

Original article

Association between Hospital Accreditation and Patient Satisfaction: A Survey in the Western Province of Iran

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Abstract:

Background: In recent years accreditation programs have been developed to assess the quality of care and patient safety in hospitals. Quality is a multidimensional concept with patient satisfaction as one of the important facets. This study aimed to test any relationship between patient satisfaction and hospital accreditation. **Material and Methods:** A cross-sectional study of seven hospitals in Hamadan, Iran, was conducted in 2013. Patient satisfaction was analyzed through a self-made questionnaire and data on hospitals' accreditation scores were obtained from the Curative Deputy of Hamadan University of Medical Sciences. Statistical analysis was done using SPSS 20. **Results:** Our research found out a strong relation between satisfaction scores and length of stay, hospital type, human resources condition, information, communication and education, medical equipment and physical structure, accessibility to clinical services, emotional support, management and coordination of care. Findings also revealed a significant negative association between hospital accreditation and patient satisfaction except for the domain of emotional support. **Conclusion:** Findings support healthcare managers with helpful information about the variables that are related to patient satisfaction. This understanding will make them capable to meet needs and preferences of patients more effectively. Study also confirmed the importance of developing an accreditation system based on outcome parameters and providing responsive services to patients which can positively impact their satisfaction.

Keywords: Patient satisfaction; Accreditation; Hospital; Quality.

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Introduction:

Hospitals as integrated parts of the wide-ranging health care systems have dominant focus on health care provision to meet, maintain and promote people's health needs of a community¹. As these types of health care organizations are directly responsible for people's lifesaving and health status, delivery of high quality services has got a particular importance to avoid them from preventable deaths and harmful injuries². In recent years accreditation programs have been developed and implemented to assess the quality

of care and patient safety in hospitals³. Quality is a multidimensional concept with patient satisfaction as one of the important facets which mirrors the quality of services in a hospital setting⁴. If health care organizations aim to survive in a competitive health care market, they have to be committed to satisfy their clients' needs and expectations⁵. Patient satisfaction is defined as patients' opinion of 'how well' services meet their needs and expectations⁶. Grogan has interpreted patient satisfaction as a condition that patients receive adequate inpatient and

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treatment services and are satisfied with staff behavior and communication also are eager to continue their treatment plan or recommend the hospital to others⁷. Information about patient satisfaction has beneficial implications for a hospital as it can forecast patients' attitude and behavior toward the health care facility in the future. Satisfaction results also convey useful information about the structure, process and outcome of care from the users' point of view⁸. For all these reasons patient satisfaction is considered as one of the main categories of accreditation plans.

In recent years there has been an evolving trend named "accreditation" which has been introduced as a practice for improving the quality of health care services and patient safety⁹. This process can be used as a criterion to evaluate the degree of achievement toward predetermined standards in health care organizations which one of the key ones is patient satisfaction¹⁰. For the reason that in Iran, accreditation has newly been applied in to practice, there is still an essential need to conduct more studies to assess the relation between patient satisfaction and hospital accreditation scores.

Literature affirms that hospital accreditation and patient satisfaction are both quality measures for health care services. Previous studies conducted to explore the association between hospital accreditation score and patient satisfaction revealed contradictory results. A study conducted in Iran with the purpose of identifying the effects of accreditation on quality of services from the experts' viewpoint uncovered that implementing accreditation standards were related to documentation, standardization and refinement of hospital procedures, monitoring medical errors, encouraging teamwork, doing the right thing, facilitating educational activities, developing a supportive culture and improving the quantity and quality of services. Experts also believed that improvement in patient safety, cost containment, decrease in medical errors, patient involvement, improvement in patient-staff communication and overall satisfaction from health care services were the main results of implementing accreditation standards¹¹. Although there were some studies which considered accreditation to have a positive impact on patient satisfaction¹²; some others couldn't find any significant relationship between these two measures^{13,14}. A study conducted by Heuer et al aimed to determine the relationship between accreditation and patient satisfaction as two quality indicators. Results did not approve any significant relationship

between these two parameters¹⁵. Another study in Malaysia conducted by Hayati et al compared patient satisfaction in surgical wards between accredited and non-accredited hospitals. Results revealed no significant difference in patient satisfaction between accredited and non-accredited hospitals confirming that accreditation was not prominently reflective of patient satisfaction¹³. Sack et al conducted a study with a similar purpose. Similarly findings did not show any meaningful association between accreditation and satisfaction rate which confirmed the idea that hospital accreditation was not a decisive factor for quality of care⁸.

Since there is lack of evidence to examine the association between accreditation score and patient satisfaction in Iran, we initiated this study to test the hypothesis that patients in hospitals with better accreditation scores are more satisfied with the provision of health care services.

Materials and Methods:

Study setting and data sources

Study was conducted in Hamadan, a western province of Iran, at seven hospitals with different accreditation scores based on the MOHME accreditation classification results. These hospitals belonged to four classification groups (1 superior, 1 plus, 1 and 2). The first two groups could achieve higher accreditation scores and the last two ones were less compliant with accreditation standards. Data collection in the study was done in two phases: first, hospitals' accreditation scores were obtained from the Curative Deputy of Hamadan University of Medical Sciences. Second, data from patient satisfaction in understudy hospitals were attained through a self-made questionnaire. Ethical approval was taken from Hamdan university of medical science.

Study design

A cross-sectional study was conducted from the beginning of January to the end of December 2013.

Sample Size

The inclusion criteria for study participants were age over 18 years old and being hospitalized for at least 24 hours at the hospital to truly express their attitude toward quality of care. Those inpatients in ICU, CCU and Emergency ward who had a severe physical condition or mental disorders were extracted from the study. By conducting a pilot study among 40 patients and assuming that the maximum difference in patient satisfaction score is 14 and standard deviation is 26.5, with 95% confidence interval

and 5% margin of error the minimum number of required sample was calculated to be 360 patients. To reach this sample size, 90 patients were randomly selected from each classification group's hospital.

$$n = \frac{2\sigma^2(Z_{\beta} + Z_{\alpha/2})^2}{d^2}$$

Data Collection tools

A self-made questionnaire was used to measure patient satisfaction among care recipients of study hospitals. To adopt the questionnaire, researchers conducted a literature review in the field of patient satisfaction and assessed different types of questionnaires used for this purpose. Finally, the questionnaire items were extracted from the study results of a similar research titled "Prioritizing the quality criteria from patients' viewpoint¹⁶⁷". Study has been widely examined for its validity and reliability. Then, the self-made questionnaire was provided for 10 experts to apply their knowledge and expertise and obtain the final version. The assessment tool was consisted of fifty questions in a five likert scale and was organized in two parts. The first part was related to hospital characteristics and socio-demographic information about patients and the second included questions measuring patients' satisfaction from different aspects of quality. Patients' perception toward human resources, medical equipment and physical structure, information, communication and education, accessibility to clinical services, emotional support and respect for values, management and coordination

of care system were among the issues assessed by the questionnaire. To discover any ambiguities in the questionnaire, a pilot study was carried out among 40 patients. Results affirmed the transparency of questions from the respondents' point of view. Also to ensure internal consistency of the survey, Cronbach's alpha value was measured (0.981).

Statistical Analysis

Statistical analysis was performed using SPSS version 22. Descriptive statistics were used to summarize patients and hospitals characteristics. To examine the effect of gender, marital status, education and other non continuous variables on patient satisfaction, independent samples t-test and ANOVA was used. Regarding to continuous variables (ex. age) Pearson correlation was performed and the strength of existing relationships was analyzed. The relationship between patient satisfaction and hospital accreditation was assessed by Covariance analysis and Fisher's least significant difference (LSD).

Results:

Demographic data of patients

Descriptive statistics on study participants revealed that the majority of patients were unemployed (54.4%) and female (53.1%), living in urban areas (73.3%) and married (71.7%). Most of them were under diploma (59.1%) while the lowest percentage of them (10.1%) had BS degree or higher educational levels. Also a significant portion of study participants (83.3%) had insurance coverage which social security was the dominant type (Table 1).

Table 1. Descriptive Statistics on Patient Sample

Study Characteristics	Categories of study Characteristics	Frequency(N=360)	Frequency (%)
Gender	Female	191	53.5
	Male	166	46.5
Length of stay	Under 5 days	190	52.8
	Over 5 days	130	47.2
Location	Urban	264	74.3
	Rural	91	25.7
Marital status	Married	258	72.3
	Single	65	18.2
	Divorced	34	9.5
Educational level	Under diploma	213	60
	Diploma	91	25.6
	BS	43	12.1
	Upper levels	8	2.3
Occupation	Unemployed	196	54.4
	Employed	152	45.5
Insurance Coverage	No coverage	16	4.5
	Under coverage	366	95.5

Patients’ Perceptions on Satisfaction Subscales

Table 2 shows that patients have a moderate level of satisfaction toward the quality of health care services provided by the study hospitals (mean=162.5). However satisfaction from some aspects of the

services was more significant. Subscale of human resources achieved the highest satisfaction followed by emotional support, medical equipment and physical structure, accessibility to clinical services, information and education and coordination of care system.

Table 2. Mean scores of patients’ perception about the study subscales

Subscale	Mean	std. deviation	Min	Max
Human resources	21.4	5	7	30
Medical equipment and physical structure	38.9	8.6	12	60
Information, communication and education	50.6	11.5	16	80
Accessibility to clinical services	19.08	5.02	6	30
Emotional support and respect for values	16.8	4.28	5	25
Management and coordination of care system	15.5	4.61	5	25
Overall satisfaction	162.5	33.5	51	250

Analysis of Patient Satisfaction Based on Demographic Variables

Assessment of patient satisfaction in study hospitals based on demographic variables revealed that statistically significant association was only observed between hospital type, patients’ gender and length of stay with the quality of health care services perceived

by patients (table 3). Results confirmed that patients with longer length of stay in hospitals had less overall satisfaction with quality of health care services (Pearson correlation=-0.103, P-value=0.05). Also those who were female and received health services from private or social insurance hospitals were more satisfied (P-value=0.04, P-value=0.00).

Table 3. Effect of patients’ demographics and hospital characteristics on patient satisfaction score

Observational unit	Variable	Mean	std. deviation	P-value	
Patient	Gender	Female	166.05	29.94	0.046
		Male	158.97	36.75	
	Age	45.75	19.23	0.74	
	Education	Diploma	162.03	26.36	0.22
		BS	159.53	42.68	
		MS	132.28	20.82	
		PhD	221	0	
	Insurance coverage	Yes	163.79	37.16	0.57
		No	161.57	31.98	
	Marital status	Married	161.44	33.42	0.74
Single		162.33	36.05		
Living place	Urban	161.56	33.17	0.35	
	Rural	165.35	35.20		
Hospital	Hospital type	Public	20.9	4.9	0.00
		Private	23.1	4.3	
		Social Insurance	21	6.4	
	Length of stay	5.3	0.8	0.06	

Association between patient satisfaction and hospital accreditation

After adjusting for confounders (hospital type, patients' gender and length of stay), the association between hospital accreditation score and patient satisfaction was assessed. Table 4 depicts that among hospitals with different accreditation scores, there were significant differences in patients'

assessment about following subscales: human resources (p=0.00), medical equipment and physical structure (p=0.00), information, communication and education (p=0.00), accessibility to clinical services (p=0.00), management and coordination of care system (p=0.015) and overall satisfaction (p=0.00). But no significant differences observed in regard to emotional support (p=0.16).

Table 4. Comparisons of patient satisfaction among hospitals with different accreditation scores

Subscale	Mean rank (accredited 1 superior)	Mean rank (accredited 1 ⁺)	Mean rank (accredited First ranking)	Mean rank (accredited Second ranking)	P-value
Human resources	19.79 ± 0.57	22.37 ± 0.55	21.26 ± 0.58	23.45 ± 0.62	0.00
Medical equipment and physical structure	39.79 ± 0.98	38.70 ± 0.95	36.38 ± 0.99	41.84± 1.14	0.00
I n f o r m a t i o n , communication and education	46.83 ± 1.34	52.05 ± 1.30	49.97 ± 1.36	54.61 ± 1.56	0.00
Accessibility to clinical services	17.49± 0.58	19.72 ± 0.57	18.54 ± 0.59	21.37 ± 0.68	0.00
Emotional support and respect for values	16.36± 0.51	17.78 ± 0.50	16.53± 0.52	17.15 ± 0.60	0.249
Management and coordination of care system	14/72 ± 0/54	16/04 ± 0/52	15/08 ± 0/55	16/99 ± 0/63	0.015
Overall satisfaction	154/97 ± 3/83	166/67 ± 3/73	157/67 ± 3/90	175/41 ± 4/46	0.00

At the accredited hospitals with second ranking, scores for subscales of human resources, medical equipment and physical structure, information, communication and education, accessibility to clinical services and overall satisfaction were higher than other accredited hospitals even those with A superior ranking. In fact results confirmed an inverse relationship between patients' satisfaction and hospital's accreditation scores.

Discussion:

Accreditation is a useful mean to achieve best possible standards in health care and develop the processes and outcomes related to a health system⁹. One of the important quality indicators which needs to be assessed through accreditation process is patient satisfaction¹⁵. This study aimed to assess the relation between hospitals' accreditation score and patient satisfaction in hospitals of Hamadan University of Medical Sciences. Worldwide, some studies have been conducted to analyze the effect of hospital's accreditation on patient satisfaction^{12,13,15,17-19}. Although some limitations exist in the literature, their findings can nevertheless be compared to our study.

Study results pointed out that the majority of patients had positive attitude toward the quality of health care services however the satisfaction scores were different regarding to various aspects of services. Patients were mostly pleased with the standards related to human resources, emotional support, medical equipment and accessibility to clinical services. Similarly, Al-Qahtani et al (2012) found that patients expressed their great satisfaction from hospital services in the dimensions of doctor's professionalism and specialization in laboratory and radiology department, the degree of respect and privacy given to them by the hospital, communication with hospital staff, doctors' responsiveness and the accuracy of diagnosis¹⁹. Our study results clarified that patients' satisfaction with the quality of health care services was statistically related to the hospital's accreditation scores. This finding was supported by the study Al-Qahtani (2012) and Al-Tehewy et al (2009) but discarded by Hayati et al (2010) and Sack et al (2010)^{12, 13, 14, 19}. Possibly astonishing our research found out a significant negative association between hospital accreditation scores and patient satisfaction

except for the domain of respect for patients' values and emotional support. In fact patient satisfaction in hospitals with lower accreditation scores was higher than those highly accredited. The reason might be the non consistency of accreditation standards with patients' needs which necessitates reexamining the standards to complement them in accordance with patients' desires. Another explanation is that accreditation programs are not confined to patients and related topics but are associated with all hospital's processes and outcomes covering a variety of clinical and non clinical aspects^{10,22,23}. Patients at low accredited hospitals were more satisfied with the quality of services regarding to personnel, equipment and physical environment, information and communication, accessibility to clinical services, management and overall dimensions. The highest satisfaction scores belonged to the standards related to information and communication, equipment and physical environment and personnel. Al-Qahtani et al (2012) obtained similar findings and noted that patients at non accredited hospitals were more satisfied with some quality aspects such as: professionalism in the laboratory than those in accredited hospitals. They added that the highest satisfaction scores belonged to the level of respect given to patients by the lab technician and the good clinical experience they had with the lab technician¹⁹. Analyzing patients' characteristics supported the trend identified in the literature although it was not statistically significant¹³. Study results revealed that younger patients were less satisfied with hospitals' services. But those under insurance coverage or living in rural areas were more satisfied comparing to those in urban cities who had not a proper insurance coverage. Results confirmed that as patients' length of stay decreased, their satisfaction relatively dropped off. Comparing patients' perception toward quality of health care services based on their socio-demographic characteristics emphasized that gender was the only variable which had significant effect on patient satisfaction. Results did not show any significant differences based on age, economic status, educational level or nationality in accordance with Al-Qatari and Haran (1999) and Hayati et al (2010)^{19,22}. Haj-Ali et al (2014) did not also find any significant relations between patient satisfaction, hospital's location and patient's socio-demographic characteristics²³. Likewise, Al-Qahtani et al (2012) and Al Qatari and Haran (1999) stated no significant

differences based on age between patients' perception on the quality of health care services^{19,22}. Similarly Hayati et al (2010) did not find any significant differences in patient satisfaction based on patients' nationality¹³. In contrast to our findings, Al-Qahtani et al (2012), Hayati et al (2010) and Margolis et al (2003) showed that level of satisfaction in some aspects was higher for patients with specific socio-demographic variables such as educational level and economic status^{13,19,24}. Similar to the literature results verified significant association between patient satisfaction, hospital type and patients' length of stay, whereas other hospital's characteristics did not reveal any significant relation^{13,26}.

Two limitations could be mentioned in reviewing our results. First, the number of study hospitals was rather small as a result of applying the research in just one of the provinces of Iran; so our findings could not be representative of all hospitals and should be considered by caution. Second, it is hard to identify the appropriate time and procedure of measuring the outcome of accreditation because of the dynamic nature of quality improvement process. To consider such effects it would be reasonable to conduct a longitudinal study.

Conclusion:

Although accreditation is an advantage tool to standardize hospital processes and improve quality of health care services, our results supported the idea that successful accreditation degrees were not positively linked to better quality of services perceived by patients. This notion might emphasize that accreditation standards need to be reviewed and complemented by quality indicators focusing on structures and processes in patient care. In fact adaptation of integrated quality indicators emphasizing on both patient centered, clinical or non clinical aspects can incentivize patients toward hospital standards. Study confirmed the existence of opportunities to build an accreditation system based on outcome parameters and provide consistent and responsive services to patients which can positively impact their satisfaction.

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References:

1. Boudreaux E.D, Autremont S, Wood K, Jones G.N. Predictors of emergency department patient satisfaction: stability over 17 months. *Acad Emerg Med.* 2004. URL: <http://www.ncbi.nlm.nih.gov/pubmed/14709428>
2. Mercier S. Factors to consider in the delivery of quality services by hospitals. *Hosp Mater Manage Q.* 1998; 19(4): 35-43. URL: <http://www.ncbi.nlm.nih.gov/pubmed/10178548>
3. Shaw C.D, Collins C.D. Health service accreditation: report of a pilot program for community hospitals. *Br Med J.* 1995; 310: 781 -4. URL: <http://www.bmj.com/content/310/6982/781> <https://doi.org/10.1136/bmj.310.6982.781>
4. Singh J. The patient satisfaction concept: A review and reconceptualization. *Advanc Consum Res.* 1989; 16: 176-79. URL: <http://www.acrwebsite.org/search/view-conference-proceedings.aspx?Id=6900>
5. Rivers P.A, Glover S.H. Health care competition, strategic mission, and patient satisfaction: research model and propositions. *J Health Organ Manag.* 2008; 22(6): 627-41. URL: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2865678> <https://doi.org/10.1108/1477260810916597>
6. Asadi-Lari M, Tamburini M, Gray D. Patients' needs, satisfaction, and health related quality of life: Towards a comprehensive model. *Health Qual Life Outcom.* 2004; 2(32). URL: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC471563>
7. Grogan S, Conner M, Willits D, Norman P. Development of a questionnaire to measure patients' satisfaction with general practitioners' services. *Br J Gen Pract;* 1995. URL: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1239403>
9. Sack C, Scherag A, Lutkes P, Gunther W, Jockel K.H., Holtmann G. Is there an association between hospital accreditation and patient satisfaction with hospital care? A survey of 37 000 patients treated by 73 hospitals. *Int J Qual Health C.* 2011; 23(3): 278-83. URL: <http://www.ncbi.nlm.nih.gov/pubmed/21515636>
10. Walcque C, Seuntjens B, Vermeyen K, Peters G, Vink I. Comparative study of hospital accreditation programs in Europe, in KCE reports. 2008, Belgian health care knowledge centre: Belgian. URL: <https://kce.fgov.be/publication/report>
11. Karimi S, Shokri A, Monglizadaeh N, Amoozadeh A. The Effect of Accreditation on Service Delivery. First national congress on clinical governance and quality improvement; November 20-November 22; Tabriz 2014.
12. ALTeheewy M, Salem B, Habil I, EL Okda S. Evaluation of accreditation program in non-governmental organizations' health units in Egypt: short-term outcomes. *Int J Qual Health C.* 2009; 21(3): 183-89. URL: <http://www.ncbi.nlm.nih.gov/pubmed/19439444>
13. Hayati N, Azimatun N.A, H. R., Sh Ezat W.A, Rizal A.M. Inpatients' satisfaction in the medical and surgical wards - A comparison between accredited and non-accredited hospital in the state of Selangor. *J Commun Health.* 2010; 16(1): 60-68. URL: <http://journalarticle.ukm.my/270>
14. Sack C, Lutkes P, Gunther W, Erbel R, Jockel K. H, Holtmann G.J. Challenging the holy grail of hospital accreditation: A cross sectional study of inpatient satisfaction in the field of cardiology. *BMC Health Servic Res.* 2010; 10(120). URL: <http://www.ncbi.nlm.nih.gov/pubmed/20459873>
15. Heuer A.J. Hospital accreditation and patient satisfaction: testingtherelationship. *JHealthc Qual.* 2004; 26(1): 46-51. URL: <http://www.ncbi.nlm.nih.gov/pubmed/14763320> <https://doi.org/10.1111/j.1945-1474.2004.tb00471.x>
16. Mohebbifar R, Ghanati E, Zareei F, Taghvaei Z, Mohseni M, Amirian S. Quality standards for hospital services from the perspective of providers and recipients of services in Qazvin province, Iran *J Health Edu Health Prom.* 2015.
17. Saeed A.A, Mohammed B.A, Magzoub M.E, Al-Doghaither A.H. Satisfaction and correlates of patients' satisfaction with physicians' services in primary health care centers. *Saud Med J.* 2001; 22(3): 262-7. URL: <http://www.ncbi.nlm.nih.gov/pubmed/11307115>
18. Greenfield D. and Braithwaite J., Health sector accreditation research: a systematic review. *Int J Qual Health C* 2008; 20(3): 172-183. URL: <http://intqhc.oxfordjournals.org/content/intqhc/20/3/172.full.pdf>
19. Al-Qahtani M.F, Al-Dohailan S.K, Al-Sharani H.T, Al-Medaires M.A, Khuridah E.N, Al-Dossary N.M. The impact of the status of hospital accreditation on patient satisfaction with the Obstetrics and Gynecology Clinics in the Eastern Province, Saudi Arabia. *Med Med Sci* 2012; 3(10): 665-673. URL: <http://www.interestjournals.org/full-articles>
20. Heuvel J, Bogers A, Does R, Dijk S, Berg M. Quality Management: Does it Pay Off? *Qual Manag Health C.* 2006; 15: 137-49. URL: <http://www.ncbi.nlm.nih.gov/pubmed/16849985>
21. Selbmann H.K., Assessment and accreditation of hospital care in Germany. *Bundesgesundheitsblatt Gesundheitsforschung*

- Gesundheitsschut* 2004; 47: 103 -10. <https://doi.org/10.1007/s00103-003-0769-0>
22. Al Qatari G, aran D. Determinants of users' satisfaction with primary health care settings and services in Saudi Arabia. *Int J Qual Health C.* 1999; **11**(6): 523-531. URL: <http://www.ncbi.nlm.nih.gov/pubmed/10680949>
23. Haj-Ali W, Bou Karroum L., Natafji N., and Kassak K., Exploring the relationship between accreditation and patient satisfaction - the case of selected Lebanese hospitals. *Int J Health Policy Manag.* 2014; **3**: 341-346. URL: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4226624/>
24. Margolis S.A, Al-Marzouqi S, Revel T, Reed R.L. Patient satisfaction with primary health care services in the United Arab Emirates. *Int J Qual Health C.* 2003; **15**(3): 241-49. URL: <http://www.ncbi.nlm.nih.gov/pubmed/12803352>
25. Rahmqvist M. Patient satisfaction in relation to age, health status, and other background factors: a model for comparisons of care units. *Int J Qual Health Care.* 2001;**13**: 385-90. URL: <https://www.researchgate.net/publication/11682145> <https://doi.org/10.1093/intqhc/13.5.385>
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