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Satisfaction to Compete? Proposal of a Model for Health and Wellness Tourism

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Abstract

Purpose: The main objective of this research was to develop an index to assess the perceived value of tourism services at the level of customer satisfaction by applying it in the context of health and wellness tourism.

Methodology: Using exploratory factorial analysis (EFA), the model's constructs were identified, and the satisfaction index of thermal customers was estimated. This method was applied to a set of data collected through a questionnaire distributed to users from thermal spa of Chaves, Portugal, through probabilistic sampling. A total of 107 participants were obtained, with a response ratio of 53.5%.

Results: Participants expressed a high level of satisfaction due to the perceived quality of various services offered, including the infrastructure and technical team. The satisfaction index of the technical team is higher than that of the infrastructures and services provided, representing the highest contribution rate to the global model.

Limitations: As limitations, other variables that influence customer satisfaction could have been included, such as prices, emotional components, and corporate social responsibility. Furthermore, only customer satisfaction in a particular thermal establishment was analysed. Future academics studies can compare the model with other establishments and/or contexts, identifying critical points and strategies to continuously improve customer satisfaction.

Practical implications: By establishing a thermal customer satisfaction index, tourism authorities and the different economic agents can obtain objective information on the results of thermal services. Tourism managers can thus set goals for improvement, competitiveness, and loyalty.

Originality: This study's unique contribution lies in how thermal customer satisfaction index or indicators are easily measured by applying EFA. A new approach is used to measure satisfaction based on a scale from 0 to 100%. The index results are very useful for making decisions on resource allocation and comparing different thermal establishments compared to traditional techniques.

Keywords: *Satisfaction; Customer; Health and wellness tourism; Multivariate model; Satisfaction index.*

1. Introduction

The health and wellness tourism (HWT) has become a popular phenomenon around the world in the 21st century because of the growing trend of people looking to escape the modern lifestyle (Kim et al., 2017). The evolution of tourists' need for well-being has increased the demand for alternative experiences in various domains, from physical to psychological and spiritual to cultural (Dini & Pencarelli, 2022). Furthermore, academics hypothesise that the pandemic may influence consumer behaviour in favour of wellness tourism (Wen et al., 2021). Indeed, by 2020, travellers worldwide made more than 600 million international and domestic

wellness trips, with international wellness tourists spending more than typical international tourists (Global Wellness Institute, 2018). This proves that this tourism market has grown tremendously, becoming an important revenue centre for both low-density destinations and the industry (Hartwell et al., 2018; Kucukusta & Denizci Guillet, 2014). Faroldi et al. (2019) adds that the thermal industry represents a considerable field of development, showing itself recognized by the European Commission as the main subsector of HWT. Therefore, despite being an emerging sector, it is perceived that HWT has not lost the attention of researchers and policy makers (Manaf et al., 2015).

But if the theoretical framework has advanced, research on HWT remains an area to explore given its fragmentation and the number of concepts involved. Thus, consistent with the objective, it was decided to coherently employ the term "HWT" defined as the deliberate promotion of wellness and health services, where tourists seek activities to improve physical and mental fitness, receive medical treatments, participate in sports, and adventure activities, as well as visit thermal establishments (Dini & Pencarelli, 2022; Han et al., 2018; Rodrigues et al., 2022; Smith et al., 2020). The literature is also divided between the terminologies "spa resort", "thermal establishment", and "spa thermal". According to the thermalism dictionary, a thermal resort corresponds to a geographical area where there is one or more natural mineral water springs operated by one or more thermal establishments. A thermal establishment or thermal spa is a thermal organization that provides health care and spa wellness services, in which the therapeutic properties of a natural mineral water are used for prevention, rehabilitation, and health maintenance. In this study, the term thermal establishment will be used consistently.

In tourism, satisfaction is defined as the fullness that a tourist gets when consuming a product and/or service. Therefore, managers should segment their offer according to more innovative criteria, making visitors experience a better quality of services and high satisfaction rates (Dini & Pencarelli, 2022). A proper assessment of the determinants of satisfaction may be useful to identify which services and/or products should be offered and restructured to meet customer needs and demands and contribute to strategic decision-making (Meleddu et al., 2015). Ensuring satisfaction should be a prerequisite obligation for service providers, ensuring financially

competitive and sustainable future activities by encouraging customers to revisit (Heydari et al., 2019; Sarker et al., 2021).

Tourism studies have increasingly focused on a holistic view of customer satisfaction, however, there are needs to be studies in the current literature on HWT that identify in a multivariate model the perceived value of services offered at the level of customer satisfaction. Consistent with these findings and recognising the call by Sirakaya et al. (2004) for the development of new measures to offset the outdated use of the arithmetic mean – calling into question many of the findings in the existing tourism literature - this research aims to:

> Construct an index that accurately translates the perceived value of the tourism experience expressed in the degree of customer satisfaction in the context of HWT, while analysing the dimensions of satisfaction that influence loyalty.

This research seeks to contribute to the literature on HWT by presenting an innovative method of measuring customer satisfaction in the form of an index that captures the perceived value of tourism services. It also provides a theoretical basis for future studies on the attributes that users take into consideration when choosing a thermal establishment. In practical terms, there are implications for management and marketing, such as professionals being able to forecast tourism demand and plan successful marketing strategies to design memorable experiences. Policy makers can incorporate the results into their promotional and regulatory decisions, while managers can improve thermal customer satisfaction levels based on more reliable data.

This study is organised into four sections. The first section discusses the theoretical framework, followed by the methodology and the analysis of results. Finally, the main conclusions, implications, and suggestions for future studies are presented.

2. Theoretical Background and Research Hypotheses

2.1. Health and Wellness Tourism

The globalisation of healthcare has resulted in the emergence of a new form of tourism, namely HWT (Heydari et al., 2019). The context of this form of tourism has developed rapidly in several Asian regions, becoming a topic that has sparked the interest of researchers (Han et al., 2018). O Global Wellness Institute (2018) indicates that there are 34.099 thermal establishments operating in 130 countries, being heavily concentrated in Asia-Pacific and Europe.

Health tourism, as a multidimensional concept, includes all behaviours based on consumer demand for health in another country and is divided into two subtypes of tourism: medical tourism and wellness tourism (Manaf et al., 2015; Moreno-González et al., 2020). Medical tourism is more related to a person's physical well-being (Sarker et al., 2021), while wellness tourism is composed of different components of the supply system, including body and mind care, hot springs, spas, sports, nature and environment, culture, spirituality, and events (Dini & Pencarelli, 2022). It is true that health and wellness services may vary across regions, but a constant feature of a thermal establishment around the world has been relaxation, both physical and mental (Han et al., 2018).

2.2. Thermal Customer Satisfaction

Satisfaction represents one of the most direct psychological consequences of a tourist experience, with tourists developing expectations about their tourist experience and feeling satisfaction if the practice exceeds expectations (Meleddu et al., 2015; Zarei & Maleki, 2019). Visitors' satisfaction when they travel to a particular destination is also perceived as satisfaction when they use a specific product and/or service (Han et al., 2018).

Satisfaction is a significant factor in tourism literature and occurs at the core of marketing activities of companies, where its evaluation is a suitable criterion to assess the overall performance of organisations (Han et al., 2017; Mi et al., 2019; Wang et al., 2017), with high levels of satisfaction determining more meaningful development (Hartwell et al., 2018). Other authors (Campón-Cerro et al., 2020; Mi et al., 2019) also refer that high levels of satisfaction allow organisations to achieve and increase their competitiveness, ensuring success in an increasingly competitive market and with increasingly demanding customers.

Previous studies have provided evidence that satisfaction also plays a vital role in the process of behavioural intentions, in which satisfied customers show an enormous desire to return and recommend the services and/or products to family and friends (Campón-Cerro et al., 2020; Han et al., 2017, 2018). Furthermore, when previous customers share their experiences, this can greatly impact the behavioural intention of potential new customers (Zarei & Maleki, 2019). According to Maunier and Camelis (2013) managers' main challenge is to understand the satisfactory and unsatisfactory elements of the tourism experience to plan and deliver a memorable experience that can result in positive post-consumption reactions. Thus, the following hypothesis (H) was developed:

H_1: *There is a positive and direct relationship between satisfaction determinants and behavioural intentions.*

Given that high levels of satisfaction determine customer loyalty and organisational sustainability, it is of interest to identify the attributes that determine satisfaction. For tourists, satisfaction depends on several factors, including satisfaction with the quality of services (González & Brea, 2005; Smith et al., 2020) and the behaviour of the team (Han et al., 2018; Heydari et al., 2019; Manaf et al., 2015). Infrastructure development, restructuring and maintenance of facilities and equipment are also a positive contribution to the tourism experience and, consequently, to thermal customer satisfaction (Maunier & Camelis, 2013; Smith et al., 2020). Thermal establishments should also aim to offer a diversity of services and products, as the availability of choice affects the decision-making process and purchase and/or usage behaviours (Han et al., 2018; Kucukusta & Denizci Guillet, 2014). Among all indicators, water, infrastructure, equipment, internal environment, diversified services and programs, treatments, and human resources are considered to have the most influence on thermal customer satisfaction (Emir & Saraçli, 2011; Medina-Muñoz & Medina-Muñoz, 2014; Rodrigues et al., 2022; Turan & Belber, 2015; Vryoni et al., 2017). Service providers must ensure that the tourism experience be good enough, considering these critical factors, to meet or, if possible, exceed expectations (Sarker et al., 2021). Consequently, the following hypothesis (H) was developed:

H_2: There is a direct and positive relationship between the determinants of satisfaction and the degree of overall satisfaction.

3. Methodology

3.1. Sample and Data Collection

The objective of this research is to develop a multivariate model to assess the perceived value of tourism services through customer satisfaction in HWT. To calculate the model, it will be necessary to determine the attributes that influence customer satisfaction. To do this, the degree of customer satisfaction was analysed, with the thermal establishment as the unit of analysis. In this case, it was selected the thermal establishment "Chaves - Termas & Spa", in the North region of Portugal.

To answer the objective, theoretical research was conducted to identify attributes related to infrastructures, equipment, facilities, and human resources, which were subsequently tested through a questionnaire. The questionnaire was based on the studies already developed by Silvério et al. (2021a, 2021b), which included sociodemographic questions, items to assess customer satisfaction with the space and service and respective loyalty. Items were measured on a five-point of Likert scale using an importance, satisfaction, and likelihood scale. The reliability and validity of the questionnaire were checked, using Cronbach's alpha indicator, and as the internal consistency was considered very good (0.922), the application of the questionnaire was continued (Field, 2018).

First, the research team contacted the person in charge of the thermal to present the research objective and request permission to apply the questionnaire. After positive *feedback*, the questionnaire was delivered in person and randomly, ensuring anonymity and data confidentiality to all participants. It was applied between July and September 2020, with a probabilistic sampling process, resulting in a final sample of 107 customers from a population of about 200 customers. The response ratio was 53.5%, which proved adequate and satisfactory for this study.

3.2. Data Treatment and Analysis

To answer the study objective, an exploratory factorial analysis (EFA) was applied as a method of building the multivariate model, which makes it possible to analyse

the inherent structures between variables and identify the determining factors (Marôco, 2021). To identify the adequacy of the data to the EFA it was necessary to analyse the Kaiser-Meyer-Olkin (KMO) criterion and Bartlett's test of sphericity (Marôco, 2021). Data were processed with IBM SPSS Statistics v.28.0.

To test the hypotheses, Pearson's correlation coefficient was applied, since the aim was to assess the degree of relationship between two variables (Field, 2018). For its applicability, normality was tested, and a 5% significance level was assumed for validation (Marôco, 2021).

The design of the multivariate model was based on the methodology used by other authors widely recognised in the scientific field (Aydin & Ozer, 2005; Kubrusly, 2001; Munoz et al., 2020; Turel & Serenko, 2006). To build an index it is important to select the attributes that compose it and then weight them (Kubrusly, 2001). The EFA allows us to obtain two appropriate indicators to weight the results in an index: (i) explanatory potential of each latent dimension (*eigenvalue*); (ii) factor loadings of the attributes, which show how much each one explains of the variance in the results of the respective latent dimension. The index per factor uses as weights the factorial loadings, while for the global calculation the *eigenvalues* of the corresponding factors are used (Kubrusly, 2001). The index is presented as a percentage, ranging from 0% (when respondents are very dissatisfied, score 1) to 100% (when respondents are very satisfied, score 5) (Munoz et al., 2020). For better analysis and qualitative measurement, the cut-off point method was applied on a scale of 0-100%, using four cut-offs by analogy to the Likert scale: [0-19.5%[-very dissatisfied; [19.5-39.5%[-dissatisfied; [39.5-59.5%[-neither dissatisfied/nor satisfied; [59.5-79.5%[-satisfied and [79.5-100%]-very satisfied.

The satisfaction index for each factor is obtained through (i=1,..., *j* [1] (Munoz et al., 2020):

$$ISCT(F_{kn}) = \frac{\sum_{i=1}^{j}(|p_i|\bar{x}_i) - \sum_{i=1}^{j} p_i}{(L_u - L_l) \cdot \sum_{i=1}^{j} p_i} \times 100\% \qquad i=1,...,j \qquad [1]$$

where,

$ISCT(F_{kn})$ Thermal Customer Satisfaction Index on factor κ (based on *n* clients);

n, number of clients;

j, number of variables in the factor κ;

$|p_i|$, factor load modulus for variable i in factor κ;

$\overline{x}_i$, mean of the variable's ranking i in the factor $i\kappa$;

L_u, this is the upper limit of the *Likert* scale;

L_l, this is the lower limit of the *Likert* scale.

The overall satisfaction index is calculated by weighting the result obtained in each factor by the *eigenvalue of* the latent dimension ([2]:

$$ISCT_G(n)$$
$$= \frac{\sum_{i=1}^{k}[\Lambda_i \cdot ISCT(F_{kn})]}{\sum_{i=1}^{k} \Lambda_i} \qquad i=1,...,k \qquad [2]$$

where,

$ISCT_G(n)$, Global Thermal Customer Satisfaction Index;

Λ_i, factor final eigenvalues κ;

$ISCT(F_{kn})$, Thermal Customer Satisfaction Index for customer *n* in the factor κ.

4. Results and discussions

4.1. Demographic and Professional Profile

In the sample structure, female respondents (69.2%) slightly outnumber men in terms of gender (

Table **I:** I). Among the participants, the average age was 58, with a university degree and an average monthly income equal to or greater than 3.001€ per household. According to occupation, retirees and civil servants represent 61.9% of the total sample. Furthermore, the majority were national and only 8 international. Given the small number of international clients, a question arises: is the impact of COVID19? It is because by 2019, the thermal establishment was visited by 2,331 international customers.

Table I: Thermal Customer Profile

Variables		n	%
Gender (n=107)	Male	33	30.8%
	Female	74	69.2%
Age (n=102)	<=25	7	6.9%
	26-35	10	9.8%
	36-45	7	6.9%
	46-65	32	31.4%
	>=66	46	45.1%
Academic Qualification (n=105)	Basic Education	35	33.3%
	High School	22	21.0%
	Higher Learning	47	44.8%
	Illiteracy	1	1.0%
Nationality (n=94)	Portugal	86	80.37%
	International	8	7.48%
NUT II (n=86)	Northern	62	72%
	Centre	12	14%
	Lisbon's Metropolitan area	12	14%
Profession (n=105)	Public official	33	31.4%
	Pensioner	32	30.5%
	Independent Professional	10	9.5%
	Housewife	6	5.7%
	Student	6	5.7%
	Self-Employed	5	4.8%
	Administrator	5	4.8%

Variables		n	%
	Worker	3	2.9%
	Office employee	3	2.9%
	Commercial Vendors/Agent	2	1.9%
Average gross monthly income of the household (n=106)	Up to 500€	6	5.7%
	501-1,000€	24	22.6%
	1,001-1,500€	13	12.3%
	1,501-2,000€	16	15.1%
	2,001-2,500€	6	5.7%

2,501-3,000€	21	19.8%
3,001€ or more	6	5.7%

Source: Own elaboration

4.2. Satisfaction Factors

The KMO criterion and Bartlett's test of sphericity were analysed to verify that the data characteristics were adequate to apply the EFA (Marôco, 2021). The KMO indicator (0.854) revealed a good model fit and Bartlett's test of sphericity was significant ($p<0.05$). As expected, all items loaded on one factor, reflecting the homogeneity of the satisfaction items, and confirming the scale developed by Silvério et al. (2021a, 2021b).

After verifying that the assumptions for applying the EFA were not violated, the factors needed to explain the correlation between the variables were determined (Marôco, 2021). Pearson's criterion was used, and three factors were extracted with a cumulative explained variance of 69.9% (excellent value in social sciences). Kaiser and Scree Plot methods confirmed the extraction of the factors (Hair et al., 2019). The factors were named according to the common characteristics of the items.

Factor 1 explains 50.5% of the data structure, proving to be the most important in explaining the data. Factor 2 accounts for 10.6% of the variability in the data and factor 3 accounts for 8.8% of the total variation (Table II). Cronbach's alpha coefficient for each factor indicated a reliability measure between "good" and "very good".

Table II: Factor analysis of satisfaction items

Variables	Factors		
	Factor 1 Infrastructures	Factor 2 Services	Factor 3 Technical team
Quality of equipment	0.811		
Security at the facility	0.743		
Cleanliness of the facility	0.706		
Quality of Installations	0.671		
Indoor environment	0.642		
Water quality	0.500		
Available Treatments		0.778	
Specialisation and Techniques used		0.764	
Diversity of services provided		0.756	
Quality of services provided		0.754	
Available Programs		0.697	
Knowledge and skills of human resources			0.888
Service customisation			0.864
Availability and assistance provided by human resources			0.848
% Variance Explained	50.5%	10.6%	8.8%
Final Eigenvalue	3.402	3.362	3.028
Cronbach's Alpha	0.850	0.895	0.910

Source: Own elaboration

4.3. Discussion Hypotheses

Of the factors identified, they were found to have a weak and non-statistically significant relationship with behavioural intentions; H_1 could not be validated - contrary to the existing literature (Campón-Cerro et al., 2020; Han et al., 2017, 2018). In turn, as predicted, the determinants of satisfaction were highly correlated with overall satisfaction – confirming H_2.

4.4. Satisfaction Index

To construct the index, ISCT, 14 variables were selected to measure satisfaction, which presented an overall mean of 4.74 points (±0.322), indicating that respondents were globally satisfied with the services and the thermal establishment.

The items were subsequently distributed into three factors (EFA), which explain the most significant percentage of the variation (Table III).

The results of the satisfaction index calculated for each factor (i=1,..., j [1] revealed that, although factor 2 presents an expressive value, it was the one that presented the lowest satisfaction index (92.07%). This means that the customers of the thermal establishment of Chaves are less satisfied with the services and, therefore, managers should direct their resources and priorities to improving the quality and diversity of services, to generate a higher satisfaction index. Factor 3 presents the highest satisfaction index (94.73%), i.e., respondents are more satisfied with the technical team than with the services and infrastructures of the thermal establishment under study.

Table III: Descriptive values, factor loading and ISCT for each factor

Factors	Variable Description	Descriptive		Factorial loading p_i	$ISCT(F_{kn})$
		$\bar{x}$	s		
Factor 1 Infrastructures	X_1. Quality of equipment	4.64	0.503	0.811	93.81%
	X_2. Security at the facility	4.82	0.385	0.743	
	X_3. Cleanliness of the facility	4.81	0.415	0.706	
	X_4. Quality of Installations	4.71	0.457	0.671	
	X_5. Indoor environment	4.79	0.450	0.642	
	X_6. Water quality	4.76	0.431	0.500	
Factor 2 Services	X_7. Available Treatments	4.64	0.500	0.778	92.07%
	X_8. Specialisation and Techniques used	4.71	0.456	0.764	
	X_9. Diversity of services provided	4.69	0.484	0.756	
	X_{10}. Quality of services provided	4.74	0.462	0.754	
	X_{11}. Available Programs	4.63	0.522	0.697	
Factor 3 Technical Team	X_{12}. Knowledge and skills of human resources	4.75	0.454	0.888	94.73%
	X_{13}. Service customisation	4.79	0.407	0.864	
	X_{14}. Availability and assistance provided by human resources	4.83	0.400	0.848	

Source: Own elaboration

The calculation of the global satisfaction index ([2] showed that the respondents, in general, are very satisfied with the infrastructures, services and technical team of the thermal establishment of Chaves, presenting a value of 93.5%. The index allows for a more accurate and rigorous analysis of customer satisfaction than the global satisfaction score, since it not only includes the concept of latent variable, but also incorporates the relative importance of these factors. In this sense, the ISCT can help HWT professionals better estimate customer satisfaction and determine the specific contribution to that satisfaction.

5. Conclusion

In several studies, it has been realised that the success of an organisation is closely related to its ability to adapt to customers' needs and changing preferences. Therefore, customer satisfaction should be a goal per se for all future-oriented organisations. The assessment of customer satisfaction and the adoption of measures to improve it have been addressed by various methods, but studies have yet to be identified that applied EFA to produce an index that translates customer satisfaction in a HWT context. To fill this gap, a multivariate index was developed to assess the perceived value of tourism services based on customer satisfaction, applied to HWT.

The customer that visits the thermal establishment of Chaves is essentially female, living in the northern region of Portugal, with an average age of 58 years old, higher education levels and a monthly income equal to or higher than 3,001.00€ per household. In terms of perception of the value of the services offered, the respondents are globally satisfied. The factors that determine satisfaction (services, infrastructures, and technical team) were identified by EFA and served as a basis to develop the index that translates the satisfaction of the thermal customer. The factor 'technical team' showed the most satisfactory value in the multivariate model for each factor, although it represents the factor with the least impact on the overall index. The correlations provided partial support to the results of previous studies that showed a relationship between determinants and the overall level of satisfaction, but weak and non-significant between the determinants of satisfaction and behavioural intentions.

This study contributes to the literature by developing and testing a new model to assess thermal customer satisfaction, reinforcing the importance of including it as a measurement method in future models. The results of the index may be useful to managers in formulating competitive strategies to meet customer demand and retain current customers. This study measured the level of thermal customer satisfaction regarding services, infrastructure, and human resources, identifying priorities in strategies to improve satisfaction. The technical team should be the strategic priority to increase customer satisfaction, and managers should continue to invest in their training to improve courtesy, friendliness, cognitive ability, and willingness to help. Satisfaction for compete.

This research must be interpreted considering several limitations. One limitation is the small number of respondents covered by the study, which did not allow for the application of the structural equation model (PLS-SEM) to test the theory.

Therefore, it is considered important to validate the index with a larger number of individuals. The selection of 14 variables to analyse customer satisfaction is also a limitation, as it did not allow other indicators to be studied. The fact that there is no literature on a multivariate model in HWT - the main contribution of this research - did not allow us to compare these results with previous studies.

Future researchers should replicate this study using a larger sample and extend it to other thermal establishments for a comparative analysis to identify their position in the market, making it possible to create a national and international ranking. A theoretical study can be a way to present other indicators that facilitate the evaluation of thermal customer satisfaction, since it proves to be a critical component to build models.

This study provides managers and tourism marketing professionals with elements that help them analyse the overall performance of thermal establishments, redefine priorities and outline new strategies to positively interfere with customer satisfaction. It also provides tools to evaluate customer satisfaction for the benefit of the organization's economic and competitive performance. It is hoped to contribute to relevant studies and stimulate new research as a reference.

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