

Impact of Hospital' Accreditation on Patient Safety in Hail City, Saudi Arabia: Nurses' Perspective

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Abstract : This study investigated the nurses' perception toward the impact of Hospital's Accreditation on patient safety related to nursing documentation, patient medication information, and healthcare associated infection. The study was conducted in King Khalid Hospital (KKH) in Hail city, Kingdom of Saudi Arabia (Oct, 2014), after hospital had been accredited by international group JCI (Joint Commission International). The study was across sectional descriptive research design and used simple random sampling method for the sample size of 200 respondents (nursing staff). The researchers received self-administrated questionnaire with response rate 76.9 percent, while five points rating scale (Likert scale) was used in the measurement. The respondents reported high positive impact of hospital's Accreditation on patient safety with overall score 4.17 out of 5 points in rating scale and most their answers were between agree to strong agree. The results showed similarity and extend for the most previous efforts and several researches related to highly positive impact of accreditation on healthcare environment, processes, outcome, and patient' satisfaction. This study's results supports policy and decision makers to increase numbers of specialized national accreditation groups for Healthcare Sector. Additionally, the study's results would encourage both public and private healthcare organizations to become accredited by national or international accreditation groups to achieve higher standard of quality and safe healthcare services.

Keywords: quality improvement, accreditations, hospitals, patient safety, nursing

I. Introduction

The term accreditation means the systematic assessment of hospitals against accepted standards. Generally, accreditation has developed for hospitals; but with time, it was considered by primary care's institutions, laboratories services, and other healthcare sectors. The process of accreditation originates in the United States. The American College of Surgeons set up a program of standards to define suitable hospitals for surgical training in 1917. This was developed later into a multidisciplinary program of standardization, and in 1951 led to the formation of the independent Joint Commission on Hospital accreditation, and now into the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), from which all subsequent national programs have been directly or indirectly derived (WHO, 2003).

The Accreditation programs have been increasing and spreading throughout the world from developed to developing countries from the past three decades, and today there are several accreditation programs for healthcare organizations. The Central Board for Accreditation of Healthcare Institutions (CBAHI), Kingdom of Saudi Arabia, was established through Ministerial pledge No. 11/144187 dated 2005. The Central Board of Accreditation is a non-profit organization under the supervision of Health Services Council; and provides evaluation and follow-up of services provided by government and private healthcare institutions with a panel of competent surveyors for the purpose of spreading; and employing quality; and safety standards approved by the International Society for Quality in Health Care (CBAHI, 2005).

Despite the fact that majority of accreditation programs are voluntary, a small number of programs are mandatory such as: CBAHI; and French, and Italian accreditation. In 2011, the Health Services Council in Kingdom of Saudi Arabia recognized that all public and private institutions must acquire CBAHI's accreditation (No.8/58 dated 4/12/2011). Several private and governmental hospitals in Kingdom of Saudi Arabia have already obtained accreditation from different international bodies. Such as: Joint Commission International, Canadian Council on Health Services Accreditation, and Australian Council for Health Care Standards (Almasabi, 2013).

Majority of past researches conducted on late decade in developed and developing countries investigated impact of accreditation programs on healthcare organizations related to its structures, processes, outcomes and patient satisfaction were highly great positive impact. Most researchers had targeted nursing staff in their populations and samples to determine the impact of accreditation programs on healthcare services, because of its vital role on quality and safety of healthcare's services. The findings of study conducted in Saudi

Arabia reported that most of respondents' answers, 721 registered nurses from eight different cultural backgrounds worked in Saudi Arabia, were between agree and strong agree in five points rating scale on impact of accreditation on patient safety and quality indicators (Alawa et al, 2009). Accreditation had high gain in reducing risks in health organizations (Sophie, 2010). Turkish nurses reported high mean score related to benefits of hospital accreditations (Ahmet & Sidika, 2014). 1048 Lebanese nurses indicated high score about improvement of quality during and after accreditation processes (El-Jardali et al, 2008). Applying accreditation programs in Neonatal Intensive Care Unit lead to significant decrease in infant mortality Rates (Lorch, Maheshwari & Shosran, 2008). Study conducted on 25 Primary Healthcare Centers in Lebanon using both self-administered questionnaire and interview reported high mean score followed by Canadian accreditation impact on quality of healthcare (El-Jardali et al, 2009). The Result of systemic literature review of 26 studies about impact of accreditation programs on healthcare services showed significant positive impact in structure, processes and clinical outcomes in different subspecialties of medicines (Alkhenizan, 2011).

On other hand one study showed the limited impact of accreditation programs on healthcare organizations and its services, especially, after accreditation in short period. The study found a reduction and fall in standards such as: compliance with clinical documentation standards of accreditation, which happened immediately after Healthcare organization was accredited (Derkaran, 2014).

II. Methods

2.1 Research Design:

Across sectional descriptive study was conducted at the King Khalid Hospital (KKH) in Hail Region, Kingdom of Saudi Arabia to determine nursing perception about the impact of accreditation on patient's safety.

2.2 Population and sampling:

The study population considered all nursing staff both Saudi and non Saudi who started working in the hospital before it was accredited and continued to work during and after accreditation at the King Khalid Hospital in Hail Region, the sampling frame include all nurses in various departments and units of the hospital. After define the population, and establishing the sampling frame; simple random sampling was conducted. Out of 450 nursing staff in King Khalid Hospital a sample size of 200 had received the self-administered questionnaire.

2.3 Data Collection Procedure:

After taking official permission letters from authorized organizations to conducting study in King Khalid Hospital. The researchers collaborated with nursing office in the King Khalid Hospital to distribute 260 self-administered questionnaires on 23th of October 2014 and received 230 questionnaires on 2nd November 2014 with response rate of 76 percent, after researchers exclude 30 questionnaires for incompleteness. The Respondents' Rights and Research Ethics had been respected and considered during all study phases.

2.4 Research Instrument:

The research instrument was self-administered questionnaires designed in manner to determine nursing perception on the impact of accreditation on patient safety related to clinical nursing documentation, medication information and hospital infection. Questionnaire used in this study consisted of three parts; the first part covered demographic data of participated nursing staff; the second part composed of three dimensions about impact of hospital accreditation on patient's safety include nursing documentation, medication information and hospital infection, each dimension consist of four items, that was drawn from literature review; and the third part included open question to give respondents the chance to describe any other issues related to the study.

Five points (5= strongly agree, 4= Agree, 3=Neutral, 2=Disagree, 1=Strongly Disagree) rating Likert scale was used for measure nurses perception toward impact of hospital accreditation on patient's safety.

Questionnaire validity was created by reverent studies and its validity was examined by experts in the field from King Saud University and ministry of health. Additionally, a pilot study was conducted on number of nursing's staff to assure validity of the questionnaire.

2.5 Data Analysis:

Frequency distribution, percentage, range, means, and standard deviations used to present the data and drew the conclusion in this descriptive study. The statistical analysis carried out with the SPSS program version 18.

III. Results

3.1 Demographic data of Respondents:

Majority of the respondents were 30 years old or less representing 45 percent of respondents, followed by respondents older than 30 to 40 years representing 39.5 percent of respondents. The least of respondent were older than 40 to 50 years old representing 10 percent of respondents. Most respondents were female representing 96.5 of respondents. Regarding nationality 44 percent of participants were Indians, 43.5 percent were Filipinos, and 12.5 percent were Saudi. Seventy three percent of participants held bachelor degree, while 18 percent held diploma, followed by 8 percent held associated degree, and 1 percent held Masters Degree or more. About 42 percent of participants were working for KKH more than 4 years, followed by 21.5 percent of respondents were working more than 2 to 3 years, 21 percent more than 3 to 4 years, and 15 percent were working for two years or less. Majority of respondents, 54 percent, have 10 years or less of experience in nursing, followed 32.5 percent of respondents have experience of more than 10 to 20 years, 10.5 percent of respondents have experience of more than 20 to 30 years, and 3 percent of respondents have experience of more than 30 years. The largest percent of participant, 91.5 percent, were working as nursing staff, 5 percent of participants were head nurses, and 3 percent were working as supervisors, and 0.5 percent were working as Chief or Deputy (Table 4.1).

Table 4.1: The Demographic Data of Respondents.

Characteristics	Groups	Frequency	Percentage	Total
Age	30 years and under	90	45	200
	Older than 30 – 40 yrs	79	39.5	
	Older than 40 – 50 yrs	20	10	
	Older than 50 years	11	5.5	
Gender	Male	7	3.5	200
	Female	193	96.5	
Nationality	Saudi	25	12.5	200
	Filipino	87	43.5	
	Indian	88	44	
	Other	0.0	0.0	
Qualifications	Diploma degree (2 yrs)	36	18	200
	Associate degree (3 yrs)	16	8	
	Bachelor degree	146	73	
	Master and above	2	1	
Working in Hospital	2 years and under	30	15	200
	More than 2 – 3 yrs	43	21.5	
	More than 3 – 4 yrs	42	21	
	More than 4 yrs	85	42	
Experiences	10 years and under	108	54	200
	More than 10 – 20 yrs	65	32.5	
	More than 20 – 30 yrs	21	10.5	
	More than 30 years	6	3	
Positions	Nursing Staff	183	91.5	200
	Head Nurse	10	5	
	Supervisors	6	3	
	Chief or his/her deputy	1	0.5	

3.2 Impact of Hospital's Accreditation on Patient's Safety Related to Clinical Nursing Documentation:

Regarding impact of hospital's accreditation on patient safety related to clinical nursing documentation items, the range of mean was from 4.05 to 4.21. The highest mean was 4.21 (Accreditation has given insight to implement policy and procedure regarding clinical documentation as standard of using abbreviation); while the lowest mean was 4.05 (Accreditation improves information accuracy). The average mean was 4.12. Table 4.2 shows ranking the items of clinical nursing documentation dimension.

Table 4.2: Ranking the Items of Clinical Nursing Documentation Dimension.

Impact of Hospital's Accreditation on patient safety related to clinical nursing documentation	Mean	SD	Frequency (Percentage %)				
			Strongly Agree	Agree	Neutral	disagree	Strongly disagree
1. Accreditation has given insight to implement policy and procedure regarding clinical documentation as standard of using abbreviation	4.21	0.62	64 (32)	115 (57.5)	21 (10.5)	0 (0)	0 (0)
2. Accreditation has positive impact on all hospital clinical forms.	4.15	0.73	65 (32.5)	106 (53)	23 (11.5)	6 (3)	0 (0)
3. Accreditation improves integration of clinical information among all healthcare providers.	4.07	0.72	50 (25)	122 (61)	23 (11.5)	3 (1.5)	2 (1)

4. Accreditation improves information accuracy.	4.05	1.68	46 (23)	122 (61)	29 (14.5)	2 (1)	1 (0.5)
Average Mean	4.12						

3.3 Impact of Hospital's Accreditation on Patient's Safety Related to Patient Medication Information:

Regarding Impact of Hospital Accreditation on patient safety related to patient medication information items the range of mean was from 3.95 to 4.13. The highest mean was 4.13 (Accreditation has positive impact on patients' current medication processes); while the lowest mean was 3.95 (Accreditation improves medication label format.). The average mean was 4.05. Table 4.3 shows ranking the items of patient medication information dimension:

Table 4.3: Ranking the Items Related to Patients' Medication Information.

Impact of Hospital's Accreditation on patient safety related to patient medication information	Mean	SD	Frequency (Percentage %)				
			Strongly Agree	Agree	Neutral	disagree	Strongly disagree
Accreditation has positive impact on patient current medication processes.	4.13	0.25	60 (30)	112 (56)	23 (11.5)	4 (2)	1 (0.5)
Accreditation has given insight to implement guideline of drug Administration.	4.12	0.65	53 (26.5)	120 (60)	26 (13)	0 (0)	1 (0.5)
Accreditation process has impact on reducing the rate of overall medication errors.	4	0.7	40 (20)	128 (64)	25 (12.5)	6 (3)	1 (0.5)
Accreditation improves medication label format.	3.95	0.70	34 (17)	131 (65.5)	28 (14)	5 (2.5)	2 (1)
Average Mean	4.05						

3.4 Impact of Hospital's Accreditation on Patient Safety Related to Healthcare Association Infection (Nosocomial):

Regarding safety related to healthcare association infection (Nosocomial) items of this dimension the range of mean was from 4.5 to 4.22. The highest mean was 4.5 (Accreditation has given insight to implement infection control standards such as hand hygiene); while the lowest mean was 4.22 (Accreditation improves culture of reporting incident such as needle stick injury). The average mean was 4.34. Table 4.4 shows the ranking items related to healthcare association infection dimension.

Table 4.4: Ranking the Items Related to Healthcare Association Infection Dimension.

Hospital's Accreditation on patient safety related to healthcare association infection (Nosocomial)	Mean	SD	Frequency (Percentage %)				
			Strongly Agree	Agree	Neutral	disagree	Strongly disagree
Accreditation has given insight to implement infection control standards (such as hand hygiene).	4.5	0.54	106 (53)	89 (44.5)	5 (2.5)	0 (0)	0 (0)
Accreditation process has impact on reducing the rate of overall Hospital infection (Nosocomial).	4.4	0.62	96 (48)	91 (45.5)	12 (6)	1 (0.5)	0 (0)
Accreditation makes our hospital as safe environment for patient.	4.24	0.70	72 (36)	109 (54.5)	16 (8)	1 (0.5)	2 (1)
Accreditation improves culture of reporting incident (such as needle stick injury).	4.22	0.68	42 (36)	103 (51.5)	23 (11.5)	2 (1)	0 (0)
Average Mean	4.34						

The overall or entire mean of all items of questionnaire was 4.17 while the highest average mean was the third dimension (Hospital's Accreditation on patient's safety related to healthcare association infection (Nosocomial)), followed by first dimension (Impact of Hospital Accreditation on patient safety related to clinical nursing documentation), then lowest average mean was the second dimension in the questionnaire (Impact of Hospital Accreditation on patient safety related to patient medication information).

IV. Discussion

In this study most of respondents age less than 40 years, which reflect importance of physical fitness for nurses to do their works, after 40 age most of them become senior (charge, head of department or supervisors) or leave working in hospital to other healthcare facilities with less workload as primary health care centers (PHC). Majority of respondents were female, since more female work healthcare services in general and nursing professional specifically. Majority of respondents were non Saudi (Indian and Filipino), because the

education programs in nursing professional has starting letter in Saudi Arabia with few number of graduates. General experiences in nursing professions were less than ten years since most of respondents are younger in age. Most participants were from subordinate level and less of them were head nurses which reflect normal distribution in nursing staff in hospital.

The impact of hospital's accreditation on patient safety from nursing staff perspective has high positive effects overall. The study showed that respondents agreed that accreditation has positive impact on patient safety, especially, healthcare associated infections; nursing documentation; and patient medication information. In spite of one study that reported immediate reduction or drop health care services standards after healthcare organizations was accredited (Derkaran, 2014); when the results of this study compared to previous study; researcher found that majority of past researches support the motion that accreditation has great positive impact (Alawa et al, 2009; Sophie, 2010; Ahmet & Sidika, 2014; El-Jardali et al, 2008).

The top five items have more impacted by hospital accreditation according to Respondents: Accreditation has given insight to implement infection control standards (such as hand hygiene), accreditation process has impact on reducing the rate of overall Hospital infection (Nosocomial), accreditation makes our hospital as safe environment for patient and staff, accreditation improves culture of reporting incident (such as needle stick injury), and accreditation has given insight to implement policy and procedure regarding clinical documentation as standard of using abbreviation. The top items from 1 to 4 related to healthcare associated infection, while the fifth items related to nursing documentation, then followed by items of medication information, these sequences of items of three dimensions reflected in nature of nursing job or their involved roles and the purpose of accreditation program. They were ranking (impact of hospital accreditation on patient safety) the healthcare association infection as first one, then their clinical documentation, while late one the medication information dimension reflect other healthcare professional mainly participated such as pharmacists in medication label format, processes of medication administration and others related to patient medication.

V. Conclusion

The results of this study come with supports and emphases on previous literature review related to positive impact of accreditation programs on healthcare environment processes, outcome and patient satisfaction. According to respondents, this study shows highly positive level of the impact of accreditation on patient safety related to nursing clinical documentation, medication information and healthcare association infection.

In lights of the study results, researchers emphasizing the implementation of local or national accreditation programs for healthcare facilities with many types or specialties groups, in order to improve quality and ensure the safety of healthcare services, encourage both public and private health sectors to be accredited either voluntary or mandatory based on government regulations, establish specialized department to monitor and facilitate accreditation's processes in each regions of Saudi Arabia. As far as further researches is concerned, researchers suggest that future researcher should expand the research's geographic area, a future research should study the accreditation impact all over Saudi Arabia; explore the relationship of different attribute of accreditation on respondents attributes; compare the impact of accreditation on several hospital; and explore the impact of accreditation from the prospective of different healthcare professionals.

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