JOURNAL OF INTERNATIONAL CRISIS AND RISK COMMUNICATION RESEARCH
ISSN: 2576-0017
2024, VOL 7, NO S6

Attitudes of Health Care Providers Regarding Patient Safety in Saudi Arabia 2024

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Abstract:

Background: In the healthcare industry, patient safety is becoming a more significant concern, and hospital administration is facing difficulties as a result of the increase in patient safety occurrences. The attitudes of health care providers about patient safety must be better understood in order to address the situation. The goal of patient safety is to reduce potential risks to patients while they are receiving medical treatment. Medical error rates and hospital safety climates are significantly influenced by the attitudes of physicians and nurses on patient safety.

The aim of the study: To assess attitudes of health care providers (HCPs) regarding patient safety in Saudi Arabia.

Methods: A cross-sectional study was conducted among all of the HCPs who worked with adult patients in general hospital during data collection from January to March 2024.

Results: Positive safety attitudes were found in the results, and these were particularly correlated with the respondents' job satisfaction levels. The assessment of a respondent's safety climate, job satisfaction, teamwork climate, and management perspective was correlated with their advanced age. A number of safety attitude categories were linked to profession, working unit, length of work experience, information acquired regarding patient safety during education, additional education, and working shifts.

Conclusion: In general, respondents' attitudes about safety were found to be favorable. HCPs had positive attitudes regarding patient safety issues, which allows for open conversations about adverse occurrences and patient safety. However, in order to better comprehend the current situation, we also need to look into the knowledge and abilities professionals possess in connection to patient safety in the future.

Keywords: Attitude, Health care providers, Patient Safety

Introduction:

Patient safety (PS) refers to a characteristic of healthcare systems that reduces the occurrence and effects of adverse events (AEs) while enhancing recovery from these incidents [(1)]. PS is a global public health concern. The World Health Organization claims that millions of individuals suffer fatalities or incapacitating injuries as a result of hazardous medical treatment [(2)]. PS is the prevention and avoidance of adverse events or patient injuries brought on by healthcare providers' (HCPs') delivery methods [(3)]. The organization's safety culture acts as a manual for how workers should conduct themselves at work, and the behaviors that are rewarded and deemed appropriate in the workplace will have an impact on or dictate how they behave. Trust-based communications, a common understanding of the value of safety, and confidence in the effectiveness of preventative measures are

characteristics of an organization's positive attitude culture [4].

An essential component of what is commonly referred to as a hospital's safety culture is attitudes toward safety-related matters [5, 6]. The attitudes of HCPs toward organizational elements like safety climate and morale, work environment elements like staffing levels and managerial support, team elements like teamwork and supervision, and staff elements like overconfidence and excessive self-assurance make up an organization's safety culture [7]. According to specific authors, a safety culture is a component of the larger organizational culture and can be characterized as the attitudes, beliefs, perceptions, competencies, and values that employees share regarding safety and that influence an organization's approach to health and safety management [8-10].

Therefore, it is crucial to comprehend how HCPs see and anticipate unfavorable occurrences in order to execute effective health care management methods. In this regard, it is crucial to take into account the workplace culture, values, and beliefs of HCPs [11]. Since it is known that millions of patients worldwide are injured or killed each year as a result of unsafe medical practices and care, and that the majority of patient injuries are preventable, ethical concerns are essential to the discussion of patient safety [12]. HCPs may be aware of their critical role in providing safe care and the need of adopting a positive safety mindset. However, Turunen et al. (2013) [13] found that both nurse managers and registered nurses (RNs) expressed dissatisfaction with the situation of patient safety in acute care hospitals, with RNs being the more critical group. However, health care personnel have usually been reported to have positive attitudes toward patient safety [14], and doctors have been found to have a more positive opinion of the safety climate in healthcare than nurses [15].

Prior research has indicated that attitudes toward patient safety vary depending on a person's occupation, age, gender, and place of employment. Researchers evaluated the relationship between safety attitudes and profession in one study [16]. The findings revealed that less than half of the doctors and nurses polled were content with their positions (47 and 45%, respectively), and that only 39% of doctors had a favorable opinion of the safety climate. When compared to managers, medical assistants, nurses, and doctors all expressed low but comparatively equal opinions of their working circumstances (29, 36, and 35%, respectively). Operating room (OR) caregivers in nine medical centers have had their professional attitudes toward patient safety examined by researchers [17].

According to a univariate analysis of occupation, stress recognition and working conditions differed significantly from the other six patient safety domains examined in the study. Regression analysis showed that the occupations under study differed in terms of working conditions and job satisfaction. Surgeons have been shown to have a more positive opinion of management than OR nurses [17], and they have also reported more positive opinions of working conditions than nurses in intensive care units [18]. The age group of health care professionals aged 30 to 35 years showed the greatest favorable safety attitudes score (48.3%) in an obstetrics study [19]. Promoting the assessment and enhancement of safety attitudes among HCP is crucial for preserving a safe patient environment and safe procedures [20]. The study aimed to assess the attitudes of HCPs regarding patient safety and determine whether there are any changes depending on the study participants' backgrounds.

Methods

A cross-sectional study was conducted among all of the HCPs (physicians, head nurses, nurses and nurse assistants) who worked with adult patients in general hospital during data collection from January to March 2024. The criteria for inclusion in the study were that participants were HCPs, working in hospital with adult patients, and would participate voluntarily in the study. An instrument measuring patient safety attitudes and background questions based on a collection of current research were used to collect data. Twenty background questions examined the participants' basic demographics (e.g., job title, workplace, age, gender, education, and years of employment, typical shift, and weekly working hours) and details about the kind and quantity of patient safety training they had received. Lastly, the number of adverse events reported within the past year was a question posed to the participants. Additionally, they were asked if they had reported any patient safety-related incidents they had encountered.

Six scales comprise the data for evaluating safety attitudes questionnaire (SAQ) [7] (short form version), which includes perceptions of management, job satisfaction, working circumstances, stress recognition, teamwork climate, and safety climate. In addition to the SAQ, five additional statements that looked at safety attitudes were included. These included the HCPs' opinions about whether they felt that if they brought up safety concerns with management, they would be addressed and whether they had a positive experience working with other nurses, staff doctors, and pharmacists in their clinical area. A concluding statement investigated the prevalence of communication breakdowns that result in delays in the provision of care. The SAQ (short form version) used in this study comprised of 36 items, each answered using a six-point Likert scale: 1 = disagree strongly, 2 = disagree slightly, 3 = neutral, 4 = agree slightly, 5 = agree strongly, and 6 = not applicable. Negatively worded items were reverse scored so that their valence matched the positively worded items.

The SAQ (short form version) was used because of its usability, the good psychometric properties it has shown in previous studies and its broad potential for implementation [7, 21]. The instrument was originally developed in the United States of America and was translated from English into Arabic using the back-translation technique [22]. The questionnaire was piloted in general hospital with HCPs to evaluate the validity of the instrument. The pilot study was not included in the main study. The SAQ showed good psychometric properties. The scales reliability was assessed with a total Cronbach's alpha of 0.79, corrected by inter- item correlation from 0.05 to 0.69. The Cronbach's alpha values were good for all scales for study: for teamwork climate 0.62, safety climate 0.75, job satisfaction 0.87, stress recognition 0.79, perceptions of management 0.92, and Working Conditions 0.78.

Ethical approval for the study was obtained from the Ethics Committee of University, and permission to collect data was also obtained from the hospital participating in the study. The ethical considerations related to the data collection were focused on the ethical principles for research, namely confidentiality, privacy, and the voluntary nature of participation in the study [23]. The contact persons circulated the questionnaires to all staff (n = 770). After 3 months, the researchers collected the returned questionnaires in closed covers from each unit. Descriptive statistics were used to describe the characteristics of respondents (physicians, head nurses, nurses and nurse assistants), the SAQ items, and the scale-level results of the three hospitals. Differences in sample characteristics between professional groups were tested using one-way analysis of variance (ANOVA) and the Tukey HSD (honest significant difference) multiple comparison test, or the Tamhane multiple comparison test (when the assumption of equal variances was not correct).

Non-normally distributed characteristics were analyzed using the Kruskal–Wallis test. Data was presented using mean [standard deviation (SD)] or median [interquartile range (IQR)] expression. Any negatively worded items of the SAQ were reversed before analysis. The internal consistency of the SAQ and its scales of safety climate, job satisfaction, perception of management, and working conditions (for SAQ) were measured by calculating the Cronbach's alpha for each area. Associations between variables were calculated by means of Spearman correlations. All of the data was analyzed using SPSS (version 28.0). A *p* value of <.05 was considered to be statistically significant.

Results

The questionnaire was answered by 770 of HCPs surveyed. Participants were nurses (70 %), nurse assistants (16.6 %) and physicians (13.5 %). **Table (1)** shows that most participants were female (91.4 %) and the most common education institutions of the study participants were medical school (45.6 %), college (12.0 %), and a university bachelor program (10.9 %). The mean age of the participants was 46.7 years (SD = 10.9). Most had a permanent position at their hospital (96.8 %), the mean work experience was more than 20 years (mean = 23.9), and they worked an average of 39.9 h per week in their unit. Some health care professionals (12.9 %) had an extra job and worked an average of 18.6 h per week in this setting. Most of the HCPs (60.9 %) worked variable shifts, and in units with averages of 30.7 beds and 24.9 staff members. Usually, one HCP had 18 patients per working shift. Almost two thirds of the participants (62.2 %) had received no information about patient safety during their initial professional education, but about half (54.4 %) had received some in their further education

(**Table 1**). 80 % of respondents had not reported any patient safety incidents during the last year.

Table (1): Work related background factors

	Mean (SD)	**Median (IQR)**
Years of experience in primary specialty	21.61 (12.04)	22.00 (17)
Years of work experience in general	23.88 (11.52)	25.00 (15)
Years worked in this unit	14.32 (11.80)	12.00 (15)
Working hours per week in this unit	39.86 (8.23)	38.00 (2)
Hours per week in extra job	18.61 (14.63)	16.50 (16)
Number of beds per unit	30.72 (17.27)	30.00 (20)
Total number of staff working in unit	24.09 (10.33)	23.00 (10)
Number of patients health care professionals usually have per working shift	18.00 (12.03)	15.00 (12)
Health care professionals working in unit		
Day shift		
Physicians	4.28 (3.15)	3.00 (4)
Nurses	4.72 (4.82)	3.00 (3)
Nurse assistants	2.48 (2.14)	2.00 (2)
Evening shift		
Physicians	1.69 (1.47)	1.00 (1)
Nurses	2.34 (1.81)	2.00 (1)
Nurse assistants	1.62 (1.08)	1.00 (1)
Night shift		
Physicians	1.19 (.82)	1.00 (0)
Nurses	1.90 (1.15)	2.00 (1)
Nurse assistants	1.28 (.67)	1.00 (0)
Usual shift	**%**	
Day	36.8%	
Evening	0.2%	
Night	0.7%	
Variable shifts	60.9%	
Other		
Extra job		
Yes	12.9%	
No	86.8%	
Information about patient safety during initial education		
Yes	37.7%	
No	62.2%	
Information about patient safety in continuing education		
Yes	54.4%	
No	45.5%	

Table (2) shows that positive safety attitudes overall, in regard to job satisfaction (mean = 4.14), teamwork and safety climate (mean = 4.10 in each domain), and working conditions (mean = 4.09). Only in the area of perceptions of management there were differences ($p < .001$) to be seen between the participating in the study.

Table (2): Patient safety attitudes

SAQ Short form scales/hospitals	Mean (SD)	Median (IQR)	Chi square	p value
Teamwork climate	4.07 (.64)*	4.07 (.64)*	3.84	0.147
Safety climate	4.07 (.67)	4.07 (.67)*	7.86	0.020
Job satisfaction	4.21 (.84)*	4.21 (.84)*	6.35	0.042
Stress recognition	3.86 (.88)	3.86 (.88)	1.12	0.572
Perceptions of management	3.75 (.83)*	3.75 (.83)*	20.76	< 0.001
Working conditions	4.05 (.97)	4.05 (.97)	5.54	0.063

Table (3) shows the most positive safety attitudes represented in the SAQ scales tended to correlate with the most background factors, namely safety climate, job satisfaction, perceptions of management and working conditions. Older HCPs were associated with how they evaluated teamwork climate (0.061), safety climate (0.078), their job satisfaction (0.150) and their perceptions of management (0.140).

Moreover, the length of work experience in general was associated with how participants evaluated their safety climate (0.082), job satisfaction (0.155) and their perceptions of management (0.193). Respondents who had received information about patient safety during their education were associated with how they reported their teamwork climate (− 0.090), safety climate (− 0.093), job satisfaction (− 0.076), perceptions of management (− 0.093) and working conditions (− 0.072). Those who had received information about patient safety in continuing education reported the same associations, with the exception of teamwork climate. Whether the health care professional worked day shifts or variable shifts was associated with her/his safety attitudes in all of the investigated safety areas: teamwork climate (− 0.108), safety climate (− 0.089), job satisfaction (− 0.137), stress recognition (− 0.088), perceptions of management (− 0.188) and working conditions (− 0.154) (**Table 3**).

Physicians had significantly higher safety attitudes related to teamwork climate ($p = 0.014$) and Stress Recognition ($p < .001$) than nurses and nurse assistants in the group of health care professionals who did not report a safety incident during the last year, but the attitudes towards the Perceptions of Management ($p < .001$) in the same group were significantly higher for physicians and nurse assistants than nurses. In the HCP group who had reported a safety incident during last year, physicians had significantly higher safety attitudes related to their teamwork climate than nurses and nurse assistants ($p = .011$). Those who didn't report any safety incidents during the last year had more positive attitudes towards Stress Recognition than those who had reported such incidents.

When comparing safety attitudes between HCPs by working unit, some significance differences were noted. HCPs working in psychiatric units had significantly lower safety attitudes relating to job satisfaction ($p = .004$), perceptions of management ($p < .001$) and working conditions ($p < .001$) than those working in internal medicine, surgical, acute or other units. Nearly two thirds of HCPs (59 %) felt that their suggestions about safety would be acted upon if they expressed them to management, whilst 20.1 % were neutral and 18.1 % disagreed. Most of the respondents experienced good collaboration with nurses (84.5 %), with staff physicians (79.4 %), but less with pharmacists (22.9 %) in their clinical area. Only 18.7 % of HCPs felt that communication breakdowns that lead to

delays in the delivery of care were common.

Table (3): Correlations between respondents' background factors and their patient safety attitude

Demographic Characteristics	Teamwork Climate	Safety Climate	Job Satisfaction	Stress Recognition	Perceptions Of Management	Working Condition
Age	.061*	.078*	.150*	−.013	.140*	.053
Gender	−.041	.013	−.017	−.083*	−.029	.039
Education	.101**	.024	.003	.059	.090**	.044
Years of experience in specialty	.007	.041	.086**	−.003	.036	.046
Years of work experience in general	.053	.082**	.155**	−.033	.093**	.053
Information about patient safety during initial education	−.090**	−.093**	−.076*	−.007	−.093**	−.072*
Information about patient safety in continuing education	−.058	−.111**	−.100**	.018	−.099**	−.063*
Received hours regarding information about patient safety in continuing education	−.052	.005	−.017	−.039	.015	−.146*
Usual shift	−.108**	−.089**	−.137**	−.088**	−.188**	−.154**
Working hours per week in this unit	−.040	−.026	−.054	.067*	−.059	−.049
Extra job	.027	.081**	.047	−.046	.014	.025
Number of beds per unit	−.038	−.074*	−.066	.056	−.039	.003
Total number of staff working in unit	−.040	−.006	−.009	.079*	−.092**	−.057
Number of physicians working in unit on day Shifts	−.024	.042	.046	.039	.056	.110**
Number of nurses working in unit on day shifts	.036	.034	*.091**	.005	.046	*.081**
Number of patients health care professionals usually have per working shift	−.020	−.033	*−.095**	−.012	−.053	*−.078**

Spearman correlations, * p < .05, ** p < .01

Discussion

The aim of the present study was to assess the general situation regarding the safety attitudes of HCPs. The safety views of healthcare providers were generally favorable and consistent with earlier research [14, 24-26]. Although some of the study's findings were consistent with previous findings, there were also some discrepancies. Therefore, more research is required to discover connections between these areas and the backgrounds and attitudes of specific responders, which could be crucial in the development of our clinical practices. Age appeared to be associated with

many safety attitudes scales, and it has previously been reported by Nabhan et al., (2007) [19] that the highest positive safety score when comparing younger and older age groups was to be found to be in the 30–35 year age group. Nevertheless, the current study revealed that older age groups had stronger safety attitudes. The associated years of work experience (mean = 23.9), which suggests that highly skilled HCPs may also have more positive views about safety, may help to explain this.

Gender was only associated with stress recognition, although a previous study conducted by Carney et al., (2010) [17] has shown gender to be associated with several safety attitudes such as teamwork climate, job satisfaction, perceptions of management, and working conditions. In the present study, only about 10 % of the respondents were male, which may have had an effect on the results. The fact that doctors were more concerned about the safety of the collaborative environment than nurses and nurse assistants was an intriguing discovery. This could mean that doctors value teamwork more than other HCP groups do when negative things happen, and they may view the problem as a shared duty.

The current finding is consistent with other researchers' earlier reports of positive physician safety attitudes, such as the fact that doctors had more favorable opinions about their working environment [18] and management [17] than nurses. Respondents in psychiatric units had considerably lower safety attitudes than those in internal medicine, surgery, acute care, and other units, according to a comparison of safety attitudes among medical professionals by work field. This may be related to their workplace because medical personnel may experience increased stress when caring for patients with mental problems, and they may also experience physical or psychological abuse from their patients. Another explanation may be that HCPs think of safety issues differently depending upon the type of treatment involved (e.g. operations, infections, or patient falls), and some of these issues may not be seen to be so relevant in psychiatric units.

Professionals in emergency departments (EDs) reported much lower levels of safety climate than professionals in other clinical areas, according to previous studies [8], who also emphasized disparities in attitudes across work domains. Negative opinions toward teamwork climate, safety climate, job satisfaction, management perceptions, and working circumstances were more prevalent among HCPs who did not get any patient safety education during their initial professional education than among those who did. Attitudes toward the safety climate, job satisfaction, management, and working conditions were also poorer among health care workers who did not acquire any knowledge regarding patient safety during their further or continuing education than those who did. Based on this, we can conclude that HCPs' attitudes toward patient safety are influenced by their education.

Conclusions

Healthcare providers have generally good attitudes on patient safety issues, which facilitate open conversations about adverse events and patient safety. However, in order to better comprehend the current situation, we also need to look into the knowledge and abilities professionals possess in connection to patient safety in the future.

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