Organizational culture that promotes patient safety at Main Mansoura University Hospital and International Specialized Hospital

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Abstract:

Organizational culture plays a critical role in the success of patient safety initiatives because it has an effect on resource provision, and the development of structures and processes of care render. However, a better understanding of the relationship between organizational culture and patient safety could reveal whether aspects of general organizational culture predispose some hospitals to better safety climate. Thus this study aims to determine organizational culture that promotes patient safety at Main Mansura University Hospital and Mansoura International Specialized Hospital. The study sample consists of all nurses (n=196 nurses) in inpatient units at Main Mansura University Hospital and 188 nurses at Mansoura International Specialized Hospital. Two tools were used for data collection, namely; Organizational Culture Inventory (OCI) and Patient Safety Climate in Healthcare Organizations Questionnaire (PSCHO). The study findings indicated that there is a significant correlation between different organizational culture especially constructive culture and patient safety in both selected hospitals. As most nurses reported that the primary factor that influence patient safety climate was management support patient safety. It was recommended further studies are needed to explore the impact of mix of organizational culture on patient safety climate.

Introduction

Patient safety continues to be a major concern for healthcare system consumers and providers while hospitals struggle with declining revenues and climbing costs [1]. Healthcare delivery is a complex system, and patient safety must be improved on multiple levels [2, 3].

Healthcare Organizations are now becoming aware of the importance of measuring and transforming organizational culture to ensure patient safety because one important area of patient safety information is the organizational culture [4]

Organizational culture and management play a critical role in the success of quality management and patient safety initiatives because both have an effect on resource provision, the development of structures and processes, the implementation of change, responses to error reporting, and use of evidence-based practices. Safety patient culture is a part of organizational culture[5,6]. In other words, organizational culture in health care represents the context in which care is delivered to the patient[7]

Organizational culture is an abstract construct that is often define as a set of shared attitudes, values, beliefs and norms that characterized the functioning or guides the behavior of a group or organization. Amore broad view the culture is one that Includes the following four components; shared mental content which includes attitudes, values, beliefs, and priorities or goals; norms which institutions which includes language, traditions, behavior patterns, or practices; institutions which includes positions, committees, and programs; which includes characteristic physical structures, equipment, forms, processes[7].

Organizational culture includes a complex set of interrelated, comprehensive and ambiguous factors. The four organizational culture traits are characteristics of organizational effectiveness, which include adaptability, involvement, consistency, and mission [8] The culture of the organization has a strong influence on organizational effectiveness. The influence of system culture and the work environment's has impact on safety patient outcomes. Health services leaders are actively promote a positive organizational culture and considering how to best support patient Safety and quality from an organizational

perspective[9] Health care organizations can move toward a safer environment for patients by improving their patient safety culture. The Patient Safety Culture (PSC) mannerisms, perceptions, competencies, and behavior patterns. A positive safety culture includes effective teamwork, communication, non-punitive response to error, and collaborative learning [3].Safety culture is a performance shaping factor that guides the many discretionary behaviors of healthcare professionals toward viewing patient safety as one of their highest priorities. The safety culture of an organization is the product of individual and group values, attitudes, perceptions, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of an organization's health and safety management[5]. Safety culture tends to focus on the deeper and less readily accessible core values and assumptions of the organization regarding safety and human resources [5,10].Promoting a culture of safety has become one of the pillars of the patient safety movement. Safety culture can be divided into three aspects: requirement of policy level, requirement of managers, and responses of individuals [10]. Efforts to improve patient safety require an understanding of

of an organization is described as an organization committing to health and safety management based on principles

organizational culture and healthcare industry factors such as the emphasis on production, efficiency and cost controls, organizational and individual inability to acknowledge fallibility, and professional norms for perfectionism among healthcare providers[11]. Understanding the organizational factors involved in decision making and delivery of patient care is a first step toward reducing medical errors and is a key aspect of a culture of safety [12].Organizational culture explains more of the variance in patient safety climate among hospitals than structural characteristics does. Transforming hospital culture may be a powerful tool to advance patient safety [13]. Therefore, by understanding of what is driving differences in patient safety climate among hospitals, it can proceed more clearly toward developing effective improvement interventions and suggest that continued efforts are needed to improve patient safety in hospitals. However, organizational culture is most consistently related to features of patient safety climate that pertain to organization [14].

During the past decade, an expanding evidence base in health care has demonstrated that safety culture plays an important role in the safety and quality of patient care [7]. A key recommendation from these reports is the creation and maintenance of organizational cultures that support patient safety.

Although the organizational literature on culture is vast, the health care literature assessing the relationship between culture and patient safety is scant and inconsistent [15].Achieving the maximum potential from patient safety initiatives, health care facilities must establish a culture of safety. One of the most fundamental predictors of success with patient safety initiatives is the state of the current organizational culture [16]. The development of patient safety culture in health care organizations is a necessary precursor to patient safety improvement. Accordingly, most initial work on patient safety culture has focused on developing measures that enable assessment and change of cultures within hospitals. Enhanced understanding of how variations in patient safety culture are related to organizational structural factors, such as size and management centralization, and the impact of such variations on patient safety performance

hopefully will lead to successful improvement interventions [17]In recent years, healthcare organizations are becoming aware of the importance of transforming organizational culture to improve patient safety. So, promoting a culture of patient safety has become one of the pillars of the patient safety movement. Organizational culture plays a critical role in the success of patient safety initiatives because it has an effect on resource provision, and the development of structures and processes of care render [6]. However, a better understanding of the relationship between organizational culture and patient safety could reveal whether aspects of general organizational culture predispose some hospitals to better safety climate. Few studies [7,18] have examined organizational culture and its characteristics that affect safety climate in hospitals. A better understanding of this relationship could reveal, for example, whether aspects of general organizational culture predispose some hospitals to better safety climate. In health care, a prime challenge to achieving safe climates is overt or covert pressure to put production and efficiency ahead of safety[7]. Hence the present study tries to explore how aspect of general organizational culture related to hospital safety climate.

Significant of the study:

In recent years, healthcare organizations are becoming aware of the importance of transforming organizational culture to improve patient safety because it has an effect on resource provision and the development of structures and processes of care render. Promoting a culture of patient safety has become one of the pillars of the patient safety movement. Organizational culture explains more of the variance in patient safety climate among hospitals than structural characteristics does Transforming hospital culture may be a powerful tool to advance patient safety. Therefore, by understanding of what is driving differences in patient safety climate among hospitals, it can proceed more clearly toward developing effective improvement interventions and suggestions that continued efforts are needed to improve patient safety in hospitals. However, organizational culture is most consistently related to features of patient

safety climate that pertain to health care organizations.

Research questions

1-Is organizational culture promotes patient safety climate at Main Mansoura University Hospital and Mansoura International Specialized Hospital?

2-Which type of organizational culture that promotes patient safety climate at Main Mansoura University Hospital and Mansoura International Specialized Hospital?

Aim of the study:

The study aims to determine organizational culture that promotes patient safety at Main Mansoura University Hospital and Mansoura International Specialized Hospital

The study was conducted at Mansoura University Hospital that affiliated to teaching university hospital and Mansoura to Ministry of Health. Both hospitals provide a wide spectrum of health services at Delta Region. The Main Mansoura University Hospital's bed capacity is 1860 Hospital's bed capacity is 600 beds. All general medical units (two units' bed with 50 beds) and general surgical units (two units with 50 beds) are included in the study.

Subjects:

The subjects of the present study included all nurses working in the all general inpatient units in both hospitals. It includes

196.nurses at Main Mansoura University Hospital. They are 6 with baccalaureate degree and 190 nurses with diploma and technical degree. While the 188 nurses at Mansoura International Specialized Hospital, who includes 31 with baccalaureate degree and 157 nurses with diploma and technical degree. All nurses subjects fulfills the criteria of having a minimum of one year experience in the work setting, to express their opinion about

Subjects and Methods

Design:

Cross-sectional descriptive study.

Setting:

International Specialized Hospital that affiliated

beds. All general medical units (two units with 66 beds) and general surgical units (four units with 120 beds) are included in this study. While, Mansoura International Specialized

organizational culture and patient safety climate in their working unit.

Tools of Data Collection:

Two tools were used for data collection, namely Organizational Culture Inventory (OCI) and patient safety climate questionnaire.

ToolI:Organizational ulture Inventory(OCI)

It consists of two parts:

First part: Personal characteristics of the staff nurses such as: age, educational qualification and years of experience in nursing.

Second part: Organizational Culture Inventory (OCI) to assess types of organizational culture in terms of behavioral norms and expectations of the staff nurses. It was developed by Cooke & Lafferty [19] and modified by Abd El-Rahman [20]. It consisted of 84 items categorized into three general types of organizational culture namely; constructive, passive-defensive and aggressive-defensive. Constructive cultural type includes (28 items) which are divided into four norms namely: achievement, self-actualization, humanistic-encouraging and affiliative norms. Passive-defensive cultural type includes (28 items) which are divided into four norms namely: approval, conventional, dependent and avoidance norms. Aggressive-defensive cultural type

Includes (28 items) which are divided into four norms namely: oppositional, power, competitive and perfectionist norms. Each norm consisted of seven items.

Subjects responses for OCI were measured on a 5- point rating scale ranged from 1 (not at all) to 5 (very great extent).

Tool II: Patient Safety Climate in Health Care Organizations Questionnaire (PSCHO)

It measures patient safety climate in the study units. It developed by Agency for Healthcare Research and Quality publication[21]. It consisted of 2 dimensions based on the extent to which they described patient safety climate in hospital.

First: Hospital-Level Dimension which include Handoffs & transitions (4 items), Management support for patient safety (3 items), Organizational learning continuous improvement(3 items), Overall perceptions of patient safety (4 items), and Teamwork across units (4 items).

Second: Unit Level Dimension which include Frequency of events reported (3 items), Communication openness health care Staff (3 items), Feedback & communication about error (3 items), Nonpunitive response to error (3 items), staffing (4 items), Supervisor/manager expectations & actions promoting safety (4 items), and teamwork within units (4 items). Subjects responses for Patient Safety Climate in Healthcare Organizations Questionnaire were

measured using a five-point Likert Scale that ranged from 1 to 5 (1=non, 2= rarely, 3= sometimes, 4= often, and 5= always).

Methods of Data Collection

1. A permission to conduct the study was obtained from the director of Main Mansoura University Hospital and Mansoura International Specialized Hospital.

2. Tools of data collection were translated into Arabic and were tested for its content validity and relevance by a jury consisted of 7 academic staff in Nursing Administration Department at Mansoura, Alexandria, and Tanta University. And 7 staff nurses from different inpatient units at Mansoura University and Ministry Hospitals. The necessary modifications were performed .

3-A pilot study was conducted on 10% of the total sample (whom are not included in the study) working at Main Mansoura University Hospital and Mansoura International Specialized Hospital, in order to ascertain its clarity and feasibility.

4-Reliability: using Cronbach's alpha, the internal consistency of the patient safety climate survey was 0.82

5-The questionnaire was distributed to the study nurses to answer the questions and rank the 12 questionnaire related to the factors that are effect on creating patient safety climate in the unit according to their prioritized. Each sheet took 20-30 minutes to be answered. Data collected in two months starting June 2010.

6-Ethical consideration; all participants interviewed for explaining the purposes and procedures of the study, and they have the right to withdrawal from the study any time during the study. Oral consent to participate was assumed by attendance of filling questionnaire sheet.

Statistical analysis

The collected data were organized, tabulated and statistically analyzed using SPSS software statistical computer package version 13. For quantitative data, the range, mean and standard deviation were calculated. For qualitative data, comparison between two groups and more was done using Chi-square test (X2). For comparison between means of two groups' student

t-test was used. Correlation between variables was evaluated using Pearson's correlation coefficient. Significance was adopted at p<0.05 for interpretation of results of tests of significance.

Results

Table (1) shows the demographic characteristics of the studied nurses at Main Mansoura University Hospital and Mansoura International Specialized Hospital. It was observed that most of staff nurses included in the present study in both hospitals had the mean of about 30 years old, and most of them have diploma education degree. Most of the nurses in both studied hospitals having years of experience ranged from 1to < 9 years of experience and were married.

Table (2) shows mean, standard deviations and t-value in relation to organization al culture in the selected studied settings. This table shows a non statistical significant differences between the total mean scores of organizational culture components at both study hospitals (t=0.722, p<0.05). Nurses at Mansoura University hospital and Mansoura International Specialized Hospital has perceived organizational culture with mean scores 262.47and 264.87 respectively. This table shows a significant difference between mean scores of Total constructive culture norms and Total passive-defensive at both study hospitals,

while total aggressive-defensive norms are no significant. The highest mean score 96.90 was reported for constructive culture at Mansoura International Specialized Hospitals. On the other hand total passive-defensive and aggressive-defensive norms represents the highest mean scores 89.25 and 84.47 respectively at Mansoura University hospital.

Table (3) shows mean, standard deviations and t-value differences of staff nurses' perceptions in relation to patient safety climate in selected studied settings. This table revealed no significant difference between total mean scores components of patient safety climate at both study hospitals (t=1.192, p<0.05). The highest mean score was 120.40 observe for overall perceptions of patient safety at Mansoura International Specialized hospitals and 118.33 at Mansoura university Hospital. The table also shows a significant difference between two studied hospitals regards overall components of patient

safety except communication openness health care staff, frequency of events reported, non-punitive response to error, overall perceptions of patient safety, and teamwork across units were not significant. **Table (4)** shows correlation between patient safety climate and organizational culture at Mansoura University and Mansoura International Specialized Hospital. The results in this table revealed Passive-defensive cultural norms and aggressive-defensive cultural norms was observed in both studied hospitals.

Figure 1 shows staff nurses' ranking of factors influence patient safety in the selected settings. In this figure the majority of the study sample 49.23% ranks management supports patient safety as the first factor affecting on patient safety at

that no significant relationship between patient safety climate and organizational culture at Mansoura university Hospital, while a significant relation was observed at Mansoura International Specialized hospital (p<0.05). The table also shows there was a significant positive relationship for constructive culture and patient safety climate at both studied hospitals, while a significant negative relationship for study hospitals and 42.14% for having enough staff to manage workload as the second factor. While coordination between units 12.9% was reported as the last factors influence patient safety in the selected settings.

Table (1): Personal characteristics of the studied nurses at Main Mansoura University Hospital and Mansoura International Specialized Hospital

Demographic characteristics	The study nurses	
	Mansoura University Hospital (n=196)	Mansoura International Hospital (n=188)
	No. %	No. %

Age (years):				
<25	53	27.0	39	20.7
25-	54	27.6	59	31.4
30-	36	18.4	48	25.5
≥40	53	27.0	42	22.3
Mean ± S.D	30.03±7.24		29.87±6.15	
Educational Qualifications:				
-Baccalaureate degree	6	3.1	31	16.5
-Diploma degree from Technical Institute of Nursing.	21	10.7	4	2.1
-Diploma degree from Secondary Nursing School.	169	86.2	153	81.4
Years of experience				
1-	142	72.5	152	80.9
10-	41	20.9	29	15.4
> 20	13	6.6	7	3.7
Mean ± S.D	10.76±6.67		7.79±4.35	
Job position:				
-Head nurse	6	3.1	31	16.5
-Staff nurse	190	96.9	157	83.5
Marital status:				
-Married	184	93.9	151	80.3
-Single	12	6.1	37	19.7

*Significant (P<0.05)

Table (2): Mean, Standard Deviations and t-value in relation to organizational culture in the selected studied settings.

Organizational culture norms	Mansoura University Hospital (n=196)	Mansoura International Hospital (n=188)	T	P
	Mean ±S.D	Mean ±S.D		
-Achievement norm	22.25±7.38	24.69±5.21	3.713	0.0001*
-Self actualization norm	22.09±7.84	25.92±6.06	5.344	0.0001*
-Humanistic encouraging norm	21.61±6.66	23.70±4.40	3.611	0.0001*
-Affiliative norm	22.79±6.45	22.58±5.46	0.337	0.737
Total constructive culture	88.75±20.87	96.90±16.96	4.188	0.0001*
-Approval norm	20.96±5.92	21.08±5.15	0.213	0.831
-Conventional norm	21.62±5.28	20.07±3.84	3.274	0.001*
-Dependent norm	23.03±6.37	20.95±4.42	3.717	0.0001*
-Avoidance norm	23.63±6.53	21.96±5.60	2.684	0.008*
Total passive-defensive	89.25±13.95	84.07±15.35	3.467	0.001*
-Oppositional norm	18.18±7.41	18.25±6.09	0.096	0.924
-Power norm	19.03±6.76	21.28±5.29	3.623	0.0001*
-Competitive norm	21.49±6.45	22.95±6.09	2.272	0.024*
-Perfectionist norm	25.76±4.66	21.42±4.38	9.396	0.0001*
Total aggressive-defensive	84.47±16.83	83.90±16.00	0.337	0.736
Total organizational culture	**262.47±30.97**	**264.87±34.06**	**0.722**	**0.471**

*Significant (P<0.05)

Table (3):Mean, standard deviations and t-value differences of staff nurses' perceptions in relation to patient safety climate in Selected studied Settings.

Patient safety climate components	Mansoura University Hospital (n=196)	Mansoura International Hospital (n=188)	T	P
	Mean ±S.D	Mean ±S.D		
1-Communication openness health care staff	7.62 ± 2.85	7.30±2.36	1.212	0.226
2-Feedback & communication about error	8.97 ±3.21	9.69±2.75	2.348	0.019*
3-Frequency of events reported	7.55 ±2.49	7.96±2.06	1.764	0.079
4- Handoffs and transitions	9.06 ± 4.14	9.83±3.22	2.036	0.042*
5-Management support for patient safety	8.24 ± 2.19	7.33±1.85	4.390	0.0001*
6- Nonpunitive response to error	8.66 ±2.66	8.62±2.22	0.185	0.854
7-Organizational learning continuous improvement	10.43± 2.74	9.08±2.72	4.823	0.0001*
8- Overall perceptions of patient safety	11.98 ± 3.34	11.39±2.88	1.853	0.065
9- Staffing	11.07± 3.69	12.47±3.01	4.072	0.0001*
10- Supervisor/manager expectations & actions promoting safety	11.69 ± 3.86	12.47±2.96	2.214	0.027*
11- Teamwork across units	10.89 ± 3.05	10.68±2.65	0.726	0.469
12- Teamwork within units	12.15 ± 3.98	13.57±3.28	3.809	0.0001*
Total patient safety climate	**118.33±17.62**	**120.40±16.49**	**1.192**	**0.234**

*Significant (P<0.05)

Table(4): Correlation between patient safety climate and organizational culture at Mansoura University and Mansoura International Specialized Hospital.

Organizational culture components	Patient safety climate scores among The study hospitals			
	Main Mansoura University Hospital (n=196)		Mansoura International Hospital (n=188)	
	r	p	r	P
• Constructive cultural norms	0.391	0.0001*	0.204	0.005*
• Passive-defensive cultural norms	-0.154	0.032*	-0.290	0.0001*
• Aggressive-defensive cultural norms	-0.416	0.0001*	-0.456	0.0001*
Total organizational culture scores	**0.032**	**0.656**	**0.446**	**0.0001***

r=Correlation coefficient   ***Significant (P<0.05)**

Figure (1) Staff nurses' ranking of factors influence patient safety in the selected settings (n= 384).

Discussion

There is a growing recognition of the importance of establishing an organizational culture of patient safety in health care system. Achieving a culture of patient safety requires an understanding of the values, beliefs, and norms about what is important in an organization and what attitudes and behaviors related to patient safety[21]. Advance patient safety in health care organizations must articulate on strategies for changing the culture to one that embraces patient safety as a core value[22]. The main finding of the present study showed that there is a significant correlation between different types of organizational culture especially constructive culture and patient safety in both studied Hospitals. This means that patient safety can be promoted by making constructive cultural style as the most nature in hospitals culture, and limited in using passive and aggressive defensive culture norms. This may be contributed to constructive culture based on an atmosphere of mutual trust in which all staff members can talk freely about safety problems and how to solve them without fear of blame or punishment.

As well as Singer et al.[13] emphasized that constructive organizational culture was considered behavioral characteristics of individuals and cultural system are the important considerations in the development of safety culture such as nurses' intrinsic motivation, cognitive decision-making style, and problem solving. This also agreed with Ingersoll et al.[23] who found that the constructive culture constituted the majority of their studied nurses and the organizational culture is linked with patient safety. In addition, Eric et al.[15] mentioned the first better understanding of the linkage between organizational culture and patient outcomes is patient safety.

This findings was supported by Abd El-Rahman[20] who reported that the constructive cultural style was the most dominant among nurses working in intensive care, surgical, and medical units at Alexandria Main University Hospital. He proved that encouragement of humanism, self actualizing and achievement norm having the highest percentages among the other norms in critical, surgical and medical intensive care

units. Accordingly, Spector,[24] suggested that hospitals may be able to increase safety climate by cultivating improvement-oriented teamwork and openness to innovation. In this same respect Marquis& Huston[25] approved the results that a constructive culture is a strong culture and is one of the characteristics of a healthy organization and is set largely by leaders in the hospital to put more attention to patient safety.

Findings of the present study revealed aggressive defensive culture was the second cultural style and perfectionist norm is the first among the aggressive defensive norms at both study hospitals. This may be contributed to that when the aggressive-defensive culture is the most dominant in the hospital, nurses feel alienated and not adequately regarded as participants in decision making processes. As a result aggressive defensive norms can be a source of much mistrust and tension that impede or block forward movement at both study hospitals. This findings was consistent with Abd-El Rahman[20] who reported that perfectionist norm was the highest among aggressive-defensive norms, especially in work units requiring precise

and highly technological care. Furthermore, Daft[26] observed that nurses seem unable to discuss problems with their managers, probably as a result of the current insecurit about jobs and fear of job loss.

Findings of the present study indicated that most nurses reported the primary factor that influence patient safety climate was that management supports patient safety. This may be due to patient safety climate was better when nurse perceived more group participation and more hospital emphasized with care and support. Also, Spector [24] suggested that hospitals may be able to increase safety climate by cultivating improvement-oriented teamwork and openness to innovation.In this same respect Marquis &Huston [25]

The results of the present study revealed that most nurses in both hospitals reported enough staff to handle workload can was the second factor that affect patient safety, this may be contributed to ensuring adequate nursing staff will reduce the possibility of harm to patients and increase the probability care will be safely delivered[26]. The study done by Singer et al.[13] supported the previous results found

that higher nurse staffing ratios were associated influence patient safety climate.

On the other hand, most nurses in this study ranked last factor for affecting patient safety climate was coordination between units. The factors influencing safety may vary depending upon individual differences, numbers of hours worked in health care, and type of culture supported in each hospital within a health care system. These undesirable behavioral and psychosocial outcomes are suggested to negatively impact both nurse and patient health and safety outcomes in the delivery of patient care[27].

Nurses at Mansoura University hospital mentioned that the two most positive components of the patient safety were teamwork within units and overall staff members' perceptions of patient safety. This is supported by Kupersmith[28] who found a relationship between characteristics of hospital systems, and hypothesized that teaching hospitals, hospitals with higher nurse staffing levels, and hospitals using more patient safety practices would experience lower rates of these patient safety incidents than would nonteaching hospitals, hospitals with lower levels of nurse staffing, and hospitals using

fewer patient safety practices. While, Hughes et al.[18] found difference between two different study hospitals as a result of difference of hospitals system. This is supported by Deirdre et al,[29] who found certain hospital characteristics were significantly associated with some patient outcomes.

The results of the present study revealed that there is no significant difference between nurses' perceptions in both study hospitals regarding communication openness staff feedback about errors as one of the components of patient safety climate. This may be due to open communication aimed at correcting or rectifying one's own mistake compared with perceptions for items addressing prevention of that mistake from happening again. Yet, Hughes et al,[18] found open communication about errors specifically initiated by nurses motivate them to discuss their mistakes with coworkers and may stem more from concerns about the immediate consequences to a patient rather than from concerns about preventing errors in the future. This is supported by DeJoy et al.[30] who's study has focused on the relationship between safety climate and general organizational climate variables

such as, communication, feedback, job involvement, and decision making. The results of the present study revealed that there is no significant difference between nurses' perception in both hospitals regarding frequency of events reported as one of the components of patient safety climate. There is a study done by Moody et al.[27] who concluded that human factors such as error-reporting norms are influence the willingness to report error and patient safety on nursing units, because mistakes are punished both professionally and socially, creating a culture in which errors go unreported and hidden rather than shared and discussed.

Incident and event reporting systems in healthcare organizations should take a non-punitive approach in order to encourage event and near-miss reporting, to identify problems and work toward their resolution, and to facilitate learning. Therefore Shostek& Fashrm[22] recommended that challenge of overcoming barriers to staff reporting of events, errors, and near misses includes removing the fear of job loss, humiliation, and "shunning" by peers, which has been associated with error reporting.

The results of the present study revealed that there is a significant difference between both study hospitals where nurses' perception in Mansoura International Hospital is higher than Mansoura University Hospital- regarding handoffs and transitions of patient record as one of the components of patient safety climate. This may be contributing to difference of hospital size, structural and respondents' characteristics and their work facilities. Staff workgroups in smaller units communicated about errors to a greater extent than did those on larger units, whereas workgroups on smaller units and units with lower work complexity participated more in error management through open communication and problem solving. Further, Hughes et al [18] suggested that depending on the size and work complexity of the unit, some workgroups may be better able to develop a strong network of peer relationships that serves to reduce threats to sense of professional competence, and social standing.

Still a specific requirement for improving communications between caregivers and other teamwork-related requirements aimed at improving patient handoffs such

as communication during nursing shift changes, physician transfer of patient responsibilities, transfer of patients from one unit to another. Gaining support for improving communication and helping physicians and staff work as teams are also keys to changing the safety [31].

Again, nurses' perception in Mansoura International Hospital is higher than Mansoura University Hospital- regarding manager and supervisor take actions which supporting and promoting patient safety as one of the components of patient safety climate, which is proved statistically. This may be due to leaders of hospital being able to support a safety culture through specific actions and behaviors that embody a commitment to safety through promoting open communication about safety concerns, educating staff about safety science, empowering staff to identify and ameliorate hazards and risks, advocating safety as everyone's responsibility, and allocating adequate safety resources. This is the same view of Armstrong et al.[1] who highlighted the importance of organizational cultural attitudes toward teamwork behavior and openness about error in promoting a positive safety climate in healthcare. Nurses' perception in both hospitals agreed that non-punitive response to error was one of the components of patient safety climate, with no significant difference between both study hospitals. This is due to creating a non-punitive atmosphere in which nurses blame for errors should be minimized, because fear of blame and disciplinary action continue to be two of the most frequently identified reasons nurses do reporting or not reporting errors. Therefore Hughes et al [18] recommended that future investigation of the patient safety climate on nursing units is needed to clarify relationships between nurse work disciplinary action and patient safety outcomes.   Another critical element to create a culture of safety is the development of effective teams[32]. The results of the present study in both hospitals revealed that there is a significant difference between both hospitals to organizational learning improvement and teamwork within units as components of patient safety climate. This is supported by Shostek & Fashrm[22] who recommended that for making healthcare patient safer hospitals should provide teamwork training and improving communication for achieving a culture of safety. Moreover, Lee et al. [4] found there is strong association between safety culture and healthcare workers' safety behaviors such as collaboration, safety training, and adverse events reporting, which are closely linked to patient safety.

Conclusion and recommendations

This study provides that there is no significant relationship between patient safety climate and organizational culture at Mansoura University Hospital, while, a significant relation was found at Mansoura International Specialized hospital. This study -also- provides evidence of significant positive relationship for constructive culture on patient safety, while a significant negative relationship for passive-defensive cultural norms and aggressive-defensive cultural norms was observed in both studied hospitals.

In the light of the findings, the following recommendations are suggested:

1- Conduct continuous learning sessions for patient safety issues to health care members especially in relation to organizational culture, safety science teamwork, patient incident and event reporting systems.

2- Management commitment to safety, supervisory performance feedback, worker involvement, and behavior norms are commonly essential elements of a generic safety climate that must be assured as a system in health care settings.

3- Nurse Managers must create policies and procedures to enhance constructive culture for promoting appropriate system for hospital resources, and patient safety.

4- Further studies are needed to explore the impact of mix of organizational culture on patient safety.

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