

## Quality of Health Services Provided to Iraqis at Jordan Red Crescent Health Centers

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**Abstract: Problem statement:** Quality of services measurement has been the concern of many scholars who have tried to develop scales for it. The most popular scale used was SERVQUAL. Hence the aim of this study is to discover the quality of health services provided to Iraqis at Jordan Red Crescent Health Centers in Amman. **Approach:** A sample study was derived from (1652) male and female patients from five health centers: Ashrafieh Health Center; Al-Hashemi Health Center; Marka Health Center; Al-Taj Health Center and AL-Hussein Health Center. Means, Standard Deviation, Independent Sample T-Test, simple regression and the Scheffe Test were used to answer the study's main questions. **Results:** It was found that the quality of health services provided to the Iraqis at Jordan Red Crescent health centers was high in all dimensions, the highest quality dimensions displayed among the health service available at Jordan Red Crescent health centers were tangibles and assurance, whereas the lowest quality dimensions were empathy and responsiveness, there was a significant difference in the quality of health services provided to Iraqis at Jordan Red Crescent Health Centers (Ashrafieh Health Center, Al-Hashemi Health Center, Marka Health Center, Al-Taj Health Center and AL-Hussein Health Center) from one center to another and there was a significant difference in the quality of health services provided to Iraqis at Jordan Red Crescent health centers based on the number of visits the Iraqis made to the center. **Conclusion:** The main recommendation presented in this study is that there is a need to expand the health services in cooperation with international humanitarian organizations in order to accommodate the rising number of Iraqis frequenting the centers.

**Key words:** Service quality, SERVQUAL, healthcare, marketing

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### INTRODUCTION

As a member of the International Movement of the Red Cross and the Red Crescent, Jordan Red Crescent Society is committed to achieving its mission "to alleviate the suffering of the victims and the vulnerable of natural disasters and armed conflicts and to protect their dignity and rights in a manner that preserves their lives, safety, security and well-being" since its establishment in 1947. In addition JRC is committed to the goals of the movement and its fundamental principles; humanity, neutrality, independence, unity, voluntary services, impartiality and universality (Crescent, 1969). It also supports Strategy 2010 of the International Federation of Red Cross and Red Crescent Societies and its vision for the future of the movement (Crescent, 2008).

As a result of the war on Iraq in 2003, many Iraqis fled to neighboring countries. As host to Iraqis, these countries now bear the burden of providing basic and essential services for those who have been displaced. In Jordan and Syria in particular the burden is greater

than the available capabilities. Regional consultations hosted by the World Health Organization highlighted the problems faced by many migrants, including the lack of access to health care services in the host countries. The Jordanian government reported that Iraqis in Jordan benefit from the same medical services that benefit Jordanians who do not have health insurance. Iraqis bear the same costs as a Jordanian citizen, or any other foreign resident of the Kingdom (Crescent, 2008).

In order to meet its mission Jordan Red Crescent employed its good relations with International humanitarian organizations to provide assistance to displaced Iraqis in Jordan by establishing five well equipped primary health centers stocked with necessary medicines. These centers are: Al-Hashimi Al-Shamali Center which provided its services to approximately 24684 patients was established on 1/3/2006 in cooperation with the French Red Cross, Ashrafieh Center which provided its services to approximately 19661 patients was established on 1/7/2007 in collaboration with the Office of the High Commissioner

for Refugees, Al-Taj Center which provided its services to approximately 15329 patients (plus 1867 from IMC), was established on 15/9/2007 in collaboration with the International Federation of Red Cross and Red Crescent Societies and with partial support from the International Medical Corps from 29/06/2008, Marqa Center which provided its services to about 9797 patients was established on 1/12/2007 in cooperation with the German Red Cross and Al-Hussein Center which provided its services to 1814 patients was established on 19/7/2008 in cooperation with the international federation of red cross and red crescent societies.

Thus the total of 53491 patients were provided with health services from 2007-2008 (Crescent, 2008). The beneficiaries of these centers are predominantly Iraqis living in Jordan and only a small percentage of needy Jordanian. The services provided included the provision of free primary health care, medicines for people who suffer from chronic diseases such as high blood pressure, diabetes, dental, psychological support and social development services, ante-and post-natal care and support to women and finally weekly transfers of patients whose condition requires specialist consultants and additional required tests (Crescent, 2008).

The Jordan Red Crescent undertakes the provision of doctors, nurses and social workers for the health centers provided that financial support is pledged by the international humanitarian organizations for the continued sustainability these services maintaining high quality of these health services provided to the Iraqis. So on the one hand the JRC achieves its ultimate mission effectively, while on the other hand it provides a partner to the international organizations for a worthy financial investment.

Therefore, the JRC considered that the best evidence comes from the recipients of the services themselves in order to achieve objectivity and transparency in the measurement of the quality of health services provided to them. Since the patients' observations on the quality of health care are very important in the organization of specialist health care because the patient observations indicate the level of patient satisfaction and therefore achievement of the health centers' goals. Previous studies showed that the quality of health service has a major influence on the patient behaviors, such as honesty and the reputation of the health organization (Andaleeb, 2001). In addition, understanding the concept of quality service can help health care providers to identify the health services that need improvement and development. With the achievement of patient satisfaction health organizations will save time, effort and money spent on dealing with patient complaints (Pakdil and Harwood, 2005).

Thus, the provision of high quality health services and improving patient satisfaction are considered as essential successful strategies for health care in the long term (Gilbert *et al.*, 1992). Thus, the accelerating changes in the health care environment-such as alternative service delivery systems, competitive health plans, physical capability of the patients and the increasing costs of health services-have led to the identification of more accurate and better understanding of the quality of services provided to patients (Fowdar and Roshnee, 2008).

The meaning of quality service is the capability of the service to provide better satisfaction to the service recipients compared with the other alternatives available (Bojanic, 1991), where the quality of the service represents the level of service received by the individual and the level of their expectations. Service quality accordingly comes within the three possibilities:

- Negative assurance (the performance is lower than the expectation)
- Positive assurance (the performance is above with the expectation)
- Assurance (the performance is equal to the expectation) (Prakash, 1984)

In the health care environment, the patient's perception is an assessment of the specific characteristics of the health service provided compared with their expectations (Carman, 1990). Service quality also means "the quality of health services provided whether it's perceived or expected. This means, what the customer expects or perceives in reality: The determining factor for providing quality of health service is patient satisfaction or dissatisfaction (Babakus and Boller, 1992)".

The importance of measuring service quality is by giving service providers the freedom to act in the workplace to achieve satisfaction and happiness of the service recipients and to develop standard measures for the high level of service that can be provided to the service recipients and to follow-up and monitor their work on an ongoing basis and to give employees feedback on the extent to which they achieved the standard of quality service (Cronin and Taylor, 1992).

**Measuring the quality of health service at Jordan red crescent health centers:** Measuring the quality of health service is useful for health center managers to understand the patients' perceptions about the quality service received by the patient. SERVQUAL scale has been used as a measure to achieve this purpose and was developed to measure quality service within the five

dimensions (tangibles, reliability, responsiveness, assurance and empathy) (Parasuraman *et al.*, 1985). This measure is based on a comparison of the expectations of patients and their perception of the service actually provided to them. Therefore the level of quality service is detected through the extent to which the patient expectations of the service resemble the actual performance they received. So the quality service represents the gap between expectation and perception and may be the gap between patient expectations for quality service and management perceptions of these expectations. Or the gap between service standards actually provided and between the management perceptions to the customers' expectations, or the gap between management perceptions and the standards of quality and the service actually provided. Or the so called performance gap which results from the imbalance in the credibility of the organization, through communication with customers, which differs from the level of service and its actual standards or the gap between the received and the expected service. Thus the quality of service is the achievement of patient satisfaction (Murfin *et al.*, 1995). Accordingly, the basic goal of the SERVQUAL scale is to clarify a series of gaps affected by patient perception of the quality of health services and make it desirable. Therefore this study has been made to detect the level of the quality of health services provided to the Iraqis at the Jordan Red Crescent Health centers.

**Problem of the study:** Jordan Red Crescent sought to provide humanitarian services to Iraqi expatriates in Jordan because of the circumstances of the war in Iraq, through its privileged relations with global and local humanitarian organizations. The Jordan Red Crescent humanitarian initiative has been to provide health services to Iraqis: On the one hand providing the requirements for establishing health centers, to deal with the services for the Iraqis including, buildings, doctors, nurses, social workers and others; on the other hand, gaining financial support to establish these centers through special investment relationships with a number of humanitarian organizations.

In order for Jordan red crescent to stimulate other humanitarian organizations to support its humanitarian policy and at the same time to provide clear and realistic evidence about the level of services provided to Iraqis to the humanitarian organizations which support these centers, they must prove to these organizations that the financial support provided to these centers has been invested in the best way and to encourage them to continue supporting this humanitarian policy. Finally, in order for Jordan Red Crescent to maintain its

credibility, it must show the results of this humanitarian policy to the global humanitarian societies in particular and to the international organizations in general. This study was to evaluate the quality of health services provided to Iraqis at the Jordan Red Crescent health centers. The study problem lies in answering the following questions:

- What is the quality level of health services provided to the Iraqis at Jordan Red Crescent Health Centers?
- Does the quality of health services provided to Iraqis at Jordan Red Crescent Health centers, differ according to the health center (Al-Ashrafieh and Al-Hashemi, Marka, Al-Taj and Hussein)?
- Does the quality of health services provided to Iraqis at Jordan Red Crescent Health Centers, differ according to demographic factors (gender, period of dealing with the health centre, marital status)?

**Importance of the study:** The theoretical importance of this study rises from the fact that it clarifies the quality of health service concept and how it measure. With regard to the practical importance of this study, it provides a scale for the quality of health services at Jordan red crescent health centers with the accepted reliability and validity indicators and also it reveals the level of quality of health services provided to Iraqis in these centers which considered a realistic indication of the success of the humanitarian policy adopted by JRC and which may be a vital indicator for the JRC and the global humanitarian organizations supporting this policy. This study also provides guidance for those involved in these health centers to enhance the quality of health services to the users through its recommendations based on the findings.

**Objectives:** The objective of this study was to assess the quality of health services provided to the Iraqis at Jordan Red Crescent health centers, through the achievement of the following sub-goals:

- To show the concept of the quality of health services; its importance, dimensions and measurement methods
- To provide a scale to measure the quality of health services at Jordan Red Crescent Health Centers with the accepted reliability and validity indicators
- To identify the level of quality of health service provided to the Iraqis at Jordan Red Crescent health centers

- To show the different level of quality of health service provided to Iraqis at Jordan Red Crescent Health Centers, according to the type of health center (Al-Hilal, Al-Hashemi, Marka, Al-Taj and Hussein)
- To show the different level of quality of health service provided to Iraqis at Jordan Red Crescent Health Centers, according to demographic factors (gender, period visiting the health centers and marital status)
- To provide a set of conclusions and recommendations to enhance the level of quality of health service provided to the Iraqis at Jordan Red Crescent Health Centers

**Study terminology:** The quality of health services: the expected or perceived quality of health services provided to the Iraqis at Jordan Red Crescent Health Centers, including four dimensions (Parasuraman *et al.*, 1985):

- Tangibles: This includes the physical elements of the service provided (seats, offices, outdoor space, facilities, lights, chairs, appliances, appearance of personnel and equipment)
- Responsiveness: The speed of delivery and level of assistance provided to service recipients
- Assurance: mean knowledge and ability to care for the service recipients; this demands providing skills and knowledge to the service provider
- Empathy: the degree of care and attention to the service recipients and their problems and work to find solutions to them in a refined humanitarian, easy and accessible way

**Limitations and determinants:**

- This study was applied to Iraqi patients at Jordan Red Crescent Health Centers from 1/2/2008-28/2/2008
- The results of this study determined by the validity and reliability of the study tool.

**MATERIALS AND METHODS**

This study relied on the descriptive approach by reviewing the theoretical literature relevant to quality of service and relevant previous studies, in addition to the application of the study questionnaire to collect data and to achieve results which contributes to a set of recommendations.

Table 1: Characteristics of the study sample

Variable	Variable levels	Number	Percentage
Health Center	Al-Hilal Center	481	29.1
	Al-Hashemi center	275	16.6
	Marka Center	229	13.9
	Al-Taj Center	439	26.6
	Al-Hussein	228	13.8
Gender	Male	793	48.0
	Female	859	52.0
Period dealing with the center	Less than 6 months	743	45.0
	From 6-12 month	449	27.2
	From 13-18 month	183	11.1
	More than 18 months	277	16.8
Marital status	Single	435	26.3
	Married	953	57.7
	Divorced	114	6.9
	Widowed	150	9.1

Table 2: Distribution of the study questionnaire items on the quality of health service dimensions

Dimension No.	Quality of health service dimensions	Item No.
1	Tangibles	1-5
2	Responsiveness	6-9
3	Assurance	10-13
4	Empathy	14-18

**Population and sample:** The study population comprised of all the Iraqi visitors to the five health centers of the Ashrafieh Health Center, Al-Hashemi Health Center, Marka Health Center, Al-Taj Health Center and Al Hussein Health Center.

As it is difficult to define the study population, especially because some of the beneficiaries of these centers' services have left Jordan and also because of the continued flow of Iraqis to Jordan due to the nature of the situation in Iraq. 10 days were chosen randomly and then all the visitors to the centers during this time were selected as members of the study sample, taking into account the non-selection of individuals who visited the center more than once during the period of gathering the study sample. The study sample consisted of 1652 service users. Table 1 shows the characteristics of the study sample.

Table 1 shows that (29%) of beneficiaries were from Al-Hilal center and that there was an even gender distribution (48%) female and (52%) male, (45%) of beneficiaries received medical services over a period less than 6 months. Finally it was noticed that (57.7%) of beneficiaries were married.

**Questionnaire:** To achieve the purpose of this study a questionnaire was developed to measure the quality of health services based on a review of theoretical literature and the scale used in Babakus and Mangold (1992) study. The study questionnaire is comprised of eighteen items distributed across four dimensions of quality service. It relied on the Likert 5-point response

format to determine the responses on the questionnaire items of the study sample. The response format ranges from 5-1: 5 = always, 4 = often, 3 = sometimes, 2 = rarely, 1 = never. Table 2 shows the distribution of the study questionnaire items:

**Questionnaire validity:** To measure the validity of the study questionnaire, Exploratory Factor Analysis (EFA) was used to examine the factor structure for the quality of health services questionnaire items which consists of 25 items measures the four dimensions of quality service; tangibles, responsiveness, reliability, assurance and empathy to examine the items loadings on quality of health service dimensions. Table 3 shows the results of factor analysis.

Table 3 shows that there are four factors where the questionnaire items loaded, 7 items were deleted as they did not show loading on these factors. These were all the reliability dimension items and thus it demands the deletion of this dimension from the study questionnaire, in addition to the deletion of two other items from the other dimensions. The four dimensions interprets (68.13%) of the variation in the individuals' response in the study sample on the quality of health service questionnaire. The Table 3 also shows that the interpreted variance percentage of the first factor was high at 60.78%. We can also see that the eigenvalue was relatively high at (10.94) compared with other factors whose eigenvalue were closer and smaller. As a whole these results indicate the possibility of the presence of a prevailing factor reflecting one dimension which is the quality services. We can also be noted that the items loadings of the quality of health service questionnaire on the 4 factors were high, as the correlation coefficient among the items of each factor and the factor that it represents is more than (0.40). This shows the high loading of the questionnaire items on the quality of health services dimensions.

Confirmatory factor analysis was also used to examine the quality of health service dimensions according to the study questionnaire items. Table 4 shows the results of the analysis.

The results in Table 4 indicate that the Compare Fit Index (CFI) value amounted to 0.984, a value being acceptable as greater than 0.90 and the value of the Tucker-Lewis Coefficient (TLI) is 0.98 and is also acceptable as a value close to 0.90 and the value of Root Means Square Error of Approximation (RMSEA) as (0.043), is acceptable as it is less than 0.05. Based on these results it proved that the quality of health services consists of four factors.

Table 3: Factor analysis for quality of health service items and items loading on quality of health service dimensions

Item No.	Tangibles Factor 1	Empathy Factor 2	Assurance Factor 3	Responsiveness Factor 4
Q3	0.71			
Q2	0.65			
Q5	0.65			
Q1	0.63			
Q4	0.63			
Q16		0.64		
Q17		0.64		
Q14		0.63		
Q15		0.62		
Q18		0.62		
Q13			0.66	
Q12			0.64	
Q10			0.56	
Q11			0.52	
Q7				0.62
Q8				0.57
Q9				0.55
Q6				0.52
Eigenvalue	10.94	0.63	0.45	0.24
Percentage of variance	60.78	3.51	2.51	1.34
Cumulative percentage of variance	60.78	64.29	66.79	68.13

Table 4: Overall fit indices for the quality of health service dimensions

CFI	0.984
TLI	0.981
RMSEA	0.043

Table 5: Internal consistency values for each quality of health service dimension

Dimension No.	Quality of health service dimension	Cronbach alpha coefficient
1	Tangibles	0.89
2	Responsiveness	0.88
3	Assurance	0.92
4	Empathy	0.92

**Questionnaire reliability:** Using the Cronbach Alpha Coefficient, internal consistency of the quality of the health service dimensions were extracted, according to the individuals in the study sample, whose number is 1652. Table 5 shows the internal consistency values.

**Statistical methods:** In order to answer the study questions, appropriate statistical methods-means, standard deviations, independent sample t-test, one way ANOVA and Scheffe tests-were used.

## RESULTS

**The results of the first question: "What is the quality level of health services provided to the Iraqis at Jordan Red Crescent Health Centers?":** To answer this question, means and standard deviations for perceptions of the study sample of the quality of health

services provided by Jordan Red Crescent Health Centers was calculated for each of its dimensions by dividing the difference between the maximum and minimum value for the Likert scale 5 point response on three scales, which represents the number of levels desired to find 3/1-5. Based on this calculation, the mean values, which the study reached, adopted a standard divided into 3 equal categories: High (5-3.68) medium (3.67-2.34), low (2.33-1). Table 6 shows the results.

Table 6 below shows that the perceptions of the members of the study sample for the level of health service quality provided at Jordan Red Crescent Health Centers were high for all dimensions. The tangibles dimension took first place with an average of 4.39; it was followed in second place by the assurance dimension with an average of 4.32. On the other hand, the empathy dimension came second to last with an average of 4.31 and in last place came the responsive dimension with an average of 4.23.

The items in each dimension for the quality of health services was analyzed; means and standard deviations were extracted for the perceptions of the study sample on the items of the quality of health services dimensions. Table 7 shows the results.

Table 7 shows that item 2 which states that "the health centre staff is well presented" came first among the items from the tangibles dimension, with a mean of 4.46 and standard deviation of 0.83, while item 4 which

states that "the health center uses available medical models" came last with a mean of 4.28 and a standard deviation of 0.96. Item 9 which states "there is a rapid response and cooperation between the doctor and staff regarding the other facilities center (ambulance, pharmacy, radiology, lab)" came first among the items of the responsiveness dimension, with a mean of 4.30 and a standard deviation 0.97, while item 8 which states that "the center staff ensure that the patients do not wait a long time" came last with a mean of 4.17 and a standard deviation 1.04.

The Table 7 also indicates that item 10 which states that "the patients feel safe with the way the center staff handle them" came first among the assurance dimension items, with a mean of 4.38 and a standard deviation of 0.94, while item 11 which states that "the health center has skilled doctors" came last with a mean of 4.27 and a standard deviation of 0.98.

Table 6: Means and standard deviations of the quality of health services provided to Iraqis at Jordan Red Crescent health centers

Quality of health service dimensions	Means	SD	Rank	Quality level of health services
Tangibles	4.39	0.73	1	High
Assurance	4.32	0.86	2	High
Empathy	4.31	0.80	3	High
Responsiveness	4.23	0.86	4	High
Total value	4.32	0.74	-	High

Table 7: Means and standard deviations of the responses of the study items for the quality of health services, ranked in descending order

Quality of health service dimensions	No.	Item	Mean	SD	Rank	Level
Tangibles	2	The health centre staff is well presented	4.46	0.83	1	High
	3	The doctor's clinic and its contents are clean and sterile	4.45	0.82	2	High
	1	The doctors and nurses in the health centre are committed to wearing medical clothes	4.40	0.86	3	High
	5	The health center has excellent hygiene for all facilities (waiting rooms, toilets)	4.35	0.91	4	High
	4	The health center uses available medical models.	4.28	0.96	5	High
Responsiveness	9	There is a rapid response and cooperation between the doctor and staff regarding the other facilities center (ambulance, pharmacy, radiology, lab)	4.30	0.97	1	High
	6	Information is given to patients on how the service performs for them and how the cost is rated	4.24	1.00	2	High
	7	The center provided emergency services to the patient when required	4.22	0.99	3	High
	8	The center staff ensures that the patients do not wait a long time	4.17	1.04	4	High
Assurance	10	The patients feel safe with the way the center staff handle them	4.38	0.94	1	High
	12	The center staff are exemplified by good treatment.	4.33	0.96	2	High
	13	The patient trusts the service provided to him/her	4.32	0.96	3	High
Empathy	11	The health center has skilled doctors	4.27	0.98	4	High
	17	The center staff maintain patient privacy	4.40	0.87	1	High
	16	The staff call the patients by name	4.35	0.93	2	High
	18	The center staff welcome the questions and queries of the patients	4.30	0.96	3	High
	14	The center staff give interest to some of the cases	4.26	0.93	4	High
	15	The center staff give utmost care to the patients	4.25	0.96	5	High

Table 8: One-way ANOVA results for the differences in the individuals' perceptions of the study sample for the quality of health services provided at Jordan Red Crescent Health Centers, according to the health center

Quality of health service dimensions	Calculated f-value	p-value
Tangibles	61.70	*0.00
Responsiveness	44.49	*0.00
Assurance	52.64	*0.00
Empathy	51.49	*0.00
Total score	63.25	*0.00

Table 9: Means, standard deviations and independent t-test results for the differences in the individual perceptions of the study sample for the quality of health services provided at Jordan Red Crescent health centers, according to gender

Dimensions for quality of health service	Gender	Means	SD	t-test value	p-value
Tangibles	Male	4.39	0.75	0.02	0.99
	Female	4.39	0.72		
Responsiveness	Male	4.22	0.87	0.68	0.50
	Female	4.25	0.86		
Assurance	Male	4.31	0.89	0.87	0.38
	Female	4.34	0.83		
Empathy	Male	4.30	0.83	0.38	0.71
	Female	4.32	0.78		
Total score	Male	4.31	0.76	0.52	0.61
	Female	4.33	0.72		

Item 17 which states that "the center staff maintain patient privacy" came first among the items of the empathy dimension, with a mean of 4.40 and a standard deviation of 0.87, while item 15, which states that "the center staff give utmost care to the patients" came last with a mean of 4.25 and a standard deviation 0.96.

**The results to the second question, which asks: "Does the quality of health services provided to the Iraqis at Jordan Red Crescent Health Centers, differ according to the type of health center (Al-Hilal, Al-Hashemi, Marka, Al-Taj and Hussein)?:** Means, standard deviations and ANOVA test were used for the differences in the individual perceptions of the study sample for the quality of health services provided at Jordan Red Crescent Health Centers, according to the health center. Table 8 shows the results.

Table 8 shows that the f-values for all quality of health service dimensions were  $p < 0.05$ . This indicates the existence of statistically significant differences in the quality of health services provided to the Iraqis at Jordan Red Crescent Health Centers, according to the type of health center (Al-Hilal and Al-Hashemi, Marka, Al-Taj and Hussein). To determine the direction of statistical difference a SCHEFFE test was used to compare the differences in quality of health services, according to the type of health center. The SCHEFFE results indicates that the quality of health services in Al-Hashemi, Marka and Al-Taj centers was highest, compared to the quality of health services in Al-Hilal and Al-Hussein centers.

Table 10: One-way ANOVA results for the differences in the individual perceptions of the study sample for the quality of health services provide at Jordan Red Crescent health centers, according to the period of dealing with the health center

Quality of health service dimensions	Calculated f-value	p-value
Tangibles	5.52	*0.00
Responsiveness	3.82	*0.01
Assurance	4.40	*0.00
Empathy	4.05	*0.01
Total score	5.04	*0.00

Table 11: One-way ANOVA results for the differences in the individual perceptions of the study sample for the quality of health services provided at Jordan Red Crescent health centers according to marital status

Quality of health service dimensions	Calculated f-value	p-value
Tangibles	3.27	*0.02
Responsiveness	4.02	*0.01
Assurance	4.96	*0.00
Empathy	2.38	0.07
Total score	4.18	*0.01

**The results of the third question, which asks: "does the quality of health services provided to the Iraqis at Jordan Red Crescent health centers, differ according to demographic factors (gender, duration of treatment at the Center, marital status)?:**

**Gender:** Means, standard deviations and an independent T test were used for the differences in the individual perceptions of the study sample for the quality of health services provided at Jordan Red Crescent health centers, according to gender. Table 9 shows that the T values for all dimensions of the quality of health services was higher than the probability values (0.05), indicating that there are no statistically significant differences in the quality of health services provided to the Iraqis at Jordan Red Crescent health centers due to gender.

**Period of dealing with the health center:** Means, standard deviations and one-way ANOVA tests were used for the differences in the individual perceptions of the study sample for the quality of health services provide at Jordan Red Crescent Health Centers, according to the period of dealing with the health center. Table 10 shows the result.

Table 10 shows that the F values for all dimensions of quality of health services was lower than the probability values (0.05), which indicate the existence of statistically significant differences in the quality of health services provided to the Iraqis at Jordan Red Crescent Health Centers is due for a period of dealing with the centers. To determine the trend of statistical difference, a SCHEFFE test was used to compare the differences in the quality of health services, according

to the period of dealing with the health center. The SCHEFFE results indicates that the quality of health services in their dimensions (tangibles, responsiveness, assurance and total score) from the patients' point of view, who were dealing with the center from 6-18 months is highest than those visiting the center for less than 6 months. The SCHEFFE results also indicates that the level empathy dimension of health services from patients' point of view who had been dealing with the center for more than 13 months was higher than other patients.

**Marital status:** Means, standard deviations and one-way ANOVA tests were used to identify the differences in the individual perceptions of the study sample for the quality of health services provided at Jordan Red Crescent Health Centers, according to marital status. Table 11 shows the result.

Table 11 shows that the f-values of the quality of health service dimensions (tangibles, responsiveness, assurance and total score) were less than 0.05, which indicate the existence of statistically significant differences in the quality of health services dimensions provided to Iraqis at Jordan Red Crescent Health Centers according to marital status. Meanwhile there were no statistically significant differences in the empathy dimension provided to the Iraqis at Jordan Red Crescent Health Centers, according to marital status. To determine the level of statistical difference a SCHEFFE test was used to compare the dimensions differences in the quality of health services according to marital status. The SCHEFFE results shows that the tangible dimension at Jordan Red Crescent Health Centers from the unmarried patients' point of view is higher than the divorced patients' point of view. Thus, the level of responsiveness and the total score for the quality of health service at Jordan Red Crescent Health Centers from the unmarried and widowed patients' point of view is higher than the divorced patients' point of view. The level of assurance in the health services from the unmarried, married and widowed patients' point of view is higher than the divorced patients' point of view.

## DISCUSSION

- The level of quality of health service provided to Iraqis at Jordan Red Crescent Health Centers is high in all dimensions (tangibles, responsiveness, assurance and empathy). This indicates the success of the health services providers in achieving the performance criteria set at a high level. In addition this result indicates the success of the Jordan Red

Crescent in the investment of financial support to these centers as optimal and expected

- The greatest quality of health services dimensions available at Jordan Red Crescent Health Centers are the tangibles and assurance dimensions, whereas the least accessible dimensions of health service are empathy and responsiveness. This result can be attributed to the work pressure faced by these health centers
- There is a statistically significant difference in the quality of health services provided to the Iraqis at Jordan Red Crescent Health Centers according to the type of the health center (Al-Hilal, Al-Hashemi, Marka, Al-Taj and Hussein). The quality of health services in Al-Hashemi, Marka and Al-Taj centers is of higher quality compared with the health services provided at the Al-Hilal and Al-Hussein centers. This result can be attributed to the fact that the services provided at the Al-Hussein health centre are new and have not been running for more than six months. Regarding to the result of Al-Hilal health center it is due to the pressure of work it is exposed to compared with other centers, in particular Al-Hilal health center during 2007 and 2008 was able to provide services to 19661 patients
- There are no statistically significant differences in the quality of health services provided to Iraqis at Jordan Red Crescent Health Centers due to gender. This result can be attributed to the fairness of the provision of services provided for both sexes in the health centers
- There is a statistically significant difference in the quality of health services provided to the Iraqis at Jordan Red Crescent Health Centers due to the period of dealing with the center, where the quality of health services in their dimensions (tangibles, responsiveness and assurance and total score), from the patients point of view who were dealing with the center from 6-18 months, was at the highest level than those had been dealing with the center for less than 6 months. In addition, the level of health service from the patients' point of view who had been dealing with the center for more than 13 months was high comparing with the other patients' point of view. This result indicates the sustainability and continuity of the health services provided to Iraqi patients and that new patients feel unable to adjust to the new situation which they miss as a result of their emigration to Jordan
- There is a statistically significant difference in the quality of health services dimensions (tangibles, responsiveness, assurance and total score) provided to Iraqis at Jordan Red Crescent Health Centers



due to marital status, whereas there is no statistically significant difference in the empathy dimension for the health services provided to the Iraqis at Jordan red crescent health centers due to marital status, as the quality of health services provided to the patients from the divorced point of view is less than that of the other patients (single, married, widowed)

### CONCLUSION

- The need to expand these health centers in collaboration with international humanitarian organizations to provide health services to a larger number of Iraqis
- To urge international humanitarian organizations and other organizations in charge of such services to engage and work in partnership for these humanitarian initiative
- To transfer the Jordan Red Crescent experience to different countries in the world which suffer from severe humanitarian conditions causing the emigration of innocent civilians to host countries
- To conduct more studies that focus on patient satisfaction of health services provided to them at Jordan red crescent health centers as a complementary study to this study

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