



## Procedures Applied by Egyptian 5-star Hotels during the Coronavirus (COVID-19) Pandemic (Reality and Prospect)

Ahmed Rady\*, M. Adel Atia

Faculty of Tourism and Hotels, Minia University, Egypt

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### ABSTRACT

Coronavirus (Covid-19) pandemic is a highly contagious and pathogenic viral infection caused by the severe acute respiratory syndrome. This pandemic has negatively affected all sectors of the world, especially the tourism sector. Therefore, this research aimed to study the procedures used in 5-star hotels to deal with this crisis and to analyze the gap between actual and targeted practices. A questionnaire was used as an instrument for collecting primary data that consisted of four dimensions; adjust hotel operations; food and beverage offers provided at the hotel; cleaning and disinfection practices; and social distancing practices. The sample of the research was selected using a convenience sampling technique from 5-star managers (49) and customers (155) at Hurghada and Sharm El-Sheikh cities to select a sample of the research. The results revealed that there were statistically significant differences between the opinions of managers and customers in terms of all procedures applied at 5-star hotels during the coronavirus (COVID-19) pandemic. Moreover, there are significant differences between that procedures and the standard level. The research suggested that it is necessary to review the procedures followed by 5-star hotels during COVID-19 pandemic such as adjusting hotel operations, food and beverages offers, cleaning and disinfection practices and social distancing practices.

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### 1. Introduction

Jennings, (2020) and Gossling et al. (2021) pointed out that COVID-19 outbreak began in December 2019 in Wuhan, China. And it continued to spread in all countries of the world. Nearly 18 million cases of the virus have been recorded in all countries of the world. In addition, total casualties rose to more than eighteen million and more than 719,000 people have died. Li et al., (2020) declared that when someone is infected with the COVID-19 virus, the initial symptoms usually appear for five

to six days. The symptoms are represented in fever, cough, and shortness of breath (Sabbah, 2020). According to WHO reports. However, there are many individual cases in which the incubation period of the virus lasts for a long period of up to 40 days as the average incubation period for the virus is 14 days (Wang et al., 2020). The growth period for the virus may differ for severe cases from slight cases, and it depends on the patient's age and resistance (Abd El-Aziz and Stockanda, 2020).

\* Corresponding author: email: [ahmed.rady@mu.edu.eg](mailto:ahmed.rady@mu.edu.eg)

## 2. Literature Review

### 2.1 *The impact of the corona virus on the global economy*

Nicola et al. (2020) stated that the World Health Organization (WHO) published that the spread of COVID-19 represents a global pandemic situation on January 30, 2020. Loeb, (2020) declared that governments imposed the closure of borders between them, the abolition of travel and the imposition of quarantine in the countries that make up the largest economies of the world, and this raised fear of a huge economic crisis and an economic recession. In an effort by researchers to understand the impact of the virus on the economy, the researchers summarized the impact of COVID-19 on the global economy, and their focus on the large sectors that include industries involved in extracting raw materials, and secondary sectors that participate in the production of final products and support sectors, including all service supply industries (Buck et al., 2020).

Fernandes (2020) agreed with Laing (2020) in that Covid-19 can destroy individual livelihoods, businesses of all kinds, industries, and entire economies, and this has led to a decrease in consumption by individuals and disruptions in production by factories and companies. In general, the work of global chains to supply purchases of various kinds was disrupted, which affected companies in all countries of the world. Thousands and millions of people will lose their jobs in the next few months. Also, many companies closing operations, revising estimates, or announcing layoffs. Also, consumers have changed their patterns of consumption and this has resulted in a dearth of goods in supermarkets in all countries of the world.

### 2.2 *The impact of Corona virus on the global tourism sector*

Lo, (2020) agreed with Maria et al., (2020) that many countries in the world are in lockdown, for an unknown period. Almost all individuals work from home, or not. People face travel bans, cancellations of important sporting events and bans on individual gatherings. Individuals do not use public transportation and avoid crowded public places, such as restaurants, malls, museums, and markets. Also, all sectors will be affected by this virus. Esposito, (2020) declared that the problems caused by the coronavirus are extremely bad in the hospitality-related sectors. The global travel

industry - including airlines, cruise companies, casinos, restaurants, and hotels - is facing a decline of more than 90%. Hoque et al. (2020) stated that tourist destinations have become deserted in all countries, airlines are working to reduce ground services and expel employees from it, trade fairs and cruises have been canceled, also, hotels, restaurants and casinos have closed all their activities. Bhattarai et al., (2020) showed that other companies depend on tourism and will suffer spillover effects. In addition to travel restrictions and quarantines, travel and tourism companies cancel travel and meetings, and governments closed borders between countries. The hotel and restaurant business during the spread of the coronavirus was affected mainly by the application of the "stay at home policy" announced by the governments of countries and the restrictions on the movement of individuals "social distancing between individuals" imposed by the government in many countries. This led to an abrupt closure in cities and villages to control the spread of the corona virus, which plunged many restaurants and hotels across the country into a sudden shock (Larry, 2020). Hotels in all countries of the world canceled many billions of dollars of reservations, and the hotel sector tried to save 150 billion dollars. Ozili, (2019) confirmed that restaurant managers have laid off employees while their restaurants are temporarily closed. Also, many customers have stayed home, preferring to have home-cooked meals El-Erian, (2020) stated that some restaurant managers have criticized the government for its implementation of the stay-at-home policy and the social distancing of individuals that has destroyed many restaurants and bars in cities. Add to that, governments announcing stay-at-home or social distancing policies were an indirect way to inform individuals not to come to bars, hotels, restaurants, etc., which was a way to shatter the hospitality industry during the spread of the Coronavirus. Ozili and Arun, (2020) stated that many hotels in the United States, the United Kingdom, and some European countries announced their suspension of activities, which raised the number of lost jobs to 24.3 million jobs worldwide, and nearly 3.9 million in the United States alone due to the decrease in hotel occupancy during the outbreak of the coronavirus.

Youm7 Newspaper (2020), announced that tourism promotion authority in Egypt indicated that the tourism industry, like other economic sectors around the world, is now living through a difficult

time due to this virus, as the total losses of the tourism sector since the virus began to appear so far have reached 12 billion US dollars, in addition to the losses of the aviation sector, which the international civil aviation Organization (ICAO) estimated at 5 billion EUR (5.5 billion USD) .

Akhbarelyom, (2020) reported that the economic advisor at the world tourism organization, dr. Saeed Al-Batouti, revealed the latest statistics and figures of the impact of the Corona virus on the tourism and travel industry in 2020. And Dr. Saeed Al- Batouti said that there is a loss of 850 million to 1.1 billion international tourists and a loss of 910 billion dollars to 1.2 trillion dollars in tourism revenues. Also, he added, an estimated decrease of 2.7 trillion USD in the gross domestic product for travel and tourism. Also, 100 to 120 million jobs in tourism are directly at risk.

### *2.3. The impact of corona virus on Egypt tourism sector*

In Egypt, the Egyptian center for economic studies has signed that The Egyptian tourism sector has been affected by the outbreak of the Coronavirus, represented by a loss of 35% of tourism revenues estimated to be achieved in the Egyptian budget for the year 2019-2020, equivalent to \$ 6 billion (Alroeya, 2020) .

### *2.4. Measures put in place by the government to operate hotels during the coronavirus pandemic.*

Alarabiya (2020) declared that on Sunday 20 May 2020, Egyptian Prime Minister Mostafa Madbouly approved some hotel accommodation controls in the country, under the guidelines of the World Health Organization to confront the Corona virus as follows: prof. Khaled Al-Anani, Minister of Tourism, said that basic requirements have been approved for granting a health certificate to hotels, among which is the necessity for every hotel to provide a clinic and a doctor, in continuous coordination with the Ministry of Health in this regard, in addition to ensuring the quality of personal protective equipment and sterilization materials used, and not dealing only with companies approved by the Ministry of Health; The minister stated that the new requirements include forming joint work teams to pass through hotels and ensure that the requirements are met and ready for operation.

Alarabiya (2020) explained that dr. Khaled Al-Anani said the conditions also require not to hold any parties or weddings inside the hotel, and to

prohibit all kinds of nighttime activities in the hotel, with the allocation of a small hotel, or a floor in the hotel in every resort for quarantine for confirmed cases and suspected cases, while constantly continuing to conduct rapid testing of workers on Tourist city gates in coordination with the Ministry of Health. youm7, (2020), reported that regarding the requirements for guests, the Minister of Tourism confirmed that they include installing a sterilization device at the entrance to the hotel, ending the guest's check-in procedures electronically, or using single-use pens, sterilizing the guests' luggage before arriving at the hotel and leaving, and measuring the temperature of the guests upon entering the facility each time.

Also, Alborsaa news, (2020) added that the requirements also included the provision of hand sanitizer in the reception area and the various facilities, the regular disinfection of all public areas, the presence of accommodation for hotel workers, and the provision of isolation areas for the affected cases if they appeared. Also, the regulations for operating restaurants in hotels were reviewed, which include completely banning buffet service, relying on predetermined menus, prohibiting the serving of hookahs, measuring temperatures for restaurant visitors, leaving a distance of at least two meters between dining tables, and one meter between each person and another at the table, taking into account families with a maximum of 6 chairs at the large table, relying on single-use food utensils as possible, placing sterilizers and sterilizing wipes on every dining table, and developing educational instructions throughout the restaurant.

Akhbarelyom (2020) indicated that the requirements for internal supervision and laundry services were reviewed, which include disinfecting the rooms daily using the special tools of the vehicle to prevent the spread of infection, following the instructions of the Ministry of Health, and cleaning and sterilizing all physical points every hour in public places and public toilets using disinfectants decided by the Ministry of Health.

Guidance on Preparing Workplaces for COVID-19, (2020) reported that when selecting personal protective equipment consider factors such as purpose, appropriate, sanitization ability, removal, and cost. Also, when personal protective equipment will have to be used frequently for a long period of time, a more expensive and strong type of personal protective equipment may be less expensive overall than disposable the other. In addition, each manager

should select the combination of personal protective equipment that guards' employees specific to their workplace.

Youm7 Newspaper (2020) and WHO (2020), declared that the Egyptian federation of Tourist Chambers and the chamber of hotel establishments have prepared a vision and action plan for safe tourism operation by applying a package of precautionary measures, preventive and health measures, in hotels and tourist restaurants, to work in light of the continuing crisis of the new Corona virus, which establishments that wish to work during the current crisis are committed to safety of tourists and workers in the sector; The plan included seven main axes that hotel and tourism establishments must adhere to, from hosting the guest to his departure as follows: The first axis is the preventive measures and measures for the tourist and hotel establishments. The maximum number of hotel occupancy includes 25% of the hotel's capacity; as for the second axis, it includes prevention measures in hotels when receiving guests, which require the provision of a rapid test device and the value of the test, is charged to the guests' invoice. The hotel is committed to assigning a doctor to examine every guest, to ensure that everyone is free of any symptoms or respiratory diseases; The third axis concerns the prevention measures for internal supervision and the laundry, and includes disinfecting rooms on a daily basis with special tools to prevent the spread of infection and in accordance with the instructions of the Ministry of Health, cleaning and sterilizing all tangible points every hour in places and public bathrooms; The fourth axis is the prevention measures in the food and beverage department, which include leaving a distance of one and a half meters between the tables, the maximum number of chairs is four for each table, disinfecting the restaurant, tables and tools after every meal, and making sure that there are signs that do not touch the food by hand; As for the fifth axis, it is concerned with providing food and drinks in tourist restaurants, which also includes the same procedures inside hotel restaurants in addition to training all workers on safety tasks and procedures and wearing protective clothing; The sixth axis relates to preventive measures inside swimming pools and the beach. There is no conclusive evidence of infection transmission through swimming pools, health clubs, or water playgrounds, and maintenance and disinfection of

swimming pools with chlorine nullify the Covid 19 virus; and the seventh and last axis concerns the gyms, which include cleaning up the physical points and all the corridors and changing the water of the Jacuzzi after each guest.

### 3. Methodology

To evaluate the procedures applied by 5-star hotels during the coronavirus (COVID-19) pandemic, a questionnaire was carried out covering sample of 5-star hotel managers (49) and customers (155) at Hurghada and Sharm El-Sheikh cities as vital areas where the big presence of 5-star hotels in Egypt (Egypt hotels guide, 2016) to understand their perceptions of applying precautionary measures at these hotels. The questionnaire was divided into some of the main variables that were measured on a five-dimensional Likert scale to declare the attitude of the participants about the study variables. For content validity the survey was piloted on a sample of 48 five-star hotels customers (28 customers at Hurghada hotels and 20 customers at Sharm El-Sheikh hotels). Then the questionnaires were modified according to participants' respondents. Data collected from a pilot study have been tabulated and analyzed using SPSS 25 statistical package.

#### 3.1. The sample of the research

To determine the sample of the research, data collected from a pilot study have been analyzed using SPSS 25 statistical package as follows:

**Table 1**

Analyzing of the pilot study for customers of 5-star hotels data

$\Sigma$	Z	e	Levene's Sig.
0.317	1.96	0.05	0.058

Table (1) indicated that Levene's coefficient is not significant Sig=0.058. If the finding p value of Levene's test is more than 0.05 the obtained equal variances in groups are likely to have been collected based on random sampling from all the population with equal variances (Nodstokke and Zumbo, 2010). The researchers used Cochran's formula to determine the research sample size of customers as follow (Shkeeb, 2014):

$$n = \frac{z^2 \sigma^2}{e^2}$$

Where:  $\sigma$  is standard deviation,  $z$  is standard degree, and  $e$  maximum allowed error

From the data showed in table 1 the researchers calculated a sample size for this research

(customers' sample size), where the maximum allowed error (e) was 0.05, this value is suitable for discrete data (Shkeeb, 2014), standard degree (z) was 1.96 and the standard deviation of the sample (σ) was 0.317. Applying these values to Cochran's formula reveals that the suitable sample size for this research is 155 participants. A total of 170 questionnaire forms were distributed to guests at Hurghada and Sharm El-Sheikh cities (100 questionnaires distributed at Hurghada and 90 questionnaires distributed at Sharm El-Sheikh) only 158 guests positively shared the questionnaire (with a response rate of 93%) this number exceed the appropriate sample size for this research. Moreover, the researchers applied Yamane's formula (Ajay and Mecah, 2014) to calculate managers' sample size as follow:

$$n = N / (1 + N * e^2)$$

Where n: appropriate sample size, N: population size= 76 five-star hotels (41hotels at Sharm-El-Sheikh, 35 hotels at Hurghada (Egyptian hotel guide, 2016), e: Margin of error = 0.05, this value is suitable for discrete data (Shkeeb, 2014).

Using the previous data, the appropriate size of the managers' sample size was 63 hotels' managers. The researchers distributed 65 questionnaires to five-star hotel managers at Hurghada and Sharm El-Sheikh cities (30 questionnaires distributed at Hurghada and 35 questionnaires distributed at Sharm El-Sheikh) only 49 managers positively shared the questionnaire (with a response rate of 75.38%) as shown in table 2.

### 3.2. Questions of the Study

What is the extent of adjusting hotel operations significance during the coronavirus (COVID-19) pandemic at 5-star hotels?

1. What is the significance of food and beverage offers provided at hotels during the coronavirus (COVID-19) pandemic at 5-star hotels?
2. What is the extent of cleaning and disinfection practices' significance during the coronavirus (COVID-19) pandemic at 5-star hotels?
3. What is the extent of social distancing practices' significance during the coronavirus (COVID-19) pandemic at 5-star hotels?
4. Are there significant differences between managers and guests' awareness about procedures applied by 5-star hotels during the coronavirus (COVID-19) pandemic?
5. Are there significant differences between the tourist areas concerning procedures applied by

hotels during the coronavirus (COVID-19) pandemic?

### 3.3. Validity and Reliability

A panel of experts in the field of hospitality management and group of health affaires experts were consulted to scale a content validity and to collect opinions and suggestions on the research tool. Prior to the main research, a pilot study was applied at a sample of the hotels under examination (40 customers and 10 managers at Hurghada and Sharm El-Sheikh cities) to test the questionnaire's content validity. Then the questionnaires were modified according to respondents' comments. Cronbach's Alpha coefficient was calculated (0.85) that exceeded 0.7 for all items; this means that all items are valid (Henson, 2001).

### 3.4. Sample characteristic

**Table 2**

Sample characteristic

Variable		Hurghada		Sharm El-Sheikh		Average percent
		Freq	%	Freq	%	
Sample type	Managers	25	23.8	24	24.2	24
	Customers	80	76.2	75	75.8	76
Gender	Male	102	97.1	97	98	97.5
	Female	3	2.9	2	2	2.5
Educational background	Intermediate education	16	15.2	15	15.1	15.15
	Higher education	76	72.3	72	72.7	72.5
	Postgraduate	13	12.5	12	12.2	12.35

## 4. Results and Discussions

### 4.1. Study variables analysis

#### 4.1.1 Adjusting 5-star hotel operations.

The purpose of this variable was to measure the level of procedures applied by 5-star hotels to adjust hotel operations during the coronavirus (COVID-19) pandemic. The collected data is illustrated in tables (3-7):

**Table 3**

Factor analysis of adjusting hotel operations at 5-star hotels during the coronavirus (COVID-19) pandemic.

Statements	Loadings
Working hours and daily service are restricted.	0.762
Room service hours are reduced.	0.872
The number of guests per room is reduced.	0.847
Upon the customer arrival, the hotel will provide details of the changes in the services provided and the improvements made to the cleaning policies.	0.772

The hotel and the customer are bound by the updated laws and enforceable by the government.	0.844
Protocols are being intensified to clean public areas and guest rooms.	0.611
Sums of squared loadings	0.784

Factor analysis presented in table (3) attempted to determine essential factors that explain the pattern of associations within a set of observed variables. Extraction loading should not be less than 0.6 (Fabrigar, et al., 1999). Factor analysis suggested that all six elements were loaded on one factor explained 78.4% of the variation in the primary variable.

**Table 4**

Descriptive statistics for adjusting hotel operations at 5-star hotels during the coronavirus (COVID-19) pandemic.

The Axis	Managers		customers		Rank	
	M.	SD.	M.	SD.	Mng.	Cust.
PAHO*1	4.12	0.33	2.85	0.75	5	4
PAHO2	4.31	0.47	2.93	0.71	3	2
PAHO3	4.27	0.45	2.77	0.73	4	5
PAHO4	4.12	0.33	3.01	0.90	5	1
PAHO5	4.55	0.50	2.92	0.90	1	3
PAHO6	4.33	0.47	2.85	1.01	2	4

\*PAHO = Procedure of Adjusting Hotel Operations

It can be concluded from the previous data tabulated in table 4 that according to managers' opinions, "The hotel and the customer are bound by the updated laws and enforceable by the government" was considered as one of the most important procedures applied by hotels during the coronavirus (COVID-19) pandemic by an average of 4.55; followed by "Protocols are being intensified to clean public areas and guest rooms" by an average of 4.33 of all the respondents." Room service hours are reduced "came in the third rank preference by the mean of 4.31, then "The number of guests per room is reduced" came in the fourth-order preference by an average of 4.27. This is followed by other procedures such as "Working hours and daily service are restricted" and " Upon the customer arrival, the hotel will provide details of the changes in the services provided and the improvements made to the cleaning policies" (see Table 4). On the other hand, according to customers' opinions, "Upon the customer arrival, the hotel will provide details of the changes in the services provided and the improvements made to the cleaning policies" was considered as one of the most important procedures applied by hotels during the coronavirus (COVID-19) pandemic by an average of 3.01; followed by " Room service hours

are reduced "by mean of 2.93". The hotel and the customer are bound by the updated laws and enforceable by the government " came in the third rank preference by the average of 2.92; followed by "Protocols are being intensified to clean public areas and guest rooms" and "Working hours and daily service are restricted" by an average of 2.85. This is followed by "The number of guests per room is reduced" by an average of 2.77. The differences between the opinions of managers and customers revealed that hospitality managers; especially in the five-star hotels, should be fully aware of procedures of adjusting hotel operations applied during the coronavirus (COVID-19) pandemic to achieve customer satisfaction.

*4.2. Comparison between managers and customers in terms of procedures of adjusting hotel operations applied during the coronavirus (COVID-19) pandemic.*

This comparison is used to find out if there is a significant difference between managers' and customers' opinions in the five-star hotels in terms of the procedures of adjusting hotel operations applied during the coronavirus (COVID-19) pandemic. Furthermore, the Mann-Whitney U test was used to determine the differences between two groups (see Table 5).

**Table 5**

Differences between managers and customers opinions in the five-star hotels in terms of the procedures of adjusting hotel operations applied during the coronavirus (COVID-19) pandemic.

procedures	Sample category	Mean rank core	Mann-Whitney U test	Asymp. Sig. (2tailed)
PAHO*1	managers	166.59	656	0.000**
	customers	82.24		
PAHO2	managers	168.98	540	0.000**
	customers	81.48		
PAHO3	managers	170.08	486	0.000**
	customers	81.14		
PAHO4	managers	156.13	1169	0.000**
	customers	85.55		
PAHO5	managers	166.92	641	0.000**
	customers	82.14		
PAHO6	managers	159.70	994	0.000**
	customers	84.42		

\* PAHO = Procedure of Adjusting Hotel Operations \*\* P-value< 0.01= Significant

Table 5 showed that the Mann-Whitney U test revealed significant difference between managers and customers in the five-star hotels in terms of all procedures of adjusting hotel operations applied during the coronavirus pandemic where sig. value

for all procedures was less than 0.05 (see Table 5). Managers scored higher mean rank scores than customers in terms of all issues (see Table 5). This finding found that the views of both managers and consumers were differed, which confirms the managers' lack of commitment to procedures of adjusting hotel operations that reach consumer satisfaction. Therefore, it is necessary to review the procedures of adjusting hotel operations followed by the hotel managers during the coronavirus (COVID-19) pandemic periodically, to achieve customer satisfaction. This result answered the fifth question of this research.

To test the extent of adjusting hotel operations significance during the coronavirus pandemic at 5-star hotels, the researchers applied One-Sample T-test (with test value of 5), this value was selected because it was a suitable value that referred to a level of "very agreement" (see Table 6).

**Table 6**

The extent of adjusting hotel operations significance during the coronavirus (COVID-19) pandemic at 5-star hotels.

variable	T	Df	Test value	Sig.
adjusting hotel operations	-33.5	203	5	0.000**

\*\* P-value < 0.01 = Significant

From the previous results, p-value was statistically significant results where p-level was definitely less than .05 (so, the null hypothesis was rejected). In the other word, there are significant differences between the procedures of adjusting hotel operations followed by the 5-star hotel managers during the coronavirus (COVID-19) and the standard level. This result agreed with the previous findings and answered the first question of this research. This finding suggested the importance of reviewing the procedures of adjusting hotel operations followed by 5-star hotels during the coronavirus (COVID-19) pandemic. This result answered the first question of this research.

*4.3. Comparison between the tourist areas in terms of procedures of adjusting hotel operations applied during the coronavirus (COVID-19) pandemic.*

This comparison is used to find out if there is a significant difference between Hurghada and Sharm El-Sheikh cities in terms of the procedures of adjusting hotel operations applied during the coronavirus (COVID-19) pandemic. Furthermore, the Mann-Whitney U test was used to determine the differences between two groups (see Table 7).

**Table 7**

Differences between Hurghada and Sharm El-Sheikh cities in terms of the procedures of adjusting hotel operations applied during the coronavirus (COVID-19) pandemic.

procedures	Sample category	Mean rank score	Mann-Whitney U test	Asymp. Sig. (2tailed)
PAHO*1	Hurghada	100.31	4968	0.566
	Sharm El-Sheikh	104.82		
PAHO2	Hurghada	100.31	4968	0.564
	Sharm El-Sheikh	104.82		
PAHO3	Hurghada	102.44	5191	0.987
	Sharm El-Sheikh	102.57		
PAHO4	Hurghada	100.02	4937.5	0.517
	Sharm El-Sheikh	105.13		
PAHO5	Hurghada	100.82	5021	0.664
	Sharm El-Sheikh	104.28		
PAHO6	Hurghada	100.53	4990.5	0.607
	Sharm El-Sheikh	104.59		

\*PAHO = Procedure of Adjusting Hotel Operations

Table 7 suggested that the Mann-Whitney U test revealed no significant difference between Hurghada and Sharm El-Sheikh five-star hotels in terms of all procedures of adjusting hotel operations applied during the coronavirus (COVID-19) pandemic where sig. value for all procedures was more than 0.05 (see Table 7). Meanwhile, the previous finding concluded the similarity in the practices applied at the five-star hotels in Hurghada and Sharm El-Sheikh cities during the coronavirus (COVID-19), which means that these procedures must be carefully monitored intensively. This result answers the sixth question of this research.

*4.4. Food and beverage's offer provided at the 5-star hotels.*

The purpose of this variable was to measure the food and beverage offers provided at the hotel during the coronavirus (COVID-19) pandemic. The collected data is illustrated in tables (8-12):

**Table 8**

Factor analysis of food and beverage offers provided at 5-star hotels during the coronavirus pandemic.

Statements	Loadings
The hotel adheres to laws that are updated and put in place by the government.	0.857
The hotel introduces a variety of F&B offers.	0.790
The hotel provides fixed meals to its customers.	0.842

The hotel offers catering, events and banquet services.	0.937
The hotel offers beverage service in glasses.	0.811
The hotel also offers room service an option for free delivery service to its guests to prevent interaction with people.	0.970
Sums of squared loadings	0.867

The previous table stated that all six elements were loaded on one factor explained 86.7% of the variation in the primary variable.

**Table 9**

Descriptive statistics for food and beverage’s offers provided at 5-star hotels during the coronavirus pandemic.

The Axis	managers		customers		Rank	
	M.	SD.	M.	SD.	Mng.	Cust.
FBO*1	4.08	0.27	3.61	1.08	1	5
FBO2	4.16	0.37	4.37	1.05	2	3
FBO3	3.89	0.87	4.55	1.06	3	1
FBO4	3.36	1.2	4.49	1.09	6	2
FBO5	3.37	1.2	4.35	1.07	5	4
FBO6	3.83	.55	3.03	.54	4	6

\*FBO = Food and Beverage Offer

From the previous table it can be showed that that according to managers' opinions, " The hotel adheres to laws that are updated and put in place by the government." was considered as one of the most important procedures applied by hotels during the coronavirus pandemic by an average of 4.08; followed by " The hotel introduces a variety of F&B offers " by an average of 4.16 of all the respondents. "The hotel provides fixed meals to its customers "came in the third rank preference by the mean of 3.89, then "The hotel also offers room service as an option for free delivery service to its guests to prevent interaction with people" came in the fourth-order preference by an average of 3.83. This is followed by other procedures such as "The hotel offers beverage service in glasses "and" The hotel offers catering, events and banquet services" with averages of 3.37, 3.36 respectively (see Table 9). Contrariwise, according to customers' opinions," The hotel adheres to laws that are updated and put in place by the government " and " The hotel also offers room service an option for free delivery service to its guests in order to prevent interaction with people " were considered as the least important procedures applied by hotels during the coronavirus (COVID-19) pandemic by an average of 3.61 and 3.03 respectively (see Table 9). The differences between the opinions of managers and customers revealed that hospitality managers; especially in the

five-star hotels, should be fully aware regarding the food and beverage offers provided during the coronavirus (COVID-19) pandemic in order to achieve customer satisfaction.

*4.5. Comparison between managers and customers in terms of food and beverage offers provided at 5-star hotels during the coronavirus pandemic.*

This comparison is used to find out if there is a significant difference between managers' and customers' opinions in the five-star hotels in terms of food and beverage offers provided at 5-star hotels during the coronavirus (COVID-19) pandemic. Furthermore, the Mann-Whitney U test was used to determine the differences between two groups (see Table 10).

Table 10

Differences between managers and customers opinions in five-star hotels in terms of the food and beverage offers provided at 5-star hotels during the coronavirus pandemic.

Procedures	Sample category	Mean rank score	Mann-Whitney U test	Asymp. Sig. (2tailed)
FBO*1	Managers	124.15	2736.5	0.002**
	Customers	95.65		
FBO2	Managers	75.55	2477	0.000**
	Customers	111.02		
FBO3	Managers	59.38	1684.5	0.000**
	Customers	116.13		
FBO4	Managers	58.30	1631.5	0.000**
	Customers	116.47		
FBO5	Managers	63.87	1904.5	0.000**
	Customers	114.71		
FBO6	Managers	156.68	1142.5	0.000**
	Customers	85.37		

\*FBO = Food and Beverage Offer \*\* P-value < 0.01= Significant

Table 10 showed that the Mann-Whitney U test revealed significant difference between managers and customers in the five-star hotels in terms of all offers of food and beverages provided during the coronavirus (COVID-19) pandemic where sig. value for all procedures was less than 0.05 (see Table 10). Customers scored higher mean rank scores than managers in terms of all issues (see Table 10). This finding found that the views of both managers and consumers differed in favor of customers, which confirms the managers’ interest in commitment to food and beverage offers during the coronavirus (COVID-19) pandemic that reach consumer satisfaction. Therefore, it is necessary to develop these offers and use them as a competitive



advantage during the coronavirus. This result answers the fifth question of this research.

To test the significance of food and beverage offers provided at hotels during the coronavirus (COVID-19) pandemic at 5-star hotels, the researchers applied One-Sample T-test with test value of (see Table 11).

**Table 11**

The significance of food and beverage offers provided at hotels during the coronavirus (COVID-19) pandemic at the 5-star hotels.

Variable	T	df	Test value	Sig.
F&B Offers	-21.53	203	5	0.000**

\*\* P-value < 0.01 = Significant

From the previous results, the p-value was statistically significant, where p-levels were less than .05 (so, the null hypothesis was rejected). In other word, there are significant differences between the level of food and beverage offers provided at 5-star hotels during the coronavirus (COVID-19) pandemic and the standard level. This result answered the second question of this research and suggested the importance of developing food and beverage offers provided at 5-star hotels during the coronavirus (COVID-19) pandemic.

*4.6. Comparison between the tourist areas in terms of the food and beverage offers provided at the 5-star hotels during the coronavirus (COVID-19) pandemic.*

This comparison is used to find out if there is a significant difference between Hurghada and Sharm El-Sheikh cities in terms of the procedures of adjusting hotel operations applied during the coronavirus (COVID-19) pandemic. Furthermore, the Mann-Whitney U test was used to determine the differences between two groups (see Table 12).

**Table 12**

Differences between Hurghada and Sharm El-Sheikh cities in terms of the food and beverage offers provided at the 5-star hotels during the coronavirus (COVID-19) pandemic.

procedures	Sample category	Mean rank score	Mann-Whitney U test	Asymp. Sig. (2tailed)
FBO*1	Hurghada	102.40	5186.5	0.978
	Sharm El-Sheikh	102.61		
FBO2	Hurghada	101.59	5102	0.798
	Sharm El-Sheikh	103.46		
FBO3	Hurghada	100.72	5011	0.594
	Sharm El-Sheikh	104.38		

FBO4	Hurghada	102.13	5158.5	0.913
	Sharm El-Sheikh	102.89		
FBO5	Hurghada	104.66	4970.5	0.546
	Sharm El-Sheikh	100.21		
FBO6	Hurghada	103.12	5132.5	0.863
	Sharm El-Sheikh	101.84		

\*FBO = Food and Beverage Offer

The previous table determined that the Mann-Whitney U test revealed no significant difference between Hurghada and Sharm El-Sheikh five-star hotels in terms of the food and beverage offers provided at 5-star hotels during the coronavirus (COVID-19) pandemic where sig. value for all offers was more than 0.05 (see Table 12). Meanwhile, the previous finding concluded the similarity in the offers provided at the five-star hotels in Hurghada and Sharm El-Sheikh cities during the coronavirus (COVID-19), which means that these offers must be carefully developed. This result was answered the sixth question of this research.

*4.7. Cleaning and disinfection practices*

The purpose of this variable was to analyze the cleaning and disinfection practices followed at the hotel during the coronavirus (COVID-19) pandemic. The collected data is illustrated in tables (13-17):

**Table 13**

Factor analysis of cleaning and disinfection practices followed at 5-star hotels during the coronavirus pandemic.

Statements	Loadings
The hotel is stepping up cleaning protocols for its public areas and guest rooms.	.829
Hotel staff wears personal protective equipment, such as gloves, to protect them from chemicals.	.836
The hotel focuses on disinfecting doorknobs, elevator buttons and phones to reduce the spread of germs.	.801
All hotel aides are trained in chemicals used in rooms to ensure that room attendants and public areas supervisors do their job.	.802
The high traffic areas of the hotel are cleaned every hour or two.	.820
The hotel continues to provide alternatives to towels and daily toiletries.	.812
The hotel creates a personal cleaning note list and a cleaning log chart for each area of the hotel is placed on the back of the doors.	.874
The main card is sterilized by front office personnel as the keys are reused.	.853

Make sure to wear gloves while sterilizing the keys, so that germs do not spread to people or other surfaces.	.747
The hotel makes guests use a mobile phone and check-in via mobile phone during their stay.	.725
The hotel provides sterile wipes, a suitable cleaning spray and paper towels everywhere in the hotel.	.845
The front office is cleaned when every guest leaves.	.869
Sterilizing stations are placed around the hotel, so hotel staff make sure to check these stations frequently if they need to be refilled.	.758
The hotel ensures that hand sanitizer and soap are available to its employees and customers in prominent locations around the hotel.	.733
Sums of squared loadings	0.807

Factor analysis showed in the previous table suggested that all elements were loaded on one factor explained 80.7% of the variation in the primary variable.

**Table 14**

Descriptive statistics for cleaning and disinfection practices followed at the 5-star hotels during the coronavirus (COVID-19) pandemic.

The Axis	managers		customers		Rank	
	M.	SD.	M.	SD.	Mng.	Cust.
CDP1	4.08	0.40	2.90	0.69	5	1
CDP2	4.12	0.33	2.56	0.61	4	4
CDP3	4.12	0.33	2.76	0.81	4	3
CDP4	4.08	0.40	2.35	0.48	5	10
CDP5	4.12	0.33	2.24	0.50	4	12
CDP6	4.33	0.47	2.37	0.53	1	9
CDP7	4.33	0.47	2.30	0.51	1	11
CDP8	4.27	0.45	2.43	0.50	2	7
CDP9	4.18	0.39	2.39	0.57	3	8
CDP10	4.10	0.51	2.44	0.77	4	6
CDP11	4.12	0.33	2.43	0.66	4	7
CDP12	4.12	0.33	2.37	0.76	4	9
CDP13	4.12	0.33	2.52	0.80	4	5
CDP14	4.12	0.33	2.79	0.71	4	2

\*CDP = Cleaning and Disinfection Practice

It can be concluded from the previous table that according to managers' opinions, "The hotel continues to provide alternatives to towels and daily toiletries" as well as "The hotel creates a personal cleaning note list and a cleaning log chart for each area of the hotel is placed on the back of the doors" were considered as two of the most important cleaning and disinfection practices followed at the 5-star hotels during the coronavirus pandemic by an average of 4.33; followed by " The main card is sterilized by front office personnel as the keys are reused "by an average of 4.27". Make sure to wear gloves while sterilizing the keys, so that germs do not spread to people or other surfaces", came in the

third rank preference by the mean of 4.18, This is followed by other practices such as "The hotel makes guests use a mobile phone and check-in via mobile phone during their stay" and "The hotel is stepping up cleaning protocols for its public areas and guest rooms"; which was the least important practices applied by 5-star hotels (see table 14). On the other hand, according to customers' opinions "The hotel is stepping up cleaning protocols for its public areas and guest rooms "was considered as the most important procedures applied by 5-star hotels during the coronavirus (COVID-19) pandemic by an average of 2.9 (see Table 14). The differences between the opinions of managers and customers revealed that hospitality managers; especially in the five-star hotels, should be fully aware regarding the cleaning and disinfection practices followed during the coronavirus (COVID-19) pandemic to achieve customer satisfaction.

*4.8. Comparison between managers and customers in terms of cleaning and disinfection practices followed at the 5-star hotels during the coronavirus (COVID-19) pandemic.*

This comparison is used to find out if there is a significant difference between managers' and customers' opinions in the five-star hotels in terms of cleaning and disinfection practices followed at the 5-star hotels during the coronavirus (COVID-19) pandemic. Furthermore, the Mann-Whitney U test was used to determine the differences between two groups (see table 15).

**Table 15**

Differences between managers and customers opinions in the five-star hotels in terms of cleaning and disinfection practices followed at the 5-star hotels during the coronavirus (COVID-19) pandemic.

Procedures	Sample category	Mean rank score	Mann-Whitney U test	Asymp. Sig. (2tailed)
CDP*1	Managers	166.54	659.5	0.000
	Customers	82.25		
CDP2	Managers	175.61	215	0.000
	Customers	79.39		
CDP3	Managers	163.77	795	0.000
	Customers	83.13		
CDP4	Managers	178.88	55	0.000
	Customers	78.35		
CDP5	Managers	177.81	107.5	0.000
	Customers	78.69		
CDP6	Managers	178.65	66	0.000
	Customers	78.43		
CDP7	Managers	178.65	66	0.000
	Customers	78.43		
CDP8	Managers	180.00	0.000	0.000

	Customers	78.00		
CDP9	Managers	177.14	140	0.000
	Customers	78.9		
CDP10	Managers	168.89	544.5	0.000
	Customers	81.51		
CDP11	Managers	175.31	230	0.000
	Customers	79.48		
CDP12	Managers	171.22	430	0.000
	Customers	80.77		
CDP13	Managers	168.72	552	0.000
	Customers	81.56		
CDP14	Managers	168.59	559	0.000
	Customers	81.61		

\*\*CDP = Cleaning and Disinfection Practice, \*\* P-value < 0.01= Significant

Table 15 showed that the Mann-Whitney U test revealed a significant difference between managers and customers in the five-star hotels in terms of all cleaning and disinfection practices followed at the 5-star hotels during the coronavirus (COVID-19) pandemic where sig. value for all practices was less than 0.05 (see Table 15). Managers scored higher mean rank scores than customers in terms of all practices (see Table 15). This finding found that the views of both managers and consumers differed in favor of managers, which confirms the managers' lack of commitment to practices that reach consumer satisfaction. Therefore, it is necessary to review the cleaning and disinfection practices followed by 5-star hotel managers during the coronavirus (COVID-19) periodically to achieve customer satisfaction. This result answers the 5<sup>th</sup> question of this research.

To test the significance of cleaning and disinfection practices followed by 5-star hotels during the coronavirus (COVID-19) followed by 5-star hotels, the researchers applied One-Sample T-test; with a test value of 5 (see Table 16).

**Table 16: Level of cleaning and disinfection practices followed by 5-star hotels during the coronavirus (COVID-19) followed by 5-star hotels.**

Variable	T	Df	Test value	Sig.
<b>cleaning and disinfection practices</b>	-40.02	203	5	0.000**

\*\* P-value < 0.01= Significant

As shown in table 16, the p-value was statistically significant, where the p-level was less than .05 (so, the null hypothesis was rejected). In the other word, there are significant differences between the level of cleaning and disinfection practices followed by 5-star hotels during the coronavirus (COVID-19)

pandemic and the standard level. This finding answered the third question of this research and suggested the importance of reviewing the cleaning and disinfection practices followed by 5-star hotels during the coronavirus (COVID-19) pandemic.

*4.9. Comparison between the tourist areas in terms of cleaning and disinfection practices followed at the 5-star hotels during the coronavirus (COVID-19) pandemic*

This comparison is used to find out if there is a significant difference between Hurghada and Sharm El-Sheikh cities in terms of cleaning and disinfection practices followed at the 5-star hotels during the coronavirus (COVID-19) pandemic. Furthermore, the Mann-Whitney U test was used to determine the differences between two groups (see Table 17).

**Table 17: Differences between Hurghada and Sharm El-Sheikh cities in terms of cleaning and disinfection practices followed at the 5-star hotels during the coronavirus (COVID-19) pandemic.**

Procedures	Sample category	Mean rank score	Mann-Whitney U test	Asymp. Sig. (2tailed)
CDP*1	Hurghada	101.06	5046.5	0.7
	Sharm El-Sheikh	104.03		
CDP2	Hurghada	100.99	5038.5	0.68
	Sharm El-Sheikh	104.11		
CDP3	Hurghada	101.82	5126.5	0.85
	Sharm El-Sheikh	103.22		
CDP4	Hurghada	102.28	5174	0.95
	Sharm El-Sheikh	102.74		
CDP5	Hurghada	104.91	4944	0.49
	Sharm El-Sheikh	99.94		
CDP6	Hurghada	99.81	4915	0.46
	Sharm El-Sheikh	105.35		
CDP7	Hurghada	100.30	4966.5	0.54
	Sharm El-Sheikh	104.83		
CDP8	Hurghada	102.09	5154.5	0.91
	Sharm El-Sheikh	102.93		
CDP9	Hurghada	102.59	5188.5	0.98
	Sharm El-Sheikh	102.41		
CDP10	Hurghada	102.16	5162	0.92
	Sharm El-Sheikh	102.86		

CDP11	Hurghada	102.65	5182	0.96
	Sharm El-Sheikh	102.34		
CDP12	Hurghada	101.44	5086	0.77
	Sharm El-Sheikh	103.63		
CDP13	Hurghada	101.07	5047	0.70
	Sharm El-Sheikh	104.02		
CDP14	Hurghada	100.08	4943.5	0.52
	Sharm El-Sheikh	105.07		

\*\*CDP = Cleaning and Disinfection Practice

The previous table determined that the Mann-Whitney U test revealed no significant difference between Hurghada and Sharm El-Sheikh five-star hotels in terms of cleaning and disinfection practices followed at the 5-star hotels during the coronavirus (COVID-19) pandemic, where sig. value for all practices was more than 0.05 (see Table 17). Meanwhile, the previous finding concluded the similarity in the practices followed at the five-star hotels in Hurghada and Sharm El-Sheikh cities during the coronavirus (COVID-19). This result was answered the sixth question of this research.

**Social distancing practices**

The purpose of this variable was to analyze the social distancing practices followed at the 5-star hotels during the coronavirus (COVID-19) pandemic. The collected data is illustrated in tables (18-22):

**Table 18: Factor analysis of social distancing practices followed at the 5-star hotels during the coronavirus (COVID-19) pandemic**

Statements	Loadings
The hotel creates a barrier at the reception to keep distance between employee and customer.	0.847
Place key cards for guests at the front office instead of handing them to the customer hand in hand.	0.857
The hotel prevents large groups from gathering in the lobby and near the elevators.	0.788
The hotel posts signs to guests that the elevators are not congested and wait for the next elevator so everyone can practice social distancing.	0.771
The hotel operates social distancing lines and identifies a way to distance standing people by placing signs at six feet, the lines can be taut with signs or small cones on the ground.	0.687
The hotel offers printouts to its guests of the various in-room exercises that they can do since the fitness center is closed.	0.909
If the hotel detects a guest or employee infected with the COVID-19, the hotel contacts	0.852

the local health department and follows the cleaning procedures for the guest room.	
The hotel is performing deep cleaning and disinfection of the room of a customer who has tested positive for COVID-19.	0.664
The hotel tracks the contacts of the injured person, and then traces the guest to link the contact during the time of the customer's stay.	0.465
Sums of squared loadings	0.684

The previous table showed that all loading coefficients for all practices was exceeded 0.6 except the last practice (see table 18 ) with loading coefficient 0.465, so the researchers deleted this sentence from the data analysis (Fabrigar, et al., 1999).

**Table 19: Descriptive statistics for social distancing practices followed at the 5-star hotels during the coronavirus (COVID-19) pandemic**

The Axis	managers		Customers		Rank	
	M.	SD.	M.	SD.	Mng.	Cust.
SDP*1	4.18	0.39	2.32	0.47	2	6
SDP2	4.10	0.51	2.23	0.49	4	7
SDP3	4.04	0.45	2.35	0.66	5	4
SDP4	4.12	0.33	2.45	0.70	3	2
SDP5	4.12	0.33	2.61	0.79	3	1
SDP6	4.12	0.33	2.18	0.46	3	8
SDP7	4.12	0.33	2.34	0.57	3	5
SDP8	4.20	0.41	2.43	0.68	1	3

\*SDP = Social Distancing Practices

The previous table indicated that according to managers' opinions, " The hotel tracks the contacts of the injured person, and then traces the guest to link the contact during the time of the customer's stay "was considered as the more important procedures applied by 5-star hotels during the coronavirus (COVID-19) pandemic by an average of 4.20, followed by " The hotel creates a barrier at the reception to keep distance between employee and customer " by an average of 4.18. This was followed by other practices (see table 19). On the other hand, according to customers' opinions "The hotel operates social distancing lines and identifies a way to distance standing people by placing signs at six feet, the lines can be taut with signs or small cones on the ground" was considered as the more important procedures applied by 5-star hotels during the coronavirus (COVID-19) pandemic by an average of 2.61, followed by " The hotel posts signs to guests that the elevators are not congested and wait for the next elevator so everyone can practice social distancing "by an average of 2.45 This was followed by other practices (see table 19). The differences between the opinions of managers

and customers revealed that hospitality managers; especially in the five-star hotels, should be fully emphasize that customers are aware of the importance of social distancing practices during the coronavirus (COVID-19) pandemic.

**Comparison between managers and customers in terms of social distancing practices followed at the 5-star hotels during the coronavirus (COVID-19) pandemic.**

This comparison is used to find out if there is a significant difference between managers' and customers' opinions in the five-star hotels in terms of social distancing practices followed at the 5-star hotels during the coronavirus (COVID-19) pandemic. Furthermore, the Mann-Whitney U test was used to determine the differences between two groups (see Table 20).

**Table 20: Differences between managers and customers opinions in the five-star hotels in terms of social distancing practices followed at the 5-star hotels during the coronavirus (COVID-19) pandemic.**

Procedures	Sample category	Mean rank score	Mann-Whitney U test	Asymp. Sig. (2tailed)
SDP*1	Managers	180.00	174	0.000
	Customers	78.00		
SDP2	Managers	176.69	162	0.000
	Customers	79.05		
SDP3	Managers	171.39	422	0.000
	Customers	80.72		
SDP4	Managers	171.66	408.5	0.000
	Customers	80.64		
SDP5	Managers	166.84	645	0.000
	Customers	82.16		
SDP6	Managers	177.81	107.5	0.000
	Customers	78.69		
SDP7	Managers	176.49	172	0.000
	Customers	79.11		
SDP8	Managers	174.42	273	0.000
	Customers	79.76		

\*SDP = social distancing practices

\*\* P-value < 0.01 = Significant

Table 20 showed that the Mann-Whitney U test revealed significant difference between managers and customers in the five-star hotels in terms of all social distancing practices followed at the 5-star hotels during the coronavirus (COVID-19) pandemic where sig. value for all practices was less than 0.05. Managers scored higher mean rank scores than customers in terms of all practices (see Table 20). This finding found that the views of both

managers and consumers differed in favor of managers, which confirms the managers' lack of commitment to practices that reach consumer satisfaction. Therefore, it is necessary to emphasize the importance of social distancing practices followed by 5-star hotel managers during the coronavirus (COVID-19) significantly in order to achieve customer satisfaction. This result answers the fifth question of this research.

To test the significance of social distancing practices followed by 5-star hotels during the coronavirus (COVID-19) followed by 5-star hotels, the researchers applied One-Sample T-test; with a test value of 5 (see Table 21).

**Table 21: Level of social distancing practices followed by 5-star hotels during the coronavirus (COVID-19) followed by 5-star hotels.**

Variable	T	df	Test value	Sig.
social distancing practices	-37.6	203	5	0.000**

\*\* P-value < 0.01 = Significant

As shown in table 21, p-value was statistically significant, where p-level was definitely less than .05 (so, the null hypothesis was rejected). In the other word, there are significant differences between the level of social distancing practices followed by 5-star hotels during the coronavirus (COVID-19) pandemic and the standard level. This result answered the fourth question of this research and suggested the importance of applying the social distancing 5-star hotels during the coronavirus (COVID-19) pandemic.

**Comparison between tourist areas in terms of social distancing practices followed at the 5-star hotels during the coronavirus (COVID-19) pandemic.**

This comparison is used to find out if there is a significant difference between Hurghada and Sharm El-Sheikh cities in terms of social distancing practices followed at the 5-star hotels during the coronavirus (COVID-19) pandemic. Furthermore, the Mann-Whitney U test was used to determine the differences between the two groups (see Table 22).

**Table 22: Differences between Hurghada and Sharm El-Sheikh cities in terms of social distancing practices followed at the 5-star hotels during the coronavirus (COVID-19) pandemic.**

procedures	Sample category	Mean rank score	Mann-Whitney U test	Asymp. Sig. (2tailed)
SDP*1	Hurghada	101.43	5085	0.771
	Sharm El-Sheikh	103.64		

SDP2	Hurghada	101.48	5090	0.770
	Sharm El-Sheikh	103.59		
SDP3	Hurghada	101.05	5045	0.685
	Sharm El-Sheikh	104.04		
SDP4	Hurghada	99.02	4832.5	0.342
	Sharm El-Sheikh	106.19		
SDP5	Hurghada	98.63	4791.5	0.299
	Sharm El-Sheikh	106.60		
SDP6	Hurghada	101.47	5089.5	0.762
	Sharm El-Sheikh	103.59		
SDP7	Hurghada	101.79	5122.5	0.844
	Sharm El-Sheikh	103.26		
SDP8	Hurghada	103.19	5125	0.853
	Sharm El-Sheikh	101.77		

\*SDP = social distancing practices

The previous table indicated that the Mann-Whitney U test revealed no significant difference between Hurghada and Sharm El-Sheikh five-star hotels in terms of social distancing practices applied at the 5-star hotels during the coronavirus (COVID-19) pandemic, where sig. value for all practices was more than 0.05 (see Table 22). Meanwhile, the previous finding concluded the similarity in the practices followed at the five-star hotels in Hurghada and Sharm El-Sheikh cities during the coronavirus (COVID-19). This result was answered the sixth question of this research.

### Conclusion

This study identifies specific source for the turtle figures on some distinctive astronomical scenes or "zodiacs" which decorated some monuments (temples, tombs, coffins, gallery, water clock, and others), are shown a complete relation with the depictions of such animal and its representation in these kinds of scenes; while the best examples of turtle figures have been found on the ceiling of the temples, tombs, and coffins. It forms widespread renovations in the Late and Greco-Roman periods. Identifying the connections between all of those monuments which reveal the kind of editions of much earlier texts and scenes which came about it. Equally evidently, it is the strict absence of this type of iconography of turtle from drawings found in monuments and inscriptions of much earlier periods, especially during the Middle Kingdom.

Turtles dwelled the sky by the Early New Kingdom, and acquired a traditional shape represent the animal form itself, not comparable to the other animals like for example serpents, which appeared in variety of shapes (winged, erected, coiled, even if they are represented as a human figure (with human heads, arms, legs, or all together). We now have a detail picture not only of the figure of the turtles and the place of their practice, but also the apparatus they used to conquer the astronomical scenes and be one the most popular creatures used to decorate them. The article also shows that considerable role turtle played in ancient astronomy.

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