

## Exploring the Gap between the Perceived and Expected Quality Levels of the Health Care Services Provided by Jordanian Dental Clinics

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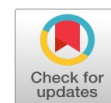
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**Abstract:** The present paper aimed at exploring the gap between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics. In order to fulfill the study's objective, the researcher of the present study developed a questionnaire that adopts the five-point Likert scale and the SERVQUAL model. The questionnaire contains dimensions for service quality: tangibility, reliability, responsiveness, assurance, and empathy. The questionnaire forms were distributed to (250) customers who have received health care services from Jordanian dental clinics. However, (194) questionnaire forms were collected. That means that the response rate is 77.6%. The collected data were analyzed statistically by using the SPSS program. It was concluded that there is a negative gap between the expected and perceived quality levels of the health care services provided by Jordanian dental clinics and measured by the dimensions above jointly and separately. The expected quality level of those services is higher than the perceived one. It was concluded that the quality of such services is below the level required by customers. Future studies are suggested to be applied to other health organizations such as specialized clinics, military hospitals, and comprehensive health centers to benefit from the development of their health service.

**Keywords:** Service quality, Perceived quality, Expected quality, Health care services, Dental clinics.

Received: 19 February 2018 / Accepted: 29 March 2018 / Published: 21 April 2018



### INTRODUCTION

The customer's decision to purchase a service or a product depends much on its value, price and quality. The customer gains such information through advertisement and word of mouth. After gaining such information, the customer shall compare it with counterpart information of other products and services leading him to make his purchasing decision (Tirole, 1988) finally.

To be specific, consumers evaluate the service quality based on its capability to win the competition against other services in the marketplace (Buell, Campbell, & Frei, 2016; Khomkaiy, Khanchitpol, & Yousapronpaiboon, 2017; Pandiangan & Tua Sitorus, 2017). In other words, the latter researchers believe that customers' evaluation of the quality of a certain service is formed by comparing its quality to the quality of other competing products.

The customer may expect to receive a certain quality level and then receive a higher quality level than expected. That shall lead to achieving a higher level of customer satisfaction leading to attract more customers. It shall gain loyal customers. However, if the expected service quality was higher than the perceived one, the customer shall experience feelings of dissatisfaction. Thus, the company shall fail in attracting customers.

- Quality can be determined by three main angles:
- Quality of care provided to the patient;
- Quality of care art provided to the patient;
- External Health Quality Foundation (Belaid, Bouchenafa, Barich, Maazouzi, et al., 2015).

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The choice of service by customers depends largely on the relationships between their willingness to pay for the improvement of the particular service, the increase in the variable cost, and the prices associated with making those improvements. The theory suggests that customers can identify the service provider that provides the best service based on their preferences on price and quality of service by obtaining information about the price and quality of service offered by the competing market service (ie by increasing market advertising, word of mouth) (Buell et al., 2016).

Service-minded customers may express a higher willingness to absorb service quality and pay for high-priced companies in their market (Cachon & Olivares, 2010). Similarly, price-sensitive customers who are less willing to absorb and pay for the quality of service can be attracted to companies that are relatively low in price/quality in their markets.

Israel (2005) argues that service quality can be evaluated by purchasing the service and consuming it. Parasuraman, Zeithaml, and Berry (1985, 1988) define service quality as being an assessment for the extent of the service excellence or customers' attitudes towards the service.

Grönroos (2007) defines service quality as the customer's evaluation of the service after comparing his expectations about it before using it with his perceptions for it after using it.

There are several models which represent the relationship between the perceived service quality level after consumption and the expected service quality level before the actual use (Gans, 2002). According to Gans (2002), customers may choose to stop purchasing a certain service due to certain defects in it or its delivery. Thus, they shall seek to purchase the services of other competing service providers. Such defects may include the length of the waiting period before getting the service (Van Mieghem, 2000); or feelings of being underserved (Cohen & Whang, 1997; Hall & Porteus, 2000; Tsay & Agrawal, 2000).

The following points summarize of the analysis by (Padma, Rajendran, & Sai, 2009) on the quality dimensions of hospital services:

- Infrastructure: It is a tangible dimension that includes facilities, equipment, service atmosphere as well as the level of cleanliness.
- The quality of staff. It is the attitude of employees associated with compassion, responsiveness, courtesy, personal care and human elements of service delivery.
- Clinical care: This consists of primary quality, technical quality, quality processes in medical treatment and their results, reliability, and understanding of diseases.
  - Dimensions of administrative procedures, which are non-human service delivery processes.
  - Safety indicators.
  - Corporate image, which contains the image, reputation and brand image.
  - Social responsibility and focus on stakeholders.
  - Hospital reliability, which includes patient trust, mutual respect relationship, and patient trust in the hospital.

Dental-care service specifically refers to the outcome level where patient satisfaction is the main aspect of evaluating services provided by dental clinics (Gupta & Rokade, 2016; Na Ayutthaya, Tuntivivat, & Prasertsin, 2016).

The main purpose of this study is exploring the gap between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics.

## LITERATURE REVIEW

### The quality dimensions of health care services

Many studies aimed at addressing quality dimensions of services, especially the health care services. Therefore, scholars have proposed several models for representing quality service dimensions. As for the present study, it adopts a service quality model that is based on the quality dimensions addressed by (Kotler, Shalowitz, & Stevens, 2011; Fatima, Malik, & Shabbir, 2018). These dimensions are: tangibility, reliability, responsiveness, assurance, and empathy.

### **Patient satisfaction**

Patient satisfaction is to judge that the health care service provides an enjoyable level of consumption. In other words, it is the general level of satisfaction with the service/product experience (Andaleeb, Siddiqui, & Khandakar, 2007; Jiang, Zhang, Xiao, Ren, & Chen, 2017). Sajid and Baig (2007) explained that patient satisfaction is very important for determining the efficiency of any health system worldwide.

Rowley (2005) states that customers can show satisfaction in one of the following ways:

- Choose to stay with the service provider
- They can increase the number of purchases or repeat purchases, or both
- They can defend the relevant organization by playing an active role in the decision of others.

Patients may have a complex set of important and relevant beliefs that cannot, on the other hand, Peprah (2014) highlighted the importance of some factors affecting customer satisfaction, such as; nurse attitudes towards customers, effectiveness in service delivery, and the ability to clarify what customers need, for the availability of the latest technology in the medical field.

Two levels of patient satisfaction have been considered: a specific level of satisfaction related to patient evaluation and judgment on the experience of purchasing or consuming a particular service (Deng, Lu, Wei, & Zhang, 2010) and overall satisfaction (or cumulative satisfaction) which means patient judgment on all purchases or consumption experiences of particular services (Kunnu, 2016; Wang, Lo, & Yang, 2004).

According to (Rumpler, 2004), the literature on patient satisfaction in hospitals is based around four dimensions:

- Personal relations with different categories of staff (medical, paramedical, nursing and administrative).
- The technical quality of care that refers mainly to professional skills and practices.
- Physical environment (hospital and offering “concierge” - catering).
- Different reception procedures, consultative coordination, and exit.

### **The study's hypotheses**

Based on the above dimensions, the researcher proposes the following hypotheses:

**H0.1.** There isn't any difference between the perceived and expected quality levels of the health care services measured by tangibility

**H0.2.** There isn't any difference between the perceived and expected quality levels of the health care services measured by reliability

**H0.3.** There isn't any difference between the perceived and expected quality levels of the health care services measured by responsiveness

**H0.4.** There isn't any difference between the perceived and expected quality levels of the health care services measured by the assurance

**H0.5.** There isn't any difference between the perceived and expected quality levels of the health care services measured by and empathy

**H0.6.** There isn't any difference between the perceived and expected quality levels of the health care services measured by all the dimensions above jointly.

### **The study's questions**

The researcher aims to provide answers to the following questions:

Q.1. Is there a difference between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by tangibility?

Q.2. Is there any difference between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by reliability?

Q.3. Is there a difference between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by responsiveness?

Q.4. Is there a difference between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by assurance?

Q.5. Is there a difference between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by and empathy?

Q.6. Is there a difference between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by all the dimensions above jointly?

### The study's limits

1. The present study was conducted in 2018 in seven Jordanian dental care clinics located in Amman.
2. The researches face a shortage in a number of studies about dental clinics in Jordan.

### The study's significance

- 1) The present study shall enable Jordanian dental clinics to identify the satisfaction level of their customers. That shall help them to improve their performance and service quality in case customers show feelings of dissatisfaction.
- 2) It shall fill a gap in the literature due to the scarcity of the studies conducted about this problem.
- 3) The present study shall provide suggestions for improving the quality of the Jordanian dental care service and Jordanians dental health level.

## RESEARCH METHOD

### Approach

The present study adopted a quantitative approach by using a questionnaire.

### The study's model

This research depends on the following model.

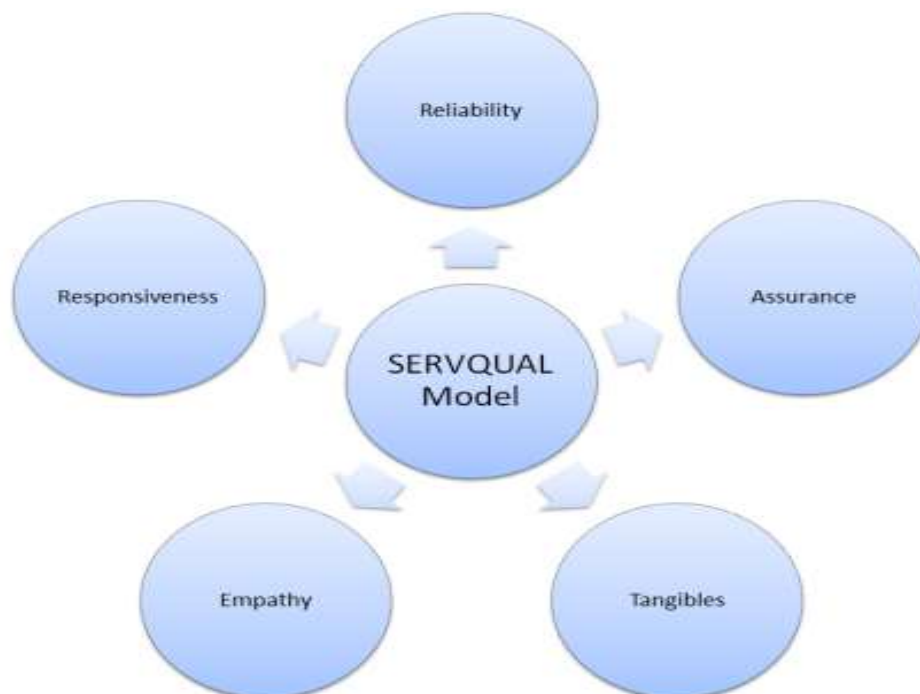


Figure 1. The SERVQUAL model that the researcher adopted based on the study of (Kotler et al., 2011)

### The study's population and sample

The population of the present study consists of all the customers who received health care services by Jordanian dental care clinics. A convenience sample was selected from the study's population. It consists of (250) customers chosen from seven Jordanian dental clinics. However, (194) questionnaire forms were collected. Thus, the response rate is 77.6%.

### The respondents demographic characteristics

The results of the statistical analysis indicate that 58.2% of the respondents are males (113 customers). As for the females, they represent 41.8% of the sample (81 customers). As for the respondents' academic qualifications, 41.2% of the respondents hold a secondary school certificate. In addition, 62% of the respondents did not reach 35 years old.

### The study's instrument

This researcher of the present study used a questionnaire to collect the required data. The questionnaire adopts the five point Likert scale. The instrument consists of two parts. The first part aims to collect the respondents' demographic data, such as gender, age and academic qualifications. As for the second part, it includes the statements.

### The instrument's reliability

The researcher calculated the Cronbach's alpha coefficient. The overall value of the Cronbach's alpha coefficient is (0.887) for the all the statements of the questionnaire. Hence, the instrument is considered highly reliable because it far exceeds the accepted value (0.60).

### The instrument's validity

The face validity of the questionnaire was tested by presenting it to 5 specialized experts and it was modified according to their opinions.

## RESULTS AND DISCUSSION

### Testing the study's hypotheses

The paired-sample *t*-test was conducted to test each hypothesis of the study's hypotheses. The results of this test are presented below:

#### Testing the first hypothesis

**H0.1.** There isn't a difference between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by tangibility.

Table 1: The results of the paired sample *t*-test of the first hypothesis (H0.1)

		Mean	<i>N</i>	Std. Deviation	<i>t</i> -value
Pair 1	The expected service quality level measured by tangibility	3.9497	194	.73035	7.276**
	The perceived service quality level measured by tangibility	3.5077	194	.70981	

\*\*Significant at (0.01) level

Table 1 shows that the *t* value (7.276) is significant at (0.01) level. This means that there is a difference between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by tangibility. To be specific, the expected service quality level is higher than the perceived one measured by tangibility.

#### Testing the second hypothesis

**H0.2.** There isn't a difference between the perceived and expected service quality levels of the health care services provided by Jordanian dental clinics and measured by reliability

Table 2 shows that the *t* value (7.783) is significant at (0.01) level. This means that there is a difference between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by reliability. To be specific, the expected service quality level is higher than the perceived one measured by reliability.

Table 2: The results of the paired sample *t*-test of the second hypothesis (H0.2)

		Mean	N	Std. Deviation	<i>t</i> -value
Pair 2	The expected service quality level measured by reliability	3.9711	194	.75384	7.783**
	The perceived service quality level measured by reliability	3.4990	194	.77319	

\*\*Significant at (0.01) level

*Testing the third hypothesis*

**H0.3.** There isn't a difference between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by responsiveness

Table 3: The results of the paired sample *t*-test of the third hypothesis (H0.3)

		Mean	N	Std. Deviation	<i>t</i> -value
Pair 3	The expected service quality level measured by responsiveness	3.7912	194	.69012	7.053**
	The perceived service quality level measured by responsiveness	3.3428	194	.69818	

\*\*Significant at (0.01) level

Table 3 shows that the *t* value (7.053) is significant at (0.01) level. This means that there is a difference between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by responsiveness. To be specific, the expected service quality level is higher than the perceived one measured by responsiveness

*Testing the fourth hypothesis*

**H0.4.** There isn't a difference between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by assurance.

Table 4: The results of the paired sample *t*-test of the fourth hypothesis (H0.4)

		Mean	N	Std. Deviation	<i>t</i> -value
Pair 4	The expected service quality level measured by the assurance	3.9510	194	.78617	7.09**
	The perceived service quality level measured by the assurance	3.4716	194	.84050	

\*\*Significant at (0.01) level

Table 4 shows that the *t* value (7.09) is significant at (0.01) level. This means that there is a difference between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by assurance. To be specific, the expected service quality level is higher than the perceived one measured by the assurance

*Testing the fifth hypothesis*

**H0.5.** There isn't a difference between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by empathy.

Table 5: The results of the paired sample *t*-test of the fifth hypothesis (H0.5)

		Mean	N	Std. Deviation	<i>t</i> -value
Pair 5	The expected service quality level measured by empathy	3.8956	194	.78423	7.089**
	The perceived service quality level measured by empathy	3.4240	194	.78503	

\*\*Significant at (0.01) level

Table 5 shows that the  $t$  value (7.089) is significant at (0.01) level. This means that there is a difference between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by empathy. To be specific, the expected service quality level is higher than the perceived one measured by empathy.

*Testing the sixth hypothesis*

**H0.6.** There isn't a difference between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by all the dimensions above jointly.

Table 6: The results of the paired sample  $t$ -test of the sixth hypothesis (H0.6)

		Mean	N	Std. Deviation	t-value
Pair 1	The expected service quality level measured by all the dimensions above jointly	3.9146	194	.64813	8.078**
	The perceived service quality level measured by all the dimensions above jointly	3.4514	194	.71532	

\*\*Significant at (0.01) level

Table 6 shows that the  $t$  value (8.078) is significant at (0.01) level. That means that there is a difference between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by all the dimensions above jointly. In other words, the expected quality level of the services provide by Jordanian dental clinics is higher than the perceived one when measured by all the dimensions above jointly.

**CONCLUSION**

The current study aimed at exploring the gap between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by five quality dimensions jointly and separately. These quality dimensions are tangibility, reliability, responsiveness, assurance, and empathy. All the study's null hypotheses are rejected. Thus, the researcher has concluded the following:

- 1) There is a difference between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by tangibility. To be specific, the expected service quality level is higher than the perceived one measured by tangibility.
- 2) There is a difference between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by reliability. To be specific, the expected service quality level is higher than the perceived one measured by reliability.
- 3) There is a difference between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by responsiveness. To be specific, the expected service quality level is higher than the perceived one measured by responsiveness.
- 4) There is a difference between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by assurance. To be specific, the expected service quality level is higher than the perceived one measured by assurance.
- 5) There is a difference between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by empathy. To be specific, the expected service quality level is higher than the perceived one measured by empathy
- 6) There is a difference between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics and measured by all the dimensions above jointly. To be specific, the expected service quality level is higher than the perceived one measured by all the dimensions above jointly.
- 7) It was concluded that the quality of such services is below the level required by customers. That is concluded because there is a negative gap between perceived and expected quality levels of the health care services provided by Jordanian dental clinics. That means that the customers of Jordanian dental clinics are not satisfied with the services of those provided to them by those clinics. That might make

those customers choose to visit dentists at hospitals and clinics outside Jordan. It might also discourage them to visit dentists. Thus, it shall lead to reducing the Jordanians' dental health level.

### Recommendations

In light of the results above, the researcher of the present study recommends the following:

1) Conducting more studies about the reasons behind the negative gap between the perceived and expected quality levels of the health care services provided by Jordanian dental clinics. In addition, scholars must suggest solutions to overcome such reasons in order to provide Jordanians with better dental care services.

2) Jordanian dental clinics should provide more attention to their patient problems, confidentiality, and medical records. They should also use advanced medical tools and materials and advanced scheduling systems

3) Dentists who work at Jordanian dental clinics should keep up with the recent studies, medications, tools, and innovations in the field of dentistry. They should also attend conferences, courses, and training programs about dentistry. They should be done to provide their patients with the best services and treatments.

4) Dental clinics should include an employee concerned with examining customer's feedbacks and perceptions for the dental care services provided to them.

5) Dentists who work at Jordanian dental clinics should be provided with incentives to motivate them to improve their performance.

6) Future studies are suggested to be applied other health organizations such as specialized clinics, military hospitals, and comprehensive health centers to benefit from the development of their health service.

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