The Effect of Health Services Quality Dimensions on Patients’ Satisfaction in Jordan Governmental Hospitals: Nurses Perception

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ABSTRACT

This study aimed to determine the effect of health services Quality dimensions on patients satisfaction in Jordan Governmental Hospitals: Perceptions of Nurses. To attain the aim of this study a cross-sectional survey design which was analytical and descriptive in nature was used, a sample of nurses employed in the target hospitals was chosen; the sample consisted of 310 nurses. To determine the impact of the application of health services Quality dimensions on patients satisfaction the researcher used a special measure called “SERVQUAL Instrument” which adapted by Parasurman and et al.(1) which was designed specially to measure the quality of service in different service sectors. The content validity of the measure conducted by committee arbitrators and throughout the multiple uses of this measure over the time. The reliability of the measure computed using Cronbach alpha, and the result indicated that the internal consistency of the measure was 80%. The results revealed that:

• There was no relationship between Tangibility dimension of health services and patients satisfaction.
• There was a positive relationship between the other four quality of health services dimensions (Reliability, Empathy, Responsiveness, and Assurance) and the patients’ satisfaction.
• There was a positive effect of age variable on the perception of the nurses of the impact of the quality dimensions on the quality of healthcare services; while there were no effects of other demographic variables such as sex or educational level.

Keywords: Quality dimensions, patient satisfaction, Jordan governmental hospital, Nurses perception

1. INTRODUCTION

Public hospitals in Jordan usually have up-to-date technology at their disposal and are serviced by knowledgeable doctors. However, like many other public healthcare systems around the world, the Jordanian public sector faces its share of problems(2).

It was increased in the last days in Jordanian multimedia the discussions about poor health services in the governmental hospitals additional to the patients' complaints(3). The researcher have noticed while visiting some of the governmental health organizations (especially hospitals) in Jordan that most of these organizations are experiencing issues that are
related to the health organization itself, concerning the lack of human and material resources and poor sense of responsibilities among the employees. Other experienced issues were due to circumstance including the lack of financial allocation, poor public health awareness and abandonment of scientific minds, which reduces the level of services quality provided in these organizations. The aim of this study was to determine the effect of health services Quality dimensions on patients satisfaction in Jordan Governmental Hospitals: Perceptions of Nurses.

**Quality Management in Health Care And Patient satisfaction**

Hospitals and other healthcare organization across the globe have been progressively implementing Total quality management (TQM) to reduce costs, improve efficiency and provide high-quality patient care. Today most managers agree that the main reason to pursue quality is to satisfy the customers. Total quality is “a philosophy or an approach to management that can be characterized by its principles, practices, and techniques. Its three principles are customer focus, continuous improvement, and teamwork.”

**Quality Management in Health Care**

Health care quality is the degree to which health care services for individuals and populations increase the likelihood of desired health outcomes. The quality of care plays an important role in describing the iron triangle of health care, which defines the intricate relationships between quality, cost, and accessibility of health care within a community.

Researchers measure health care quality to identify problems caused by overuse, underuse, or misuse of health resources. Dr. Avedis Donabedian initially termed the professional practice field clinical outcomes management, which was later popularized by Dr. Paul Ellwood’s seminal 1988 Shattuck Lecture published in the New England Journal of Medicine.

**Patient Satisfaction**

Customer satisfaction is important because many researchers have shown that customer satisfaction has a positive effect on an organization’s profitability. Customer satisfaction was defined as (overall customer attitude towards a service provider, or an emotional reaction to the difference between what customers anticipate and what they receive, regarding the fulfillment of some need, goal or desire”.

Customer loyalty. Also defined as "the number of customers, or percentage of total customers, whose reported experience with a firm, its products, or its services (ratings) exceeds specified satisfaction goals. But Kotler (2000) defined satisfaction as: “a person’s feelings of pleasure or disappointment resulting from comparing a product’s perceived performance (or outcome) in relation to his or her expectations”.

Most research results actually showed that customer satisfaction is significantly associated with current and future financial performance. Plenty of empirical research in the last decade showed that customer satisfaction was positively relevant to corporate performance.

**Service quality and patient satisfaction**

Most of the studies of consumer satisfaction highlight the unavoidable relationship between customer satisfaction and quality. Therefore service quality and customer satisfaction are closely related.

One of the most useful measurements of service quality is the dimensions of the SERVQUAL model. In the creation of this model for the very first time, Parasuraman et al. (1985) identified 97 attributes which were condensed into ten dimensions; they were found to have an impact on service quality and were regarded as the criteria that were important to access customer’s expectations and perceptions on delivered service.

The SERVQUAL scale which is also known as the gap model by Parasuraman, et al. (1988) has been proven to be one of the best ways to measure the quality of services provided to customers. This service evaluation method has been proven consistent and reliable by some authors. They held that when perceived or experienced service is less than the expected service; it implies less than satisfactory service quality; and when perceived service is more than expected service, the obvious inference is that service quality is more than satisfactory. From the way this theory is presented, it seems the idea of SERVQUAL best fits the evaluation of service quality from the customer perspective. This is because when it is stated “perceived” and “expected” service, it is very clear that this goes to the person, who is going to or is consuming the service; who definitely is the consumer/customer.

The original study by Parasuraman et al., (1985) presented ten dimensions of service quality as below:

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1. Tangibles: the appearance of physical artifacts and staff members connected with the service (accommodation, equipment, staff uniforms, and so on).
2. Reliability: the ability to deliver the promised service.
3. Responsiveness: the readiness of staff members to help in a pleasant and effective way.
4. Competence: the capability of staff members in executing the service.
5.Courtesy: the respect, thoughtfulness, and politeness exhibited by staff members who are in contact with the customer.
6. Credibility: the trustworthiness and honesty of the service provider.
9. Communication: an understandable manner and use of language by the service provider.
10. Understanding the customer: efforts by the service provider to know and understand the customer.

Further investigation led to the finding that, among these ten dimensions, some were correlated. After refinement, these ten dimensions above were later reduced to five dimensions as below:

1. **Tangibility**: physical facilities, equipment, and appearance of personnel
2. **Reliability**: ability to perform the promised service dependably and accurately
3. **Responsiveness**: willingness to help customers and provide prompt service
4. **Assurance**: knowledge and courtesy of employees and their ability to inspire trust and confidence
5. **Empathy**: caring individualized attention the firm provides to its customers

The literature review shows the relationship between customer satisfaction and service quality. The researches in this area have been covered so far as below:

1. It has been researched that there is a relationship between customer satisfaction and service quality.
2. It has been researched that service quality could be evaluated with the use of SERVQUAL model.
3. It has been researched that service quality could be evaluated by other dimensions of service quality that is, functional and technical and not necessarily SERVQUAL model.
4. Some researchers even tested service quality and service quality dimensions.

2. **METHODS**

**Study design**
A cross-sectional survey design which was analytical and descriptive in nature was used to determine the effect of health services Quality dimensions on patients satisfaction.

**Study sample**
The sample was drawn from a population of nurses working in the target hospitals. All nurses were invited to participate. Participants were recruited from the only two governmental hospitals located in (Amman) the capital of The Hashemite Kingdom of Jordan using the following inclusion criteria: (a) Be working in the current hospital for at least two years; (b) agreed to participate in the survey with written consent. The sample size (n= 310) was calculated according to the site for sampling calculation –Raosoft.

**Instrumentation**
A 2-part questionnaire was used to collect data. Part1 consisted of The cover letter which explains the objective of the study and ensured the confidentiality of the information.

Part 2 of the questionnaire includes 3 section:

**Section (1)** It includes the basic phrases through which it recognized the study hypotheses. This part measures the independent variable (quality of health services dimension):

1. **Tangibility**: It consists of (4) phrase
2. **Reliability**: It consists of (6) phrase.
3. **Responsiveness**: It consists of (4) phrase.
4. **Empathy**: It consists of (6) phrase.
5. **Assurance**: It consists of (5) phrase.

**Section (2)** it includes data of members of the sample. It is a descriptive and personal data of:

1. **Gender**.
2. **Age**.
3. **Job**.
4. **Years of experience in the current Hospital**
5. **Educational Qualification**

**Section (3)** measures the dependent variable (patients satisfaction).
**Ethical considerations**

Institutional Review Board (IRB) approval was obtained from the two target hospitals; that located in Amman. The researchers explained the study aims and methods to potential participants along with privacy, confidentiality, and the right to withdraw at any time before obtaining written consent to participate.

**Data analysis**

To analyze the data and test the hypotheses, several statistical tools were employed. Statistical Package for Social Science (SPSS) (6) Version 21.0 was used with the following techniques:

1. Reliability Test for the questions of the questionnaire by using: (A) Virtual Honesty Test; and (B) Cronbach’s Alpha

2. Descriptive Statistics Methods: to describe the characters of the sample of the study.

**3. RESULTS**

**Demographic Characteristics of Participants**

Of the 358 questionnaires distributed, 327 were returned (response rate 91.3%). 17 questionnaires were incomplete and were excluded from analysis. Demographic characteristics of participants are given in (Table 1). Participants average age was 35.2, were predominately female 54.5%, were educated at the Bachelor level 47.4%, and had a mean of 44.5 years of nursing experience. The majority of participants were employed 67.7%.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Categories</th>
<th>Number</th>
<th>Frequency (%)</th>
<th>Mean(SD)</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>35.2</td>
<td>30-40 yrs</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>141</td>
<td>45.5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>169</td>
<td>54.5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Education level</td>
<td>Diploma</td>
<td>128</td>
<td>41.3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Bachelor</td>
<td>147</td>
<td>47.4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Master</td>
<td>17</td>
<td>5.5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Doctorate</td>
<td>15</td>
<td>4.8</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>3</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Years of nursing experience</td>
<td>-</td>
<td>-</td>
<td>44.5</td>
<td>-</td>
<td>5-10 yrs</td>
</tr>
<tr>
<td>Job</td>
<td>Employee</td>
<td>210</td>
<td>67.7</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Unit Head</td>
<td>61</td>
<td>19.7</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Section Head</td>
<td>29</td>
<td>9.4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>10</td>
<td>3.2</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Descriptive statistics for the 5 Quality Dimensions**

As it shown in Table (2)

1. The average of all phrases (3.30) with a standard deviation (1.13) and relative importance (%66). This shows that the majority of respondents agree with middle proportion of all phrases that measure the first axis of the (Tangibles)

2. The average of all phrases (3.52) with a standard deviation (0.94) and relative importance
This shows that the majority of respondents agree with the middle proportion of all phrases that measure the second axis (Reliability).

3. The average of all phrases (3.49) with a standard deviation (1.01) and relative importance (69.8%). This shows that the majority of respondents agree with the middle proportion of all phrases that measure third axis (Responsiveness).

4. The average of all phrases (3.60) with a standard deviation (1.11) and relative importance (72%). This shows that the majority of respondents agree with the middle proportion of all phrases that measure the fourth axis (Assurance).

5. The average of all phrases (3.55) with a standard deviation (1.06) and relative importance (71%). This shows that the majority of respondents agree with middle proportion of all phrases that measure the fifth axis (Empathy).

<table>
<thead>
<tr>
<th>The Quality Dimensions</th>
<th>Standard Deviation</th>
<th>Average</th>
<th>Relative</th>
<th>Disagree of Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangibles</td>
<td>1.13</td>
<td>3.30</td>
<td>66%</td>
<td>Middle</td>
</tr>
<tr>
<td>Reliability</td>
<td>0.94</td>
<td>3.52</td>
<td>70.4%</td>
<td>High</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>1.01</td>
<td>3.49</td>
<td>69.8%</td>
<td>Middle</td>
</tr>
<tr>
<td>Assurance</td>
<td>1.11</td>
<td>3.60</td>
<td>72%</td>
<td>High</td>
</tr>
<tr>
<td>Empathy</td>
<td>1.06</td>
<td>3.55</td>
<td>71%</td>
<td>High</td>
</tr>
</tbody>
</table>

### 4. DISCUSSION

**First Hypothesis**

There is a positive relationship between the quality of health services dimension (Tangibility, Reliability, Empathy, Responsiveness, and Assurance) and the patient's satisfaction. From this hypothesis, we derived the following sub-hypotheses:

1. First sub-hypothesis: There is a positive relationship between the dimension Tangibility of health services and the patient's satisfaction.
2. Second sub-hypothesis: There is a positive relationship between the dimension Reliability of health services and the patient's satisfaction.
3. Third sub-hypothesis: There is a positive relationship between the dimension Empathy of health services and the patient's satisfaction.
4. Fourth sub-hypothesis: There is a positive relationship between the dimension Responsiveness of health services and the patient's satisfaction.
5. Fifth sub-hypothesis: There is a positive relationship between the dimension Assurance of health services and the patient's satisfaction.

**Second Hypothesis**

There is a relationship between the demographic variables such as gender, age, the level of education and nurses perception of quality of health services provided.

**First sub-hypothesis**

There is a positive relationship between the dimension Tangibility of health services and the patient’s satisfaction.

To affirm this hypothesis the study used a simple regression model for investigating the causal relationship between the independent variable (patients satisfaction) and the dependent variable (Tangibility of health services).

The following table shows the results were obtained:
Table 3 showed the following:

1. The coefficient (R)= (0.10) and this calculated value indicate there is a positive relationship between (Tangibility of health services) and (patients satisfaction).
2. The coefficient of determination R²=(0.01) which gives the total variation in (patients satisfaction) explained by the (Tangibility of health services) this result indicate that is more than (1%) of the changes in (patients satisfaction) were explained by the (Tangibility of health services).
3. The coefficient (B=0.02) this result indicate that is positively influenced by (Tangibility of health services).
4. T. value was (1.77) with sig.(0.077) and F. value (3.14) with sig.(0.077) indicating that the coefficient is statistically insignificant at 5%, this indicates that there was no causal relationship between (Tangibility of health services) and (patients satisfaction).

Conclusion: the results revealed a strong evidence to accept the null hypotheses; these results indicate: No relationship between (Tangibility of health services) and (patients satisfaction).

Second sub-hypothesis

There is a positive relationship between the dimension Reliability of health services and the patient's satisfaction.
To affirm this hypothesis the study used simple regression model for investigating the causal relationship between the independent variable (patients satisfaction) and the dependent variable (dimension Reliability of health services).
The following table shows the results were obtained:

Table 4 showed the following:

1. The coefficient (R)= (0.28) and this calculated value indicate there is a positive relationship between (dimension Reliability of health services) and (patients satisfaction).
2. The coefficient of determination R²=0.08 which gives the total variation in (patients satisfaction) explained by the (dimension Reliability of health services) this result indicates that is more than (8%) of the changes in (patients satisfaction) were explained by the (dimension Reliability of health services).
3. The coefficient (B=0.04) this result indicate that is positively influenced by (dimension Reliability of health services).
4. T. value is (5.05) with sig (0.000) and F. value (25.5) with sig (0.000) indicating that the coefficient is statistically significant at 5%, this indicates that there is a causal relationship between (dimension Reliability of health services) and (patients satisfaction).

Conclusion: the results revealed strong evidence to reject the null hypotheses and to accept the alternative hypotheses; these results indicate the existing relationship between (dimension Reliability of health services) and (patients satisfaction).

Third sub-hypothesis

There is a positive relationship between the dimension Empathy of health services and the patient's satisfaction.
To affirm this hypothesis the study used a simple regression model for investigating the causal relationship between the independent variable (patients satisfaction) and the dependent variable (dimension Empathy of health services).
The following table shows the results were obtained:
Table 5: model results

<table>
<thead>
<tr>
<th>Variables</th>
<th>Beta coefficient</th>
<th>T .values</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>0.07</td>
<td>6.18</td>
<td>0.000*</td>
</tr>
<tr>
<td>R^2</td>
<td>0.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>38.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Significant levels: 0.05

Table 5 showed the following:

1. The coefficient (R)= (0.33) and this calculated value indicate there is a positive relationship between (the dimension Empathy of health services) and (patients satisfaction).
2. The coefficient of determination R^2=(0.11) which gives the total variation in (patients satisfaction) explained by the (the dimension Empathy of health services) this result indicate that is more than (11%) of the changes in (patients satisfaction) were explained by the (the dimension Empathy of health services).
3. The coefficient (B=0.07) this result indicate that is positively influenced by (the dimension Empathy of health services).
4. T. value is (6.81) with sig(0.000 ) and F. value(38.3) with sig(0.000) indicating that the coefficient is statistically significant at 5%, this indicates that there is a causal relationship between (the dimension Empathy of health services) and (patients satisfaction).

Conclusion: the results revealed a strong evidence to reject the null hypotheses and to accept the alternative hypotheses; these results indicate the existing relationship between (the dimension Empathy of health services) and (patients satisfaction).

Fourth sub-hypothesis
There is a positive relationship between the dimension Responsiveness of health services and the patient's satisfaction. To affirm this hypothesis the study used a simple regression model for investigating the causal relationship between the independent variable (patients satisfaction) and the dependent variable (Responsiveness of health services).
The following table shows the results were obtained:

Table 6: model results

<table>
<thead>
<tr>
<th>Variables</th>
<th>Beta coefficient</th>
<th>T .values</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>0.04</td>
<td>4.98</td>
<td>0.000*</td>
</tr>
<tr>
<td>R^2</td>
<td>0.27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R^2</td>
<td>0.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>24.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Significant levels: 0.05

Table 6 showed the following:

1. The coefficient (R)= (0.27) and this calculated value indicate there is a positive relationship between (Responsiveness of health services) and (patients satisfaction).
2. The coefficient of determination R^2=(0.08) which gives the total variation in (patients satisfaction) explained by the (Responsiveness of health services) this result indicate that is more than (8%) of the changes in (patients satisfaction) were explained by the (Responsiveness of health services).
3. The coefficient (B=0.04) this result indicate that is positively influenced by (Responsiveness of health services).
4. T. value is (4.98) with sig (0.000 ) and F. value (24.8) with sig (0.000) indicating that the coefficient is statistically significant at 5%, this indicates that there is a causal relationship between (Responsiveness of health services) and (patients satisfaction).

Conclusion: the results revealed a strong evidence to reject the null hypotheses and to accept the alternative hypotheses; these results indicate the existing relationship between (Responsiveness of health services) and (patients satisfaction).

Fifth sub-hypothesis
There is a positive relationship between the dimension Assurance of health services and the patient's satisfaction. To affirm this hypothesis the study used a simple regression model for investigating the causal relationship between the independent variable (patients satisfaction) and the dependent variable (Assurance of health services).
The following table shows the results were obtained:
Table 7: model results

<table>
<thead>
<tr>
<th>Variables</th>
<th>Beta coefficient</th>
<th>T values</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.04</td>
<td>5.30</td>
<td>0.000*</td>
</tr>
<tr>
<td>R</td>
<td>0.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>0.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>28.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Significant levels: 0.05

Table 7 showed the following:

1. The coefficient (R)= (0.29) and this calculated value indicate there is a positive relationship between (the dimension Assurance of health services) and (patients satisfaction).
2. The coefficient of determination R²=(0.09) which gives the total variation in (patients satisfaction) explained by (the dimension Assurance of health services) this result indicate that is more than (9%) of the changes in (patients satisfaction) were explained by (the dimension Assurance of health services).
3. The coefficient (B=0.04) this result indicate that is positively influenced by (the dimension Assurance of health services).
4. T. value is (5.30) with sig (0.000) and F. value(28.1) with sig (0.000) indicating that the coefficient is statistically significant at 5%, this indicates that there is a causal relationship between (the dimension Assurance of health services).

Conclusion: the results revealed a strong evidence to reject the null hypotheses and to accept the alternative hypotheses; these results indicate the existing relationship between (the dimension Assurance of health services) and (patients satisfaction).

Table 8: Summary of Hypothesis Testing

<table>
<thead>
<tr>
<th>No.</th>
<th>Statement of the hypothesis</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>There is a positive relationship between the quality of health services dimension (Tangibility, Reliability, Empathy, Responsiveness, and Assurance) and the patient's satisfaction.</td>
<td></td>
</tr>
<tr>
<td>H1.a1</td>
<td>There is a positive relationship between the dimension Tangibility of health services and the patient's satisfaction</td>
<td>Rejected</td>
</tr>
<tr>
<td>H1.a2</td>
<td>There is a positive relationship between the dimension Reliability of health services and the patient's satisfaction</td>
<td>Accepted</td>
</tr>
<tr>
<td>H1.a3</td>
<td>There is a positive relationship between the dimension Empathy of health services and the patient's satisfaction</td>
<td>Accepted</td>
</tr>
<tr>
<td>H1.a4</td>
<td>There is a positive relationship between the dimension Responsiveness of health services and the patient's satisfaction</td>
<td>Accepted</td>
</tr>
<tr>
<td>H1.a5</td>
<td>There is a positive relationship between the dimension Assurance of health services and the patient's satisfaction</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Second Hypothesis

There is a relationship between the demographic variables such as gender, age, the level of education and nurses’ perception of quality of health services provided.

In this section, the researcher tried to find out the impact of demographics on others related research factors on the adoption of the quality of health services provided, demographics which should be investigated on that are gender, age, education. This study will help us to understand the different viewpoints of respondents on adoption of the quality of health services provided with different demographic characteristics. The T-test was used to consider the effect of gender, and one-way ANOVA (analysis of variance) to analyze the differences in answers in relation to the respondents’ age and education.
To examine the impact of demographic on the quality of health services provided following hypothesis was tested:

- H1: gender has considering impact on adoption of quality of health services provided
- H2: Age has considering the impact on the adoption of the quality of health services provided.
- H3: Education has considering the impact on the adoption of the quality of health services provided.

**H1; Gender has considering the impact on the adoption of the quality of health services provided:**
To test this hypothesis using independent T-test table below shows the results of group mean and significance level for gender, p-value rank is compared by sig the accepted level is where p-value less than 0.05 accepted sig level will be shown by different color.

<table>
<thead>
<tr>
<th>Factors</th>
<th>mean</th>
<th>Std.</th>
<th>mean</th>
<th>Std.</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/ Tangibles</td>
<td>3.32</td>
<td>1.19</td>
<td>3.39</td>
<td>1.14</td>
<td>0.465</td>
<td>0.643</td>
</tr>
<tr>
<td>2/ Reliability</td>
<td>3.22</td>
<td>1.01</td>
<td>3.42</td>
<td>0.89</td>
<td>1.71</td>
<td>0.089</td>
</tr>
<tr>
<td>3/Responsiveness</td>
<td>3.44</td>
<td>1.12</td>
<td>3.68</td>
<td>1.10</td>
<td>1.86</td>
<td>0.063</td>
</tr>
<tr>
<td>4/ Assurance</td>
<td>3.43</td>
<td>1.07</td>
<td>3.66</td>
<td>1.18</td>
<td>1.74</td>
<td>0.084</td>
</tr>
<tr>
<td>5/ Empathy</td>
<td>2.82</td>
<td>1.20</td>
<td>2.88</td>
<td>0.96</td>
<td>0.507</td>
<td>0.613</td>
</tr>
</tbody>
</table>

As we see in Table (9) significant level for quality of health services provided are greater than 0.05 the results revealed a strong evidence to accept the null hypotheses. Therefore gender has not effective impact on quality of health services provided for all factors (Tangibles, Reliability. Responsiveness, Assurance, Empathy).

**H2; age has considering the impact on the adoption of the quality of health services provided:**
To test this hypothesis one-way ANOVA test help to examine on mean differences between age groups and compare each group views on extracted adoption factors. the accepted level for ANOVA test is P-value less than (0.05).

<table>
<thead>
<tr>
<th>Factors</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/ Tangibles</td>
<td>1.48</td>
<td>0.218</td>
</tr>
<tr>
<td>2/ Reliability</td>
<td>1.15</td>
<td>0.325</td>
</tr>
<tr>
<td>3/Responsiveness</td>
<td>0.505</td>
<td>0.679</td>
</tr>
<tr>
<td>4/ Assurance</td>
<td>0.901</td>
<td>0.441</td>
</tr>
<tr>
<td>5/ Empathy</td>
<td>1.03</td>
<td>0.392</td>
</tr>
</tbody>
</table>

As we see in Table (10) significant level for quality of health services provided in different group of age are greater than 0.05 in factors (Tangibles, Reliability. Responsiveness, Assurance, Empathy), the results revealed a strong evidence to accept null hypotheses; (there are no differences between age category of respondents).

**H3; Education has considering the impact on the adoption of the quality of health services provided:**

One-way ANOVA test was used to help to examine the mean differences between education characteristic. Since education has been divided into five categories; the accepted level for ANOVA test is P-value less than (0.05).

H0; there are no differences between education category of respondents.
H1; there are differences between education category of respondents.

Table 11 shows one-way ANOVA test result for all research factors according to different groups of respondents. The significant values, which were accepted for hypotheses shown in different color (p-value less than 0.05)

<table>
<thead>
<tr>
<th>Factors</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/ Tangibles</td>
<td>1.12</td>
<td>0.344</td>
</tr>
<tr>
<td>2/ Reliability</td>
<td>1.18</td>
<td>0.111</td>
</tr>
<tr>
<td>3/ Responsiveness</td>
<td>1.43</td>
<td>0.272</td>
</tr>
<tr>
<td>4/ Assurance</td>
<td>1.37</td>
<td>0.244</td>
</tr>
<tr>
<td>5/ Empathy</td>
<td>1.54</td>
<td>0.249</td>
</tr>
</tbody>
</table>

As it shows in table 11 significant level for quality of health services provided in different group of education are greater than 0.05 in factors (Tangibles, Reliability, Responsiveness, Assurance, Empathy), the results revealed a strong evidence to accept null hypotheses, (; there is no difference between age category of respondents).

Results of hypotheses

- **First Hypothesis**
  There is a positive relationship between the quality of health services dimension (Tangibility, Reliability, Empathy, Responsiveness, and Assurance) and the patient's satisfaction.

Conclusion:

1. The results revealed a strong evidence to accept the null hypotheses; these results indicate No relationship between (Tangibility of health services) and (patients satisfaction).

2. The results revealed strong evidence to reject the null hypotheses and to accept the alternative hypotheses; these results indicate the existing relationship between (the other 4th quality of health services dimension (Reliability, Empathy, Responsiveness, and Assurance) and the patient's satisfaction).

- **Second Hypothesis**
  There is a relationship between, demographic variables such as gender, age, the level of education and nurses, patients’ perception of quality of health services provided.

1. Gender has not effective impact on quality of health services provided for all factors (Tangibles, Reliability, Responsiveness, Assurance, Empathy).

2. Age has no effective impact on quality of health services provided for all factors (Tangibles, Reliability, Responsiveness, Assurance, Empathy) from the patients’ perception. As for the nursing perception, the study has shown that there is a disparity in the nursing perception of the five quality service’s dimensions due to the age variable

3. Education has not effective impact on quality of health services provided for all factors (Tangibles, Reliability, Responsiveness, Assurance, Empathy).

5. CONCLUSION

In this part, Researcher was present the most important conclusions that he has reached through his study of the impact of the application of health services quality dimensions on patients’ satisfaction. The study aimed to raise a number of questions. It also provided hypotheses related to the nature of the impact of the variables of the study. It reached several results that contributed to solving the problem of the study answering the questions and hypotheses. The study here tried to refer to the most prominent results and their conclusion.

Results of describing the characteristics of the study sample are as follows

1. The number of females in the study sample, which is 54.5% is higher than that of males, which is 45.5%.

2. The study was collected among respondents from different educational levels as well as experiences.

3. The highest percentage of respondents aged between 30 to 40 years, representing 39% of the total respondents.

4. The study showed that satisfaction with the quality of health services provided is 58.7%, which is higher than the dissatisfaction percentage 41.3%.

5. The trends of the study sample for the quality of health services were influenced by the age variable only, while the other demographic variables, such as gender, scientific qualification, did not affect the trend.

**Results of analysis of the member's responses**

1. The majority of the sample agree that (The Hospital leaders ensure that the staff are neat appearing and dressing appropriately and consistent with the nature of services provided) where the proportion is (62.6)%
2. The majority of the sample agree that (The Hospital leaders ensure that patients' information and their health condition are documented or computerized accurately) where the proportion is (72.6)%
3. The majority of the sample agree that (The Hospital staff always help the patients.) where the proportion is (63.5)%
4. The majority of the sample agree that (Excellence is found in the performance of the Hospital staff.) where the proportion is (63.9)%
5. The majority of the sample agree that (The Hospital staff are aware of the patients' needs) where the proportion is (68.1)%

**Results of interviews**

The researcher conducted an open interview with the senior leadership (the decision makers), which are the general managers, medical directors, as well as directors of quality departments and heads of the medical departments in the study hospitals. The majority of them agreed on the following:

1. Lack of understanding the quality of health services makes it difficult to implement them.
2. Lack of medical staff is one of the most difficult difficulties faced by the departments in order to adhere to high quality in the services provided.
3. Lack of effective quality unit for improvement in hospitals. Instead, we find quality unit aimed at tracking employees mistakes.

**Conclusion**

It is shown from the answers to the questionnaire phrases answered by the sample in the subjected hospitals and their evaluation of the quality of services provided based on the quality dimensions and their impact on patients satisfaction that all dimensions of quality are of high importance. This means that applying the health services quality dimensions positively affects the patient's satisfaction, according to the view of the study sample. In other words, increasing the interest in understanding and applying these dimensions lead to improving the quality of health services provided and fulfilling the patient's satisfaction. We conclude at the end of our study of the impact of the application of health services quality dimensions on patients satisfaction in Amman Governorate the following:

1. The analysis of the questionnaire showed that it is highly reliable and stable and can be used as an accreditation tool to measure the quality of services provided.
2. The study showed the importance of understanding and applying health services quality dimensions to improve the quality of services provided.
3. The study showed that there is a relationship between the application of health service quality dimensions and patients satisfaction, except for the dimension Tangibility, which showed a lack of relationship between the nursing perception only.
4. The results of the study showed a high level of satisfaction in patients and nurses with the quality of health services in the subjected hospitals. This indicates that the administration of the hospitals is interested in quality as a key factor in satisfaction.
5. The results of the study showed that the demographic variables (age, sex, and educational level) did not affect the awareness of patients and nursing in terms of applying the health services quality dimensions on patients satisfaction; however, the age variable indicated a disparity between the nursing perception.

**6. RECOMMENDATIONS**

From the results of this study derived from the theoretical framework of the study as well as the results obtained from the statistical analysis of the data and personal interviews, the following recommendations were reached:

1. The higher management in governmental hospitals must pay attention to the quality of health services through appointing quality coordinators in each department of the hospital to...
observe the application of quality dimensions standards and raise the level of knowledge of individuals in understanding and applying these dimensions to different departments in coordination with quality management.

2. To increase the level of services by measuring the satisfaction of the services recipient, listening to their complaints and achieving their ambitions and expectations

3. To work on forming a committee from all health sectors in the kingdom aiming to coordinate the understanding and application of health services quality dimensions among the providers and recipients of health services.

4. To work on continuous assessment of patient satisfaction after applying health services quality dimensions.

5. The researcher recommends that this study should be reconducted to include the private sectors in the Kingdom.

6. The researcher recommends that the current study should be reconducted to support or deny the findings of the age variable and its impact on the awareness of the health services quality dimensions and its impact on patients satisfaction.

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