

The Impact of Accreditation on Patient Safety and Quality of Care as Perceived by Nursing Staff in a Cardiac Care Centre in the Eastern Province, Kingdom of Saudi Arabia

Nahed Gassem Aldossary¹, Dr. Azra Fatima², Zainab Qassim Aldarwish^{3*}

¹M.sc Health Care Management, D. Nursing Director, Saud Albabtin Cardiac Center (SBCC), Saudi Arabia

²Head of Academics and Examinations, Swiss Buisness School (SBS), UAE

³M.sc Clinical Nursing, Director of Nursing Education, Saud Albabtin Cardiac Center (SBCC), Saudi Arabia

DOI: [10.36348/sjnhc.2022.v05i08.002](https://doi.org/10.36348/sjnhc.2022.v05i08.002)

| Received: 12.07.2022 | Accepted: 19.08.2022 | Published: 23.08.2022

*Corresponding author: Zainab Qassim Aldarwish

M.sc Clinical Nursing, Director of Nursing Education, Saud Albabtin Cardiac Center (SBCC), Saudi Arabia

Abstract

Accreditation is one of the approaches to evaluate the quality of health care services, and it's an essential requirement for the continuity of services. Nursing staff play a major role in the accreditation preparation, process and continuity. The study aimed to assess the nursing perception of the impact of accreditation on the quality of care and safety in a tertiary cardiac care center in the Eastern Province, Kingdom of Saudi Arabia. A cross-sectional descriptive research design was used. A convenient sample of 56 nursing staff was included. The study tool was a self-administered online questionnaire. It consisted of four major sections with 20 subscales rated from 1 to 5 on a Likert scale. Nursing documentation, patient medication information, healthcare-associated infection, leadership and support sections are all included. The study findings indicated that nurses have a 94.6% positive perception of the impact of accreditation on the patient's safety. This perception was measured in accordance with the items related to international patients' safety goals. Higher agreement was found on the items of nursing clinical documentation and medication safety process. The study findings support the overall positive impact of accreditation. The study further recommends exploring the nursing perception of accreditation impact in different settings.

Keywords: accreditation, quality, nursing, patient safety, perception, CBAHI.

Copyright © 2022 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

1. BACKGROUND

Accreditation has been considered as an integral component for evaluating and improving the quality of health services and safety by reducing the incidence of medical errors (Petrović G *et al.*, 2018). Many studies attempted to investigate the actual impact of accreditation on patients' safety, the systematic review by Hussain *et al.*, 2021 explored 76 studies that examined the effect of accreditation and found a positive impact on cultural safety, and other performance indicators. Although, the systematic review did not prove a positive effect in improving the infection and mortality rates, however, the authors supported the benefits of accreditation in enhancing health care quality.

In 1999, The Institute of Medicine (IOM), defined the quality as "*Quality of care is the degree to which health services for individuals and populations*

increase the likelihood of desired health outcomes and are consistent with current professional knowledge". However, this definition was revised in 2002 to include six dimensions for quality improvement, these dimensions are Safety, Effectiveness, Patient-centeredness, Timeliness, Efficiency, and Equity (Spath P, 2009). Owing to the significance of healthcare a variety of approaches have been developed and utilized to acknowledge these dimensions. The accreditation process is one of these approaches, that characterized by its inclusiveness of all elements of health service, administrative and technical aspects. The evaluation process includes health care provision systems, managerial procedures and processes in the health facility as well as supportive services (Flodgren G *et al.*, 2016).

Accreditation is increasingly being used as a tool for governmental regulation to guarantee the

quality of care. In Saudi Arabia, the Central Board for Accreditation of Healthcare Institutions (CBAHI) was founded in 2005 and mandated in 2013 on all healthcare facilities, including polyclinics, and medical laboratories. Additionally, the Ministry of Health is mandating CBAHI accreditation as a prerequisite for renewal of the operating license. Private healthcare sectors are also required to adhere to the CBAHI standards and to fulfill requirements (CBAHI Corporate Profile, 2017).

Patient safety is an essential theme in any accreditation process, that aims to provide an environment where hazards are eliminated or minimized for employees, staff, patients, and visitors. Safety is promoted through several activities, including risk management, hazardous materials management, emergency preparedness, environmental safety and hygiene, preventive maintenance, radiation safety and security (JCI manual, 2017). Nurses play a major role in these activities, as well as in identifying deficiencies, triggering harmful events and catching errors (Gaffney, T 2020).

Nursing perception was targeted in many studies to explore the impact of accreditation on hospital services, Alawa *et al.*, 2011 conducted a cross-sectional study to compare the quality indicators pre and post accreditation in the university hospital in Jeddah, KSA. A total of 721 nurses were recruited and found a significant perceived improvement in safety and quality was reported by nurses. According to AlShammari *et al.*, 2015, the impact of hospital's accreditation on patient safety from nursing staff perspective has a high positive overall effect. AlShammari study showed that respondents agreed that accreditation has positive impact on patient safety, especially, healthcare associated infections; nursing documentation; and patient medication information.

Owing to the significance of nursing role in the accreditation preparation, process and continuity, it is essential to explore the nursing perspectives about the impact of accreditation on the quality of care, in a tertiary care cardiac center, in KSA.

2. OBJECTIVES OF THE STUDY

The objective of this study was to assess nurses' perceptions of the impact of accreditation on health care quality, patient safety and perceived contributing factors that affect the quality of care and patient safety. These factors are; Clinical Nursing Documentation, Patients' Medication Information, Healthcare Association Infection, Leadership, commitment and support.

3. METHODOLOGY

3.1 Design and Setting

A cross-sectional study was conducted in a governmental tertiary cardiac care center, located in the Eastern Province, KSA. The centers' capacity is 62

beds providing care to more than 4000 patients annually. The center passed the requirements for accreditation under the JCI standards in 2010, and it was the first center affiliated to the Ministry of Health in the Kingdom to receive this accreditation. The center also passed the requirements for accreditation of CBAHI in 2012, and achieved the re-accreditation with both entities in the following re-accreditation cycles.

3.2 Data Collecting Tool

An online self-administered questionnaire was utilized. It consisted of four major sections with 20 subscales rated on a Likert scale from 1 to 5 (5=strongly agree, 4= Agree, 3=Neutral, 2=Disagree, 1=Strongly Disagree). These sections are related to the research question, including; clinical nursing documentation, medication information, nosocomial infection, and leadership and support. The tool was developed and examined by experts in the field from King Saud University and Ministry of Health (AlShammari M *et al.*, 2015). A written approval was obtained from the principal author to utilize the tool prior to proceeding with the study.

3.3 Study Sample

The Study recruited a convenient sample, consisted of all nursing staff, who are working in various departments, both Saudi and non-Saudi, who started working in the center for the last 10 years, before it was accredited and continued to work during and after accreditation.

3.4 Ethical Consideration

Ethical approval was obtained from the research and ethics committee at the Saud Albabtain Cardiac Center (SBCC). An electronic consent that explains the study purpose and participants' rights was attached before proceeding with the survey. Confidentiality and anonymity of the data was maintained. Data set was stored in private computer with controlled access.

3.5 Data Analysis

Data were expressed as Numbers, mean, and frequencies, descriptive and inferential analyses were used to assess the study's variables. Missing data management was not needed in the data set.

4. RESULTS

4.1 Distribution of the Study Population According to their Socio-Demographic Information

The present study is a cross-sectional study that included 56 nurses who fit the inclusion criteria. The majority of the respondents were 40-45 years old, representing 39.3 % of the study sample, followed by 35.7% of them being aged less than 40 years. The average age among participants was 42.02 ± 5.28 years. Most respondents were female representing 94.6% of the sample. Regarding nationality, 75.0% of participants were non-Saudi, and 25.0% were Saudi.

Participants held associate degrees (3 years) constituted 46.4% of the sample, while 41.1 % held bachelor's degrees, followed by 7.1 % held master's and above degree, and 5.4 percent held diploma degree (2 years).

The majority of the participant, 71.4 %, was working as nursing staff, 14.3 % were head nurses, and 14.3 % were working as supervisors, and nobody was working as Chief or Deputy (Table 1).

Table 1: Distribution of the study population according to their socio-demographic information

Variables	Category	Count	%	Mean ±SD
Age Group	Less than 40	20	35.7%	42.02±5.28
	40-45	22	39.3%	
	More than 45	14	25.0%	
Gender	Male	3	5.4%	
	Female	53	94.6%	
Nationality	Saudi	14	25.0%	
	Non-Saudi	42	75.0%	
Qualifications	Diploma degree (2 years)	3	5.4%	
	Associate degree (3 years)	26	46.4%	
	Bachelor degree	23	41.1%	
	Master and above	4	7.1%	
Positions	Nursing Staff	40	71.4%	
	Head Nurse\Head of department	8	14.3%	
	Supervisors	8	14.3%	
	Chief or his/her deputy	0	0.0%	
Experiences (in the study setting)	Less than 10 years o	0	0.0%	
	At least 10 years and above	56	100.0%	

4.2 Impact of Hospital's Accreditation on Patient's Safety in Relation to Clinical Nursing Documentation

The agreement mean ranged from 4.27 to 4.41. The highest mean was 4.41 (Accreditation improves

information accuracy), while the lowest mean was 4.27 (Accreditation has a positive impact on all center clinical forms). The average mean was 4.33. Table 2 shows the ranking of the items of the clinical nursing documentation dimension.

Table 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 Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Accreditation improves information accuracy.	4.41	0.53	0 (0)	0 (0)	1 (1.7)	31 (55.4)	24 (42.9)
2. Accreditation has given insight to implement policy and procedure regarding clinical documentation as standard of using abbreviation	4.32	0.58	0 (0)	1 (1.8)	0 (0)	35 (62.5)	20 (35.7)
3. Accreditation improves integration of clinical information among all healthcare providers.	4.30	0.54	0 (0)	0 (0)	2(3.6)	35 (62.5)	19 (33.9)
4. Accreditation has positive Impact on all centre clinical forms.	4.27	0.62	0 (0)	1 (1.8)	2 (3.6)	34 (60.7)	19 (33.9)
Total	4.33	0.47					

4.3 Impact of Hospital's Accreditation on Patient's Safety in Relation to Patient Medication Information

Regarding the patient medication information items, the mean range was from 4.27 to 4.34. The highest mean was 4.34 (Accreditation has a positive

impact on patients' current medication processes), while the lowest mean was 4.27 (Accreditation improves medication label format). The average mean was 4.31. Table 3 shows ranking the items of patient medication information dimension.

Table 3: Ranking the items related to patients' medication information

Impact of Hospital's Accreditation on Patient's Safety Related to Patient Medication Information	Mean	SD	Frequency (Percentage %)				
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Accreditation has positive Impact on patient' current medication processes.	4.34	0.48	0 (0)	0 (0)	0 (0)	37 (66.1)	19 (33.9)
2. Accreditation process has Impact on reducing the rate of overall medication errors.	4.32	0.66	0 (0)	0 (0)	6 (10.7)	26 (46.4)	24 (42.9)
3. Accreditation has given insight to implement guideline of drug Administration.	4.30	0.46	0 (0)	0 (0)	0 (0)	39 (69.6)	17 (30.4)
4. Accreditation improves medication label format.	4.27	0.62	0 (0.0)	0 (0.0)	5 (8.9)	31 (55.4)	20 (35.7)
Total	4.31	0.46					

4.4 Impact of Hospital's Accreditation on Patient Safety in Relation to Healthcare Association Infection (Nosocomial)

Regarding safety related to healthcare association infection (Nosocomial) items, the mean range was from 4.20 to 4.38. The highest mean was

4.38 (Accreditation improves the culture of reporting incident (such as needle stick injury); while the lowest mean was 4.20 (Accreditation process has an impact on reducing the rate of overall Centre infection (Nosocomial). The average mean was 4.29 (Table 4).

Table 4: Ranking the Items related to healthcare-associated infection dimension

Impact of Hospital's Accreditation on Patient Safety Related to Healthcare Association Infection (Nosocomial)	Mean	SD	Frequency (Percentage %)				
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Accreditation improves the culture of reporting incidents (such as needle stick injury).	4.38	0.59	0 (0.0)	0 (0.0)	3 (5.4)	29 (51.7)	24 (42.9)
2. Accreditation has given then Insight to implement infection control standards (such as hand hygiene).	4.32	0.54	0 (0.0)	0 (0.0)	2 (3.6)	34 (60.7)	20 (35.7)
3. Accreditation makes our centre as safe environment for patient.	4.25	0.64	0 (0.0)	1 (1.8)	3 (5.4)	33 (58.9)	19 (33.9)
4. Accreditation process has an impact on reducing the rate of overall Centre infection (Nosocomial).	4.20	0.59	0 (0.0)	0 (0.0)	5 (8.9)	35 (62.5)	16 (28.6)
Total	4.29	0.47					

4.5 Impact of Hospital's Accreditation on Patient Safety Related to Leadership, Commitment and Support

The agreement mean range of the items of this dimension was from 3.88 to 4.34. The highest mean was 4.34 (Based on accreditation results, senior center executives have a thorough understanding of how to

improve the quality of care and Patient Safety; while the lowest mean was 3.88 (Senior center executives allocate available resources (e.g. finance, people, time, and equipment's) to improve quality and patient safety. The average mean was 4.31. Table 5 shows the ranking items related to leadership, commitment, and support dimension.

Table 5: Ranking the Items related to leadership, commitment, and support dimension

Impact of hospital's accreditation on patient safety related to leadership, commitment and support	Mean	SD	Frequency (Percentage %)				
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1) Based on accreditation results, senior centre executives have a thorough understanding of how to improve the quality of care and Patient Safety	4.34	0.51	0 (0.0)	0 (0.0)	1 (1.8)	35 (62.5)	20 (35.7)
2) Senior centre executives have articulated a clear vision for improving the quality of care and Patient Safety	4.25	0.64	0 (0.0)	1 (1.8)	3 (5.4)	33 (58.9)	19 (33.9)
3) The top management is a primary driving force behind quality improvements efforts	4.18	0.69	0 (0.0)	1 (1.8)	6 (10.7)	31 (55.4)	18 (32.1)
4) Senior centre executives have started to act on suggestions to improve the quality and of care and Patient Safety	4.16	0.53	0 (0.0)	0 (0.0)	4 (7.1)	39 (69.7)	13 (23.2)
5) Senior centre executives have demonstrated an ability to manage the change (e.g. organizational, technological) needed to improve the quality and Patient Safety	4.14	0.55	0 (0.0)	0 (0.0)	5 (8.9)	38 (67.9)	13 (23.2)
6) Senior centre executives provide highly visible leadership in maintaining an environment that supports quality improvement	4.13	0.74	1 (1.8)	1 (1.8)	3 (5.4)	36 (64.2)	15 (26.8)
7) Senior centre executives consistently participate in activities to improve the quality of care and Patient Safety	4.13	0.54	0 (0.0)	0 (0.0)	5 (8.9)	39 (69.7)	12 (21.4)
8) Senior centre executives allocate available resources (e.g. finance, people, time, and equipments) to improve quality and patient safety	3.88	0.72	1 (1.8)	1 (1.8)	9 (16.1)	38 (67.8)	7 (12.5)
Total	4.31	0.42					

4.6 Impact of Hospital's Accreditation on Patient Safety in Relation to Total Dimension

The mean range was from 83.0% to 86.6%. The highest weighted mean was 86.6 (clinical nursing

documentation), while the lowest mean was 83.0% (Leadership, commitment, and support). The average mean was 85.4 (Figure 1).

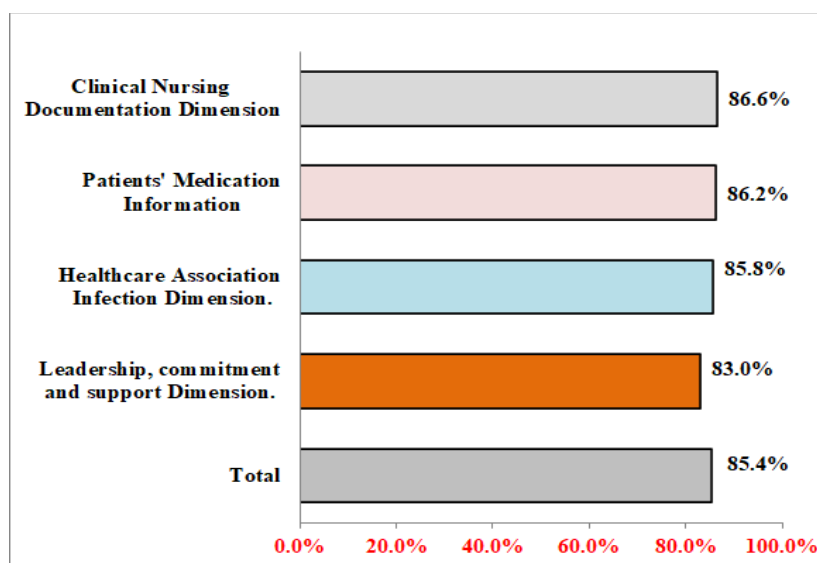


Figure 1: Impact of hospital's accreditation on patient safety related to total dimension

4.7 Impact of Hospital's Accreditation on Patient Safety

Table 6 illustrates the distribution of the study population according to their Impact of hospital accreditation on patient safety. This table showed that only 5.4% of the participants have a neutral level of

Impact of hospital accreditation on patient safety, while 94.6% have positive levels of Impact of hospital accreditation on patient safety. However, nobody of the participants has a negative level of Impact of hospital accreditation on patient safety. The average (SD) of knowledge levels was 85.36 (8.04) out of 100 points.

Table 6: Impact of hospital's accreditation on patient safety

Variable and level (Percentage mean scores (PMS))	N (%)	Mean [‡] (SD)	Min	Max
Total Impact of hospital's accreditation on patient safety		85.36 (8.04)	70.00	100.00
Negative (< 50%)	0 (0.0)			
Neutral (50-75%)	3 (5.4)			
Positive (>75%)	53 (94.6)			

N: number of subjects; SD: standard deviation; Min: minimum; Max: maximum; [‡]Maximum score of mean = 100 points; Responses on each domain were converted to percentage mean scores (PMS). Scores below 50 were accounted to have a negative perception, scores between 50-75 show neutral perception, and scores above 75 were accounted to have a positive perception.

4.8 Nurses' Perception to Accreditation Impact According to Demographic Characteristics

The study showed that there was no relation between nurses' perception to accreditation impact according to personal characteristics (P>0.05).

Table 7: Nurses' perception to accreditation impact according to some demographic characteristics

Variables	Perception to accreditation impact			% mean score (x ±SD)
	Negative (n=0, 0.0%)	Neutral (n=3, 5.4%)	Positive (n=53, 94.6%)	
Age Group				
Less than 40	0 (0)	2 (10)	18 (90)	84.52±9.43
40-45	0 (0)	1 (4.5)	21 (95.5)	83.68±6.45
More than 45	0 (0)	0 (0)	14 (100)	89.21±7.36
	$\chi^2 = 2.258, p = 0.323$			F = 2.303, p = 0.110 p adj. = 0.128
Gender				
Male	0 (0)	0 (0)	3 (100)	85.8±9.57
Female	0 (0)	3 (5.7)	50 (94.3)	85.34±8.05
	$\chi^2 = 3.40, p = 0.560$			t = 0.096, p = 0.924 p adj. = 0.924
Nationality				
Saudi	0 (0)	2 (14.3)	12 (85.7)	81.36±7.08
Non -Saudi	0 (0)	1 (3.2)	41 (96.8)	87.1±9.16
	$\chi^2 = 3.102, p = 0.376$			F = 2.443, p = 0.074 p adj. = 0.150
Qualifications				
Diploma degree (2 years)	0 (0)	0 (0)	3 (100)	91.07±11.42
Associate degree (3 years)	0 (0)	1 (3.8)	25 (96.2)	85.17±6.97
Bachelor degree	0 (0)	1 (4.3)	22 (95.7)	84.77±7.7
Master and above	0 (0)	1 (25)	3 (75)	85.75±14.88
	$\chi^2 = 2.194, p = 0.533$			F = 0.539, p = 0.658 p adj. = 0.521
Positions				
Nursing Staff	0 (0)	1 (2.5)	39 (97.5)	85.46±7.77
Head Nurse\Head of department	0 (0)	2 (25)	6 (75)	80.33±8.33
Supervisors	0 (0)	0 (0)	8 (100)	89.93±6.99
Chief or his/her deputy	0 (0)	0 (0)	0 (0)	F = 3.081, p = 0.054 p adj. = 0.461
	$\chi^2 = 5.047, p = 0.80$			
Experiences in the centre				
Less than 10 years o	0 (0)	0 (0)	0 (0)	0.0±0.0
At least 10 years and above	0 (0)	3 (5.4)	53 (94.6)	85.36±8.04
	$\chi^2 = 0.00, p = 1.000$			t = 0.000, p = 1.000 p adj. = 1.000

5. DISCUSSION

The study examined the nursing perception of the impact of accreditation on the quality of care, as the

nursing profession is one of the most critical factors in determining the quality and the nature of patient outcomes. It is known that nurses spend 90% of their time caring for patients; therefore, they are in an ideal

position to assess the impact of accreditation on the quality of patient care and patient safety as they perceive it (Alawa B *et al.*, 2011).

In this study, the mean age of the study sample was 42 years. The majority of participants were female, non- Saudi, had an associate diploma degree. The nature of the sample demographics is related to the fact that the nursing community in Saudi Arabia is highly dependent on expatriate manpower. Nursing in Saudi Arabia faces the same global challenges, such as severe shortage, high turnover, expansions in healthcare services, and a growing population. Saudi Arabia produces around 10.8 nurses per 100,000 populations, far below countries such as Germany, Canada and the United States (General Directorate for National Health Economics and Policy Saudi Health Council, Kingdom of Saudi Arabia, 2019). The majority of the study sample was staff nurses, who have been practicing and who were present throughout the pre and post accreditation process. A minority of the sample were assigned as head nurses, which yielded a comprehensive prospective of the impact of accreditation from different nursing managerial levels.

The overall percentage mean score (PMS) of nurses' perception was 85.36, and more than 75%, which reflects a positive perception of the accreditation impact on patient safety. This positive perception was contributed by bed side nurses with 3- year Associate degree. This observation was in agreement with similar study conducted in Saudi Arabia by Abolfotouh *et al.*, (2014), who evaluated Nursing Perception towards Impact of JCI Accreditation and Quality of Care in a Tertiary Care Hospital. Abolfotouh *et al.*, (2014), highlighted that the percentage mean score (PMS) of nurses' perception was significantly higher among nurses of Bachelor degree or less than among those of higher education, with significant p values of 0.02. Although this comparison in the current study was not statistically significance, however, it was observed that nurses with more than 10 years of experience also have a positive perception. The lack of statistically significant p value could be due to small sample size in comparison to Abolfotouh *et al.*, (2014), who involved more than 400 nurses. Negative perception was not reported by the participants in this study, while only 4% had neutral perception. This was in agreement with similar research by Alshammari, *et al.*, (2015) that studied the impact of hospital accreditation on patient safety in hail city, Saudi Arabia. Nurses' Perspective showed that respondents agreed that accreditation has a positive impact on patient safety, especially, healthcare associated infections; nursing documentation; and patient medication information. However, Alshammari, *et al.*, 2015 excluded the leadership commitment and Support dimensions, which is important in a general hospital, and in a large sample size of nurses.

Another study was conducted by Awa *et al.*, (2011), to examine the impact of accreditation on patient safety and quality of care as perceived by 721 Nursing Staff in an 878 bedded University Hospital, in Saudi Arabia. The study showed that despite all environmental barriers created by the multicultural, and multilingual, the accreditation process generated a positive impact on the quality of patient care and safety.

This study examined the impact of accreditation on patient's safety based on many domains, including; improving the information accuracy, culture of reporting incidents (such as needle stick injury), improving the patient's current medication process, Healthcare Association Infection, as well as leadership, commitment and support. The mean score is higher in the item of clinical nursing documentation, followed by healthcare associated infection, patient medication information, while the lowest mean score was related to leadership, commitment and support.

The majority of the participants (62.5%) agreed that the accreditation improved the communication of information among healthcare providers, which highlights the importance of the documentation tools such as SBAR that is mandated accrediting bodies. Additionally, 62.5% of the participants reported that accreditation improved the used of eligible abbreviation, which is considered as a critical factor in patient's safety and prevention of errors (JCI manual, 2017).

The documentation system in the current study setting is non-electronic method, and it's based on paper forms. It is unknown whether the initiation of electronic system would have a positive or a negative impact on the nurses' perception towards this item. In the study conducted at Johns Hopkins Aramco Healthcare, Saudi Arabia (2021), found a critical drop in the staff performance and commitment to the international patient safety goal of effective communication during the period from 2017 to 2018, when a new system took a place. The study highlighted that the compliance and performance of healthcare providers recovered in 2019, which highlights the importance of assessing the staff perceptions towards the accreditation requirements and prior to the implementation of new approaches (Al-Sayedahmed H *et al.*, 2021).

This study found that 60% of the participants agreed that accreditation improved the overall process for medication, and reduced the medication errors, which is aligned with the international patient safety goal. Although the process remained paper-based however, this item was scored with a mean of 4.31. This finding is consistent with the study done in a tertiary hospital in South Korea to assess the nurses' perception and perceived performance level of the impact of accreditation on the patient safety in

accordance with the international patient safety goals (Despotou *et al.*, 2020). The study included 76 nurses via online and structured interview technique, and found a positive overall perception among nurses, as well as a positive perceived effect on patient safety. These results were statistically significant in the above study as they were correlated well with experience, certification and perceived impact on patient's safety, especially with the medication process, and high alert medication preparation. Although our study did not show a statistically significant correlation, however, similar observations were noted. This discrepancy could be due to limited sample size, as well as the time frame differences, as the Korean study assessed the nurses' perception immediately during the pre and post accreditation, while this current study focused on recruiting senior staff who were present during the last 10 years' period. Additionally, Despotou (2020) study utilized structured interview procedure which yielded a detailed perception on the process.

The study found a lower mean score (3.88) in the leadership and support subscale of "Senior centre executives allocate available resources (e.g., finance, people, time, and equipment) to improve quality and Patient safety". Although the majority of nurses agreed that senior executives have articulated a clear vision for the improvement of quality of care and services at the cardiac center, however, this neutral perception could be related to the nature of the cardiac specialty that has increased demands for appropriate resources to match the patients' care requirements.

CONCLUSION

Engagement of nurses during the accreditation process is essential for achieving the desired outcome of implanting the required standards. The study findings indicate that nurses have a positive perception of the impact of accreditation on the patient's safety. This perception was measured in accordance with the items related to international patients' safety goals. Higher agreement was found on the items of nursing clinical documentation and medication safety processes. This study assists in exploring nurses' point of view regarding the accreditation process, and highlighted the perception of safety culture in a tertiary care center in the Eastern Province of Saudi Arabia. Further studies are needed to assess nurses' perception in different settings. It's also recommended that further studies to be conducted to assess the association between perceived perception and the actual compliance among nurses. Additionally, assessment of patients' satisfaction towards the implementation of international patients' safety goals would yield in- depth and objective into the impact of accreditation on the quality of services.

Limitation

The target participants in this study were senior staff that were practicing before and after the

accreditation process for more than 10 years' period. The major limitations of this study are the small sample size and the risk of recall bias.

REFERENCES

- Petrovic, G. M., Vuković, M., & Vraneš, A. J. (2018). The impact of accreditation on health care quality in hospitals. *Vojnosanitetski pregled*, 75(8), 803-808. <https://doi.org/10.2298/VSP160728390M>.
- Hussein, M., Pavlova, M., Ghalwash, M., & Groot, W. (2021). The impact of hospital accreditation on the quality of healthcare: a systematic literature review. *BMC health services research*, 21(1), 1-12. <https://doi.org/10.1186/s12913-021-07097-6>
- Spath, P. (2009). Introduction to Healthcare Quality Management (1st ed.) [E-book]. *Health Administration Press*.
- Flodgren, G., Gonçalves-Bradley, D. C., & Pomey, M. P. (2016). External inspection of compliance with standards for improved healthcare outcomes. *Cochrane Database of Systematic Reviews*, (12). CD008992. <https://doi.org/10.1002/14651858.CD008992.pub3>.
- CBAHI Corporate Profile 2017, Available at: <https://portal.cbahi.gov.sa/Library/Assets/CBAHI%20Corporate%20Profile-041915.pdf> [Last Access on 7th Aug 2021]
- Joint Commission International. (JCI) (2017). Joint Commission International Accreditation Standards for Hospitals. 6th ed. *Joint Commission Resources*.
- Gaffney, T. A. (2020). Keeping Patients Safe: The Critical Role of Medical Error Recovery. In (Ed.), *Nursing - New Perspectives*. Intech Open. <https://doi.org/10.5772/intechopen.91412>
- Al-Awa, B., Al Mazrooa, A., Rayes, O., El Hati, T., Devreux, I., & Al-Noury, K. (2011). Comparison of Patient Safety and Quality of Care Indicators Between Pre and Post Accreditation Periods in King Abdulaziz University Hospital. *Ann Saudi Med*, 32(2), 143-150.
- Al Shammari, M., al Habib, S., al Shubrami, D., & al Rashidi, M. (2015). Impact of Hospital Accreditation on Patient Safety in Hail City, Saudi Arabia: Nurses' Perspective. *IOSR Journal of Nursing and Health Science*, 4(1). <https://doi.org/10.9790/1959-041XXXXX>
- General Directorate for National Health Economics and Policy Saudi Health Council, Kingdom of Saudi Arabia. (2019). *The Nursing Workforce in Saudi Arabia Challenges and Opportunities*. Available at: https://shc.gov.sa/Arabic/Documents/KSA_Nursing_Challenges_and_Opportunities_pub_6-22-20.pdf [last access on July2022]
- Abolfotouh, M. A., Alkelya, M., Abukhalid, N., Salam, M., & Alamry, A. (2014). Nursing Perception Towards Impact of JCI Accreditation

and Quality of Care in a Tertiary Care Hospital, Central Saudi Arabia. *International Journal of Medical Sciences*, 47(1).

- Al-Sayedahmed, H., Al-Tawfiq, J., Al-Dossary, B., & Al-Yami, S. (2021). Impact of accreditation certification on improving healthcare quality and patient safety at Johns Hopkins Aramco Healthcare. *Glob J Qual Saf Healthc*, 4, 117-122.

DOI: 10.36401/JQSH-21-8.

- Despotou, G., Her, J., & Arvanitis, T. (2020). Nurses' Perceptions of Joint Commission International Accreditation on Patient Safety in Tertiary Care in South Korea: A Pilot Study. *Journal of Nursing Regulation*, 10, 30-36. 10.1016/S2155-8256(20)30011-9.