

Accreditation Impact on Quality of Healthcare Organization Services and Culture in a Tertiary Hospital in Saudi Arabia

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Keywords

Accreditation · Quality · Culture · Impact · Saudi

Abstract

Introduction: While accreditation is thought to promote healthcare quality, a literature review revealed a scarcity of studies conducted in Saudi Arabia addressing the relationship between accreditation and better care quality and healthcare organization culture. **Objectives:** This research examined the accreditation effect on care quality and culture presented in King Abdullah Medical City (KAMC), as a healthcare organization, from the perspective of healthcare workers. **Methods:** The study design is a cross-sectional quantitative using anonymous and self-administered questionnaire for data collection from healthcare employees. The total number of participants was 218. Descriptive analysis was used, including means, range, and standard deviation. Also, the χ^2 test was used for the association between the variables. **Results:** The result of the study showed that most of the dimensions associated with quality of care received high ratings. It revealed a significant beneficial association between employees' perceptions of accreditation and quality of care across all these dimensions. The most dominant culture at KAMC was a group type demonstrated KAMC to

be a personal environment. It revealed a strong relationship between employees' views of the accreditation effect and a group culture type. **Conclusion:** This study's findings matched those of a literature review that revealed a relation between accreditation and quality. Accreditation can help foster an organizational culture changing toward a culture that values skill development, cooperation, outcomes quality, and customer satisfaction. Accreditation processes have been found to promote a long-lasting and sustained improvement in quality of care and culture change. It demonstrated the crucial leadership influences in reaching this goal.

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Published by S. Karger AG, Basel

Introduction

Accreditation is considered a way designed to enhance the quality, effectiveness, and efficiency of healthcare organizations by improving its three primary levels structure, process, and outcome [1]. In general, accreditation is often seen as a systematic program that assesses organization performance against a set of standards via evaluation and reviewing functions and practices [1, 2].

In 1998, The Joint Commission International (JCI) was founded and extended its activities outside the USA. Because the standards of accreditation at international are different from those within the USA, the JCI is committed to enhancing the quality and safety of patient care around the world. In Saudi Arabia, the importance of using accreditation processes to raise the efficiency of healthcare facilities has increased over the past years [3]. In 2005, the Central Board for Accreditation of Healthcare Institutions (CBAHI) was established in order to develop and enforce standards of quality in all healthcare provider organizations in Saudi Arabia. The main tasks of CBAHI are to develop the standards of quality of healthcare services and provide certificates of accreditation for healthcare organizations that meet the criteria and comply with the standards. It also provides professional counselling, training, and education to healthcare facilities as well as sharing the finding and recommendations of analysis of medical errors and patient safety conditions with the stakeholders. In addition, CBAHI develops criteria for classification of healthcare organizations determining the range of pricing in private hospitals [4].

Despite the widespread use of accreditation in several parts of the world and the prevailing belief that accreditation was linked to variables influencing the successful quality of healthcare and organizational outcomes, only limited scientific research contributed to its recognition as an indicator of the success of healthcare [5]. The literature showed an inconsistent result on the impact of healthcare organization accreditation. Some studies implied that accreditation had contributed immensely to improving the quality of healthcare organizations, while others have indicated no effect.

A systematic review study was conducted by Greenfield and Braithwaite [6], in which 3,000 articles were identified. The review discovered that motivation of change and skill improvement was reasonably consistent across accredited hospitals, with significant improvements. The data conflicted across professional attitudes toward accreditation, organizational impact, economic impact, and quality and program evaluations. Ultimately, insufficient research exists to make a conclusion regarding the effect of accreditation on patient and public perceptions [6]. Based on a review study carried out by Alkhenizan [7], twenty-six studies that examined the impact of accreditation were recognized and met the inclusion criteria. The research finding indicated a positive effect of the accreditation process on clinical outcomes [7].

Schmaltz demonstrated more improvement in JCI-accredited hospitals' performance than those not-accredit-

ed [8]. The result was consistent with Alkhenizan reported that accredited hospitals improved clinical outcomes in areas such as pain management, infection control, and trauma care [7]. According to Braithwaite, this association is not strong and should be interpreted carefully [5]. However, others discovered no different statistical significance in performance between accredited and unaccredited hospitals [9].

Accreditation provoked organizational changes through process implementation, system integration, and, in some cases, organizational structure improvements [10]. Organizations are forced to meet the quality criteria required by accrediting bodies, thereby creating a need to focus on changes that impact the organization's various functional and strategic dimensions, leading to a state of learning and improvement in the organization. Environmental change induces organizational learning; hence, an organization defensively lines up with the setting to achieve stability and competitiveness [11].

Lanteigne [10] assessed the incorporation of the accreditation Canada program as a cause of change and learning of organization in two healthcare institutes in Canada and Italy. The researcher reported that persons, teams, and institutes had valuable learning [10]. Another research accomplished by Pomey et al. [12] aimed to examine how accreditation led to changes in a corporation that could increase the quality and safety of care. It was a retrospective study that analyzed characteristics and explored changes related to accreditation in five Canadian Healthcare Organisations (HCOs) with various accreditation profiles. Findings demonstrated that the accreditation program was a significantly successful mechanism for fostering collaboration and steady quality improvement [12].

In Saudi Arabia, very few studies addressed the accreditation effect on healthcare quality services. Al Awa et al. [13] conducted a study collecting 119 performance metrics. The author found that accreditation benefited patient safety and quality-of-care indicators [13].

Almasabi and Thomas [3] assessed the effect of CBAHI accreditation on quality of care using a mixed-method research design. Although the study showed some improvement in the procedure, no influence of accreditation on quality outcomes could be demonstrated [3].

Although numerous studies have recognized that accreditation in healthcare organizations is an essential element for improving the quality of patient care and safety, a great deal of research is needed to evaluate the real accreditation effect on patient healthcare quality and orga-

nization culture. Also, very few studies from the KSA assessed the accreditation effect on the quality of care. None of these studies explored an association of accreditation with organizational culture changes. The current study aims to fill this gap in literature.

Method

This quantitative, cross-sectional study aims to explore and quantify the potential association between participation in accreditation and quality of care and organizational culture change. The study was carried out at King Abdullah Medical City (KAMC), Makkah, Saudi Arabia, a 500-bed non-profit healthcare organization considered a tertiary services provider Center. KAMC has been accredited by JCIA since 2013 and had been reaccredited in 2019. KAMC also has been accredited by CBAHI since 2017 and had been reaccredited in 2020. The target population included all KAMC employees: managers, administrative personnel, physicians, nurses, dentists, pharmacists, technicians, dietitians, and support staff.

In the current study, we used an anonymous, self-administered questionnaire that had previously been developed and utilized by Pomey et al. [14] and in other studies [11, 15]. A link to the electronic questionnaire was sent along with a participation invitation message to all KAMC staff through email, and an invitation message explained the aim of the study with an emphasis on voluntary participation.

The Questionnaire

The questionnaire was categorized into two parts: (a) management for researching the program for quality enhancement and (b) culture for understanding the mechanisms of change and learning in the organization.

Management Questionnaire

This part of the questionnaire contained four sections: demographic information, quality of care, professional participation in organizational management, and accreditation impact. Demographic information had eight items. The quality-of-care section compiles data on the hospital's involvement in quality improvement in seven areas: leadership (11 items), information and analysis (7 items), strategic quality planning (7 items), human resources utilization (8 items), quality management (9 items), quality results (5 items), and customer satisfaction (9 items). Professional participation in the organizational management portion assesses participants' degree of engagement in the organization's management (4 items). The accreditation impact part contained thirteen questions investigating the effect of the accreditation process on change dynamics. It also evaluates organizational learning by examining the degree to which the organization was aligned with its surroundings. The participant was instructed to tick the box corresponding to each question for demographic information. In the quality of care and accreditation impact parts, each question was assessed by the respondents as strongly disagree = 1, disagree = 2, neither disagree nor agree = 3, agree = 4, agree strongly = 5, or do

not know = 9. For the professional engagement section, the participant was required to rate each question from "1 – never" to "5 – always."

Culture Questionnaire

The culture questionnaire offers four aspects of understanding organizational culture: character, the managers, cohesion, and emphasis. It was used to evaluate organization changing by looking at different cultures (group culture, developmental culture, hierarchical culture, and rational culture) in terms of contextual variables in the learning process [11, 12, 15].

The purpose of grading these four dimensions was to determine what kind of culture the hospital has. Within each of the four dimensions, the respondents weighed the four scenarios by marking which situation matched the corresponding amount of time. The researcher was devoted to adhering to all ethical concerns necessary to handle research; ethics approval was acquired from IRB Committees at King Abdullah Medical City to carry out the study with IRB reference number 20-712.

Data Management and Statistical Analysis

To maximize the study sample size, it was decided to send the questionnaire to all KAMC employees. The collected data were transferred into an Excel spreadsheet, where data coding was performed. Then the Excel file was imported into SPSS for analyzing the data. For descriptive purposes, categorical data were presented as percentages, and numeric data were presented as the mean, standard deviation, or median and range according to data distribution. The χ^2 test was used to compare categorical variables. Spearman's correlation was used to explore the association between ordinal variables. For testing the associations, multivariate analysis was used, participation in accreditation was taken as an independent variable, and quality improvement and organizational culture change as dependent variables.

Results

Approximately 2,000 employees were in KAMC during the time of the study that took place. The total number of questionnaires collected was 218 (CI 95%, with a 6.27% margin of error), of which no one was discarded. The main reason for the high completion percentage was a provision in the electronic survey instrument that minimized the number of parts left blank by not being permitted to move on to the next section until the prior one was completed. The sample size represented approximately 10.9 percent of the total employees in KAMC, which was a convenient obtained sample.

As seen in Table 1, the results came from demographic characteristics that were more male than female (59.2 vs. 40.8%). The majorities (56.9%) of respondents were within the age-group Between 30 and 45 years, and all the respondents were full-time. Most participants (61%) have been involved in the accreditation.

Table 1. Participants' demographic characteristics (N = 218)

	N	%
<i>Demographic details</i>		
Gender		
Female	89	40.8
Male	129	59.2
Age		
<30 years	56	25.7
30–45 years	124	56.9
46–55 years	24	11.0
>55 years	14	6.4
Working status		
Full-time employee	218	100
Part-time	–	–
Member of the quality management department		
Yes	35	16.1
No	183	83.9
Involved in the accreditation		
Yes	133	61.0
No	85	39.0
Years in organization		
<5 years	76	34.9
5–10 years	134	61.5
>10 year	8	3.7
<i>Occupation variables</i>		
Clinical		
Physician	64	29.4
Nurse	41	18.8
Technician	42	19.3
Dentist	1	0.5
Pharmacist	3	1.4
Radiology	8	3.7
Laboratory	8	3.7
Dietitian	5	2.3
Managerial		
Managerial	9	4.1
Other administrative	22	10.1
Clinical and managerial		
Physician and managerial	8	3.7
Nurse and managerial	3	1.4
Pharmacist and managerial	1	0.5
Radiology and managerial	1	0.5
Laboratory and managerial	2	0.9
Total	218	100.0

Quality-of-Care Staff Perception

As shown in Table 2, the study found that quality results ranked first from the employee's perspective (mean 4.26, Std. 1.35), followed by quality management (mean 4.25, Std. 1.15), then information and analysis (mean 4.24, Std. 1.11) followed by customer satisfaction (mean 4.12, Std. 1.01) and strategic quality planning (mean 4.03, Std. 1.00) then leadership (mean 4.02, Std. 1.05) and fi-

Table 2. Quality improvement perception

Quality scales	Mean	Standard deviation	Range
Leadership	4.02	1.05	3.59
Information and analysis	4.24	1.11	3.79
Strategic quality planning	4.03	1.00	3.57
Human resources utilization	3.83	1.08	4.00
Quality management	4.25	1.15	3.72
Quality results	4.26	1.35	4.00
Customer satisfaction	4.12	1.01	4.39

Table 3. Accreditation participants' perception

Accreditation scales	Mean	Standard deviation	Range
Overall Accreditation Impact	4.21	1.10	4.15

nally the utilization of the human resources (mean 3.83, Std. 1.08).

The mean scores indicated that the quality-of-care components' areas of strength were quality results (4.26), quality management (4.25), and information and analysis (4.24). In conclusion, most elements under the quality of care obtained high scores, indicating that staff evaluated the corporation as having considerable advancements in quality and performance.

Quality-of-Care Perception in Relation to Demographics

The χ^2 test was used to assess whether there were significant differences in responses based on individual participants' characteristics concerning quality improvement. The result demonstrated no considerable differences in the quality-of-care values based on respondents' demographic factors. However, there was a fairly significant difference between participants who had been engaged and those who had not been engaged in the accreditation regarding the quality result (p value <0.025). These results indicate that the KAMC successfully improved quality and customer care as well as administrative fields.

Staff Perception of Accreditation Impact

The means, range, and standard deviations were obtained for the total scores of items in this section. Table 3 demonstrated that the overall impact of accreditation mean

Table 4. Accreditation and the quality-of-care correlation

Accreditation impact	Correlation coefficient	<i>p</i> value
Quality-of-care scales		
Leadership	0.550	0.001
Information and analysis	0.504	0.001
Strategic quality planning	0.541	0.001
H. resources utilization	0.475	0.001
Quality management	0.508	0.001
Quality results	0.615	0.001
Customer satisfaction	0.578	0.001
Overall quality of care	0.671	0.001

score was 4.21, with a standard deviation of 1.10. According to the Likert Scale, the mean score falls into the category (of 3.40 and less than 4.20). These findings indicate that staff were in agreement on the positive effect of accreditation on the improvement of quality of care in KAMC.

Accreditation Impact Perception in Relation to Demographics

The χ^2 test was used to explore whether there were significant differences in responses based on the characteristics of individual participants. The results showed no relation between demographic variables and employees' perception of accreditation impact, with all *p* values ≥ 0.05 .

Accreditation and the Quality-of-Care Correlation

As shown in Table 4, overall accreditation was strongly connected with quality ($R = 0.671$, *p* value 0.001), with an R^2 value of 0.450, as considered by employees at KMC.

Staff Perception of Organization Culture

Table 5 represents the results of organizational culture at KAMC as the employees perceive it. It shows that there were two dominant cultures at KAMC. The first type was a group with a mean score of 27.50, and the second type was hierarchical with a mean score of 26.68. These results demonstrate that the culture at KAMC is dominantly based on affiliation, teamwork, and participation values and norms. However, it has some features of the ideals and norms associated with bureaucracy.

Cultural Perception in Relation to Demographics

The χ^2 test was used to determine whether there was a significant difference in responses based on the characteristics of individual participants in relation to culture

Table 5. Culture participants' perception

Culture type	Mean	Range	Standard deviation
Group (A)	27.50	87.5	14.64
Developmental (B)	23.35	65	8.96
Hierarchical (C)	26.68	81.75	11.24
Rational (D)	23.68	80	13.52

types. The result revealed no significant cultural differences based on participants' demographic factors.

Accreditation Impact and Culture Correlation

The results in Table 6 showed a positive relationship between employees' views of accreditation and the organizational culture of group type at KAMC ($R = 0.221$, *p* value = 0.001). For the other culture types (hierarchical – developmental – rational), the result demonstrated that there was no significant correlation between any of these and the employees' perception of accreditation (all *p* values ≥ 0.05).

Discussion

Accreditation and Quality of Care

The findings of all seven elements (quality management, human resources utilization, leadership, information and analysis, customer satisfaction, strategic quality planning, and quality results) revealed a high rating. According to the overall mean scores, the aspects of strength in the quality-of-care variables were quality results (4.26), quality management (4.25), and information and analysis (4.24). Quality results ranked the highest score that points out, according to the staff, the KAMC successfully obtained considerable progress in quality and customer care as well as administrative fields. Quality management ranked employees' second-high score (4.25), revealing the degree to which all departments contribute to overall quality and performance standards. These study results are compatible with the research outcomes [11].

The leadership dimension has been scored high (4.02), implying that KAMC's executives paid great attention to quality principles embedded in the organization's management structure. These findings match previous research that stressed the importance of leadership in effectively executing quality programs [6, 16]. According to the study finding, KAMC evaluated the needs and expect-

Table 6. Accreditation impact and culture correlation

	Organizational culture			
	group (A)	developmental (B)	hierarchical (C)	rational (D)
Correlation coefficient	0.221	0.030	-0.086	0.114
<i>p</i> value	0.001	0.662	0.207	0.093

tations of its customers very well, as shown by high scores in customer satisfaction (4.12).

According to the survey, human resource utilization was a weakness compared to other dimensions in the organization (3.83), which indicates that employees in KAMC did not believe they were receiving appropriate quality development training and education. The study finding demonstrated that age, gender, occupation, and working years in the organization did not affect the rating, according to the demographic statistics in the quality-of-care section. The result, however, revealed a positive relationship between the involvement of workers in accreditation and the quality result subsection. This finding is consistent with the results of Ghareeb et al. [11] and Weber [15] that indicated staff who engaged in accreditation had a more positive attitude toward quality.

The accreditation impact section revealed that the overall employees agreed that accreditation benefits the organization. However, demographic analyses in this section revealed that there had been no discrepancies in the organization depending on gender, age, occupation, involvement in accreditation, or years of working. A strong relation was found between the accreditation and quality-of-care sections in the evaluation of the correlation analysis, indicating that KAMC staff considered accreditation a great resource that induced significant quality improvements.

This study's findings matched those of a literature review that revealed a relation between accreditation and quality. According to Beaumont [17], there is a correlation between implementing quality initiatives and engaging in accreditation [11, 17, 18]. The findings also revealed that accreditation and strategic quality planning have a beneficial correlation that was consistent with Lantaigne's research [10] on the impact of accreditation on relational and strategic changes in corporations. According to Salmon [2], hospitals in the accreditation process had a greater rate of adherence to quality requirements than those not included in the accreditation process. Based on El Jardali's research [19], accreditation has a favorable effect on both quality and customer satisfaction. Such results were in agreement with the conclusions of

this research, reporting an effect of accreditation on quality and customer satisfaction. However, in contrast to these findings, Sack et al. [20] and Ghareeb et al. [11] reported no considerable relation between accreditation and customer satisfaction [11, 19, 20].

Greenfield and Braithwaite [6] reported that accreditation was effective when there was a high level of staff involvement and dedication. The result of the current study was congruent with that was reported in the previous studies, as it showed that staff involvement in accreditation had a positive influence on quality improvement.

Ghareeb et al. [11] found a correlation between employees who worked more than 10 years in a firm and the effect of accreditation on quality as perceived employees. This study contradicted these findings and found no significant relationship between the duration of working in an organization and the effect of accreditation on quality advancement. This study's result indicated that accreditation's impact on quality improvement was a long-lasting effect that conflicted with the findings of Greenfield et al. [21], who concluded that improvement was only noticed during the corporation's preparation for the assessment.

Accreditation and Organization Culture

The two dominating cultures at KAMC, based on the current findings of the culture questionnaire, were group, with a mean score of 27.50, and hierarchical, with a mean score of 26.68. The organization's primary culture type (i.e., the group type) demonstrated KAMC to be a personal environment in which employees were deeply motivated and devoted, and supervisors were compassionate and focused on their workers' progress and advancement. The group culture fostered an environment that promotes quality improvement. The second most common choice was a hierarchical culture, which defined the corporation as a highly codified and organized environment characterized by regularity and efficient operating procedures and dominated by regulatory requirements and rigid policies. According to previous studies, healthcare institutions are prone to synthesizing various cultural types.

Indeed, this may be a requirement as they must have at least some features of each type [15].

The correlation analysis found that accreditation positively correlates with group culture as viewed by staff. The study's results showed that KAMC was a group culture revealed that the firm created a culture that favored quality progress. This finding was consistent with the high-quality score results as well. In other words, the KAMC staff perceived a positive accreditation effect on culture changing toward team members with the power to influence the quality, caring for patients, policies, and management. However, the study showed that accreditation had no association with other culture types. The healthcare leaders really do need to recognize the significance of having a group culture that encourages quality enhancement makes it possible for staff to feel that they are a part of important developments that are taking place, puts a strong emphasis on staff training to increase employee awareness of quality improvement intervention. Consequently, the organizations created a culture that favored acquiring knowledge, sharing ideas, transferring information, enhancing change, and quality improvement.

These findings reinforce the previous studies that stated that when healthcare organizations embrace essential characteristics such as cooperation, communication, and allegiance, they can achieve a higher level of adoption and implementation of quality improvement. Accreditation can help foster an organizational culture changing toward a culture that values skill development, cooperation, outcomes quality, and customer satisfaction [11, 22].

The findings of this research showed a significantly positive correlation between accreditation and quality care in seven elements, demonstrating that accreditation has a beneficial effect on these aspects such as quality management, human resource utilization, leadership, quality results, and customer satisfaction. Therefore, accreditation also impacted organization culture and learning in these dimensions. As a result of accreditation, it is believed that the organization increased its capabilities to be internalized by its staff members, resulting in changes, learning, and an acceptance of change becoming customs and habits [11, 15].

The previous research indicated that when firms focus on accreditation, they implement huge strategic plans to alter the current condition and move it up to higher standards of quality, as mandated by the accrediting authority [10, 14]. Also, it was illustrated that accreditation is a source for acquiring knowledge and improving service quality. Consequently, accreditation is viewed as a man-

agement approach that induces a change in the same way a new strategic plan would [12, 23, 24]. The outcomes of the current study were also supported in alignment with the previous literature findings.

Limitations

This study has a few limitations discovered and highlighted in the following lines:

1. The sample size in this study did not reach the minimum number to achieve a CI of 95% with a 5% margin error. The main reason for that was the too-long questionnaire, making many participants not complete the survey.
2. In this study, the method for the data collection, a self-report questionnaire, was used, which raised the likelihood of over- or below estimation of the participant's impressions.
3. Using a single quantitative approach, instead of multiple, for data collection would be considered a limitation in this study.
4. This research was done in only one medical institute; thus, the results of this analysis would not easily be generalized to other healthcare organizations.

Conclusions

This quantitative cross-sectional study assessed the accreditation effect on the quality of care. It also examined whether accreditation improved organizational culture. Overall, the JCIA and CBAHI accreditation processes have been found to promote improvement in quality of care and change. This positive impact of accreditation on quality-of-care improvement, as recognized by organization staff, has extended beyond the period of accreditation preparation to long-lasting and sustained impact.

The results demonstrated the crucial leadership influences in reaching this goal. Additionally, a more substantial commitment to quality improvement education and training is required due to the critical nature of involving employees in accreditation and quality improvement initiatives. The study reinforced what has been explored in previous literature studies that the main driving force behind change is the organizational culture that is influenced positively by accreditation.

Acknowledgments

We are very grateful to Soha Elmory, MD, PhD, KAMC research center for her insightful comments on an initial version of the manuscript.

Statement of Ethics

This study was reviewed and approved by the Institutional Review Board (IRB) Committee at King Abdullah Medical City, Makkah with IRB reference number 20-712. The researcher was devoted to adhering to all ethical concerns necessary to handle research. A written informed consent was obtained for participation in this study.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

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Funding Sources

The authors did not receive any funding related to this study.

Author Contributions

Mohammed A. Babakkor and Waleed M. Kattan: designed the framework, analyzed the data, drafted the manuscript, and approved the final version.

Data Availability Statement

All data generated or analyzed during this study are included in this article. Further inquiries can be directed to the corresponding author.