

## Article

# Tourist Crowding versus Service Quality: Impacting Mechanism of Tourist Satisfaction in World Natural Heritage Sites from the Mountain Sanqingshan National Park, China

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**Abstract:** World Heritage Sites (WHS) possess outstanding universal value (OUV) centered on science and aesthetics, and the large scale of tourism has a certain influence on sustainable development, which will have some degree influence on the quality of tourist service and experience. Taking the World Natural Heritage Site Mount Sanqingshan National Park in China as a case, we collected 535 samples of tourists and used structural equation modeling as a methodology to construct a theoretical framework from the perspective of tourists' perception, including tourism crowding (functional crowding, personal crowding, and social crowding), service quality (interpretation, goods, commuting, accommodation, and catering), tourists' satisfaction, and OUV attractiveness as intermediary variables. The results were: (1) tourist crowding has a substantial negative influence on satisfaction, and the negative influence on OUV attractiveness is not tenable; (2) service quality has a substantial positive impact on OUV attractiveness and satisfaction; (3) the tourists' perception of OUV attractiveness has a mediating influence on service quality and satisfaction, but there is no mediating impact on tourism crowding and satisfaction; (4) this paper puts forward the SCA-S (service, crowding, attractiveness, and satisfaction) framework of WHS, and explores impact factors and mechanisms of visitor satisfaction of WHS from different aspects. The relevant research conclusions have some theoretical value and practical significance for the interpretation and display of heritage value, improved service quality, and tourism experience, and they are conducive to protecting WHS.

**Keywords:** tourist crowding; service quality; outstanding universal value; satisfaction; World Heritage Sites



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## 1. Introduction

As the elite cultural treasure and/or natural wonder of humanity, WHS are the legacy of the classic creativity of ancestors and the masterpieces of God. They are irreplaceable and rare treasures of mankind, an important bridge for the dialogue and exchange of different civilizations, and have OUV for all mankind. WHS are most in need of protection for their esteemed value, which is also a fundamental necessity of the Convention Concerning the Protection of World Cultural and Natural Heritage. Concurrently, the majority of WHS serve as emblematic focal points for tourism and regional economic growth, possessing significant cultural, scientific, and socio-economic value [1,2]. WHS status is akin to an international brand. Once a site is successfully nominated by UNESCO to become a WHS, it often signifies that it will become a sought-after tourist destination both domestically and internationally, thereby precipitating a rapid development in the tourism industry. As of August 2024, 1223 World Heritage Sites have been approved in the world and distributed across 169 countries and regions, including 59 WHS in the People's Republic of China, which is a well-deserved WHS country. The fast development of heritage tourism

in China has brought great pressure, and even threats to the heritage belt, especially to sustainable development and heritage conservation of the World Natural Heritage Sites [3]. In addition, China's large population, strong tourism demand since the Reform and Opening Up in 1978, and the habit of traveling during holidays have undoubtedly contributed to the surge in tourist numbers at WHS. Caust et al. (2017) questioned whether it is a blessing or a curse for developing countries in Asia to be listed as WHS [4]. For example, Mount Sanqingshan National Park (MSNP) successfully applied for WHS status, and the number of tourists soared from 580,000 in 2002 to 28.98 million in 2023, which undoubtedly applied huge pressure to the sustainable development of MSNP.

It can be said that well-developed WHS often face challenges such as overcrowding, capacity overload, inadequate tourism facilities, and excessive commercialization, which pose significant issues to the protection of OUV and WHS [5–7]. In particular, overcrowding and over-tourism at WHS have seriously affected the features of tourism experience and satisfaction, reducing OUV attractiveness and hindering the healthy development of WHS tourism [8–10]. As an important stakeholder in the tourism activities of WHS, tourists' attitudes, behaviors, and quality of experience have a significant impact on WHS' protection and sustainable development. Tourists are not only participants and contributors to heritage conservation, but also supervisors and beneficiaries. Therefore, it is of great value to study tourists' perception of tourism crowding, service quality, destination attractiveness, and overall satisfaction. This is the starting point and focus of this study.

Tourists at WHS are naturally associated with conservation and sustainable development, and Kempniak et al. (2017) studied the complex relationship between tourism conflict events, heritage tourist motivation, experience quality and satisfaction, and WHS' tourism development [11]. Scholars have studied the attitudes and behavioral intentions of heritage tourism visitors from the perspectives of tourist congestion, tourism carrying capacity, OUV attraction, destination attachment, and tourist satisfaction [9,10,12–14]. Based on OUV attractiveness, its outstanding value and important status are constantly emphasized and manifested [15,16]. From the perspective of brand marketing, the popularity of WHS can attract tourists and generate place identity, especially when open-air tourist attractions are appreciated by tourists, and it performs an important role in destination loyalty [11,15]. It can be said that the attraction of WHS has a very optimistic impact on destination attachment, which facilitates the clarification of OUV and boosts tourists' satisfaction [17–21]. In addition, relevant scholars have conducted a series of studies from the perspectives of tourist value perception, service quality, satisfaction, environmental behavior, and heritage conservation, analyzing tourists' multi-dimensional perception of WHS. Tourism is an empirical pursuit and emotional procedure, and tourists' loyalty plays a certain role in the protection of WHS [22]. Tourism crowding is a valuable research topic in environmental psychology. Relevant research results show that overcrowding and over-tourism lead to a decrease in the quality of tourists' experience, downgrade destinations' attractiveness, and weaken tourists' satisfaction, which is not conducive to WHS protection and healthy development [12,13,23–27]. It can be said that tourist congestion is an important sign of tourists' experience quality, and it manifests in the overloading of tourist capacity and in increased negative impacts, especially in popular tourist destinations and hotspot WHS [5,9,10,23,28–30]. Tourism service quality is a key factor affecting tourists' experience, satisfaction, and overall impression of a destination. When tourists believe that they are getting value for money and the trip is worthwhile, this will stimulate positive emotions, generate destination identification, and enhance tourists' satisfaction, which is beneficial for the OUV dissemination of WHS, responsible environmental behavior, and sustainable development [31–35]. At the same time, OUV as the charm of WHS has a strong attraction ability that has a definite effect on satisfaction, and the conservation and sustainable development of WHS [2,36]. Research results of relevant scholars show that the uniqueness, attractiveness, and exhibition of aesthetic, cultural, educational, scientific, and ecological values of WHS further highlight the core position of OUV [37,38]. The relevant research results show that OUV attractiveness has a crucial effect on tourists' destination loyalty,

perceived value, destination attachment, environmental awareness behavior, and heritage protection attitudes and behavior [14,19,39,40].

Satisfaction, as a psychological state, is not only a cognitive judgment but also an emotional attitude [41,42]. Tourism satisfaction is a valuation of the comparison between tourists' experience and expectations. Especially since the 21st century, with the trend of "tourist-centered" development in destinations, satisfaction has attracted great attention [41,43]. Tourists' satisfaction is a comprehensive result affected by various factors, such as destination image and attractiveness, tourist congestion, service quality, scenic area management level, and even the level of tourist involvement and travel preferences [44–50]. If the overall quality of tourists' experience exceeds expectations, it will have a certain impact on satisfaction, increasing tourists' loyalty and revisiting rates, which is more conducive to the interpretation of WHS' values and the possibility of promoting the economic growth of tourism [42,51]. From a systematic perspective, satisfaction encompasses the entire process of tourists' travel, positively influencing the quality of travel experience, value perception, and motivation realization. This is beneficial for OUV's interpretation and the sustainable development of WHS [52–54].

We have constructed a conceptual framework of tourists' perception based on tourists' satisfaction in WHS. Using structural equation modeling techniques and relying on MSNP, we investigate the relationship between, and impact mechanism of, tourist crowding, service quality, and OUV's effect on tourist satisfaction, in order to enhance tourists' experience quality, and conservation and management in WHS. In the following sections, we conduct a literature review on related concepts, propose research hypotheses, and construct a conceptual framework. The second part mainly introduces the research methods, case studies, data collection, and examination. To conclude, we examine the empirical outcomes, summarize the research conclusions, and propose research prospects.

## 2. Theoretical Construction

### 2.1. Tourist Crowding

As a significant research topic in environmental psychology, crowding mainly refers to the personal feeling of intensity and spatial constraints, which are influenced by many factors including physical, social, and personal aspects. Overcrowding can lead to extreme physiological arousal, listless communal behavior, and even mobility limitations, with environmental stimuli and specific behavioral responses becoming the focus of attention [24–27]. With the development of vigorous outdoor leisure since the mid-19th century, research on crowding in the context of tourism has received widespread attention. Especially in the 21st century, the large-scale development of mass tourism worldwide led to overcrowding, which has become a constraint factor in tourism development, resulting in a decrease of environmental quality of scenic spots and tourists' experience, which have posed a huge challenge to the protection of WHS, and even threatened and undermined their sustainable development [7,55,56]. Tourist congestion not only occurs within scenic spots, but also in large-scale traffic jams between tourist source areas and destinations, and even on short-distance trips within destinations. The seasonal differences in tourism activities lead to large-scale travel during peak seasons and related holidays, including in popular tourist destinations such as WHS, national parks, and world geological parks, which can easily lead to tourism overload and tourist congestion [9,12]. There are considerable differences in tourist crowding, mainly due to individuals, the spatial scene, and the crowd environment, which may have a negative impact on tourists' emotions and satisfaction, and activate adjustments such as product transformation, replacement, rationalization, and even complaints and protests [12,57,58]. Relying on the theory of expectation, social interference, stimulus overload, and density reinforcement, relevant scholars have conducted research on meaning, measurements, mechanisms, affecting issues, and tourism crowding [10,13,28,55,59]. The perception of tourist crowding is a multidimensional concept, generally considered to be a complete assessment of the surrounding background from physiological and psychological perspectives. Physical congestion and social

crowding were suggested by Stokols [60]. Perception of physical crowding is about the perception of spatial inadequacy caused by non-personal factors (e.g., tourism resources and infrastructure), while perception of social crowding is about the perception of spatial inadequacy caused by the number of people and social interaction in the environmental context.

The crowded feeling of leisure recreation was divided into physical, behavioral, and goal crowding [61]. Crowding is a concept of evaluative attitude, and dense crowding may be accompanied by negative evaluations, while intense psychological incentives may affect crowding discernments when crossing personal boundaries [25,30,62]. Positive terms (happy, good, relaxed, pleasant, satisfied) and negative terms (crazy, angry, irritated) were used to examine the different feelings evoked by crowding, and it was found that crowding does not always lead to a “severe” result [58]. It is speculated that the crowding of people towards the attraction of the destination may affect tourists’ emotions [23]. Shi et al. (2017) assessed destinations’ attractiveness based on lots of photographs displayed by visitors on social media platforms to examine the influence of crowding on visitors’ emotions, and observed that crowding leads to optimistic feelings [57]. Research indicates that visitor congestion and over-tourism have a substantial impact on destinations’ attractiveness and attachment [12,13]. Tourists’ crowding reduces the optimistic effect of previous tourists on current tourists, which means that crowding may weaken destinations’ attractiveness [6]. The increase in crowding may lead to a decrease in tourists’ expectations and satisfaction, thereby avoiding negative evaluations of crowding, which may weaken the enjoyment of the destination experience and have a negative impact on the destination [62,63]. It can be said that the perception of tourist groups has a significant effect on visitors’ satisfaction, usually resulting in three main outcomes: negative correlation, positive correlation, and no correlation [10,23,28]. For example, overcrowding has a negative impact on satisfaction and loyalty, or as the perception of congestion rises, may decrease tourist satisfaction [64], or the congestion has no significant impact on satisfaction [65]. Meanwhile, tourist crowding may reduce the quality of visitors’ experience, varying according to various phases of the tourism destination’s life cycle, particularly in well-known WHS [5,9,29,30].

## 2.2. Service Quality

Grönroos proposed a model (GM) of observed service quality according to the concept of the customer-oriented management decision, which regards service quality as a subjective evaluation of customers’ expectations, and these ultimately determine how they perceive quality and satisfaction [66]. Zeithaml suggested the customer value theory, which states that customer value is an in-depth assessment of product effectiveness related to perceived rewards [67]. The American customer satisfaction index (ACSI) was developed according to a performance measurement to estimate service quality and customer experience [68]. The hierarchical service quality model (HSQM) was developed, which included interaction, physical environment, and outcome quality, with quality assessment based on authenticity, resonance, and empathy for each sub dimension [69]. Parasuraman et al. put forward the concept of service quality development, which is determined by ten factors, including communication, ability, politeness, credibility, reliability, responsiveness, security, and understanding customers, and developed a five-dimensional SERVQUAL assessment instrument with 22 indicators, which is extensively applied to calculate the quality of marketing and tourist services, and these factors affect customers’ perception of service quality [70,71]. Service quality plays a crucial function in ensuring visitors’ satisfaction, maintainability, retention rate, and the overall image and attractiveness of a destination, such as the scenic spot environment and accessibility of the destination, as well as the convenience and comfort of relevant tourism facilities, which have a significant effect on the experience and evaluation of service quality and overall satisfaction [31–33].

Service quality is the assessment of service performance enjoyed by tourists in a specific place. People think that if the service quality is high somewhere, they are more willing to spend time, money, and energy there. Therefore, people who take a positive view of service quality should form a strong sense of value by comparing their benefits or sacrifices

when consuming products and services [34,35]. Measuring the quality of tourism services should not only reflect service effect, but also include the emotional procedure of experiencing tourism services. It can be said that service quality, tourism experience, and lasting participation will affect tourists' behavioral intentions, which shows that tourists' behavioral intentions are influenced by the comprehensive effect of service quality perception and satisfaction [72–74]. The most direct impact of tourist experience quality is tourists' functional experience, which mainly includes the interaction of tourist motivation and behavior, destination attraction, tourist service facilities, and the level of destination management [75]. While visitors discover good value for money, they will develop positive feelings about the tourism destination, such as destination identity and even attachment, so as to improve tourist satisfaction [76–78]. According to the theory of service quality evaluation systems SERVQUAL and HISTOQUAL (historical quality model), and united with the properties of cultural heritage tourism, the HERITQUAL framework was developed for evaluating service quality in cultural heritage destinations, including response, carrying capacity, hardware condition, communication, and local participation [79]. Relevant scholars' research shows that accessibility of destination, efficiency of interpretation, realization of psychological demands, and expressive feelings are important factors affecting tourists' place attachment, environmental responsibility behavior, and satisfaction, which may alter behavioral intentions, further World Heritage protection, and be conducive to the sustainable development of WHS [19,80–82].

### 2.3. OUV Attractiveness

The WHS has an important cultural or natural influence, is a nationally outstanding cultural or natural holy land, and has universal significance for current and prospect generations for all mankind. OUV is to be selected as the core criterion of the WHS, including 10 evaluation criteria. It can be regarded as a complete WHS only if it has integrity, authenticity, and adequate protection and managerial organization capabilities [1]. World Natural Heritage Sites are natural resorts with scientific, conservation, and ecological benefits or natural areas with OUV, which represent the most intuitive expression of the attractiveness of WHS and represent an important catalyst for tourism growth [2,36]. The WHS has the key value of OUV, which is in the core position in terms of emotional experience and service functions [83]. Destination attraction is a significant representation of how a destination meets personal needs, including core and ancillary attractiveness, and is the main driving force for tourists [84–86]. The core quality attribute refers to the unique natural and human capital, the prominence of the OUV, and the extended qualities with regard to functional characteristics such as enjoyable tourism amenities, care services, and the well-organized management of the WHS. Generally, these accompany each other and together increase the attractiveness of WHS for tourists. The visitors' OUV perception in the study revealed that aesthetic, cultural, instructional, ecological, and spiritual values of World Heritage can contribute to improving cultural heritage protection [15]. Balar et al. (2017) measured the OUV of the WHS system and tourists' views on its OUV, including significance, uniqueness, effect, heritage value, and attractiveness [87].

The uniqueness of the destination and the tourism attraction system have comprehensive impacts on tourists, and destination attractiveness especially plays a key role in satisfaction, and through value creation of WHS it can better attract potential tourists [37,38]. The "extraordinary" or "wonderful" symbolic features of WHS have great attraction for tourists, which is also a common achievement beyond heritage protection itself [88]. For WHS, OUV has a major effect on visitors. When OUV protection is inadequate, the interpretation is poor, intercultural communication is difficult, and the barrier between globalization and localization leads to the loss of perceived value and affects the quality of tourists' experience [62,64,89]. Scholars have examined the structural correlation between destination appearance, tourist satisfaction, and vacation loyalty, and have shown that the natural and historical attractiveness of destinations has profound effects on satisfaction and overall loyalty [90]. Study results show that the embodied perception of attractiveness can

improve destination attachment, tourism value perception, and environmentally responsible behavior, and change tourists' attitudes and improve tourists' satisfaction [91,92]. As the essential charm of WHS, OUV plays a critical role in the quality of visitor experience, place attachment, and satisfaction. At the same time, tourists' satisfaction, interaction, and repeat visits will also enhance the attraction of WHS [11,15,19]. Tourism crowding will reduce the attractiveness of tourism destinations, and destination attractiveness can enhance destination identity, positive reputation, and willingness to revisit [6].

#### 2.4. Tourist Satisfaction

Satisfaction is an individual's expressive response to service quality, and is a comprehensive result of the conflict between pre-purchase expectations and post-purchase performance [41]. Satisfaction is a cognitive judgment and an emotional state [42]. Satisfaction is a psychological state, which is an assessment of a person's satisfaction with their service experience. If the actual experience meets or exceeds expectations, one will be satisfied, and vice versa [45,46,93]. Tourism satisfaction is the product of the interaction between visitors' experience in the destination and their expectations of the destination [43]. Tourist satisfaction describes the degree of satisfaction by comparing visitors' feelings with their original expectations. It is the most popular measure for evaluating the features of leisure and recreational experiences, including the cognitive dissonance theory, demand theory, and marginal utility theory [41]. Relevant scholars who have studied destination marketing, outdoor recreation, and natural-cultural heritage, driven by service quality theory and satisfaction theory, gradually applied the customer satisfaction theory to the tourism industry. The concept of visitors' satisfaction in tourism destinations has obtained more emphasis and reflects the novel tendency of tourist-centered tourism management in the 21st century [43]. Tourist satisfaction is predicated on the positive impact of tourists' expectations and actual experiences, representing a perception or sensation of "positivity" [44]. Satisfaction is the basis for evaluating tourist attractions, tourism products, and tourism services. Testing is typically conducted through the utilization of perceived overall performance and expectation models. It primarily involves a comparison with preferred tourism leisure experiences and the quality of experiences post-tourism, which will influence the selection of destinations, product consumption on the journey, and decision to revisit [44,45,47,48]. The destination image has an important effect on satisfaction. An optimistic impression can lead to greater satisfaction, thereby enhancing tourists' loyalty to the destination. For instance, satisfaction can significantly affect the possibility of revisiting and recommending, thus contributing to general economic development [42,51,94]. The essential determinants of satisfaction configuration include relationships, assurance of expected returns, and a sense of fairness, which play a significant role in forecasting behavioral intentions, community engagement, environmental conservation, World Heritage protection actions, and support for tourism development [95–98].

With the emergence of ecotourism and WHS tourism, the study of tourist satisfaction provides a new perspective on environmental carrying capacity, the basic assumption being that as the amount of visitors increases, congestion rises, inducing a decline in tourist satisfaction. At the same time, according to the comprehensive evaluation of destination attraction on tourists' cognition, when the evaluation result exceeds the original expectation, according to the theory of "expectation inconsistency", individuals are pleased with the tourist spot. Tourists' satisfaction with the quality of services provided at WHS is closely correlated with their perception of destination value, environmental behavior, and leisure experiences, particularly in relation to social, physical, and life satisfaction [99–101]. Relevant researchers have examined the comprehensive impact of visitor satisfaction and dissatisfaction, including tourism scale and team familiarity, different types of service, interpretation system efficiency, tourism experience quality, and destination crowding [53,54]. Neal et al. (2008) analyzed tourists' satisfaction from a systemic perspective, where satisfaction encompassed the pre-visit, visit, and post-visit phases, covering satisfaction with destination services, travel commuting, overall effectiveness, and over-

all cost [52]. Chen et al. (2010) investigated the comprehensive effect of visitors in WHS from the aspects of visitor experience, tourism motivation, satisfaction, and behavioral intent [82]. The quality of tourism experience is not only an assessment of the goodness or badness of tourists' travel experience but also a precursor variable for tourists' satisfaction [53,54]. The studies and findings regarding tourists' satisfaction hold significant theoretical value and practical significance for elucidating the experiences of OUV and interpretation of sustainable development.

### 2.5. Theoretical Model

According to the aforementioned studies and theoretical constructions, the ensuing pertinent hypotheses and a theoretical framework were proposed (Figure 1).

**Hypothesis 1 (H1).** *Tourist crowding has significant negative influence on OUV attractiveness.*

**Hypothesis 2 (H2).** *Tourist crowding has significant negative influence on tourist satisfaction.*

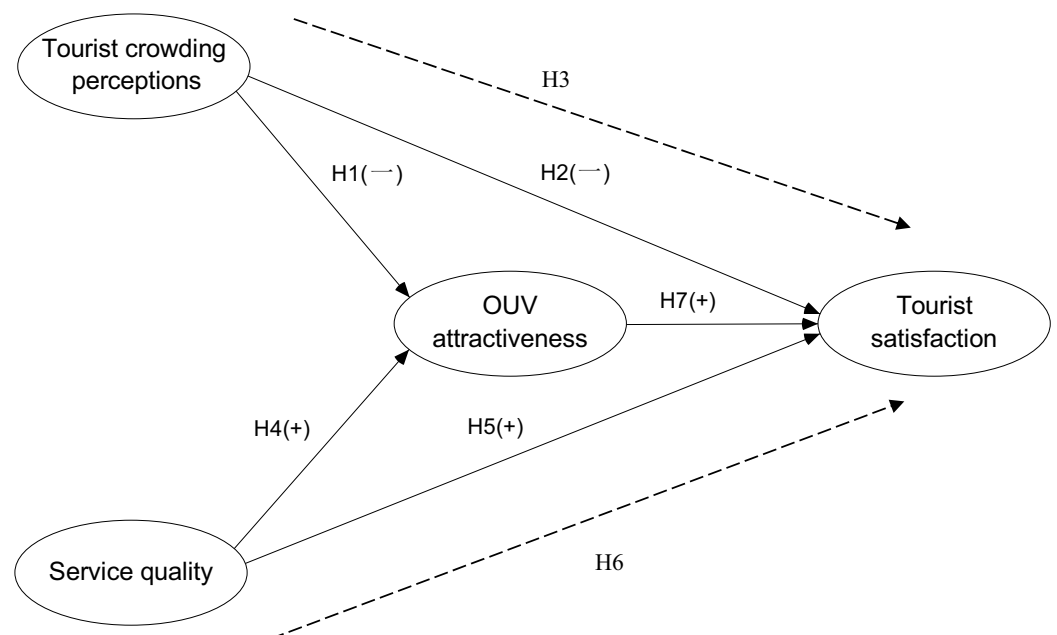
**Hypothesis 3 (H3).** *Tourist crowding is indirectly related to tourist satisfaction through OUV attractiveness.*

**Hypothesis 4 (H4).** *Service quality has significant positive influence on OUV attractiveness.*

**Hypothesis 5 (H5).** *Service quality has significant positive influence on tourist satisfaction.*

**Hypothesis 6 (H6).** *Service quality is indirectly connected to tourist satisfaction through OUV attractiveness.*

**Hypothesis 7 (H7).** *OUV attractiveness has significant positive influence on tourist satisfaction.*



**Figure 1.** Theoretical framework. Note:  $\longrightarrow$  direct impact;  $\dashrightarrow$  indirect impact.

## 3. Methodology

### 3.1. Research Cases

The Mount Sanqingshan National Park (MSNP) is located in Jiangxi Province, China. Its entire region is 229.5 square kilometers, and the maximum length is 1819.9 m. It combines national scenic spots, world natural heritage sites, world geological parks, and top

national tourist attractions (Figure 2). It is named after the towering peaks of Yujing, Yuxu, and Yuhua, which resemble Taoism's three supreme deities, Yuqing, Shangqing, and Taiqing, a famous Taoist mountain that has been culturally infiltrated for thousands of years. In particular, the MSNP was listed as a WHS by UNESCO (United Nations Educational, Scientific and Cultural Organization), which has attracted more attention at home and abroad. The UNESCO World Heritage Committee believes that the MSNP is of OUV. It displays unique granite pillars and peaks. The combination of lifelike granite shaped stones, rich ecological vegetation, and the wonders of climate change in the near and far create a unique landscape in the world, presenting fascinating natural beauty. “揽胜遍五岳, 绝景在三清” (“When we visited the most famous mountains in China such as Mount Taishan, Huashan and so on, we found the most beautiful scenery in MSNP”), said Shi Su, who was one of the most famous poets of the Song Dynasty (960–1279) in China. Since the onset of the 21st century, the tourism industry has experienced rapid expansion, attracting a substantial influx of domestic and international visitors, and generating significant economic benefits. By 2023, the number of tourists and tourist revenue of MSNP had skyrocketed to 28.98 million and 26.62 billion CNR (CNR, Chinese Yuan), respectively (Figure 3). At the same time, this brought enormous pressure to the WHS' protection and forest ecosystem overload, unavoidably leading to issues of overcrowding and excessive tourism, and also placing higher demands on tourism service quality. This may have had a certain impact on the attractiveness of OUV and tourist satisfaction, as well as posing challenges to the sustainable development of WHS; selecting the MSNP as a case study is, therefore, acceptable and appropriate.

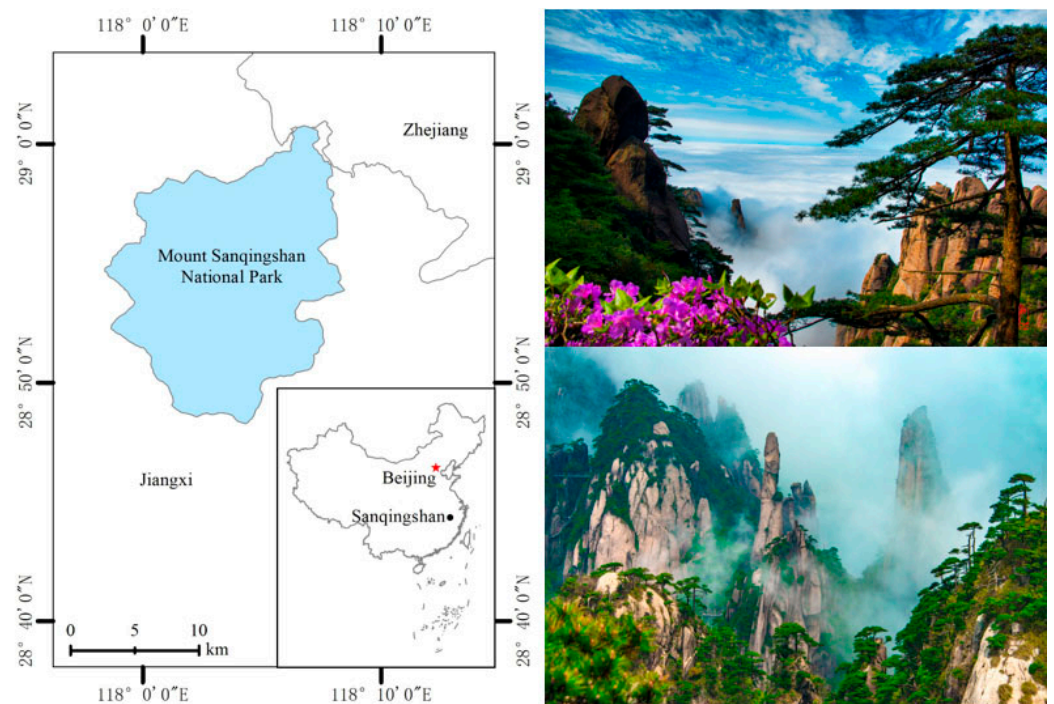
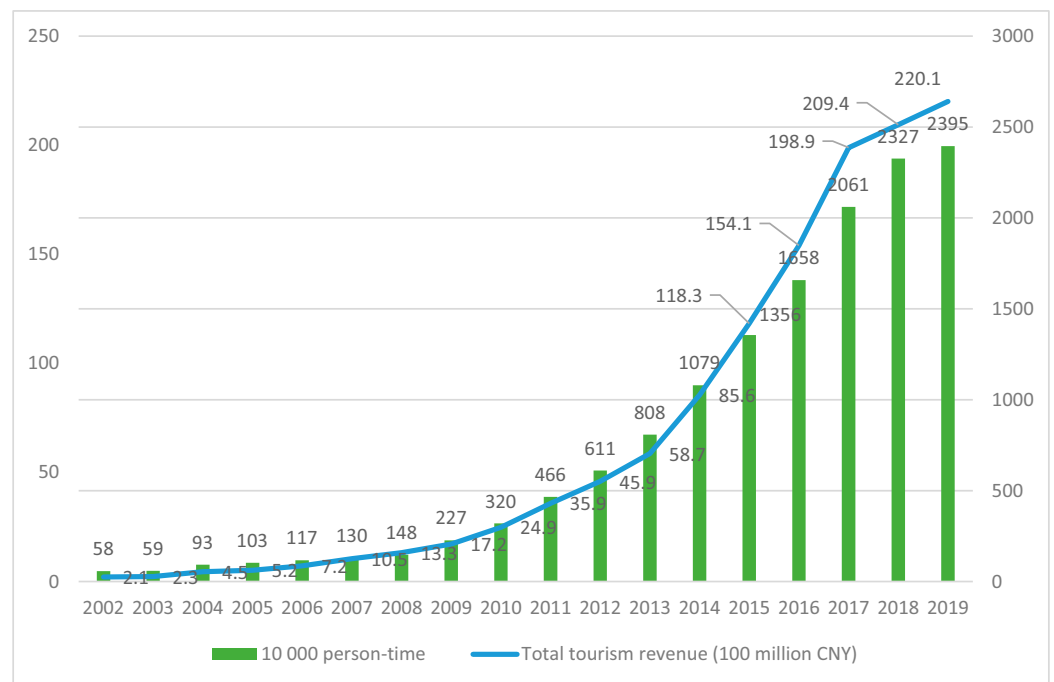


Figure 2. MSNP panoramas.





**Figure 3.** Tourist arrivals and tourism income of the MSNP. Note: 1 CNY ≈ USD 0.141 (18 September 2024).

### 3.2. Measurement Instruments

The first part of the questionnaire includes key information such as demographic characteristics, travel organization methods, and tourism motivations. The second part includes four perception dimensions: tourist crowding, service quality, OUV attractiveness, and satisfaction, covering 41 measurement items, mainly derived from a literature review, tourist online comments, and multiple surveys conducted by the research team in the case site from 2013 to 2019 (Table 1). Tourist crowding was mostly derived from the literature and field research, as well as comments from tourists on the Internet, including functional crowding, personal crowding, and social crowding [24,28,30]. Service quality mainly came from the relevant literature and preliminary surveys, as well as comments from tourists on apps such as Xiaohongshu and Ctrip, including tourists’ interpretation, goods, traffic, accommodation, and catering [71,82,102]. OUV attractiveness was obtained from the relevant literature [16,103], and Criterion VII of the World Heritage Site, current situation of the MSNP, and the real expression of OUV. Tourists’ satisfaction was derived from the literature, including revisits and recommendations, as well as by comparing expectations and real experiences [28,44,45,52]. The evaluation of each record was done according to a Likert scale ranging from (1) “strongly disagree” to (5) “strongly agree”.

**Table 1.** Measurement items.

| Constructs       | Items               |  |
|------------------|---------------------|--|
| Tourist Crowding | Functional Crowding | FC1 I feel very crowded on the plank road in the scenic spot.                            |
|                  |                     | FC2 I feel very crowded in the resting area of the scenic spot.                          |
|                  |                     | FC3 I feel very crowded in the public toilets in the scenic spot.                        |
|                  |                     | FC4 I feel very crowded in the dining area of the scenic spot.                           |
|                  | Personal Crowding   | PC1 The influx of tourists has had an impact on my use of public facilities for tourism. |
|                  |                     | PC2 The influx of tourists has somewhat impeded my appreciation of the scenic beauty.    |
|                  |                     | PC3 I feel uncomfortable when many tourists litter and pollute the environment.          |
|                  |                     | PC4 I feel irritated because public order is disrupted by many tourists.                 |

Table 1. Cont.

| Constructs   | Items  |  |
|--|--|--|
| Tourist Crowding   | Social Crowding  | SC1 I feel that the numerous tourists around me have ruined my mood when enjoying the beautiful scenery. |
|  |  | SC2 I feel nervous when surrounded by many strangers.  |
|  |  | SC3 I feel disturbed when I come into contact with many strangers.                                       |
|  |  | SC4 I feel that too many tourists have damaged the quiet environment of this place.                      |
| Service Quality  | Tourist Interpretation   | TI1 The reflection of scenic spot signboards is scientific and simple to comprehend.                     |
|  |  | TI2 The quality of the explanations given by tour guides and interpreters is fine.                       |
|  |  | TI3 The instructions on the guide panorama and tour map are clear and straightforward.                   |
|  |  | TI4 The service quality provided by the tourist center is nice.  |
|  | Tourist Goods  | TG1 The distribution of tourist shopping spots is reasonable.  |
|  |  | TG2 The types of tourism commodities are abundant.   |
|  |  | TG3 The price of tourist commodities is reasonable.  |
|  | Tourist Traffic  | TT1 The external transportation is relatively convenient.  |
|  |  | TT2 The arrangement of the tour route is reasonable.   |
|  |  | TT3 The waiting time for taking the cableway is acceptable.  |
|  |  | TT4 The safety performance of the walking trails and high-altitude plank roads is nice.                  |
|  | Tourist Accommodation  | TA1 The hygiene condition of tourist accommodation is fine.  |
|  |  | TA2 The price of tourist accommodation is reasonable.  |
|  |  | TA3 The environment of tourist accommodation is comfortable.   |
|  | Tourist Catering   | TC1 The tourist catering and food is very distinctive.   |
|  |  | TC2 The prices of food and beverages in tourist areas are reasonable.                                    |
| TC3 The tourist dining environment is clean and sanitary.      |  |  |
| TC4 The arrival of tourists at dining locations is convenient. |  |  |
| OUV Attractiveness   | OA1 The allure of natural scenery is captivating.  |  |
|  | OA2 The extraordinary peaks and unique rocks are awe-inspiring.                          |  |
|  | OA3 The rapid and waterfall is astonishing.  |  |
|  | OA4 The serene canyon and clouds is intoxicating.  |  |
|  | OA5 The geomorphic landscape is unique.  |  |
|  | OA6 The emergence of the "Giant Python" from the Mountain is awe-inspiring.              |  |
| Satisfaction   | Sa1 How satisfied are you with the general experience in the scenic spot?                |  |
|  | Sa2 How satisfied are you with the MSNP compared to your expectations before your visit? |  |
|  | Sa3 How satisfied are you with the MSNP compared to your ideal scenic spot?              |  |
|  | Sa4 Would you be willing to visit the MSNP again for tourism?                            |  |
|  | Sa5 Would you be willing to recommend travel to the MSNP to others?                      |  |

### 3.3. Sampling and Data Collection

Under the guidance of three professional teachers, 9 students (four undergraduates, three postgraduates, and two doctoral students) trained in questionnaire distribution conducted data collection for domestic tourists in the chief departments of the Jinsha and Waishuangxi cableways in MSNP from 1 to 7 July 2019. To improve the efficiency and quality of the survey, we set up stands at the main exits, gave the subjects small gifts featuring the motifs of WHS, and selected tourists who had fully visited MSNP as the main respondents. Based on the convenient sampling method, 590 questionnaires were deliv-

ered and 576 were gathered. Samples that were not filled in carefully, incompletely, or logically were excluded, resulting in 535 valid surveys with a collection validity rate of 92.9%. At the same time, we conducted interviews with visitors, the WHS' managers, tourism practitioners, and community inhabitants on aspects such as heritage protection, visitors' satisfaction, heritage value perception, crowding perception, service quality, and the heritage site management level of the WHS, which achieved a more comprehensive insight into the relevant situation from the MSNP.

### 3.4. Data Analysis

The research employed structural equation modeling (SEM) for confirmatory factor analysis (CFA), and utilized SPSS 22.0 statistical software for processing the sample data. Additionally, AMOS 24.0, produced by SPSS Inc. in Chicago, IL, USA, was adopted for SEM and CFA. SEM is a statistical method based on the covariance matrix of variables, utilized for analyzing the relationships among variables. It was a valuable tool for multivariate data analysis and is frequently used in CFA, high-order factor analysis, and path analysis, which had extensive applications in social sciences and other fields. When using SEM for validation, the first phase is to conduct reliability and validity analysis on the sample. Secondly, it is necessary to test whether there is a reverse estimation hypothesis in the model parameters and to conduct normality tests on the sample. We simultaneously tested whether there were common method biases in the conceptual framework, especially in the mediation effect test of the hypotheses of this study.

## 4. Texting

### 4.1. Sample Profile

Among 535 tourists, all were from China, and 43.8% were male and 56.2% were female. The age range of 18 to 40 accounted for more than three quarters of the sample. In terms of occupation category, employees of enterprises and institutions (36.3%), professionals (21.9%), and students (20.5%) accounted for nearly 80%. The majority of them were college graduates (67.5%). In terms of per capita monthly income, the majority of them earned between CNY 1500 and 5000, accounting for nearly 60%. The travel circumstances were family and friends (42.8%), and group tours (34.9%). The main frequency of visiting the MSNP was once (83.5%), and the main durations were one day (50.2%) and two days (36.2%). The relevant demographic characteristics and basic tourism information are shown in Table 2.

**Table 2.** Sample profile.

| Items      | %                      | Items | %                   |                        |      |
|------------|------------------------|-------|---------------------|------------------------|------|
| Gender     | Male                   | 43.8  | ≤1500               | 19.3                   |      |
|            | Female                 | 56.2  | 1501–3500           | 27.5                   |      |
| Age        | ≤18                    | 8.6   | Income (CNY/month)  | 3501–5000              | 28.6 |
|            | 19–30                  | 50.8  |                     | 5001–8000              | 13.5 |
|            | 31–40                  | 25.8  | ≥8001               | 11.1                   |      |
|            | 41–50                  | 12.3  | Travel circumstance | Family and friends     | 42.8 |
|            | ≥51                    | 2.5   |                     | Travel in groups       | 34.9 |
| Occupation | Enterprise staff       | 36.3  |                     | Organizational tourism | 13.8 |
|            | Professional personnel | 21.9  | Travel alone        | 8.5                    |      |
|            | Students               | 20.5  | Travel frequency    | Once                   | 83.5 |
|            | Workers and farmers    | 10.2  |                     | Twice                  | 9.8  |
|            | Others                 | 11.1  |                     | Three times or above   | 6.7  |

Table 2. Cont.

| Items     |                       | %    | Items            |                     | %    |
|-----------|-----------------------|------|------------------|---------------------|------|
| Education | High school or below  | 24.2 | Duration of stay | One day             | 50.2 |
|           | College graduate      | 67.5 |                  | Two days            | 36.2 |
|           | Postgraduate or above | 8.3  |                  | Three days or above | 13.6 |

#### 4.2. Data Quality Analysis

The aim of the reliability testing was to check the stability and consistency of the database. The higher the reliability, the smaller the standard error measurement. At a significance level of 0.001, outcomes illustrated that the Cronbach's  $\alpha$  scale of the entire sample was 0.926, which was more than 0.9, indicating that the internal reliability was good. The reliability coefficients of each dimension of Cronbach's  $\alpha$  scale (0.882–0.929) were greater than 0.8, signifying that the reliability of each dimension was acceptable [104]. The Kaiser Meyer Olkin (KMO) value of the overall sample was 0.918, which is more than 0.9, indicating that the overall sample had suitable construct validity. The KMO value of content validity (0.849–0.929) was greater than 0.8, indicating that measurement items can signify measurable expression. The average variance extracted (AVE) for each dimension (0.593–0.656) was greater than 0.5, indicating that the observed variables can measure underlying variables. The composite reliability (CR) value (0.851–0.899) was more than 0.8, signifying that the model had effective validity [105] (Table 3).

Table 3. Data quality analysis.

| Constructs         | Items | Mean  | SD    | Standardised Loading | Cronbach's Alpha | AVE   | CR    |
|--------------------|-------|-------|-------|----------------------|------------------|-------|-------|
| Tourist Crowding   | FC    | 3.489 | 1.384 | 0.811                | 0.929            | 0.656 | 0.851 |
|                    | PC    | 3.404 | 1.405 | 0.866                |                  |       |       |
|                    | SC    | 3.239 | 1.635 | 0.748                |                  |       |       |
| Service Quality    | TI    | 3.249 | 1.260 | 0.791                | 0.928            | 0.641 | 0.899 |
|                    | TG    | 3.444 | 1.113 | 0.800                |                  |       |       |
|                    | TT    | 3.816 | 0.951 | 0.846                |                  |       |       |
|                    | TA    | 3.799 | 1.029 | 0.783                |                  |       |       |
|                    | TC    | 3.560 | 1.198 | 0.782                |                  |       |       |
| OUV Attractiveness | OA1   | 4.195 | 0.978 | 0.801                | 0.895            | 0.593 | 0.897 |
|                    | OA2   | 4.141 | 0.979 | 0.825                |                  |       |       |
|                    | OA3   | 3.653 | 1.164 | 0.651                |                  |       |       |
|                    | OA4   | 4.079 | 1.042 | 0.806                |                  |       |       |
|                    | OA5   | 4.188 | 0.944 | 0.789                |                  |       |       |
|                    | OA6   | 4.073 | 1.056 | 0.736                |                  |       |       |
| Satisfaction       | Sa 1  | 3.869 | 0.723 | 0.726                | 0.882            | 0.605 | 0.884 |
|                    | Sa 2  | 3.794 | 0.830 | 0.832                |                  |       |       |
|                    | Sa 3  | 3.817 | 0.829 | 0.845                |                  |       |       |
|                    | Sa 4  | 3.890 | 0.853 | 0.719                |                  |       |       |
|                    | Sa 5  | 4.109 | 0.764 | 0.759                |                  |       |       |

Additionally, the degree of variance inflation factor ( $VIF < 10$ ) indicates that there was no multicollinearity [106]. The outcomes show that the correlation coefficient was less than the square root of the AVE, indicating that the discriminant validity was adequate [105] (Table 4). In short, each sign was appropriate, and the data collected were acceptable.

**Table 4.** Discriminant validity.

| Variable           | Tourist Crowding | Service Quality | OUV Attractiveness | Satisfaction |
|--------------------|------------------|-----------------|--------------------|--------------|
| Tourist crowding   | 0.810            |                 |                    |              |
| Service quality    | 0.245            | 0.801           |                    |              |
| OUV attractiveness | 0.023            | 0.367           | 0.770              |              |
| Satisfaction       | 0.033            | 0.582           | 0.570              | 0.778        |

#### 4.3. Descriptive Statistical Analysis

According to related research results, the mean count on a five-point Likert scale ranges from 1.0 to 2.4 for disapproval, 2.5 to 3.4 for neutrality, and 3.5 to 5.0 for approval [107]. We see that the average score of OUV attractiveness was 4.06, signifying that tourists had a high perception of the OUV in the MSNP. The average score of service quality was 3.57, suggesting that there is still the possibility for improving the quality of tourist services in WHS. The average score of the perceived crowding was 3.36, implying that tourists have a neutral attitude towards crowding, which further illustrates the possible negative impact of crowding in WHS. The overall satisfaction rate of tourists was 3.90, indicating that tourists have a good experience in MSNP.

#### 4.4. Confirmatory Factor Analysis

##### 4.4.1. Measurement Models Testing

In an effort to examine the hypothesized correlation between potential variables in the measurement model, it was necessary to perform a test analysis on the structural model. First, a multivariate normality test was performed on the sample and the absolute value of skewness of the observed variables was discovered, ranging from 0.181 to 1.334, which is below the threshold of 2.58, and the absolute value of kurtosis was between 0.030 and 2.604, which is smaller than the threshold of 8, indicating that the sample can be considered as complying with a multivariate normal distribution. Second, it was necessary to check the common method bias (CMB), which is related to the artificial covariation between the predictor and the criterion variables triggered by the similar source or evaluator, measurement setting, project background, and attributes of the project itself. For factor exploratory analysis, Harman's single factor testing was adopted, and the cumulative contribution rate of the first factor was 11.92%, indicating that the CMB was not significant and may be disregarded [108]. When analyzing the general model fit index, Hair et al. (2002) suggested first testing whether the model parameters violated the approximation phenomenon. This can be done as follows: if there is a negative error variance, the standardized parameter coefficient is higher than or equivalent to one [106]. In light of the estimation, the measured error variance in the model ranged from 0.031 to 0.057, and had no negative error variance. The standardized parameter coefficients ranged from 0.651 to 0.866, with all values not exceeding one. The results indicate that the model did not violate the assessment occurrence. Ultimately, the maximum likelihood method was used to analyze the parameters of the conceptual framework and it was found that the related fit indicators did not reach the ideal values, so additional modifications were needed. Based on the SEM's measurement model, some potential variables can be correlated, and the modified structural model fitting index was compared in principle ( $\chi^2/df = 1.93$ , GFI = 0.880, RMSEA = 0.042, IFI = 0.951, TLI = 0.947, CFI = 0.951, NFI = 0.903, PGFI = 0.775, PNFI = 0.835, PCFI = 0.879) [109], as shown in Table 5.

**Table 5.** Goodness-of-fit indices testing.

| Model-Fit Index   | Absolute Fit |       |       | Comparative Fit |       |       |       | Parsimony Fit |       |       |
|-------------------|--------------|-------|-------|-----------------|-------|-------|-------|---------------|-------|-------|
|                   | $\chi^2/df$  | GFI   | RMSEA | IFI             | TLI   | CFI   | NFI   | PGFI          | PNFI  | PCFI  |
| Threshold value   | 2~5          | >0.90 | <0.08 | >0.90           | >0.90 | >0.90 | >0.90 | >0.50         | >0.50 | >0.50 |
| Theoretical model | 2.40         | 0.851 | 0.051 | 0.926           | 0.920 | 0.925 | 0.879 | 0.756         | 0.820 | 0.863 |
| structural model  | 1.93         | 0.880 | 0.042 | 0.951           | 0.947 | 0.951 | 0.903 | 0.775         | 0.835 | 0.879 |

#### 4.4.2. Mediating Impact Testing

OUV attractiveness was adopted as a mediating variable to examine the mediating impact of tourist congestion and service quality on tourist satisfaction. To test the mediating effects, we used the Bootstrap and Mackinnon's PRODCLIN2 approaches for indirect impact analysis [110]. A 2000-time testing showed that the bias-corrected 95% confidence interval and 95% percentile confidence interval values for mediating the impact of OUV attractiveness on crowding perception and tourist satisfaction both covered 0, and two-tailed significance testing was not significant. At the same time, Mackinnon's PRODCLIN2 95% confidence interval covered 0, signifying that a mediating effect did not occur. The bias-corrected 95% and 95% percentile confidence interval values of the mediating impact of OUV attractiveness on service quality and visitors' satisfaction did not include 0, and the two-tailed significance test was significant. At the same time, Mackinnon's PRODCLIN2 95% confidence interval did not include 0, which indicates that mediating effects did occur (Table 6).

**Table 6.** Mediating impact testing.

| Variables        | Point Estimate | Product of Coefficients |        | Bootstrapping         |        |       |                   |                         |       | Mackinnon's PRODCLIN2 95% CI |       |
|------------------|----------------|-------------------------|--------|-----------------------|--------|-------|-------------------|-------------------------|-------|------------------------------|-------|
|                  |                |                         |        | Bias-Corrected 95% CI |        |       | Percentile 95% CI |                         |       | Lower                        | Upper |
|                  |                |                         |        | S.E.                  | Z      | Lower | Upper             | Two-Tailed Significance | Lower |                              |       |
| Total effect     |                |                         |        |                       |        |       |                   |                         |       |                              |       |
| Tourist Crowding | −0.085         | 0.039                   | −2.179 | −0.175                | −0.019 | 0.014 | −0.169            | −0.016                  | 0.020 |                              |       |
| Service Quality  | 0.405          | 0.048                   | 8.438  | 0.320                 | 0.507  | 0.001 | 0.317             | 0.505                   | 0.001 |                              |       |
| Direct effect    |                |                         |        |                       |        |       |                   |                         |       |                              |       |
| Tourist Crowding | −0.071         | 0.037                   | −1.919 | −0.149                | −0.004 | 0.036 | −0.145            | −0.001                  | 0.045 |                              |       |
| Service Quality  | 0.293          | 0.045                   | 6.511  | 0.217                 | 0.391  | 0.001 | 0.212             | 0.385                   | 0.001 |                              |       |
| Indirect effect  |                |                         |        |                       |        |       |                   |                         |       |                              |       |
| Tourist Crowding | −0.015         | 0.020                   | −0.750 | −0.056                | 0.023  | 0.475 | −0.056            | 0.023                   | 0.492 | −0.051                       | 0.019 |
| Service Quality  | 0.113          | 0.023                   | 4.913  | 0.073                 | 0.165  | 0.001 | 0.071             | 0.164                   | 0.001 | 0.068                        | 0.169 |

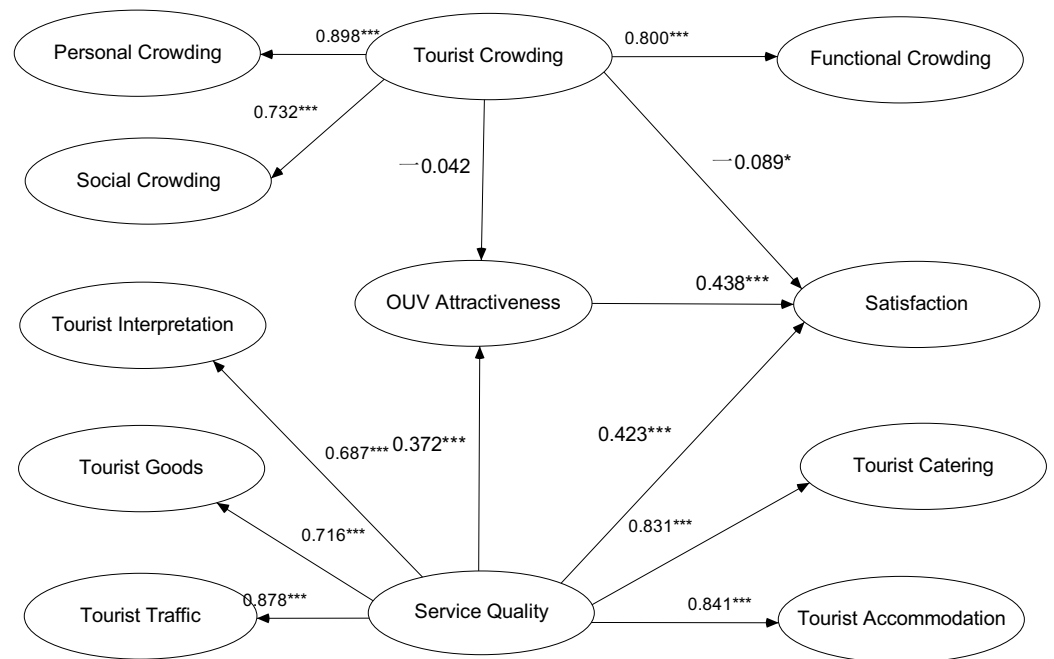
Note: TC, Tourist Crowding; SQ, Service Quality.

#### 4.4.3. Structural Models Testing

The hypothetical causal relationship was tested, and relevant assessment outcomes were presented in Figure 4 and Table 7.

**Table 7.** Summary of outcomes.

| Hypotheses   | SRW                                     | C.R.   | Results   |
|--|---|--------|-----------|
| H1 Tourist crowding to OUV attractiveness                          | −0.042                                  | −0.840 | Rejected  |
| H2 Tourist crowding to tourist satisfaction                        | −0.089                                  | −2.105 | supported |
| H3 Tourist crowding to tourist satisfaction via OUV attractiveness | The mediating effect does not exist.    |        | Rejected  |
| H4 Service Quality to OUV attractiveness                           | 0.372                                   | 6.850  | supported |
| H5 Service Quality to tourist satisfaction                         | 0.423                                   | 8.204  | supported |
| H6 Service Quality to tourist satisfaction via OUV attractiveness  | The incomplete mediating effect exists. |        | supported |
| H7 OUV attractiveness to tourist satisfaction                      | 0.438                                   | 8.821  | supported |



**Figure 4.** Testing outcomes. Note: Significance \*\*\* at 0.001 level; \* at 0.05 level.

## 5. Discussion

### 5.1. Analysis

The findings of the hypotheses in this study were presented in Figure 4 and Table 7. H1 and H3 were not verified, and H2, H4, H5, H6, and H7 were accepted, respectively.

#### 5.1.1. Tourist Crowding Impact

The verification results of the H1 hypothesis show that tourist crowding in this case study had no significant effect on destination attraction, which may be related to China's large population and people's ability to tolerate a certain degree of crowding, and moderate crowding may have little effect on destination attraction and overall image. The average of tourists' crowding perception dimension was 3.36, indicating that tourist crowding is neutral, which further reveals that Chinese tourists are more inclusive in WHS [107]. Relevant research results show that tourism congestion and over-tourism have a negative impact on destination attraction [12,13], or stimulate positive emotional responses [57]. We speculate whether this case is related to the OUV of the MSNP. Its outstanding natural beauty makes tourists marvel at its magnificent scenery. At this moment, tourists' negative perceptions may no longer exist, which may be the charm of OUV. In the H2 hypothesis, tourism crowding had a significant negative influence on satisfaction, indicating that visitor crowding has a negative influence on the quality of tourists' experience in WHS, which fully shows sensitivity to tourist crowding. These findings are consistent with those of other research, to the extent that tourism crowding will inevitably have a negative influence on satisfaction and loyalty, especially in terms of the negative effects of overcrowding, and even hinder tourists' willingness to visit again [10,12,28,64]. At the same time, tourism congestion does not necessarily have a negative effect, but it will reduce tourists' satisfaction to a certain extent [63,65,89]. The mediating effect of the H3 hypothesis is not tenable, indicating that tourism crowding has no impact through the mediation of OUV, but this means that crowding may lead to lower expectations and weaken the quality of destination experience, thus negatively affecting overall tourism satisfaction [6,10,23,62]. Especially in such popular tourist destinations as WHS, tourists themselves have high expectations, and the final tourism satisfaction and experience quality are vulnerable to tourist crowding [5,9,12,29].

### 5.1.2. Service Quality Impact

The H4 hypothesis test shows that destinations' service quality has a significant positive influence on OUV attractiveness, which fully illustrates the important role of service quality in the attractiveness perception of WHS. As an important functional experience of the destination, service quality interacts with destination attraction, tourism service facilities, and the management level of WHS, which further indicates that good service quality is conducive to tourists' positive value perception, emotional attachment, and environmental behavioral intentions [75,76,78,101,102]. The H5 hypothesis result shows that tourism service quality has a significant positive influence on visitors' satisfaction, which completely shows an important effect of tourism service quality on tourists' destination experience. It can be said that service quality is a valuable magic weapon to ensure satisfaction and maintain the overall image and brand influence of a destination, which is crucial to the sustainable development of the tourism industry [31–33]. Good service quality and tourists' satisfaction are also one of the important ways to promote tourists' destination loyalty, repeat visits, and willingness to recommend. Especially when tourists find that the money exceeds the value, they will have positive destination attachment, which improves their satisfaction [73,76–78]. Actively improving and enhancing the accessibility of a destination, the effectiveness of the interpretation system, and the efficiency of service quality makes tourists have a positive experience, and promotes WHS protection and OUV interpretation, which are favorable to sustainable development [19,80,82,111]. The test results of the H6 hypothesis show that service quality plays an intermediary role between destination attraction and visitors' satisfaction, which further indicates the importance of tourist service quality perception to the expression and interpretation of OUV, as well as the important role it plays in improving overall satisfaction. This requires that WHS should pay attention to the improvement of public infrastructure and tourism service facilities, and ensure the high-quality development of tourism services. We should strengthen the elucidation of OUV, so that tourists can have a more comprehensive and profound comprehension of value, extensive tourist experiences are stimulated, and the influence of WHS is enhanced [2,36].

### 5.1.3. OUV Attractiveness Impact

The result of the H7 hypothesis shows that tourists' OUV perceptions have a meaningful positive influence on satisfaction, which shows that WHS highlight the charm and core attraction of OUV, with an average of 4.06, which further indicates that tourists highly recognized and were even surprised by the OUV of the MSNP. OUV attraction facilitates the enhancement of tourists' satisfaction and boost tourists' loyalty. It shows that the attraction of WHS has a significant positive correlation with visitors' experiences and emotions, which is favorable to WHS' protection and OUV dissemination [37,87]. Although tourists' interaction with the tourism destination is only for a short time in a non-habitual setting, it contributes to tourist satisfaction to some degree, as well as to environmentally friendly behavior and in-depth experience, which is a good result for tourist satisfaction and sustainable development of the destination [30,39,58,62,112]. OUV, as one of the main attractions and motivation driving forces for tourists to travel to WHS, is the catalyst for tourists' value perception, which shows its great charm, and performs an important position in improving tourists' satisfaction with the destination terrain impression, and is also conducive to the sustainable development of WHS [11,15,76,78].

To sum up, we can see that the tourist satisfaction of WHS is comprehensively affected by "negative" tourism crowding, "positive" service quality, and "charming" OUV attraction. Therefore, we proposed the SCA-S (service, crowding, attractiveness, and satisfaction) framework to improve the tourist satisfaction of WHS through the concepts of positive reinforcement, negative weakening, and charm highlighting. Generally speaking, the increase of congestion has a negative impact, the improvement of service quality has a positive influence, and the improvement of OUV interpretation and communication abil-



ity has a positive effect, which are crucial to enhance visitors' experiences and WHS' value inheritance.

### 5.2. Implications

In theory, we researched the impact of tourism crowding and service quality, as well as the mediating variable of OUV on tourist satisfaction, and proposed the SCA-S framework explanatory model which delivers a novel perspective for analyzing satisfaction and OUV. Relevant research findings indicate that negative perceptions of crowding and positive improvements in service quality have a significant influence on visitors' satisfaction and the value of OUV. This further demonstrates the important role of the "soft environment" of tourism crowding, the "hard environment" of service quality, and the level of OUV interpretation and display in tourists' overall experience quality. Considering the core value of OUV in WHS, its strong charm is an important driving force for improving tourists' satisfaction, demonstrating the importance of OUV interpretation, promotion, and protection. It can be said that this study provides a new conceptual paradigm for tourists' satisfaction in WHS, which helps to better explain OUV and analyze tourists' attitudes and behaviors.

From the perspective of tourists' experience quality and WHS management, it is necessary to enhance the feature of tourists' experience and boost the level of interpretation of OUV. Firstly, it is necessary to reasonably control the tourist capacity of WHS, measure the destination carrying capacity, control the number of tourists to popular WHS and hotspots, and keep tourism congestion within an acceptable range. This will help tourists better appreciate OUV, boost attachment and loyalty to WHS, and reduce conflict and pressure on WHS protection. Secondly, we will enhance tourists' experience of WHS, strengthen the construction of tourist infrastructure, and comprehensively utilize advantageous technologies such as smart tourism, virtual tourism, and artificial intelligence. Through heritage conservation education, OUV interpretation and display, and WHS' science popularization before, during, and after tourism, we will improve tourist satisfaction. Thirdly, enhancing the core attractiveness of OUV and meeting the needs and expectations of tourists as much as possible will also help. At the same time, the tourism development of WHS should pay more attention to the participation of different stakeholders, such as fully leveraging the role of local capital in maintaining the interests of the community, so as to further the healthy and sustainable development of the social, economic, and ecological environment of WHS better, which is conducive to protecting the forest ecosystem.

### 5.3. Prospect

Although this study has provided related research outcomes, there are still certain drawbacks that require further expansion. Firstly, further exploration is needed into how to better measure the perception of crowding among tourists at WHS. For example, there may be different representations of crowding perception for different tourist groups, different tourism periods, different tourism space, and varying degrees of destination attractiveness. Future research can combine spatiotemporal backgrounds, concentrate on different measurements of tourist crowding, distinguish important impacting issues, and investigate multiple effects, such as the impact of tourist crowding on WHS' management, destination arranging, and sustainable development. Secondly, the dimension construction and measurement of tourism service quality perception still need further improvement. We should consider these from the perspective of soft service quality, rather than just from the perspective of hardware such as accommodation, food, transportation, tourism, shopping, and entertainment. Thirdly, it is best to combine the measurement of tourists' perceived OUV attractiveness of WHS with the extent of WHS education and the effectiveness of WHS interpretation and display systems, in order to more accurately and reasonably evaluate the OUV. Fourthly, the quality of tourism experience is intimately related to satisfaction. In addition to tourist crowding, service quality, and OUV attractiveness, it is also related to destination attachment, heritage education level, and tourism preferences,

which are also worth paying attention to in future research. Fifthly, in addition to the stunning natural scenery, the case study site is also a holy land of Chinese Taoist culture. The main concepts of respecting nature and conforming to the harmony between nature and human environment in Taoist thought have a significant influence on visitors' perception of crowding, OUV attractiveness, and satisfaction. These are all topics worth exploring. By integrating the concept of harmony between humans and the environment from traditional Chinese philosophy into heritage conservation and tourist satisfaction perception, and comparing the corresponding conclusions with those from the Western cultural backgrounds, such research findings may be more convincing and universal.

## 6. Conclusions

This study constructed a conceptual framework for tourist satisfaction in WHS from the viewpoints of tourist crowding and observed service quality, with OUV as the mediating variable, to check the comprehensive affecting determinants and mechanisms of tourism experience. Firstly, tourism crowding has a significant negative influence on satisfaction, which tallies with most research conclusions and fully demonstrates the important impact of tourism congestion on tourists' experience quality. Tourism destinations must have a good and scientific measurement and control of their carrying capacity and tourist capacity in order to ensure the improvement and enhancement of visitor satisfaction. Secondly, tourism service quality has a significant positive influence on OUV's attractiveness and the satisfaction with WHS, explaining the importance of high-quality tourism services. On the one hand, it stimulates the charm of OUV, and on the other hand it enhances satisfaction. Thirdly, WHS' attractiveness has a significant positive influence on visitor satisfaction, indicating that OUV is crucial for tourists' perception of revisits and experience quality. At the same time, the increase in satisfaction actually promotes the interpretation and display of OUV better, perhaps reducing the negative effects of tourist crowding. Fourthly, the SCA-S explanatory model proposed in this study reveals from both positive and negative perspectives how to avoid the occurrence of destination crowding and how to improve service quality. This study further expands the channels for perceiving and transforming the value of heritage sites, providing practical references for heritage site tourism management, tourist satisfaction improvement, and world heritage protection.

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**Informed Consent Statement:** Informed consent was waived for this study.

**Data Availability Statement:** Data are available on request due to privacy restrictions.

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**Conflicts of Interest:** The authors have no potential conflicts of interest to declare.

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