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Determination of Customer Requirements for Thermal Accommodation Facility Designs

Termal Tesis Tasarımları İçin Müşteri Gereksinimlerinin Belirlenmesi

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Abstract

In order to provide quality in service in thermal accommodation facilities, the design of the facilities must be properly made. For this reason, the inclusion of customers' expectations and satisfaction in existing facilities into the design of new facilities will increase the quality of building and service. The sustainable development of tourism will be ensured through the transfer of knowledge and experiences of different disciplines connected with tourism. With this consciousness, this architecture-based research was supported by a field study. Surveys were conducted with a focus group on the facilities located in the Ihlara region, which is considered to be the gate of Cappadocia. Some of the questions asked in the questionnaire studies were adapted from previous studies. With the field study, the thermal plant design parameters have been tried to be determined in line with the demands and expectations of the customers. When the findings of the survey are examined, it is seen that the customers coming to the thermal accommodation facilities mostly come to health and stay in the facilities for a long time. For this reason, customers prefer thermal accommodation facility designs to be compatible with nature. Accommodation facilities with densely populated residential areas in the immediate vicinity are not preferred. In addition, it is observed that customers prefer social facilities such as natural nutrition, sports activities, social activities and shopping in the facility. After the health criterion, the “service” criterion was the most important item. Conspicuous expectations, such as “environmental awareness”, “use of natural resources”, “consideration of natural environment data”, “preparation of action plans”, have shown the sensitivity of energy conservation and productivity of thermal accommodation facility users. "Physical appearance”, “originality” and “harmony with the natural environment” have also become important topics. Extensive evaluations of findings are described in detail in the third chapter. While the main areas that play a big role in the country's economies are opening to tourism, determining the conditions of the region and the physical, psychological and sociological expectations of the customers and taking the correct steps will be an important step in sustainable development.

Keywords: Thermal tourism, thermal accommodation facility, architecture design, customer requirements, Ihlara, Cappadocia.

Özet

Termal tesislerde sağlıklı hizmet verilebilmesi için tesis tasarımlarının doğru kurgulanması gerekmektedir. Bu nedenle mevcut tesisleri kullanan müşterilerin beklenti ve memnuniyetleri değerlendirilerek yeni tesis tasarımlarına dâhil edilmesi yapı ve hizmet kalitesini arttıracaktır. Turizmin sürdürülebilir gelişimi, turizmle bağlantılı farklı disiplinlerin bilgi ve tecrübelerini turizm

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sektörüne aktarmasıyla sağlanacaktır. Bu bilinçle mimarlık disiplinini kapsayan bu araştırma bir alan çalışmasıyla desteklenmiştir. Kapadokya'nın giriş kapısı olarak kabul edilen Ihlara bölgesinde bulunan tesislerde odak bir grupla anket çalışması yapılmıştır. Anket çalışmalarında belirlenen soruların bazıları daha önce yapılmış olan çalışmalardan uyarlanmıştır. Örnek alan çalışmasıyla termal tesis tasarım parametreleri, müşterilerin ihtiyaç ve gereksinimleri doğrultusunda geliştirilmeye çalışılmıştır. Araştırmada elde edilen bulgular incelendiğinde termal tesislere gelen müşterilerin çoğunlukla sağlık amaçlı geldikleri ve tesislerde uzun süre kaldıkları görülmektedir. Bu nedenle müşteriler termal tesis tasarımlarının doğayla uyumlu olmasını tercih etmektedirler. Tesis yakınlarında nüfus yoğunluğu olan yerleşim alanları çok tercih edilmemektedir. Ayrıca müşterilerin tesis içerisinde doğal beslenme, spor aktiviteleri, sosyal aktiviteler, alışveriş gibi sosyal donatıları tercih ettikleri görülmektedir. Sağlık kriterinden sonra "hizmet" kriteri en çok önem verilen kalem olmuştur. "Çevresel duyarlılık", "doğal kaynak kullanımı", "doğal çevre verilerinin dikkate alınması", "eylem planlarının hazırlanması" gibi başlıklar altında toparlanmış beklentiler sanılanın aksine termal tesis kullanıcıların enerji korunumu ve verimliliği konusunda duyarlılıklarını ortaya koymuştur. "Fiziki görünüm", "özgünlük", "doğal çevreye uyum" yine önem verilen başlıklar olmuştur. Bulgularla ilgili geniş değerlendirmeler üçüncü bölümde detaylı bir şekilde anlatılmıştır.

Ülke ekonomilerinde büyük rol oynayan bakir alanlar turizme açılırken bölge şartları ve müşterilerin fiziksel, psikolojik ve sosyolojik beklentilerine yönelik unsurlar tespit edilerek doğru adımların atılması sürdürülebilir gelişimin önemli bir hamlesi olacaktır.

Anahtar Kelimeler: Termal Turizm, termal konaklama faaliyetleri, tasarım; müşteri gereklilikleri; ıhlara, Kapadokya.

Introduction

Tourism plays a significant role in the economies of many countries. It is constantly developing and diversifying in order to increase life quality of man. As a result new tourism sectors emerged (Domínguez-Gómez and González-Gómez 2017) such as health tourism, thermal tourism, rural tourism, ecotourism, etc. It is necessary to increase the study of related disciplines to develop these types of tourism. Studies on health tourism in particular will contribute significantly to the literature. Because a literature search shows that research exploring the relationship between health and tourism is limited (Hunter-Jones 2005, Connell 2006).

Because of rapid urbanization and industrialization, environmental conditions have begun to affect human health negatively. This condition has strengthened the basic criteria of life quality such as natural resources, natural foods, ecological medicine and alternative treatments. So, Thermal tourism is currently one of the fastest growing subsectors in health tourism and leisure sector (McNeil and Ragins 2005). Thermal tourism, rapidly developing in the world, also has a great importance for Turkey. Turkey ranks 1st in Europe in terms of thermal sources. The water characteristics of different thermal sources differ widely and each are known to cure various and differing diseases (Pasvanoğlu, Güner et al. 2012). Our country, which is so lucky in terms of resources, cannot succeed in terms of facility production and operation in order to evaluate these resources. According to the Turkish Healthcare Travel Council, there are more than 1800 thermal accommodation facilities (TAFs) in Turkey and only 6% of these are used for touristic purposes (THTDC 2018).

In order to increase the success of the design process and ensure the sustainability of the facilities, the quality philosophy must be adopted throughout the life cycle of buildings.

The realization of this can be achieved by determining customer demands and requirements and spreading them to the whole process. With this study, it is argued that the most important criterion showing the competitive power of tourism structures with thermal resources is customer demands, and it will be investigated how customer needs and expectations are combined with technical requirements and reflected in the architecture designs in the most effective manner.

1. Theoretical Background

Tourism offers products and services designed to improve the life quality through satisfying the needs related to health (Chen, Prebensen et al. 2008). The recent increase in health awareness has led to a more proactive approach to the use of natural thermal springs (Dimitrovski and Todorović 2015). Healing waters have not only been a source of healing for people throughout history, but also a source of life and beauty. Bathing in hot and mineral springs and drinking mineral spring water is part of this holistic approach to health and wellness, and the literature on this (Altman 2000, Leavy and Bergel 2003, Bullard 2004, Cohen and Bodeker 2008, Erfurt-Cooper and Cooper 2009). Thus complements and supports research into the human use of natural springs for health and wellness tourism (Erfurt-Cooper and Cooper 2009). The human need for places that offer healing and rehabilitation through natural, thermal and mineral springs has been present for a long time. In the field of complementary and alternative medicine balneotherapy or balneology is a term used for healing by bath as well as consumption of both hot and cold water (Serbulea and Payyappallimana 2012).

Accordingly, throughout history, Anatolia has witnessed the use of spas and people's healing waters. In the twenty-first century, health and wellness tourism is a more global phenomenon. Those visitors choosing thermal tourism do so primarily to try enhance both physical and spiritual wellbeing or to receive a few days of cosseting and pampering (Hsieh, Lin et al. 2008). In response to increasing demand, traditional, small spa towns are upgrading or constructing modern TAFs (Alén, De Carlos et al. 2014). How to provide diversified hot spring-related products to attract tourists has become more and more important (Hsieh, Lin et al. 2008). After undergoing constant development and merging with other activities, these facilities have come to be known as hot spring hotels (Sayili, Akca et al. 2007), and this transformation is testament to the importance of the discipline of architecture for the sustainable development of Thermal tourism. In studies focusing on developing structural qualities throughout the lifetime of architectural projects, the necessary factors for meeting the physical, psychological, sociological (Voigt 2010) etc. expectations of customers must be analysed and the current status of the location and the available resources must be understood.

The tourism hotel industry is one of the markets in which strategic quality planning is of utmost importance, where changes are constantly and rapidly experienced. Quality is regarded as the capacity to satisfy the stated and implied requirements of customers (Lin and Su 2003, Chen 2014). In order to maintain superiority in international competition, "customer-oriented" approaches need to be adopted. In the discipline of architecture, there have been only limited studies of customer requirements related to the design of TAFs, and the present study will contribute greatly to literature by filling this gap.

The study is supplemented by a fieldwork aimed at determining the contributions of thermal tourism to regional development and quality parameters, for which an on-site examination was conducted at the study site, and the customers of the facility were surveyed.malıdır.

2. Methodology

The question of how the principles of architectural design can be maintained while increasing quality in line with the demands of the customers in the thermal accommodation facilities are addressed in this research, based on the study of a developing tourism area. A review of literature was made to identify the concepts that would provide a basis for application, and a qualitative method was used, with which the observations and interviews would be carried out to determine the requirements of customers. The tools used to identify customer demands and expectations are given below: Surveys, face to face interview, focus group, go to Gemba (Imai 2007, Toussaint 2009).

2.1. Questionnaire Design

Some of the questions in the questionnaire were adapted from previous studies, while some open ended questions were also asked to learn about the expectations and the use habits of TAFs in recent years. The first part of the questionnaire, which is compiled in three parts, garners such personal information as age, gender and level of education so as to determine a customer profile (Deng 2007, Lee, Ou et al. 2009, Dimitrovski and Todorović 2015). Following this, general questions are asked to determine the level of knowledge of the respondent in regards to the hot springs, their purpose of use, their reasons for choosing the facility in the area, the length of stay, how often they visit, their satisfaction levels and their expectations (Pesonen, Laukkanen et al. 2011, Suresh and Ravichandran 2011). The questions asked in the second and third parts aim to determine user satisfaction levels and priorities when designing a hot spring by way of a five-point Likert scale (Fakere, Arayela et al. 2017). Independent variables were used to identify the levels of agreement with the stated question via the "Strongly disagree", "Disagree", "Neutral", "Agree" and "Strongly agree" options, their frequencies and the percentages of these frequencies.

2.2. Data Analysis Methods

Mean and standard deviation values were utilized in the summary of numerical data, while frequencies and percentages were used to summarize categorical data. While preparing the questions in the questionnaire survey, it is possible that the customer sometimes may not be able to predict his/her actual expectation. The Gemba Analysis method is commonly used to circumvent this problem in the questionnaire survey, in which "Gemba" is a Japanese word that means the actual place in which the customer uses the product. Accordingly, a Gemba analysis can be defined as the observation made at the location the product is actually used, in order to understand the requirements of the customer. This method is utilized to reveal the needs that the customers may not be aware of through the observation of the use of the product.

Revealed through the questionnaire survey, these needs take the form of a great amount of disorganized data composed of many items and expressions from different contexts, and this data must be downsized based on a limited set of criteria. Affinity (Shafer, Smith et al. 2005) and hierarchy diagrams are often used in the organization of this list of requirements and expectations. The data is organized into groups in affinity diagrams in the first stage, and is then re-organized horizontally via a hierarchy (tree) diagram (Guri-Rozenblit 1989) and analytically in a hierarchy. In this way, through the collective, systematic representation of grouped needs, design parameters that are based on customer requirements are presented in a comprehensive and complete form.

2.3. Site Description (Ihlara hot springs, Cappadocia)

The location of the study is the Ihlara thermal region in the rural Cappadocia region of Turkey, which is listed on the World Cultural Heritage list (Ulusay, Gokceoglu et al. 2006). Small businesses in this region are especially preferred. Small businesses are well recognised and acknowledged worldwide as vital and significant contributors to economic development, job creation, innovation, income generation and the general health and welfare of both national and international economies (Morris and Brennan 2000, Morrison, Breen et al. 2003, Ayyagari, Beck et al. 2007, Bengtson, Pahlberg et al. 2009, Akbaba 2012). The Ihlara valley, located in this region, is somewhat of a paradise, hidden in the middle of a deserted, vast steppe.

The valley was formed by the flow of lava from Hasan mountain and the corrosion of Melendiz creek over thousands of years, and is regarded as the gateway to the Cappadocia region. Nature, history and religious values come together in this region, which has grown into a significant tourism destination, contributing greatly to the economic development of Turkey. Various alternative tourism types can be easily integrated in this region, and studies conducted to date in the region, which is rich in hot spring resources, have been of profound value for the development of tourism in the region. Where the comparative advantage of a tourism destination depends on the resources availability, its competitive advantage in the tourism destination market depends on its ability to use these resources effectively (Crouch and Ritchie 1999) and generate an added value (Crouch 2006, Cuccia, Guccio et al. 2016).

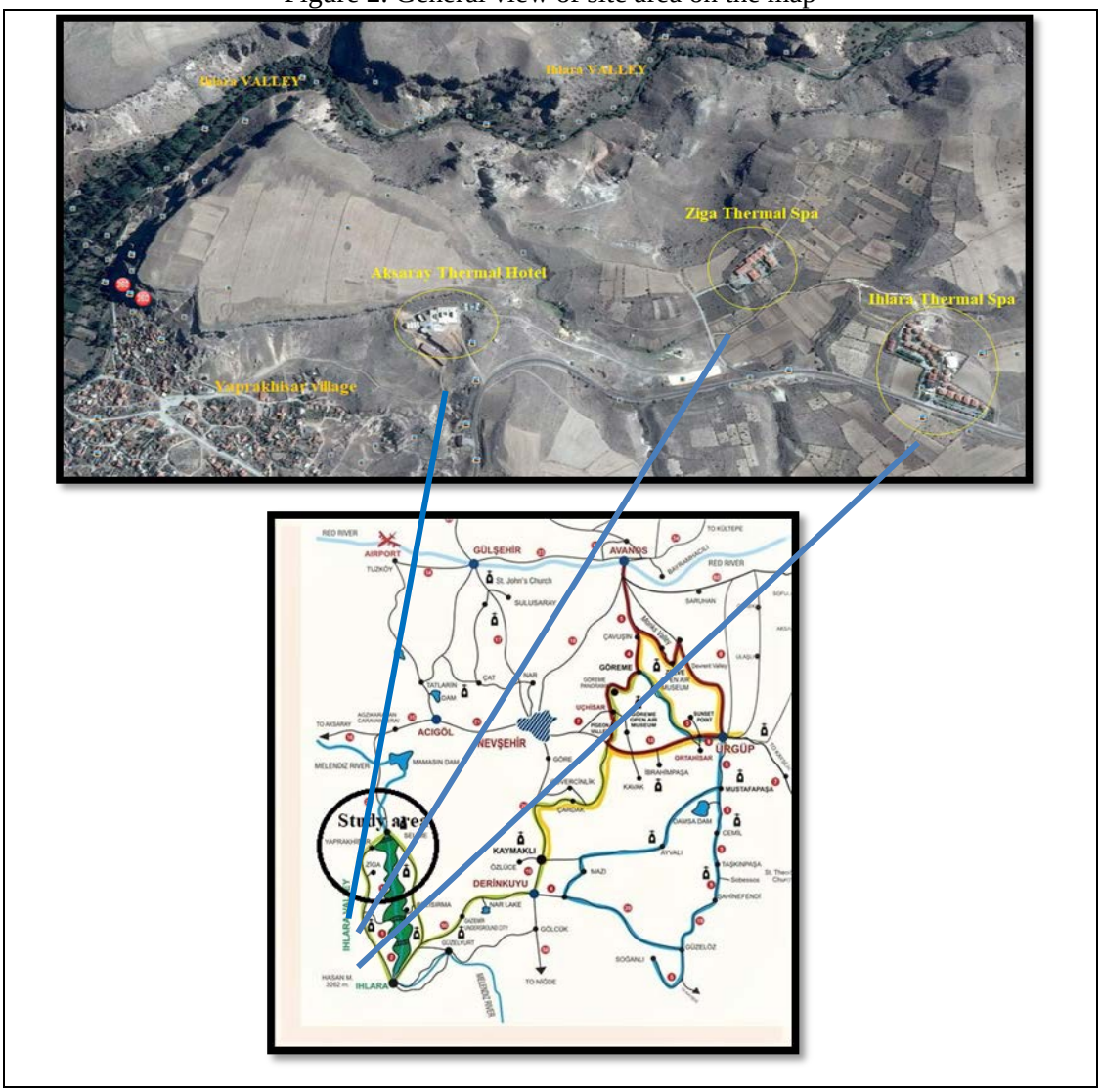
The natural hot spring is located in the village of Yaprakhisar in the Güzelyurt District, which is close to the Ihlara valley. The site of the thermal hot spring and its surroundings has been declared a protected area, and consequently, there are restrictions on building. The natural environment and the climate of the region have positive effects on mental health (Fig.1).

Figure 1. General view of Ihlara Valley in Cappadocia

Table 1. General characteristics of Ziga thermal sources

Characteristics of Thermal water	**Diseases treated**	**Alternative tourism types in the region**
Temperature: 47 °C Flow rate: 150 lt / sec Mineral: 7609 mg/l	Rheumatic diseases, Nervous system impairment, body imbalance, metabolic disorders, muscular problems, skin problems (acne, eczema, dermatitis, urologic disorders and orthopaedic disorder.	Cultural tourism, Nature tourism, Historical tourism, Ecological tourism Winter tourism

Figure 2. General view of site area on the map



There are three small-scale facilities located around the thermal hot spring, and three hot springs close to the Ihlara Valley that make use of the "Ziga" thermal waters (Table 2).

Table 2. Schematic of the thermal accommodation facilities located near of the Ziga thermal springs

	Ihlara thermal facilities (A)	**Ziga thermal facilities (B)**	**Aksaray Thermal Hotel (C)**
Locations of TAFs			

Assessing whether or not these thermal accommodation facilities, which have been mostly built using traditional methods, meet customer needs them to be subjected to screening and analysis, and to this end, a study visit was made between March and May 2017, after which all the garnered data was archived. The general characteristics of the Ziga thermal waters found in the Ihlara region are shown in Table 1. A questionnaire was made involving a focus group of 60 people in August 2017, during which attempts were made to empathize with the users by spending time with them in different parts of the facilities. TAFs tend to feature complex system and data related to various disciplines is encountered as input, and in this regard, determination on customer requirements by sharing their experiences of the facility can be considered a more appropriate.

3. Results

3.1. Socio-demographic characteristics of customers

The socio-demographic characteristics of the thermal tourists visiting TAFs Ihlara region of Cappadocia are presented in Table 3. Among the respondents, 58,3% were male and 41,7% were female; and 33,9% were in the 36-45 age range, followed by 25,4% who were above 56+, 22% who were 26-35, 11,9% who were 16-25, and 6,8% who were 46-55. An analysis of the frequency and percentage distribution of the customers shows that people of all ages make use of the facilities, contradicting the popular belief that only the elderly use such facilities. Much of the broad age distribution can be attributed to the fact that people come to such facilities together with their entire families. In terms of the education levels of the customers, 32,1% of the customers of the facilities in which the study was conducted had an undergraduate degree, 26,8% had an associate degree, 21,4% had a high school diploma, 10% had primary education and 1,8% had a graduate degree. The frequency and percentage distribution in the analysis indicates that the ratios of the education levels of the customers are quite close, although holders of undergraduate degrees use the facilities the most.

Table 3. Socio-demographic profile of customers (n=60)

Demographics		**Frequency (n)**	**Percentage of total (%)**
Gender	Female	25	41,7
	Male	35	58,3
Age	16-25	7	11,9
	26-35	13	22,0
	36-45	20	33,9
	46-55	4	6,8
	56+	15	25,4
Education	Elementary school	10	17,9
	High school	12	21,4
	Associate’s degree	15	26,8
	Bachelor’s degree	18	32,1
	Master PhD	1	1,8

3.2. Findings and Evaluations on the Utilization of Thermal Accommodation Facilities

The aim in this section is to determine how much the customers who actively use hot spring facilities know about them, their reasons for using these facilities and whether they are interested in studies aimed at increasing the quality of thermal accommodation facilities. To this end, the customers were asked the first thing that comes to their mind upon hearing the term "thermal spring", their reasons for choosing the facility at which they were staying, when they prefer to use the facilities, where they come from, what form of transportation they used to get there, how long they stayed or planned to stay, which activities in the facility they benefited from, which characteristics of the facilities did they find distinctive, with which classification they should be included in the tourism industry and what quality means to them. When these questions were analysed, the following findings were obtained. In answer to the question "What is the first thing that comes to your mind upon hearing the term hot spring?", 71,7% said it's an important place for health, 56,7% said it's a soothing place, 41,7% said it's a place where various diseases can be treated under medical supervision, 16,7% said the weather and climate were pleasant, and 8,3% said it's a place for year round vacationing.

Table 1. What do customers think of when asked about the thermal baths (max. three preferences) (n=60)

	Frequency (n)	Percentage of total (%)
It is a place beneficial for health	43	71,7
Being treated under the control of a physician	25	41,7
It is a relaxing place	34	56,7
It has natural environment and scenic beauty	10	16,7
It offers holiday opportunities during all seasons of the year	5	8,3

In reply to the question, "When do you prefer to use the facilities the most?" 40% of customers said in the summer, 30% said all the year round, and 15% said in winter and spring. While it is apparent that most customers prefer to use such facilities in the summer, the number of people who prefer to visit all the year round is also considerable. An enclosed tunnel was built in the Ihlara hot spring to connect the residential units to the therapy units to facilitate their use during winter, and although it was functionally necessary, the building disturbs the aesthetic appearance of the environment. During the design of hot spring projects, it should be considered that the facilities will be in use all the year round, and that additions to the facilities not only distort the image of the building, but also affect functionality. When asked where they came from, 63,3% of the customers said that they were from Cappadocia or its surroundings, 28,3% came from other regions in Turkey and 8,3% came from abroad. The findings indicate that the vast majority of customers come from Cappadocia and its surroundings, and it was observed that the customers who stated that they had come from abroad were actually from the local community, in that they often visit the facility during the summer and stay for long periods. The facilities in this region are not well known, but it is considered that improving the quality of the hot spring facilities to be built in this region will increase the number of customers, given the great number of tourists that visit Cappadocia, especially in the summer. Interviews conducted with tourists indicated that most are unaware of the thermal tourism aspect of the region. Visitors to the TAFs often

complained about the shortcomings of the facilities. As most of the visitors are from the region, they use their own cars as a means of transportation. When asked about how they had arrived at the facility, 81,7% said they used their own car, 13,3% said by bus and 5% said by airplane. When asked how long they planned to stay, 75% of the customers said 1-5 days, 23,3% said 6-10 days and 1,7% said 11-21 days. Since the facilities are used mostly by locals, they prefer to stay for short periods, but more frequently. New facilities must be built incorporating new functions in the region. In order to undergo therapy in a facility with a physical therapy unit 21 day (Karagülle and Dönmez 2002) stay is necessary, and customers need to be able to meet all of their needs, and to be satisfied both physically and psychologically, when spending such a time in the facility.

Table 2. The use of TAFs in the Ihlara region, Cappadocia

		Frequency (n)	Percentage of total (%)
What time of the year do users prefer to visit?	Summer	24	40
	Winter	9	15
	Spring	9	15
	Every time of the year	18	30
Where do TAF users come from?	From the Cappadocia	38	63,3
	From outside the region	17	28,3
	From abroad	5	8,3
How do TAF users come?	By plane	3	5
	By bus	8	13,3
	By car	49	81,7
How long do the users stay?	1-5 days	45	75
	6-10 days	14	23,3
	11-21days	1	1,7

When asked about the factors affecting their preference, 86,7% of the customers said the features of the thermal waters, 51,7% said the quality of service, 45% said the natural environment and climate, 15% said the architecture of the facility and 11,7% said the activities available at the facility. The fundamental aspect of a hot spring facility, thermal water, was the most important factor for the vast majority of the customers, although they also considered the quality of service, proximity to the natural environment and the architecture of the facility to be of great importance. These expectations of the customers should be taken into account during the planning of a facility, and should be reflected in the design. Decisions related to the expectations, needs and desires of employers/users should be taken at the stage in which quality planning is carried out as part of the planning process, and based on these decisions, scales need to be developed in order to ensure a certain level of quality.

Table 3 Reason for preferring this TAFs (max. three preferences) (n=60)

	Frequency (n)	Percentage of total (%)
Features of thermal waters	52	86,7
Architecture of the hot spring (TAFs)	9	15,0
Utilizing the natural landscape and climate	27	45,0
Service quality	31	51,7
Holiday opportunities	7	11,7

When asked about the most distinctive feature of their chosen facility, 73,3% said the quality of the thermal water, 40% said the natural environment, 26,7% said accessibility, 18,3% said variety and quality in the therapy and treatment services, 16,7% said the location in Cappadocia and 10% said the variety of social activities. Most of the customers stated that

they preferred the facility due to the characteristics of the thermal water and the fact that it was in a natural environment. In parallel with the findings attained from the first question, the customers' stated preferences were generally health-related, based on its siting in a natural environment, as well as the good climate.

Table 4. What is the most important characteristic that distinguishes from the other TAFs (max. three preferences) (n=60)

	Frequency (n)	Percentage of total (%)
Quality of thermal water	44	73,3
The diversity and quality of cure / treatment services	11	18,3
The diversity of social activities	6	10,0
Being with the natural environment	24	40,0
Accessibility	16	26,7
Location in the Cappadocia region	10	16,7

When asked: "Do TAFs, like tourism hotels, need to be classified? If so, what should be the criteria?", 80% of the customers said quality, 40% said area of service, 23,3% said that they should be classified according to a certification system and 10% said that they should be classified based on whether or not it is in a touristic area. The findings of the analysis indicate that most customers consider quality to be an important factor. If such facilities are to be classified, first, quality criteria must be determined. Moreover, another point customer consider important is that TAFs should be classified based on their area of service, given the different and more complex nature of TAFs when compared to other tourism facilities. Thus, different and more specific criteria must be determined for hot springs if they are to be classified.

Table 5. How should be TAFs classified (max. three preferences) (n=60)

	Frequency (n)	Percentage of total (%)
According to the quality	48	80,0
According to the holiday opportunities	6	10,0
According to the nature of the thermal springs	14	23,3
According to the service fields	24	40,0

3.3. Efficiency of Facility Use and Customer Satisfaction For Quality Assessment

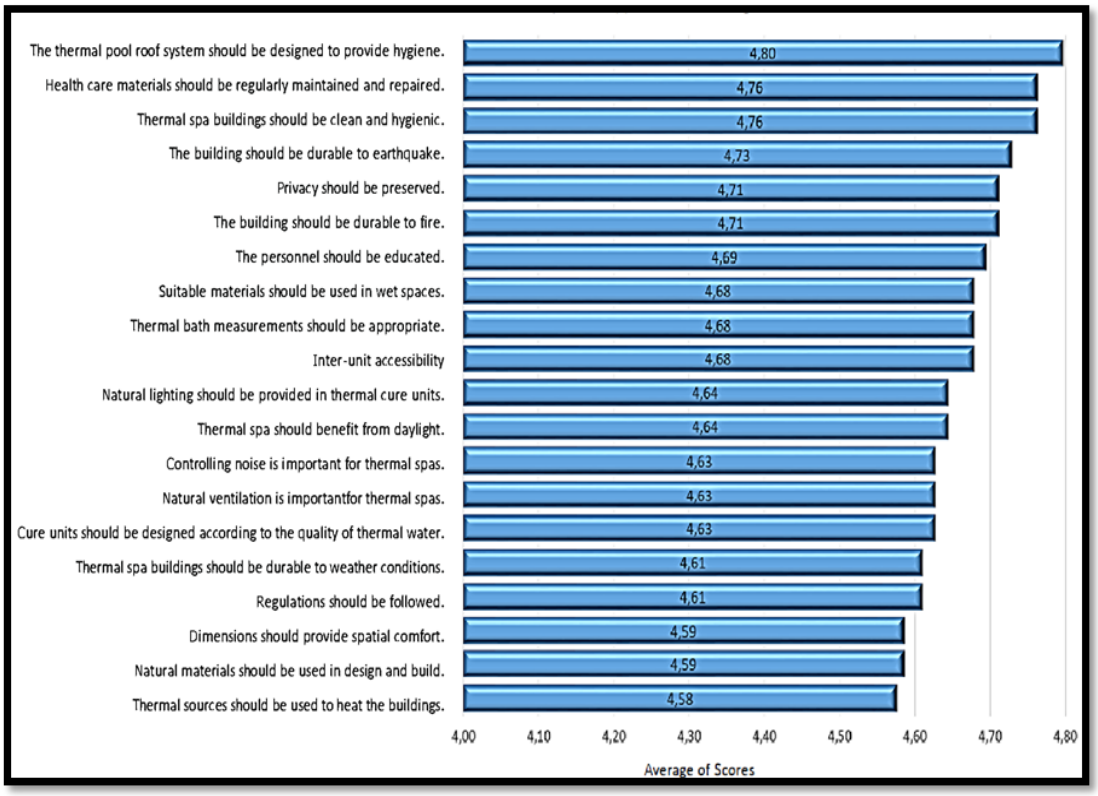
It is vital in studies assessing the quality of thermal spa designs to understand what needs to be done to increase customer satisfaction. In this regard, it is necessary to determine the most common user demands and to identify which are most significant in increasing quality. Organizing customer requirements will aid in the analysis of what is needed to increase user satisfaction and can help in transforming the demands into quality characteristics. To this end, the responses to the questionnaire are ranked from the most to least positive using the mean scores method. A reliability analysis was needed for the answers ranked from 1 to 5 on the Likert scale. In order to assess the reliability of the questions asked with the same purpose, Cronbach's alpha values were evaluated. A "Cronbach's alpha" analysis measures correlations between questions, and the result indicates the total reliability level of the questions.

The questions asked in the Fig.3,4,5 were, in general, aimed at determining the customer requirements and expectations from the design of the TAFs. These questions were prepared after conducting a literature review and interviews with facility managers and designers, and following discussions with potential customers of TAFs making use of open-ended questions. The answers to these questions needed a reliability analysis. For this reason, Cronbach alpha values were calculated to evaluate the reliability of the questions asked for the same purpose. The Cronbach alpha value for the question items in Figure 3 was calculated as 0,919. The Cronbach alpha value for the question items in Figure 4-5 is calculated as 0,944.

Table 6. Reliability Statistics

Reliability Statistics (Fig.3)		**Reliability Statistics (Fig.4,5)**	
Cronbach's Alpha	N of Items	Cronbach's Alpha	N of Items
0,919	20	0,944	39

Figure 3. User evaluations of TAFs in Cappadocia Ihlara Region



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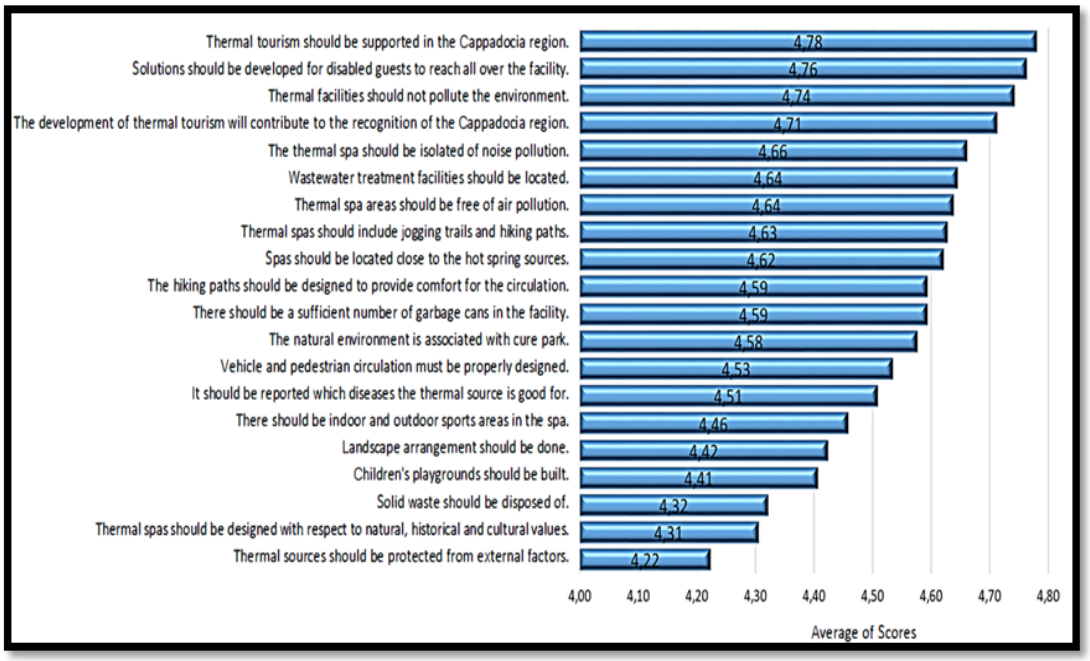
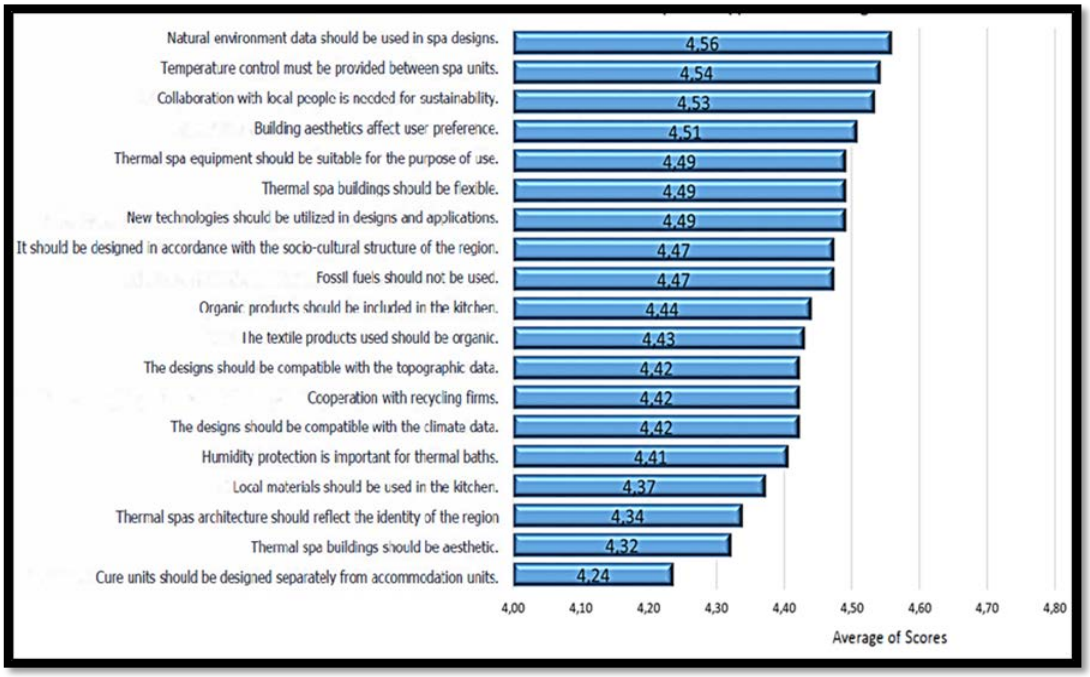


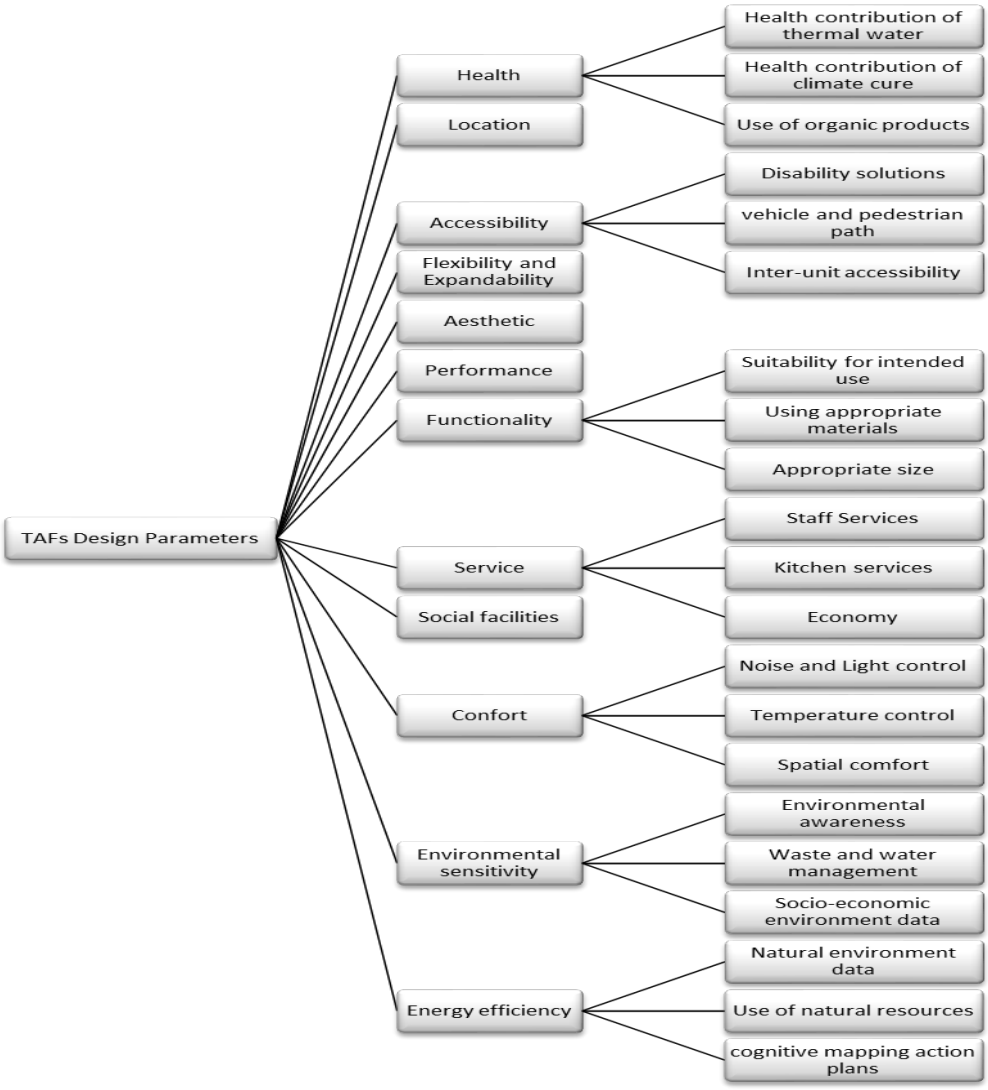
Figure 5. User evaluations of TAFs in Cappadocia Ihlara Region



The number of questions was preferred to be high. Similar answers are grouped in an affinity diagram and the answers that receive the most attention are sorted according to a specific hierarchy. An affinity diagram is used to organize the information garnered from focus groups, allowing opinions to be organized as a hierarchical list. Creating such a

diagram requires the grouping of similar opinions under a specific title, with the aim being to create a hierarchy of the 5-10 main ideas. The affinity diagram method (or the KJ Method, after Kawakita Jiro, who devised it) is used to create data sets based on natural relationships through an analysis of verbal data outputs collected via brainstorming, surveys, interviews and feedback. By grouping sub-categories under main categories, the number of created parameters is smaller. Focus is on answers that are capable of increasing customer requirements, especially in hot spring designs. To this end, the mean score method was used on the answers to the questions (Fig 3,4,5), and standard deviations were calculated. The mean score was used to determine with which points they agree the most, while the standard deviations were used to test the reliability of the results. Demands with an average of above 4 were considered and grouped through an affinity diagram, and after this grouping, the main categories were determined. It was found that certain answers under sub-categories were similar, and these answers were combined to represent common items of data.

Figure 6. Hierarchy (tree) diyagram of Customer requirements for Quality of TAFs in the Ihlara Region



An affinity diagram was used to divide the data first among the main categories, and then the sub-categories, based on the identified similarities. In order to ensure that the obtained data is healthy, the groups were analytically reorganized into a hierarchy (tree) diagram.

The purpose of a hierarchy diagram is to present categorized data systematically (Fig. 6). A hierarchy diagram is a tool for determining the order in which tasks should be fulfilled so as to present the subject of interest in the best way possible way, and/or to identify all factors that contribute to the main problem (Akbaba 2003).

The categorization of the demands of the customers that visit the region under certain groups constitutes a significant input in terms of the creation and assessment of parameters for thermal spa design. The building of new facilities in the region based on this input would contribute greatly to increasing the quality of the thermal tourism.

Conclusion

An analysis of these findings reveals that most customers visit thermal accommodation facilities for health purposes, although when the general distribution is considered, these facilities, which are used for health purposes, are deemed to necessarily provide in the light of worsening environmental and climatic conditions, the presence of problems that are detrimental to human health, and the desire to eliminate stress a relaxing and soothing environment where there is clean air. Clean air, organic foods and natural treatments are emerging as preferred vacation criteria among people, despite the rapid development of technology. Environmental data is of great importance in the design of TAFs, and it is necessary to eliminate environmental problems (traffic, noise and air pollution etc.) around facilities that are used primarily for health purposes (Kürüm Varolgüneş 2014). Considering the services provided by the TAFs, high quality of service is very important in terms of customer satisfaction. In addition, the provision of hygiene of the treatment units in the facility is one of the most important demands. Considering the services provided by the TAFs, high quality of service is very important in terms of customer satisfaction. The extra services offered in TAFs all over the world, are now being demanded by the users of thermal accommodation facilities in Turkey.

One of the leading weaknesses of architecture in terms of quality is that it is too hard to identify customer requirements, and as customer demands are the primary information source in a building project, their input is crucial for the successful planning and implementation of such projects. With this in mind, the first stage in the design of a building should be to effectively integrate customer requirements into the formation (design and building) process of the building, in other words, the final product. The reason why customer requirements should be integrated in the early design stage is that there may also be other potential requirements within the context of the project. The construction of a specific purpose building is a process involving immense uncertainties. In this regard, there is a serious need for taking the decisions in the early phase of a building project's life cycle, and for methods and tools to help the management come up with better solutions during the decision making process. Accordingly, a plan that involves the actions to be taken for improving quality throughout the entire process (design and building), and the relations between these actions will be one of the most important tools addressing this need.

TAFs, as part of the tourism industry that involves tough competition, have started to attach greater importance to high quality designs, services and customer satisfaction. Creating projects that take into account customer requirements is crucial for attaining these goals. With this perspective, proper actions must be taken in increasing the contribution of the Cappadocia region, referred to as Turkey's open air museum, to the country's tourism industry. For a smooth and fast implementation of the project regarding the establishment of a hot spring facility in Ihlara, known as the door to Cappadocia, customer requirements must be taken into consideration beginning from the preliminary preparation and planning processes.

As the perception of vacationing has transformed and people are again in need of spiritual cleansing like in the past, tourism customers are now seeking out water-based facilities that also offer recreational, sportive and social activities. Armed with this greater awareness, tourists are now demanding hot spring facilities that are designed in line with the settlement characteristics of the region, landscape and climatic conditions. In addition to geographical conditions, they also would like to see facilities that respect and maintain the traditional characteristics of the area.

That is why in this study, a newly developing rural region was analysed with a view to identifying the healthiest options, following a comparison of design parameters regarding TAFs with customer requirements through a sample field study. The most appropriate action when targeting sustainable development is to make the right decisions when opening untouched areas to tourism, which will play an important role in the country economy, and this requires the proper identification of the conditions of the region and the profile of the users.

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