

Perception of hospital accreditation among health professionals in Saudi Arabia

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Ann Saudi Med 2017; 37(4): 326-332

DOI: 10.5144/0256-4947.2017.326

BACKGROUND: Hospital accreditation assesses hospital performance against explicit standards. Studies of the efficacy of accreditation are limited, but suggest that Joint Commission International (JCI) accreditation is efficient in improving the safety and quality of care in accredited hospitals.

OBJECTIVES: This study aimed to assess the perceptions of health professionals on the impact of JCI accreditation and implementation of change towards the delivery of quality patient care.

DESIGN: Cross-sectional survey.

SETTINGS: King Abdulaziz Medical City in Jeddah, Saudi Arabia.

SUBJECTS: Between June 2016 and September 2016, a validated questionnaire was distributed to physicians, nurses, medical technologists, dietitians, and other allied healthcare professionals. The questionnaire consisted of 19 items covering participation in accreditation, benefits of accreditation, and the quality of results of accreditation. Demographic data collected on the participants included age, gender, educational attainment, profession, length of service, and department.

MAIN OUTCOME MEASURE(S): Participation in accreditation, benefits of accreditation, and quality of results of accreditation.

RESULTS: Hospital accreditation was given a worthy response from the general view of 901 health professionals. The mean (standard deviation) of scores on a 5-point Likert scale were 3.79 (0.68) for participation in accreditation, 3.85 (0.84) for benefits, and 3.54 (1.01) for quality of results.

CONCLUSION: As perceived by health professionals in our survey, accreditation had a positive impact on the process and implementation of change in the hospital that resulted in improvement in the delivery of patient care and other health services.

LIMITATIONS: Single institution study with no comparison made to other small, medium, or large-sized JCI-accredited hospitals in Saudi Arabia. Patient satisfaction before and after accreditation was not included.

The quality of patient care is dependent on how healthcare institutions implement their vision, mission, and objectives. Every healthcare organization has its institutional, administrative, organizational, and professional set of standards. These standards serve as a mandate for everybody to comply with to achieve a general goal. Every hospital has its own policies and protocols that are grounded in their specific norms, culture, and tradition to ensure high-quality patient care. The quality of patient care is one of the priorities of practitioners and healthcare organizations. According to the World Health Organization (WHO), a

total of 19217 hospitals and health-care facilities are available worldwide.¹

Hospital accreditation assesses hospital performance against explicit standards, especially in view of globalization and trading in health care services. The main goal is to assess the internal and external mechanisms and provide benchmarks that could help to improve the capacity of hospitals in providing quality care, accountability and regulation. In addition, the interests of stakeholders in different countries are guaranteed by the process of accreditation, which opens opportunities for exchange of knowledge in different contexts

and frameworks in international settings (e.g. evidence-based practice).² In addition, accreditation may improve the consistency of health care practices and the overall status of health care delivery systems. Through accreditation, WHO could work with countries to protect national health systems. Countries could introduce their own standards for accreditation based on the best interests of their health system in order to safeguard the primary health care principles of universality, equity, quality, efficiency, and sustainability.³

The Joint Commission International (JCI) is a non-profit affiliate formed by The Joint Commission (TJC) that provides leadership in healthcare accreditation and quality improvement for organizations outside the United States.⁴ Worldwide, only 912 hospitals are now accredited by JCI. In the Middle East, only 373 hospitals have been accredited. Most are in the United Arab Emirates (153) and Saudi Arabia (102).⁵

There is limited data on the efficacy of JCI accreditation. However, the available literature suggest that JCI is efficient in improving safety and quality of care in the hospitals who participate in the accreditation process.⁶⁻⁸ The healthcare system in Saudi Arabia has a mandatory rule that all public and private hospitals must be accredited by the local accreditation body in Saudi Arabia, the Central Board for Accreditation of Healthcare Institutions (CBAHI).⁹ In addition, some healthcare institutions in Saudi Arabia have obtained accreditation from several international bodies such as the JCI. The aim of this study was to evaluate the perception of health professionals of the impact of JCI on the quality of health care. The study was conducted in an accredited center that recently joined an academic university.

SUBJECTS AND METHODS

This cross-sectional study was conducted at King Abdulaziz Medical City in Jeddah, Saudi Arabia between June 2016 and September 2016. The hospital has 650 beds in different tertiary care specialties and is attached to King Saud bin Abdulaziz University for Health Sciences in Jeddah, Saudi Arabia. The first accreditation was on 23 November 2006, and since that time, it has been reaccredited periodically. This study was approved by the institutional review board (IRB) of King Abdullah International Medical Research Center (KAIMRC).

The population of this study was comprised of physicians, nurses, medical technologists, dietitians, and other allied healthcare professionals. Respondents were not selected by sampling. Rather, questionnaires were manually distributed to all health professionals in their

designated department and collected with the cooperation of department heads, managers, and staff (i.e. secretaries). To increase the retrieval rate, factors such as shifting of duty, day-offs and leaves were determined to identify their availability and to assure that they received survey questionnaires. The collection and retrieval of survey forms for every department took about 1-3 weeks. All retrieved questionnaires were screened based on the criteria for inclusion which allowed only participants who started working before accreditation and continued to work during and after accreditation and reaccreditation.

This study used a validated questionnaire adapted from the tool used by El-Jardali et al¹⁰ which has been used in many studies. The English version of the questionnaire consists of 19 items divided into three main domains: participation in accreditation (5 items), benefits of accreditation (9 items), and quality of the results of accreditation (5 items) quality of results of accreditation. There were no modifications or changes in wording in all items so as to maintain the meaning of the content. The questionnaire employs the five-point Likert scale with corresponding verbal interpretations: 1 for Strongly Disagree, 2 for Disagree, 3 for Neither Disagree, 4 for Agree, and 5 for Strongly Agree. In previous studies,¹⁰⁻¹² the inter-rater reliability of this instrument for the three domains in both English and other languages (i.e Turkish and Arabic) yielded a Cronbach's α of 0.87-0.96, indicating high reliability. Demographic data about the participants including age, gender, educational attainment, profession, length of service, and department were also collected. Data was distributed and retrieved by hand, not by electronic means.

Data were analyzed using IBM SPSS version 23. Demographic data is summarized by frequency and percentage, and mean and standard deviation of each score. One-way ANOVA and the t test were used to determine differences between groups in demographic variables. The Pearson correlation coefficient was calculated for the dependent variable (quality of results) and benefits of accreditation and employee participation (independent variables). Statistical significance was defined by the 5% level of probability with 95% reliability.

RESULTS

Of 1360 survey questionnaires distributed, 934 were returned. Based on the criteria for inclusion, 33 were excluded, and 901 were included in the analysis. Demographic data are shown in **Table 1**. The majority of the participants were nurses (n=488, 54.16%), followed by physicians (n=166, 18.42%), (**Figure 1**). Most respondents who provided a department were from surgery

(n=92, 10.2%). There were only 4 (0.4%) respondents from the intensive care unit (**Figure 2**). Hospital accreditation gathered a generally worthy response from the different professional health groups in the three dimensions. The mean (standard deviation) of the values of the dimensions were participation in the accreditation' (3.79 [0.66]), benefits of accreditation (3.85 [0.84]), and quality of results of accreditation (3.54 [1.01]) (**Table 2**).

In participation in accreditation, the item "these recommendations were an opportunity to implement important changes at the hospital" had the highest response rate (mean and SD, 3.88 [0.78]) followed by "I participated in the changes that resulted from accreditation recommendations" (3.79 [0.79]) and "during the preparation for the last survey, important changes were implemented at the hospital" (3.78 [0.80]). This indicates

Table 1. Demographic characteristics of the respondents (n=901).

Characteristics	n	%
Age (years)		
25-30	283	31.4
31-35	182	20.2
36-40	128	14.2
41-45	120	13.3
46-50	63	7.0
<51	66	7.3
Total	842	93.5
Unclassified	59	6.5
Total	901	100.0
Gender		
Male	226	25.1
Female	673	74.9
Total	901	100.0
Education		
Certificate	11	1.2
Diploma	137	15.2
Bachelor's degree	607	67.4
Master's degree	42	4.7
Doctorate degree	45	5.0
Total	842	93.5
Unclassified	59	6.5
Total	901	100.0
Length of service (years)		
≤5	406	45.1
6-10	279	31.0
11-15	148	16.4
16-20	33	3.7
≥21	35	3.9

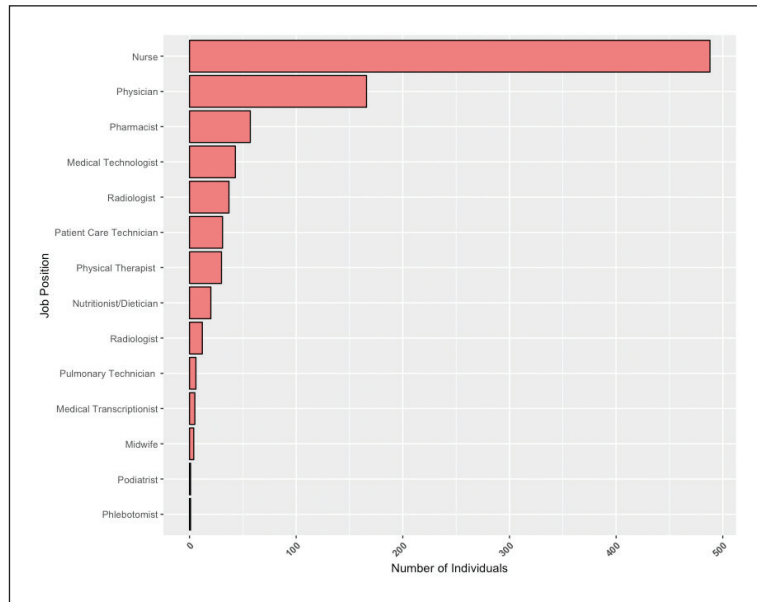
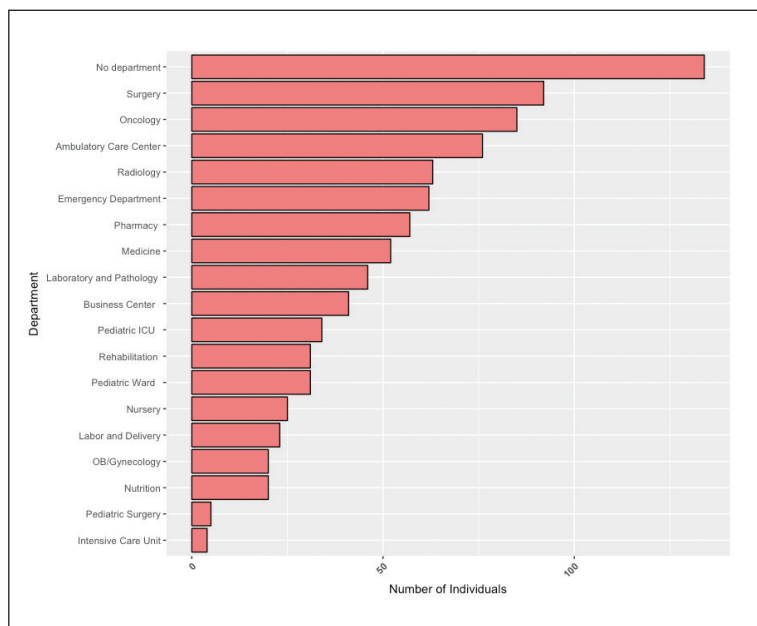


Figure 1. Distribution of respondents by profession.



Information on department was not provided for 134 physician and pulmonary technicians.

Figure 2. Distribution of respondents by department.

Table 2. The perception of professional health groups on the accreditation.

A. Items on respondent participation in the accreditation	n	Mean	SD
1. During the preparation for the last survey, important changes were implemented at the hospital.	882	3.78	.80
2. I participated in the implementation of these changes.	880	3.76	.87
3. I learned of the recommendations made to your hospital since the last survey (yes response)	873	3.76	.78
4. These recommendations were an opportunity to implement important changes at the hospital.	878	3.88	.78
5. I participated in the changes that resulted from accreditation recommendations.	861	3.79	.79
Total	882	3.79	.68
B. Items related to the benefits of accreditation			
1. Accreditation enables the improvement of patient care.	886	4.06	.84
2. Accreditation enables the motivation of staff and encourages teamwork and collaboration.	883	3.90	.86
3. Accreditation enables the development of values shared by all professionals at the hospital.	884	3.94	.79
4. Accreditation enables the hospital to better use its internal resources (e.g. finances, people, time, and equipment).	882	3.84	.85
5. Accreditation enables the hospital to better respond to population needs.	878	3.81	.82
6. Accreditation enables the hospital to better respond to its partners (other hospitals, diverse hospitals, private clinics, and others.).	880	3.82	.77
7. Accreditation contributes to the development of collaboration with partners in the healthcare system.	886	3.87	.77
8. Accreditation is a valuable tool for the hospital to implement changes.	886	4.05	.75
9. Hospital participation in accreditation enables it to be more responsive when changes are to be implemented.	879	3.97	.80
Total	901	3.85	.84
C. Items on quality of results			
1. Over the past 3 years, the hospital has shown steady, measurable improvements in the quality of customer satisfaction.	865	3.66	.84
2. Over the past few years, the hospital has shown steady, measurable improvements in the quality of services provided by the administration (finance, human resources, etc.).	864	3.57	.85
3. Over the past few years, the hospital has shown steady, measurable improvements in the quality of care provided to patients (e.g. medical, surgical, obstetric and pediatric patients).	864	3.67	.81
4. Over the past few years, the hospital has shown steady, measurable improvements in the quality of services provided by clinical support departments such as laboratory, pharmacy, and radiology.	863	3.74	.81
5. Over the past few years, the hospital has maintained high quality health services.	863	3.77	.82
Total	901	3.54	1.01

that important changes took place in the hospital during the preparation for surveys, and the participants were involved in this process. For the benefits of accreditation, the item "accreditation enables the improvement of patient care" (4.06 [0.84]) had the highest response rate followed by "accreditation is a valuable tool for the hospital to implement changes" (4.05 [0.75]). However, the item "accreditation enables the hospital to better respond to the population's needs" had the lowest response rate (3.81 [0.82]). For quality of results, the item "over the past few years, the hospital had maintained a high quality health services" had the highest response rate (3.77 [0.822]), while the item "over the past few years, the hospital had shown steady, measurable improvements in the quality of services provided by the administration (finance, human resources, etc.)" had the lowest response rate (3.57 [0.85]).

Group differences in "participation in accreditation" were significantly different in age ($F=4.39$, $df=5$, 830, $P<.05$), gender ($F=9.0$, $df=1$, 880, $P<.05$), profession ($F=5.20$, $df=11$, 824, $P<.05$) and department ($F=4.67$, $df=13$, 822 $P<.05$). In terms of benefits of accreditation, respondents differed significantly in profession ($F=5.88$, $df=11$, 830, $P<.05$), department ($F=8.27$, $df=13$, 828, $P<.05$), and length of service ($F=3.03$, $df=4$, 896, $P<.05$). In terms of quality results, they were significantly different in educational attainment ($F=4.37$, $df=4$, 837, $P<.05$), profession ($F=4.31$, $df=11$, 830, $P<.05$), department ($F=4.13$, $df=13$, 828, $P<.05$), and length of service ($F=2.97$, $df=4$, 896, $P<.05$).

Scores for females (3.87) and those who were age 50 years and older (3.97) indicated the highest rate of participation. On the other hand, certificate (3.67) and bachelor's degree holders (3.67) had the highest scores in quality of results. Patient technicians had the highest scores (3.98) in terms of participation while medical technologists had the highest scores in benefits in accreditation (4.45) and quality results (4.07). Physicians had the lowest scores for participation (3.47), benefits of accreditation (3.69), and quality of results (3.28). Those who had worked for 11-15 years (3.90) and 16-20 years (3.90) had the highest scores for participation, 5 years and below (3.92) for benefits of accreditation, and 11-15 years (3.70) for quality of results. The business center (4.00) and ambulatory care (3.98) had the highest rate in the participation while laboratory and pathology had the highest in benefits of accreditation (4.43) and quality of results (4.05) (Table 3).

There was a statistically significant positive association between quality of results versus the benefits of accreditation ($t=10.87$; $P=.000$) and employee participation ($t=7.482$; $P=.000$). The benefits of accreditation

($\beta=0.478$) accounted for most of the variability in the dependent quality of results variable. The overall regression equation was highly significant, $P<.001$ and 33% of the variance in quality results was explained by the combined effect of the benefits of accreditation and employee participation. The unexplained variation will require further study.

DISCUSSION

In a study conducted by Lutfiyya et al,⁶ the difference in performance between accredited and nonaccredited hospitals was statistically significantly in favor of the accredited hospitals. In addition, accredited hospitals tended to have better baseline performance compared to nonaccredited peer facilities, as evidenced by publicly reported quality measures, and these differences in quality tend to become more pronounced over time. Likewise in a 4-year retrospective study conducted by Halasa et al⁷ in Jordan, the JCI accreditation process may have improved several aspects of patient care, including a reduction in return to ICU within 24 hours of ICU discharge, reduction in staff turnover, and completeness of the medical records. These improvements translated into total savings of US\$593 000 in Jordan's health-care system. The positive impact of JCI accreditation was also the conclusion of the study of Al Shammari et al⁸ in King Khalid Hospital in Hail, Saudi Arabia, that JCI accreditation had a high positive impact on the patient safety (score 4.17 out of 5 points).

In our study, the results demonstrated that health-care workers are amenable to participation in the accreditation process because of its apparent benefits. In our opinion, compliance with the standards set forth by the accreditation organization should benefit the hospital in the implementation of change towards hospital quality of patient care services. Participation of different healthcare professional groups and ensuring their motivation are critically important in order to putting accreditation standards into practice.²

Despite the excellent participation in accreditation in our population, physicians were lowest in participation. In addition, they gave low scores on the benefits of accreditation and the quality of results of accreditation. Explanation of these results deserves further study. All respondents who participated in the previous JCI survey participated again in reaccreditation and implementation of important changes in the hospital. This indicates that they believe strongly in the positive effect of accreditation on their hospital.

Accreditation can improve patient care and implementation of changes within the hospital, as indicated by adoption of hand hygiene.¹ However, in this study,

Table 3. Association between the dependent variable and independent variables.

Independent variables	Dependent variable (quality of results)		
	B (Beta)	t	P value
Constant	.469	3.064	.002
Accreditation			
Employee participation	.335	7.482	.001
Benefits of accreditation	.478	10.871	.001

Overall ANOVA: R²=.331, F=217.491, P=.001

we noticed that this perspective is limited only within the hospital context and does not specifically address community health needs and engagement. Thus, we suggest that accreditation should promote community health. Updates to accreditation should encourage hospitals to pursue programs (in conjunction with the Ministry of health and community stakeholders) to promote health behaviors and better management of chronic diseases. In addition, accreditation should help address other factors, such as economic and social factors, known to impact health. Lastly, accreditation should encourage teaching hospitals to train future health professionals to promote best practices as they pertain to population health management. By doing this, accreditation can accelerate a professional and cultural shift to prioritize these activities.

As a result of periodic accreditation, the hospital in our study had maintained delivery of quality health services over the years. However, there was inefficiency in the services provided by the hospital administration, implying that accreditation should include a review and evaluation of the steps taken to improve the quality of services.

This was a single institution study and no comparison was made to other small, medium, or large-sized hospitals in Saudi Arabia that were also accredited by the JCI. The study focused on the perceived impact of

JCI accreditation on the process and implementation of change in the hospital towards improving healthcare services. Patient satisfaction before and after accreditation was not included. Other external factors that could have contributed to the quality of results of accreditation should be subjected to further study. There are several issues on the transparency of JCI and the reliability measures that determine the impact on quality of care after accreditation. Braithwaite et al¹³ argued that "empirical evidence to sustain many claims about the benefits of accreditation is currently lacking".

Based upon the findings of this study, accreditation had a positive impact on the process and implementation of change in the hospital as perceived by health professionals. Improvement in the delivery of patient care and other health services was also observed by respondents. This study therefore supports the conclusion that accreditation must be considered a primary requirement towards improving the quality in the health care delivery system. This study will also help to increase awareness of health professionals, particularly physicians, of the importance of accreditation, and encourage participation in accreditation.

Conflict of interest

The authors declare that they have no conflicts of interest.

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