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Analyze and identify the patient safety culture and possible predictors and areas for improvement related to patient safety culture of Saudi Arabia

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Abstract - Patient outcomes and the effectiveness of the healthcare system as a whole are substantially impacted by patient safety culture, which is a crucial aspect of healthcare quality. This research analyzes and identifies Saudi Arabia's patient safety culture, along with potential predictors and areas for development. The present research is an electronic, cross-sectional, descriptive survey of community pharmacy pharmacists. In accordance with recommendations made by the Agency for Healthcare Research and Quality (AHRQ), the positive response rate (PRR) was determined. The findings of the present research suggest that there is room for improvement in patient safety across a number of community pharmacies. However, a high response rate must be taken into consideration while prioritizing the necessity.

Keywords - patient safety culture, possible predictors

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INTRODUCTION

One of the main suggestions made by the Institute of Medicine to guarantee that hospitals can create a culture of excellence and patient safety is the development of a patient safety culture [1, 2]. The first stage in developing a strategy for a culture that promotes and supports safety is to evaluate the health organization's present safety culture [3]. Healthcare businesses are able to get a comprehensive picture of factors related to patient safety thanks to the safety culture evaluations for healthcare organizations that are supported by international accrediting bodies. These capabilities include the ability to pinpoint the security culture's strengths and weaknesses [4], assisting healthcare companies in identifying their ongoing patient safety challenges [5], and enabling them to compare their performance to that of other similar businesses [6]. According to earlier research, strong communication based on mutual trust, information flow, a shared understanding of the importance of safety, organizational learning, commitment from the administration and leadership, and the presence of a non-punitive attitude toward incident and error reporting are the key predictors of a positive patient safety culture in hospitals [7]. In a

health organization, a culture of patient safety encompasses staff members' knowledge of safety, public servants' desire to retell occurrences, the frequency of incidents reported, and a global patient safety grade provided by staff to their units [8]. According to some of the literature, there are a few patient safety culture concerns that need attention, such as the necessity for hospital employees to record incidents, how the working environment affects safety, and what can be done to improve safety. There have been several research on the frequency and different kinds of patient safety cultures, but there is little data on the correlation between these predictors and results, notably in the Eastern Mediterranean nations. One of the first studies to try to assess the safety culture in hospitals in Lebanon was done by El-Jardali et al. [9].

In the "HSOPSC" American Hospital Survey on Patient Safety Culture, 12 patient safety culture composites are measured, each of which represents a different patient safety culture predictor.Additionally, the HSOPSC requests that respondents assess the patient safety of their work area or unit and react to a question about a few incidents from the previous 12 months [8]. Answers with positive percentages for each composite show which component of patient safety had the greatest favorable ratings; these composites include those for organizational education and ongoing growth, support for patient safety from hospital management, and collaboration within units. Teamwork between hospital units, personnel, a non-punitive reaction to mistake, and hospital handoffs and transitions, on the other hand, received poor scores composites [9].

Alahmadi H (2010) claims that Saudi Arabian hospitals in Riyadh are working to improve the standard of care they provide by placing a strong emphasis on patient safety via the deployment of safety measures and cultivating a culture of safety. His research aims to assess the extent to which Saudi hospitals' traditions assist patient safety. The HSOPSC questionnaire was given out to 223 health experts, including nurses, technicians, managers, and medical personnel, in 13 general hospitals in Riyadh, Saudi Arabia. The findings revealed that 60% of respondents ranked the overall Patient Safety Grade as outstanding or very good, 33% as acceptable, and 7% as failing or bad. There have been positive responses to patient safety culture components ranging from 22% to 87%. Organizational education and ongoing improvement (87%), cooperation within units (84%), and feedback and communication regarding mistakes (77%), were areas of strength for the majority of hospitals. Under-reporting of occurrences (43 percent of events throughout a year went unreported), non-punitive responses to errors (22 percent), staffing (22 percent), and collaboration within hospital units (27 percent) were all potential areas for improvement [10]. The findings of this study emphasized the necessity for doing more, comparable research in other hospitals in other Saudi Arabian locations. The safety culture seems to have been excellent based on past study findings, but further research is needed to determine whether or not this can be applied to other Saudi institutions.

PSC across countries

Adverse incidents are influenced by weak PSC; therefore fostering a safety culture is crucial. The majority of the researches analyzed in their bibliometric assessment were carried out in institutional or medical settings. The best journal for safety culture was called "Safety Science." In wealthy nations, information technology has increased patient safety. PSC research in Sweden utilized HSOPSC. Unit collaboration, open communication, the supervisor's/manager's expectations and actions in promoting safety, non-punitive reactions to faults, and error feedback and communication were its components with the highest results. Most hospitals in the Netherlands, the USA, and Taiwan exhibited high levels of collaboration according to a different research utilizing the HSOPSC2 [11, 12]. Transitions and handoffs might be made better in all nations. When it came to hospital safety, Americans had higher expectations than Dutch and Taiwanese respondents. The Turkish translation of HSOPSC was used at four hospitals in Turkey to study PSC. The best methods were teamwork and organizational learning and ongoing development. Non-punitive reactions to mistakes and reporting frequency had the lowest means. Different nations' healthcare systems have varying strengths and need for development [13-15].

Components (factors) of PSC

Adverse incidents are influenced by weak PSC, therefore fostering a safety culture is crucial. The majority of the research analyzed in their bibliometric assessment were carried out in institutional or medical settings. The best journal for safety culture was called "Safety Science."[16] In wealthy nations, information technology has increased patient safety. PSC research in Sweden utilized HSOPSC. Unit collaboration, open communication, the supervisor's/manager's expectations and actions in promoting safety, non-punitive reactions to faults, and error feedback and communication were its components with the highest results. Most hospitals in the Netherlands, the USA, and Taiwan exhibited high levels of collaboration according to a different research utilizing the HSOPSC2. Transitions and handoffs might be made better in all nations. When it came to hospital safety, Americans had higher expectations than Dutch and Taiwanese respondents [17]. The Turkish translation of HSOPSC was used at four hospitals in Turkey to study PSC. The best methods were teamwork and organizational learning and ongoing development. Non-punitive reactions to mistakes and reporting frequency had the lowest means. Different nations'

healthcare systems have varying strengths and need for development [18-20].

PSC predictors

A current control group and clinical variables are additional considerations. Other factors that might predict PSC included commitment from management and leadership, information sharing within and across units, a common vision for patient safety, and a non-punitive approach to event and mistake reporting. PSC was predicted by age, job history, bachelor degree, and medical occupation [21]. Negative PSC views were predicted with young, nursing or technical personnel, day-night shift, and extensive hospital experience. PSC was projected to occur in Jordanian hospitals by using evidence-based practice, working with institutions of higher learning, and placing a priority on patient safety [22].

PSC and outcomes

PSC results include employee willingness to report incidents, safety perceptions, and the volume of incidents recorded. Patient outcomes and safety culture are related [23]. Most research focused on a single hospital and time frame. Statistically significant relationships between PSC and nurse-sensitive patient outcomes were very sometimes identified in studies [24]. Hospital safety cultures have been connected to mortality, complications, duration of stay, and readmissions in studies [25–27].

METHODOLOGY

Saudi pharmacists working in local pharmacies participated in a descriptive, cross-sectional, survey-based study. An strategy known as non-probabilistic practical sampling was used to select the study's participants. All pharmacists employed by community pharmacies in this region, including student pharmacists, pharmacy technicians, and pharmacy assistants, were urged to participate in the survey, even if more than one pharmacist was present in the same pharmacy.

The Agency for Healthcare Research and Quality (AHRQ)'s "Pharmacy Survey on Patient Safety Culture" (PSOPSC), designed for community pharmacies, was used to collect data for the study. It is a 40-question, self-administered, pre-validated survey that evaluates patient safety culture on a 5-point Likert scale across 11 domains.

The poll questions were written in both English and Arabic. At a time that worked for them, the research assistants met the pharmacists one-on-one at their pharmacies. The drugstore sent them a Google Forms survey, and they responded to it electronically.

The Statistical Package for Social Sciences (SPSS) version 22 was used to conduct the necessary statistical analyses. The variables related to the items with the lowest positive response rate were found using the chi-square test. The threshold for significance was a p-value of 0.05 or less.

RESULTS

Tables 1 show the Socio demographic characteristics of the respondents. Approximately 67 (67%) of the pharmacists that were included in the research were men. 64% of pharmacists, 13% of student pharmacists, 5% of pharmacy technicians, and 17% of pharmacy managers work in the industry. More over 50% of pharmacists had experience of less than five years, and 26% had experience of six to ten years. Additionally, 7% of pharmacists have between 11 and 15 years of experience. 4 percent of pharmacists have between 16 and 20 years of experience. 7% of pharmacists have 20 years or more of experience or more. A total of 35% of the community pharmacists who took part in the study dealt with more than 250 prescriptions per week, while the other 35% dealt with less than 250. Over 40 hours were worked by more than half of community pharmacists each week.

Table 1: Socio demographic characteristics

Characteristics	Number of Responses	Percentage
Gender		
Male	67	67
Female	33	33
Pharmacy type		
Chain	83	83
Independent	17	17
Position of Pharmacist		
Managing Pharmacist	17	17
Pharmacist	64	64
Student Pharmacist	13	13
Technicians	5	5
Experience Year		
< 5 years	56	56
6–10 years	26	26
11–15 years	7	7
16–20 years	4	4
> 20 years	7	7
Volume of Prescription per week		
> 250	65	65
< 250	35	35
Hours of Working per week		
30–40	48	48
> 40	52	52

For each item, the positive response ratio was calculated and derived for several patient safety culture dimensions (Table 2). The highest Positive Response Rates were for teamwork (94%), patient counseling (94%), and physical environment (93%). The factors with the fewest positive response rates

were staffing, work pressure, and speed (47%), then communication openness (72%), respectively. The Positive Response Rate varied across several patient safety characteristics, from 47.70 to 95.

Table 2: Dimensions to patient safety culture for Positive Response Rate (PRR)

Dimensions	Positive Responses (Score of 5 & 4)	Negative Responses (Score of 2 & 1)	Total number of Responses	PRR
Physical space and environment				**93**
This pharmacy is structured well.	95	5	100	95
This pharmacy is tidy and uncluttered.	92	8	100	92
This pharmacy's physical layout encourages efficient workflow.	92	8	100	92
Team work				**95**
The employees respect each other.	94	6	100	94
The employees of this pharmacy are aware of their duties and responsibilities.	95	5	100	95
Staff members function as an efficient team.	96	4	100	96
Staff training and skills				**89**
In this pharmacy, pharmacy assistants and helpers receive the training they need to do their jobs.	89	11	100	89
The pharmacy's staff is well-trained and capable of performing their jobs, and new hires are given a thorough orientation.	92	8	100	92
This pharmacy provides adequate staff training.	86	14	100	86
In this pharmacy, pharmacy assistants and helpers receive the training they need to do their jobs.	88	12	100	88
Communication openness				**85**
This pharmacy values the opinions and suggestions of its employees.	77	23	100	77
When staff are uncertain about something, they feel at ease asking questions.	91	9	100	91
Concerns about patient safety can be raised by staff members with their pharmacy manager (chief pharmacist) or pharmacy owner without hesitation.	87	13	100	87
Patient guidance				**94**
The pharmacists here encourage customers to discuss their prescriptions with one another.	96	4	100	96
Our pharmacists spend enough time explaining how to use medications to patients.	93	7	100	93
Our pharmacists provide crucial information to patients regarding new prescriptions.	93	7	100	93
Personnel, workload, and pace				48
During their shifts, employees take enough breaks.	74	26	100	74
When processing prescriptions, we experience pressure.	15	85	100	15
Our staff is sufficient to handle the workload.	83	17	100	83
It is difficult for staff in this pharmacy to work accurately due to interruptions and distractions (from phone calls, faxes, customers, etc.).	19	81	100	19
Communication about prescriptions across shifts				**87**
We have definite guidelines for sharing crucial prescription information between shifts.	90	10	100	90
We follow established protocols to share prescription information between shifts.	84	16	100	84
It is effectively communicated between shifts how problematic prescriptions are progressing.	87	13	100	87
Communication about mistakes				**90**
Employees at this pharmacy talk about errors	87	13	100	87
Staff members discuss patient safety concerns when they arise in this pharmacy.	90	10	100	90
In this pharmacy, we discuss how to stop mistakes from occurring again.	93	7	100	93
Responses to mistakes				**74**
When employees commit mistakes, they receive fair treatment	94	6	100	94
Instead of criticizing staff members, this pharmacy encourages them to learn from their errors.	86	14	100	86
We examine employee behavior and how we conduct ourselves to comprehend why mistakes occur in this drugstore.	88	12	100	88
Staff members feel as though their errors are used against them	28	72	100	28
Organizational learning—continuous improvement				**91**
When an error occurs, we attempt to identify the issues with the work process that contributed to the error.	94	6	100	94
When the same error occurs repeatedly, we alter our methods.	89	11	100	89
In this pharmacy, mistakes have resulted in positive changes.	90	10	100	90
Overall perceptions of patient safety				**73**
In this pharmacy, patient safety comes second to sales.	40	60	100	40
This pharmacy is adept at avoiding errors.	90	10	100	90
The way we conduct ourselves in this pharmacy demonstrates a strong commitment to patient safety.	88	12	100	88

*** PRR = Positive Responses/Total Responses × 100)**

Table 3 displays the overall results for the patient safety grade reported by the community pharmacies involved in the study. Community pharmacies rated their facility as outstanding or very good in 48% and 28%, respectively. A poorer patient safety grade was also given to their pharmacy by 5% of respondents. Only 15 percent of community pharmacists indicated that overall patient safety is good, very good, or outstanding.

Table 3: Overall patient safety grade in community pharmacy

Overall Patient Safety Grade	Frequency	Percentage
Poor	5	5
Very good	4	4
Good	15	15
Very good	28	28
Excellent	48	48

CONCLUSION

In conclusion, cultivating a culture of patient safety calls for a consistent dedication to constant improvement, Healthcare organizations can foster a culture where patient safety is at the center of all actions and decisions by recognizing the importance of patient safety culture, identifying possible predictors, and actively striving to improve important areas. In the end, a strong patient safety culture helps to improve clinical outcomes, boost patient confidence, and create a safer healthcare ecosystem overall.

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