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Patient safety culture as a quality indicator for a safe health system:
Experience from Almadinah Almunawwarah, KSA

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المخلص

أهداف البحث: تسمح تقييمات ثقافة السلامة لمنظمات الرعاية الصحية بالحصول على فهم واضح لجوانب سلامة المرضى التي تتطلب اهتماما عاجلا، وتقوم بتحديد نقاط القوة والضعف لثقافة السلامة، ومساعدة الوحدات الصحية في تحديد معوقاتنا الحالية التي تؤثر على سلامة المرضى، وقياس درجاتها مع المنظمات المماثلة الأخرى. تهدف الدراسة لتقييم مدى الدعم الذي تلقاه ثقافة سلامة المرضى في المستشفيات بالمملكة العربية السعودية.

طرق البحث: أجريت دراسة مقطعية تحليلية رصدية في مستشفى الملك فهد بالمدينة المنورة

النتائج: شعر العاملون الصحيون أن لديهم قناعة قليلة بشأن ثقافة سلامة المرضى داخل المستشفى. وتم الحصول على أكبر الدرجات الإيجابية للعمل الجماعي داخل الوحدات؛ مكونات ثقافة السلامة، وردود الفعل، والتواصل حول الخطأ، وتوقعات الإدارة، والإجراءات التي تعزز سلامة المرضى والتعلم التنظيمي والتحسين المستمر. لم تحقق أي من هذه الميزات درجة إيجابية تصل إلى 75% أو أكثر كمجال للقوة. كما تم تقييم بقية الجوانب بشكل سلبي كمجالات مقترحة للتطوير، حيث كانت أقل الدرجات لرد الفعل غير العقابي على الخطأ، والتوظيف، وتسلم الأدوار بالمستشفى والانتقال، والتواصل المنفتح، ودعم إدارة المستشفى لسلامة المريض.

الاستنتاجات: هناك حاجة قوية لتحسين وتحفيز السياسات المعمول بها لتحسين ثقافة سلامة المرضى في هذا المستشفى والالتزام بجودة الرعاية كنتيجة أكيدة مرتبطة بسلامة المرضى. إن تطوير الكفاءة الإدارية القوية لإقامة بيئة من التشاور المفتوح والحكمة الإدارية دون لوم، وخوف وسكوت فيما يتعلق بالإبلاغ عن الأخطاء سوف يقطع شوطا طويلا في تحسين ثقافة سلامة المرضى.

الكلمات المفتاحية: ثقافة سلامة الجودة؛ الجودة؛ نتائج الجودة؛ المستشفيات؛ المملكة العربية السعودية

Abstract

Objectives: Safety culture assessments allow healthcare organisations to get a clear understanding of those aspects of patient safety requiring urgent attention and highlight safety culture strengths and weaknesses. This study aimed to evaluate the extent to which the culture supports patient safety at a hospital in KSA.

Methods: A cross-section analytical observational study was conducted at King Fahad Hospital in Almadinah Almunawwarah, KSA.

Results: After the survey, the staff felt less certain about the patient safety culture inside the institution. The greatest positive scores were obtained for teamwork within units, safety culture composites, feedback, communication about error, management expectations, actions promoting patient safety, organisational learning, and continuous improvement. However, none of these features achieved a positive score of 75% or more as an area of strength. The rest of the aspects were negatively ranked as areas for probable development, with the lowest scores obtained for non-punitive reaction to error, staffing, hospital handoff and transition, communication openness, and hospital management support for patient safety.

Conclusion: Commitment to quality care as an outcome is certainly correlated with patient safety. There is a strong need to improve and promote applicable policies to improve the culture of patient safety in hospitals. The development of strong management competence to promote an environment of open consultation and administrative wisdom will contribute to improving patient safety culture.

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Keywords: Hospitals; KSA; Patient safety culture; Quality; Quality outcomes

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Introduction

The implementation of a patient safety culture is the primary recommendation proposed by the Institute of Medicine to ensure that hospitals develop an environment of excellence and patient safety.^{1,2} The evaluation of the healthcare organisation's current safety culture is the first step in establishing a culture that promotes and supports safety.³ Reviews about the safety culture in healthcare organisations, advocated by the international accreditation organisms, permit healthcare organisations to gain a clear view of aspects related to patient safety. These aspects include the ability to identify the strengths and flaws of the security culture,⁴ help health units recognise their prevailing difficulties concerning patient safety,⁵ and allow healthcare organisations to benchmark their performance with other analogous organisations.⁶ Previous studies have reported that key predictors of a constructive patient safety culture in hospitals include communication founded on shared trust, good flow of information, mutual reading of the significance of safety, organisational learning, dedicated effort from the administrators and leaders, and the presence of a non-punitive attitude towards incidents and error reporting.⁷ A culture of patient safety in a healthcare organisation comprises the safety awareness of staff members, the motivation of public servants to recount events, the sum of incidents registered, and a global patient safety grade fitted out in the units by staff members.⁸ Moreover, literature has reported about the aspects of patient safety culture that need attention, including incident recording by the staff of the health institution, the role of the workplace setting in promoting safety, and stages that can be accomplished to improve safety. Although there has been a large number of studies on the prevalence and types of patient safety culture, there is no adequate evidence on the relationship between the predictors and outcomes of patient safety culture, particularly in countries of the Eastern Mediterranean Region. El-Jardali et al. were one of the first researchers that attempted to evaluate the safety culture in Lebanese hospitals.⁹

The American Hospital Survey on Patient Safety Culture "HSOPSC" measures 12 patient safety culture composites characterising several patient safety culture predictors. The HSOPSC also requires that respondents evaluate their work area/unit concerning patient safety, and respond questions concerning events that occurred during the past 12 months.⁸ Answers with positive percentages in each composite show which aspects of patient safety received the highest positive ratings, including teamwork within units, hospital administration support for patient safety, and

organisational education and continuous development. Conversely, composites that obtained low ratings were teamwork across hospital units, staffing, non-punitive response to error, and hospital handoffs and transitions.⁹

According to Alahmadi H (2010), Saudi Arabian hospitals in Riyadh city are striving to improve their quality of care by addressing the issue of patient safety using safety systems implementation and establishing a culture of safety. His study aimed to appraise to what extent the traditions supported patient safety at Saudi hospitals. The HSOPSC questionnaire was distributed to 13 general hospitals in Riyadh city, KSA, and participants comprised 223 health specialists including nurses, technicians, managers, and medical staff. The results indicated that the general Patient Safety Grade was evaluated as excellent or very good by 60% of respondents, acceptable by 33%, and failing or poor by 7%. Positive reactions to patient safety culture constituents ranged from 22% to 87%. The areas of strength for most hospitals were organizational education/continuous development (87%), teamwork within units (84%), and feedback and communication about errors (77%). Possible areas for improvement included unreported events over 12 months (43%), non-punitive response to error (22%), staffing (22%), and teamwork across hospital units (27%).¹⁰ The results of this study emphasised the need to conduct similar research in other hospitals in different regions of KSA. According to previous study results, it seems that the safety culture in these hospitals was adequate; however, there is a need to study and update whether this can be generalised to all Saudi hospitals or not.

Aim of the study

To determine the level of knowledge and application of safety measures in a Saudi Governmental Hospital and to discuss how these measures can impact health care quality.

Materials and Methods

A cross-section analytical observational study was conducted in King Fahd Hospital at Almadinah Almunawwarah city.

King Fahd Hospital is the largest governmental hospital in Almadinah Almunawwarah, offering tertiary healthcare services to Almadinah Almunawwarah residents in addition to visitors from Hajj or Omra throughout the year.

The study included nurses working at King Fahd Hospital and specialised centres belonging to the hospital, such as cardiology, diabetes, and renal dialysis.

Inclusion criteria were to be a nurse working at King Fahd Hospital or one of its related specialised centres, male or female, and voluntarily agree to participate in the survey.

Based on the total number of Saudi nurses (395; 309 female and 86 male), the sample size was calculated using Epi-Info StatCalc software with an expected acceptance frequency of 70% and a confidence level of 5%, a sample of 231 participants would give a power of 99% to the study.

The study team distributed 400 questionnaires to nurses who fulfilled the inclusion criteria.

The study used the Arabic version of the psychometric instrument American Hospital Survey on Patient Safety

Culture “HSOPSC” validated by El Jardeli F et al.^{9,11} The HSOPSC has shown to be reliable in evaluating the safety culture of hospitals where the language followed is Arabic. The internal consistency of the instrument was estimated by Cronbach’s alpha coefficient (α). The highest value (0.83) was obtained in teamwork within units, and the lowest value (0.239) was related to hospital’s management support for patient safety (Table 2).

Analysis of the composite scores

The HSOPSC consists of 12 patient safety composites (Table 2) that combine to make a total score of 42 points.

It consists of positive and negative statements that are scored on a five-point scale, and positive responses for each item are calculated. Positive response rates of negatively worded items were reversed during the analysis. Additionally, composite-level scores were estimated by the sum of the elements within the composite scales and later divided by the number of points.

In this study, the HSOPSC User’s Guide was used¹¹ for data analysis with the intention of creating benchmarks and comparing the results to other similar studies.

Positive responses were stated as ‘Agree/strongly agree’ or ‘Most of the time/always’ while the negative responses were stated as ‘Disagree/strongly disagree’ or ‘Never/rarely’.

On this basis, areas of strength were outlined as those elements that obtained 75% of respondents’ positive answers, or when approximately 75% of respondents differed in the reverse-worded item. However, areas recognised to have the potential for development were those areas that 50% or more of the interviewees scored negatively using ‘Disagree/strongly disagree’ or ‘Never/rarely’ (when 50% of respondents did not agree with reverse-worded items). Survey results were plotted in descending order of percentage of positive responses (Table 2). Furthermore, two single-item response outcome measures concerning the overall patient safety score (‘excellent’ to ‘failing’) and the number of results reported within the previous year were included.

Ethics

This study was submitted for review and approved by Taibah University, College of Dentistry Research Ethics Committee, “TUCD REC.” Waiver of informed consent was requested and permitted based on the nature of the study that used a self-administered questionnaire.

Statistical analysis of the results

Data gathered were coded and analysed using SPSS software under Windows version 22. A simple descriptive analysis was performed followed by inferential statistics using Chi-square test. Cronbach’s alpha coefficient was calculated for the 12 patient safety culture composites to measure the internal consistency at a significance level of $P < 0.05$.

Results

From a total of 400 questionnaires that were distributed, 272 were returned; of these, 22 forms were rejected either

owing to an entire section being incomplete, less than half of the items being filled, or all items being assigned the same response.

A total of 240 questionnaires fulfilled the requirements and equalled a power of 99% (estimated sample size = 231).

As shown in Table 1, the sample was composed of 168 (70%) females and 72 (30%) males. Almost half (43%) reported that they had been working in the organisation for one to five years, followed by 26% who reported that they had been working for less than a year. Just under a quarter (23%) stated that they had been working for more than six years.

Most study participants worked from 40 to 59 h per week (61%). Almost all participants (90%) had direct contact with patients, while 36% had worked in their speciality less than a year, and 38% had worked from one to five years.

Table 2 presents the 12 safety culture composites; the internal consistency of the instrument was calculated using Cronbach’s alpha coefficient. The safety culture composites that obtained the highest positive scores were teamwork within units (58.75%), feedback and communication about error (55.83%), manager expectations and actions promoting patient safety (52.12%), and organisational learning and continuous improvement (50%). It can be observed that none of these dimensions achieved the 75% threshold of the positive score to be considered an area of strength. The rest of the questionnaire dimensions were negatively scored as areas for possible development. The lowest scores were obtained in the following composites: non-punitive response to error (30%), staffing 34%, Hospital handoffs and transitions (38%), communication openness (46%), and hospital management support for patient safety (45%).

Table 1: Characteristics of the participants.

	N = 240	%
Gender		
Male	72	30
Female	168	70
How long have you worked in the current hospital work area?		
Less than 1 year	63	26.3
1–5 years	102	42.5
6–10 years	54	22.5
11–15 years	12	5
16–20 years	6	2.5
21 years or more	3	1.3
How many hours per week do you work in this hospital?		
Less than 20 h per week	6	2.5
20–39 h per week	51	21.3
40–59 h per week	147	61.3
60–79 h per week	21	8.8
80–99 h per week	12	5
100 h per week or more	3	1.3
Direct interaction or contact with patients		
Yes	216	90
No	24	10
How long have you worked in the current speciality or profession?		
Less than 1 year	87	36.3
1–5 years	90	37.5
6–10 years	45	18.8
11–15 years	15	6.3
16–20 years	3	1.3

Table 2: Survey composites, items positive score, and Cronbach's α .

Composites and Survey items	Average percentage positive response ^a
Overall perception of safety (Cronbach's $\alpha = 0.411$)	43.45
A10 – It is just by chance that more serious mistakes do not happen around here (R) ^b	25
A15 – Patient safety is never sacrificed to get more work done	53.8
A17 – We have patient safety problems in this unit (R)	37.5
A18 – Our policies, procedures, and systems are effective in preventing errors	57.5
Supervisor/manager expectations and actions promoting patient safety (Cronbach's $\alpha = 0.618$)	52.125
B1 – My supervisor/manager says a good word when he/she sees a job done according to established patient safety procedures	66.3
B2 – My supervisor/manager seriously considers staff suggestions for improving patient safety	51.2
B3 – Whenever pressure builds up, my supervisor/manager wants us to work faster, even if it means taking shortcuts (R)	38.8
B4 – My supervisor/manager overlooks patient safety problems that happen over and over (R)	52.5
Organisational learning and continuous improvement (Cronbach's $\alpha = 0.674$)	50
A6 – We are actively doing things to improve patient safety 91.4	61.3
A9 – Mistakes have led to positive changes here 62.2	41.3
A13 – After we make changes to improve patient safety, we evaluate their effectiveness 80.8	47.5
Teamwork within units (Cronbach's $\alpha = 0.831$)	58.75
A1 – People support one another in terms of work in this unit	60
A3 – When a lot of work needs to be done quickly, we work together as a team to get the work done	63.7
A4 – In this unit, people treat each other with respect	58.8
A11 – When members of this unit get really busy, other members of the same unit help out	52.5
Non-punitive response to error (Cronbach's $\alpha = 0.0.716$)	30.43
A8 – Staff feel like their mistakes are held against them (R)	15
A12 – When an event is reported, it feels like the person is being reported, not the problem (R)	48.8
A16 – Staff worry that mistakes they make are kept in their personnel file (R)	27.5
Staffing (Cronbach's $\alpha = 0.577$)	34.075
A2 – We have enough staff to handle the workload	28.7
A5 – Staff in this unit work long hours which might affect patient care (R)	41.3
A7 – We use/hire temporary/part-time staff which sometimes affects patient care (R)	48.8
A14 – When the work is in 'crisis mode' (i.e. when the work pressure is too high) we try to do too much, too quickly (R)	17.5
Hospital management support for patient safety (Cronbach's $\alpha = 0.239$)	44.6
F1 – Hospital management provides a work climate that promotes patient safety	35
F8 – The actions of hospital management show that patient safety is a top priority	53.8
F9 – Hospital management seems interested in patient safety only after an adverse event happens	45
Teamwork across hospital units (Cronbach's $\alpha = 0.451$)	38.45
F2 – Hospital units do not coordinate well with each other and this might affect patient care (R)	32.5
F4 – There is good cooperation among hospital units that need to work together	40
F6 – It is often not easy to work with staff from other hospital units (R)	35
F10 – Hospital units work well together to provide the best care for patients	46.3
Hospital handoffs and transitions (Cronbach's $\alpha = 0.716$)	37.93
F3 – Things 'fall between the cracks', i.e. things might go uncontrolled and get lost (e.g. medical records, medical treatment, patient information and education, discharge criteria) when transferring patients from one unit to another (R)	31.3
F5 – Important patient care information is often lost during shift changes (R)	40
F7 – Problems often occur in the exchange of information across hospital units (R)	32.5
F11 – Shift changes are problematic for patients in this hospital (R)	42.5
Communication openness (Cronbach's $\alpha = 0.614$)	45.86
C2 – Staff will freely speak up if they see something that may negatively affect patient care	55
C4 – Staff feel free to question the decisions or actions of those with more authority	48.8
C6 – Staff are afraid to ask questions when something does not feel right (R)	33.8
Feedback and communications about error (Cronbach's $\alpha = 0.719$)	55.833
C1 – We are given feedback about changes put into place based on event reports	43.8
C3 – We are informed about errors that happen in this unit	63.7
C5 – In this unit, we discuss ways to prevent errors from happening again 74.5	60
Frequency of incidents reported (Cronbach's $\alpha = 0.799$)	40.2
D1 – When a mistake is made, but is caught (noticed, discovered) and corrected before it affects the patient, how often is this reported?	41.8
D2 – When a mistake is made, but has no potential to harm the patient, how often is this reported?	42.5
D3 – When a mistake is made that could harm the patient, but does not, how often is this reported?	36.3

As shown in Table 3, nearly half of the respondents (51%) agreed that the overall grade for patient safety was acceptable; 30% reported that the grade ranged from 'very good to excellent', and 19% felt that the grade was 'poor or failing'. The highest category of reported events was one to two events, representing 31.3%. However, 40% reported no events in the last 12 months.

Table 4 shows a significant statistical difference that associates duration of service in the current speciality with patient safety grade perception, $P < 0.01$. However, this was not the case when associating the length of duty as a whole with patient safety grade $P = 0.69$ (NS).

This table also indicates that interaction with patients resulted in a percentage score of 56% acceptable level of

patient safety; no interaction was associated with the excellent perception of patient safety 50%, and this was statistically significant $P < 0.001$.

Table 5, shows a statistically significant association between length of service and duration of work in the same speciality within King Fahd Hospital and some events reported ($P < 0.001$ and $P = 0.001$, respectively).

Discussion

It is essential to continuously improve health care quality through the implementation of patient safety culture. The health leader's role is to place patient safety as a high priority, and leaders should apply significant effort toward the prevention of adverse events. Previous studies have reported clear ideas about safety culture and how safety can be improved.

Nurses are the first line of contact with the patients and families, so the choice to select the nurses was based on benchmarks in line with other related studies as well as to prove the point of nurses being the cornerstone in raising the quality of patient safety.

Results that appear in Table 2 confirm the results found by other researchers and were evaluated against three similar studies from the same geographic area: a study from Lebanon performed in 68 private hospitals with 6807 participants,⁹ a study from Palestine,¹² and a study from Saudi Arabian (Riyadh City) conducted in 13 public and private hospitals.¹⁰

From the previously mentioned studies, the composite scores of teamwork within the unit, organisational learning/continuous improvement, and feedback and communication about errors were the highest. The lowest composite scores were the non-punitive response to error and staffing. These results highlight the critical role of effective leadership in accepting patient safety culture as a way of assuring quality and patient safety by encouraging and practising teamwork building that leads to robust proactive safety culture and commitment to learning from errors. Also, building a safety culture system needs to consider the staff and make them feel that their mistakes will not be held against them, but will be used as constructive discussions. When an event is reported, it should be dealt with in a systematic and professional way rather than victimising the person. Staff were concerned that their mistakes or errors would be kept in their personnel file; staff should be reassured that this will not be the case.^{12,13} Factors such as staff to patient ratio, acceptable working hours, and use of permanent staff should be considered predisposing factors to an effective patient safety culture. Hospital staffing and staff/unit ratio were an additional patient safety concern (composite score 34%, as shown in Table 2). The majority of the participants complained of a high patient to staff ratio which forced them to operate in 'crisis mode' trying to do a lot more than would normally be expected (17.5% item score). This should be communicated to staff that as King Fahad Hospital in Almadinah Almunawwarah city is one of the largest hospitals in the area. The hospital frequently experiences shortages of professional staff and often has high patient workloads as it is a tertiary referral hospital serving a community of almost two million. As a consequence, staff

Table 3: Self-perception regarding patient safety and number of events reported.

	N = 240	%
Work area/unit overall grade on patient safety		
Excellent	30	12.5
Very good	42	17.5
Acceptable	123	51.2
Poor	30	12.5
Failing	15	6.3
Number of incidents reported in the last 12 months		
No incident reports	96	40
1–2 incident reports	75	31.3
3–5 incident reports	30	12.5
6–10 incident reports	27	11.3
11–20 incident reports	12	5

Table 4: Patient safety grade variable and respondent characteristics.

	Patient safety grade						
	Excellent/ Very good	Acceptable	Poor/ Failing	Total			
	N = 72	N = 123	45	N = 240			
Length of service							
Less than 1 year	15	26.3	36	63.2	6	10.5	57
1–3 years	21	43.8	15	31.3	12	25	48
4–6 years	18	28.6	30	47.6	15	23.8	63
7–9 years	9	23.1	24	61.5	6	15.4	39
10 years or more	9	27.3	18	54.5	6	18.2	33
Chi Square test	14.54; $P = 0.69$						
Gender							
Male	18	25	42	58.3	12	16.7	72
Female	54	32.1	81	48.2	33	19.6	168
Chi Square test	2.1; $P = 0.35$						
How long have you worked in your current hospital work area?							
Less than 1 year	15	23.8	36	57.1	12	19	63
1–5 years	45	44.1	48	47.1	9	8.8	102
6–10 years	6	11.1	30	55.6	18	33.3	54
11–15 years	3	25	6	50	3	25	12
16–20 years	3	50	0	0	3	50	6
21 years or more	0	0	3	100	0	0	3
Chi Square test	= 36.37; $P < 0.001$						
Do you have direct interaction with patients?							
Yes	60	27.8	120	55.6	36	16.7	216
No	12	50	3	12.5	9	37.5	24
Chi Square test	= 16.369; $P < 0.001$.						

Table 5: Events reported in the last 12 months and respondents' characteristics.

	Events reported in the last 12 months								
	No events		1–2		3–5		5+		Total
	N = 96	%	N = 75	%	N = 30	%	N = 39	%	N = 240
Length of service									
Less than 1 year	36	63.2	9	15.8	3	5.3	9	15.8	57
1–3 years	9	18.8	27	56.3	6	12.5	6	12.5	48
4–6 years	18	28.6	21	33.3	9	14.3	15	23.8	63
7–9 years	12	30.8	9	23.1	12	30.8	6	15.4	39
10 years or more	21	63.6	9	27.3	0	0	3	9.1	33
Chi Square test 56.39; P < 0.001									
Gender									
Male	30	41.7	15	20.8	6	8.3	21	29.2	72
Female	66	39.3	60	35.7	24	14.3	18	10.7	168
Chi Square test 2.1; P = 0.35 (NS)									
How long have you worked in your current hospital work area?									
Less than 1 year	30	47.6	15	23.8	3	4.8	15	23.8	63
1–5 years	42	41.2	33	32.4	15	14.7	12	111.8	102
6–10 years	18	33.3	12	22.2	12	22.2	12	22.2	54
11–15 years	3	25	9	75	0	0	0	0	12
16–20 years	3	50	3	50	0	0	0	0	6
21 years or more	0	0	3	100	0	0	0	0	3
Chi Square test = 36.901; P = 0.001									
How long have you worked in your current hospital work area?									
Yes	84	38.9	66	30.6	27	12.5	39	18.1	216
No	12	50	9	37.5	3	12.5	0	0	24
Chi Square test = 5.33; P = 0.149 (NS).									

had to make greater effort to offset the shortages; approximately 61% of the respondents had to work more than the standard 40 h per week. Therefore, sufficient work hours should be allocated to ensure patients receive the best care. Long working hours amongst medical staff has shown to produce increased fatigue which can cause medical oversights, undesirable consequences, and after-effects.¹³

A high percentage of “no event” reporting was noted in this study (Table 3). As shown in Table 5, there was a statistically significant association between length of service and duration of work in the same speciality within King Fahad Hospital, and some events reported (P < 0.001 and P = 0.001, respectively).

Similarly, other studies also reported “no events” over the period of the last year. The prevalence of “no events” in the current study was 40% while a study in Riyadh, KSA reported 43%, a Palestinian study reported 53.2%, and in Lebanon, it was 59%. Another shared patient safety concern found in different countries is event reporting.^{8–10,12} The extent of the frequency of event reporting affects responses from the staff.¹² The unwillingness to report incidents by the staff is undoubtedly associated with the prevalence of punitive response to error and the blame culture (composite score 30%). The staff could be fearful that oversights made by them could be kept in their personnel file (item score 27.5%); furthermore, they reported being afraid that oversights made might be held against them (item score 15%) (Table 2). The fact that there was a lack of feedback and communication about the errors (55.83%) meant that staff were not being notified or not notified clearly of errors that had occurred; it could also mean that they were not advised of changes implemented, and

practices to prevent errors were not appropriately reviewed. Healthcare organisations should use incident reporting as a tool for enhancing safety culture and improving quality; this can transform the culture from an atmosphere where errors are viewed as personal failures to one in which errors are seen as areas for improvement.

As shown in Table 3, the overall patient safety grade was 30% which was lower than that found in other Saudi Hospitals in Riyadh (60%), Palestine (64%), Lebanon (73%), and USA (75%).^{8–10,12} Table 4 shows a statistically significant difference when the duration of service in the current speciality was associated with patient safety grade perception (P < 0.01). That means the staff duration of 16–20 years reflected an excellent/very good perception of patient safety grade.

This result needs further investigation to identify if this outcome is due to their cumulative experiences or due to their adaptation to face errors and harm as a part of the work. They might be accepting it as a factor not affecting the hospital service or patient outcomes; as shown in Table 4, no interaction was associated with excellent perception of patient safety 50%, and this was statistically significant (P < 0.001).

Conclusions

Commitment to quality care as an outcome will most certainly be associated with patient safety. The current study presented an overall evaluation of the perceptions of safety culture amongst nursing staff in the biggest governmental hospital in Almadinah Almunawwarah city in KSA. Participants had a negative attitude regarding patient safety culture.

This may be attributed to the fact that nurses should be trained to provide a safe patient environment; additionally, awareness programmes should be directed to nurses as continuous on-the-job training. Teamwork within units, feedback and communication about error, manager expectations and actions promoting patient safety, and organisational learning and continuous improvement received the highest safety culture scores. However, none of these dimensions reached the 75% minimum score to be recognised as an area of strength. The lowest composite scores were obtained in non-punitive response to errors, staffing, hospital handoff and transition, communication openness, and hospital management support for patient safety. Results also pointed out the need to create and apply effective strategies to encourage patient safety culture in Saudi hospitals; this can be accomplished by enhancing leadership capacity to promote a climate of open communication and organisational learning with no blame, fear, and silence regarding reporting errors.

Strengthening the hospital patient safety culture is one of the competencies that should be acquired by nurses within their undergraduate curriculum.

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Conflict of interest

The authors have no conflict of interest to declare.

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