

Research on the Relationship between Soundscape Situational Perception and Overall Soundscape Satisfaction

-- Taking Phoenix Mountain in Dinghu, Zhaoqing as an Example

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Abstract: This study selects Phoenix Mountain in Dinghu, Zhaoqing, Guangdong, known as a "world-renowned longevity town," as the case study area and delves into tourists' soundscape experiences and explores the manifestations of situational perception within these scenes, in which a measurement system for soundscape situational perception was constructed and validated. Furthermore, the study analyzes the intrinsic relationship between various dimensions of situational perception and overall soundscape satisfaction. The research finds that soundscape situational perception consists of four dimensions, namely "relaxation," "association," "tranquility," and "aesthetic appeal", among which only "association" and "aesthetic appeal" significantly impact overall soundscape satisfaction, indicating that while people may not elevate their emotional responses to relaxation and tranquility, they do experience positive emotions and attitudes through quiet and natural soundscape, which significantly enhance overall satisfaction with the soundscape. This study guides forestry workers to focus more on the emotional value of forest soundscapes.

Keywords: Soundscape; Situational Perception; Overall Soundscape Satisfaction.

1. Introduction

Phoenix Mountain is located in the eastern section of the Dinghu Mountain forest ecosystem, administratively belonging to Dinghu District, Zhaoqing City, Guangdong Province. It features a typical subtropical monsoon climate with most rainfall concentrated in spring and summer, and less rain in autumn and winter. The predominant wind direction in winter is northerly, providing abundant hydrothermal resources. Its excellent climatic conditions are favorable for the growth of animals and vegetation. The region has a forest coverage rate of 90%, with continuous mountain ranges and numerous mountain streams interconnecting, presenting abundant scenes of beautiful flowers, green trees, fresh air, and crystal-clear streams. On July 18, 2018, with reference to the relevant evaluation indicators of the United Nations for longevity areas, the expert committee of the International Health Conference unanimously approved and announced that Dinghu District, Guangdong Province, be officially awarded the title of "China-Dinghu World Longevity Homeland". According to the evaluation standards of the "World Longevity Homeland," Phoenix Mountain far exceeded three mandatory indicators: there are 3,540 elderly people aged over 80, accounting for 21.80% of the total population, which is 1.45 times the standard; there are 19 centenarians, accounting for 0.117% of the total population, 1.6 times above the evaluation standard for a world longevity homeland; and the average life expectancy reaches 80.3 years, also surpassing the evaluation standard. All other ten assessment indicators met the criteria.

Dinghu District features a subtropical monsoon humid climate, with an average annual temperature of about 21.93°C

and an annual precipitation of 1637 millimeters. Its high forest coverage rate and urban residential green space provide fresh and pleasant air with high concentrations of negative oxygen ions, making it an excellent place for improving life quality and longevity benefits. The fresh air, lush vegetation, and tranquil atmosphere in the forest environment significantly alleviate psychological stress, promote emotional relaxation, and enhance physical fitness, making it the top choice for longevity and health tourism. When exploring the secrets of longevity in Phoenix Mountain, scholars have begun to explore sensory experiences beyond vision, including olfactory, auditory, and tactile sensations. Among these, the "soundscape" (such as birdsong, flowing water, and rustling leaves) creates a unique atmosphere within forest resources. Visitors can enrich their landscape perception experience through natural sounds heard via auditory senses. Being in a forest environment filled with natural sounds allows visitors to relax physically and mentally, relieve anxiety and stress, and gain beneficial psychological effects.

Phoenix Mountain shares the same lineage as Dinghu Mountain and is metaphorically referred to as the backyard garden of Dinghu Mountain. The forests in this town are home to a wealth of species, including wild higher plants, birds, reptiles, amphibians, insects, and large fungi, providing Phoenix Town with abundant natural acoustic resources such as birdsong and the rustling of leaves. The town boasts water resources like Jiulong Lake, Huangjin Gully, and Canglong Gully, where visitors can hear the rippling sounds of lake water, the cascading sound of waterfalls, and valley echoes. These sounds, combined with the tranquility of the forest, form a unique forest soundscape system. This paper takes

Pheonix Mountain in Dinghu, Zhaoqing City, Guangdong Province—known as a world-renowned longevity town—as an example. Through questionnaire surveys and investigation methods, it studies tourists' perceptual levels of the soundscape within the local forest resources, namely their evaluation of the favorability, comfort, and harmony of different sound sources in the forest. The study further explores the relationship between situational perception and soundscape satisfaction.

2. Literature Review

2.1. Literature Review of Soundscape

The concept of Soundscape was initially proposed to study the relationship between humans and their acoustic environment. Canadian musicologist and environmentalist Murray Schafer introduced in his work *The Tuning of the World* that a soundscape should be understood as "the sounds worth listening to and remembering from an aesthetic and cultural perspective in natural and urban-rural environments". The International Organization for Standardization (ISO) describes a "soundscape" as an "acoustic environment," which is the sound environment perceived, experienced, and understood by one or more persons within an environment. Kuller applied the concept of landscape from the *European Landscape Convention*, which states: "A landscape is an area, i.e., a space perceived by people, characterized by the result of the interaction between natural and human factors," to the understanding of soundscapes. He believes that a soundscape consists of the overall acoustic environment made up of both natural and artificial sound sources.

This academic field was not introduced to China until the mid-to-late 20th century and was translated into various academic terms such as "acoustic landscape," "sound scene," and "audio landscape." By the beginning of this century, a unified description of "soundscape" had been formed, which literally combines "sound" and "landscape." Cheng Zheng and Shi Yunxuan classified sounds based on their sources into natural sounds, artificial sounds, mechanical sounds, etc. Natural sounds include all sounds related to nature such as water, wind, plants, and animals; artificial sounds mainly consist of conversations, shouts, children playing, and footsteps, primarily from tourists and nearby residents engaging in forest tourism activities; mechanical sounds mainly include musical instruments from entertainment facilities, car traffic, and construction noise. People perceive these sounds through their auditory system, forming positive or negative evaluations.

Initially, research on soundscapes primarily focused on the enjoyment of musical soundscapes. Later, environmental experts applied soundscape studies to the issues of industrial and urban noise. However, with the rise of forest leisure tourism, tourists have also begun seeking multi-sensory experiences that include visual landscape experiences. Among these, auditory sense is one of the important senses for tourists participating in the travel process. Soundscape resources are crucial in enhancing visitors' perception of the locality of the travel destination, contributing to a complete and profound travel experience. Forest resources provide people with opportunities and places to connect with nature, breathe fresh air, relax, and release stress. Therefore, scholars have started to pay attention to the study and exploration of soundscapes in forests, attempting to find the evolutionary patterns of forest soundscapes.

2.2. Research on Situational Perception Measurement

Hearing is an important human sense, and the sounds people receive can induce memories and associations, thus forming auditory perception. Auditory perception refers to the conscious process of paying attention to, sensing, and perceiving internal and external information through the ears. The sound experience needs of tourists can be summarized into three levels, namely physical conception, situational, and artistic conception experience, among which the "physical conception" refers to the objectively existing sound environment and can be universally experienced and perceived by the public; secondly, "situational" and "artistic conception" are subjective-level perceptions that vary due to individual differences such as knowledge, gender, occupation, marital status, family, age, and life experiences. "Situational" often manifests as personal emotional and affective perceptions, such as whether it is pleasing or relaxing. "Artistic conception" emphasizes "imagery" and "association," allowing individuals to enter a certain state through association and achieve emotional resonance. Describing tourists' soundscape perception using physical conception perception and situational perception is based on subjective evaluation methods combined with social psychology characteristics and literary thought, aligning more closely with the scientific connotation of soundscapes while also matching the subjective perception of the receiver.

When people are in a forest facing the same landscape environment, different individuals can have varying psychological experiences, which is determined by subjective initiative and autonomy. Situational perception involves not only sensory pleasure but also deep engagement that excites and stirs the soul, representing a spiritual fusion between humans and soundscapes. Therefore, this study measures situational perception of soundscapes using four dimensions, namely relaxation, association, tranquility, and aesthetic appeal. Firstly, relaxation refers to the process by which people use appropriate methods to free themselves from negative emotions such as tension, depression, and anxiety. The opposite of such negative emotions is physical and mental relaxation and inner calm, and softness refers to sounds that are comfortable, relaxing, pleasant, and soothing. A comfortable and relaxing sound environment has become a significant factor for tourists enjoying soundscapes during their trips. Secondly, association includes the factors of "distinctive, ease to associate, and informative." Some landscapes with auditory aesthetic value in forest parks can evoke an emotional appeal and combine with rich visual spatial environments to produce perfect synesthesia, triggering tourists' resonant associations and facilitating the construction of images in their minds. Thirdly, "tranquility" in the *Modern Chinese Dictionary* is defined as quietness. "Tranquil" means stable and still without noise, while "calm" implies peacefulness and serenity. Tranquility is a feeling that can be understood but not easily put into words. When natural sounds dominate the sound sources in a forest park, as described by the Southern Dynasties poet Wang Ji in the phrase "The cicadas' noise makes the forest more silent, the birds' singing deepens the mountains' seclusion," the silence of the woods is profoundly rendered. A quiet environment allows the brain to relax, naturally eliciting a sense of simplicity and purity in tourists. Lastly, aesthetic appeal is an important dimension in the soundscape tourism perception

evaluation system, with sub-dimensions including naturalness, clarity, openness, spiritual resonance, and mellowness. Naturalness refers to the inherent natural attributes of the forest; clarity indicates the distinguishability of the overall soundscape of the forest park from other regions; mellowness means the overall soundscape sounds moisturizing and even without being harsh; openness refers to the soundscape giving a strong sense of openness; spiritual resonance means emotional resonance generated within the tourist.

2.3. Overall Soundscape Satisfaction

Soundscape conception perception focuses not only on physical attributes but also on the content perception of soundscapes. This type of perception of soundscape attributes is based on tourists' overall soundscape satisfaction evaluation from the perspective of soundscape perception. Overall soundscape satisfaction refers to the state of pleasure or disappointment that tourists feel after comparing their expectations of the destination with their actual soundscape perception upon arrival. Drawing on relevant research findings, this study uses overall soundscape satisfaction as the outcome variable for soundscape measurement.

2.4. Research Assumption

1. Construction of the Measurement System for Situational Perception

Situational perception is a mental experience that appreciates the beauty of landscape imagery through emotions and feelings, as well as the projection or induction between the "heart" and "object." Only when tourists have basic satisfaction with their physiological perception can they comprehend deeper layers of meaning from the sounds they hear, such as relaxation, association, tranquility, and aesthetic appeal. This leads to positive psychological experiences with the tourism soundscape, thereby influencing overall satisfaction with the soundscape. That is, the higher the evaluation by tourists, the greater their satisfaction. Based on the above derivation, this article assumes:

H1: Situational perception is composed of four dimensions: relaxation, association, tranquility, and aesthetic appeal.

H2: The relaxation aspect of situational perception positively impacts overall soundscape satisfaction.

H3: The association aspect of situational perception positively impacts overall soundscape satisfaction.

H4: The tranquility aspect of situational perception positively impacts overall soundscape satisfaction.

H5: The aesthetic appeal aspect of situational perception positively impacts overall soundscape satisfaction.

Based on theoretical deduction and assumptions, a research framework diagram is formed as shown in Figure 1.

and aesthetic appeal; Overall Soundscape Satisfaction

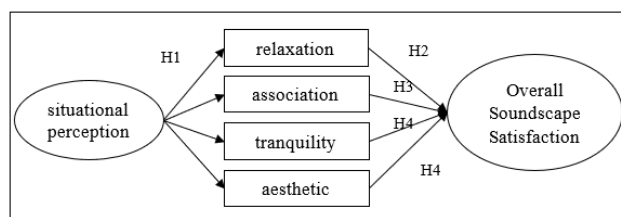


Figure 1. Research Structure

3. Research Methods

Soundscapes are an important component of tourists' sensory experiences. Using questionnaires to collect research data can effectively gather respondents' psychological feelings and internal perceptions. This article draws on relevant measurement methods and measures situational perception of soundscapes through relaxation, association, tranquility, and aesthetic appeal. Relaxation includes three observation points, namely relaxation, calmness, and softness. Association includes distinctiveness, ease of association, and informativeness. Tranquility includes simplicity and tranquility. Aesthetic appeal includes observation points such as naturalness, clarity, openness, spiritual resonance, and mellowness. The questionnaire is designed using a 5-point Likert scale ("1" indicates very dissatisfied, "2" indicates dissatisfied, "3" indicates no opinion, "4" indicates satisfied, "5" indicates very satisfied). This article distributed questionnaires at the Phoenix Mountain Forest resource site in Dinghu District, Zhaoqing City, Guangdong Province, targeting tourists visiting Phoenix Mountain Forest. A total of 400 questionnaires were distributed, with 381 returned and 360 valid questionnaires, making the effective response rate 90%. This article uses SPSS 21.0 software to analyze the collected survey data and employs AMOS 21.0 software for structural equation modeling analysis.

4. Data Analysis

4.1. Frequency Analysis

First, the sample attributes were analyzed, including gender, age, education level, and occupation. In terms of gender, there are 179 female tourists, accounting for 49.7%, and 181 male tourists, making up 50.3% of the total. Regarding age, the largest group features 147 tourists aged 31-45, accounting for 40%, and the smallest group features 17 tourists, accounting for 4.7%. In terms of education level, the largest group consists of 146 tourists with a high school education or below, accounting for 40.6%, and the smallest group consists of 18 tourists with a master's degree or higher, accounting for 5%. Occupationally, the largest group consists of 25 industrial workers, accounting for 25%, and the smallest group consists of 8 farmers, accounting for 2.2%.

4.2. Mean Analysis

A mean analysis of the items in the data was conducted, and the results are shown in Table 1."

From Table 1, it can be observed that most observation points in the four dimensions of "relaxation," "association," "tranquility," and "aesthetic appeal" have reached a "satisfactory" level. Only the observation points of "simplicity," "clarity," "spiritual resonance," and "mellowness" have not reached the "satisfactory" level but are close to it. The mean results indicate that Phoenix Mountain, as a region known for its longevity, receives generally positive perception evaluations from tourists regarding its forest soundscape, providing high situational perception value. Additionally, the overall satisfaction level of tourists with the soundscape has reached a "satisfactory" level."

Table 1. Mean Scores of Tourists' Soundscape Evaluation

Dimensions	Sub-dimensions	Questions	Mean	N	standard deviation
Relaxation	relaxation	The sounds in the forest park make me feel physically and mentally relaxed.	4.10	360	0.673
	calmness	The sounds in the forest park bring a sense of inner calm to me.	4.16	360	0.705
	softness	The sounds in the forest park make me feel comfortable and pleasant.	4.14	360	0.730
Association	distinctiveness	The sounds in the forest park have a gentle and fresh characteristic.	4.01	360	0.731
	ease of association	The sounds in the forest park evoke images of enchanting scenery in my mind.	4.04	360	2.223
	informativeness	The sounds in the forest park reflect a vibrant and lively feature.	4.10	360	0.723
Tranquility	simplicity	The sounds in the forest park are simple and free from impurities.	3.91	360	0.848
	tranquility	I can experience the feeling described as "the more cicadas chirp, the quieter the forest feels; the more birds sing, the more secluded the mountains appear."	4.10	360	0.767
Aesthetic appeal	naturalness	The sounds in the forest park have a strong natural quality.	4.09	360	0.735
	clarity	The distinguishability of the sounds here from those in other areas is extremely high.	3.81	360	0.855
	openness	The sounds in the forest park give me a strong sense of openness and expansiveness.	4.03	360	0.759
	spiritual resonance	The sounds in the forest park resonate with my inner emotions.	3.90	360	0.847
	mellowness	The sounds in the forest park are mellow, even, and not harsh to the ears.	3.97	360	0.788
Overall Soundscape Satisfaction	/	Overall Soundscape Satisfaction	4.09	360	0.672

Source: Compiled from the analysis using SPSS 21.0 software in this study

4.3. Reliability and Validity Analysis

In this study, the overall Cronbach's α reliability coefficient

of situational perception reached 0.836, and the Cronbach's α reliability coefficient of each dimension exceeded 0.8 as detailed in table 2, indicating that the scale has good reliability.

Table 2. Cronbach's α reliability coefficient table

measurement
situational perception
relaxation
association
tranquility
aesthetic

Source: Sorted from SPSS21.0 software analysis of this study.

In this study, the discriminant validity of the scale was measured by the dimension reduction method, and the results of Table 3 were analyzed. It was found that the KMO value of the overall scale was 0.913, the significance of the Bartlett spherical test result was 0.000 ($P < 0.001$), and the P values were all less than 0.05, all reaching a significant level, indicating that each item has a good degree of differentiation.

In this study, the discriminant validity of the scale was measured through dimensionality reduction methods. The results presented in Table 3 show that the overall KMO value of the scale is 0.913, and the Bartlett's test of sphericity has a significance level of 0.000 ($P < 0.001$). All P-values are less than 0.05, reaching significant levels, indicating that each item has good discriminability.

Table 3. KMO and Bartlett 's tests

Kaiser-Meyer-Olkin measure of sampling adequacy		0.913
Bartlett's sphericity test	Approximate chi-square	1943.663
	df	78
	Sig.	0.000

Source: Sorted from SPSS21.0 software analysis of this study.

Construct validity primarily examines the contribution of each item to its construct. Using principal component analysis and maximum orthogonal rotation, 13 factors were extracted

with eigenvalues greater than 1. As shown in Table 4, the cumulative contribution rate of the first two factors is 53.904%, exceeding 50%, with the first factor accounting for

45.156%, which is below 50%. This indicates that the scale has good structural validity and closely aligns with the latent

variables set in the theoretical model.

Table 4. Total variance explained

component	Initial eigenvalue			Extract Square and Load		
	Total	variance %	accumulation %	Total	variance %	accumulation%
1	5.870	45.156	45.156	5.870	45.156	45.156
2	1.137	8.748	53.904	1.137	8.748	53.904
3	0.925	7.117	61.021			
4	0.808	6.217	67.238			
5	0.695	5.348	72.586			
6	0.636	4.892	77.478			
7	0.597	4.594	82.072			
8	0.474	3.649	85.721			
9	0.470	3.612	89.333			
10	0.404	3.105	92.438			
11	0.356	2.741	95.178			
12	0.341	2.623	97.802			
13	0.286	2.198	100.000			

Extraction method: principal component analysis.

4.4. Structural Equation Analysis

This study focuses on the Phenix Mountain Forest in Zhaoqing, examining visitors' perceptual measurements of the forest's soundscape and their relationship with overall satisfaction. The model construction and analysis results are shown in Figure 2 (where F1 represents "Relaxation," F2 represents "Association," F3 represents "Tranquility," and F4 represents "Aesthetic Appeal"). Through the estimation of

non-standardized regression coefficients and their significance tests, the model successfully converged, yielding the results in Table 5. The data in the table indicate that all relationships between the observed variables and latent variables are significant, supporting the hypothesis that the situational perception in soundscape measurement is composed of four dimensions; thus, Hypothesis H1 is confirmed.

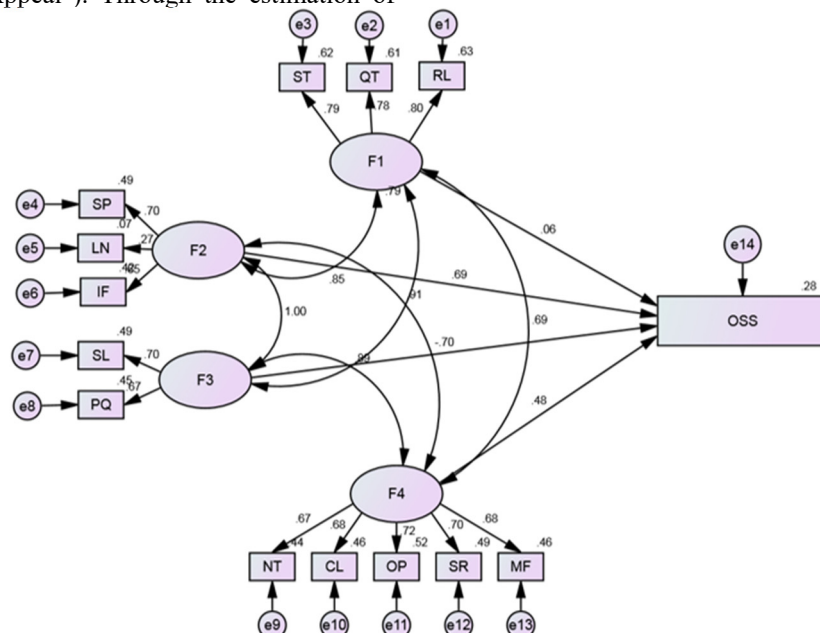


Figure 2. Diagram of standardized estimation model

Source: Sorted from AMOS21.0 software analysis of this study.

Furthermore, the data analysis revealed the relationships between the four dimensions of situational perception and overall soundscape satisfaction. Firstly, the path relationship between "Relaxation" and "Overall Soundscape Satisfaction" had a path significance of 0.71, exceeding the significance criterion of 0.05, indicating that this path is not significant, or

that, Hypothesis H2 is not supported. Secondly, the path relationship between "Association" and "Overall Soundscape Satisfaction" had a standardized path coefficient of 0.695, suggesting that this path relationship is significant; therefore, Hypothesis H3 is supported. Thirdly, the path relationship between "Tranquility" and "Overall Soundscape Satisfaction"

had a path significance of 0.062, exceeding the significance criterion of 0.05, indicating that this path is not significant; thus, Hypothesis H4 is not supported. Lastly, the path relationship between "Aesthetic Appeal" and "Overall

Soundscape Satisfaction" had a path significance of 0.026, which is less than the significance criterion of 0.05, indicating that this path relationship is significant; hence, Hypothesis H5 is supported.

Table 5. Regression coefficients of the model

Path Relationship			Estimate	S.E.	C.R.	P	Label	Standardized Regression Weights
IF	<---	F2	1					0.646
LN	<---	F2	1.271	0.271	4.696	***	par_1	0.267
SP	<---	F2	1.095	0.098	11.207	***	par_2	0.700
PQ	<---	F3	1					0.668
SL	<---	F3	1.163	0.103	11.34	***	par_3	0.703
ST	<---	F1	1					0.787
QT	<---	F1	0.957	0.067	14.245	***	par_4	0.778
RL	<---	F1	0.932	0.064	14.637	***	par_5	0.795
OSS	<---	F1	0.071	0.19	0.372	0.710	par_6	0.060
OSS	<---	F2	1					0.695
OSS	<---	F3	-0.919	0.492	-1.869	0.062	par_7	-0.700
SR	<---	F4	1					0.702
OP	<---	F4	0.917	0.073	12.534	***	par_11	0.718
CL	<---	F4	0.981	0.084	11.616	***	par_12	0.682
NT	<---	F4	0.825	0.074	11.197	***	par_13	0.667
MF	<---	F4	0.9	0.078	11.552	***	par_17	0.679
OSS	<---	F4	0.539	0.324	1.666	0.026	par_18	0.477

Source: Compiled from the analysis of AMOS21.0 software

5. Conclusion and Implications

5.1. Main Research Conclusion

This study developed an evaluation scale for forest visitors' situational perception of soundscape based on a review of relevant literature and the measurement of situational perception in the Phoenix Mountain Forest in Dinghu, Zhaoqing. Situational perception is based on sensory pleasure, deeply engaging and exciting the soul. This paper verifies through structural equation analysis that the situational perception of soundscape can be measured through four dimensions: "Relaxation," "Association," "Tranquility," and "Aesthetic Appeal." Therefore, the situational perception of soundscape can be described as follows: Through the acquisition of soundscape, it enables individuals to achieve physical and mental relaxation leading to inner peace, evokes images of enchanting and refreshing comfort, and produces emotional resonance, entering a state of self-forgetfulness. The tranquil and natural forest soundscape is pleasant and comfortable, fresh and pure, devoid of any extraneous noise and simple and serene. Such sounds can induce relaxation, which in turn brings inner peace. The sounds of the forest wind, birds, and nature also convey the vibrant vitality of nature. Under the influence of this soundscape, people will associate with more beautiful imagery and experience emotional resonance, soothing their own souls.

Additionally, this study targeted tourists in the Phoenix Mountain Forest in Dinghu, Zhaoqing to investigate the path relationships between tourists' perceptions of relaxation, association, tranquility, and aesthetic appeal from the soundscape in the Phoenix Mountain Forest and overall soundscape satisfaction. Initially, a hypothetical relationship model between the four dimensions of situational perception

of the soundscape and overall soundscape satisfaction was constructed. The non-standardized validation of the relationship paths was conducted through a structural equation model, revealing that the path relationships between "association" and "overall soundscape satisfaction," as well as between "aesthetic appeal" and "overall soundscape satisfaction," were significantly established. Conversely, the path relationships between "relaxation" and "overall soundscape satisfaction," as well as between "tranquility" and "overall soundscape satisfaction," within situational perception were not established.

The path relationship between "Association" and "Overall Soundscape Satisfaction" has been validated, indicating that tourists in a comfortable and pleasant forest experience the fresh and gentle soundscape of the forest, which leads them to associate with delightful scenic imagery and evokes a vibrant attitude towards life. This positive emotion can result in higher overall soundscape satisfaction. The "Aesthetic Appeal" positively influences "Overall Soundscape Satisfaction," suggesting that the natural and clear soundscape of the forest can bring about a sense of relaxation and openness, nourishing the psyche and producing emotional resonance, thereby enhancing people's satisfaction with their soundscape appreciation. In other words, when the aesthetic appeal of the forest soundscape is higher, people achieve greater satisfaction in their perception of the soundscape.

The path relationship between "Relaxation" and "Overall Soundscape Satisfaction" within situational perception is not established, indicating that the sense of relaxation in a forest soundscape does not necessarily significantly enhance overall soundscape satisfaction. This is because relaxation only induces a feeling of looseness and may not necessarily lead to

a positive emotional state, thus it cannot directly affect satisfaction with soundscape perception. Similarly, "Tranquility" also provides a sense of calm and peacefulness in the forest soundscape, but this feeling does not elevate to the levels of emotion, attitude, and sentiment; it remains at a superficial level of situational perception and therefore cannot effectively enhance overall soundscape satisfaction.

5.2. Implications and Outlook on Future Research

During the soundscape survey in Phoenix Mountain Forest, it was found that people generally have a positive evaluation of the natural soundscape of Phoenix Mountain, indicating that the overall quality of the forest soundscape resources is excellent. However, the average value of situational perception remains at the level of "satisfied" and has not reached the level of "very satisfied," indicating that there is still room for improvement in the forest soundscape of Phoenix Mountain. Particularly, the average value of "reputation" is generally low, which requires managers to pay attention to artificial improvement measures to further enhance the uniqueness and recognizability of the region's forest. This could include adapting forest vegetation and stream channels to local conditions, reducing human activities such as road construction and exploration, and maintaining a more natural state of the forest. In recent years, with the growing reputation of Phoenix Mountain as a "world-renowned longevity town," an increasing number of tourists have come for leisure travel, objectively increasing the density of tourists in the area and human activities, which has a certain impact on the soundscape of the area. Therefore, scientific management of tourist capacity is needed to maintain a reasonable and scientific flow of tourists. With the promotion of the rural revitalization strategy in recent years, large-scale construction projects have begun in the villages within the Phoenix Mountain area. To maintain the tranquility and relaxation of its forest soundscape, it is necessary to construct modern rural villages for forest health preservation, taking full advantage of the high forest coverage in the area.

This study confirms that the dimensions of "Association" and "Aesthetic Appeal" significantly influence overall soundscape satisfaction, indicating that the satisfaction of high-level emotions and mental states in forest soundscapes is crucial. This finding provides a new theoretical supplement for future research on situational perception of forest soundscapes and also poses a new question: what is the mechanism by which situational perception affects overall soundscape satisfaction?

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