The TREA Model of Tourist Behavior in Ecological Tourist Attraction: A Case Study of Zhejiang Tianmushan National Nature Reserve

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Abstract: Based on the TRA (Theory of Reasoned Action), the paper investigated Tianmushan tourist attraction by introducing a new 'environment-induced' factor to form a new model—TREA, which attempts to explore factors influencing tourists' behavior, and expects to weaken the influence that tourist behavior on ecological tourist attraction by researching tourist behavior and developing intervention strategies proactively. The empirical study of this paper adopts the method of questionnaire and uses a case of 'touching trees' behavior in Tianmushan tourist attraction. AMOS8.0 software are applied to conduct structural equation analysis, and drew the following conclusions: The original TRA and modified TERA are all valid; Environmental induction has the greatest influence on tourist behavior, followed by individual attitude. Subjective norms play the weakest role among the factors; This paper proposed persuasion strategies based on individual beliefs and cognitive change, guide policies based on social norms, and induction strategies based on social environment.

1. Introduction

With the in-depth study of visitor management theory and application for national parks and protected areas during last 50 years, researchers have put forward a variety of theoretical models and management modes, including ROS (Recreation Opportunity Spectrum), LAC (Limits of Acceptable Change), VERP (Visitor Experience & Resource Protection), VIM (Visitor Impact Management), VAMP (Visitor Activity Management Plan), TOMM (Tourism Optimization Management Model) and so on [1]. Although differences exist in the specific operation, most of these visit management modes based on RCC (Recreation Carrying Capacity), and focused on maximizing visitor experience within the reasonable loading of resources by establishing strict indicator system and monitoring according to indicators [2]. The steps of management modes are mainly as following: first, investigate the status quo; second, determine the desirable future state; third, establish appropriate management programs between status quo and desirable future state; fourth, monitor and evaluation [3]. These management theories achieved results on practical application, influenced tourists' attitude toward behavior and beneficial to protect tourist attraction in some extent. With improved study and practical analysis, some weaknesses occurred in these theories, mainly that these 'post' measures may cannot protect resources timely, since management actions are inspired by monitoring data.

Basing on the above two analyses, this thesis attempts to weaken the impact visitors on the environment of eco-tourism area by studying the behavior of visitors and developing management strategies proactively.

2. Literature review

2.1. Mechanism of tourist behavior

Just as Kinnaird (1994) put it, gender differences exist in tourist motivation, travel behavior, tourism activities and other aspects of travel experience [4]. Fish & Waggle (1996) indicated that stable personal income is the most important factor when predict traveling expense [5]. Chen (2000) stated that culture is one of the most important elements that influence the decision-making behavior of tourists [6].

Tourist motivation is the direct impetus of tourism behavior, and also a key element of travel decision-making. In the research field of visitor behavior, motivation is mainly divided into push and pull force, which also known as 'push-pull' motivation model, put forward by Crompton (1979). He argued that push force is associated with inner and emotional reasons, which is the internal cause that pushes people to travel [7]. However, pull force is associated with properties of the destination, which is the external appeal. Scholars' conclusions on the influences of these two forces to tourist behavior vary from person to person. Uysal (1994) deemed that both inner push force and the external pulling force work together on tourism activities [8]. Kippendorf (1987) found that push force play a more important role, since the desire to travel of most visitors come from the idea of leaving somewhere instead of yearning for another place [9]. Hong's study shown that push force has significant impact on the intentions of revisit and recommendation [10]. But Um (2006) pointed out that perceived attractiveness of destination, namely the pulling force, has important effect on the intention of revisit [11].

2.2. The Theory of Reasoned Action (TRA)

Martin Fishbein and Icek Ajzen put forward 'The Theory of Reasoned Action' (TRA) in *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research* in 1975. The theory indicates that people's behavior is the result of rational thinking. According to TRA, the study of Behavior Intention (referred to as BI) can predicts whether people will practice a certain Behavior (referred to as B), which is to say that Behavioral Intention affects and decides the occurrence of Behavior (B≈BI). And Behavioral intention (BI) is determined by two factors, attitude toward the behavior (referred to as AB) and subjective norm (refer to as SN). The former is a self-intrinsic factor, which is a positive or negative evaluation of the practice of this behavior; the latter is an external factor, namely the social pressure toward practice perceived by individual.

After the establishment of TRA, scholars conducted many empirical studies based on TRA from different fields, including politics, health, charity, fertility, consumption, employment, drug and other fields. Besides, some scholars studied visitor behavior based on TRA, the most typical research of which was conducted by Brown, who studied the rock-climbing behaviors of tourists in the national park of central Australia, and found out that personal attitude and subjective norms have a significant impact on the intention of tourists' climbing behavior [12].

3. Research method

The thesis conducted field investigation in Tianmushan in order to study and confirm factors affecting the tourist behavior. Based on TRA, this study adopted in-depth interviews and questionnaire to explore factors influencing visitors' behavioral intention.

3.1. Tourists behavior model

Based on TRA and qualitative exploratory analysis, this paper proposed a modified model of tourist's behavior, defined as TERA (Fig. 1)
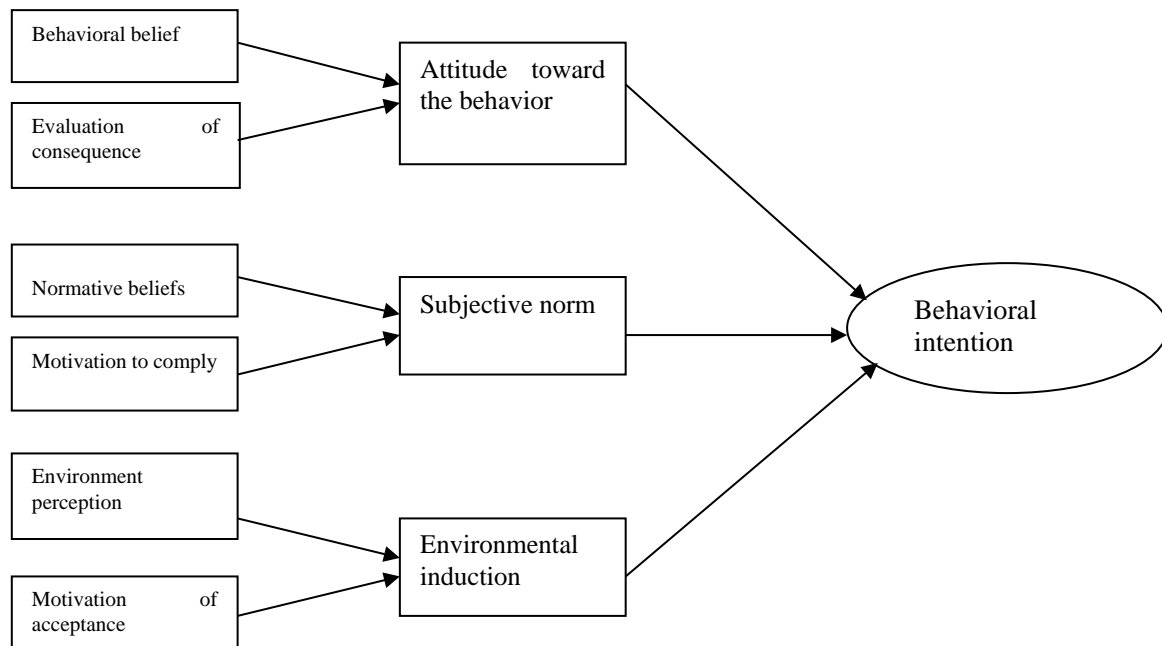
Fig. 1 Conceptual model of TERA

Attitude toward the behavior and subjective norm are factors consistent with the TRA, and environmental induction is the newly introduced factor of the model.

3.2. Result of the interview

The in-depth interview was adopted, with semi-structured outline to guide topics for interviewees, including tourists, staff of ecological tourist district and experts. Since TRA is a model focused on a specific behavior, our interview was conducted in the form of having direct communication with interviewees to understand their behavior of touching trees in Tianmushan and influencing factors. Reasons to select the behavior of 'touching trees' are as follows: Firstly, Tianmushan is famous for trees, while people's awareness of protecting trees is relatively weak; secondly, the usage of 'touch' refer to the action of sabotage trees, including touch, engraved, stripping, climbing, folding, and picking, can reduce the vigilance of tourists.

The Content Analysis was employed after the interview. According to data collected from interview, mainly the statement concerning factors influencing tourists' behavioral intention, we used generic analytical method to collate and analyze those statements:

Step One: Transcribe statements from the original interview to the card. 50 statements were collected in this interview. Step Two: Statement filtering. Statements must have clear meaning in Chinese and expressed factors influencing the behavior of 'touch trees', 22 statements of which were excluded. Step Three: Use the TRA model. Three entries are combined from the last 28 statements. (See Table 1)

Table.1. Category of factors touch trees

Factors	Statement
Personal factors	Touching trees make me feel closer to nature. I want to know how branches feel like. Trees are Reiki, which can give me good luck by touching it. Trees can bless me. Touching trees can bring me good luck Touching does not matter, as long as do not stripping the bark. Touching trees makes my tour to Tianmushan more complete. Trees, like people, need to be caressed. Touching trees to give me the feeling that 'I have been here'. I fear there will be germs brought to me by touching trees.
Group factors	Friends say its normal to touch trees. Colleagues say there's nothing interest to touch trees. My husband said that trees should be protected instead of be touched. Mom does not allow me to touch trees. Tour guide told us to touch the tree, which bringing us luck to make great deal of money. Since others were touching trees, I joined them for fun. If the leadership didn't touch trees, I won't do that either. He (boyfriend) said it does not matter to touch trees. My wife wants to get Reiki form trees, and I followed her. When patrollers are nearby, I won't touch trees.
Environmental factors	It doesn't matter to touch trees, since some of them already dead. The most precious trees have fence around, which do not allow visitors to enter. Tianmushan is just a mountain with trees, which make me aesthetic fatigue. Some trees are too far to reach. I won't touch it since family members are with me. Warning signs hindered me to touch trees, since I was afraid of being punished. I read the propaganda of Tianmushan, which makes me have the impulsion to hold trees. No one cares whether we touch trees.

3.3. Hypothesis

Supposing that TERA can explain the relationship between tourist psychology and behavioral intentions to some extent. And according to Ajzen's view, TRA is already sufficient to explain the relationship between attitudes and behavior. Therefore, this study intends to examine the two theoretical models, TERA and TRA, simultaneously, and test which model has a higher goodness of fit.

Based on TERA, basic assumptions of this empirical research are:

(1) The attitude toward the behavior of touching trees (AB) has a significant impact on their behavioral intentions.

(2) Subjective norm of tourists (SN) has a significant impact on their behavioral intentions of touching trees.

(3) Environmental induction (ED) has a significant impact on their behavioral intentions of touching trees.

(4) The behavior belief (BB) and the evaluation of the consequence (EC) of touching trees have a significant impact on their attitude toward the behavior.

(5) The normative beliefs (NB) and motivation of compliance (MC) of touching trees have a significant impact on the subjective norm of visitors.

(6) Environmental perception (EP) and motivation of acceptance (MA) of touching trees have a significant impact on environmental induction.

Taking into account that AB is measured by the product of BB and EC (SN, EN measured in the same way), so this study will examine two alternative models (Fig. 2, Fig. 3).
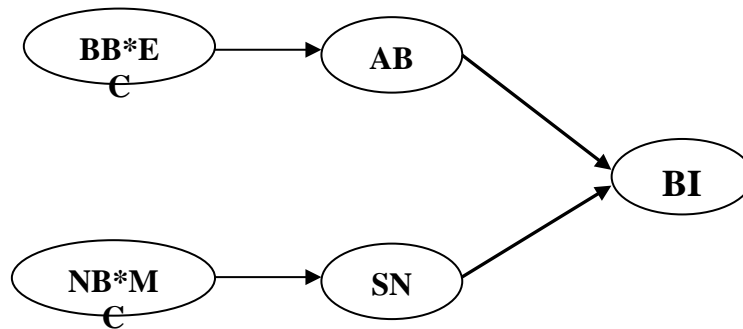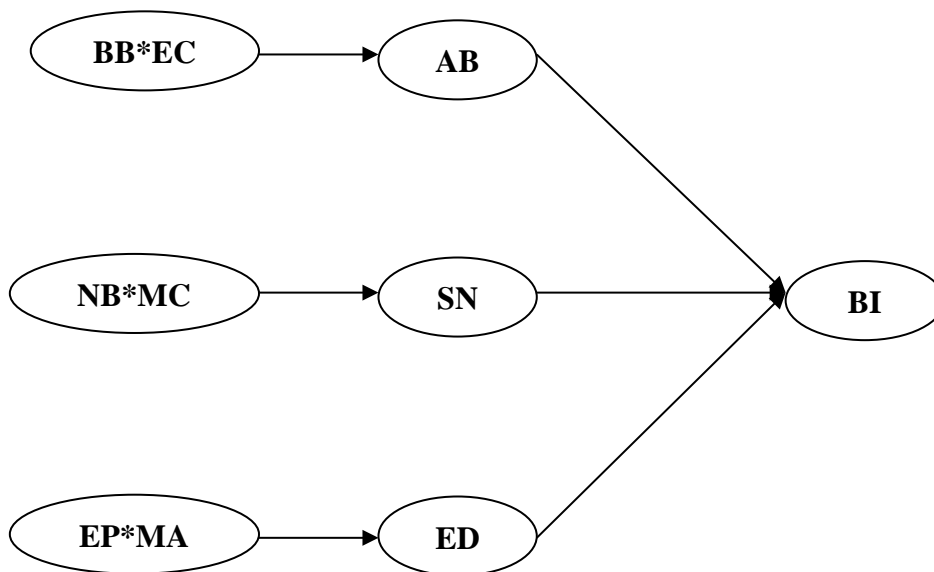

Fig. 2 TRA of 2 factors for 'touch trees' (Model I)

Fig. 3 TERA of 3 factors for 'touch trees' (Model II)

3.4. Questionnaire

The questionnaire is based on literature and interviews. Five experienced specialists are invited to assess and revise the questionnaire, including two experts in eco-tourism, one psychology tourism expert, one tourism geography expert, and one tourism planning expert.

The following 10 sub-scales are measured by Likert's seven scales, ranging from 'strongly disagree' to 'strongly agree'. The score of BI, AB, SN, ED and BB, NB, EP range from - 3, -2, -1,0, + l, + 2, + 3, and the score of EC, MC, MA range from 1, 2, 3, 4, 5, 6, 7. Besides, taking the semantic and reader's habit of thinking into consideration, some questions in the questionnaire are designed in negative form, of which the score need to be revised.

Table.2. Questions in the scale

Factors and questions
BI: Behavioral intention
01: I want to touch trees during the tour.
02: I want to touch trees when I see others do.
AB: Attitude toward the behavior
01: The behavior of touching trees is understandable.
02: The behavior of touching trees violates the code of conduct of ecological protection areas.
03: I will (against?) if the behavior of touching trees gets fined.
SN: Subjective norm
01: People around think it doesn't matter to touch trees as long as administers do not stop the behavior.
02: I would feel isolated when people around touched trees, while I did not.
03: People around me despise the behavior of touching trees.
04: People around think we should touch trees as long as we had the tour.
ED: Environment induction
01: I think it's reasonable to touch trees as long as this action was not stopped by the destination.
02: It's normal to touch trees in here since Tianmushan has a lot of trees.
03: I will not touch trees that have been stripped of bark.
04: It doesn't matter to touch trees, since some of them already dead.
BB: Behavioral beliefs
01: Touching trees make me feel closer to nature.
02: Touching trees fulfill my curiosity.
03: Touching trees bring me good luck.
04: Touching trees will affect the growth of tree.
05: Touching trees make my tour to Tianmushan more complete.
EC: Evaluation of the consequence
01: I wish I could come closer to nature.
02: Travel can satisfy my curiosity.
03: I hope to get good luck.
04: I want to know the growth condition of trees.
05: I hope to have the perfect journey.
NB: Normative beliefs
01: Companions think I should touch trees.
02: Relatives and friends think I should touch trees.
03: Tour guide thinks I should touch trees.
MC: Motivation to comply
01: During the tour, I would adopt opinions of companions when making decisions.
02: During the tour, I would adopt opinions of relatives and friends when making decisions.
03: During the tour, I would adopt opinions of tour guide when making decisions.
EP: Environment perception
01: The fence prevented me from touching trees.
02: Some trees are too far to touch.
03: I see warning signs around trees.
04: I read the propaganda that 'children hold tress', which makes me have the impulsion to hold trees.
05: Nobody prevent us from touching trees.
MA: Motivation of acceptance
01: I think it is necessary to make fence around important scenery.
02: I think the path design of Tiammushan is reasonable.
03: I would not touch tress if there are warning signs.
04: I will try to look for sceneries in propaganda and do activities in propaganda.
05: I like freedom.

3.5. Data collection

312 copies of questionnaires were distributed, of which 295 valid questionnaires were received. The effective rate is 94.8%. The proportion of male and female respondents in this study is close to 1: 1.375. Age range from 26 to 35 and 36 to 45 accounted for the largest proportion (63.1%), followed by respondents under 25 years old (16.2%). So young people under the age of 45 accounted for 79% of the total respondents, and elder people over 60 years old accounted for 4.8% of the total respondents. In terms of educational background, 59% of the respondents received vocational education, and 32% of the respondents have bachelor degree or above. In addition, enterprise personnel accounted for 26.6% of the respondents, and others accounted for 20.5%, which has not been noted more specifically. Finally, most of the respondents have the revenue between 1000-3000 and 3000-5000 per month, accounting for 34.2% and 39.8% respectively. To conclude, most of respondents is under 45 years old, with secondary education and above, and work as enterprise personal, who can represent tourist come to Tianmushan.

4. Findings

4.1. Analysis of the data

SPSS17.0 was used to calculate the mean and standard deviation of each variable in this paper (Table 3). The standard deviation of all the questions and sub-index are greater than 0.5.

Form above table, the mean of behavioral intention (BI) is 0.5. Though positive, the score is relatively low, which indicates that although visitors have the intention to touch trees, the intention is not intense. And according to the TERA model, their behaviors are influenced by individual attitudes, subjective norms, and environment induction. AB, SN and ED are generally consistent with BI, since their means are generally between 0 and 1, except SN02 and SN03, which mean scores are negative. The reliability of these two indicators still needs subsequent testing.

In general, the mean of behavioral beliefs (BB) is relatively low, range between 0 and 1, while the mean of evaluation of consequence is relatively high, range between 4 and 6. The reason is that the scouring methods of the two indicators are different, the score range of BB is from -3 to +3, while the score range of evaluation of consequence is from 1 to 7, the statistical result of the two indicators are all fluctuate slightly in the degree of 'slightly agree' from the perspective of 'strongly disagree - strongly agree'. The analysis of behavioral beliefs and evaluation of consequence can directly reflect the psychological demands of tourists, since the evaluation of the consequence aimed at each behavioral belief, which is the subjective weight for every behavioral belief. The mean of BB01 is the highest, while the mean of EC01is relatively low. While BB05 of the lowest score has the highest EC05. To conclude, tourists generally agree that the concept of 'touching trees make me feel closer to nature', but 'I' do not care whether or not I am close to nature. And tourists are skeptical about 'the behavior was not stopped by the destination', but they also hope to 'leave them alone'.

Table.3. Data description of each question

Code of questions (corresponding question number)	Mean	Standard Deviation
BI01 (Q6)	.55	1.366
BI02 (Q7)	.58	1.423
AB01 (Q12)	.63	1.315
AB02 (Q13)	.26	1.601
AB03 (Q14)	.43	1.417
BB01 (Q16)	.69	1.442
BB02 (Q17)	.56	1.398
BB03 (Q18)	.58	1.560
BB04 (Q20)	.52	1.433
BB05 (Q21)	.35	1.434
BB06 (Q19)	.58	1.407
EC01 (Q1)	4.53	1.674
EC02 (Q2)	4.43	1.481
EC03 (Q3)	4.95	1.544
EC04 (Q4)	5.07	1.341
EC05 (Q5)	5.18	1.407
EC06 (Q23)	5.15	1.415
SN01 (Q22)	.27	1.528
SN02 (Q24)	-.12	1.854
SN03 (Q25)	-.14	1.432
SN04 (Q26)	.36	1.505
NB01 (Q37)	.43	1.462
NB02 (Q38)	.40	1.408
NB03 (Q39)	.06	1.765
MC01 (Q9)	4.62	1.406
MC02 (Q10)	4.77	1.303
MC03 (Q11)	4.65	1.189
ED01 (Q27)	.38	1.518
ED02 (Q28)	.17	1.483
ED03 (Q29)	.28	1.404
ED04 (Q30)	.18	1.321
EP01 (Q31)	.31	1.387
EP02 (Q32)	.45	1.329
EP03 (Q33)	.80	1.362
EP04 (Q34)	.52	1.311
MA01 (Q35)	5.22	1.401
MA02 (Q8)	4.56	1.691
MA03 (Q36)	5.04	1.281
MA04 (Q15)	4.72	1.184

4.2. Analysis of NB and MC

The mean of the three indicators of motivation to comply (MC) are roughly equal but relatively low (5 for 'slightly agree'), indicating that tourists generally make decisions by their own during their tour, and the opinions from relatives, companions and tour guides are also rather important. As for normative beliefs (NB), the mean of the indicator of relatives and friends, as well as companions are relatively equal, and significantly higher than the mean of tour guide. This indicates that on the one hand, the companions of some tourists are their relatives and friends, and on the other hand, some tourists think that tour guides would not allow them to touch trees, since some tour guides have already started to promote the idea of protecting trees.

4.3. Analysis of EP and MA

The mean tendency of EP and MA is generally consistent with the above mean, EP is between 0-1 points, while the mean of MA around 5. The mean of EP01 is the lowest among them, while the mean of MA01 is the highest correspondingly. From specific analysis, tourists think that 'fence has little effect on prevent tourists from touching trees, while they still regard fence as a 'must', in other words, they believe that 'most people would accept it'. In addition, 'warning signs' has the highest perception and acceptance to tourists, indicating that visitors may not to touch trees if there are warning signs. But since most of the warning signs in Tianmushan are fireproofing and safety warnings, we perceive that visitors will have a higher perception and reduce their touch of trees if there are warning signs about 'no touching trees' around the area. 'Accessibility' is the least acceptable factor, indicating that tourists are not very satisfied with the path design of Tianmushan.

4.4. Reliability and equation analysis

The indicator of internal consistency was adopted to test the reliability of scale, with the standard of Cronbach α. In general, Cronbach α greater than 0.7 is of high reliability, Cronbach α ranged between 0.35 and 0.70 is acceptable, and Cronbach α less than 0.35 is of low reliability[1].

After calculate the Cronbach α of AB, SN, ED, BB, EC, NB, MC, EP, MA, and BI, we need delete questions that the total correlation less than 0.30, and delete questions that the standard deviation less than 1.0.

Due to the limited questions in the questionnaire, we so only delete questions according to coefficient total correlation and whether Cronbach α is optimized after the deletion, and the deletion only conduct in one term. (Table 4 and 5).

Table.4. Cronbach α of subscales

Subscale	Measurement items	Question number	Cronbach α	Deleted question	The total correlation of deleted question	Cronbach α after deleteon
AB	AB01-03	3	0.775			
SN	SN01-04	4	0.257	SN03	-.592	0.813
ED	EN01-04	4	0.813			
BB	BB01-06	6	0.870			
EC	EC01-06	6	0.875			
NB	NB01-03	3	0.874			
MC	MC01-03	3	0.887			
EP	EP01-04	4	0.812			
MA	MA01-04	4	0.746			
BI	BI01、BI02	2	0.863			

SN03 (Q25) was deleted since the total correlation of it is negative, and the reliability of SN significantly increased after deletion. In addition, although the total correlation of question EP03 and

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[1] J.P Gillford, Psychometric Methods, 2nd ed.(New York, NY: McGraw-Hill, 1954).

MA04 are relatively low, they were retained since BB and EC, NB and MC, EP and MA need to be deleted in pair according to the design of the question.

The equation test results of the two alternative models are in Table 6. The χ^2 of two models are all reach significant standard, indicating that significant difference lies between the theoretical model and data. However, the only investigation of χ^2 is not enough, indicators of goodness of fit should also take into account. Typically, the goodness of fit of the model is acceptable if χ^2 / DF is between 2 and 5. The fit statistics of baseline comparison output by AMOS include NFI, RFI, IFI, TLI, and CFI. The overall fitness of the assumed model and observed data are good if the values of these five statistics are close to 0.900 (standard model fitness) respectively. As we can see from the table, the five values of model I are close to 0.9, while all the values of model II are greater than 0.9, indicating that model II has the better fitness. AGFI is generally regarded as absolute indexes of fit, and model II is better since both models meet the goodness of fit of 0.9. RMSEA is root mean square error of approximation, the smaller the RMSEA, the better of the goodness of fit. The RMSEA are 0.09 and 0.14 in this paper, less than 0.50 (acceptable standard).

Table.5. Fitting result of models

Model	χ^2	DF	P	χ^2/DF	NFI	RFI	IFI	TLI	CFI	AGFI	RMSEA
TRA 2 factors Model I	280	119	0.000	2.35	0.874	0.856	0.893	0.867	0.891	0.889	0.14
TERA 3 factors Model II	525	292	0.000	1.80	0.913	0.905	0.922	0.910	0.931	0.909	0.09

We had an analysis of the specific path coefficients of them, since second-order variables (BB * EC, NB * MC, EP * MA) are complex. Table 6 is the fitting result of each model. Though some coefficient does not meet the best standards, they're very close to. In general, the model has a good fitness with research data.

Table.6. Fitting result of second-order variables model

Model	χ^2	DF	P	χ^2/DF	NFI	RFI	IFI	TLI	CFI	AGFI	RMSEA
BBEC—AB Model	156	41	.000	3.82	.887	.849	.904	.872	.904	.883	.128
NBMC—SN Model	172	56	.000	3.07	.922	.870	.931	.884	.931	.896	.155
EPMA—EN model	177	88	.000	2.01	.930	.901	.947	.925	.946	.907	.099

4.5. Analysis of models

Path coefficients of the two models are as follow (Fig 4 and 5). In TRA 2 factors model, the effect of attitude toward the behavior (AB) has on behavioral intention (BI) is significantly higher than subjective norm (SN) has. After environment induction (ED) be introduced into the model, the influence of environment induction (ED) has on behavioral intention (BI) are significant and higher than attitude toward the behavior (AB) and subjective norm (SN) have. The effect attitude toward the behavior (AB) and subjective norm (SN) have on behavioral intention (BI) indicates that environmental factors has the most influence on tourists' behavioral intention described in ecological district.
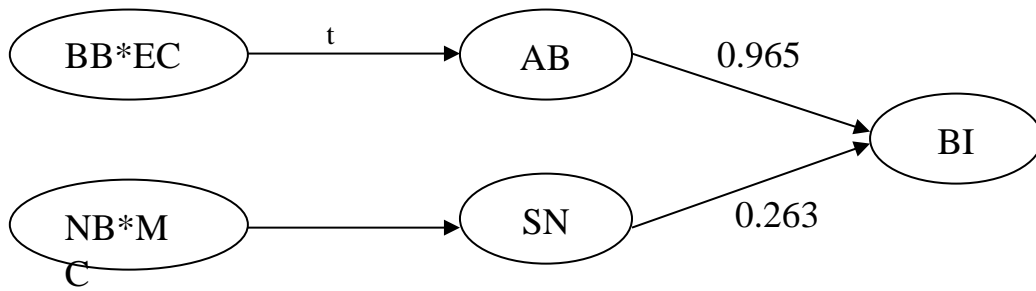
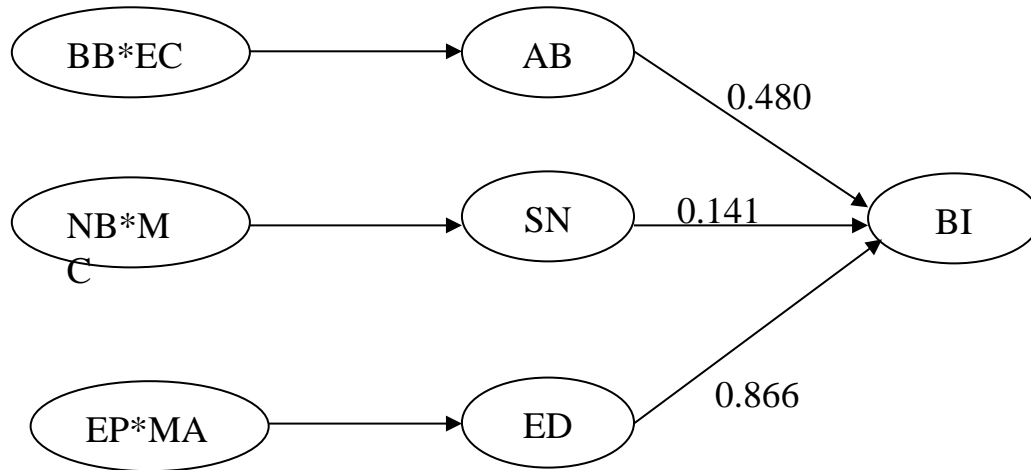Fig. 4 Path coefficients of TRA 2 factors model

Fig. 5 Path coefficients of TERA 3 factors model

In the AB model, the standardized path coefficient of BB*AB to AB is 1.000, which confirmed the theoretical models of AB. Each observed variables of BB*EC have positive impact on BB*EC, but weights varied. And BBEC02> BBEC04> BBEC01> BBEC03> BBEC05> BBEC06, which indicates the different degree of belief for visitors, and BBEC02 has the greatest impact on tourists, while the impact of BBEC06 is relatively low. The weights of observed variables of AB are also varied, the following AB01> AB02> AB03 (Table 7).
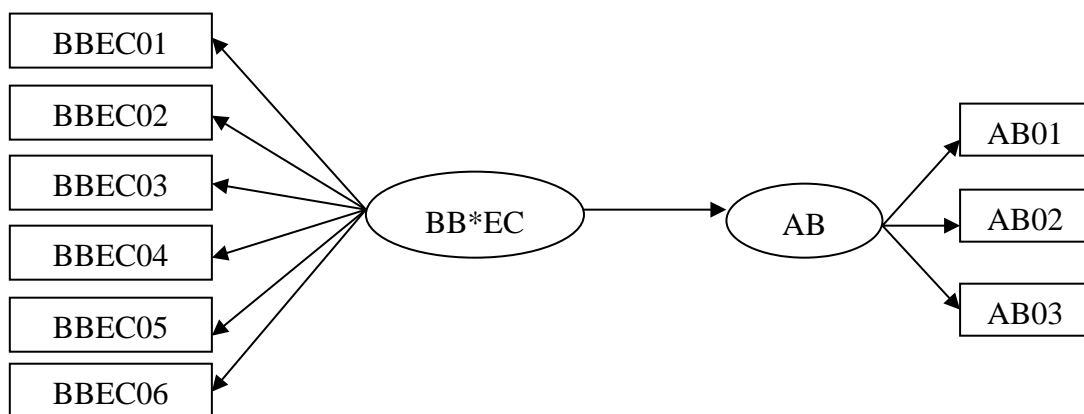

Fig. 6 Influence BB*EC has on AB

Table.7. The standardized coefficient of observed variables of AB model

			Estimate
AB	<---	BBEC	1.000
BBEC06	<---	BBEC	.593
BBEC05	<---	BBEC	.690
BBEC04	<---	BBEC	.781
BBEC03	<---	BBEC	.698
BBEC02	<---	BBEC	.814
BBEC01	<---	BBEC	.770
AB01	<---	AB	.734
AB02	<---	AB	.697
AB03	<---	AB	.598

SN model is relatively simple, and the standardized path coefficient of NB*MC to SN is also 1.000. The observed variables of NB * MC have relatively significant influence, and respectively are NBMC02> NBMC03> NBMC01. The influence of observed variables of SN is SN04> SN01> SN02 (Table 8.)
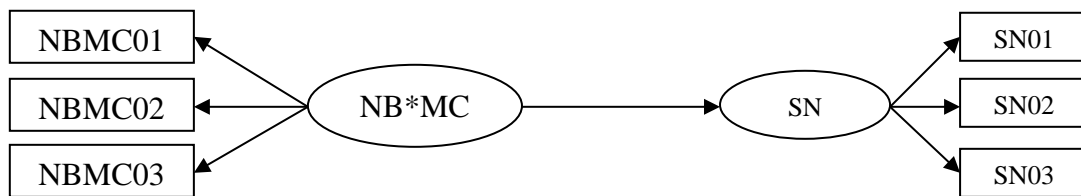

Fig. 7 Influence NB*MC has on SN

Table.8. The standardized coefficient of observed variables of SN model

			Estimate
SN	<---	NBMC	1.000
NBMC03	<---	NBMC	.819
NBMC02	<---	NBMC	.837
NBMC01	<---	NBMC	.699
SN01	<---	SN	.726
SN02	<---	SN	.653
SN04	<---	SN	.772

ED model has four observed variables, and the standardized path coefficient of EP*MA to is also 1.000. The standardized coefficient of EPMA03 is relatively low, but it was retained in consideration of the ambiguous of the question (Q33). While, the influence of other variables is obvious.
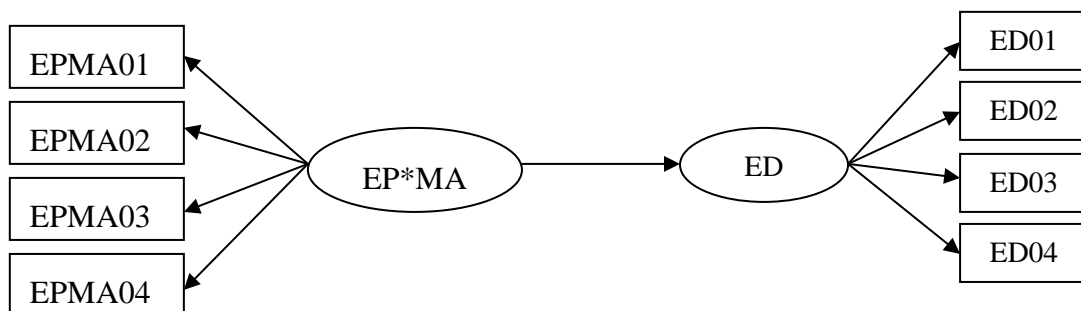

Fig. 8 Influence EP*MA has on ED

Table.9. The standardized coefficient of observed variables of EN model

			Estimate
ED	<---	EPMA	1.000
EPMA04	<---	EPMA	.711
EPMA03	<---	EPMA	.410
EPMA02	<---	EPMA	.768
EPMA01	<---	EPMA	.821
ED01	<---	ED	.700
ED02	<---	ED	.688
ED03	<---	ED	.632
ED04	<---	ED	.814

4.6. Discussion

Two structural models were obtained after questionnaire data been analyzed by AMOS, and their explanation toward behavioral intention is not insufficient. In addition, the goodness of fit of TREA is better than TRA, which indicates that environmental induction (ED) factor has a decisive effect on visitors' behavior.

The impact of tourists' individual attitude, subjective norm and environment induction has on behavioral intention

According to the analysis result of revised TERA model, environment induction has the greatest influence on tourists' behavioral intention, followed by individual behavior attitude, and subjective norm just has little effect. Reasons may lie in two aspects, on the one hand, the atmosphere and layouts of eco-tourism district have influence on tourists' behavior, on the other hand, certain tourists may have 'evade responsibility' attitude during the survey. Consequently, the survey associated with the subjective will have to be 'hidden' and the objective factors 'revealed' out.

The impact of behavioral beliefs and evaluation of the consequence has on attitude toward the behavior

Just as above analysis, the degree of the impact of behavioral beliefs and evaluation of the consequence has on attitude toward the behavior is BBEC02> BBEC04> BBEC01> BBEC03> BBEC05> BBEC06, indicating that the belief that 'touching trees can fulfill my curiosity' has the most impact on the behavior of 'touching trees', and the belief 'touching trees will affect the growth of trees' has minimal influence.

The impact of normative beliefs and motivation of comply has on subjective norm

Theoretically, NB*MC refers to that tourists perceived and subordinated subjective norms of social group, and pressure from subjective norm to social group will exist meanwhile. Data shows that normative beliefs and motivation of comply have significant positive influence on subjective norm, which is NBMC02> NBMC03> NBMC01, manifesting that impact from relatives and friends > impact from tour guides> impact from companions.

The impact of environment perception and motivation of acceptance has on environment induction

In TERA 3 factors model, environmental induction factor played a decisive role in behavioral intention. In the result, the degree of the impact of environment perception and motivation of acceptance has on environment induction is EPMA01>EPMA02> EPMA04> EPMA03, and the path coefficient of EPMA03 is 0.41 which is very low. In the item of EP03, most of the respondents tend to choose the option that they saw warning signs in Tianmushan, while they also choose the option of 'I would not touch tress if there are warning signs' in MA03. The reason why contradiction exists is that most of the warning signs in Tianmushan is about fireproofing safety, which cannot stop visitors from the behavior of touching trees. And other factors such as fences, billboards and accessibility have relatively significant effect.

5. Conclusion

The paper analyzed 'touching trees' intention and influencing factors by taking Tianmushan tourists as respondents, 'touching trees' as the questionnaire, and examined TRA and the revised TERA model. Then created the scale of predicting tourists' attitude toward 'touching trees' according to theoretical model and in-depth interview. Combining this scale and questionnaire, the results are as follow:

After analysis of models, both TRA and the revised TERA model can effectively explain the relationship between the behavior of touching trees and the behavioral intention of visitors in Tianmushan. The goodness of fit becomes better of the introduction of environment induction factor. And the introduction of environment factor is more conducive to the analysis of behavioral intention of touching trees, and provides theoretical basis for the management of visitors' behavior, guidance to tourists and environment protect.

As we can seen from the standardized route map of the revised TERA model, tourists' behavioral intention is driven by multiple psychological factors, and individual attitude, subjective norm and environment induction all have positive correlation with behavioral intention of tourists, which consistents with our hypotheses.

We can see from our research that environment induction is the most important factor affects behavioral intention of visitors in the model, and followed by attitude toward the behavior and subjective norm. In the model, curiosity satisfying, normative beliefs from relatives and friends, as well as fences are the most critical factors to attitude toward the behavior, subjective norms and environmental induction respectively. The success of changing behavioral intention of tourists lies in these key factors.

The study explores behavioral intention of tourists on a psychological perspective. It makes possible for evading responsibility attitude of some tourists who fill questionnaire by subjective will to hide implicit attitude. Eventually, the data collected in this study exists certain deviation and difficult to reflect true tourist's intention. Other research method should be implemented to improve the reliability in further study. In addition, since only tourists in Tianmushan were choose as studying subject in this empirical study, the model may not be applied to other scenic spots. And tourists from other districts can be involved in future study to perfect the model. Enlarging the scope of research objects, the future study would probe into tourist's behavior influencing factors generally so as to guide tourism administrative departments.

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