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Assessment of factors affecting patient safety culture in Maternity and Children hospital in Makkah, Saudi Arabia

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Abstract

Background: Patient safety is defined as preventing harmful effects and errors for patients who are associated with healthcare. Improving patient care also is at the forefront of healthcare management policies and practice. Patient safety culture and the factors influencing this culture have not been extensively studied in Saudi Arabia. The aim of this study was to identify factors influencing the culture of patient safety in a Saudi hospital. The objectives were to determine the standard of the culture of patient safety and, to assess demographic and work-related factors variables on patient safety culture.

Methods: A cross-sectional study was conducted in all departments of Maternity and Children Hospital in Makkah, Saudi Arabia through an electronic survey. The target community of this study was the nurses and physicians. The Hospital Survey on Patient Safety Culture (HSOPS) survey was used to gather the data. The data were analyzed by SPSS version 25, and descriptive statistics such as frequencies and percentages, as well as independent sample t-test, and One-Way ANOVA were used. The study was approved by an ethics board.

Results: The reliability (α) of the scale was 0.856. The majority (97.8%) was Saudi. 78.8% of the participants were women and 42.8% were between 31 – 39 years. 62.5% had a bachelor's degree, and 58.4 were married. 76.2% of the study participants were nurses, while 23.8% of them were physicians. The income of 45.4% of the study participants was > 5,000 – ≤ 10,000, 42.4% had an experience between 5 – 10 years. The mean scores were as follows: Frequency of events reported = 3.11, Organizational learning–continuous improvement = 3.71; Teamwork within units = 3.74, Feedback and communication about errors = 3.65, Non-punitive response to error = 3.18, Staffing = 3.07, Hospital handoffs & transitions = 2.72, Total score = 3.27. All scores were out of 5.

Conclusion: The results of the study indicate a favorable understanding of patient safety culture in the majority of patient safety culture areas but less favorable for the 'hospital transitions' sector.

Keywords: Patient safety; maternity; children; healthcare; Saudi Arabia.

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1. Introduction

Patient safety is defined as preventing harmful effects and errors for patients who are associated with healthcare [1]. Patient safety culture is conceptually defined as the product of collective and individual values, perceptions, competencies, attitudes, and patterns of behavior that determine the commitment to the method of safety, health, and management efficiency in the institution [2]. Improving patient care also is at the forefront of healthcare management policies and practice [3]. In developed countries, one in ten patients were affected while accessing higher-probability medical treatment in developing countries [1].

Patient safety is considered a serious health issue globally that requires a concerted and continuing effort to assess and develop it. In efforts to help hospitals improve the treatment of patients, the Institute of Medicine (IOM) required performance steps to adopt the culture of patient safety [4]. Patient safety promotes monitoring, analysis, and limiting medical errors, which often lead to adverse health outcomes. Moreover, most negative events are preventable and occur due to a procedure or institution failure rather than inadequate performance by health care providers, including nurses [5]. The new IOM study on patient protection underlines the need to foster a policy of safety of patients in healthcare institutions [6]. It also stresses on the management and protection culture and proposes the creation of edification that promotes transparency and education [6].

For all the efforts taken by the healthcare institutions, the level of medical mistakes is still perceived to be high. This high prevalence may be attributed to cultural influences and lack of a culture of safety among nurses and health workers [7]. The most critical deterrent to developing patient safety is the culture of security of the health care institution, where the culture of connecter safety is essential for developing the safety of the patient [8].

The research conducted by Jeffrey et al. found that the strong safety of culture in the workplace was connected to a variety of favorable patient results, like reduced declines, reduced death rates, illnesses, and improved the satisfaction of the patient [9]. Moreover, a healthy safety culture will enable health professionals to report and test their failures. This is an important method for developing safety as the first stage for developing favorable safety culture is to examine the existing culture [10]. On the other side, hospitals are expected to establish a culture of patient safety among staff before introducing institutional interventions [8].

The literature reveals that there are positive or negative associations between many safety dimensions. Thus, improving one dimension could strengthen the other. Assessing the mindset of midwives and nurses towards the culture of patient safety is the first step that healthcare institutions need

to take to recognize issues to be resolved to strengthen the culture of patient safety. Factors such as poor communication, according to literature, have a negative impact on patient safety. Previous studies revealed incidents that endangered patient safety include gaps in coordination between personnel, unclear communication in sensitive circumstances, lack of procedures, lack of understanding of goods or devices, and inadequate education [11]. Several reports emphasize the relevance of patient safety culture to patient safety procedures and outcomes [9].

Abood and Abo El-Magd (2018) showed the factors which influence patient safety culture among nurses include organization commitment, employee empowerment, management support, error reporting system, and reward system [12]. These factors and other factors have not been extensively studies in Saudi Arabia. In addition, no studies were conducted in Saudi Arabia among employees of maternity and child health hospitals. Conducting this study will provide the researcher with basic information on patient safety and factors influencing this issue. It will also guide other researchers in this field to continue searching for this issue in Saudi Arabia.

The aim of this study was to recognize factors influencing the culture of patient protection in a Saudi hospital. The objectives were to determine the standard of the culture of patient safety and, assess demographic and work-related factors variables on patient safety culture.

2. Subjects and Methods

2.1 Study population and sample

The target population included nurses and physicians working at study venue as they were the main healthcare providers in the hospital and were in direct contact with patients. Male and female nurses and physicians who had experience of at least one year and consented to participate in the research were included. The total number of nurses and physicians in this hospital was 1160, i.e., 840 and 320, respectively.

Sample from each specialty was be calculated using a stratified sampling method. Thus, after calculation, 72.4% (840/1160) of the calculated sample was drawn from the nurses, and 27.6% (320/1160) of the calculated sample was drawn from the physicians. Thus, the sample for nurses and physicians was 209 and 80, respectively. The required sample size was 289, considering considering the total number of nurses and physicians in the hospital, i.e., N = 1160, p = 0.05, power = 0.8, and 95% Confidence Interval. In the present study, 269 out of 289 (93.07%) have responded to participate in the present study.

2.2 Instrument of the study

The Hospital Survey on Patient Safety Culture (HSOPS) survey formulated by Hannah et al. (2008) was used [13]. It was in public domain and did not require permission to use. The questionnaire

was deemed valid and reliable [13]. Survey domains included: 1) quality development in organizational learning, 2) coordination within departments, 3) error feedback and communication, 4) recorded incident occurrence, 5) staffing, 6) hospital handoffs and change, and 7) non-positive error response. All Likert scale items had a 5-point scale (1= strongly disagree, 2= disagree, 3= neither agree nor disagree, 4= agree, and five strongly agree). On 5-points, other questions were determined as (1= never, 2= rarely, 3= sometimes, 4= most of the time, and 5= always). Some of the questions were positive while some were negative. The code of these questions was reversed

2.3 Data Collection

Data were collected during January and February 2021, using electronic survey through Google forms. It was done so as it is easy to collect the data amid COVID-19 pandemic. The participants were asked to fill the form and submit it voluntarily. Participants were briefed about the study using a study information letter that outlined the purpose of the study, the costs, and the advantages of participation. The participants were asked to sign a written consent confirming their intention to participate willingly. The legal considerations of participants and anonymity were ensured. Convenience sampling was used in the study.

2.4 Statistical Analysis

The Statistical Package for Social Science (SPSS version 25) was used to analyze the data. Data distribution was checked through informal methods [14]. Descriptive statistics such as frequencies and percentages, independent sample t-test, and One-Way ANOVA were used. The independent sample t-test, and One-Way ANOVA test were used to report the level of patient safety culture based on independent variables such as demographics.

2.5 Ethical consideration

The study was granted ethics clearance from the institutional review board (IRB) (H-02-K-076-1220-422) dated 07/05/1442. A formal letter was sent to the Maternity and Children Hospital in Makkah to obtain an agreement to start the collection of data. An informed consent was received from all the participants prior to participation in the study.

3. Results

3.1 Demographic Characteristics

More than half (78.8%) of the participants were women, while 21.2% were males. 42.8% of survey participants were 31-39 years old while 41.6% were 26-30 years old. 62.5% had a bachelor's degree while 12% had postgraduate studies (master and PhD). In addition, 58.4% of the participants in the study were married.

Further, 76.2% of the study participants were nurses, while 23.8% of them were physicians. The majority (97.8%) was Saudi. The income of 45.4% of the study participants was > 5,000 – ≤ 10,000. Moreover, 42.4% had an experience between 5 – 10 years. The distribution of the sample participants according to demographic characteristics is tabulated in table 1.

Table (1) Sample Distribution according to the Participants' Demographic (n=269)

Variables	Number	Percentage (%)
Gender		
Male	57	21.2
Female	212	78.8
Age groups		
< 26 years	34	12.6
26 – 30 years	112	41.6
31 – 39 years	115	42.8
>39 years	8	3.0
Educational level		
Diploma	34	12.6
Bachelor	168	62.5
Postgraduate	22	12.0
Marital status		
Single	98	36.4
Married	157	58.4
Widowed/Divorced	14	5.2
Job title		
Physician	64	23.8
Nurse	205	76.2
Nationality		
Saudi	263	97.8
Non-Saudi	6	2.2
Income		
≤5,000 SAR	86	32.0
>5,000 – ≤10,000 SAR	122	45.4
>10,000 SAR	61	22.7
Experience		
<5 years	101	37.5
5 – 10 years	114	42.4
11 – 15 years	44	16.4
>15 years	10	3.7

3.2 Reliability analysis

The α values for overall scale and each of its subscales were >0.5. The reliability of the scale and its subscales is tabulated in table 2.

Table (2) Reliability for patient safety culture scale and its subscales

Sub-scales	α	Cronbach's α based on standardized items	Number of items
Frequency of events reported	0.696	0.688	3
Organizational learning –continuous improvement	0.799	0.799	3
Teamwork within units	0.814	0.815	4
Feedback and communication about errors	0.761	0.761	3
Non-punitive response to error	0.792	0.792	3
Staffing	0.566	0.567	4
Hospital handoffs & transitions	0.845	0.855	5
Total items	0.856	0.861	25

3.3 Patient safety culture among study participants

The lowest score for each item was 1, while the highest score was 5. The mean percentage for each item was calculated by dividing each score by five and multiplying the result by 100. The highest score indicated that the event was always done, while the lowest score indicated that the event was never done. The mean score of reporting was 3.31 (66.2%, for the item, 'where an error is made but was caught and corrected before impacting the patient. The mean score was 3.01 (60.2%) for the item, 'where an error was made that has no potential to affect the patient'. The mean score was 3.01 (60.2%) for the item, 'where an error is made that may harm the patient but is not.

The mean score of doing something effectively to maximize patient efficiency safety was 3.90 (78.0%), Besides, the mean score of evaluating the effectiveness of changes after making it to improve patient safety was, 3.78 (75.6%). In addition, the mean score of agreement about of that error has contributed to positive improvements, was 3.46 (69.2%). The average score of consensuses on the subject of employees treating each other with respect was, 3.86 (77.2%), while the average score of working together as a team to get the job finished while a lot of work has to be done efficiently, was 3.79 (75.8%). Further, the average score of encouraging each other in the department, was 3.76. (75.2 percent). The mean score of discussing ways to prevent reoccurring errors, was 3.69 (73.8%), while the mean score for being informed about errors happening in the department, was 3.64 (72.8%). The mean score for receiving feedback about changes put into place based on event reports, was 3.62 (72.4%).

The mean score for consensus on workers worrying that errors they create are stored in their personnel file, was 3.39 (67.8%), the mean score of feeling like their errors are held against them, was 3.12 (62.4%). Besides, the mean score for feeling that the person is being written up, not the question of documenting reported, was 3.03 (60.6%). The mean score of working in crisis mode, attempting to do too much, too soon, was 3.27 (65.4%), the mean score of agreement on getting enough workers to manage

the workload, was 3.17 (63.4%), and the mean score for agreement on employees working more hours in the department than that required for patient care, was 3.06 percent (61.2%).

Regarding hospital handoffs and transfers, the mean score for problem agreement often occurs during the exchange of information between hospital departments, was 2.9 (58%), while the mean score for problem agreement often occurs during the exchange of information between hospital departments is 2.73 (54.6 percent). The mean score for items "falls between the cracks" as patients are moved from one department to another, was 2.66 (53.2%). The details are presented in table 3.

Table (3) Score and distribution of participants based on their Patient safety culture among study participants

Items	**Mean**	**SD**	**%**
Frequency of events reported			
How much is this recorded where an error is made but is detected and corrected before impacting the patient?	3.31	1.21	66.2
How much is this recorded where an error is made but has the potential to affect the patient?	3.01	1.32	60.2
When a mistake is made that could harm the patient but does not, how often is this reported	3.01	1.37	60.2
Organizational learning –continuous improvement	**Mean**	**SD**	**%**
We consciously do things to strengthen the welfare of patients.	3.90	1.04	78.0
Errors have contributed to positive improvements here.	3.46	1.07	69.2
After we make changes to improve patient safety, we evaluate their effectiveness	3.78	1.11	75.6
Teamwork within units	**Mean**	**SD**	**%**
In this department, individuals encourage each other	3.76	0.99	75.2
We work together as a team to get the job done when a lot of work has to be done fast.	3.79	1.04	75.8
In this department, people treat each other with respect	3.86	1.11	77.2
When one area in this department gets really busy, others help out	3.55	1.04	71.0
Feedback and communication about errors	**Mean**	**SD**	**%**
We are given feedback about changes put into place based on event reports.	3.62	1.08	72.4
We are informed about errors happening in this department	3.64	1.03	72.8
In this department, we discuss ways to prevent reoccurring errors	3.69	1.14	73.8
Non-punitive response to error	**Mean**	**SD**	**%**
Staff feels like their mistakes are held against them.	3.12	1.20	62.4
When an event is reported, it feels like the person is being written up, not the problem	3.03	1.15	60.6
Staff worry that mistakes they make are kept in their personnel file	3.39	1.150	67.8
Staffing	**Mean**	**SD**	**%**
We have enough staff to handle the workload	3.17	1.18	63.4
Staff in this department work longer hours than is best for patient care	3.06	1.25	61.2

We use more agency/temporary staff than is best for patient care	2.79	1.03	55.8
We work in "crisis mode," trying to do too much, too quickly	3.27	1.170	65.4
Hospital handoffs & transitions	**Mean**	**SD**	**%**
Problems often occur during exchange of the information across hospital departments	2.90	1.18	58.0
Things "fall between the cracks" when transferring patients from one department to another.	2.66	1.29	53.2
Important patient care information is often lost during shift changes	2.66	1.12	53.2
Problems often occur during exchange of the information across hospital departments	2.73	1.13	54.6
Shift changes are problematic for patients in this hospital	2.66	1.11	58.0
Total mean score	2.72	1.15	54.4

The mean score of teamwork within units, was 3.74 (74.8%), the mean score of organizational learning–continuous improvement, was 3.71 (74.2%), while the mean score of feedback and communication about errors, was 3.65 (62.2%). The table 4 shows the mean score for each domain in the patient safety culture domains, the lowest and the highest mean score for each domain, is 1 and 5, respectively.

Table (4) Patient Safety Culture Domains

Domain	No of items	Mean	SD	Mean %
1. Frequency of events reported	3	3.11	1.03	62.2
2. Organizational learning–continuous improvement	3	3.71	0.90	74.2
3. Teamwork within units	4	3.74	0.84	74.8
4. Feedback and communication about errors	3	3.65	0.89	73.0
5. Non-punitive response to error	3	3.18	0.98	63.6
6. Staffing	4	3.07	0.76	61.4
7. Hospital handoffs & transitions	5	2.72	0.93	54.4
otal	25	3.27	0.54	65.4

Table 5 indicates that there was a substantial difference between the mean patient safety culture rating and the gender of the participants (<0.05). The mean patient safety culture score for women was substantially higher than the mean male culture. On the other hand, there was no significant difference in the mean level of patient safety culture with regard to participants' job title and their nationality (p>0.05).

Table 5: Differences in the level of patient safety culture with regard to (Gender, Job title, and Nationality) of the study participants

Variable		N	Mean	SD	t statistics	p value[1]
Gender	Male	57	3.10	0.50	-2.660	0.008
	Female	212	3.32	0.54		
Job title	Physicians	64	3.31	0.43	0.571	0.569
	Nurses	205	3.26	0.57		
Nationality	Saudi	263	3.27	0.55	-0.312	0.755
	Non-Saudi	6	3.34	0.13		
[1] Independent sample t-test						

The table 6 indicates that there was no substantial variation with respect to the age ranges of subjects in the mean standard of the patient safety culture ($p>0.05$). Besides, there was no substantial difference in the mean degree of the patient safety culture with respect to the years of experience of the researchers ($p>0.05$). Furthermore, there was no significant difference in the mean level of patient safety culture with regard to participants' marital status, educational level, and income ($p<0.05$).

Table (6) Frequencies and Percentage of Demographic Variables

Variable	N	Mean	SD	F (df)	*P*-value*
Age groups					
<26 years	34	3.30	0.77	0.274 (3, 265)	0.844
26 – 30 years	112	3.26	0.59		
31 – 39 years	115	3.27	0.41		
>39 years	8	3.43	0.34		
Years of experience					
≤ 5 years	101	3.31	0.66	0.683 (3, 265)	0.563
6 – 10 years	114	3.25	0.49		
11 – 15 years	44	3.20	0.40		
>15 years	10	3.40	0.23		
Marital status				0.616 (2, 266)	0.541
Single	98	3.27	0.62		
Married	157	3.29	0.49		
Divorced	14	3.12	0.44		
Education					
Diploma	34	3.13	0.47	7.605 (2, 266)	0.207
Bachelor	168	3.31	0.57		
Master	67	3.25	0.48		
Income					
≤5,000	86	3.27	0.53	2.239 (2, 266)	0.109
>5,000 – ≤10,000	122	3.34	0.57		
>10,000	61	3.16	0.46		
*One way ANOVA					

4. Discussion

The findings of this study particularly in the domain of 'Frequency of Events Reported', were not consistent with the results of Eldeeb et al. (2016), that showed that more than half of nurses do not officially disclose adverse events if an error is made [14]. In comparison, the findings of the current study are not consistent with the results of Aboshaiqah and Baker (2013), which showed that 58% of participants in the study reported errors and corrected them before the patient was affected [15]. Additionally, 55.3% of nurses reported a mistake when it was made with no chance of hurting the patient, and 68.1% reported a mistake when it was made and could hurt the patient, but not.

The findings of the current research regarding the detection of adverse events, were better than the

results of the study by Alshammari et al., 2019 [16]. The study found that, ‘ actively doing things to improve patient safety’, had the highest mean score in this domain, i.e., 3.9, while the item, ‘mistakes have led to positive changes’, had the lowest mean score (3.46), and the overall mean score for this domain was 3.71. This value was smaller than that of Alshammari et al., 2019, i.e, 3.98 [16]. On the other hand, this outcome is better than the value reported by Okuyama et al., 2019 [17]. The differences between the present study and the previous study results could be attributed to the differences in the study sample and participants who have been included in these studies.

Regarding the domain of teamwork within units, the present study results revealed that the mean score of agreement about the issue of people treat each other with respect had the highest score (3.86, 77.2%), while the lowest mean score was for item of ‘people support one another in the department’, (3.76, 75.2%). Also, the total mean score for this domain was 3.74 (74.8%). This result is slightly higher than values reported by Alshammari and colleagues 2019 [16]. This outcome was even better than what was reported by Okuyama and colleagues 2019 [17]. The outcome of this area suggests that in the current research, there are strong support, respect, meeting needs in the departments of the hospital.

The present study findings found that, ‘discussing ways to prevent recurring errors’, had the highest mean score within this area, (3.69), while the item, ‘receiving feedback on changes put in place based on event reports’, had the lowest, (3.62). The overall mean score for this domain was 3.655. The outcome of the current research in this domain is better than the value reported previous studies [16] [17]. The result indicates that there is an improvement about errors in the domain of communication, and there is an improvement in discussing ways to prevent reoccurring errors. This could be attributed to the utilization of the results and recommendations of the previous studies. The present research found that the average mean score was 3.18, 74.2%. The outcome of the current research on this domain's total score is better previous studies [16] [17].

The survey found that the average mean score for this domain was 3.07. In this analysis, the mean score for the item, ‘working in crisis mode, trying to do too much, too fast’, is less than the value reported in study by Alshammari et al. (2019), i.e., 3.47 [16]. However, the total mean score was higher than the value reported by Okuyama et al. (2019), i.e., 1.4 [17]. The differences among study results and other studies could be attributed to the differences in the type of sample and sampling methods as well as the type of population included in these studies. The findings of the present analysis revealed that the overall score for this area was 2.72 that was less than that those reported previously [16] [17].

It was found that the mean score of teamwork within units was 3.74 among participants, followed by the field of organizational learning-continuous improvement, which was 3.71, followed by the field of

feedback and communication. Many of the domains listed above were considered positive. The domain of hospital transitions', that was below the 3.0 average. The above-mentioned findings were not consistent with the results of Rajalatchumi et al. (2018), which suggested that 58 percent of all healthcare providers have a favorable overall view of patient safety cultures [5]. In the present study, the study participants including the nurses and physicians, showed a favorable understanding of the frequency facets of recorded incidents, interpersonal learning-continuous enhancements, coordination, input and contact on mistakes, non-punitive error resolution, and staffing. These findings are in line with previous research in which the overall patient safety standard for the hospital has been deemed variable, and patient safety culture has been strong in most safety fields [18] [19].

This may potentially be due to the patients' and doctors' understanding of the value of proper health treatment in the hospital report, with preference given to the welfare of the patient in the field of nursing and patient specialization. The analysis of patient protection is also essential for inspiring hospital workers and encouraging them to develop quality assurance and safety plans to create healthy workplaces. This indicates that the management of hospitals should recommend policies to educate and encourage supervisory habits, enabling nurses to disclose safety details and to take part in safety initiatives. The present study findings about the domains pertaining to the understanding of patient safety culture, particularly, 'teamwork within the unit', and, 'organizational learning and continuous improvement', displayed the highest responses. These findings are consistent with the results of Rajalatchumi et al. (2018) [5]. Regarding the lowest ranked domain in the current analysis, it was observed that the score for 'hospital handoffs and transfers', domain was the lowest. This outcome is consistent with the outcome of Rajalatchumi et al. (2018), showing, 'hand-offs', domain having least responses [5].

This study found differences from 62.2% to 74.8% in employee's understanding of patient safety culture across various areas. More importantly, the overall mean score for the perception of the study participants regarding patient safety culture was 74.2%. This score was good compared to estimates reported from developed countries such as Norway, the US, and the Netherlands [60% to 86%] [20, 21, 22, 23]. Additionally, the percentage score in the present study is higher than what has been reported in some developing countries such as Egypt and Ethiopia (Aboul-Fotouh et al., 2012) [24, 25]. Also, the current study result regarding the total perception score is higher as compared to the response reported from other Indian settings, which was 48% [26]. With regard to all previous studies, especially in different patient safety culture domains, the highest positive response was reported in the domain of 'teamwork within the unit' [26, 21, 27].

Contrary to this, the majority of the studies reported low perception score in the dimension of,

’teamwork across the unit’ [26, 28]. The present study also showed a good perception score in the, ‘teamwork within the unit’, i.e., (74.8%), and, 62.2% in, ‘handoffs & transitions’ domains. The domain, ‘handoffs and transitions’ needs cooperation from other departments and showed a low perception score in many studies (20%–40%), including the present study (62.2%) [26, 20, 21, 29, 25, 27]. In the present study, apart from the domain of teamwork within the unit, other dimensions such as ‘organizational learning and continuous improvement’ and ‘Feedback and communication about errors’, had more positive responses. Similar results were also stated by a study from one of the Indian hospitals [26]. Event monitoring frequency obtained less mean score responses from all other research, including the current one [26]. The findings are not consistent with the results of Okuyama and team, as they found that supervisor/manager expectations and behaviors that foster patient safety, organizational learning and performance growth, and collaboration across units, had the highest positive score in patient safety culture domains [17].

Teamwork is the strongest field of the current study. The healthcare workers should also aspire to carry out their tasks in a supervised support team within their work units and to seek changes to patient safety [30]. Teamwork is vital because it depends on cooperation and mutual respect [17]. These principles present opportunities to implement programs for change. Similar findings were observed in other studies [31, 32].

The findings of this study do not correlate to the results of Aboshaiqah et al. (2013), which showed that the area of ‘continuous organizational learning' increases as the number of interactions in work increases [15]. The dimensions of ‘feedback and error communication’ revealed that goals need to be changed. Improper coordination increases the frequency of negative events [15]. As found in other research, contact deficiency is directly connected to the degradation of care quality [33, 34]. Hospitals that have a free contact forum between managers and staff for advice, questions, and feedback on patient care changes, appear to provide improved outcomes for efficiency and motivation in terms of learning from mistakes [35].

On eight of the ten patient safety culture dimensions, a previous study in Norwegian nursing homes reported positive responses of more than 60% relative to six domains in this study [36]. However, the numbers of positive responses were higher in all dimensions compared to the current study, except for ‘hospital handoffs & transitions’, where it was very low in all dimensions [36].

The present analysis found that there was a substantial difference in the mean level of patient safety culture with respect to the gender of the participants, and there was no significant difference in the mean level of patient safety culture with respect to the work description and nationality of the participants. The

results are not consistent with the results of Rajalatchumi et al. (2018), as they found that the overall mean perception of patient safety culture differs among job titles such as physicians and nurses [5]. The lack of significant difference among job titles in the present study could be attributed to the type of sample and sampling process. Also, it could be attributed to coherence in point of view of nurses and physicians regarding patient safety.

The present study results showed the total average score among physicians (2.31) was higher than the mean score among nurses (2.26), but this difference did not reach a statistically significant difference. Similar finding was reported in the Netherlands, i.e., a more positive mean score among physicians [20]. The higher mean score among physicians could be attributed to the nature of their work which directly relates to patient safety, including all invasive procedures and medication errors that can occur during prescription and other procedures, as well as closer involvement of their work with other departments in day-to-day work. Similarly, the nurses also had reported good perception scores. This could be attributed to the result of the inbuilt system developed by the organization for nursing staff which facilitates day-to-day supervision and conflict management among the staff [5].

With respect to the culture of patient safety and participant ages, our findings do not correspond with the results obtained in Okuyama et al. (2019), which showed that increased age and length of the work experience were correlated with a greater understanding of the culture of patient safety as part of the supervisory/manager expectation and action to promote patient safety [17].

In comparison, the current findings are inconsistent with the results of Okuyama et al. (2019), which showed that the area of non-punitive error response was related only to age, and the region of the ‘frequency of events reported’, according to job title (patient and health care professional) and education level [17]. It was different as lower perception was evident among employees with higher education. In addition, the level of expertise is related to patient safety culture, as seen in a study in Finland [37]. Most significant, a professional's experience may have a positive impact on the outcome, as shown by a study carried out in Palestine, which showed an improvement in adverse incidents with professional experience [38].

Further studies are needed to continue evaluation of the value of quality metrics dependent on health care. Overall, the appraisal findings recommend a platform for enhanced action and transformation practices aimed at promoting the patient's protection community. There are few limitations, the sample was calculated for both physicians and nurses. The limited number of physicians was the major limitation for this study. Besides, this study focused mainly on the two main healthcare professions in the hospital, other healthcare professions were not considered since they are not in direct contact with hospital patients

and their care.

5. Conclusion

Issues related to improving patient safety include how health workers from diverse ethnic and linguistic cultures work and interact with each other and their patients (mainly Saudis), what influences the atmosphere of patient safety and the environment, and how the healthcare sector interacts with its workforce. By recognizing the essential facets of the culture of safety in a particular setting, recommendations may lead to a greater culture of safety and eventually increase patient safety.

This study establishes a baseline or benchmark for safety and patient safety culture in a Saudi maternity and children hospital. The results of the study indicate a favorable understanding of patient safety culture in the majority of patient safety culture areas except the 'hospital transitions' sector. A higher understanding was noted in the field of 'teamwork in units' and 'organizational study, continuous improvement'. Therefore, the problems associated with inpatient handovers and transitions need to be changed and strengthened. The findings of the research show that healthcare practitioners, especially the nurses and physicians in the study hospital, affirm that they uphold a culture of patient protection. Further studies investigating the same in other health specialties are recommended.

6. Declarations

6.1 Conflict of Interest Statement

Authors have declared that no competing interests exist.

6.2 Funding Disclosure

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6.3 Acknowledgements

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7. References

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