

## Evaluation of hospitality services provided for medical tourism and health recovery in Hurghada

Maaly Fayad Abdelghani<sup>1</sup>, Mohammed Nader Shalaby<sup>2\*</sup>

<sup>1</sup>.Lecturer-Hotel Studies Department- Faculty of Tourism and Hotels-Alexandria University, Egypt.

<sup>2</sup>Associate Professor of Biological Sciences and Sports Health Department, Faculty of Physical Education, Suez Canal University, Egypt, [dr.m.nader@suez.edu.eg](mailto:dr.m.nader@suez.edu.eg)

### Abstract

**The study aims** to evaluate the hospital services provided in the resorts of Hurghada and to highlight the components of the Hurghadahospital. The field research was carried out using a survey form on a sample of hospital resorts in Hurghada. Survey forms divided into a service quality assessment model and a loyalty assessment model were distributed to 11 (five- and four-star) resorts in Hurghada, and statistical methods were used to illustrate the link between the quality of services provided at resorts and the loyalty of guests.

**The results of the study showed:** that most sample hotels apply the following quality dimensions well (Responsiveness - warranty - efficiency), while the application of the two dimensions (reliability - Tangibility) is acceptable; and show a great impact in achieving loyalty of guests if all dimensions of quality are applied collectively. Considering the modernization aspect of the possibilities and hospital equipment. Attention should be paid to training the resort's staff in all modern methods of providing service, especially hospital services. All services needed by guests are provided in the advertised form.

**The study recommends:** the interest of Hurghadaresorts to applying the dimensions of quality (reliability- Responsiveness - Tangibility - Warranty - efficiency) in the services provided to hospital tourism tourists, and that there should be cooperation between all state authorities to establish clear health standards for hospital resorts. The Ministry of Tourism should transform some areas of the region into integrated hospital areas. Bilateral government agreements should be made to ensure that hospital resorts are subject to foreign health insurance requirements. The Ministry of Health must work on many protocols of cooperation with many health insurance agencies in Arab and foreign countries.

**Keywords:** hospitality services, medical tourism, health recovery,

### Introduction

With the global medical return to nature, scientists around the world have devoted themselves to studying the definition and explanation of environmental therapy and nature's ability to treat some diseases, and many famous specialized treatment resorts have appeared to treat some chronic diseases and take advantage of nature's tools of mineral water, mud, and sun. In addition to the use of modern diagnostic and examination methods.[1]

Cham (2021) showed that medical tourism began with the population of one country going to another country for cosmetic surgery or dental treatment, and the first beneficiaries of medical tourism may have adapted their treatment to relatively simple procedures, but with the application of international medical standards and regulations in new hospital sites around In the world, more and more people are seeking the best treatment at an affordable price in a suitable therapeutic environment. [1, 2]

The nature of life imposes on the organism between movement and stillness, effort, excitement, and tension on the one hand, and rest on the other, and between the physical effort on the shoulders of the athlete and the rest period, as this is the natural rhythm that we deal with in the life we live in general and sports life. It imposes on the organs of the body (every muscle fiber and every organ in the human body to deal with this rhythm).[3]

What concerns us here is what happens during physical activity and how the body can return to its normal state before performing this activity, the return of the athlete's functional devices, and all the physiological changes that occurred to the state it was in before performing the activity.[4]

Letunovska(2020) defines hospitalization as a general term used in the sense of restoring the renewal of indicators of the physiological and psychological state of a person after being exposed to excessive pressure or subjected to the effect of a certain activity, and these cases can be measured or estimated objectively by measuring these psychological and physiological indicators[5]

Rebuild and configure the various sources of energy and structural elements that are consumed during training and competitions, and that rebuilding takes place in many organs and systems of the body.[6]

The timing of the recovery process plays an important role in the success of this process, and the technical staff responsible for the player or team is responsible for that.[7]

1- Before the competitions: Deliberate that the players get enough psychological relaxation and mental calm and away from stress or noise and noise and eating the right food at the right time plays an important role before the competitions.

2- During the competitions: This is done during the competition and between matches or between rounds of play, through the instructions of the technical officials, with the necessity of drinking favorite drinks for the players to help them start the next round or the next round, and they are more willing to exert physical effort.

3- After the competitions: After the end of the match or competitions, it becomes necessary to seek the return of the players to their normal state and full psychological fitness to start the following exercises in preparation for the next competitions. Pay attention to food, rest periods, and sleep.[8, 9]

#### **Definition of medical tourism and recovery:**

Kaufmann and Muller (2001) define medical and medical tourism as any type of travel to make oneself or a member of one's family healthier.[10]

The Tourism Development Authority (2005) also defined medical tourism as "a movement of the tourist due to the desire to achieve recovery from some diseases, by providing some of his body's needs from natural healing resources that do not exist."in his environment, but it is present in another environment, where he remains for a certain period for treatment."[11]

Both Bookman and Bookman (2007) defined medical tourism as travel to improve health, as well as an economic activity that requires a trade in services and represents the link between at least two sectors: medicine and tourism. [12]

Recovery: It is the process of restoring and renewing the indicators of the functional and psychological state of the various organs of the body after being subjected to stress or the effect of performing an activity.[13]

It is an improvement - identification - activation - restoration - strengthening - rebuilding - reproduction - compensation - healing or that it is the period following pregnancy until reaching or exceeding the level that the individual was in before performing the pregnancy and his readiness to perform a certain pregnancy again.[14]

Restore the renewal of indicators of the physiological, physical, and psychological state of the individual after being subjected to severe pressures or influences.[14]

#### **Types of medical tourism**

medical tourism are divided into three types:

##### **1. Medical recuperation tourism:**

Tourists in this type of tourism travel to perform a specific surgery or perform some diagnoses and medical examinations under full medical supervision in a hospital or medical center that includes a team of international specialists, or hospitals specialized in a particular type of disease or surgery. In this case, The patient remains under full medical supervision according to the type of disease, and in most cases, the patient can stay in the hospital for several weeks, followed by a period spent by the patient in a touristic place to spend the recovery period until he recovers.[15]

##### **2. Synthetic medical tourism:**

This tourism is man-made, as it provides artificial therapeutic pools and pools, and the use of modern technology in the treatment of skin and muscular diseases. It is also characterized by the presence of recreational facilities and green spaces that support the treatment program. In these places, there are health centers for fitness and fitness seekers, and these places It is visited by tourists in search of health and pleasure. The Italian cities of Montecatini and the British Bath are among the most important tourist areas specialized in this field. [15]

##### **Natural medical tourism:**

It aims to treat through the available natural therapeutic ingredients, the most important of which are climate, mineral water, sulfur water, therapeutic silt, yellow sand pools, and black sand rich in minerals and radioactive materials in the proportions allowed for treatment, and herbs and medicinal plants. This is done by a team of therapists and under medical supervision. Full or partial, this type of tourism helps to treat the body and soul together.[15]

We would like to mention the following branches of natural medical tourism:

**Salt seawater treatment:** Many centers treat their patients using salty sea water, which has great effectiveness in treating some diseases.

Especially for chronic skin diseases such as psoriasis, the Dead Sea area in Jordan is one of the most important areas for using salty sea water in treatment.

**The pure and calm nature:** This method of treatment depends on the patient's presence in a calm environment free of pollution and air suspensions, in which the patient heals as soon as he is exposed to this environment and enjoys the picturesque nature and the calm atmosphere free from moisture and pollution, and from these chest diseases, psychological diseases, and physical exhaustion, Asthma. [16]

**Sulfur or mineral baths:** There are spring waters and mineral and sulfur wells with healing properties, whose temperature from the source may reach 72 degrees Celsius in certain areas, which are used as baths to treat many diseases, especially those related to the skin, kidneys, stomach, and articular rheumatism.[16]

**Mud baths:** Many centers treat patients using therapeutic mud, whether they are volcanic or corrupt ponds or lakes, and the method of treatment, in this case, is by burying the sick parts of tourists in the mud because it contains sulfur water, such as mud extracted from corrupt lakes In Wadi Al-Natron, the therapeutic mud extracted from the Ain Al-Sira pond, and the materials found in the therapeutic mud are calcium carbonate, calcium sulfate, phosphate, sulfur, iron, and finally ammonium oxide. [16]

**Sand baths:** This method relies on burying patients in sand rich in radioactive materials with curative properties to treat chronic diseases such as rheumatoid, rheumatism, back pain, and joints, and we find this kind of treatment in Aswan and Siwa Oasis. [17]

**Alternative medicine or traditional herbal treatment:** Many studies have proven the ability of herbs to heal incurable diseases, under the supervision of doctors specializing in herbal medicine or by folk healers. [17]

#### **Hotel resort concept**

A hotel resort can be defined as “a specific geographical unit or a specific floor area in which natural or cultural tourist attractions are gathered, and it can be defined in another definition as “different things for different people as some people prefer resorts for rest and entertainment, and others go to them to improve their health status.” And obtaining an excellent service of food, entertainment, and treatment in a pleasant atmosphere, and there is another definition as “a place used for temporary accommodation for guests and providing them with the enjoyment of recreational activities, and these activities are prepared to include health purposes, or pleasure or both.” [18]

**Equipment for hospital resorts:** When choosing the type of equipment in the therapeutic resorts, it should be considered that it serves the therapeutic purpose on which the resort is built. The equipment includes devices and equipment in the guest rooms and the rest of the resort’s sections, which provide comfort to the guests and help to enjoy their stay.[18]

Some facilities must be available in the health club to serve the therapeutic purpose that is the basis of the resort, including:

- rooms for infrared and ultraviolet rays.
- Massage rooms are equipped with a team of massage experts and often equipped with devices Electric waves and other sound waves help to relax the muscles before the start of the massage sessions, which are given to the guests who receive treatment regularly, almost on daily basis.
- The sauna center with heated swimming pools and equipment to raise temperatures and steam rates and a cold-water plunger, and the sauna is often divided from the inside into separate rooms to provide privacy, and it is provided with a range of natural oils, masks, different creams, and towels of their sizes. different for guests to use.
- Equipment for the health and fitness center, which serves women and men to take care of body health and fitness.
- Aerobics rooms where aerobics is done to the tune of music.
- Herbal baths, natural oils, and roses with fragrant aromas in which guests rest to restore the activity of the body.
- The bathrooms of the guest rooms are designed to complement the therapeutic purpose where jacuzzi baths and appropriate equipment are provided for guests with special needs.

In addition to the provision of devices and equipment that serve the activities practiced at the resort such as diving, fishing, golf, and tennis, where the provision of devices and equipment used in the practice of various activities in appropriate quantities with the expected numbers of guests.

The concept of the SPA: one of the possible sources for the word SPA is the word (Solus per aqua), any "health from water" was (SPA) the name of a small village in Belgium by Mineral Springs hot. And the ancient Romans discovered that these springs relieve the pain and pain of soldiers after their long marches and fierce battles.[19]

**Research problem:**

Although Hurghada has a huge therapeutic environmental potential, which is represented by seawater, ultraviolet radiation in the appropriate proportions for treatment, the Clean Climate free of plankton, well water, hot and cold Sulphur eyes, therapeutic silt, black sand rich in radioactive minerals, as well as all other historical and cultural characteristics, this region lacks the presence of health resorts with services and possibilities that make it compete with global health resorts.

**Research objectives:**

- Evaluation of the hospitality services provided in Hurghada resorts from the point of view of guests.
- Identifying the hospital components of the Hurghada, and a survey study for resorts and therapeutic centers in the territory of Hurghada.
- Highlighting the health resorts in Hurghada through appropriate exploitation of the environmental components of the hospital in the region to increase the volume of tourism revenues from this tourism style.

**Research methodology:**

The research community was identified in the five- and four-star hotels that provide hospital services in some Hurghada hotels five- and four-star categories were selected as a random probability sample from the total research community look homogeneity characteristics of the sample, and the questionnaire forms were distributed to guests by 15 forms to each hotel in the selected hotels (16 resorts in Hurghada). Accordingly, 180 questionnaire forms were distributed, and 40 were canceled between missing forms and forms that do not contain answers to all questions, leaving 140 valid forms for analysis, with a response rate of 77.7%, Which is shown in Table 2. The sample size was determined based on Roscoe's theory (1975, I R) which states when the sample size is more than 30 and less than 500, it is suitable for all studies.

**Study Sample:**

The sample of this research focused on hotels and resorts that provide hospital services. The researchers conducted a comprehensive survey of all hotels and resorts in Hurghada to reach the search sample.

The researchers selected the study sample to include several (16) resorts four- and five-star hotels. The number of collected forms has reached (140) forms after the exclusion of (40) invalid forms, by 77.7% Of the total forms distributed.

**Table (1) forms distributed in hotels**

Resort Name	Level	The number of forms distributed	Correct forms	
			Number	%
Pasha Hotel	****	15	12	80.0%
Cook's Club El Gouna	****	15	10	66.7%
Captain's Inn	****	15	13	86.7%
Labranda Club Paradisio El Gouna	***	15	11	73.3%
Dawar El Omda Hotel	*****	10	8	80.0%
Fanadir Hotel	****	10	8	80.0%
Sheraton Miramar	****	10	6	60.0%
Steigenberger El - Gouna	****	10	8	80.0%
Sultan Bey	*****	10	9	90.0%
Three Corners Rihana Resort And Inn	****	10	7	70.0%
Three Corners Ocean View Hotel	****	10	7	70.0%
Turtle's Inn	****	10	7	70.0%
Mövenpick	****	10	8	80.0%
Mosaique Hotel	****	10	8	80.0%
Bellevue Beach Hotel	****	10	9	90.0%
Ancient Sands Golf Resort.	****	10	9	90.0%
<b>Total</b>			<b>140</b>	<b>77.92%</b>

**Research hypothesis:**

**Main hypothesis:** there is a statistically significant positive relationship between service quality and guest loyalty.

**Sub-Hypotheses:**

1. There is a statistically significant positive relationship between reliability and guest loyalty.
2. There is a statistically significant positive relationship between response and guest loyalty.
3. There is a statistically significant positive relationship between remoteness and guest loyalty.
4. There is a statistically significant positive relationship between the security dimension and guest loyalty.
5. There is a statistically significant positive relationship between efficiency and guest loyalty

**Field study**

This part dealt with the analysis of the questionnaire form distributed to the guests of hotels in Hurghadato identify the level of quality of hotel services provided, in statistical proportions. Analysis of demographic factors:

Demographics data into customer preferences, so they have been studied as follows:

- The gender question:

The results shown in Table 2 indicate that the number of male tourists is more dominant at 56.8% than females with 43.2% of the study sample.

**Table (2) Gender question**

Sex	%
Male	56.80%
Female	43.20%

- The question concerning the age categories of tourists:

We conclude from the statistical results that the majority of members of the sample of visitors to the resorts in Hurghada are elderly people, who were aged from 41 years to over 61 years (68.4%) of the total selected sample members.

- The question of the average surplus of the monthly income of tourists:

The data shows that almost half of the research sample had a monthly income surplus of between 200 – 300 \$ and are considered middle-income groups.

- Test the degree of consistency and truthfulness of the content of the questionnaire list:

The test used Alpha Cronbach coefficients to determine the stability of the instrument used in the measurement, i.e. if this study is repeated on the same sample under conditions similar to this study can be obtained the same results of the current study, where first shows the value of the alpha Cronbach coefficient for the entire questionnaire, then the value of the alpha Cronbach coefficients for the overall dimension, as well as its value when not included any of the survey questions to see the effect of not including this question in the sincerity of each dimension of the guest questionnaire. The Cronbach Alpha coefficient is good if it reaches 70%, and the following tables show the constancy coefficients according to the variables of the study.

**Table No. (3) Cronbach value for overall quality dimensions**

Number of paragraphs	Cronbach's alpha
20	0.962

The results in Table 3 indicate that the Cronbach alpha value of the twenty paragraphs of quality (the ability of the questions developed to achieve the goal for which they were formulated is very high (0.962). It also does not require the deletion of any of the questions; as the cancellation results in a decrease in the total value of Cronbach Alpha, this means that the tool has a high degree of stability and honesty meets the purposes of the study being higher than the acceptable percentage (70%) to judge the stability of the resolution and measures

**First: analysis of vocabulary after reliability and truthfulness Cronbach Alpha:**

The researchers calculated some methods of descriptive statistics vocabulary analysis after reliability, and Table (4) shows that the general average answers to individuals' sample study

On the vocabulary associated with the dimension of dependencies came high, and the highest answer came on the dimension of dependencies when the singular (1), States (The hotel is characterized by a high degree of reliability and accuracy in the delivery of services provided to its customers), while the least answers came on the reliability of the individual (4), and states the services provided by the hotel meet the needs and desires of customers).

The results in Table (4) indicate that the Cronbach alpha value of the reliability dimension the ability of the questions developed to achieve the goal for which they were formulated very high (0.901). It also does not require the deletion of any of the questions that make up this dimension; the cancellation results in a decrease in the total value of Cronbach alpha by (0.01 to 0.048).

**Table No. (4) Cronbach value of reliability**

Variables		I do not Agree	I do not Agree with severely	Neutral	Agreed	severely Agreed	Cronbach's alpha	The amount of the decrease or increase when a question is not included	Total Cronbach's alpha
Q1	N	1	2	26	41	70	0.822	-0.039	0.901
	%	0.71%	1.43%	18.57%	29.29%	50.00%			
Q2	N	2	2	28	53	55	0.864	-0.042	
	%	1.43%	1.43%	20.00%	37.86%	39.29%			
Q3	N	1	4	28	54	53	0.843	-0.048	
	%	0.71%	2.86%	20.00%	38.57%	37.86%			
Q4	N	1	8	29	40	62	0.889	-0.01	
	%	0.71%	5.71%	20.71%	28.57%	44.29%			

**Second: Download vocabulary after responding and verifying Cronbach's alpha**

The researchers calculated some methods of descriptive statistics analysis vocabulary after the response, and Table No. (5) shows that the general average of the answers of the sample members of the study on the vocabulary associated with the response dimension came high and came to the highest answer after the response when the singular (5), and states(The hotel staff provides services), while the least answers followed responding to the individual (7), and states to provide the services that customers need at the times they want).The results in Table 5 show that the Cronbach alpha value of the (response) dimension (the ability of the questions set to achieve the goal for which they were planned) is highat0.821 and also does not require the deletion of the questions that make up this dimension; the cancellation results in a decrease in the total value of Cronbach's alpha by 0.012 to 0.041.

**Table No. (5) Cronbach's value of the response**

Variables		I do not Agree	I do not Agree with severely	Neutral	Agreed	severely Agreed	Cronbach's alpha	The amount of the decrease or increase when a question is not included	Total Cronbach's alpha
Q5	N	1	1	26	31	81	0.791	-0.03	0.821
	%	0.71%	0.71%	18.57%	22.14%	57.86%			
Q6	N	1	11	28	52	37	0.711	-0.012	
	%	0.71%	7.86%	20.00%	37.14%	26.43%			
Q7	N	3	11	42	42	42	0.794	-0.033	
	%	2.14%	7.86%	30.00%	30.00%	30.00%			
Q8	N	1	6	30	38	65	0.782	-0.041	
	%	0.71%	4.29%	21.43%	27.14%	46.43%			

**Third: analysis of vocabulary after concreteness and sincerity of Cronbach's Alpha**

The researchers calculated some methods of statistical descriptive analytical vocabulary after the concrete, and Table No. (6) shows that the general average of the answers of the sample members of the study on the vocabulary associated with it after the concrete came high, and the highest answer followed the concrete when the singular (9), and statesOn (the appearance of the hotel staff is decent and attractive), while fewer answers came to the tangibility of the single (11)It states (the general appearance in terms of interior design, decorations and equipment is commensurate with the type of service provided). The results in Table 6 indicate that the Cronbach alpha value after (concrete) (the ability of the questions developed to achieve the goal for which they were planned) is high (0.868). It also does not require the deletion of the questions that make up this dimension; the cancellation results in a decrease in the total value of Cronbach alpha by (0.003to0.055).

**Table No. (6) Cronbach's value of concreteness and sincerity**

Variables		I do not Agree	I do not Agree with severely	Neutral	Agreed	severely Agreed	Cronbach's alpha	The amount of the decrease or increase when a question is not included	Total Cronbach's alpha
Q9	N	1	1	23	40	75	0.826	-0.055	0.868
	%	0.71%	0.71%	16.43%	28.57%	53.57%			

Q10	N	1	3	31	52	53	0.825	-0.055
	%	0.71%	2.14%	22.14%	37.14%	37.86%		
Q11	N	3	2	30	52	53	0.872	0.003
	%	2.14%	1.43%	21.43%	37.14%	37.86%		
Q12	N	1	1	29	42	67	0.831	-0.048
	%	0.71%	0.71%	20.71%	30.00%	47.86%		

**Four: analysis of the vocabulary after warranty and truthfulness Cronbach Alpha**

The researchers calculated some methods of statistical descriptive analytical vocabulary after warranty, and Table (7) shows that the general average of the answers of the members of the study sample on the vocabulary associated with some warranty came high and came to the highest answer after warranty when the single (15), and states (Customers are treated by the hotel staff with respect and appreciation), while the least answers followed the guarantee for the individual (13), states (the hotel provides services as advertised).

Table (7) results show that the Cronbach alpha value of the security dimension, the ability of the questions developed to achieve the objective for which they were planned high at 0.862. It also does not require the deletion of the questions that make up this dimension; cancellation results in a decrease in the total value of Cronbach alpha by 0.004 to 0.055).

**Table No. (7) Cronbach value of Security**

Variables	I do not Agree	I do not Agree with severely	Neutral	Agreed	severely Agreed	Cronbach's alpha	The amount of the decrease or increase when a question is not included	Total Cronbach's alpha
Q13	N	1	2	36	54	47	0.855	0.004
	%	0.71%	1.43%	25.71%	38.57%	33.57%		
Q14	N	1	1	34	40	64	0.801	-0.051
	%	0.71%	0.71%	24.29%	28.57%	45.71%		
Q15	N	1	1	21	50	67	0.752	-0.055
	%	0.71%	0.71%	15.00%	35.71%	47.86%		
Q16	N	2	2	22	40	74	0.752	-0.055
	%	1.43%	1.43%	15.71%	28.57%	52.86%		

**Fifth: vocabulary analysis after efficiency and truthfulness Cronbach Alpha**

The researchers calculated some methods of descriptive statistics analysis vocabulary after efficiency, and Table No. (8) shows that the general average of the answers of the sample members of the study on the vocabulary associated with after efficiency came high and came to the highest answer after efficiency when the singular (17), and states (the hotel staff is characterized by professionalism and professionalism when providing the service), while the least answers came on the competence of the individual (19), and states (the hotel has the capabilities and capabilities that are difficult for other hotels to imitate). The results in Table 8 indicate that the Cronbach alpha value of the (efficiency) dimension (the ability of the questions set to achieve the goal for which they were planned) is high 0.892. It also does not require the deletion of the questions that make up this dimension; the cancellation results in a decrease in the total value of Cronbach alpha by (0.022 to 0.061).

**Table No. (8) Cronbach value of Security**

Variables		I do not Agree	I do not Agree with severely	Neutral	Agreed	severely Agreed	Cronbach's alpha	The amount of the decrease or increase when a question is not included	Total Cronbach's alpha
Q17	N	3	1	30	48	58	0.875	-0.022	0.892
	%	2.14%	0.71%	21.43%	34.29%	41.43%			
Q18	N	3	5	36	51	45	0.863	-0.034	
	%	2.14%	3.57%	25.71%	36.43%	32.14%			
Q19	N	14	8	38	42	38	0.858	-0.039	
	%	10.00%	5.71%	27.14%	30.00%	27.14%			
Q20	N	13	7	37	35	48	0.836	-0.061	
	%	9.29%	5.00%	26.43%	25.00%	34.29%			

The results in Table (9) indicate that the Cronbach alpha value of guest loyalty paragraphs (the ability of the questions set to achieve the goal for which they were planned) is high than 0.907. It also does not require the deletion of the questions ranging from 0.899 to 0.907. In the total value of the crow component of this element, the cancellation results in a decrease in Cronbach's alpha.

Variables		I do not Agree	I do not Agree with severely	Neutral	Agreed	severely Agreed	Cronbach's alpha
Q21	N	3	5	25	48	59	0.905
	%	2.14%	3.57%	17.86%	34.29%	42.14%	
Q22	N	1	1	24	55	59	0.905
	%	0.71%	0.71%	17.14%	39.29%	42.14%	
Q23	N	1	3	36	42	58	0.907
	%	0.71%	2.14%	25.71%	30.00%	41.43%	
Q24	N	23	37	30	21	29	0.905
	%	16.43%	26.43%	21.43%	15.00%	20.71%	
Q25	N	18	17	43	27	35	0.905
	%	12.86%	12.14%	30.71%	19.29%	25.00%	
Q26	N	39	15	38	20	28	0.908
	%	27.86%	10.71%	27.14%	14.29%	20.00%	
Q27	N	25	14	46	33	22	0.902
	%	17.86%	10.00%	32.86%	23.57%	15.71%	
Q28	N	7	8	59	31	35	0.901
	%	5.00%	5.71%	42.14%	22.14%	25.00%	
Q29	N	12	7	41	30	50	0.901
	%	8.57%	5.00%	29.29%	21.43%	35.71%	
Q30	N	1	9	29	58	43	0.864
	%	0.71%	6.43%	20.71%	41.43%	30.71%	
Q31	N	4	5	28	59	44	0.901
	%	2.86%	3.57%	20.00%	42.14%	31.43%	
Q32	N	5	4	43	43	45	0.901
	%	3.57%	2.86%	30.71%	30.71%	32.14%	
Q33	N	5	4	37	48	46	0.901
	%	3.57%	2.86%	26.43%	34.29%	32.86%	
Q34	N	5	4	21	42	68	0.899
	%	3.57%	2.86%	15.00%	30.00%	48.57%	
Q35	N	5	4	38	37	56	0.906
	%	3.57%	2.86%	27.14%	26.43%	40.00%	

**Correlation analysis**

The Pearson correlation coefficient (r) has been worked out to make a linear correlation matrix between quality variables to show the extent of a linear relationship between variables and determine the direction of this relationship.

Table 11 shows that the correlation coefficients of the fields and dimensions of the questionnaire are statistically significant at the level of 0.05. All areas of the questionnaire are thus considered truthful to what was developed for policy.

**Table (11) matrix of correlation coefficients between quality dimensions.**

Dimensions	Reliability	Response	Enterprise	Security	Efficiency	Quality	Loyalty
<b>Reliability</b>	1						
<b>Response</b>	0.801	1					
<b>Enterprise</b>	0.689	0.732	1				
<b>Security</b>	0.743	0.723	0.82	1			
<b>Efficiency</b>	0.516	0.619	0.553	0.457	1		
<b>Quality</b>	0.864	0.903	0.876	0.854	0.774	1	
<b>Loyalty</b>	0.586	0.717	0.699	0.668	0.754	0.813	1

the previous table showed that there is a correlation between the independent variables and the dependent variable where the upper limit of the correlation coefficients was 0.903, and the minimum value was 0.457, therefore, all statements of the axis of the dependent variable are internally consistent with the independent variables proving the validity of the internal consistency of the axis statements, and the value of the determinant of the correlation coefficient matrix must not be less than 0.0001. If it is less than, variables whose correlation coefficients are greater than 0.80

**Table (12) Multiple regression coefficient analysis between quality dimensions**

Dimensions	Non-standard coefficients	regression	Std. Error	Beta	T-Value	Sig.
<b>independent variable</b>	0.431		0.247		1.748	0.084
<b>Reliability</b>	-0.154		0.092	-0.16	-1.667	0.099
<b>Response</b>	0.229		0.095	0.248	2.418	0.017
<b>Enterprise</b>	0.126		0.098	0.13	1.29	0.200
<b>Security</b>	0.288		0.106	0.28	2.706	0.008
<b>Efficiency</b>	0.338		0.048	0.483	6.994	0.000

All the theoretical and mathematical requirements necessary for the validity of the two models shown in my table (12) were observed where a strong correlation is observed between all the study variables. Test validity of the first sub-premise: the first sub-premise states "there is a statistically significant positive relationship between the dimension of reliability and the loyalty of inmates"

It is clear from Table 12 that there is no significant effect of the first dimension of reliability in the dependent variable (loyalty), which means the inability of the independent variable "reliability" to directly affect the "loyalty" as a dependent variable, and therefore does not verify the validity of the first sub-hypothesis of the study and accept the zero hypotheses:

The second hypothesis states, " there is a statistically significant positive relationship between responsiveness and inmate loyalty."

Table 12 shows a significant relationship between the second dimension of response and the dependent variable (loyalty), where the values of the regression model indicate to this and it means that the change after meeting the requirements of guests in the resorts of Hurghada by one unit will lead to a positive impact in the loyalty of guests by 2.4 units, this indicates a relationship

Statistically significant positive correlation between response dimension as an independent variable and guest loyalty as a dependent variable thus validating the second subtype. Test validity of the third hypothesis: the third sub-hypothesis states "there is a statistically significant positive relationship between the dimension of concreteness and the loyalty of the inmates"

It is clear from Table 12 that there is no significant effect of the third dimension of tangibility in the dependent variable (loyalty), which means that the independent variable "tangibility" is not able to directly influence "loyalty" as a dependent variable, and therefore the validity of the third hypothesis of the study and the acceptance of the zero hypothesis is not achieved

Test validity of the fourth sub-premise: the fourth premise states that there is a statistically significant positive relationship between the dimension of security and the loyalty of the guests. The same table shows that there is a significant effect of the fourth dimension (guarantee) in the dependent variable (loyalty), which means the ability of the independent variable " guarantee "to directly influence" loyalty " as a dependent variable, this

means that a change in the level of the warranty dimension by one unit will lead to an improvement in guest loyalty by (2.8) units, which indicates a statistically significant positive direct relationship between the warranty dimension as an independent variable and guest loyalty as a dependent variable" thus validating the fourth sub-hypothesis.

Test validity of the fifth sub-premise: the fifth sub-premise states that there is a statistically significant positive relationship between efficiency and guest loyalty"

Table 12 shows that there is a strong positive relationship between the fifth independent variable (competence) and the dependent variable (loyalty).which means that a change in efficiency by one unit will result in improved guest loyalty by one unit, which shows a statistically significant strong direct relationship between competence as an independent variable and the level of guest loyalty as a dependent variable and thus validates the fifth sub-imposition. Evaluation of the second model the validity test of the main premise: the main premise states that there is a statistically significant positive relationship between service quality and guest loyalty"

Results based on the field study and previous studies:

- found that most of the sample hotels apply the following quality dimensions well (Warranty response-efficiency), while the application of two dimensions (dependability -Tangible) is acceptable: there is no moral effect between reliability and guest loyalty.
- There is a relationship between responsiveness in meeting Guest Requirements and loyalty in regional hotels
- There is a relationship between the security dimension and the loyalty of the guests in the hotels of Hurghada.
- there is a relationship between the efficiency of the staff and the loyalty of the guests to the resorts of Hurghada.
- shows a great influence in achieving the loyalty of the guests if all dimensions are applied

Quality grouped, Hurghada has many natural environmental components that make it one of the most important areas of recovery around the world, which is represented by the presence of seawater with a low percentage of bromine, which causes sensitivity and irritation to the skin, the absence of impurities suspended in the atmosphere and suitable for respiratory patients, and the brightness of the sun throughout the year.

Recommendations based on the results of the field study: Hurghada hotels and resorts should pay attention to the application of quality dimensions

Reliability-responsiveness-tangible-guarantee-efficiency in the services provided to tourists' hospital tourism in Hurghada through the following:

- consider the provision of all services needed by guests as advertised (Attention to customer problems and speed of performance considering reporting deadlines) Service.
- Care must be taken about the cleanliness of the places of service provision with the provision of all facility's suitable material for this service and attractive. The guest must feel safe while staying at the resort or hotel by dealing honestly and honestly with the hotel staff and dealing with respect.
- Attention should be paid to training the hotel/resort staff in all modern methods in the provision of service, especially hospital services.
- Considering the aspect of modernization in the capabilities and hospital equipment in resort territory.

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