The Impact of Application of Health Services Quality Dimensions on Customer Satisfaction in Jordan Governmental Hospitals (Amman Governorate): Perceptions of Patients

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ABSTRACT

This study aimed to measure the Impact of Health Service Quality Dimensions on Customer Satisfaction in Jordan governmental hospitals (Amman governorate): Perceptions of Patients.

To attain the aim of this study a random sample of inpatients was chosen to conduct this study within. The sample consisted of 309 inpatients. To determine the impact of Health Service Quality Dimensions on Customer 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 use 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 84%. The result revealed that:

1) There is an Impact of application of health service quality dimensions on customers’ satisfaction.
2) There is no impact of the demographic variables on the patients’ perceptions of the effect of the application of Health Service Quality Dimensions on patients’ Satisfaction.

Keywords: Health Services, Quality Dimensions, Customer Satisfaction

1. INTRODUCTION

Many organizations (including hospitals) seek to improve their services by using a variety of strategies in order to improve their level of performance, but the most of the delivery of health care services have created a climate where decision makers at all levels are seeking objective data for evaluating healthcare organizations. In the majority of countries, the quality of patients care provided through the health care delivery system has become the center of attention. Since the quality of care is a crucial factor in health care, initiatives to address quality of health care have become a worldwide phenomenon. Quality in health care has been defined as meeting the needs and exceeding the expectations of those we serve by delivering all and only the care that the patient and family needs(2). Important of
these strategies is the orientation towards quality in organizations and hospitals and then work on measurement to ensure that the services reach the degree of excellence. The attention to quality is not a new issue, the new issue lies in the process of using scientific methods and statistical techniques to apply for quality management programs, as well as in the development of appropriate standards, evaluating performance levels, maintaining high level of administrative and technical performance through implementing quality management programs.(3)

This study was a focus on measuring the impact of the application of health services quality dimensions on customer satisfaction in Jordan governmental hospitals (Amman governorate): Perceptions of Patients.

Previous studies used "Servqual and Model of Services Quality Gaps"

Study of Na‘asan et al. (2007)(4) conducted a cross-sectional study to measure the perceptions of customers regarding the quality of health services and their impact on their satisfaction and apply that to the Syrian university hospitals. This study indicated that the quality of health services began taking a fast curve in terms of better performance in order to achieve the continuity of hospitals, and that there is a positive relationship between the dimensions of the quality of health services and the patient satisfaction in the Syrian hospitals with a focus on the dimensions that best achieve the degree of satisfaction of the patient.

In Iraq, AL Jazari (2010)(5) conducted a cross-sectional study to measures health service quality in AL-Faiha general hospital. A total of 459 registered nurses, 161 doctors, and 350 patients participated in this study. SERVQUAL scale, which adapted by Parasuraman, Zeithaml, and Berry in 1985, 1988, was used. The results of this study revealed that there was clear weakness in the level of health service quality, which provided to patients, in addition, there is some difference in importance which dependent from research sample to any variables from a mean variable. AL-Tawiil, et al. (2010)(5) conducted a study to shed light on the possibility of establishing the dimensions of the quality of health services in selected hospitals in the province of Nineveh, where the hospital is considered a service organization responsible for providing integrated health services such as diagnosis, therapies, education, and research. The hospital, as an administrative system, uses human, technical and financial resources and its size and values are increasing with the technical and therapeutic progress.

The demand for the health services is increasing due to multiple factors, such as wars and their effects and the increase in population, road accidents and extent of pollution, and industrial accidents. Accordingly, the challenge in front of the hospital's management and staff lies in providing health services in a distinctive quality; the quality of health services is a very important element in the management of hospitals, and this is linked to the most important aspect of human life, health; therefore, we must stand and take a good care of this human requirement in order to establish the dimensions of the quality of health services in our hospitals. Through the theoretical vision and the operational application in these hospitals, the researchers see that there is a gap at the level of the concept and dimensions of the quality of health services. Generally, the study tried to answer the following questions: 1. Do workers in the hospitals have a clear knowledge about the concept, objectives, and dimensions of the quality of health services? 2. Are there dimensions of the quality of health services in hospitals under discussion? 3. Do hospitals under discussion vary in the possibility of establishing the dimensions of the quality of health services? The study found a group of the most important conclusions: 1. there was a variation in the agreement among respondents regarding the existence of the dimensions of the quality of health service in hospitals under discussion, and 2. there was a variation in the response of hospitals under discussion with the dimensions of the quality of health services.

Diab (2012)(6) This study aims to measure the dimensions of the quality of medical services provided in the public hospitals of Jordan from the perspective of patients and staff; the study population consisted of all the hospitals of the Ministry of Health which amounted to (30) distributed in the various twelve provinces of Jordan; The study sample was randomly selected from the patients and staff at three hospitals in the north, center, and south of the kingdom; two questionnaires were used: one for the staff and the other for the patients (as the main tool for data collection for this study which is fit with the objectives and questions of the study; (300) questionnaires were distributed to the patients and (250) ones were distributed to the employees and that 90% were retrieved from the total of the questionnaires. Furthermore, the study used arithmetic means, T-test in addition to the analysis of variance to test the hypotheses. The study found many results, most important of which is: the governmental hospitals have the dimensions of the medical service such as

reliability, concreteness, sympathy, and security except for response from the viewpoint of workers in the hospitals taking into account that this application is varied among the five dimensions. The assessment of patients for the same dimensions was converged with respect to all the dimensions except for response and sympathy. Also, the study did not show any differences in the assessment of patients for the dimensions of the quality due to any of the demographic variables.

**Background information on the field research (hospitals)**

Jordan has an advanced health care system, although services remain highly concentrated in Amman. Government figures have put total health spending in 2002 at some 7.5 percent of gross domestic product (GDP), while international health organizations place the figure even higher, at approximately 9.3 percent of GDP. Jordan was ranked by the World Bank to be the number one healthcare services provider in the region and among the top 5 in the world, as well as being the top medical tourism destination in the Middle East and North Africa. The country’s health care system is divided between public and private institutions. In the public sector, the Ministry of Health operates 1245 primary health care centers and 27 hospitals, accounting for 37 percent of all hospital beds in the country; the military’s Royal Medical Services runs 11 hospitals, providing 24 percent of all beds; and the Jordan University Hospital accounts for 3 percent of total beds in the country. The private sector provides 36 percent of all hospital beds, distributed among 56 hospitals(7). In order to measure the quality of health services in Jordan governmental hospital, the researcher chose two governmental hospitals in Amman: Al-Bashir and Dr.Jameel Al-Totantji hospitals.

2. **METHODS**

**Research design**

A descriptive, cross-sectional design will be used to measure and assess health services quality in two hospitals in Jordan; a survey design provides a quantitative description of trends, attitudes or opinions of a population by studying a sample of that population. The survey is a non-experimental, descriptive research design, which can be a powerful and useful way to collect information(8).

**Research population and samples**

This study was conducted in two governmental hospitals in Amman; Al-Bashir Hospital and Dr. Jameel Al-Totantji Hospital. Sample from all inpatients in the target hospitals was invited to participate in this study. Specific inclusion criteria for inpatient are, able to participate cognitively. The sample size of this study (n=372) which was calculated according to the site for sampling calculation -Raosoft(9). The confidence rate is 95% and the accuracy rate 5%.

A total of 255 copies was distributed to the patients in Al-Bashir Hospital, 235 questionnaires were received (92.2% response rate), and 11 copies were excluded with a total of (224) were relied questionnaires. A total of 85 copies was distributed to the patients in Dr. Jameel Al-Totantji Hospital, 85 questionnaires were received with no exclusion. The total relied questionnaires from the two hospitals were (n=224+85=309).

**Development of questionnaire (research tool)**

This step involves the conversion of the research objectives into information required to obtain the necessary output of the questionnaire; it involves formatting the clearly statements. All the research questions in this study had been converted into the relevant questions and clearly stated .Most of the respondents were familiar with the Arabic language. Therefore, the instrument required translation to Arabic language and then to the English language again.

The cover letter was attached to the first part of the questionnaire which explains the objective of the study and ensured the confidentiality of the information and part (2) includes three sections:

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

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

1) Gender .
2) Age.

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3) Job.
4) Years of experience in the current Hospital
5) Educational Qualification

section (3): measures the dependent variable (customer satisfaction).

The degree of potential responses measured by Likert Scale Pentathlon. In the distribution of weight to the respondents” answer which is distributed from the top weight give (5) degrees and represents the answer (strongly agree) to its lower weight given (1) degree and represents the answer (strongly disagree) and in between three weights. The purpose for that is to allow respondents to choose the exact answer to the discretion of the respondents. Table (1) shows the degree to approve the measure.

<table>
<thead>
<tr>
<th>Approved Degree</th>
<th>Relative weight</th>
<th>%</th>
<th>Statistical Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>5</td>
<td>Greater than 80%</td>
<td>Very high degree of Approval</td>
</tr>
<tr>
<td>Agree</td>
<td>4</td>
<td>70 – 80%</td>
<td>High degree of Approval</td>
</tr>
<tr>
<td>Neutral</td>
<td>3</td>
<td>50 – 69%</td>
<td>Medium</td>
</tr>
<tr>
<td>Disagree</td>
<td>2</td>
<td>20 – 49%</td>
<td>Low approval</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>1</td>
<td>Less than 20%</td>
<td>Nonexistent degree of approval</td>
</tr>
</tbody>
</table>

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

- Reliability Test for the questions of the questionnaire by using:
  1. Virtual Honesty Test: to ensure that the phrases are measure specific meaning exactly based on the response of the sample of the study.
  2. Cronbach’s Alpha: it was used to measure the internal Stability for the phrases of the questionnaire.

- Descriptive Statistics Methods: to describe the characters of the sample of the study using the following tools:-
  1. The Weighted Mean: it is used to describe the opinions of the sample about the hypotheses of the study as it is one of the measures of central tendency.
  2. Standard Deviation: it is used to measure the dispersion in the result to the arithmetic mean.
  3. III. Person correlation was used to see the degree of correlation between the variables.
  4. Simple Liner Regression was used to test the hypothesis.

- Reliability of the patient’s questionnaire
The results of the reliability analysis summarized in Table (4/7). Confirmed that all the scales display a satisfactory level of reliability (Cronbach’s alpha exceed the minimum value of 0.6). Therefore, it can be concluded that the measures have an acceptable level of reliability.

Table (2): Reliability Test of the patient’s questionnaire

<table>
<thead>
<tr>
<th>Variables</th>
<th>Cronbach,s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/ Tangibles</td>
<td>0.75</td>
</tr>
<tr>
<td>2/ Reliability</td>
<td>0.80</td>
</tr>
<tr>
<td>3/Responsiveness</td>
<td>0.91</td>
</tr>
<tr>
<td>4/ Assurance</td>
<td>0.84</td>
</tr>
<tr>
<td>5/ Empathy</td>
<td>0.82</td>
</tr>
</tbody>
</table>

3. TESTING HYPOTHESIS
This part aims to analyze and present the results views of the study sample and test the hypotheses using statistical methods identified in the first research in the paragraph of statistical processing used. This research was discussed as follows:

- Characteristics of the sample of the study.
- Quality service dimension Analysis and evaluation
- Hypothesis testing and presentation of the results.

Characteristics of the sample of the study
It consists of the following characteristics:

1) Distribution of the sample according to Gender:
As it shows from the table (3) that the majority of the sample are females where they accounted (50.2) %,
and the males are (49.8)% of the total sample of the study.

Table (3): Frequency Distribution of the Sample

<table>
<thead>
<tr>
<th>Issue</th>
<th>Number</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>154</td>
<td>49.8</td>
</tr>
<tr>
<td>Female</td>
<td>155</td>
<td>50.2</td>
</tr>
<tr>
<td>Total</td>
<td>309</td>
<td>100</td>
</tr>
</tbody>
</table>

2) Distribution of the sample according to age:
As it shows from the table (4) that the majority of the sample is aged (30 – less than 40 years) and they are (39.8)% of the sample, while the proportion of respondents aged (40 – less than 50 years) (32.7)% of the sample and the aged the respondents 50 years or more are only (9.1)% as lower ratio of the sample.

Table (4): Frequency Distribution of the Sample according to age

<table>
<thead>
<tr>
<th>Issue</th>
<th>Number</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 30 years</td>
<td>57</td>
<td>18.4</td>
</tr>
<tr>
<td>30 – less than 40 years</td>
<td>23</td>
<td>39.8</td>
</tr>
<tr>
<td>40 – less than 50 years</td>
<td>101</td>
<td>32.7</td>
</tr>
<tr>
<td>50 years or more</td>
<td>28</td>
<td>9.1</td>
</tr>
<tr>
<td>Total</td>
<td>309</td>
<td>100</td>
</tr>
</tbody>
</table>

3) Distribution of the sample according to Length of stay in the Hospital:
As it shows from the table (5) that the majority of the sample Length of stay in the Hospital (3 – less than 10 days) and they are (38.5)% of the sample, while the proportion of sample stay in the Hospital (10 – less than 30 days) (32.4)% and the sample stay in the Hospital (a month or more) are only (7.4)%.

Table (5): Distribution of the sample according to length of stay in the Hospital

<table>
<thead>
<tr>
<th>Issue</th>
<th>Number</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than three days</td>
<td>67</td>
<td>21.7</td>
</tr>
<tr>
<td>3 – less than ten days</td>
<td>119</td>
<td>38.5</td>
</tr>
<tr>
<td>10 – less than 30 a month or more</td>
<td>100</td>
<td>32.4</td>
</tr>
<tr>
<td>Total</td>
<td>309</td>
<td>100</td>
</tr>
</tbody>
</table>

4) Distribution of the sample according to Level of Education:
As it shows from table (6) Concerning for the respondents educational level that fills up the questionnaires, majority of them were High school graduate account for (30.4%), followed by the level of Diploma (29.8%); and respectively as lower ratios; whereas, respondents who have masters were account for (5.5%). While those with the level of the others were account for (1%).

Table (6): Distribution of the Sample according to Level of Education

<table>
<thead>
<tr>
<th>Qualifications</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than high school graduate</td>
<td>52</td>
<td>16.8</td>
</tr>
<tr>
<td>High school graduate</td>
<td>94</td>
<td>30.4</td>
</tr>
<tr>
<td>Diploma</td>
<td>92</td>
<td>29.8</td>
</tr>
<tr>
<td>Bachelor's degree</td>
<td>51</td>
<td>16.5</td>
</tr>
<tr>
<td>Master's degree</td>
<td>17</td>
<td>5.5</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>309</td>
<td>100</td>
</tr>
</tbody>
</table>

5) Distribution of the sample according to Work:
As it shows from the table (7) that the majority of the sample Employee and they are (47.9)% of the sample, while the proportion of sample (do not work) (32.4)% and the sample (Freelance) are only (19.1)%.

Table (7): Frequency distribution according to work

<table>
<thead>
<tr>
<th>Work</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I do not work</td>
<td>100</td>
<td>32.4</td>
</tr>
<tr>
<td>Employee</td>
<td>148</td>
<td>47.9</td>
</tr>
<tr>
<td>Freelance</td>
<td>59</td>
<td>19.1</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>0.6</td>
</tr>
<tr>
<td>Total</td>
<td>309</td>
<td>100</td>
</tr>
</tbody>
</table>

6) Distribution of the sample according to (how satisfied are you with the quality of the healthcare services provided):
From the table (8)The majority of the sample satisfied with the quality of the healthcare services provided where the proportion is (64.4)% while the percentage of dissatisfied to that (35.6)%.
Table (8): Frequency distribution according to (how satisfied are you with the quality of the healthcare services provided)

<table>
<thead>
<tr>
<th>Satisfied</th>
<th>dissatisfied</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>199</td>
<td>110</td>
<td>309</td>
</tr>
<tr>
<td>64.4%</td>
<td>35.6%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Quality service dimension Analysis and evaluation

This part includes the analysis of the basic data for the study to discuss the hypotheses according to the following steps:

1. Relative Frequency Distribution of the answers for phrases of the Questionnaire: This step is done through a summary of the data in tables to illustrate every factor in figures and percentages for the phrases of the study.
2. Descriptive Statistics of Variables: It is done through estimation of the Mean Deviation and Standard Deviation for all axis of the study to show the direction of the study.
3. The discussion of the Study Hypothesis.

Relative Frequency Distribution of the answers for phrases of the Questionnaire

- The first axis: Tangibles:

From the table (9), we can see as follows:

Table (9): The Frequency Distribution for the Wording: Tangibles

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/ The Hospital needs to upgrade the devices and medical equipment being used currently.</td>
<td>36</td>
<td>61</td>
<td>78</td>
<td>100</td>
<td>34</td>
</tr>
<tr>
<td>2/ You think that the current patients' lobbies, waiting areas, and doctors and staff offices meet your expectations.</td>
<td>23</td>
<td>94</td>
<td>73</td>
<td>74</td>
<td>45</td>
</tr>
<tr>
<td>3/ The Hospital leaders ensure that the staff is neat appearing and dressing appropriately and consistent with the nature of services provided.</td>
<td>25</td>
<td>102</td>
<td>83</td>
<td>41</td>
<td>58</td>
</tr>
<tr>
<td>4/ You think that the Hospital leaders have provided the material supplies mentioned in points no. (1-3) within available resources.</td>
<td>47</td>
<td>94</td>
<td>71</td>
<td>57</td>
<td>40</td>
</tr>
</tbody>
</table>

- The second axis: Reliability:

From the table (10), we can see as follows:

A. The majority of the sample disagree that (The Hospital needs to upgrade the devices and medical equipment being used currently) where the proportion is (34.4)% while the percentage of agree to that (31.4)%, and those who did not show specific answers have accounted (25.2)%.
B. The majority of the sample agree that (You think that the current patients' lobbies, waiting areas, and doctors and staff offices meet your expectations) where the proportion is (38.5)% while the percentage of non – conformists to that (37.8)%, and those who did not show specific answers have accounted (26.9)%.
C. 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 (41.1)% while the percentage of non – conformists to that (32.1)%, and those who did not show specific answers have accounted (26.9)%.
D. The majority of the sample agree that (You think that the Hospital leaders have provided the material supplies mentioned in points no. (1-3) within available resources) where the proportion is (42.6)% while the percentage of non – conformists to that (31.3)%, and those who did not show specific answers have accounted (23)%.
and healthcare services) where the proportion is (43.7)% while the percentage of agree to that (33.3)% and those who did not show specific answers have accounted (23)%.

B. The majority of the sample agree that (The Hospital leaders are committed to their promises to the patients on providing a convenient environment) where the proportion is (36.6)% while the percentage of non-conformists to that (32)%, and those who did not show specific answers have accounted (31.4)%.

C. The majority of the sample disagree that (The Hospital leaders are committed to resolve patients complaints) where the proportion is (42.2)% while the percentage of agree to that (39.4)% and those who did not show specific answers have accounted (22.7)%.

D. The majority of the sample disagree that (The Hospital leaders ensure that the services are provided accurately and in time) where the proportion is (38.2)% while the percentage of agree to that (36.9)% and those who did not show specific answers have accounted (24.9)%.

E. The majority of the sample agree that (The patients rely on the skills of the medical staff in the Hospital) where the proportion is (38.5)% while the percentage of non-conformists to that (36.)%, and those who did not show specific answers have accounted (24.9)%.

F. 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 (43.1)% while the percentage of non-conformists to that (38.2)% and those who did not show specific answers have accounted (18.8)%.


<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/ The Hospital leaders are committed to their promises to the patients on providing treatment and healthcare services.</td>
<td>25 F</td>
<td>8.1 P%</td>
<td>78 F</td>
<td>25.2 P%</td>
<td>85 F</td>
</tr>
<tr>
<td>2/The Hospital leaders are committed to their promises to the patients on providing a convenient environment.</td>
<td>30 F</td>
<td>9.7 P%</td>
<td>83 F</td>
<td>26.9 P%</td>
<td>52 F</td>
</tr>
<tr>
<td>3/The Hospital leaders are committed to resolve patients complaints.</td>
<td>31 F</td>
<td>10 P%</td>
<td>77 F</td>
<td>24.9 P%</td>
<td>61 F</td>
</tr>
<tr>
<td>4/The Hospital leaders ensure that the services are provided accurately and on time.</td>
<td>43 F</td>
<td>13.9 P%</td>
<td>71 F</td>
<td>23 P%</td>
<td>80 F</td>
</tr>
<tr>
<td>.5/The patients rely on the skills of the medical staff in the Hospital.</td>
<td>35 F</td>
<td>11.3 P%</td>
<td>84 F</td>
<td>27.2 P%</td>
<td>65 F</td>
</tr>
<tr>
<td>6/The Hospital leaders ensure that patients' information and their health condition are documented or computerized accurately.</td>
<td>53 F</td>
<td>17.2 P%</td>
<td>80 F</td>
<td>25.9 P%</td>
<td>64 F</td>
</tr>
</tbody>
</table>

The third axis: Responsiveness:

From the table (11), we can see as follows:

A. The majority of the sample disagree that (The patients are informed about the time of service) where the proportion is (36.9)% while the percentage of non-conformists to that (29.7)% and those who did not show specific answers have accounted (33.3)%.

B. The majority of the sample agree that (It is unexpected for the patients to receive an instant service from the Hospital staff.) where the proportion is (39.2)% while the percentage of non-conformists to that (39.8)% and those who did not show specific answers have accounted (33.3)%.

C. The majority of the sample disagree that (The Hospital staff always help the patients.) where the proportion is (41.5)% while the percentage of agree to that (35.3)% and those who did not show specific answers have accounted (23.3)%. 
D. The majority of the sample agree that (The staff provide the services to the patients and respond to their requests immediately despite their busy schedule) where the proportion is (38.8)% while the percentage of non – conformists to that (34.6)%, and those who did not show specific answers have accounted (26.5)%.

Table (11): The Frequency Distribution For The Wording: Responsiveness

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/ The patients are informed about the time of service.</td>
<td>19 6.1</td>
<td>73 23.6</td>
<td>103 33.3</td>
<td>85 27.5</td>
<td>29 9.4</td>
</tr>
<tr>
<td>2/ It is unexpected for the patients to receive an instant service from the Hospital staff.</td>
<td>16 5.2</td>
<td>105 34</td>
<td>65 21</td>
<td>74 23.9</td>
<td>49 15.9</td>
</tr>
<tr>
<td>3/ The Hospital staff always help the patients.</td>
<td>25 8.1</td>
<td>84 27.2</td>
<td>72 23.3</td>
<td>53 17.2</td>
<td>75 24.3</td>
</tr>
<tr>
<td>4/ The staff provide the services to the patients and respond to their requests immediately despite their busy schedule.</td>
<td>63 20.4</td>
<td>57 18.4</td>
<td>82 26.5</td>
<td>55 17.8</td>
<td>52 16.8</td>
</tr>
</tbody>
</table>

- The fourth axis: Assurance:

From the table (12), we can see as follows:

A. The majority of the sample disagree that (The patients fully trust the Hospital staff.) where the proportion is (42.3)% while the percentage of agree to that (32)%, and those who did not show specific answers have accounted (26.6)%.

B. The majority of the sample agree that (The patient is reassured that he/she is in good hands with the Hospital staff) where the proportion is (42.4)% while the percentage of non – conformists to that (24.6)%, and those who did not show specific answers have accounted (33)%.

C. The majority of the sample disagree that (Credibility is found in the performance of the Hospital staff.) where the proportion is (42.7)% while the percentage of non – conformists to that (36.6)% and those who did not show specific answers have accounted (20.7)%.  

D. The majority of the sample agree that (Excellence is found in the performance of the Hospital staff.) where the proportion is (41.4)% while the percentage of non – conformists to that (32.3)% and those who did not show specific answers have accounted (226)%.

E. The majority of the sample agree that (The Hospital leaders support the staff to develop themselves) where the proportion is (41.8)% while the percentage of non – conformists to that (35.9)%, and those who did not show specific answers have accounted (22.3)%.

Table (12): The Frequency Distribution For The fourth axis: Assurance

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/ The patients fully trust the Hospital staff.</td>
<td>23 7.4</td>
<td>76 24.6</td>
<td>79 25.6</td>
<td>74 23.9</td>
<td>57 18.4</td>
</tr>
<tr>
<td>2/ The patient is reassured that he/she is in good hands with the Hospital staff.</td>
<td>33 10.7</td>
<td>98 31.7</td>
<td>102 33</td>
<td>43 13.9</td>
<td>33 10.7</td>
</tr>
<tr>
<td>3/ Credibility is found in the performance of the Hospital staff.</td>
<td>28 9.1</td>
<td>85 27.5</td>
<td>64 20.7</td>
<td>63 20.4</td>
<td>69 22.3</td>
</tr>
<tr>
<td>4/ Excellence is found in the performance of the Hospital staff.</td>
<td>46 14.9</td>
<td>82 26.5</td>
<td>81 26.2</td>
<td>60 19.4</td>
<td>40 12.9</td>
</tr>
<tr>
<td>5/ The Hospital leaders support the staff to develop themselves.</td>
<td>42 13.6</td>
<td>87 28.2</td>
<td>69 22.3</td>
<td>60 19.4</td>
<td>51 16.5</td>
</tr>
</tbody>
</table>

The fifths axis: Empathy:

From the table (13), we can see as follows:

A. The majority of the sample disagree that (The Hospital leaders give personal attention to the patients.) where the proportion is (43.3)% while the percentage of agree to that (19.1)% , and those who did not show specific answers have accounted (34.6)%.

B. The majority of the sample disagree that (The Hospital staff are able to give personal care services to the patients) where the proportion is (42.4)% while the percentage of agree to that (31.7)% , and those who did not show specific answers have accounted (25.9)%.

C. The majority of the sample agree that (The Hospital staff are aware of the patients' needs) where the proportion is (44.4)% while the percentage of non – conformists to that (31.7)% , and those who did not show specific answers have accounted (23.9)%.

D. The majority of the sample disagree that (The Medical and Hospital staff interact with the patients and treat them nicely and gently) where the proportion is (40.4)% while the percentage of agree to that (35.2)% , and those who did not show specific answers have accounted (24.3)%.

E. The majority of the sample disagree that (The Hospital leaders provide the best services available to the patients) where the proportion is (43.7)% while the percentage of conformists to that (33.3)% and those who did not show specific answers have accounted (23)%.

F. The majority of the sample disagree that (The Hospital leaders have convenient operating hours in accordance with the patients' needs) where the proportion is (40.1)% while the percentage of conformists to that (34.6)% and those who did not show specific answers have accounted (25.2)%.

Table (13): The Frequency Distribution For The fifths axis: Empathy

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/ The Hospital leaders give personal attention to the patients.</td>
<td>F</td>
<td>P %</td>
<td>F</td>
<td>P%</td>
<td>F</td>
</tr>
<tr>
<td>2/The Hospital staff are able to give personal care services to the patients.</td>
<td>7</td>
<td>2.3</td>
<td>52</td>
<td>16.8</td>
<td>107</td>
</tr>
<tr>
<td>3/The Hospital staff are aware of the patients' needs.</td>
<td>25</td>
<td>8.1</td>
<td>73</td>
<td>23.6</td>
<td>80</td>
</tr>
<tr>
<td>4/The Medical and Hospital staff interact with the patients and treat them nicely and gently.</td>
<td>45</td>
<td>14.6</td>
<td>92</td>
<td>29.8</td>
<td>74</td>
</tr>
<tr>
<td>5/The Hospital leaders provide the best services available to the patients.</td>
<td>44</td>
<td>14.2</td>
<td>65</td>
<td>21</td>
<td>75</td>
</tr>
<tr>
<td>6/The Hospital leaders have convenient operating hours in accordance with the patients' needs.</td>
<td>17</td>
<td>5.5</td>
<td>86</td>
<td>27.8</td>
<td>71</td>
</tr>
</tbody>
</table>

First hypothesis (H1)

There is a positive relationship between the dimensions (Tangibility Reliability, Empathy, Responsiveness, and Assurance) of health services and the customer satisfaction.

To affirm this hypothesis, the study used simple regression model for investigating the causal relationship between the independent variable (customer satisfaction) and the dependent variable (Tangibility, Reliability, Empathy, Responsiveness, and Assurance) of health services.

Table (14): 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 customer 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 customer satisfaction</td>
<td>Accepted</td>
</tr>
<tr>
<td>H1.a2</td>
<td>There is a positive relationship between the dimension Reliability of health services and the customer satisfaction</td>
<td>Accepted</td>
</tr>
<tr>
<td>H1a3</td>
<td>There is a positive relationship between the dimension Empathy of health services and the customer 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 customer 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 customer satisfaction</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Second Hypothesis (H2)

There is a relationship between the demographic variables such as gender, age, the level of education and nurses, patients’ perception of quality of health services provided. In this section try 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 helped us to understand the different viewpoints of respondents on adoption of the quality of health services provided with different demographic characteristics. In order to do that, I’m going to test sample T-test to consider the effect of gender, and also one-way ANOVA (analysis of variance) to analyze the differences in answers in relation to the respondents age, Education. To examine the impact of demographic on quality of health services provided following hypothesis was tested:

- H2 (1); Gender has considering impact on adoption of quality of health services provided
- H2 (2); Age has considering impact on the adoption of the quality of health services provided.
- H2 (3); Education has considering impact on the adoption of the quality of health services provided.

H2 (1); Gender has considering impact on adoption of quality of health services provided

To test this hypothesis use 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 was shown by different color; As it shows in the table (15), 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).

Table (15): T-test regarding gender

<table>
<thead>
<tr>
<th>Factors</th>
<th>Male</th>
<th>Female</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Std.</td>
<td>Mean</td>
<td>Std.</td>
</tr>
<tr>
<td>1/ Tangibles</td>
<td>2.93</td>
<td>1.14</td>
<td>2.83</td>
<td>1.23</td>
</tr>
<tr>
<td>2/ Reliability</td>
<td>2.85</td>
<td>1.24</td>
<td>2.78</td>
<td>1.19</td>
</tr>
<tr>
<td>3/ Responsiveness</td>
<td>2.93</td>
<td>1.03</td>
<td>2.85</td>
<td>1.08</td>
</tr>
<tr>
<td>4/ Assurance</td>
<td>2.75</td>
<td>1.20</td>
<td>2.81</td>
<td>1.23</td>
</tr>
<tr>
<td>5/ Empathy</td>
<td>2.58</td>
<td>0.98</td>
<td>2.55</td>
<td>1.09</td>
</tr>
</tbody>
</table>
H2 (2); Age has considering impact on adoption of 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 16 shows one-way ANOVA test result for all research factors according to different groups of respondents age. The significant values, which are accepted for hypotheses shown in different color (p-value less than 0.05)
As it shows in table (16) 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 is no differences between age category of respondents).

\begin{table}[h]
\centering
\begin{tabular}{|l|c|c|}
\hline
Factors & F & Sig \\
\hline
1/ Tangibles & 1.48 & 0.218 \\
\hline
2/ Reliability & 1.15 & 0.325 \\
\hline
3/Responsiveness & 0.505 & 0.679 \\
\hline
4/ Assurance & 0.901 & 0.441 \\
\hline
5/ Empathy & 1.03 & 0.392 \\
\hline
\end{tabular}
\caption{one–way ANOVA test result for groups of age}
\end{table}

H2 (3); Education has considering impact on adoption of quality of health services provided
To test this hypothesis one-way ANOVA test help to examine on mean differences between educations characteristic. Since education has been divided into five categories. The accepted level for ANOVA test is P-value less than (0.05).
Table 17 shows one-way ANOVA test result for all research factors according to different groups of respondents age. The significant values, which are accepted for hypotheses shown in different color (p-value less than 0.05).
As it shows in table (17) 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 differences between age category of respondents).

\begin{table}[h]
\centering
\begin{tabular}{|l|c|c|}
\hline
Factors & F & Sig \\
\hline
1/ Tangibles & 1.33 & 0.263 \\
\hline
2/ Reliability & 1.37 & 0.244 \\
\hline
3/Responsiveness & 1.40 & 0.258 \\
\hline
4/ Assurance & 1.54 & 0.249 \\
\hline
5/ Empathy & 1.30 & 0.277 \\
\hline
\end{tabular}
\caption{one –way ANOVA test result of education}
\end{table}

Results of hypotheses and comparison with previous studies
First Hypothesis: There is a positive relationship between the quality of health services dimension (Tangibility, Reliability, Empathy, Responsiveness, and Assurance) and the customer satisfaction.
Conclusion:
- The results revealed a strong evidence to accept the alternative hypotheses; these results indicate the existence relationship between (Tangibility of health services) and(customer satisfaction).
- The results revealed strong evidence to reject the null hypotheses and to accept the alternative hypotheses; these results indicate the existence relationship between (the other 4th quality of health services dimension (Reliability, Empathy, Responsiveness, and Assurance) and the customer satisfaction.
- These results are in line with the results of the study conducted by both Na’asan et al. (4), Al-Tawiil, Julialii and Wahhab (5), AL Jazari (3), where they all agreed on the existence of a relationship between the health services quality dimensions and patients satisfaction, which means that the more these dimensions are applied, the greater the satisfaction of patients is; however, the results differ slightly with the study conducted by Diab (6), where the results of his studies showed that the two dimensions: Empathy and Responsiveness did not gain the acceptance of the patients as the other dimensions: Reliability, Assurance, and Tangibility.

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

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

• 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.

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

4. CONCLUSION
In this part, Researcher presented 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, as well as the consequent recommendations.

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 conclusions.

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

A. The number of females in the study sample is approximately equal to the number of males as they reached 50.3%, while the percentage of males was 49.7%.

B. The highest percentage of patients had a duration of stay between 3 to less than ten days by 38.5%.

C. The highest percentage of patients aged between 30 to 40 years, representing 39.8% of the total respondents.

D. The study showed that the percentage of patients satisfaction with the quality of health services provided is 64.4%, which is higher than the dissatisfaction percentage 35.6%.

E. The demographic variables represented by (gender, age, qualification) did not affect the attitudes of the sample members regarding the quality of health services.

Results of analysis of the members responses:

A. The majority of the sample agree that (You think that the Hospital leaders have provided the material supplies mentioned in points no. (1-3) within available resources) where the proportion is (42.6)%

B. The majority of the sample disagree that (The Hospital leaders are committed to their promises to the patients on providing treatment and healthcare services) where the proportion is (43.7)%

C. The majority of the sample disagree that (The Hospital staff always help the patients.) where the proportion is (41.5)%

D. The majority of the sample agree that (The Hospital leaders support the staff to develop themselves) where the proportion is (41.8)%

E. The majority of the sample agree that (The Hospital staff are aware of the patients' needs) where the proportion is (44.4)%

It was 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 were positively affects the patients 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 patients 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:

A. 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.

B. The study showed the importance of understanding and applying health services quality dimensions to improve the quality of services provided.

C. The study showed that there is a relationship between the application of health service quality dimensions and patients satisfaction.

D. The results of the study showed a high level of satisfaction in patients with the quality of health services.
services in the subjected hospitals. This indicates that the administration of the hospitals are interested in quality as a key factor in satisfaction.

E. The results of the study showed that the demographic variables (age, sex, and educational level) did not affect the awareness of patients in terms of applying the health services quality dimensions on patients satisfaction.

5. 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:

Specific recommendations

A. 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.

B. The quality department must be effective in the hospitals and move from the stage of searching for errors to the stage of continuous improvement of performance.

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

D. To promote the concept of teamwork and to open channels of cooperation and communication between the various departments and involve the largest number of employees to understand and apply the health services quality dimensions, as well as focusing on granting bonuses and incentives to the most committed staff in applying those dimensions.

General recommendations

A. All hospitals should pay attention to applying health services quality dimensions, as they have a positive impact on improving the quality of health services provided.

B. 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.

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

Scientific recommendations

A. The researcher recommends that this study should be re-conducted to include the private sectors in the Kingdom.

B. The researcher recommends that this study should be re-conducted in the remaining governorates of the Hashemite Kingdom of Jordan.

C. The researcher recommends that the current study should be re-conducted 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.

Future studies recommended by the researcher

A. The impact of the application of health services quality dimensions on patients satisfaction in Jordan private hospitals.

B. The impact of the application of health services quality dimensions on patients satisfaction in Primary Healthcare Centers.
REFERENCES