	0.050	0.981	0.962	0.972

Default Model: χ2(36)=1250.375, p=1.000

Table 6. Goodness of Fit of Structural Equation Model

It can be seen from Table 6 that CMIN/DF is 1.961 and less than 3, GFI, NFI, NNFI, and CFI all reach the standard of 0.9 or more, and RMSEA is 0.063, which is less than 0.1. Each fitting index is in line with general research standards, so it can be considered that this the model consists of a good fit.

Direct Effect Test

From Table 7 above, It can be seen that immersion experience has a significant positive effect on positive emotions (β=0.000, p<0.05), assuming H3 is established; immersion experience has a significant positive effect on tourist satisfaction (β=0.019, p<0.05) Influence, assume H1 is established; positive emotion has a significant positive impact

on tourist satisfaction (β=000, p<0.05), assume H2 is established.

X	Y	STD.Estimate	SE	C.R.	p	Estimate
Immersive Experience	Positive Emotions	0.731	0.071	10.287	0.000	0.709
Immersive Experience	Tourist Satisfaction	0.202	0.086	2.338	0.019	0.216
Positive Emotions	Tourist Satisfaction	0.519	0.089	5.842	0.000	0.574

Table 7. Model Regression Coefficient

Mediation test

From Table 8 above, The mediating effect of positive emotions between immersion experience and tourist satisfaction accounts for 51.514%. According to this result, it is assumed that H4 holds.

Items	c	a	b	Mediating effect value	a*b (Boot SE)	a*b	a*b	(95% BootCI)	c'	Label	Effect proportion
H4	0.547**	0.603**	0.468**	0.282	0.041	6.804	0.000	0.197 ~ 0.359	0.265**	Partial intermediary	51.514%

* p<0.05 ** p<0.01

Table 8. Intermediary inspection summary

5. Conclusion

This study is based on the context of general theme park visits to explore the relationship between tourists' immersion experience, positive emotions and satisfaction. The research data was obtained by conducting a questionnaire survey on tourists who had experience in theme parks, and with the help of SPSS21.0 and AMOS24.0 software, the interaction mechanism between variables was explored, and the following conclusions were drawn through empirical analysis:

1. Immersive experience has a significant positive impact on tourist satisfaction. This shows that tourists who have obtained the immersive experience are more likely to have the willingness to revisit or recommend word-of-mouth, thereby

increasing the goodwill of potential tourists to the tourist destination and establishing a better word-of-mouth image for the tourist destination.

2. Immersive experience has a significant positive effect on positive emotions. According to conclusion 1, it can be seen that tourists who get immersive experience often represent a more satisfactory travel experience, which not only produces satisfied and pleasant emotions in the process of travel experience, but also reduces the generation of negative emotions, so immersion experience is conducive to stimulating tourists positive emotions. Therefore, the immersive experience is an important catalyst to stimulate the positive emotions of tourists, improving the immersive experience of tourists is an important channel to enhance the positive emotions of tourists.

3. Tourists' positive emotions have a significant positive impact on tourist satisfaction. The positive emotions generated by tourists during the theme park experience will affect the tourists' willingness to revisit or word-of-mouth recommendation. Therefore, positive emotions are undoubtedly an important factor affecting tourists' willingness to revisit or word-of-mouth recommendation.

4. Positive emotions play a partial mediating role between immersion experience and tourist satisfaction. Tourists who get an immersive experience during the theme park visit are prone to have a positive emotional state, thereby promoting the willingness of tourists to revisit or recommend them by word of mouth. Therefore, positive emotions play an important role as a bridge between immersion experience and tourist satisfaction.

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