Assessing Safety Culture as perceived by Nurses Working in Governmental Hospitals in Saudi Arabia

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Abstract

Background: Patient safety is a serious element of the quality of healthcare. Scientists define safety culture as the common values, perceptions and attitudes of safety within the institution, to reduce the percentage of patients' harm. The importance of safety culture has been recurrently accentuated to progress the quality and safety of health care. Aim: This study aimed to assess the perception of safety culture among nurses working in Governmental Hospitals in Saudi Arabia. Methodology: This research study used a descriptive, cross-sectional design to explore nurses' perception about safety culture and factors that influence patients' safety. The researcher used Safety Attitude Questionnaire (SAQ) to measure the perceptions and attitudes of nurses about patient safety. The study included 98 from a total of 198 nurses working at governmental hospitals in the Saudi Arabia. Results: The results of this study revealed that the total score of the SAQ was 70.2% with a mean of 3.51 (±0.69). The domain that ranked first was the stress recognition which had a score of 80% with a mean of 4.0 (±0.79) followed by safety climate with a score of 69.4% and a mean of 3.47 (±0.58), working conditions with a score of 69.2% and a mean of 3.46 (±0.66), job satisfaction with a score of 68.4% and a mean of 3.42 (±.79), teamwork climate with a score of 67.6% and a mean of 3.38 (±0.60). There were no correlations between all SAQ domains and age except years of experiences in nursing in general and working conditions (p-value (-0.034) and all SAQ domains with ears of experience. Conclusions: Improving nurses' perception of safety culture will improve patient safety and reduce the number of adverse events. This may have a positive impact on patient outcomes and contribute to reduced mortality and morbidity.

Keywords: Nurses; Patient; Safety; Saudi Arabia; Government Hospitals.

1. Introduction

Patient safety is a critical component and serious element of healthcare quality. Over the past few decades, the importance of a safety culture for enhancing the quality and safety of healthcare

has been repeatedly emphasized because developing a safety culture is supposed to help avoid negative actions or correct mistakes quickly before damage occurs [1].

Safety culture is a sub-dimension of structural culture. It is widely distributed into numerous subcultures, such as teamwork, leadership, learning, communication, evidence-based, fair and patient-centered [2]. Organizations with positive safety cultures have established communication on confidence in the efficiency of protective measures, shared trust, shared perceptions about the consequence of safety, and support for the workforce. These tools can be used from either a staff or an administrative perspective of course, or they can be used from both [3]. Providing a clear indication of the current situation as well as the evolution of organizations over time is one of the most important benefits of measuring safety culture. [3,4]. Patient safety is considered to be one of the main international health concerns manipulating patients in diverse healthcare locations in both developed and developing countries [5].

In addition to being a considerable economic burden, adverse events cause the expenditure on health care to be higher in the developing countries 5 to 10% than the developed countries. Fortunately, it is appraised that up to three-quarters of these events in providing health care are preventable [6]. The promotion of a safety culture, which allows ideal patient outcomes, is one of the most important steps in developing patient safety. A culture of trust, integrity, reporting, and commitment to change are all dependent on accomplishing a culture of trust, transparency, reporting, and commitment to change [1,7]. Patient safety is paramount particularly in intensive care units

In Saudi, one out of seven patients suffer harm and injury so the ability to interpret the safety culture and conducive factors in Saudia public hospitals is limited. It is beneficial to gain knowledge and insight into a company's security culture in order to have information and insight into patient safety [8].

The aim of this study is to assess the perception of safety culture among nurses engaging in Governmental Hospitals at the Saudi Arabia. Findings from this study will give an opportunity to higher understanding the extent to that patient safety attitudes are a unit gift among nurses engaging at Governmental Hospitals and thus develop recommendations to enhance.

2. Materials and Methods

Study design

This research study used a descriptive, cross-sectional design to explore nurses' perception about safety culture and factors that influence patients‟ safety. A cross-sectional study design was used to search and describe factors inducing patients‟ safety culture as perceived by nurses.

Study Participants and Sample Size

All nurses' workers in Governmental hospitals at Saudi Arabia were included. Nurses who were working in various departments in hospitals for at least one year prior to the survey period were included in the study. The minimum required sample size was calculated via Raosoft®, using a

95% confidence level and a 5% margin of error (significance $\alpha = 0.05$) with a 50% response distribution. It was found to be 368 respondents.

Study Instruments

For the aim of this study, the researcher used Safety attitude form (SAQ) to live the perceptions and attitudes of frontline suppliers on patient safety. SAQ covers dimensions: cooperation Climate, Safety Climate, Job Satisfaction, teamwork, and dealing Condition. It consists of thirty things that live safety culture on a five-points Likert-scale starting from one (Highly disagree) to five (highly agree). Besides the SAQ, the form contains an area to gather demographic information concerning participants like gender, age, address, educational degree, experiences.

Data Collection

The survey was distributed electronically to a diverse group of Nurses through online channels, including email and social media platforms (e.g., WhatsApp® and Facebook® groups). Participants were informed that participation was voluntary and that they could withdraw, and participants' identities were kept confidential to encourage open and honest responses. The survey was conducted in both English and Arabic to accommodate the linguistic diversity of participants.

Data analysis

Statistical analysis was carried out using the Statistical Package for the Social Sciences (SPSS Inc., Chicago, IL, USA), version 26. Frequency and percentages were obtained for the categorical variables, while mean and standard deviation (SD) were calculated for the scale variables. Various inferential statistical tests were employed to identify significant variations within the study groups, including the independent t-test, one-way analysis of variance (ANOVA), Pearson's correlation (r), multiple linear regression, and logistic regression.

3. Results

Socio-Demographic Characteristics of the Respondents

A total of 198 responses from Nurse were collected. The study group falls within the age group of 18-60 years. About (20.0%) of the participants are less than 25 years old, (30.0%) are between 25 – 30 years, followed by (26.0%) are between 31 – 40 years. Among the study groups, (59.0%) male, (41.0%) Female. Most respondents were working as Nurse (bachelor and above) (67.0%), Nurse (two years diploma) (27.0%), Supervisor/head of department (60.0%). Nearly (38.0%) of the Nurse had Less than 5 years of experience, (40.0%) had 6 - 10 years of experience. Besides, the majority of participants holding a bachelor's degree (67.0%), When asked to evaluate the patient safety condition in the they work at, (43.4%) participants mentioned that the patient safety in their unit was very good, (21.2%) of them believed that the patient safety is acceptable, (19.7%) believed it is excellent, and (15.7%) participants believed that the patient safety in their is poor. A total of (57.6%) of participants didn't report any incidents (medical errors) in the last year.as shown in table (1).

Table 1.demographic traits of participants (n=198)

	Categories	Frequency	Percent %
Age (years)	< 25 years old	39	20.0%
	25-30 years old	59	30.0%
	31-40 years old	52	26.0%
	> 40 years	48	24.0%
sex	male	116	59.0%
	Female	82	41.0%
Educational level	Diploma	53	27.0%
	Bachelor's degree	133	67.0%
	MSc	12	6.0%
Years of experience	Less than 5 years	76	38.0%
	6 - 10 years	79	40.0%
	More than 10 years	34	17.0%
Job title	Nurse (bachelor and above)	133	67.0%
	Nurse (two years diploma)	53	27.0%
	Supervisor/head of department	12	6.0%
Perceived patient safety score in hospital	Excellent	39	19.7%
	Very good	86	43.4%
	Acceptable	42	21.2%
	Poor	31	15.7%
Incidents (medical errors) reported to the supervisor during the last year	I did not report any event	114	57.6%
	3-5 incidents	58	29.3%
	1-2 incident reports	26	13.1%

The perceptions and attitudes of frontline suppliers on patient safety

Table 2. Mean, Standard Deviation, and Chi-Square for the perceptions and attitudes of frontline suppliers on patient safety statement.

	Paragraph	Mean	Std. Deviation	Mean%	p-value
Elements of Job Satisfaction					
1	Working here is like being part of a huge family	3.61	0.97	72.2	.000
2	This hospital administration is doing an excellent job	3.51	0.91	70.2	.000
3	This clinical area has a high level of morale	3.02	1.09	60.4	.000
	The Average	3.38			
Measuring Safety Climate					
1	I will feel safe when I am treated here as a patient	3.95	0.88	79.0	.000
2	Medical errors are handled appropriately in this medical field	3.48	0.83	69.60	.000
3	I know the proper ways to ask patient safety questions in this clinical field	3.39	0.99	67.8	.000
4	I received appropriate feedback about my performance.	3.38	0.86	67.6	.000
5	I am encouraged by my colleagues to report any patient safety concerns I may have.	3.35	1.12	67.00	.000
6	It's easy to learn from other people's mistakes in this clinical field because of the culture.	3.55	1.03	71.00	.000
The Average		3.51			
Teamwork Climate					
1	In this clinical setting, nurse input is valued	3.61	0.92	72.20	.000
2	Deviations in this clinical area are appropriately resolved. (i.e., not who is right, but what is best for the patient).	3.14	1.06	62.80	.000
3	I have the support I need from other persons to care for patients	3.30	0.99	66.00	.000
4	It is easy for personnel here to ask questions when there is something that they do not understand.	3.45	0.89	69.00	.000
5	The doctors and nurses here work together as a well-coordinated group.	3.43	0.95	68.60	.000
The Average		3.38			
Working Conditions					
1	Personnel Difficulties are dealt with usefully by our department	3.39	1.01	67.8	.000
2	This hospital does a good job of training new personnel	3.30	1.02	66.0	.000

3	I have access to all of the necessary information for making diagnostic and therapeutic decisions on a regular basis.	3.37	0.89	67.4	.000
4	Learners in my discipline are sufficiently supervised.	3.79	0.97	75.8	.000
The Average		3.46			

As is clear from the results of the first dimension, the paragraph that states "Working here is like being part of a huge family" obtained first place with an arithmetic mean of (3.61), and the paragraph that states "This clinical area has a high level of morale" obtained last place with an arithmetic mean of (3.02). According to the results of the second dimension, the paragraph states, "I will feel safe when I am treated here as a patient" The first place was taken with an arithmetic mean of (3.95), while the paragraph that states "TI am encouraged by my colleagues to report any patient safety concerns I may have." was taken last with an arithmetic mean of (3.35). As is clear from the results of the third dimension, the paragraph that states "In this clinical setting, nurse input is valued" ranked first with an arithmetic mean of (3.61), while the paragraph that states "Deviations in this clinical area are appropriately resolved. (i.e., not who is right, but what is best for the patient)." ranked last with an arithmetic mean of (3.14). According to the results of the fourth dimension, the paragraph that states "Learners in my discipline are sufficiently supervised" ranked first with an arithmetic mean of (3.79), while the paragraph that states "This hospital does a good job of training new personnel" ranked last with an arithmetic mean of (3.3).

Correlation between numerical variables and the SAQ domains among the study participants

Table 3. Correlation Between Numerical Variables and the Total Score of The SAQ Domains And Age.

SAQ domains	Age		Years of experience in nursing in general	
	R	p-value	R	p-value
Job Satisfaction	-0.054	0.596	0.006	0.952
Measuring Safety Climate	0.085	0.403	0.133	0.267
Teamwork Climate	0.026	0.800	0.061	0.554
Working Conditions	0.176	0.083	0.215	0.034
total	0.233	1.882	0.415	1.80

shows the correlation between numerical variables and the total score of the SAQ domains and age, years of experience in nursing in general. There are no correlations between all SAQ domains and age except with years of experiences in nursing in general and working condition p-value (0.034). According to this study, the patient safety culture differed depending on the age of the nurses. Nurses over 35 years old had more positive attitudes than those under 35 years old. One possible explanation is that older nurses are more mature and professionally responsible and place a higher priority on patient safety during patient care than younger nurses. Nurses in their 40s and 50s are more aware of their responsibilities and roles in terms of patient safety, and they are better able to fully understand the complexities and consequences of negligence and poor care. Therefore, 'they can act as role models and mentors for new employees.

4. Discussion

Patient safety is a vital component of quality healthcare. Patient safety is one of the major international health concerns that affect patients in various healthcare settings in both developed and developing countries. It is an important element when seeking improvement in healthcare.

Patient safety aims to avoid health-related errors before they cause illness or death, especially in intensive care units (ICUs) because its complexity indicates potential challenges to patient safety for critically ill patients. Therefore, the aim of this study was to assess the perception of safety culture among nurses working in intensive care units (ICUs) in governmental hospitals in the Saudi Arabia. The study showed significant differences in participant characteristics such as age, gender, educational level, years of experience in nursing in general, years of experience in ICU, and job title. The researcher used the Safety Attitude Questionnaire (SAQ) to measure the perceptions and attitudes of nurses regarding patient safety. The overall score of the questionnaire was 70.2%, The domain that ranked first was stress recognition which had a score of 80% with a mean of 4.0 (±0.79). while the domain perception of management received the lowest score of 67% with a mean of 3.35(±0.70). Such results are inconsistent with literature. For example, studies revealed that poor teamwork could be an important source of nurses' job dissatisfaction that has led to a critical nursing shortage [9,10]. Moreover, a research study stated that stress and high workload decrease performance of health care providers (nurses and physicians) and increase number of medical errors [11]. Results from this study were close to the results reported by (Profit et al., in a study conducted in the USA (the mean scores of total SAQ ranged between 56.3 and 77.8) [12]. but inconsistent with another study that showed the mean scores of total SAQ ranged between 54.7 and 70.9 [13]. Also, this study reproduces a previous one accompanied by Hamdan, study in the West Bank at Palestine [14]. The scores for almost all domains in our study were higher than those reported in Hamdan's study, (the mean score of total SAQ ranged between 36 and 71). The results of this study revealed that the domain of teamwork had a highly significant statistical relationship with all domains; this represents that when nurses work together, they are significantly more satisfied with the service and perceptions of staff adequacy, and therefore when intensive care nurses communicate effectively; this can improve the safety culture in the unit.

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