

**THE IMPACT OF SERVICE QUALITY ON CUSTOMER SATISFACTION IN THE LUXURY HOTEL: THREE HOTELS IN CAPPADOCIA-TURKEY**

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**ABSTRACT**

The luxury hotel industry has everything to make a dream come true. But the most important thing is that customers are satisfied after their stay so hotels must meet customer demand; therefore, the primary focus of this study is to assess guest satisfaction with luxury features of their rooms as well as their overall perceptions of their hotels. And to identify the structure of service quality factors with regard to satisfaction with luxury hotels in Cappadocia. To measure the tourist's perceptions on service quality and customer satisfaction toward indicators related to the luxury in the hotel, the most popular model is SERVQUAL with 7-Likert scales have been chosen, and a total of 290 questionnaires as valid for analysis in the three luxury hotels of Cappadocia (Milistone cave suit, Jacob's Cave Suites, Hidden Cave Hotel) Were surveyed. Moreover, it reports the difference in the customer expectations and perceptions related to the hotel services. Additionally, questionnaires were distributed to the hotel tourists to understand their perceptions of, while, factorial analyses are used to assess service quality and the impact of quality on customer satisfaction. The result reveals that there have strong positive correlations between overall satisfaction and hotel luxury service.

**Keyword:** Luxury hotel, Customer satisfaction, hotel services

**1. INTRODUCTION**

Although hotels in the United States are provided in response to the need for accommodation, they represent high-quality guesthouses that are higher than the standard of the small bays and inns normally found at that time (Becker 2009). As a result, hotels tend to be architectural examples of American excellence and represent a distinctive American vision of mobility, civil society, and democracy (Sandoval-Strausz 2007), although this perception of hotels has faded over time due to the large diversity of industry market segmentation, including a significant increase in the supply of inexpensive, lower quality chain hotels(Becker 2009) However, this trend has been reversed in recent years, with many hotels creating a series of boutique brands such as Hotel W which offers excellent service to guests who are looking for hotel experiences With elegance, service, comfort, and luxury that are interesting, originality, and creative curiosity. These hotels often explore the highfashion architecture, hotel design, and interior design that affect guest satisfaction in hotels, plans to return, and the likelihood of

recommending a hotel.(Heide&Gronhaug 2009). Based on a review of a number of articles that discussed the appropriate design features for luxury hotels, this study identified key design features that could promote a luxury hotel (Becker, 2009; Heung et al., 2006; Curtis 2001; Bernstein 1999; Cohen &Bodeker 2008; &Gronhaug 2009;). (Table 1) For example, the general features of a luxury hotel include more space, luxurious or exotic materials, complex lighting that feels warm and welcoming, and bathrooms with large bathtubs and multiple shower heads (Becker 2009). These design features make visitor visits more comfortable but can create a remarkable conflict with sustainability as the major green building strategies focus on reducing the environmental impact of humans by reducing resource consumption to necessities. At times, these luxury features may be seen as incompatible with green building practices, which often focus on reducing resource consumption over the life cycle of the building to reduce environmental footprint.

**Table 1: Design features for luxury hotels**

Design Features	Design Features for Luxury Hotels
Lobby Design	<ul style="list-style-type: none"> <li>• Social interaction spaces not only for guests but also for the local community</li> <li>• Staged to provide a theatrical introduction to the environment and hotel spaces</li> </ul>
Guest room	<ul style="list-style-type: none"> <li>• Safety, comfort, privacy, quiet and spacious guestrooms</li> <li>• Unique design details, technology, and controllable lighting</li> <li>• Comfortable indoor environment</li> <li>• Comfortable office spaces within the room</li> <li>• Stylish furniture, plush materials and high tech entertainment devices</li> </ul>
Bathroom	<ul style="list-style-type: none"> <li>• Spacious bathroom</li> <li>• Deep tubs, his and her lavatories, walk-in showers, marble and chrome finishes</li> <li>• Quality and appearance of amenities</li> <li>• Technology such as a small plasma television, flexible lighting</li> </ul>
Artwork	<ul style="list-style-type: none"> <li>• High quality artwork in guestrooms, hallways, lobbies, staircases, and elevators</li> <li>• Gallery areas in the hotel</li> </ul>
Spa	<ul style="list-style-type: none"> <li>• Attention to interior design, increasing guest relaxation</li> <li>• Transition areas and generous public spaces</li> <li>• Multiple relaxation areas: outdoor and indoor</li> <li>• Environmental controls for guest comfort</li> </ul>

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	• Spa cuisine-health, organic options
Food & beverage	• Organic food and unusual food items • Top quality food and beverage
Landscaping and exterior environment	• Parks/gardens with trees and plants • Open space with trees and plants • Diverse colors and textures

The first impressions of design thinking are evident in the lobby spaces, which are places of social interaction not only for guests but for communities (Curtis, 2001). New design trends show the lobby as a stage for a theatrical introduction into the environment. Concepts such as organic gardening (as seen in W in New York), fashion cat like walk with DJ (as shown in Standard in Las Vegas), and city movie collections (as Paris and Las Vegas) have prompted more theater introductions in hotel spaces. The permanent height bars have inspired new designs from the check-in desk and are now used as a technical expression. The smooth transfer of information must be absorbed quickly through the design feature (Curtis, 2001). Guest rooms are one of the most important areas of the hotel, as the main products are served to guests (Heung, Fei, & Hu, 2006). Guests view these rooms as an outlet to inspire their own homes and dream of better lifestyles (Curtis, 2001). Safety, comfort, privacy and tranquility are essential in hotels. Details of unique design, technology and controllable lighting have begun to be important for hotel guests. In-room office space is seamlessly added to traditional office alternatives, such as folding or retractable surfaces that can be disposed of when there is time to relax. Bathrooms where guests spend 25% of their time (Curtis, 2001), which is why they have become more important than the past years. Deep tubs, his and her lavatories, walk-in showers, marble and chrome are some of the ways hotel designers accommodate increasing design requirements. Accurate details are important to customers such as quality and appearance amenities (Curtis, 2001). One Aldwych Hotel in London and other luxury hotels are slowly adding technology, such as small plasma televisions, to bathrooms. Artwork is an important design element that is more carefully integrated into hotels (Curtis, 2001). Local artwork can be incorporated into guest rooms and extra spaces such as corridors, stairs and lifts to retain local themes. Some hotels such as the Bellagio Hotel in Las Vegas create full gallery areas to showcase well-known artists and satisfy consumers.

**The objectives:**

- To identified key design features that can promote a hotel to luxury status.
- To investigate guest satisfaction of luxury design solutions used in the context of vernacular architectural style in Cappadocia’s hotels.

- To obtain the overall guest satisfaction which are the comparison between the expectation of the level of service (before the purchase) and the perceived service (after the purchase)

**The Hypothesis:** There is a positive relationship between guests' overall satisfaction level and hotel luxury service practices.

## **2. RESEARCH METHODOLOGY**

Hotel guests' perceptions were measured with a self-administered questionnaire. The questionnaire was developed on the basis of a literature review and adopted to suit the specific features of a hotel setting. Among the service quality models for many researchers, RamsaranFowdar's (2007) scale is selected as a basic model for this study because her model consists of a rich source of measurement items. The measurement model that emerged comprised 62 measurable items as shown in Table 2. As a foundation for questionnaire development, the SERVQUAL model was used. The questionnaire consisted of four sections. The first section measured guests' perceptions of hotel attributes using a modified SERVQUAL model. SERVQUAL is based on seven dimensions of service quality, namely, 'Tangibility', 'Reliability', 'Assurance', 'Empathy', 'Environment', 'Technology' and 'Entertainment' is operational in the form of two 62-item sections to measure customer expectations and perceptions. Respondents were asked to rate the level of importance before their actual experience of the hotel's service among 62 items based on their expectations (E) along a 7-point Likert-type scale, with 1 set as 'strongly unimportant', 4 set as 'average', and 7 set as 'strongly important' (in section 1 of the questionnaire). The use of 7-point Likert-type scale was based on Lai and Hitchcock's (2015). A day or a few days later, respondents were asked to rate the level of performance among 62 items based on their actual experiences (perception, P) of enjoying the hotel's services along a 7-point Likert-type scale, with 1 set as 'very poor performance', 4 set as 'average', and 7 set as 'excellent performance' (in section 2 of the questionnaire). Section 3 inquires into contextual general background information, and section 4 is used to measure the overall satisfaction with the hotel services encountered. For each dimension, the SERVQUAL scale provides a score for customer expectations (E) and a score for customer perceptions (P) of service providers' performances. According to Parasuraman and his colleagues, the difference between the two scores is service quality (Q).  $Q = (P - E)$  The key to optimizing service quality is to maximize this positive gap score. The negative value of this gap score reveals the dissatisfaction of customers. With reference to Lai and Hitchcock's (2015) guidelines, the importance attributes in this study are independent variables and overall satisfaction is a dependent variable. Partial correlation was employed because there are a large number of attributes and thus the results of multiple regressions may dominate few attributes (in which coefficients are very large) thereby causing other attributes fall into the low implicit importance area. Furthermore, the correlation between the importance of each attribute and overall satisfaction is independent of other correlations; thus using a partial correlation is more appropriate in this case because partial correlation only measures the degree of association between two variables, so partial correlation analysis is more

suitable than regression analysis for quantifying the influence of independent variables on dependent variables (Hair, Anderson, Tatham, & Black, 1995).

**Table 2: The measurement model that emerged comprised 62 measurable items (SERVQUAL).**

Dimensions	N.	Mean Customers' Expectation Score( E)	N.	Mean Customers' Perception Score (P)	Mean Gap Score Service Quality=(P-E)
<b>Tangibility</b>					
Q1 Modern and comfortable furniture					
Q2 Appealing interior and exterior hotel decoration					
Q3 Attractive lobby					
Q4 Cleanliness and comfort of rooms					
Q5 Spaciousness of rooms					
Q6 Hygienic bathrooms and toilets					
Q7 Convenient hotel location					

Q8 Neat and professional appearance of staff				
Q9 Availability of swimming pool, sauna and gym				
Q10 Complimentary items				
Q11 Visually appealing brochures, pamphlets, etc.				
Q12 Image of the hotel				
<b>Reliability</b>				
Q13 Staff performing services right the first time.				
Q14 Performing the services at the time promised.				
Q15 Well-trained and knowledgeable staff.				
Q16 Experienced staff.				
Q17 Staff with good communication skills.				
Q18 Accuracy in billing.				
Q19 Accuracy of food order.				
Q20 Accurate information about				

hotel services.				
Q21 Advance and accurate information about prices.				
Q22 Timely housekeeping services.				
Q23 Availability of transport facilities.				
Q24 Reliable message service.				
Q25 Willingness of staff to provide help promptly.				
Q26 Availability of staff to provide service				
Q27 Quick check-in and check-out.				
Q28 Prompt breakfast service.				
Q29 Problem-solving abilities of staff.				
<b>Assurance</b>				
Q30 Friendliness of staff.				
Q31 Courteous employees.				
Q32 Ability of staff to instill				

confidence in customers				
<b>Empathy</b>				
Q33 Availability of room service .				
Q34 Understanding the customers' requirements.				
Q35 Listening carefully to complaints.				
Q36 Hotel to have customers' best interests at heart.				
Q37 Giving special attention to the customer.				
Q38 Recognizing the hotel customer.				
Q39 Addressing the customer by name.				
Q40 Customer loyalty program.				
<b>Environment</b>				
Q41 Comfortable, relaxed and welcome feeling.				
Q42 Quietness of room.				



Q43 Variety/quality of sports and recreational facilities.					
Q44 Security of room.					
Q45 Security and safety at the hotel.					
Q46 Comfortable and clean mattress, pillow, bed sheets and covers.					
Q47 Reasonable room rates.					
Q48 Variety of basic products and services offered (toothpaste, soap, shampoo, towels, toilet paper, stationery, laundry, ironing, tea, coffee, drinking water)					
Q49 Room items in working order (kettle, air conditioning, lighting, toilet, fridge, etc.).					
Q50 Quality of food in restaurant(s).					
Q51 Choice of menus, buffet, beverages and wines.					
<b>Technology</b>					
Q52 In-room technologies (Wi-Fi, smart TV, telephone, voicemail, on demand PC,					

television, internet plug, meal ordering, email, wake-up system).					
Q53 Hotel technologies (online reservation, email, internet, fax, international calling facilities, hotel website, direct hotel email, computerized feedback form, special promotions on hotel website, acceptance of credit and debit cards)					
<b>Entertainment</b>					
Q54 Provision of children's facilities (playground, baby-sitting, swimming pool, etc.)					
Q55 Provision of evening entertainment.					
Q56 Casino					
Q57 Variety show (such as concert).					
Q58 Recreation and therapy (such as SPA)					
Q59 Shopping center.					
Q60 Acrobatics performances (such as the House of Dancing Water).					

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Q61 Convention and exhibition center.					
Q62 Tourist attractions.					

**Remark:**

1. Q1 to Q55 are retrieved from Ramsaran- Fowdar's (2007) study.
2. Q56 to Q62 are developed in this study.

**6.10. Data collection of luxury in Cappadocia’s vernacular hotels.**

In this study, the questionnaire was checked by two professors of hospitality and tourism to ascertain whether there are misunderstandings or ambiguities and to check for content validity. They also evaluated the context in which measurable items on the questionnaire are placed for reducing the causes of the common bias. The final version of the questionnaire was then agreed upon. A questionnaire survey was used in order to ascertain guests' expectations of the service quality provided by luxury hotels in Cappadocia. The questionnaire included one filter question and four sections. The filter question was used to confirm whether or not the respondents would be staying overnight in luxury hotels. Respondents were asked to rate the level of importance before their purchase of the hotel's service among 62 items based on their expectations along a 7-point Likert-type scale, with 1 set as 'strongly unimportant', 4 set as 'average', and 7 set as 'strongly important' (in section 1 of the questionnaire). Then a day or a few days later, respondents were asked to rate the level of performance among 62 items based on their actual experiences of enjoying the hotel's services along a 7-point Likert-type scale, with 1 set as 'very poor performance', 4 set as 'average', and 7 set as 'excellent performance' (in section 2 of the questionnaire). Section 3 inquires into contextual general background information, and section 4 is used to measure the overall satisfaction with the hotel services encountered. The overall satisfaction was measured through three items (satisfied with the services, expectations, and satisfied with experience) adapted from the American Customer Satisfaction Index(ACSI) model from Fornell, Johnson, Anderson, Cha, and Bryant (1996). This questionnaire structure can disrupt potential interference between questions of independent variables and questions of the dependent variable. The interviewers collected data in Cappadocia including the Millstone cave suite, Hidden cave and Sakura cave, from November 2017 to January 2018 Interviewers stayed in each location for one to ten days from 11:00 to 19:00 and selected one respondent every 30 min. Additionally the questionnaire were distributed in two language (Turkish, English). As it was impossible in this study to collect measures for different constructs from different sources, data were collected at different points in time and location in order to have a diversified sample and reduce the contextual influences. A total of 600 sets of questionnaire were distributed, but only 315 sets of completed questionnaire were collected. However, 25 incomplete questionnaires were eliminated, leaving 290 questionnaires as valid for analysis.

**6.11. Demographic information**

The sample consisted of 146 males (50.35percent) and 144 females (49.65percent) guests. The majority of respondents (52.75percent) were between the ages of 20-29. In all, 18.27percent held a master's degree and higher, 33.44percent held a bachelor's degree. Respondents with a monthly income below US\$1000 accounted for 28.62 percent and followed by US\$1000-2999 (25.2percent). Detailed information on the sample description is presented in Table (3).

**Table 3: Description of respondents (n =290)**

Variables	Categories	Frequency	Percentage (%)
Gender Age	Male	146	%50.35
	Female	144	%49.65
	Under 20	15	%5.2
	20-29	153	%52.75
	30-39	60	%20.68
	40-49	34	%11.72
	50 or above	28	%9.65
Income	Without income	15	%5.17
	Below USD1000	83	%28.62
	USD1000-2999	73	%25.2
	USD3000-4999	56	%19.3
	USD5000 or above	63	%21.72
Education	Primary school	36	%12.41
	Secondary school	43	%14.82
	College diploma	61	%21.03
	Undergraduate	97	%33.44
	Postgraduate	53	%18.27

Nationality	Chinese	70	%24.13
	Korean	55	%18.96
	Russian	74	%25.5
	Turkish	80	%27.58
	Spanish	5	%1.7
	Arabian	6	%2
Purpose of visit	Business/Official work	47	%16.2
	Visit friends and relatives	35	%12.06
		196	%67.58
	Vacation	12	%4.13
	Others		
Duration of stay at hotel	1-3 days	87	%30
	4-7 days	167	%57.58
	8 days and more	36	%12.41

### **Analysis of data and findings**

Service quality is composed of seven dimensions are cataloged as ‘basic (tangible)’, ‘reliability’, ‘assurance’, ‘empathy’, ‘environment’, ‘technology’, and ‘entertainment’. The 290 respondents were asked to rate each statement concerning their expectation 1 set as ‘strongly unimportant’, 4 set as ‘average’, and 7 set as ‘strongly important’ and perception 1 set as ‘very poor performance’, 4 set as ‘average’, 7 set as ‘excellent performance’,

of service quality in of Cappadocia’s hotel to examine the dimensionality of the 62 items. The analytical findings of the service quality of each dimension were as table (4) follows:

Table 4: The analytical findings of the service quality of each dimension

<b>Tangibility Dimension</b>	<b>N.</b>	<b>Mean Customers' Expectation Score( E)</b>	<b>N.</b>	<b>Mean Customers' Perception Score (P)</b>	<b>Mean Gap Score (P-E)</b>
Q1 Modern and comfortable furniture	290	5.468	287	6.284	0.816
Q2 Appealing interior and exterior hotel decoration	290	5.599	290	6.408	0.809
Q3 Attractive lobby	290	5.414	290	6.408	0.994
Q4 Cleanliness and comfort of rooms	290	6.130	288	6.789	0.659
Q5 Spaciousness of rooms	290	5.686	271	6.348	0.662
Q6 Hygienic bathrooms and toilets	290	6.117	285	6.682	0.565
Q7 Convenient hotel location	290	5.434	284	6.358	0.924

Q8 Neat and professional appearance of staff	29 0	5.842	27 3	6.231	0.389
Q9 Availability of swimming pool, sauna and gym	29 0	5.103	27 8	5.699	0.596
Q10 Complimentary items	29 0	4.943	29 0	6.047	1.104
Q11 Visually appealing brochures, pamphlets, etc.	29 0	4.742	27 6	5.037	0.295
Q12 Image of the hotel	29 0	5.668	29 0	6.338	0.67
<b>Reliability</b>					
Q13 Staff performing services right the first time	29 0	5.439	28 3	6.505	1.066
Q14 Performing the services at the time promised	29 0	5.659	28 6	6.475	0.816
Q15 Well-trained and knowledgeable staff	29 0	5.530	29 0	6.391	0.861
Q16 Experienced staff	29 0	5.487	27 9	6.231	0.744

Q17 Staff with good communication skills	29 0	5.436	29 0	6.448	1.012
Q18 Accuracy in billing	29 0	5.940	27 5	6.334	0.394
Q19 Accuracy of food order	29 0	5.515	29 0	6.130	0.595
Q20 Accurate information about hotel services	29 0	5.535	28 4	6.284	0.749
Q21 Advance and accurate information about prices	29 0	5.715	28 8	6.395	0.68
Q22 Timely housekeeping services	29 0	5.682	27 8	6.388	0.706
Q23 Availability of transport facilities	29 0	5.706	28 6	6.398	0.692
Q24 Reliable message service	29 0	5.234	29 0	5.950	0.716
Q25 Willingness of staff to provide help promptly	29 0	5.188	27 6	6.127	0.939
Q26 Availability of staff to provide service	29 0	5.404	28 7	6.334	0.93



Q27 Quick check-in and check-out	29 0	5.334	29 0	6.411	1.077
Q28 Prompt breakfast service	29 0	5.271	29 0	6.054	0.783
Q29 Problem-solving abilities of staff	29 0	5.545	26 7	6.485	0.94
<b>Assurance</b>					
Q30 Friendliness of staff	29 0	5.702	28 8	6.515	0.813
Q31 Courteous employees	29 0	5.532	27 4	6.291	0.759
Q32 Ability of staff to instill confidence in customers	29 0	4.938	28 4	5.783	0.845
<b>Empathy</b>					
Q33 Availability of room service	29 0	4.736	29 0	5.465	0.729
Q34 Understanding the customers' requirements	29 0	4.391	27 6	5.067	0.676
Q35 Listening carefully to complaints	29 0	5.568	29 0	6.140	0.572

Q36 Hotel to have customers' best interests at heart	29 0	5.156	28 6	6.164	1.008
Q37 Giving special attention to the customer	29 0	5.237	29 0	6.418	1.181
Q38 Recognizing the hotel customer	29 0	5.331	27 9	6.388	1.057
Q39 Addressing the customer by name	29 0	5.004	29 0	6.284	1.28
Q40 Customer loyalty programme	29 0	5.442	28 7	5.813	0.371
<b>Environment</b>					
Q41 Comfortable, relaxed and welcome feeling	29 0	5.671	29 0	6.428	0.757
Q42 Quietness of room	29 0	5.993	29 0	6.656	0.663
Q43 Variety/quality of sports and recreational facilities	29 0	5.483	27 9	5.920	0.437

Q44 Security of room	29 0	6.323	29 0	6.756	0.433
Q45 Security and safety at the hotel	29 0	6.312	29 0	6.786	0.474
Q46 Comfortable and clean mattress, pillow, bed sheets and covers	29 0	6.336	29 0	6.779	0.443
Q47 Reasonable room rates	29 0	5.140	26 8	6.539	1.399
Q48 Variety of basic products and services offered (toothpaste, soap, shampoo, towels, toilet paper, stationery, laundry, ironing, tea, coffee, drinking water)	29 0	5.754	29 0	6.495	0.741
Q49 Room items in working order (kettle, air conditioning, lighting, toilet, fridge, etc.)	29 0	6.027	28 7	6.667	0.64
Q50 Quality of food in restaurant(s)	29 0	5.498	29 0	6.784	1.286
Q51 Choice of menus, buffet, beverages and wines	29 0	5.336	27 8	6.543	1.207

<b>Technology</b>					
Q52 In-room technologies (Wifi, smart TV, telephone, voicemail, on demand PC, television, internet plug, meal ordering, email, wake-up system)	290	4.947	290	6.437	1.49
Q53 Hotel technologies (online reservation, email, internet, fax, international calling facilities, hotel website, direct hotel email, computerized feedback form, special promotions on hotel website, acceptance of credit and debit cards)	290	5.509	279	6.743	1.234
<b>Entertainment</b>					
Q54 Provision of children's facilities (playground, baby-sitting, swimming pool, etc.)	290	5.088	276	5.678	0.59
Q55 Provision of evening entertainment	290	5.082	290	6.867	1.785

Q56 Casino	290	5.848	285	6.856	1.008
Q57 Variety show (such as concert)	290	5.262	278	5.736	0.474
Q58 Recreation and therapy (such as SPA)	290	5.318	290	5.761	0.443
Q59 Shopping center	290	2.508	278	2.765	0.257
Q60 Acrobatics performances (such as the House of Dancing Water)	290	1.247	269	2.765	1.518
Q61 Convention and exhibition center	290	5.222	279	5.612	0.39
Q62 Tourist attractions	290	5.286	290	6.898	1.612

According to Parasuraman and his colleagues, the difference between the two scores is service quality (Q).  $Q = P - E$  The key to optimizing service quality is to maximize this positive gap score. The negative value of this gap score reveals the dissatisfaction of customers. The following table (5) is the Overall satisfactions.

**Table 5: The analytical findings of Overall satisfactions.**

Questions	N.	Overall satisfactions
OS1 I was fully satisfied with the services offered by this hotel.	290	6.361
OS2 The services offered by this hotel met my expectations.	290	6.653

OS3 I am satisfied with my experience in this hotel.	290	6.567
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### 6.13. Descriptive Statistics

Table (6) displays us some important statistical results which are (Mean, Standard Deviation). The mean value explained the nature of the respondent answer about any questions asked to participants because it is one of the most important statistical techniques in measure of tendency.

**Table 6: Descriptive Statistics of all variables**

Variables	N	Mean	Std. Deviation	Skewness	Kurtosis
Q1	267	6.236	0.859	-1.157	1.232
Q2	267	6.419	0.616	-0.564	-0.594
Q3	267	6.404	0.656	-0.893	0.756
Q4	267	6.704	0.497	-1.355	0.795
Q5	267	6.337	0.803	-1.299	1.926
Q6	267	6.667	0.503	-1.064	-0.087
Q7	267	6.345	0.795	-1.331	2.116
Q8	267	6.221	0.867	-1.107	1.036
Q9	267	5.727	0.991	-0.271	-0.581
Q10	267	6.000	0.897	-0.630	-0.052
Q11	267	5.071	0.879	0.228	-0.351
Q12	267	6.341	0.795	-1.323	2.108
Q13	267	6.494	0.674	-0.983	-0.237
Q14	267	6.468	0.633	-0.956	0.707
Q15	267	6.393	0.770	-1.454	2.720
Q16	267	6.217	0.883	-1.133	0.859
Q17	267	6.427	0.647	-0.943	0.927

Q18	267	6.330	0.783	-1.317	2.275
Q19	267	5.989	0.903	-0.595	-0.146
Q20	267	6.255	0.864	-1.187	1.071
Q21	267	6.419	0.768	-1.531	2.942
Q22	267	6.382	0.811	-1.529	2.617
Q23	267	6.404	0.762	-1.448	2.732
Q24	267	5.914	0.920	-0.412	-0.478
Q25	267	6.022	0.892	-0.588	-0.166
Q26	267	6.348	0.777	-1.373	2.505
Q27	267	6.397	0.649	-0.861	0.789
Q28	267	6.004	0.852	-0.522	-0.388
Q29	267	6.483	0.603	-0.920	0.923
Q30	267	6.494	0.674	-0.983	-0.237
Q31	267	6.277	0.826	-1.200	1.350
Q32	267	5.719	0.934	-0.277	-0.533
Q33	267	5.502	0.994	-0.075	-0.658
Q34	267	5.116	0.844	0.269	0.074
Q35	267	6.120	0.867	-0.792	0.144
Q36	267	6.180	0.870	-0.909	0.323
Q37	267	6.446	0.637	-0.981	1.103
Q38	267	6.386	0.759	-1.452	2.908
Q39	267	6.292	0.825	-1.236	1.437
Q40	267	5.734	0.930	-0.322	-0.479
Q41	267	6.457	0.620	-0.884	0.712

Q42	267	6.622	0.584	-1.282	0.643
Q43	267	5.903	0.908	-0.413	-0.404
Q44	267	6.730	0.477	-1.455	1.051
Q45	267	6.768	0.457	-1.741	2.108
Q46	267	6.760	0.462	-1.679	1.865
Q47	267	6.532	0.639	-1.036	-0.026
Q48	267	6.536	0.589	-1.082	1.340
Q49	267	6.659	0.506	-1.024	-0.184
Q50	267	6.768	0.457	-1.741	2.108
Q51	267	6.524	0.645	-1.024	-0.068
Q52	267	6.464	0.678	-1.181	1.285
Q53	267	6.734	0.475	-1.481	1.141
Q54	267	5.704	1.033	-0.249	-0.767
Q55	267	6.858	0.371	-2.495	5.563
Q56	267	6.843	0.385	-2.284	4.393
Q57	267	5.723	1.025	-0.288	-0.712
Q58	267	5.734	0.946	-0.277	-0.593
Q59	267	2.831	1.919	0.602	-1.116
Q60	267	2.783	1.865	0.607	-1.091
Q61	267	5.652	1.020	-0.160	-0.753
Q62	267	6.884	0.344	-2.955	8.476

#### 6.14. Frequency Table

A frequency table is built by arranging collected data values in ascending order of magnitude with their corresponding frequencies. It will give us a summarized grouping of



data divided into mutually exclusive classes and the number of occurrences in a class. Frequency table can be used for both qualitative and quantitative data.

The uses of Frequency Distribution are as follows;

1. To help us for analyzing the data.
2. To estimate the frequencies of the population on the basis of the sample.
3. To easiness of computation of various statistical measures

To construct a frequency distribution table, one has to count the number of observations that fall into each category. The number of observation falling within a class interval is called class frequency of that class interval.

In this study about “customer satisfaction of Hotels in Cappadocia area”, we have 71 variables that are all categorical data. We have used frequency tables for some of them that will give us a visual display of the data and it is one way to organize data so that it makes more sense.

From the questionnaires that we had distributed to 290 respondents of our survey but due to missing values we have taken 267 observations into account, it is shown that Male respondents were higher than Female respondents which are 54.7% and 45.3% respectively).see table (7).

**Table 7: Frequency Table of Gender**

	Frequency	Percent	Cumulative Percent
Male	146	54.7	54.7
Female	121	45.3	100.0
Total	267	100.0	

In the above Table, variable Age is divided into five classes. The age of majority participants is within 20 to 29 years old (57.7% of the data). The second largest percentage goes to the group age of (30-39 with 22.5%) and the other age groups are between (1.9% and 12.4%). see table (8).

**Table 8: Frequency distribution of Age's respondents**

	Frequency	Percent	Cumulative Percent
Under 20	15	5.6	5.6
20 – 29	154	57.7	63.3

30 – 39	60	22.5	85.8
40 – 49	33	12.4	98.1
50 or Above	5	1.9	100.0
Total	267	100.0	

From Figure 1, we can identify that the income of the visitors of the hotels. 31.9% respondents's income were below \$1000 which tells us that their economic status is not very high. Whereas 5.6% respondents had not have an income, followed by 20.60% of them had income between \$3000 and \$5000 which also indicated that there are people in the high income who visited the hotels, and this might be due to of potential properties of the hotels and areas.

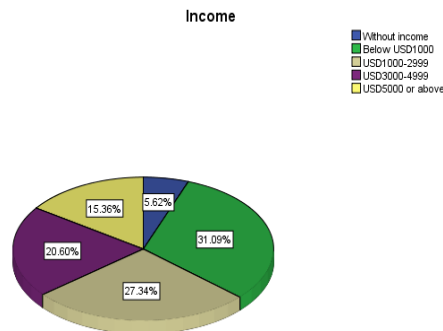
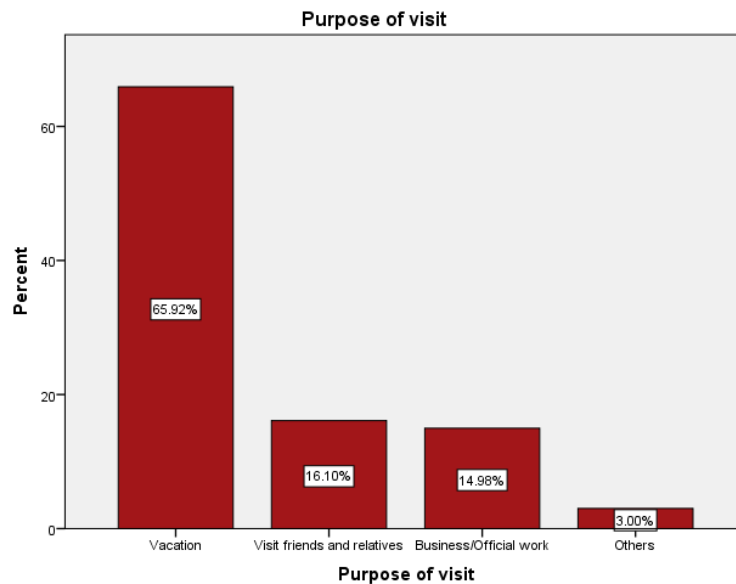


Figure 1: Income status of the visitors

	Frequency	Percent	Cumulative Percent
Primary school	35	13.1	13.1
Secondary school	43	16.1	29.2
College diploma	61	22.8	52.1
Undergraduate	94	35.2	87.3
Postgraduate	34	12.7	100.0
Total	267	100.0	

**Table 9: Education level**

Table 9 shows us level of education for the participants, thus it is cleared that the majority of the tourists who visited this area have bachelor degree with 35.2%, and 22.8% have college diploma. It is interesting to show that 12.7% of them have postgraduate degree. However, we have also had primary school and secondary school respondents by 13.1% as well as 16.1% respectively.



**Figure 2: Purpose of visiting**

Figure 2 illustrates that the main purpose of visiting these hotels were for vacation since 65.92% of the visitors said that. While visiting friends and relatives with business/office work had quite similar percentage with roughly 15% and visiting for other reason was only 3%. This clearly shows us that people spend time there for vacation and get relaxed.

In this survey, we have asked the participants for how long they usual stay at the hotels in this area. It is found that the majority of participants of the study (55.1%) stay for 4-7 days which is matched to the previous question (purpose of staying) as the majority was vacation, and 31.5% respondents remain for 1-3 days, whereas 13.5% stay at the hotel for more than 8 days.see table (10).

**Table 10: Duration of Staying**

	Frequency	Percent	Cumulative Percent
1-3 days	84	31.5	31.5
4-7 days	147	55.1	86.5
8 days and more	36	13.5	100.0
Total	267	100.0	

**6.15. Factor analysis**

Factor analysis is a way of identifying patterns in data, and expressing the data in such a way as to highlight their similarities and differences. Also through factor analysis we can detect the most important variables impact on such a phoneme. Since patterns in data can be hard to find in data of high dimension, where the luxury of graphical representation is not available, factor analyzing is a powerful technique for analyzing data. There are various ways to do so and Principal Components Analysis (PCA) is one of the most usage one.

The main advantage of PCA is that once you have found these patterns in the data, and you compress the data, ie. By reducing the number of dimensions, without much loss of information. This technique used in image compression, as we will see in a later section.

After conducting PCA on our data in SPSS program the following outputs are created as we will go through the main important results. Appendix () shows as abridged version of the R-matrix and the top half of this table contains the Pearson correlation coefficients between all pairs of question whereas the bottom half contains the one-tailed significance of these coefficients. We can use this correlation matrix to check the pattern of relationships. First, scan the significance values and look for any variable for which the majority of values are greater than 0.05. Then seek the correlation coefficients themselves and check for any greater than 0.9. If any of them are found then we should be aware that a problem could arise because of singularity in the data. For that we need to check the determinant value of the correlation coefficients matrix listed at the bottom of the matrix. Here its value is 0.00005 which is not zero otherwise the problem of not conducting factor analysis appears. Thus, multicollinearity is not a problem. In conclusion, all questions are correlated fairly well and there is no need to eliminate any questions at this stage.

Table (11) shows several important parts of the result; the Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett’s test of sphericity. The KMO statistic varies between 0 and 1. Since the value is greater than 0.5 which is (0.880), therefore using Factor Analysis is likely to be appropriate.

**Table 11: Test of KMO and Bartlett’s**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.880
Bartlett's Test of Sphericity	Approx. Chi-Square	17958.196
	df	1128
	Sig.	0.000

Bartlett’s measure tests the null hypothesis that the original correlation matrix is an identity matrix. For factor analysis to work we need some relationships between variables and if the r-matrix were an identity matrix, then all correlation coefficients would be zero. Thus, we want this test is to be significant and it is indeed.

Table (12) demonstrates the main results of the factor analysis. After seven cycles of decreasing the number of factors retained, 14 measurement items were removed and 48 measurement items were retained. As seen there are (9) factors which have been extracted using PCA which explains the total variability of the data. We can notice that we have (9) extracted factors as chosen automatically by the program and chose only those which have eigenvalues greater than 1. % of Variance column indicates how much of the variability in the data has been modeled by the extracted factors. All 9 factors are the main factors which effects displaced people to decide leaving their places and the total variability from those factors are 80.934% and each factors explains (37.108%, 13.396%, 7.374%, 5.975%, 4.762%, 3.695%, 3.175%, 3.095%, 2.353%) respectively. The scree plot shows that seven components are an appropriate solution.

**Table (12): Total variance of each component**

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	17.812	37.108	37.108	10.558	21.996	21.996
2	6.430	13.396	50.504	5.599	11.665	33.661

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3	3.540	7.374	57.878	5.201	10.835	44.495
4	2.868	5.975	63.853	4.814	10.030	54.525
5	2.286	4.762	68.615	3.551	7.398	61.923
6	1.773	3.695	72.310	2.899	6.040	67.963
7	1.524	3.175	75.485	2.426	5.055	73.018
8	1.486	3.095	78.580	1.962	4.087	77.105
9	1.130	2.353	80.934	1.838	3.829	80.934
10	0.915	1.906	82.840			
11	0.870	1.813	84.653			
12	0.790	1.646	86.298			
13	0.722	1.504	87.802			
14	0.624	1.300	89.102			
15	0.536	1.117	90.220			
16	0.501	1.043	91.263			
17	0.444	0.925	92.188			
18	0.402	0.838	93.026			
19	0.368	0.766	93.792			
20	0.323	0.673	94.465			
21	0.314	0.654	95.119			
22	0.263	0.548	95.666			
23	0.220	0.458	96.124			
24	0.206	0.428	96.552			
25	0.161	0.335	96.887			
26	0.157	0.327	97.214			

27	0.141	0.293	97.507			
28	0.124	0.259	97.767			
29	0.113	0.235	98.002			
30	0.101	0.211	98.212			
31	0.093	0.194	98.406			
32	0.089	0.185	98.592			
33	0.074	0.155	98.747			
34	0.072	0.150	98.897			
35	0.065	0.136	99.033			
36	0.059	0.122	99.155			
37	0.056	0.116	99.271			
38	0.054	0.112	99.383			
39	0.044	0.092	99.475			
40	0.042	0.088	99.564			
41	0.041	0.085	99.648			
42	0.036	0.076	99.724			
43	0.031	0.064	99.788			
44	0.026	0.055	99.843			
45	0.022	0.047	99.890			
46	0.021	0.043	99.933			
47	0.018	0.037	99.970			
48	0.015	0.030	100.000			
Extraction Method: Principal Component Analysis.						

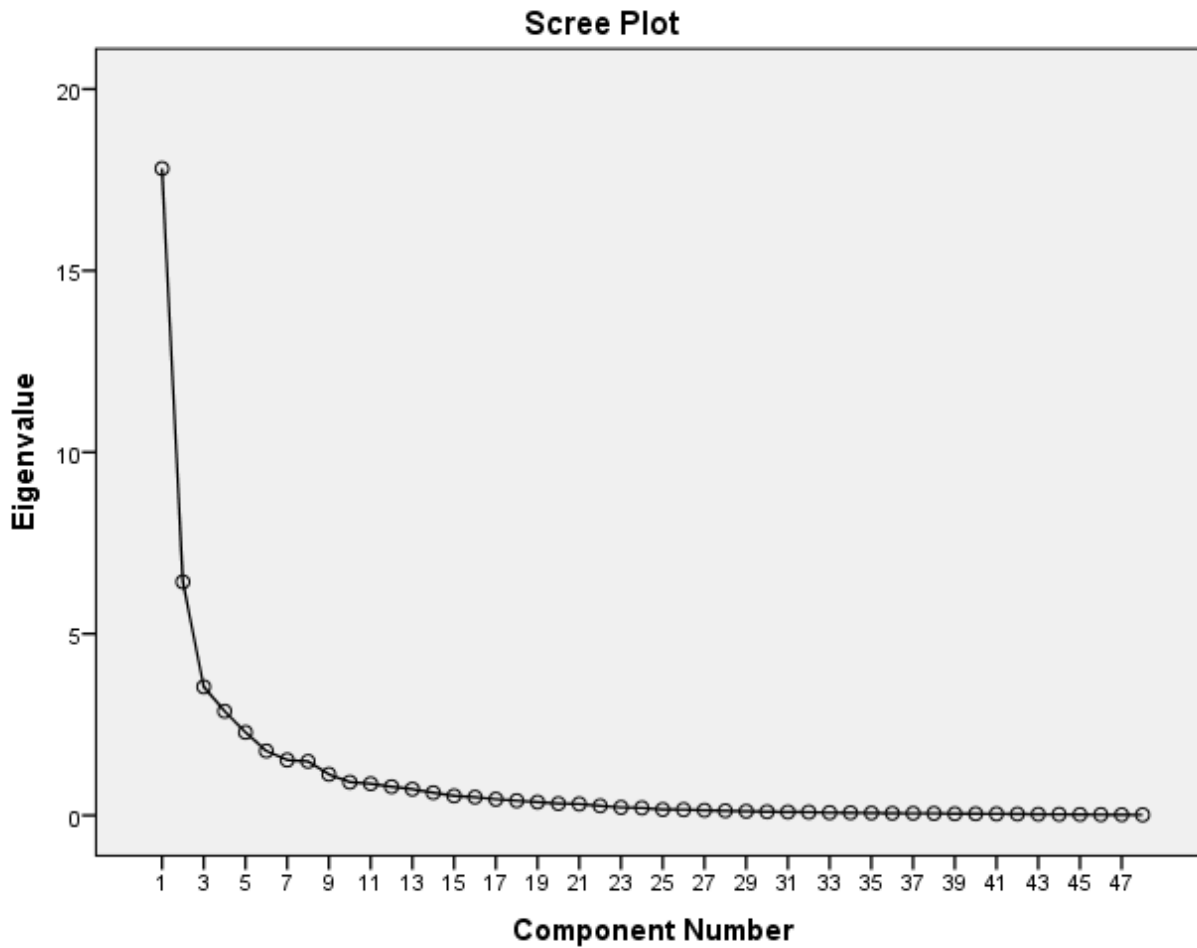


Figure 3: Screen plot of eigen value vs components

Table (13) illustrates the significant factors have impact on leaving decision and they are dependent on significant variables;

	1	2	3	4	5	6	7	8	9	Communalities
Q5	0.881									0.876
Q18	0.875									0.898
Q20	0.869									0.843
Q22	0.864									0.827



Q15	0.862									0.843
Q31	0.860									0.827
Q16	0.857									0.859
Q23	0.821									0.803
Q38	0.779									0.704
Q35	0.765									0.775
Q36	0.743									0.694
Q1	0.658									0.738
Q10	0.584									0.792
Q55		0.917								0.864
Q62		0.849								0.761
Q50		0.847								0.887
Q46		0.809								0.755
Q56		0.807								0.732
Q44		0.798								0.831
Q53		0.745								0.737
Q47			0.866							0.872
Q51			0.838							0.840
Q13			0.836							0.867
Q42			0.775							0.694
Q6			0.775							0.839
Q49			0.752							0.807
Q4			0.621							0.828
Q29				0.887						0.900

Q41				0.881						0.889
Q37				0.870						0.865
Q27				0.774						0.826
Q14				0.671						0.724
Q2				0.619						0.710
Q61					0.874					0.936
Q54					0.864					0.962
Q57					0.849					0.946
Q9					0.688					0.863
Q58						0.860				0.856
Q32						0.845				0.886
Q25						0.579				0.741
Q28						0.444				0.493
Q59							0.883			0.847
Q60							0.866			0.844
Q34								0.869		0.775
Q33								0.684		0.745
Q11								0.550		0.436
Q52									0.911	0.911
Q48									0.903	0.896

**Factor 1:( Tangibility)** First factor always has the highest impact, so in selecting hotels in Cappadocia areathe first factor explains (37.108%,) total variance. It means with this percentage has impact on deciding to choose that area and the variables which share their influences in these factors are as followings in order:

Variables	Factor loading
-----------	----------------

1:	Spaciousness of rooms	Q5	0.881
2:	Accuracy in billing	Q18	0.875
3:	Accurate information about hotel services	Q20	0.869
4:	Timely housekeeping services	Q22	0.864
5:	Well-trained and knowledgeable staff	Q15	0.862
6:	Courteous employees	Q31	0.860
7:	Experienced staff	Q16	0.857
8:	Availability of transport facilities	Q23	0.821
9:	Recognizing the hotel customer	Q38	0.779
10:	carefully to complaints	Q35	0.765
11:	to have customers' best interests at heart	Q36	0.743
12:	Modern and comfortable furniture	Q1	0.658
13:	Complimentary items	Q10	0.584

**Factor 2:( Entertainment)** This factor is rank at second place and explains (13.396%) of total variance. The variables contributable are given below;

Variables	Factor loading
1: Provision of evening entertainment	Q55 0.917
2: Tourist attractions	Q62 0.849
3: Quality of food in restaurant(s)	Q50 0.847
4: Comfortable and clean mattress, pillow, bed sheets and covers	Q46 0.809
5: Casino	Q56 0.807
6: Security of room	Q44 0.798
7: Hotel technologies (online reservation, email, internet, fax, international calling facilities, hotel website,	Q53 0.745

**Factor 3:( Responsiveness)**This factor is rank at third place and explains (7.374%) of total variance. The variables contributable are given below;

Variables		Factor loading
1: Reasonable room rates	Q47	0.866
2: Choice of menus, buffet, beverages and wines	Q51	0.838
3: Staff performing services right the first time	Q13	0.836
4: Quietness of room	Q42	0.775
5: Hygienic bathrooms and toilets	Q6	0.775
6: Room items in working order (kettle, air conditioning, lighting, toilet, fridge, etc.)	Q49	0.752
7: Cleanliness and comfort of rooms	Q4	0.621

**Factor 4:( Empathy)** This factor is rank at fourth place and explains (5.975%) of total variance. The variables contributable are given below;

Variables		Factor loading
1: Problem-solving abilities of staff	Q29	0.887
2: Comfortable, relaxed and welcome feeling	Q41	0.881
3: Giving special attention to the customer	Q37	0.870
4: Quick check-in and check-out	Q27	0.774
5: Performing the services at the time promised	Q14	0.671
6: Appealing interior and exterior hotel decoration	Q2	0.619

**Factor 5:(Environment)** This factor is rank at fifth place and explains (4.762%) of total variance. The variables contributable are given below;

Variables		Factor loading
1: Convention and exhibition center	0.874	Q61
2: Provision of children's facilities (playground, baby-sitting, swimming pool, etc.)	0.864	Q54
3: Variety show (such as concert)	0.849	Q57
4: Availability of swimming pool, sauna and gym	0.688	Q9

**Factor 6:(Reliability)** This factor is rank at fifth place and explains (3.695%) of total variance. The variables contributable are given below;

Variables		Factor loading
1: Recreation and therapy (such as SPA)	Q58	0.860
2: Ability of staff to instill confidence in customers	Q32	0.845
3: Willingness of staff to provide help promptly	Q25	0.579
4: Prompt breakfast service	Q28	0.444

**Factor 7:(Core hotel benefit)**This factor is rank at seventh place and explains (3.175%) of total variance. The variables contributable are given below;

Variables		Factor loading
1: Shopping center	Q59	0.883
2: Acrobatics performances (such as the House of Dancing Water)	Q60	0.866

**Factor 8:( Assurance)**This factor is rank at eighth place and explains (3.095%) of total variance. The variables contributable are given below;

Variables	Factor loading
1: Understanding the customers' requirements	Q34 0.869
2: of room service	Q33 0.684
3: Visually appealing brochures, pamphlets, etc.	Q11 0.550

**Factor 9:( Technology)**This factor is rank at ninth place and explains (2.353%%) of total variance. The variables contributable are given below;

Variables	Factor loading
1: In-room technologies (Wifi, smart TV, telephone, voicemail, on demand PC, television, internet plug, meal	Q52 0.911
2: Variety of basic products and services offered (toothpaste, soap, shampoo, towels, toilet paper, stationery,	Q48 0.903

We can also specify the effect of single variable of impacting on deciding to stay at the hotels in Cappadocia area. The Communalities column in Table 7 that is derived for each variable by taking the sum of the squared factor loading for each of the factors associated with the variable. All variables are loading factor 1 have about 80% variability on deciding to stay. However, the average percentage of variability of variables in factor 2 is about to 79%. Also other variables have quite reasonable influence on deciding to stay which is about 85% variability.

**6.16. Relationship between guests’ overall satisfaction level and hotel luxury service practices**

One of the main aim of our study is to know how strong and which direction these two terms are related. Thus, we have conducted Spearman Correlation in different vision.

**6.16.1 Correlation between overall satisfaction and hotel luxury service dimensions separately**

Table (14) displays relationship between overall satisfaction and dimensions of hotel luxury service. As shown that the value of correlation coefficients are all greater than 0.4 with plus sign except between Entertainment and overall satisfaction. Thus, it is evidence that there are positive relationships between them and the value of presented correlation is significant since the Sig. value is less than 0.05. This indicates that the link is not occurred by chance.

**Table 14: Spearman Correlation result between Overall Satisfaction and hotel luxury service dimensions**

	Spearman's rho/Sig. Test	Overall Satisfaction
Tangibility	Correlation Coefficient	.562**
	Sig. (2-tailed)	0.000
Reliability	Correlation Coefficient	.587**
	Sig. (2-tailed)	0.000
Assurance	Correlation Coefficient	.620**
	Sig. (2-tailed)	0.000
Empathy	Correlation Coefficient	.494**
	Sig. (2-tailed)	0.000
Environment	Correlation Coefficient	.746**
	Sig. (2-tailed)	0.000
Technology	Correlation Coefficient	.435**
	Sig. (2-tailed)	0.000
Entertainment	Correlation Coefficient	0.115
	Sig. (2-tailed)	0.059

**6.16.2. Correlation between overall satisfaction and hotel luxury service dimensions together**

The below table provides us information about the attitude relationship between overall satisfaction and overall luxury service dimensions. Again, there is a positive relationship because the value of Pearson correlation is greater than 0.3. It is also worth mentioning that the relationship is not occurred by chance due to having Sig. value greater than 0.05.

	Pearson's rho/Sig. Test	Overall Satisfaction

Overall Luxury service dimension	Pearson Correlation	.578**
	Sig. (2-tailed)	0.000

From the above results we can conclude that there is a strong positive correlation between overall satisfaction and hotel luxury service, and this result matches with our study hypothesis as well as objective. Therefore, it should be taken into account in order to get much more satisfaction from the visitors.

**CONCLUSION**

The results of this study determine the roles of 49 attributes in 7 dimensions that affect customer satisfaction in existing luxury hotels that allow hotel managers to follow the most precise planning and marketing decisions. The results show in 7 dimensions of quality of service for all luxury hotels that customers are generally satisfied with the luxury hotels in Cappadocia. On the other hand, there is an urgent need for a significant improvement in hotel techniques because people live in a high-tech world. For example, maintaining an appropriate and consistent room environment is essential and intelligent management systems provide easy ways to control air conditioning and lighting that are more important. Improving basic facilities (such as furniture and lobby) and reliable services are necessary because these features cause dissatisfaction if they are not met

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