Asian Administration and Management Review

Original Research Article

Received: 18 June 2025 **Revised:** 27 June 2025 **Accepted:** 8 July 2025

HEALTHCARE SERVICE QUALITY AND MEDICAL TOURISM: THE MODERATING ROLE OF DESTINATION DISTINCTIVENESS IN THAI OUTBOUND INTENTIONS

Kobkrit RAKJIT[1] and Tipparat LAOHAVICHIEN[1]

1 Faculty of Business Administration, Kasetsart University, Thailand; kobkrit.r@ku.th (K. R.); fbustrl@ku.ac.th (T. L.)

Handling Editor:
Professor Dr.Wing-Keung WONG Asia University, Taiwan
(This article belongs to the Theme 1: Business & Economic in Industry 5.0)

Reviewers:
1) Assistant Professor Dr.Noppanon HOMSUD SU, Thailand
2) Assistant Professor Dr.Pranee EAMLAORPAKDEE UTCC, Thailand
3) Dr.Watcharin JOEMSITTIPRASERT NYICE, USA

Abstract

This study examines the drivers of outbound medical tourism from Thailand, specifically investigating the impact of healthcare service quality (Healthqual) on Thai patients' behavioral intentions to seek treatment abroad. The study also explores the moderating influence of destination distinctiveness on this relationship. Survey data were collected from 468 Thai medical tourists who had received non-emergency treatments overseas, and analyzed using structural equation modeling (SEM). The results indicate that Healthqual—encompassing empathy, tangibles, safety, and efficiency—positively influences outbound medical tourism intentions. Notably, destination distinctiveness moderates this relationship, suggesting its crucial role in tourists' choices. The findings underscore the need for Thai healthcare providers to enhance their service offerings and consider the factors influencing destination choice to compete effectively with international medical tourism destinations. The results aim to reduce the economic outflow associated with Thai patients seeking medical care overseas.

Keywords: Medical Tourism, Healthcare Service Quality, Behavioral Intentions, Destination Distinctiveness, Thailand

Citation Information: Rakjit, K., & Laohavichien, T. (2025). Healthcare Service Quality and Medical Tourism: The Moderating Role of Destination Distinctiveness in Thai Outbound Intentions. *Asian Administration and Management Review, 8*(2), Article 15. https://doi.org/10.14456/aamr.2025.40

Introduction

The globalization of connectivity, information accessibility, social media popularity, and ease of access to modern medical facilities have all increased medical service travel worldwide (Gómez-Carmona et al., 2022). People are increasingly seeking high-quality, non-emergency treatments, including cosmetic surgery, dental work, bariatric surgery, assisted reproductive technology, ophthalmologic care, orthopedic surgery, cardiac surgery, organ and cellular transplantation, gender reassignment, vaccine clinics, fertility services, diagnostics, and executive health evaluations. Healthcare is one of the fastest-growing service sectors (Mahmud et al., 2021). "Medical tourism" occurs when people seek medical care abroad. WHO defines medical tourism as patients seeking treatment abroad (Balogun, 2020). Patients who receive medical care while on vacation, including holidays, are referred to as medical tourists (Cohen, 2008). Based on Connell (2015), medical tourism is a popular form of mass culture in which people travel abroad to receive dental, surgical, and medical care, while also visiting the country's tourist attractions. The number of global medical tourists seeking treatment abroad is closely tied to economic growth. Medical tourism has experienced rapid growth in Asia, particularly in countries such as India, Korea, Singapore, Thailand, and Malaysia (Lwin et al., 2021). Foreign medical tourists visit Asian countries for cosmetic surgery, heart, reproductive, orthopedic, dental, cancer, surrogate pregnancy, weight loss, scans, tests, and health checks (Das, 2017). From various viewpoints, the growth of medical tourism drives a country's economy, leading to the development of travel and tourism infrastructure that attracts foreign tourists and generates revenue (Collins et al., 2019).

According to Rosenbusch et al. (2018), Thailand is a popular medical tourism destination because it enhances healthcare infrastructure, offers innovative medicines, provides lower treatment costs, offers better personal care, and utilizes the latest treatment technologies. Thailand is widely accepted as a leading destination for inbound medical tourism, attracting millions of international patients annually due to its preferred healthcare services and affordability. However, a growing trend has emerged wherein Thai people are increasingly seeking medical treatments abroad. This outbound medical tourism is driven by factors such as perceived superior medical technologies, specialized treatments unavailable domestically, and the desire for privacy and anonymity, particularly in procedures like cosmetic surgery (Supasettaysa, 2023). Thai patients account for approximately 5% of foreign patients receiving medical care in South Korea, marking a significant shift in patient mobility (Jattuchai et al., 2021). This trend raises concerns about potential gaps in domestic healthcare services, patient satisfaction, and the economic implications of healthcare expenditure flowing out of the country (Biswakarma & Basnet, 2025; Chia & Liao, 2021). Additionally, there is a lack of empirical research on the motivations, decision-making processes, and experiences of Thai outbound medical tourists. Understanding these factors is crucial for enhancing domestic healthcare and maintaining Thailand’s position in the global medical tourism market. This study addresses this gap by exploring the reasons and intentions behind Thai patients seeking treatment abroad (Jattuchai et al., 2021).

Turning attention to the healthcare literature, the role of patients in describing the quality involved has turned into a significant competitive concern (Dagger et al., 2007). In light of the study by Rosenbusch et al. (2018), medical tourism providers should develop a strategy to enhance the quality of medical care services, as service quality is the primary predictor of behavioral intention. Healthcare service quality has become a key marketing method for medical tourism. The context of service quality is an essential component that needs to be investigated to confirm overall behavioral intentions. The earlier study suggests that human behavior is the primary focus of tourism research, and a considerable amount of research indicates that delighted tourists are more likely to return to a specific area (Dolnicar et al., 2015). The relevance of investigating service quality in healthcare is underlined by the lack of

existing service quality models (Rahman, 2019). However, there is a significant gap in the literature regarding the multidimensional structure of service quality perceptions in the context of medical healthcare. Since previous research has highlighted the importance of service quality evaluations, it has not examined the specific dimensions in a healthcare context that influence these perceptions. Consequently, this lack of understanding hinders the development of effective strategies to enhance the quality of healthcare services and the behavioral intentions of outbound tourists. Beyond the previous studies, this study explores destination distinctiveness as a moderator in the relationship between Healthqual and behavioral intentions. It is essential to be aware of the destination's distinctiveness to understand the potential intentions of future tourists (Chen et al., 2016). This highlights the importance of developing distinctive and unique destination experiences to attract medical tourists. The research's primary contribution is the first to systematically investigate the healthcare service quality (Healthqual) that influences the behavioral intentions of outbound medical tourists. Furthermore, this study reveals the critical dimensions of Healthqual, which can help healthcare providers improve their offerings and attract more medical tourists. Previous studies have indicated that improving overall service quality can lead to increased long-term profitability (Lee, 2017).

Literature Reviews

Theory of Planned Behavior: Behavioral Intentions

The Theory of Planned Behavior (TPB), proposed by Ajzen (1991), provides a comprehensive framework for understanding the relationship between individual intentions and actual behavior. In the context of medical tourism, behavioral intentions are crucial for predicting tourists' decisions to seek healthcare services overseas. Prior literatures show that behavioral intentions are the primary antecedent of absolute behavior or action in the TPB model (Guerin & Toland, 2020). Positive behavioral intentions are associated with a service provider's ability to get its customers to 1) say positive things about them, 2) recommend them to other customers, 3) stay loyal to them (i.e., buy from them again), 4) spend more with the company, and 5) pay price premiums is linked to favorable behavioral intentions. Disruptive behavioral intentions include eliminating the business, reducing spending with it, spreading negative word of mouth, and pursuing legal action. The study by Ladhari (2009) defines "behavioral intentions" as a complex concept including loyalty, recommendation, and willingness to pay a premium price. Initially, loyalty in the current research refers to a strong commitment to making repeated purchases of preferred services. Loyalty can be shown by both growing future business with a business and showing a preference for it. Extensive loyalty has been consistently linked to profitability in the tourism industry, according to numerous studies. Secondly, the recommendation was described as the willingness of an existing consumer to share information about a service provider without receiving any monetary benefit. These consumers are valuable to service providers and serve as advocates for the business. Lastly, a customer's willingness to pay more is related to their intention to pay a greater price than their rivals for the advantages received from a service provider. Thus, in the field of medical tourism, the theory of planned behavior is presented in relation to the purpose of visiting a destination. Even though the TPB model has been applied in different sectors (Zhang et al., 2021). It has been applied to very few in the post-pandemic medical tourism context, particularly in relation to tourists' intentions to visit a destination. (Pahrudin et al., 2021). With these reasons, this study aims to contribute to the literature by examining healthcare as an inseparable component of medical tourism, which may be a driver of adoption intention behavior.

Healthcare Service Quality: Healthqual

Until the mid-1980s, the majority of product quality research centered on the physical element of the product. However, studies have begun to analyze the differentiating qualities of services

since that time, and this has served as the foundation for changing the quality criteria for services (Ali et al., 2023). The broad meaning of "quality" is "meeting the needs of the consumer" (Ghobadian et al., 1994). As a result of the service encounter process, service quality (SERVEQUAL) is defined as the degree to which service is provided to fulfill customer expectations (Duffy et al., 1997). Grönroos (1984) proposed a theory of service quality whereby quality evaluations are based on a comparison of perceived and expected service performance. On the other hand, SERVPERF is a method that mainly focuses on measuring service performance (Cronin Jr & Taylor, 1992). Moreover, Cronin Jr. and Taylor (1992) suggested that the SERVPERF measure provided better results, more reliable estimates, greater validity convergence and discrimination, and a higher explained variance, as well as less bias, than SERVQUAL. It is generally accepted that measurement items must be adjusted according to the study's context. Lee et al. (2012) propose that healthcare service quality comprises multiple aspects, depending on the expected service and the degree of patient reactions following treatment, as patients and/or future customers evaluate their experiences based on their expectations compared to the actual quality of service, in addition to serving as the basis for the development of our healthcare service quality scale. Mahmud et al. (2021) have developed the Healthqual model, which was initially proposed by Lee (2017) to measure the quality of healthcare services and is adapted from the SERVQUAL and SERVPERF models.

To conclude, healthcare provision is a complex service. Existing healthcare service quality models (e.g., SERVQUAL, SERVPERF, modified SERVQUAL) are insufficient to represent the complexities and all elements of healthcare services adequately (Ali et al., 2023). As a consequence, current models could be expanded, enhanced, and modified to account for every aspect and the complexities of healthcare services. Healthqual is a comprehensive framework for evaluating the quality of healthcare services, which takes into account the perspectives of patients, hospitals, and accreditation authorities. In general, the evaluation of healthcare service quality has typically relied on measurement items selected by researchers from other service industries. The primary goal of the Healthqual scale is to serve as a diagnostic approach for the objective assessment of the comprehensive quality of care services provided by hospitals, as perceived by both internal and external consumers. Healthqual encompasses the essential factors for assessing healthcare providers, including both public and private institutions, clinics, and specialized medical centers. These aspects consist of multi-stage care delivery operations, facilities, technology, and management systems (Lee, 2017). Therefore, the Healthqual scale may help ensure the maximum appropriate and effective utilization of healthcare service quality by all parties concerned.

Destination Distinctiveness

A destination's distinctiveness serves as a means to showcase its identity, differentiating it from other countries (Pike & Page, 2014). Cai (2002) states that a representation of a destination attribute is "how tourists think about the place based on the memories they have of it". Tourists' perception of this uniqueness confers a location with a competitive advantage that is theoretically difficult for others to replicate. Previous research indicates that Destination distinctiveness refers to "all that the destination evokes in the individual; any idea, belief, feeling, or attitude that tourists associate with the place" (Alcañiz et al., 2009). It can also be defined as destination marketing, place branding, and tourism destination image, which is a set of beliefs, ideas, and impressions that tourists hold (Taheri et al., 2021). Consequently, this is likely to increase the location's appeal relative to other destinations, which has been shown to lead to positive intentions to spend money and recommend it to others (Qu et al., 2011). Nevertheless, a destination's distinctiveness has a crucial role in the decision-making process of tourists, as well as in the selection of a specific tourism destination (Marder et al., 2021). The degree to which the destination distinctiveness effectively represents the destination is a critical determinant in the decision-making process of tourists (V.G. et al., 2021). Chen et al.

(2016) reported that several tourism destinations and businesses engage in competition to attract customers and encourage them to visit.

The competitive advantage of businesses in the marketplace is influenced by the development, marketing, and utilization of their natural and cultural resources (Taheri et al., 2021). Tourists engage in visits to various sites and tourist attractions, thereby benefiting themselves from a variety of activities that contribute to their overall holiday experience. Consequently, destinations are presented as combinations of the services and resources offered to tourists (Ritchie et al., 2000). Tourists typically choose to visit various locations and tourist attractions based on their interests, seeking pleasure and gaining knowledge about specific events, such as historical significance, local culture, or natural landmarks within the region. Moreover, destination distinctiveness or country image can be viewed as a stimulus that plays a crucial part in creating distinctive identities and understanding tourists' current and future behavior towards a destination (Zhang & Lo, 2024). Thus, the concept of destination image plays a significant part in understanding tourists' perceptions of a location and its potential impact on their behavior during a visit. This understanding has important implications for destination management and marketing activities (Pike & Page, 2014).

Medical Tourism

The tourism sector is a profitable sector for countries. It is regarded as one of the significant drivers of economic growth due to its capacity to generate income and create new employment opportunities. Medical tourism is the practice of traveling to a foreign location for medical services (Sousa & Alves, 2019). Traveling for the purpose of treating physical diseases or undergoing medical procedures under the guidance of medical professionals at hospitals and medical facilities outside of their home country is an example of medical tourism (Assadzadeh et al., 2019). In the context of Thailand's medical tourism industry, Ritwatthanavanich et al. (2018) proposed a scenario model for the aesthetic plastic surgery business, examining the readiness of Thai medical tourism to respond to the wave of popular culture in aesthetic and wellness services. The study underscores the importance of destination image, service differentiation, and high service standards as essential elements for competitiveness. These findings complement the current study’s exploration of destination distinctiveness as a moderator affecting the relationship between healthcare service quality and behavioral intentions. In the broader Asian context, cultural values, social norms, and perceptions of healthcare significantly influence the behaviors and destination choices of medical tourists. In many Asian societies, including Thailand, concepts of hospitality, personal care, privacy, and family influence decision-making in medical tourism (Assadzadeh et al., 2019). The collectivist nature of Asian cultures often emphasizes recommendations from peers and family in healthcare decisions, which aligns with the behavioral intention’s dimensions of loyalty, recommendations, and willingness to pay more explored in this study. Additionally, varying levels of trust in domestic healthcare systems and preferences for international destinations across Asian countries contribute to distinctive patterns in outbound medical tourism.

Recent studies in the Thai medical tourism context have also emphasized the role of destination branding and service quality in influencing tourist behavioral intentions (Siribowonphitak, 2023).

Conceptual Framework and Research Hypotheses

It would be interesting to examine the effect of Healthqual on behavioral intentions. This could help healthcare centers develop a deeper understanding of the implications of service quality on medical tourists' behavioral intentions, enabling them to establish long-term relationships with their patients. The Theory of Planned Behavior (Ajzen, 1991) posits that behavioral intention is a significant predictor of actual behavior and is influenced by individuals' attitudes, perceived social pressure (subjective norms), and perceived behavioral control. In the context of medical tourism, patients' decisions to seek treatment abroad are considered intentional and

rational, which is consistent with this theoretical framework. This study proposes that Healthqual, which encompasses empathy, tangibles, safety, and efficiency, has a significant influence on behavioral intention to seek treatment overseas. The ultimate goal of a healthcare destination in terms of service quality is also linked to medical tourists' final intentions, such as recommendations, loyalty, and willingness to pay more, which are the key results. Therefore, applying TPB and prior healthcare service quality research, this study hypothesizes:

H1: Healthqual has a significant positive influence on behavioral intentions.

The distinction or image of a destination is a crucial factor for outbound patients when choosing a destination country (Parrey et al., 2019). Some scholars emphasize the destination distinctiveness aspect, suggesting that a destination's distinctive branding is a way of communicating a distinctness that sets it apart from competitors (Pike & Page, 2014; Qu et al., 2011). The perception of the destination's distinctiveness by tourists gives the country an advantage in competitiveness that other countries may find hard to copy (Taheri et al., 2021). Destinations must actively identify and understand their key distinguishing characteristics in order to build an attractive destination distinctiveness (Pike & Page, 2014). Therefore, understanding destination distinctiveness aspects as a moderator may help healthcare businesses and destination countries effectively manage their healthcare quality to meet the subsequent intentions of potential medical tourists for future visits. So, the hypothesis is developed as follows:

H2: Destination distinctiveness has a moderated effect on the relationship between Healthqual and behavioral intentions.

The following conceptual framework elaborates on the links between the independent and dependent variables, depicted in Figure 1.

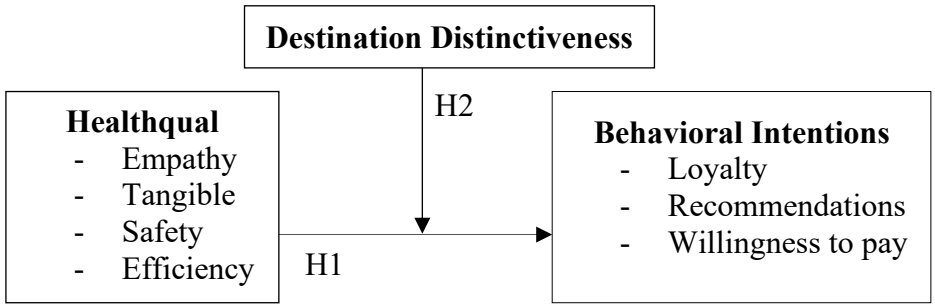

Figure 1 Conceptual Framework

Research Methodology

Survey Administration and Sample

Based on the purpose of this study, the focus of the population and sample is on outbound Thai medical tourism. Structural equation modeling (SEM) is used to analyze the collected data. This study used an online survey to collect data. The target sample size was calculated based on Hair et al. (2010), who stated that a minimum sample size of 200 is sufficient to generate acceptable statistical power for data analysis in SEM. In addition, Kline (2011) suggested that the minimum sample size can be calculated by 10-20 times the number of items in the questionnaire. The total number of questions on the questionnaire in this study is 37 items. The minimum sample size should be 370, which is qualified for reliable results in structural equation modeling (SEM). Therefore, the usable data (n = 468) exceeded this threshold, ensuring an adequate sample size for reliable SEM analysis.

Ethical Consideration

This study adhered to the human research ethics standards established by the Kasetsart University Research Ethics Committee (COE No. COE67/015, approval date: 14 February 2024).

Scale Development

The measurement employs a five-point Likert scale format, with respondents rating it from 1 (strongly disagree) to 5 (strongly agree). This research examines the quality of healthcare services for outbound Thai medical tourists in multidimensional terms (empathy, tangibles, safety, and efficiency) in relation to their behavioral intentions, which encompass three key dimensions: loyalty, recommendations, and willingness to pay.

Furthermore, destination distinctiveness is measured as high and low to determine the degree to which the destination country where outbound medical tourists received treatment is distinct from other countries. The five-point Likert scale of destination distinctiveness was converted into two categorical categories (Low/High). A high value of destination distinctiveness can be interpreted as respondents, who are medical tourists, agreeing that the country where they received non-emergency treatment is distinct from other destinations, whereas a low value of destination distinctiveness can be interpreted oppositely. The collected data on destination distinctiveness were classified as low if the average values of destination distinctiveness were ≤ 3.0. On the other hand, the average values of destination distinctiveness > 3.0 were classified as high destination distinctiveness.

Measurement Model Assessment

The two-step approach for SEM is applied in the data analysis process, as suggested by Hair et al. (2010). The first stage involves examining the measurement model, while the second step examines the structural relationships among the latent variables. The two-step approach includes determining the reliability and validity of the measurements before analyzing the structural relationships in the model. The surveys were tested for reliability using Cronbach's alpha and composite reliability (CR). Cronbach's alpha values ranging from 0.7 to 0.79 indicate strong reliability (Cronbach & Shavelson, 2004). The accepted value of CR is equal to or greater than 0.70 (Fornell & Larcker, 1981). Moreover, Harman's Single-Factor Test was used to assess the potential for Common Method Variance (CMV) in self-reported survey data (Podsakoff et al., 2003). All 37 observed variables were subjected to principal component analysis, which required a single-factor solution. The results showed that the single factor accounted for 22.66% of the total variance, which is less than the 50% threshold used to indicate significant CMV concerns. Thus, the results indicate that CMV is not considered a significant threat in this study.

Table 1 Reliability and Convergent Validity Measures

Latent variables	Item	Standardize Factor loadings	CR	AVE	Cronbach's Alpha
Empathy	EM1	0.781	0.899	0.641	0.833
	EM2	0.742			
	EM3	0.829			
	EM4	0.743			
	EM5	0.897			
Tangibles	TA1	0.757	0.898	0.637	0.896
	TA2	0.769			
	TA3	0.846			
	TA4	0.828			
	TA5	0.788			
Safety	SA1	0.794	0.870	0.626	0.870

Latent variables	Item	Standardize Factor loadings	CR	AVE	Cronbach's Alpha
	SA2	0.806			
	SA3	0.765			
	SA4	0.800			
Efficiency	EF1	0.746	0.846	0.580	0.846
	EF2	0.783			
	EF3	0.726			
	EF4	0.789			
Loyalty	LO1	0.824	0.920	0.697	0.920
	LO2	0.814			
	LO3	0.847			
	LO4	0.857			
	LO5	0.833			
Recommendation	RE1	0.748	0.899	0.573	0.870
	RE2	0.778			
	RE3	0.774			
	RE4	0.755			
	RE5	0.730			
Willingness to pay	WI1	0.753	0.898	0.560	0.864
	WI2	0.734			
	WI3	0.719			
	WI4	0.761			
	WI5	0.773			
Destination distinctiveness	DD1	0.729	0.870	0.672	0.889
	DD2	0.850			
	DD3	0.850			
	DD4	0.844			

Based on Table 1, the eight variables are considered reliable measurements, as Cronbach's Alpha values exceed 0.70, indicating strong internal consistency. The values of CR generated for this investigation indicate that the measurement items are within the acceptable range of 0.70 or greater, showing evidence of internal consistency. Content validity was verified to ensure that the measurement items adequately covered the content of this study and related theories. Convergent validity was investigated to measure the extent to which the same aspect of a construct can be accessed and quantified by different models. The average variance extracted (AVE) is a standard measure used to assess the convergent validity of the construct level. The recommended value for AVE is greater than or equal to 0.50 (Fornell & Larcker, 1981). On the other hand, when the AVE value is under 0.5, it indicates that the measurement error in the items exceeds the variance explained by the construct (Hair et al., 2010). The AVE values in Table 1 are greater than 0.50 in all constructs, which is considered acceptable convergent validity (Fornell & Larcker, 1981).

In this study, factor loadings were another measure to investigate convergent validity. Each construct's recommended factor loading value is 0.50 or higher (Hair et al., 1998). Table 1 shows that the standardized factor loadings exceed the threshold of 0.50, as suggested by Hair et al. (2010). Confirmatory Factor Analysis (CFA) is a statistical technique that utilizes the variance and covariation of observable indicators to determine a smaller set of latent factors. Therefore, CFA is essential for validating the fundamental framework of scale items and the relationships and interactions between the items and factors (Ganesh & Srivastava, 2023). In the current study, the researchers employed structural equation modelling (SEM) with AMOS

software to evaluate the validity of confirmatory factor analysis (CFA). Structural equation modelling (SEM) uses confirmatory factor analysis to provide a rigorous evaluation of the theory of measurement. The method is intended to systematically and logically quantify variables that precisely reflect constructions through a theoretical framework.

Research Results

Respondents' Profiles and Studied Variables

This study comprised 468 participants to analyze their demographic data. Most of the respondents were 291 females (62.2 percent), and the majority of them were married (238 persons; 50.9 percent). The majority of respondents were between 25 and 40 years old (237 persons; 50.6%), and their monthly personal income exceeded 40,000 baht, with approximately 267 persons (57.1%) falling into this category. Finally, most of them completed their education with bachelor's degrees (227 persons, 48.5 percent) and went on to work as business owners (approximately 185 persons, 39.5 percent).

Model Development, Convergent Validity, and Discriminant Validity

In the second step in structural equation modelling (SEM), the validated measurement model has been integrated into the proposed structural model and evaluated using AMOS software, as shown in Figure 2.

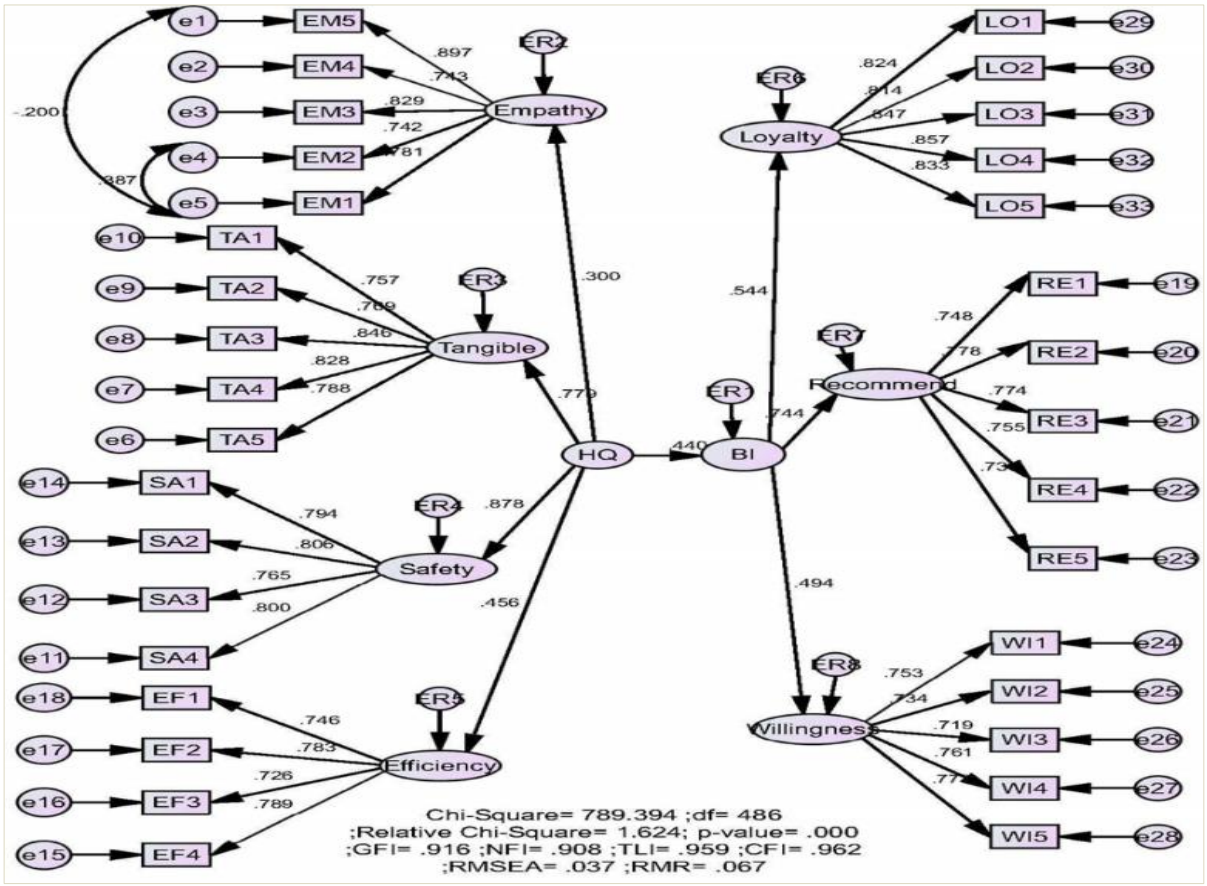

Figure 2 Structural Model

The CFA was used collectively among all factors to determine discriminant validity. This investigation examines Healthqual by integrating four dimensions of service quality measurement, proposing to determine the relationship between dependent and independent factors. Hair et al. (2010) suggest that a correlation below 0.85 between the two constructs may

be considered indicative of discriminant validity. The result shows that each correlation of the construct is below 0.85, indicating that discriminant validity has been appropriately achieved. The square roots of the AVE for Healthqual (0.790) and Behavioral Intentions (0.781) are both greater than the correlation between them (0.65). This indicates that each construct shares more variance with its own indicators than with other constructs, thereby confirming adequate discriminant validity (Fornell & Larcker, 1981).

Table 2 Fit Indices Result of SEM Structuring Model

Model Fit Indices	Recommended value	Source	Results
χ^2/Degree of freedom	< = 5	Bagozzi & Yi (2012)	1.624
Goodness of Fit Index (GFI)	> = 0.90	Hair et al. (1998)	0.916
Adjust Goodness of Fit Index (AGFI)	> = 0.90	Kline & Santor (1999)	0.903
Normalized Fit Index (NFI)	> = 0.90	Hu & Bentler (1999)	0.908
Relative Fit Index (RFI)	> = 0.90	Hu & Bentler (1999)	0.900
Incremental Fit Index (IFI)	> = 0.90	Hu & Bentler (1999)	0.963
Tucker Lewis Index (TLI)	> = 0.92	Bagozzi & Yi (2012)	0.959
Comparative Fit Index (CFI)	> = 0.90	Hu & Bentler (1999)	0.962
Root Mean Square Error of Approximation (RMSEA)	< = 0.08	Hair et al. (1998)	0.037

Table 2 presents the results of the measurement model, which include the average variance extracted from a collection of variables. The suggested indicator values have been considered consistent with the data, demonstrating substantial acceptability. The CFA results revealed an appropriate goodness of fit (χ^2/degrees of freedom = 1.624, GFI = 0.916, AGFI = 0.903, NFI = 0.908, RFI = 0.900, IFI = 0.963, TLI = 0.959, CFI = 0.962, RMSEA = 0.037), all within acceptable levels (Hair et al., 2010).

Hypothesis Analysis

Following the establishment of an acceptable structural model, path estimates and critical ratios, also known as t-values, are used to determine the statistical significance of the parameter estimates obtained through structural equation modeling. Table 3 displays the data analyses generated by AMOS SEM. The results of the hypothesis testing are as follows.

Hypothesis 1 was supported with a path coefficient of 0.440, indicating that healthcare service quality (Healthqual) has a significant influence on behavioral intentions in medical tourism ($p < 0.001$). The results provide strong evidence supporting the direct impact of Healthqual on behavioral intentions.

Hypothesis 2 tested results indicated that destination distinctiveness had a significant influence as a moderator between Healthqual and behavioral intentions, with a path coefficient of 0.125 ($p < 0.05$). This suggests that destination distinctiveness influences the relationship between Healthqual and behavioral intentions.

Table 3 Results of Hypothesis Testing

Hypotheses	t-value	Path coefficient	p-value	Results
H1: Healthqual ⟶ Behavioral Intentions	0.3927	0.440	***	Supported
H2: Moderator effect: Destination distinctiveness* Healthqual ⟶ Behavioral Intentions	2.400	0.125	*	Supported

Note: * at significance level < 0.05; *** at significance level < 0.001

Figure 3 shows the moderator effects of destination distinctiveness on the relationship between Healthqual and behavioral intentions. The result shows that at low destination distinctiveness, Healthqual has a greater impact on behavioral intentions compared to high destination distinctiveness when Healthqual is low. While at high destination distinctiveness, Healthqual has a greater impact on behavioral intentions compared to low destination distinctiveness, when Healthqual is high. In addition, Figure 5 indicates that the slope of the high destination distinctiveness line was significantly steeper in comparison to the slope of the low destination distinctiveness line. It demonstrates that in countries with high destination distinctiveness, an increase in Healthqual is associated with a greater change in behavioral intentions than in countries with low destination distinctiveness. In other words, outbound medical tourists who are experienced in high destination distinctiveness are more likely to revisit destinations, recommend them to others, and prefer to pay more compared to those in low-distinction destination countries. Overall, the findings acknowledge that regardless of the destination's distinctiveness level, outbound medical tourists' prior travel abroad is for high-service quality healthcare for non-emergency treatment.

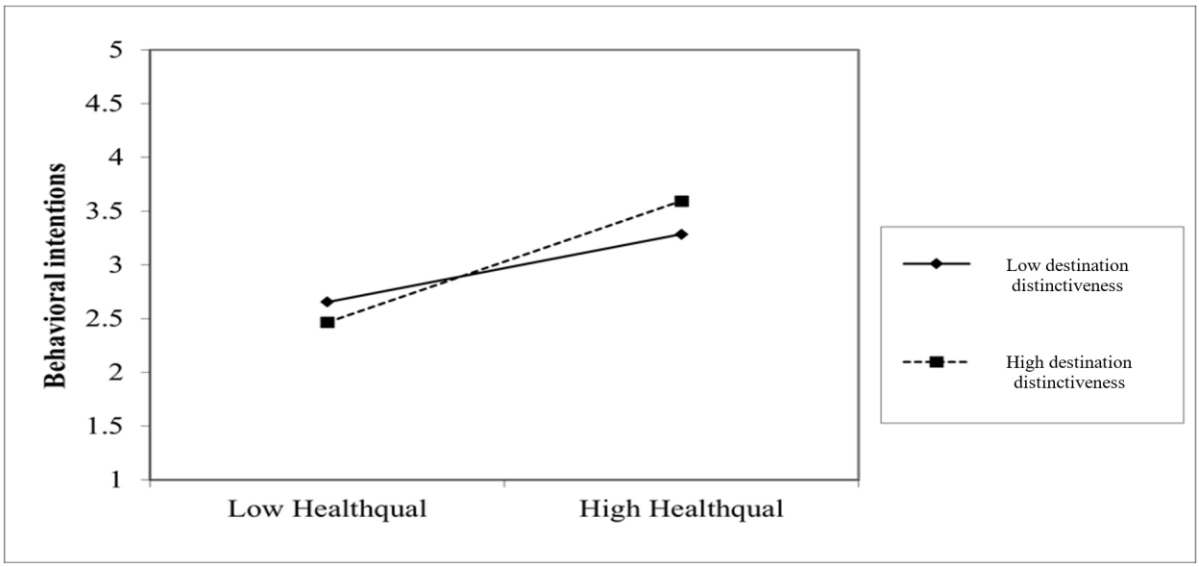

Figure 3 Moderating Effect

Conclusion and Discussion

This study employs the theory of planned behavior as the framework to explore the relationship between healthcare service quality and behavioral intentions. The findings of this study highlight the importance of the relationship between healthcare service quality and outbound medical tourists' behavioral intentions to select a destination for healthcare, as well as the moderating role of destination distinctiveness on the relationship between Healthqual and behavioral intentions in the medical tourism industry. This study also contributes to the broader discourse on the sustainability of medical tourism industries in developing Asian economies. To improve healthcare service quality and promote destination distinctiveness, countries can ensure the short-term and long-term sustainability of their inbound and outbound medical tourism sectors. Sustainable medical tourism practices involve maintaining high standards of care, ethical marketing, cultural sensitivity, and responsible resource management. These initiatives are crucial for mitigating potential adverse effects on local healthcare resources and for fostering balanced economic development.

Theoretically, this study extends the theoretical contributions of healthcare service quality (Healthqual) modeling and the theory of planned behavior (TPB) to the tourism context. First,

this study applies a Healthqual model in a new context: outbound medical tourism for healthcare services. The primary goal of the Healthqual scale is to serve as a diagnostic approach for the objective assessment of the comprehensive quality of care services provided by hospitals, as perceived by both internal and external consumers. In this study, the Healthqual scale encompasses the essential factors (empathy, tangibles, safety, and efficiency) for assessing healthcare providers, including both public and private institutions, clinics, and specialized medical centers. Moreover, Healthqual is developed with consideration of the perspectives of outbound medical tourists to measure the quality of medical healthcare in service delivery processes. These findings align with previous similar studies, such as Ali et al. (2023), Dagger et al. (2007), Lee (2017), Mahmud et al. (2021), and Sousa & Alves (2019). Second, this study applies the TPB theory in the context of outbound medical tourism. The findings offer new insights into the varying importance of three factors influencing behavioral intentions, which differ from those in all previous works in the literature. The three factors include loyalty intention aspects, recommendation intention aspects, and willingness-to-pay intention aspects. Lastly, this study contributes a new flavor to the area of medical tourism research by examining the moderating influence of destination distinctiveness on the relationship between Healthqual and behavioral intentions in medical tourism. Findings revealed that destination distinctiveness has a significant moderating influence on the relationship between Healthqual and behavioral intentions. These outcomes are supported by prior similar research, such as Pike & Page (2014), Qu et al. (2011), and Taheri et al. (2021). Nevertheless, the outcomes from this study could be used in future research papers as a criterion in relevant contexts. The originality of this paper may be further explored in subsequent research studies.

In terms of managerial implications, this study provides actionable insights for healthcare providers and destination management professionals. Providing evidence of Healthqual's significant positive effect on behavioral intentions, which is increased by destination distinctiveness. To improve healthcare service quality in healthcare businesses, managers should understand every dimension of the Healthqual model, and specific strategies are recommended for each dimension of Healthqual. First, empathy is a quality aspect. The general opinion is that sufficient focus can improve patient behavioral intentions. Doctors and nurses can show empathy through private care and mental support. Second, the tangible quality aspect: high-quality treatment facilities may not ensure improved healthcare. They comprise skilled physicians, nurses, and other medical professionals, as well as modern medical equipment and experts in the application of innovative technologies. Physical improvements provide a positive effect on patients and staff, which strongly influences behavioral intentions. Third, safety is a quality aspect. Healthcare safety relies on qualified staff, confidence in their work, and a safe environment for both patients and staff. This assessment involves patient comfort and safety, medical staff expertise and knowledge, accuracy of illness diagnosis, and interpretation of laboratory reports. Medical tourists' behavioral intentions increase with the safety of healthcare providers. Lastly, the efficiency of healthcare services is most strongly correlated with operational components, including medication use, ease of medical procedures, and medical expenditure. Thus, the behavioral intentions of outbound medical tourists and other international medical tourists directly influence efficiency. Furthermore, the moderating role of destination distinctiveness indicates an alternative strategic concentration. When destination distinctiveness is high, higher Healthqual strongly confirms behavioral intentions. Conversely, for less distinctive destinations, consistently providing exceptionally high Healthqual becomes important to driving positive behavioral intentions. Thus, strategic efforts should simultaneously improve healthcare service quality and effectively communicate destination attributes to attract and maintain medical tourists.

This study has some limitations that should be considered. The complexities and sensitivity of research are taken seriously, as medical tourism is a significant niche in the current tourism sector. Firstly, the study collected data from respondents selected from the Thai outbound medical tourist sample, which limited its generalizability to other populations. Future studies should consider foreign medical tourists as the sample. Secondly, this study focuses on the non-emergency medical tourism sector by applying service quality to examine tourists' behavioral intentions. Future research should consider another type of treatment in healthcare tourism to confirm the study's results. Thirdly, this study employed quantitative research methodologies that may introduce response bias and limit the temporal analysis of behavioral changes. As the participants are patients, this involves sensitive details about a patient, such as personal information, medical conditions, and treatment options. Additionally, categorizing destination distinctiveness into high and low categories may simplify tourists' complex perceptions. Thus, qualitative research methods can be employed in future studies to gain a deeper understanding of the attitudes and behavioral intentions of respondents. Lastly, data collection during the recovery period from the pandemic might have altered tourists' attitudes and risk perceptions, which could have impacted the study's outcomes.

References

Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179-211.

Alcañiz, E., García, I., & Blas, S. (2009). The functional-psychological continuum in the cognitive image of a destination: A confirmatory analysis. *Tourism Management, 30*(5), 715-723.

Ali, J., Jusoh, A., Idris, N., Nor, K., Wan, Y., Abbas, A., & Alsharif, A. (2023). Applicability of healthcare service quality models and dimensions: future research directions. *The TQM Journal, 35*(6), 1378-1393.

Assadzadeh, A., Azad, M., Asgharpur, H., & Mirani, N. (2019). Investigating the role of institutional quality on development of medical tourism industry in Iran: system dynamics approach. *Journal of Tourism Planning and Development, 7*(27), 26-54.

Bagozzi, R., & Yi, Y. (2012). Specification, evaluation, and interpretation of structural equation models. *Journal of the Academy of Marketing Science, 40*, 8-34.

Balogun, B. (2020). Preliminary look at the motivators and decision-making process of medical tourists from Nigeria to India. *Journal of Tourism Analysis: Revista de Análisis Turístico, 27*(1), 41-61.

Biswakarma, G., & Basnet, B. (2025). *Motivational factors affecting outbound medical tourism: the case of Nepal, a developing nation*. Leeds: Emerald Publishing Limited.

Cai, L. (2002). Cooperative branding for rural destinations. *Annals of Tourism Research, 29*(3), 720-742.

Chen, J., Wang, W., & Prebensen, N. (2016). Travel companions and activity preferences of nature-based tourists. *Tourism Review, 71*(1), 45-56.

Chia, K., & Liao, Y. (2021). An exploratory study of factors influencing Chinese outbound medical tourism. *Journal of China Tourism Research, 17*(3), 376-394.

Cohen, E. (2008). Medical Tourism in Thailand. *AU-GSB e-JOURNAL, 1*(1), 24-37.

Collins, A., Medhekar, A., Wong, H., & Cobanoglu, C. (2019). Factors influencing outbound medical travel from the USA. *Tourism Review, 74*(3), 463-479.

Connell, J. (2015). Medical tourism – concepts and definitions. In N. Lunt, D. Horsfall & J. Hanefeld (eds.). *Handbook on Medical Tourism and Patient Mobility* (pp. 16-24). Cheltenham: Edward Elgar Publishing.

Cronbach, L., & Shavelson, R. (2004). My Current thoughts on Coefficient Alpha and Successor Procedures. *Educational and Psychological Measurement, 64*(3), 391-418.

Cronin Jr, J., & Taylor, S. (1992). Measuring service quality: a reexamination and extension. *Journal of Marketing, 56*(3), 55-68.

Dagger, T., Sweeney, J., & Johnson, L. (2007). A hierarchical model of health service quality: scale development and investigation of an integrated model. *Journal of Service Research, 10*(2), 123-142.

Das, R. (2017). Medical marketing in promoting medical tourism in India. *ELK Asia Pacific Journal of Marketing and Retail Management, 8*(3), 1-10.

Dolnicar, S., Coltman, T., & Sharma, R. (2015). Do satisfied tourists really intend to come back? Three concerns with empirical studies of the link between satisfaction and behavioral intention. *Journal of Travel Research, 54*(2), 152-178.

Duffy, J., Duffy, M., & Kilbourne, W. (1997). Cross national study of perceived service quality in long-term care facilities. *Journal of Aging Studies, 11*(4), 327-336.

Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39-50.

Ghobadian, A., Speller, S., & Jones, M. (1994). Service quality: concepts and models. *International Journal of Quality & Reliability Management, 11*(9), 43-66.

Gómez-Carmona, D., Paramio, A., Cruces-Montes, S., & Marín-Dueñas, P. (2022). Impact of COVID-19 prevention measures on health service quality, perceived value and user satisfaction. A structural equation modelling (SEM) approach. *Atención Primaria, 54*(2), 102178.

Grönroos, C. (1984). A service quality model and its marketing implications. *European Journal of Marketing, 18*(4), 36-44.

Guerin, R., & Toland, M. (2020). An application of a modified theory of planned behavior model to investigate adolescents' job safety knowledge, norms, attitude and intention to enact workplace safety and health skills. *Journal of Safety Research, 72*, 189-198.

Hair, J., Anderson, R., Babin, B., & Black, W. (2010). *Multivariate data analysis: A global perspective* (7th ed). New Jersey: Pearson.

Hair, J., Black, W., Babin, B., Anderson, R., & Tatham, R. (1998). *Multivariate data analysis*. (5th ed) Ohio: Prentice Hall.

Hu, L., & Bentler, P. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1-55.

Jattuchai, S., Pitakchinnapong, R., Apisitmontree, N., & Simpattanawong, D. (2021). *Medical Tourism: A Case Study of Cosmetic Surgery Packages of Thai Tourists in Korea*. A paper presented at the 16th National and International Sripatum University Conference, Sripatum University, Thailand.

Kline, R. (2011). Convergence of Structural Equation Modeling and Multilevel Modeling. In M. Williams & W. Paul Vogt (eds.). *The SAGE Handbook of Innovation in Social Research Methods* (pp. 562-589). California: SAGE Publications Ltd.

Kline, R., & Santor, D. (1999). Reviews of using LISREL for structural equation modelling: A researcher's guide and principles and practice of structural equation modelling. *Canadian Psychology/Psychologie Canadienne, 40*(4), 381-383.

Ladhari, R. (2009). A review of twenty years of SERVQUAL research. *International Journal of Quality and Service Sciences, 1*(2), 172-198.

Lee, D. (2017). HEALTHQUAL: A multi-item scale for assessing healthcare service quality. *Service Business, 11*, 491-516.

Lee, M., Han, H., & Lockyer, T. (2012). Medical tourism—attracting Japanese tourists for medical tourism experience. *Journal of Travel & Tourism Marketing, 29*(1), 69-86.

Lwin, H., Punnakitikashem, P., & Thananusak, T. (2021). The level and determinants of international patient satisfaction with dental tourism in Bangkok, Thailand. *Cogent Business & Management, 8*(1), 1898316.

Mahmud, M., Lima, R., Rahman, M., & Rahman, S. (2021). Does healthcare service quality affect outbound medical tourists' satisfaction and loyalty? Experience from a developing country. *International Journal of Pharmaceutical and Healthcare Marketing, 15*(3), 429-450.

Marder, B., Erz, A., Angell, R., & Plangger, K. (2021). The role of photograph aesthetics on online review sites: Effects of management-versus traveler-generated photos on tourists' decision making. *Journal of Travel Research, 60*(1), 31-46.

Pahrudin, P., Chen, C., & Liu, L. (2021). A modified theory of planned behavioral: A case of tourist intention to visit a destination post pandemic Covid-19 in Indonesia. *Heliyon, 7*(10), e08230.

Parrey, S., Hakim, I., & Rather, R. (2019). Mediating role of government initiatives and media influence between perceived risks and destination image: A study of conflict zone. *International Journal of Tourism Cities, 5*(1), 90-106.

Pike, S., & Page, S. (2014). Destination Marketing Organizations and destination marketing: A narrative analysis of the literature. *Tourism Management, 41*, 202-227.

Podsakoff, P., MacKenzie, S., Lee, J., & Podsakoff, N. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879-903.

Qu, H., Kim, L., & Im, H. (2011). A model of destination branding: Integrating the concepts of the branding and destination image. *Tourism Management, 32*, 465-476.

Rahman, M. (2019). Medical tourism: tourists' perceived services and satisfaction lessons from Malaysian hospitals. *Tourism Review, 74*(3), 739-758.

Ritchie, J., Crouch, G., & Hudson, S. (2000). Assessing the role of consumers in the measurement of destination competitiveness and sustainability. *Tourism Analysis, 5*(2), 69-76.

Ritwatthanavanich, N., Thoongsuwan, A., & Pavapanunkul, S. (2018). The Scenario Model of Aesthetic Plastic Surgery Business for Preparing a Thai Popular Culture Wave on Medical Tourism. *PSAKU International Journal of Interdisciplinary Research, 7*(1), 96-109.

Rosenbusch, J., Ismail, I., & Ringle, C. (2018). The agony of choice for medical tourists: a patient satisfaction index model. *Journal of Hospitality and Tourism Technology, 9*(3), 267-279.

Siribowonphitak, C. (2023). Causal Relationship Model of Tourist Motivation and Destination Branding Related to Behavioral Intentions towards Health and Wellness Tourism in Maha Sarakham, Thailand. *Asian Administration and Management Review, 6*(2), 158-171.

Sousa, B., & Alves, G. (2019). The role of relationship marketing in behavioural intentions of medical tourism services and guest experiences. *Journal of Hospitality and Tourism Insights, 2*(3), 224-240.

Supasettaysa, G. (2023). *Public-Private Partnerships in the Thailand Medical Tourism Industry*. Massachusetts: Harvard Kennedy School.

Taheri, B., Chalmers, D., Wilson, J., & Arshed, N. (2021). Would you really recommend it? Antecedents of word-of-mouth in medical tourism. *Tourism Management, 83*, 104209.

V.G., G., Park, E., & Lee, C. (2021). Testing the influence of destination source credibility, destination image, and destination fascination on the decision-making process: Case of the Cayman Islands. *International Journal of Tourism Research, 23*(4), 569-580.

Zhang, Q., Zhang, H., & Xu, H. (2021). Health tourism destinations as therapeutic landscapes: Understanding the health perceptions of senior seasonal migrants. *Social Science & Medicine, 279*, 113951.

Zhang, S., & Lo, Y. (2024). Tourists' perceived destination image and heritage conservation intention: a comparative study of heritage and film-induced images. *International Journal of Tourism Cities, 10*(2), 469-490.

Data Availability Statement: The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Conflicts of Interest: The authors declare that the research was conducted without any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's Note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.