

## Study of The Relationship Between the Quality of the Medical Service and Patient Satisfaction in Private Hospitals Operating in Amman Area

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### ABSTRACT

This study aimed to determine the relationship between a set of independent variables included: basic health services, non health services, medical, nursing staff, and prices of health services with the dependent variable goal of patient satisfaction, this study determined the differences statistical concept of service quality health depending on variables Patient demographic, To achieve the above objectives, and to test hypotheses, soft sample was taken from patients goes private hospitals in Jordan, amounted to (300) patients, of whom underwent (92.3%) of the final analysis.

The study found that the availability of appropriate health services influential element on patient satisfaction, and among 54.7% of respondents said that the level of health service below average. The second package included a number of important variables in influencing satisfaction of patients visitors. 62.6% of the respondents said that the non-health services also below average. The 66.7% of the sample has expressed satisfaction with the level of medical and nursing staff working in over 77.3% dissatisfaction with the level of prices. Finally, the study found statistical differences in patient satisfaction according to sex, level of education, and income.

The study found a set of recommendations including: reconsider the pricing of health services, and attention to the training and qualification of medical staff in terms of marketing.

**Keywords:** Services quality, Medical Quality, Consumer satisfaction.

### 1. Introduction:

Despite the length of time that followed the raise of interest in the subject of quality assurance, the quality of medical services is considered as one of the modern topics, dating its beginnings to 1980, it took an ample space in the literatures of marketing services, and with the development of the social concept of marketing and competition an increase has happened in the level of interest in the quality of services, having become an important tool in distinguishing institutions and attract customers and increasing rates of Customers Retained while maintaining their loyalty (Al Nsour, 2008).

Jordan; during the last two decades, developed evidently in various aspects and sectors to cope with this global developments in the same area, and the medical sector is one of the leading sectors that have benefited from this progress significantly, which is reflected in the improvement of the quality and quantity of medical services, the growth in the competitiveness of the sector, and the widening of such services increased its productive base to the point that led to the weakness of the local market to be able to absorb these developments, and therefore it was necessary to study the quality of medical services provided by the Jordanian hospitals.

The recognition of the views of patients about the services provided to them would contribute to the constructive quality of the service itself, and enhance the participation of patients themselves in the formulation and implementation of plans and programs promoted in the hospital according to the concept of modern marketing, and strengthens cooperation with the existing patients and the potential patients in the target market, during the search of those hospitals for the wishes and needs of these patients, and this also enhances the quality by trying to reconcile the desires and needs of patients with the orientations of the hospital, and to take advantage of new ideas they come up with for the development of available medical services.

## **2. Importance of the study:**

The importance of this study shows in the time of growth in the applications of quality in various organizations and sectors, and with the improvement in the methods of designing and delivering products that will enhance the role of quality in the marketing activity of the organization, which contributed to the growth of many industries and improves its effectiveness at all levels.

From here This study examined the concept of quality of medical services provided in the private sector hospitals in Jordan, which is one of the most influential factors on the request of the patients, and its role in improving the prospects for the development of these institutions.

## **3. Objectives of the study:**

The purpose of this study was to try to achieve the following:

- Determine the relationship between basic medical services at the hospital and patient satisfaction.
- Determine the relationship between the non-medical services and patient satisfaction.
- Determine the relationship between the medical and nursing staff and patient satisfaction.
- Determine the relationship between the prices of medical services and patient satisfaction.
- Identify statistical differences in the concept of the quality of medical service according to the patient's gender, level of education, and income.

## **4. Elements of the problem of this study:**

**Elements of the problem-centered study try to answer the following questions:**

The purpose of this study was to try to achieve the following:

- What is the relationship between basic medical services at the hospital and patient satisfaction?
- What is the relationship between the non-medical services and patient satisfaction?
- What is the relationship between the medical and nursing staff and patient satisfaction?
- What is the relationship between the prices of medical services and patient satisfaction?
- What are the statistical differences in the concept of the quality of medical service according to the patient's gender, level of education, and income?

## **5. Previous studies:**

- A study of (Al Nsour, 2012) entitled "the quality of medical services provided by clinics of eligibility in Saudi Arabia: An Empirical Study on private clinics operating in the city of Al-Kharj". Which aims to identify the components of the quality of medical services provided by these clinics, and tries to determine the difference in the perception of patients of this concept according to their demographic characteristics, such as age, income level, level of education, and gender of the patients. The study classifies those components into three groups: therapeutic services, non-therapeutic services, and selling prices of therapeutic services. The study found the significance of efficient medical staff working in the clinics of the first group, It also showed the patient the importance of hygiene care in clinical buildings in the second group, and it shows the selling prices of medical services in the clinic generally in the third set. Finally he found that there are significant differences in the concept of service quality on the basis of educational levels, however, there does not appear to be any differences according to the gender of the patient, age level, or the average monthly income.
- A study of (Al Nsour in 2009) entitled "Quality of Therapeutic Tourism Services from the point of view of foreign patients coming for treatment in private hospitals in Jordan" aims to identify the components of quality of therapeutic tourism services provided by private Jordanian hospitals to foreign patients coming for treatment, and tries to determine the difference in the perception of patients to this concept according to their demographic characteristics such as nationality, income level, level of education, and the gender of the patient. The study found a group of results: moral of food and buildings hygiene, communication services, and equipped sophisticated medical transport in the first group, and the patient

also showed the importance of procedures and diagnostic tests and treatments that he/she receives, the good reputation of doctors working at the hospital, medical ethics and confidentiality of information about the patient, and quality of medical service provided, in the second group.

The Importance of shape and material composition of the hospital, and medical equipment was shown in the third set, and finally it was found that there are significant differences in the concept of quality of therapeutic tourism services based on nationality, education level, and income level, while there was no difference according to the gender of the patient.

- A study of (Ahmadi, 2006) entitled “Determinants of the quality of primary medical care services: a qualitative study”, tried to identify the determinants of the quality of primary health care from the perspective of those who are in this sector in the Saudi city of Riyadh. The study used one of the tracking qualitative methods, the "Grounded Theory" or derived from reality by conducting personal interviews with various categories of workers of this sector. Also, the study reviewed documents related to the application of quality initiatives, in addition to the precise observation of the surrounding environment through field research. The study found six determinants for the application of quality in this sector, namely: leadership, organizational culture, measurement and analysis, quality management systems, human resource development, integration and coordination. The study included a number of sub-elements that are influential factors on the quality of primary health care. Based on the results of the study, a number of elements were identified for the success of the application of quality in this sector.
- A study (United States Agency for International Development, 2005) entitled "Measuring patient satisfaction with the services provided by the Ministry of Health hospitals in Jordan", aimed to identify weaknesses of therapeutic service delivery in these hospitals, and on the demographics of patients. The study relied on an accessible sample that reached (471) patients distributed among (26) government hospital. And used a set of standards that addressed a doctor's waiting period to obtain service, satisfaction with the services provided by the nursing staff, the level of medical service provided to patients upon entry, overall satisfaction for the rooms and bathrooms, and the quality of food provided. The study also showed characteristics of the respondents in terms of gender, marital status, level of education, and income level.

The study showed that (88%) of the respondents were satisfied with the services provided in government hospitals, and (40%) of the respondents said that they are waiting for the doctor for more than two hours to get the service, It also found that (56%) of the respondents were unsatisfied with the services provided by the nursing staff and are demanding more respect. The study showed that (75%) of the respondents were women and (18%) of them were unmarried, and (80%) of them had their education below high school level, and the average household income of the respondents was nearly (200) dinars. (80%) of the respondents emphasized that the level of medical service provided to patients when entering are more than good, and the percentage of overall satisfaction for rooms is (80%), and bathrooms (66%), and among (26%) of patients said that the food provided to them was cold .

- Another study (Nusseirat & Domoor, 2004) entitled "The Impact of the marketing mixture to attract Arab patients for treatment in Jordanian hospitals" tried to determine the impact of marketing mixture on hospitalization services on the decision of choosing Arab patients for Jordanian hospitals, and find out if these elements vary in their relative significance and their impact on the decision of choosing while depending on demographic factors of patients. An appropriate sample of patients from Arab visitors to Jordanian hospitals was taken, and amounted to 141 patients. The study found that there were statistically significant differences in the importance of the elements of marketing mixture in terms of their ability to attract patients, where the factor "services and personnel" and the factor "accessibility" ranked first and second, respectively; while the factors of promotion and price ranked relatively low in importance. It also appeared that there is the presence of significant differences in the relative importance given to certain elements of the marketing mixture in accordance with the education and age of patients, and these differences did not show on the the basis of nationality and gender. The study provided some recommendations for marketers and administrators who would attract Arab patients to

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Jordanian hospitals.

#### **6. The concept of the medical service:**

The process of marketing medical services works mainly on the quality of therapeutic service available, particularly if we know that the service is inclined toward Intangibility, this property assists to reduce the degrees of risk, and leads to the creation of a strong perception of the service provided. Despite this importance, it creates significant results in the marketing process itself, and the process of quality control and evaluation becomes more difficult, especially when compared to other competing services in the same area.

Therefore, examining and studying the concept and components of the therapeutic service is useful in understanding the factors affecting them accurately, despite the difficulties associated with this process, such as: time and need based on the emergence of disease, and the complications in determining the service components and what inputs and outputs they contain during their presentation to the patients.

Some researchers tried to describe an appropriate definition for the concept of service in general, and this study will determine the characterization of the available medical services, (Gronroos, 1994, PP 36-45) defined service as "Any activity or a series of activities in nature normally intangible, and not necessarily occur in interaction between the consumer and the producers of the service, financial resources, goods, or systems that are offered as solutions to the problems encountered by the buyer." Kotler (Kotler, 2006) defined service as "any performance by a party to another party, and it's primarily intangible and does not result in any property, and its production may or may not provide tangible physical products".

The concept of the medical service varies in general from the concept of other services in some aspects, despite its participation in a large number of properties with it, and the researcher suggests for this purpose a set of standards that will be used to distinguish between both concepts as follows:

Table (1): Differences between medical services and other services

Property	Medical service	Other services
Risks of perceived quality	Classified as services, which are directed on the human, so it is believed that they are characterized by high sensitivity compared to the rest of services as represented by the highest degree of communication taking place in services generally. People Processing	Could be directed on the the human , the mind, or ownership, as most of them have less direct connection to humans.
Nature of demand	The demand for them is of extended type because of its impact on a wide range of sectors, including health institutions, treatments, transportation, universities, treatment centers, food, etc..	Limited often on a series of specific activities linked to the service more than other sectors that are linked to it, such as banks, and insurance.
Need	It's Difficult to postpone or cancel their consumption because of their direct impact on the health of the individual since it's linked to his/her longevity.	It can be postponed or cancelled, and then proceed to search for other options with less costs and quality in specific periods.
Service production	Health institutions produce more medical services, and the production line itself is deeper and more extended.	Less complicated, extended and deep, and characterized by the shortness of production lines and their simplicity.
Location of consumption	The Patient has to travel to its whereabouts to benefit from it, therefore, the process of moving and travel becomes and essential part in the health industry, but it can also be provided through the internet – Online.	The need to travel is less important because of the low effort needed.
Workforce	It needs a professional technical and administrative group.	May need less levels of professionalism in training, education and qualification.
Costs and prices	Usually, it's characterized by its high cost, since the medical service is a part of a long chain of activities.	Most of It, characterized in relatively low costs, and the possibility of substitution seems to be high with the change of costs and factors that are connected to it.
Components	includes accommodations, diagnostics, laboratory tests, prescriptions, and radiological images.	Its components are less complicated, such as insurance, banking, and education.
Time period	It's difficult to predict its period in advance, as it relates to the disease, which is difficult to predict its time of occurrence.	It can be be specified in advance by relying on the factors that are affecting it.
Expenses	The magnitude of the amount of money spent for development or allocated for creating new ones.	It usually has lower expenses.

Source: Iyad Al Nsour, developing a marketing strategy for the development of medical tourism in Jordan, 2007, Ph.D. Thesis.

## **7. The concept of the quality of the health service:**

The quality presents a process of building the relationship with the customer and improving its sustainability by predicting and satisfying their established and implicit needs (Wender & Judd, 1996). Quality is defined as the production of a commodity by an organization, or to provide a high level service conveniently and be able to meet the needs and desires of those customers in a way that is consistent with their expectations and by achieving happiness and satisfaction for them (Al Rasheed, 2010, p 4). While (Kotler, 2003) explains "The deviation between the value of service perceived, and those projected by the customer" and adding "It is the size of the products, services, processes, and relationships are free from defects, determinants, and items that reduce the value added to the customers "(www.Qualitydigest.com, 2005).

The concept of the quality of medical service represents "The transfer of therapeutic services to patients in the quickest, best, cheapest and most modern way (www.ldrl.com), therefore, hospitals and health institutions perfect their therapeutic services for the following reasons: repeated purchase of medical service, promoting word of mouth (WOM) among patients, reduction of the cost of attracting new patients, protecting patients from the effects of hospital competitiveness, achieving a sustainable competitive advantage for each of the medical services and the hospital, and reducing the rate of failure or the failure of the hospital in the execution of its duties.

Overall, the marketing literatures show that the concept of quality of medical services is linked and is compatible with a range of dimensions, and in accordance with the point of view of the entity that observes this quality, which are as follows:

1 - **Quality from the medical and technical point of view**, representing the following: providing medical services using the latest methods; which includes: Ethics of medical practice, medical working personnel, and the quality of the provided medical services.

2- **Quality from the patient's point of view**, representing the following: satisfying patient needs, and providing the necessary medical service for the patient.

3- **Quality from the administrative point of view**, which includes: Ways of using available resources and allocate them to ensure the delivery of the medical service in the right time, and with an acceptable cost.

4- **Quality from the senior medical administration, which includes:** the extent of satisfaction with the performance of the senior management, and its role in the support and development of medical services and the health system in general, also, the adequacy of this administration in the allocation of financial resources, and the ability to draw strategies and action plans for the future.

However, Dunabdeen focuses on the availability of three methods to measure the quality of medical care, and they are the following ( Nuseirat & Dmoor, 2000, p 48):

- Structural Method: They include fixed characteristics of the health institution such as: the numbers, qualifications, and categories of producers and providers of curative services, available equipment and facilities, and the style of its organization and management.
- Operational Method: refers to the activities and services provided to patients, which includes the sequence and coordination of activities. This concept was developed later and separated between the technical aspects, and the non-personal skills associated with dealing and interacting with the patients or the so-called art of care.

Final result Method: They reflect the final results of medical care and are classified into two groups, one of them includes the indicators of general health status and focuses on the patient's knowledge of his health, while the indicators of private health status include the death rates of a specific disease, and the occurrence of symptoms associated with a specific disease.

Marketing studies add a set of criteria used by customers to judge the quality, which is usefully applied on health services as they affect the formulation of the level of their awareness of this service. These criteria includes the physical aspects, reliability, responsiveness, effective communication with customers, credibility, efficiency and capacity of employee service, courtesy and respect in dealing, honesty, understanding customer needs, and easy access to service personnel; in 1988 the previous standards were reduced to to five criteria, and are as follows (Nasani et al, 2007, p 4):

**A. Tangibility:** includes the patient's interest in external appearance, decor, the arrangement of health departments in the organization, patient transport, medical staff, benefits, tools and equipment used in medical therapy, and therapeutic spas.

**B. Reliability:** It is the ability to provide health services perceived by patients, expected to be accurate and continuous, and in a timely manner without errors.

**C. Responsiveness:** the ability of the medical and administrative staff to provide immediate and urgent health service, in addition to their ability to adapt with emergency conditions.

**D. Assurance:** it's the patient's sense of comfort and confidence when dealing with the hospital, and with various medical cadres; it also includes senior management support to the employees who provide the health service at the hospital, and a willingness to assess attitudes and estimate work effort.

**E. Empathy:** it include aspects that reflect the degree of understanding of the health institution to the needs of patients, their circumstances, and their interests.

There is another set of aspects through which one can judge the quality of health services in health institutions, listed as follows (Al Nsour, 2007):

- Reduce the differences in medical practices and try to present it in a stereotyped way.
- Reducing waiting times for patients to obtain the health service in service sites.
- Provision of health services in an acceptable manner to all categories of patients (children, women, The elderly, and people with special needs).
- Adherence to standards and medical ethics in medical practice.
- The existence of standards and a clear systems governing health service delivery.
- Provide effective health service in the right time and place for the patient.

#### **7.1 Health service consumer satisfaction:**

The Demand theory assumes that consumers are eager to buy goods and services, that gives them the maximum benefit due to saturation of consumption. However, a new wording for that theory made a distinction between the concepts of goods and services sold in the market and linked them to primary needs chosen among them and called the Merchandise. When the required goods are good health it is possible to obtain health through the purchase of a range of therapeutic services, hence the demand for therapeutic service is derived from the underlying demand for health (Valdesteen, 2002, p 76). The concept of health is associated with the absence of disease and the factors causing it (Sprenger, 2005, P.2), The World Health Organization showed that health is a s dynamic state of physical , mental, moral, and social factors to the individual (WWW. WHO.ORG), Therefore, a large group of studies appeared and tried to study this concept and the factors associated with it.

The idea of demand is linked with therapeutic service, beginning by the needs of the individual for this service before he/she demands it, and this need can be realized only through the individual himself individually without the presence of an effect to this perception. For example an individual having a headache allows him/her to assess the need for treatment, while the estimation of appropriate treatment is carried out by trained personnel and specialists, represented by physicians, and in both cases, there is a feeling generated by an increase of the need for health service

and making the decision of purchase or not. Thus, the emergence of the need for therapeutic service is represented by the emergence of the disease or what calls for seeking treatment, which has much impact on the emergence of demand, and despite the difficulty in measuring the quantitative need, it can be expressed in the demand for the same therapeutic service (Sarma, 2003).

- **Inertia Loyalty:** less competitive businesses in the market assume that there is a group of customers who retain their allegiance to it, and that assumption ensures that the customers do not go to any other institution, but these institutions recognize that these customers may be the first converts if they were not able to secure new customers for its products .
- **Latent Loyalty:** This loyalty happens when the customers have a sense of loyalty to the organization, but this does not prevent their desire to discontinue dealing with this organization for longer periods of time. This case happens when customers buy goods and store it for long periods during the holiday seasons and occasions, or they are not profitable enough for the organization, so the owners of this loyalty prefer products that carry a current value and meets their needs for the future.
- **Premium Loyalty:** This type is characterized by a high level of attractiveness by customers as a pure attention and constant care and it's one of the most favored and desired by them, so when customers portray their additional loyalty to the organization they are dealing with, they boast about this constant relationship with the organization, they might have a strong sense of happiness and satisfaction, and the desire to share the positive experience with others WOM through their involvement in this organization.

## 7.2 Importance of satisfaction for hospitals:

The revenue is the key element between the customer and any organization, where to place the latter at the forefront of priorities and objectives; Through loyalty programs, the fiscal revenue of the organization will grow and improve the organization's ability to achieve their goals and aspirations, and if we consider that loyalty means keeping customers for as long as possible, the

positive Word Of Mouth plays a role in strengthening loyalty programs, and the Declaration using this tool leaves a significant impact on the sales quantities and revenues and the reputation of the organization and its employees, the investment in attracting more new customers coincides with maintaining the existing customers of the organization. The Programs of consumer loyalty stimulates the feeling of loyalty by the employees to their organization, so that customer loyalty to the organization is linked and synchronized with the loyalty of its employees, therefore, the investment in consumer loyalty programs without the interest in educational programs for workers would make the organization vulnerable to failure (Churchill, 2004).

## 8. Study hypotheses:

**study hypotheses were formulated as follows:**

**Ho1:** There are no statistically significant relationship between the quality of primary health services, and patient satisfaction in private hospitals in Jordan.

**Ho2:** There are no statistically significant relationship between the quality of non-primary health services, and patient satisfaction in private hospitals in Jordan.

**Ho3:** There are no statistically significant relationship between the medical and nursing staff and patient satisfaction in private hospitals in Jordan.

**Ho4:** There are no statistically significant relationship between the prices of health services, and patient satisfaction in private hospitals in Jordan.

**Ho5:** There are no statistically significant differences between patient satisfaction in private hospitals on the basis of gender, income, and level of education, for determining components of the quality of health services in Jordan.

## 8.1 Study Methodology:

### A) study sample:

Depending on the objectives of the study and its hypotheses, an accessible (appropriate) sample of patients who



received treatment at private hospitals in Jordan has been withdrawn , The study resorted to this kind of sample because of the large size of the original community of the study it was not possible to Survey everyone during the distribution of the questionnaire. The respondents reached (300) patients, of whom responded about (277) or in percentage (92.3%) underwent all the final analysis.

### **B) sources of data collection:**

**The study was based on two types of data sources, and they are:**

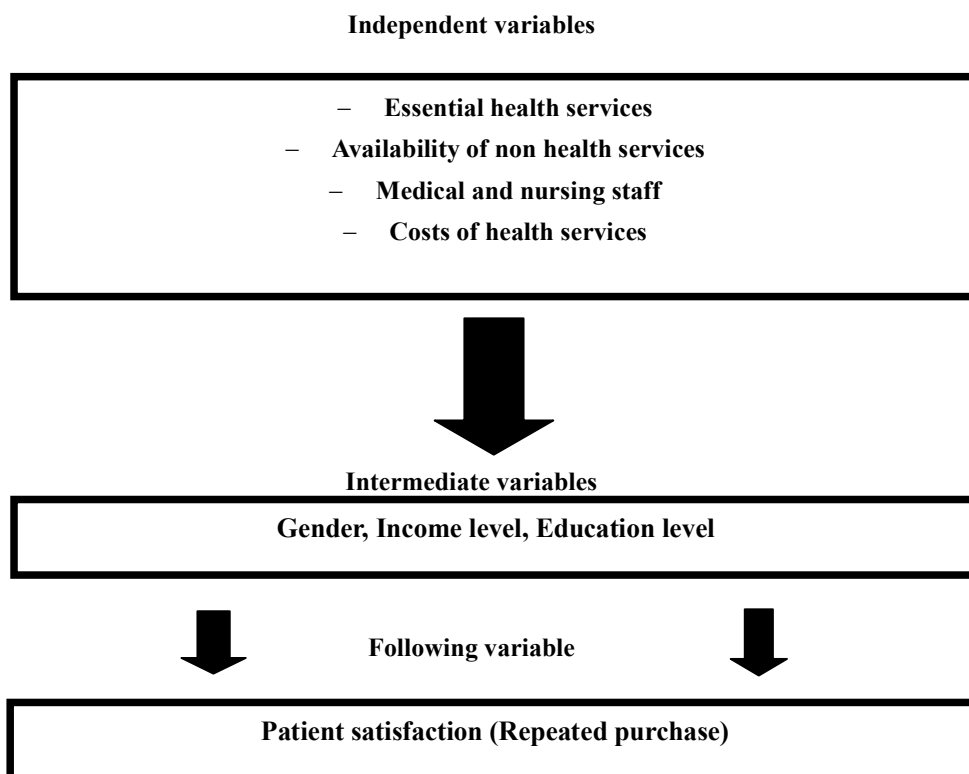
**A. Secondary data:** through different review of the literature related to the subject of the study, published books, Arab and foreign theses, and in addition to specialized websites.

**B. primary data:** An appropriate measurement tool was developed (questionnaire) to collect the raw data needed for the study.

**C) the variables of the study:** Based on the literature of the previous study, a group of variables has been specified, that are believed to be important in influencing the quality of health services, and they are as follows:

- Basic health services (curative services).
- Non-health Services (communication and transport, booking and incomes, hygiene).
- Medical and nursing staff working in the hospital.
- Prices of health services in Hospitals.

### **Study Model:**



### 9. Methods of statistical analysis:

The statistical analysis was carried out using the statistical package SPSS, where descriptive statistics instruments were used, which was represented in the measures of central tendency such as the arithmetic mean, median, standard deviation, and frequency tables, in addition to statistical methods for testing hypotheses such as t-test, choice F, correlation coefficient r, and the Scheffe test to find the differences between the different variables 3; table (1) shows the statistical tests conducted on the answers obtained from patients regarding the quality of health services provided in the private hospitals of Jordan.

Table (2): Statistical tests for all variables

Test	Amount	Goal	Statistical base
<b>Coefficient of mid variation</b>	<b>0.9761</b>	<b>Used to measure the degree of internal coherence and consistency between the paragraphs of the scale.</b>	<b>the high value of the correlation coefficient indicates to the fact that the two parts responses are similar to a large extent.</b>
<b>Cronbach's alpha</b>	<b>0.8876</b>	<b>Measures the degree of validity and reliability of the scale.</b>	<b>The acceptable ratio for this test is (60%) or more.</b>

Continued Table (2): Cronbach's alpha tests according the independent variable

Cronbach's alpha	Variable
0.861	Essential health services
0.906	Available non-health services
0.7761	Medical and nursing staff
0.761	Cost of health services

### 10. Study results analysis:

#### First: essential health services

The results show a positive direction for a group of specific phrases on the scale, which had an arithmetic mean that was greater than the arithmetic mean of the scale that amounted in 3, namely: Provide health service quickly, providing health service accurately, professionalism in the provision of health services, providing appropriate medical procedures, the use of technical equipment and modern technology, and the availability of appropriate medications and treatments.

Table (3): Descriptive statistic results for the first hypothesis

Phrase	Arithmetic mean	Standard deviation
Providing fast Therapeutic service	3.087	0.809
Providing accurate Therapeutic service	3.431	0.857
Professionalism in the diagnosis of the health service	2.224	0.904
Professionalism in providing the health service	3.221	0.907
Providing appropriate medical procedures	3.554	0.985
The use of technical equipment and modern technology	3.567	0.776
availability of appropriate medications and treatments	3.456	0.998
availability of appropriate health services	2.097	0.668

**Second: Non-health services**

The results of the descriptive statistic in Table (4) show the acceptance of the sample's respondents who are responsive to most independent variables (phrases) that represent non-therapeutic advantages available in the private hospitals of Jordan, availability of online booking services, and the ability to respond to queries from patients electronically. The results of the acceptance or rejection were based on the comparison of the arithmetic mean values for each phrase with the general average of the scale (3); If the value of the arithmetic mean of the phrase from the center of the scale was more than the general average then the variable will be accepted, and vice versa.

Table (4): Descriptive statistic results for the second hypothesis

Phrase	Arithmetic mean	Standard deviation
Cleanness of tools and equipment in the hospital	4.554	1.548
Cleanness of buildings and rooms in the hospital	3.539	1.780
Cleanness of decorations, tools and equipment in the hospital	3.608	1.870
Availability of necessary communication means (phone, Internet, Fax)	3.458	1.443
Availability of modern and prepared medical transport	3.590	1.673
Availability of electronic booking services in the hospital	1.845	0.878
Simplifying entrance procedures to receive treatment in the hospital	3.544	0.908
Ability to answer patient questions electronically	2.991	0.765
Safekeeping of patient's private information	4.339	0.843

**Third: Nursing and medical staff**

The results of the descriptive statistic in Table (5) show the acceptance of the sample's respondents who are responsive to most independent variables (phrases) that represent the medical and nursing staff working in the hospital. The results of the acceptance or rejection were based on the comparison of the arithmetic mean values for each phrase with the general average of the scale (3); If the value of the arithmetic mean of the phrase from the center of the scale was more than the general average then the variable will be accepted, and vice versa.

Table (5): Descriptive statistic results for the third hypothesis

Phrase	Arithmetic mean	Standard deviation
Qualification of cadres working in the hospital	3.5044	0.687
Adequacy of cadres working in the hospital	3.568	0.985
Hygiene of cadres working in the hospital	3.556	0.96
Proficiency in the delivery of health service	4.561	0.751
Speed in the delivery of health service	4.679	1.780
Ability to satisfy all patient's needs	3.879	0.590
Hospitality and warm welcoming of the patient	3.988	0.980
Good treatment and Joviality in the face of the patient	3.007	1.126

**Fourth: Costs of health services**

The results of the descriptive statistic in Table (6) show the availability of only two variables that recorded positive answers according to the answers of the individuals of the responsive sample, and they are: providing a detailed invoice on all tests, and treatments given to the patient, and the costs of medicine and treatments for the patient. The results of the acceptance or rejection were based on the comparison of the arithmetic mean values for each phrase with the general average of the scale (3); If the value of the arithmetic mean of the phrase from the center of the scale was more than the general average then the variable will be accepted, and vice versa.

Table (6): Descriptive statistic results for the fourth hypothesis

Phrase	Arithmetic mean	Standard deviation
Offers and price reductions provided to patients	2.989	0.899
Payment facilities and price discounts offered to new patients	2.225	0.888
Payment facilities and price discounts when treated more than once	2.144	0.783
Provide a detailed invoice of all treatments and tests provided to the patient	4.567	0.976
Diversity of methods used to pay due medical bills (installments, in cash, by card)	2.176	1.651
Commitment of the hospital with the list prices for the therapeutic services	2.0648	1.321
Prices of diagnostic tests and X-rays	2.837	0.876
Appropriateness of therapeutic services selling prices in the hospital	2.133	0.917
Appropriateness of medication and treatment selling prices to patients	3.134	0.876

### 10.1 Testing the hypotheses of the study:

**The first hypothesis: There is no statistically significant relationship between the quality of essential health services, and patient satisfaction in the private hospitals of Jordan.**

The study used the Step Wise tiered method of analysis to identify the most influential phrases on the satisfaction of the health services buyer in private hospitals in Jordan, where it was found that providing adequate health services is the most effective on the concept of satisfaction, and that was with a level of significance that reached .003, therefore, the alternative hypothesis was accepted which sees the existence of a relationship between the quality of health services available and patient satisfaction, as the statistical program excluded all other variables because they were statistically insignificant .

The professionalism variable for diagnosing the health service was linked with a positive average relationship that reached 33.5%, and as interpreted by this variable alone about 11.2% of the size variation in the dependent variable (the level of satisfaction).

As the results of the analysis show, the independent variables (phrases) did not affect the concept of health service buyer satisfaction in the private hospitals of Jordan because of its weakness from a statistical point, namely: fast delivery of therapeutic service , accurate delivery of therapeutic service, professionalism in the diagnosis of the health service, professionalism in health service delivery, providing appropriate medical procedures, the use of technical equipment and modern technology, and providing appropriate medications and treatments.

By depending on the results of the multiple regression analysis table of the first hypothesis , the text of the first nihilist hypothesis is rejected, which sees that there is no statistically significant relationship between the quality of health services available in the private hospitals of Jordan and between patient satisfaction, thus the alternative hypothesis was accepted, which sees into the existence of such a relationship. The result was shown by comparing the value of the significance level for the test F (0.000) with a level of significance as a whole of (0.05).

Table (7): Variation test for the first hypothesis

Phrase	R	t	Siq.	F	Siq.
Availability of appropriate heal services	0.335	5.167	0.003	13.714	0.000

- level of significance as a whole is 5%.

**Second hypothesis: There is no relationship between the unavailable health services , and patient satisfaction in the private hospitals of Jordan**

Using the Step Wise Tiered method of analysis to find phrases that are most influential on patient satisfaction in private hospitals of Jordan, it was found that the Hygiene of buildings and rooms in the hospital is what most affects the concept of satisfaction among the non-health factors in hospitals, and that was with a level of significance that reached 0.000 ( $t= 7.871$ ), where the used statistical program SPSS excluded all other variables because it was statistically incorrect.

The hospital rooms and buildings hygiene variable was associated with the concept of patient satisfaction with a highest positive correlation among all the variables, and reached 36.8%, as this variable alone, interpreted about 9.6% of the total variation in the dependent variable.

Table (8): Variation test for the second hypothesis

Phrase	R	t	Siq.	F	Siq.
Availability of appropriate heal services	0.378	7.871	0.000	9.776	0.009

- level of significance as a whole is 5%.

Depending on the above and by comparing the statistical significance of the test F (0.009) with the level of significance of the test as a whole of (0.05), the text of the second nihilism hypothesis was rejected, and the alternative hypothesis is accepted, which sees into the existence of a significant relationship between the quality of non-health services, and patient satisfaction in the private hospitals of Jordan.

**The third hypothesis: There is no statistically significant relationship between the medical and nursing staff working in the hospital, and patient satisfaction in the private hospitals of Jordan.**

The tiered method did not succeed in reaching the results of statistical significance, therefore, the “ Enter” analysis method was used to find the moral phrases that have a statistical impact on patient satisfaction in the private hospitals of Jordan. It was found that there are three variables that succeeded in effecting: the efficiency of medical and nursing staff working in the hospital, the ability to meet the needs of the patient, hospitality, warm welcoming and smiling in the face of the patient.

he previous three variables were associated with the dependent variable (patient satisfaction) with positive correlation relationship that reached 56%, as these variables were also able to explain about 55% of the volume variation in the dependent variable.

Table (9): Variation test for the third hypothesis

Phrase	R	t	Siq.	F	Siq.
Efficiency of the medical and nursing staff working in the hospital	0.378	7.871	0.000		
Ability to satisfy patient needs	0.645	5.521	0.000		
hospitality, warm welcoming and smiling in the face of the patient	0.481	4.768	0.000		
Variables combined	0.563	8.877	0.000	9.991	0.00

- level of significance as a whole is 5%.

Depending on the above and by comparing the statistical significance of the test F (0.009) with the level of significance of the test as a whole of (0.05), the text of the third nihilism hypothesis was rejected, and the alternative hypothesis is accepted, which sees into the existence of a significant relationship between the quality of medical and nursing staff working in the hospital, and patient satisfaction in the private hospitals of Jordan.

**The fourth hypothesis: There is no relationship between the cost of health services, and patient satisfaction in the private hospitals of Jordan.**

The results of the statistical analysis showed the presence of two variables (phrases) only, which recorded a positive statistical link and succeeded in influencing the dependent variable: the appropriateness of the health service selling prices, and appropriateness of medicine and treatment selling prices.

Both variables of appropriate selling prices for health services, and appropriate selling prices of medicines and treatments has been associated with a positive and a high relationship correlation with patient satisfaction that amounted 75.2%, where these variables alone, were able to explain 61.3% of the volume variation (change) in the dependent variable, and this is linked to the result that was reached, which states that the level of satisfaction with the sales prices will increase the level of overall satisfaction.

Depending on the above and by comparing the statistical significance of the test F (0.009) with the level of significance of the test as a whole of (0.05), the text of the fourth nihilism hypothesis was rejected, and the alternative hypothesis is accepted, which sees into the existence of a significant relationship between the quality of health service costs, and patient satisfaction in the private hospitals of Jordan.

Table (10): Variation test for the fourth hypothesis

Phrase	R	t	Siq.	F	Siq.
Appropriateness of the health service selling prices	0.667	13.154	0.000		
Appropriateness of medicine and treatment selling prices	0.701	8.975	0.000		
Variables combined	0.752	8.776	0.000	11.661	0.001

- level of significance as a whole is 5%.

**The Fifth hypothesis: There are no statistically significant differences between patient satisfaction in private hospitals on the basis of gender, income, level of education, for determining components of the health services quality in Jordan.**

Table (11): results of descriptive statistics for demographic variables

Property	Arithmetic mean for the sample	Standard deviation	General Arithmetic mean
Gender	1.13	0.657	1.5
Level of education	2.564	0.9810	3
Income level	2.223	0.456	2.5

The results of the descriptive statistics in Table No. (11) show negative orientations (rejection) of the study sample on the impact of demographic variables on patient satisfaction in the private hospitals of Jordan, and there was a rejection on the influence of the patient gender variables, and level of education, in accordance to the values of the arithmetic mean for each attribute with the general arithmetic mean.

Table (12): Analysis of the demographic variables variations with the dependent variable

Property	F Test	Level of significance
Gender	1.658	0.106
Level of education	1.342	0.07
Income level	3.274	0.004

- level of significance as a whole is 5%.

To test the fourth hypothesis, the ANOVA analysis of variance was used, or the so-called F test, and the the Previous table shows the results of this test, were it was found that the level of significance to gender and level of education is greater than the significance level of the test as a whole (0.05), and therefore, the text of the fifth nihilism hypothesis we accepted, which sees that there are no statistical differences in patient satisfaction in the private hospitals of Jordan, In accordance with gender, and education level variations.

On the other hand, it was found that there are statistical differences in the concept of satisfaction according to the income level of the patient, and to determine the orientation of these differences in patient satisfaction in the private hospitals of Jordan, the Scheffe test was used, to determine the orientation of these differences, and the test results were shown in table (13).

It is clear from the above table that there are statistical differences in the concept of satisfaction formed in patients seeking health service from the private hospitals of Jordan in accordance with the variations in their income levels, and these differences tended to favor the levels of income that are less than 400 dinars, as the components affecting the health service buyer satisfaction, affects the low income earners more than it affects the high income earners, and this means that they are the most sensitive to selling prices of health services in the private hospitals of Jordan.



Table (13): Results of Scheffe test in accordance with the income level

	N	Subset for alpha = .05	
Income level		1	2
Below 400	77	1.9437	
400 – less than 800	122	1.7655	1.876
800 – less than 1200	40	1.444	1.444
1200 – less than 1600	17	1.74	1.74
1600 – less than 2000	15	1.596	2.167
More than 2000	9	1.876	
Sig.	0	0.678	0.065

## 11. Results discussion:

### Firstly: Essential health services

- It was shown, that the quick provision of health service, the accurate provision of health service, the professionalism in providing health service, providing appropriate medical procedures, the use of technical equipment and modern technology, and the availability of appropriate medicines and treatments, are the most highlighted phrases that achieve satisfaction for buyers of health services, if it was provided by these hospitals.
- It was found, that the availability of adequate health services for patients is the only element available in reality, through which verifies patient satisfaction in the private hospitals of Jordan, therefore, the mere availability of adequate health services regardless of their level is an important factor in understanding the quality of health service available .

Among the most important results that appear in this place, are the following:

1. Between approximately 44.3% of the respondents said that the level of speed in providing therapeutic services was above good to excellent.
2. Between approximately 61.3% of the respondents said that the level of accuracy in the delivery of health service was below average.
3. Between approximately 54.3% of the respondents said that the level of professionalism in providing therapeutic service was mid-level and less.
4. Between approximately 76.1% of the respondents said that the level of the use of modern equipment and technology in treatment was of average level.
5. Between approximately 43.5% of the respondents said that diagnostic procedures (Scans and analyzes) were less than the average level.
6. Between approximately 33% of the respondents said that the availability of appropriate medications and treatments was good to excellent.
7. **Generally 54.7% of the respondents see that the level of health service delivery in the private hospitals of Jordan is less than the average level.**

### **Secondly: Non-therapeutic advantages**

- Respondents considered that the availability of electronic booking services, and the possibility of responding to patient inquiries electronically, are the most highlighted factors that can affect patient satisfaction in the private hospitals of Jordan.

- **Some of the other results that were taken:**

1. 62.1% of the respondents see that the level of equipment and devices cleanliness in private hospitals is less than the average level.
2. 44.4% of the respondents see that the level of the hygiene of cadres working in the hospital is less than the average level.
3. 40.1% of the respondents see that the level of cleanliness of buildings in the hospital is less than the average level.
4. 56.4 of the respondents see that the level of cleanliness of decorations and equipment in the hospital is less than the average level.
5. 66.5% of the respondents see that the level of necessary communication means in the hospital is below the average level.
6. 66.8% of the respondents see that the level of equipped and modern medical transport is below the average level.
7. 88.1% of the respondents see that the level electronic booking services in the hospital is below the average level.
8. 44.9% of the respondents see that there are complications in the entrance regulations for receiving medical care in the hospital.
9. 91% of the total respondents agree on the unavailability of Response and electronic inquiry services in the hospital.
10. 45% of the respondents see that there is safekeeping of private patient information.

**11. Generally, 62.6% of the respondents see that the level of providing non-health services in the private hospitals of Jordan is below the average level.**

### **Thirdly: Working medical cadres**

- It was found that there are three variables that succeeded in influencing patient satisfaction: the efficiency of medical and nursing staff working in the hospital, the ability to meet the needs of the patient, hospitality and warm reception and smiling in the face of the patient.

- **Some of the other results that were taken:**

1. among about 66% of the respondents said that the performance of qualified specialized medical staff was mid-level and less.
2. 77.2% of respondents said that there is a low level of hospitality and good reception in the private hospitals of Jordan.
3. 71.4% of the overall respondents consider that there is a weakness in the kindness and good treatment towards the patient.
4. about 88% of the respondents found that the efficiency of the staff working in the private hospitals of Jordan is more than good to excellent.
5. About 67% of the respondents found that the hygiene level of the cadres working in the private hospitals is more than the average level.
6. About 77.9% of the respondents found that the skill level of the medical and nursing staff in providing health service is above average.

7. **Generally, among about 66.7% of the respondents are satisfied with the level of medical and nursing staff working in the private hospitals of Jordan.**

#### **Fourth: Sale prices of therapeutic services**

- It was found that there are two variables that recorded positive statistical correlation relationships and succeeded in influencing the dependent variable: the appropriate selling prices of health services, and the appropriate selling prices of medicines and treatments.
- **Some of the other results that were taken:**
  1. About 90% of the respondents were dissatisfied with the offers and price reductions provided to patients.
  2. About 98% of the respondents were dissatisfied the payment facilities and price discounts offered to new patients.
  3. About 44.5% of the respondents expressed their satisfaction on the provision of a detailed invoice of all treatments and tests provided to the patient.
  4. 70% of the respondents were dissatisfied with the methods used to pay due medical bills (installments, in cash, by card).
  5. Approximately 88.7% of the respondents were dissatisfied with the prices of diagnostic tests and X-rays.
  6. About 77% of the overall respondents expressed their dissatisfaction with the level of selling prices of therapeutic services provided by the private hospitals of Jordan.
  7. About 80% of the overall respondents expressed their dissatisfaction with the level of prices for medicine and treatments for patients.
- 8. **Generally about 77.3% of the overall respondents expressed their dissatisfaction with the level of selling prices of therapeutic services in the hospital.**

#### **Fifth: Statistical differences**

- It was found that there are statistical differences in patient satisfaction in the private hospitals of Jordan, according to gender, and education level.
- It was found that there are statistical differences in the concept of satisfaction depending on the income level of the patient requesting health service from the private hospitals of Jordan, and these differences tended to favor income levels that were less than 400 dinars.

#### **Recommendations:**

- Reconsidering the pricing of health services provided by the private hospitals in Jordan, and the necessity of taking into account the price sensitivity for low-income earners.
- Adopt a monthly indicative price bulletin issued by the Association of the Private Hospitals, the goal of which, to illustrate the changes that are made on the production costs of therapeutic services in those hospitals.
- Pay greater attention to training and qualifying medical cadres on marketing methods for the health services.

#### **A. Arabic references:**

- (1) Marketing(concepts-strategies),theoretical and applied,Abu aflu Isam,aleskandria,2002.
- (2) Determinants of the quality of primary health care services,public administrative journal,Nawal alhmadi,alryadh,2006.
- (3) Health care marketing, Tamer albakri,Amman,2005.
- (4) Factors affecting tourist satisfaction in the Jordanian desert region north and central,althmour hani and fawaz alhamad,Jordan university journal No.28,amman,2001.
- (5) factors affecting of services satisfaction in hospitals,yaser aledwan and abdelhalim ahmad,yarmouk

university journal, irbid, No.13, 1997.

(6). Therapeutic quality of tourism services from the point of view of foreign patients coming for treatment in hospitals, iyad alnsoor, economy Afaq journal, No.28, Dubai, 2007.

(7). The impact of the marketing mix to attract Arab patients for treatment in hospitals, Hani thmour and farid nuseerat, Jordan university journal No.31, 2004.

(8). Measure customer perceptions of quality of health services and their impact on satisfaction and apply it to the Syrian hospitals, abdmohesen nassani, halab university journal, Syria, 2007.

#### **B. English References:**

(9)-AMIR Program (2002), The Jordan Medical Cluster, Final Report. Amman.

(10)- Fornell . C , Mithas .S , Morgensen . F , Kirshan .S (2006) , Customer Satisfaction & Stock Prices : High Returns ,Low Risk . Journal of Marketing 70 (January) , 1-14 .

(11)-Foster .S (2003) , Optimizing Revenue Through Customer Retention & Delivering Customer Value, An InfoMentis White Paper , The Importance of Team Based Training In Sales Organizations .

(12)- Gronroos . C (1994) , Services Quality Model & It's Marketing Implications .European Journal of Marketing , Vol . 18 ( 4) , 36-45 .

(13)-Griffin .J (1995) , Customer Loyalty : How To Get It , How To Keep It . San Francisco: Jossey – Bass Press.

(14)-Hayes , B (2007) , Customer Loyalty 2 , Part 1 : Measurement & Meaning of Customer Loyalty , Business Over Broadway , December 3.

(15)-Manish , M ( 2001) , Customer Loyalty Solutions , September 5.

(16)-Mckenna .R (2001) , The New Relationship Marketing , The Entrepreneurship Institute OF Canada , P.3 .

(17)-Monaghan . T , One of The Most Important Lessons Of Business – The Value of Concentrating On The Customer You Have , Domino's Pizza .

(18)-LaMalfa .K (2007) , Peak Oil & Sustainability : CRM's Potential Impact , November 27 .

(19)-Reicheld .F (2000) , The Loyalty Effect : The Hidden Force Behind Growth , Profits & Lasting , Boston : Harvard Business School Press, 1996 Woods , John , The Quotable Executive , New York, NY :McGraw Hill.

(20)-Reicheld .F & Sasser .W (1990) , Zero Defections : Quality Comes To Service . ' Harvard Business