

Quality of Health Services and Patients' Satisfaction in Accredited and Non-Accredited Hospitals

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Abstract

The majority of hospitals follow voluntary or mandatory accreditation standards; these standards are widely believed to improve the quality of hospital services (QHS) and thereby increase patient satisfaction (PS). The current descriptive-comparative study explored patients' opinions and beliefs with regard to QHS and PS at accredited and non-accredited Jordanian public hospitals in 2016. Data of discharged patients were collected using a structured questionnaire; 250 patients from four hospitals participated (response rate: 83%). SPSS v.15 was used calculate mean values, standard deviations, and Pearson's correlation coefficient, and to conduct t-tests. Patients indicated medium levels of QHS and PS in both accredited and non-accredited hospitals; additionally, QHS and PS were significantly correlated ($p \leq 0.05$) in both types of hospitals. These results suggest that QHS and PS require improvement in all Jordanian public hospitals; future research should identify causal relationships between implementing accreditation standards and patient satisfaction.

Keywords: hospital accreditation, Jordan, patient satisfaction, quality of health services

1. Background

In recent decades, hospitals have increasingly recognized that supplying quality goods and services importantly promotes hospitals' domestic and international competitiveness (Guasch, Racine, Sanchez, & Diop, 2007; Czajkowska & Stasiak-Betlejewska, 2015). Health care systems are increasingly applying quality initiatives adopted by hospitals to promote their survival and success (McLaughlin & Kaluzny, 2006; Örténblad, Löfström, & Sheaff, 2015). Hospitals are a basic component of the health system; they offer a range of health services that improve people's health and lives (World Health Organization, 2015). Hospitals have moved quickly to adopt modern management concepts and improve service quality (i.e., quality of health services; QHS) and patients' perception of QHS (Papp, 2015).

Patients' perception of QHS often depends on what patients see, touch, hear, and smell during a hospital stay (Haggard & Hosking, 2003). The majority of patients regard easy access, suitable admission and discharge procedures, and respect for patients' rights as core components of QHS in hospitals (Moonesinghe & Zhu, 2011). Adequate patient communication and physicians' and nurses' skill, attention, and respect for patients also importantly affect QHS (Buttaro & Buttaro, 1999; Siddiqui, Zuccarelli, Durkin, Wu, & Brotman, 2015; Al-Amin, 2016). Proper presentation of facilities, housekeeping, and food service also mediate patients' perceived QHS (Health Care Accreditation Council, 2011).

Hospital accreditation (HA) is currently used globally to ensure QHS (Nightingale, 1860; Wang et al., 2015; Peterit, 2015). Numerous HA programs exist around the world; some are voluntary (e.g., in Jordan) and others are compulsory (e.g., in France). Most programs use the American Joint Commission accreditation standards (Sack et al., 2011). HA uses self-assessment and external quality audits to check hospitals' compliance with standards and thereby maintain and promote QHS (Brown, 2004) by identifying existing care practices that require reform or implementing new practices (Trestman, Appelbaum, & Metzner, 2015).

Healthcare is highly competitive; therefore, client satisfaction is a primary concern in healthcare (Sodani & Sharma, 2014). The term "client satisfaction" refers to the client's considered judgment of their requirements and expectations' satisfaction (Tran, Nguyen, Phan, & Latkin, 2015), and reflects clients' evaluation of service quality (Zeitham, Berry, & Parasuraman, 1996). Client satisfaction also applies to health systems, as health institutions

also aim to satisfy clients (Shiver & Cantiello, 2016). Patient satisfaction (PS) is presently an accepted indicator of QHS (Gaol, Mars, & Saragih, 2015; Milutinovic, Brestovacki, & Cvejic, 2010; Accreditation Canada, 2015). PS significantly predicts critical patient outcomes (e.g., mortality rate, health status; Sack et al., 2011). Additionally, patient feedback and comments may inform and promote performance improvement. Administrators should aim to recognize issues requiring resolution in order to continuously improve PS (Harris, 2016; Tulchinsky & Varavikova, 2014).

The Health Care Accreditation Council (HCAC) is responsible for HA in Jordan. Jordan was among the first Middle Eastern countries to adapt and implement HA programs (Shaw, 2015), after receiving support from the U.S. Agency for International Development (USAID) during 2007-2013 (Arbaji, 2014). USAID provided \$445 million to Jordan between 2000 and 2015 for the development and improvement of QHS in Jordan, the establishment of the HCAC, and to support Jordanian hospitals in implementing HCAC standards (U.S. Agency for International Development, 2016). Implementing HCAC standards requires adhering to QHS requirements (Ministry of Health, 2011). The Ministry of Health (MoH) ensures continued adherence to HA standards (Jordanian High Health Council, 2014). Currently, 10 out of 31 public hospitals in Jordan are accredited (Health Care Accreditation Council, 2016).

The present study tested the hypothesis that patients' perceived QHS and PS is higher in accredited hospitals (AH) than in non-accredited hospitals (NAH) by comparing patients' perceived QHS and PS between AHs and NAHs. This study's results provide valuable insight into the process and effects of hospital accreditation in Jordan, and may promote the accreditation of additional hospitals in Jordan.

1.1 Research Questions

This study aimed to answer the following questions:

Q1: *What is patients' opinion regarding implementation of QHS in AHs and NAHs?*

Q2: *What is the level of PS in AHs and NAHs?*

Q3: *What is patients' opinion regarding the implementation of QHS and PS, compared between AHs and NAHs?*

2. Methods

2.1 Study Design and Sampling Technique

This study used a descriptive-comparative design. The sample was selected using multistage sampling in 2016. Jordan contains 31 public hospitals (21 NAHs and 10 AHs). These were sorted into a NAH and an AH group, each of which contained hospitals that were broadly similar regarding size, services provided, location, and customers. Pools of 7 NAHs and 5 AHs were created; two hospitals were randomly selected from each pool and examined using a cross-sectional survey. The sample population was composed of discharged patients who were able to complete the questionnaire, understood the study's aims, and voluntarily agreed to participate. Patients who had been discharged from pediatric departments, stayed in their hospital for <2 days, or who had been admitted to the target hospital for the first time were excluded. Research assistants distributed and collected the questionnaire during typical discharge times (10 am-2 pm) over a randomly selected 10-day period during the data collection period. Participants completed the questionnaire in 10-15 min. Three hundred questionnaires were distributed (150 in each hospital); 129 and 121 questionnaires (86% and 81%) were collected from the AH and NAH, respectively. Hospital staff did not intervene.

2.2 Questionnaire

The questionnaire was prepared following a review of relevant research on QHS and PS measurement (Siddiqui, Zuccarelli, Durkin, Wu, & Brotman, 2015; Atallah, Mansour, Al-Sayed, & Aboshaiqah, 2013; Saif, 2013; Sack et al., 2011; Hogan, 2005; Fields, 2013). The questionnaire examined participants' demographics (age, gender, education, length of stay) and evaluation of QHS regarding hospital access, admission, patient accommodation and meals, the attending physician and nurses, diagnostic and therapeutic procedures, patients' rights, and discharge procedures. Thirty-two items examined specific elements of QHS; four items examined overall patient satisfaction with QHS. The questionnaire was presented to five experts and subsequently revised as necessary to ensure its validity. The questionnaire was pilot-tested among 15 participants and subsequently improved. The questionnaire's reliability was estimated using Cronbach's alpha; values ranged from 0.70 to 0.88, indicating adequate internal consistency (Table 1).

Table 1. Questionnaire reliability

Variable		Cronbach's Alpha
Quality of healthcare services	Access to health services	86.2
	Admission to hospital	70.3
	Patient accommodation	88.1
	Food	83.7
	Physician	80.6
	Nurses	70.1
	Diagnostic and therapeutic procedures	76.2
	Patient rights	78.3
Satisfaction	Discharge procedures	69.6
	Overall satisfaction	69.9

2.3 Statistics & Analysis

Patients indicated their perceived QHS and PS using a 5-point Likert scale (5 = highest QHS or PS; 1 = lowest QHS or PS). Statistical analysis was carried out using SPSS v.15.0 for Windows (SPSS Inc., Chicago, IL, USA). Mean values (MV) and standard deviations (SD) of QHS and PS were calculated; using these statistics, participants' responses were sorted into the following groups: low rating (1-2.33); medium rating (2.34-3.67) and high rating (3.68-5; Hassouneh, 2015). A single-sample t-test was used to test for homogeneity of responses throughout the entire sample; a two-sample t-test was used to compare ratings of QHS and PS between AHs and NAHs; Pearson's correlation coefficient was calculated to measure the relationship between perceived QHS and PS. Values of $p \leq 0.05$ were considered statistically significant.

2.4 Ethical Approval

This study's protocol was revised and approved by the Research Committee of the MoH in Jordan. Participation was anonymous and voluntary; collected information was not disclosed. All participants were informed that they were able to withdraw at any time without penalty.

3. Results

Most participants were aged ≥ 50 years. Females composed 59.4% of the sample. The majority of participants had a bachelor's degree or less and had stayed < 5 days in hospital.

Tables 2–10 compare participant ratings of QHS between NAHs and AHs regarding each of the questionnaire's subscales; these results are relevant to research question one (i.e., *what is patients' opinion regarding implementation of QHS in AHs and NAHs?*).

Table 2. Access to health services

Variable	Non-accredited			Accredited		
	MV (SD)	t-value	level	MV (SD)	t-value	level
1 Health service is easily accessible	3.25 (1.15)	38.18*	m	2.93 (1.19)	34.22*	m
2 Location of service provider is convenient	3.18 (1.20)	35.18*	m	3.01 (1.28)	32.31*	m
3 It is easy to book an appointment for health care	2.93 (0.91)	32.10*	m	2.63 (1.27)	28.92*	m
Total	3.12 (1.04)	39.89*	m	2.85 (1.03)	38.71*	m

* $p \leq 0.05$, m = medium level.

Table 3. Admission to hospital

Variable	Non-accredited			Accredited		
	MV (SD)	t-value	level	MV (SD)	t-value	level
4 Ease of admission procedures	2.53 (1.09)	31.23*	m	3.01 (1.23)	34.19*	m
5 Appropriateness of administration procedures	3.03 (1.13)	31.35*	m	3.05 (1.33)	31.94*	m
6 Staff warmly welcomed you	2.58 (1.03)	33.82*	m	2.73 (1.23)	30.97*	m
Total	2.71 (0.85)	42.04*	m	2.93 (0.98)	41.53*	m

* $p \leq 0.05$, m = medium level.

Table 4. Patient accommodation

Variable	Non-accredited			Accredited		
	MV (SD)	t-value	level	MV (SD)	t-value	level
7 Room cleanliness	2.77 (1.35)	27.65*	m	3.24 (1.38)	38.42*	m
8 Suitable room temperature	3.00 (1.30)	30.99*	m	3.03 (1.28)	32.72*	m
9 Suitable room equipment and furniture	2.95 (1.28)	30.96*	m	3.14 (1.24)	35.20*	m
10 Quietness of hospital setting	3.11 (1.23)	34.05*	m	3.12 (1.24)	34.99*	m
11 Feeling safe in the room	3.26 (1.25)	35.24*	m	3.15 (1.22)	35.81*	m
Total	3.01 (1.07)	37.23*	m	3.13 (0.91)	47.58*	m

* $p \leq 0.05$, m = medium level.

Table 5. Food

Variable	Non-accredited			Accredited		
	MV (SD)	t-value	level	MV (SD)	t-value	level
12 Satisfaction with food quality	3.42 (1.19)	38.82	m	3.33 (1.13)	40.89*	m
13 Suitable food temperature	2.94 (1.24)	32.04*	m	2.87 (1.17)	34.11*	m
14 Variety of food	3.12 (1.22)	34.56*	m	2.90 (1.22)	33.19*	m
15 Dietary counseling supplied	2.93 (1.31)	30.16*	m	2.87 (1.21)	33.14*	m
Total	3.10 (1.06)	38.39	m	2.99 (0.89)	46.57*	m

* $p \leq 0.05$, m = medium level.

Table 6. Physician

Variable	Non-accredited			Accredited		
	MV (SD)	t-value	level	MV (SD)	t-value	level
16 Usually spends sufficient time with you	3.04 (1.34)	30.60*	m	2.90 (1.26)	32.10*	m
17 Opportunity to interact with the physician	2.77 (1.36)	26.85*	m	2.75 (1.25)	30.69*	m
18 Knowledge and skill of physician	2.92 (1.30)	30.35*	m	3.18 (1.27)	34.77*	m
19 Physician's respect for the patient	2.69 (1.32)	27.53*	m	2.81 (1.27)	30.73*	m
Total	2.86 (1.12)	33.89*	m	2.91 (0.93)	43.67*	m

* $p \leq 0.05$, m = medium level.

Table 7. Nurses

Variable	Non-accredited			Accredited		
	MV (SD)	t-value	level	MV (SD)	t-value	level
20 Knowledge and skill of nurse	2.64 (1.31)	26.98*	m	2.52 (1.27)	27.57*	m
21 Nurses' response to your needs	2.78 (1.37)	27.00*	m	3.03 (1.20)	35.11*	m
22 Nurses' attention to visitors and family	3.09 (0.96)	33.65*	m	3.30 (1.14)	40.37*	m
23 Nurses' respect for the patient	2.73 (1.29)	28.51*	m	3.11 (1.13)	38.32*	m
Total	2.81 (1.12)	33.82*	m	2.99 (0.82)	49.64*	m

* $p \leq 0.05$, m = medium level.

Table 8. Diagnostic and Therapeutic Procedures

Variable	Non-accredited			Accredited		
	MV (SD)	t-value	level	MV (SD)	t-value	level
24 Hospital has everything it needs to provide full medical care	2.83 (1.35)	28.36*	m	3.16 (1.22)	35.96*	m
25 Waiting time for medical procedure	3.32 (1.39)	18.80*	m	2.98 (1.24)	33.80*	m
26 Explanation of processes in testing or treatments	2.79 (0.93)	42.98*	m	3.06 (1.29)	33.02*	m
Total	3.04 (1.11)	36.17*	m	3.07 (0.92)	46.57*	m

* $p \leq 0.05$, m = medium level.

Table 9. Patient Rights

Variable	Non-accredited			Accredited		
	MV (SD)	t-value	level	MV (SD)	t-value	level
27 I was informed of my rights	2.84 (1.17)	32.87*	m	3.40 (1.30)	35.30*	m
28 My privacy was maintained	2.67 (1.12)	32.13*	m	2.98 (1.22)	34.0*3	m
29 I was provided with adequate information about my condition and treatment plan	2.98 (0.92)	43.74*	m	3.15 (1.21)	36.18*	m
Total	2.83 (0.85)	43.97*	m	3.18 (0.97)	45.41*	m

* $p \leq 0.05$, m = medium level.

Table 10. Discharge Procedures

Variable	Non-accredited			Accredited		
	MV (SD)	t-value	level	MV (SD)	t-value	level
30 Ease of discharge procedures	3.16 (0.95)	44.92*	m	3.22 (1.28)	35.06*	m
31 Instructions received about caring for oneself at home	2.97 (1.01)	39.68*	m	2.87 (1.22)	32.68*	m
32 Fee is clear and understandable	3.11 (1.00)	42.06*	m	2.67 (1.27)	29.18*	m
Total	3.08 (0.78)	52.42*	m	2.92 (0.92)	42.32*	m

* $p \leq 0.05$, m = medium level.

Table 11 compares overall QHS ratings between NAHs and AHs.

Table 11. Overall QHS in Accredited and Non-accredited Hospitals

Variable	Non-accredited			Accredited		
	MV (SD)	t-value	level	MV (SD)	t-value	level
Quality of healthcare services	2.95 (0.77)	51.79*	m	3.00 (0.73)	57.11*	m

* $p \leq 0.05$, m = medium level.

Table 12 presents participants' overall ratings of AHs and NAHs; these results are relevant to research question two (i.e., *what is the level of PS in AHs and NAHs?*).

Table 12. Overall Satisfaction

Variable	Non-accredited			Accredited		
	MV (SD)	t-value	level	MV (SD)	t-value	level
33 Overall, I am satisfied with the hospital's services	2.91 (0.96)	41.11*	m	2.81 (1.26)	31.13*	m
34 How does this hospital compare with your ideal hospital?	2.95 (1.01)	39.38*	m	2.97 (1.29)	32.19*	m
35 Are there benefits to being here?	3.12 (0.90)	36.40*	m	2.91 (1.20)	33.10*	m
36 I would recommend this hospital to my friends as a good place for therapy	2.87 (1.10)	51.33*	m	3.25 (1.19)	34.96*	m
Total	2.96 (0.75)	53.43*	m	2.98 (0.70)	56.46*	m

* $p \leq 0.05$, m = medium level.

Table 13 presents values of correlation between QHS and PS; these results are relevant to research question three (i.e., *what is patients' opinion regarding the implementation of QHS and PS, compared between AHs and NAHs?*).

Table 13. QHS and PS in AHs and NAHs

Hospital type	r	Sig
Non-accredited hospitals	.78	.000
Accredited hospitals	.67	.000

4. Discussion and Conclusion

Accrediting hospitals is a widely accepted way of ensuring QHS (Sack, Scherag, Lutkes, Gunther, & Holtmann, 2011). Substantial evidence is not yet available regarding accreditations' effect on patient outcomes and satisfaction (Nicklin, 2015). This study tested the hypothesis that patients perceived higher QHS and PS in AHs than in NAHs. Additionally, this study examined the correlation between QHS and PS in NAHs and AHs. This study quantitatively examined the following QHS factors: ease of access, suitable admission and discharge procedures, physicians' and nurses' skill and attention paid to patients, respect of patients' rights, communication with patients, appearance of physical facilities, and housekeeping and food services.

Participants' QHS and PS ratings were strongly correlated, supporting Sodani and Sharma (2014). Participants' mean satisfaction rating with QHS, its factors, and PS differed significantly between NAHs and AHs; however, the differences were relatively small, suggesting that accreditation's effect on QHS and PS is significant but small. This may reflect inadequate application of HCAC standards or the comparatively larger effect of overcrowding (which was observed in the surveyed hospitals) on QHS and PS.

Ease of access differed significantly between NAHs and AHs but received a medium rating in both types of hospital; this suggests that accreditation standards may not adequately address patient access to hospitals. Standards relating to patient access address service access within hospitals, but do not address patient referral from primary health centers to hospitals (Hospital Accreditation Standards, 2008).

Patient admission and discharge procedures also differed significantly between NAHs and AHs but received a medium rating in both types of hospital, suggesting that accreditation standards have a small effect on admission and discharge procedures. This finding may reflect very high demand on all public hospitals in Jordan (which may impede admission), as well as the effects of several unavoidable regulations affecting admission and discharge procedures. Additionally, accreditation standards require hospitals to comply with national laws and regulations.

Patients' evaluation of hospital accommodation also differed significantly between NAHs and AHs but received a medium rating in both types of hospital. This suggests that both NAHs and AHs need to improve patient accommodation, and that accreditation standards concerning patient accommodation had not been fully implemented in AHs. This factor may particularly require improvement: patients' acceptability rating of hospitals' corridors and rooms may affect PS more strongly than staff responsiveness (Panda & Das, 2014).

Regarding food, patients in AHs rated their hospital's food service significantly lower than the patients in NAHs, although both AHs and NAHs received a medium rating overall. No hospital accreditation standards apply to food variety; instead, most relevant standards address food service management and safety. This may explain NAHs and AHs' similar food ratings.

All factors of patients' relationship with healthcare providers received a medium rating. Motivation to satisfy patients appears to be lacking in AHs, given that promotion in public hospitals depends on seniority, and not on the successful implementation of accreditation standards. Further, successfully implemented standards may take considerable time to bring about behavioral changes that positively affect PS (Sack et al., 2011).

Patients also gave a medium satisfaction rating to diagnostic and therapeutic procedures at both AHs and NAHs. Patients typically hold deep-seated beliefs that hospitals are able to meet their needs; however, NAHs and AHs possess similar equipment and supplies, and implementation of accreditation standards did not improve patients' opinion.

Finally, patients also gave a medium rating to NAHs and AHs' respect for patients' rights. Significantly, AHs' rating on this factor exceeded that of NAHs by a small amount, indicating that accreditation had a small effect on hospitals' respect of patients' rights. This may reflect the limited extent of actions that standards require of accredited hospitals regarding patients' rights: patients' rights are listed in corridors and patient rooms, hospitals make announcements stating the importance of protecting patients and their property, and brochures are distributed detailing the hospital's services. These measures appear to weakly promote patient satisfaction, and the importance of patient's rights remains widely unaccepted in public hospitals in Jordan.

This study has the following limitations: First, the sample contained only four hospitals; this decreases the chance that the sample was representative compared to a larger sample. Additionally, the study used a cross-sectional design, preventing inferences about causal connections between the examined variables.

4.1 Recommendations

The present results indicate the importance of developing effective hospital accreditation standards in order to promote QHS and PS. Additionally, PS and all examined factors of QHS require urgent improvement in both

NAHs and AHs. Future research should identify more powerful means of increasing PS.

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