

## Patient safety at psychiatric hospitals and its relationship with organizational culture (comparative study)

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### Abstract

**Background:** Recently, psychiatric health is considered a unique scope in promoting rights of patient safety, although there are few scientific researches that provide information about patient safety frameworks, coaching, politics and providing suitable patient care without harm **Aim:** this study aimed to assess the relation between patient safety and organizational culture inpatient care at psychiatric hospitals. **Design:** descriptive correlational design. **Setting:** This study was carried out at Mansoura & Benha Psychiatric hospital. **Sample:** All nurses worked at the studied hospitals. **Tools:** two tools were used, WHO Medical School Curricular Guide for Patient Safety and Organizational Culture Assessment Instrument. **Results:** there is a highly significant positive correlation between patient safety and organizational culture at both Psychiatric hospitals. **Conclusion:** There are other factors rather than Organizational culture affects patient safety as patients, physical environment, and care provider factors. **Recommendation:** Develop patient safety culture as an important part from organizational culture.

**Key words:** patient safety, organizational culture, psychiatric hospital.

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### I. Introduction

Today, the most important and dominant challenge face health care is patient safety. The notion of safety in health care environment refers to a cluster of concepts including patient safety, quality assurance and quality improvement (Hall, Moore & Barnsteiner, 2008 in Slemon, Jenkins and Bunjay, 2017). It is accepted that the quality of health care provision needs to be improved significantly in terms of reducing unnecessary patient harm. Although, the delivery of safe care requires managing risks and preventing adverse events, there is a great emphasis on the importance of cultural transformation in improving quality and safety (Konteh et al., 2008).

Safety of patients is considered the more important and essential principle of general health measures so; each point of care giving process contains a certain degree of safety maintaining (WHO, 2017). Organizations should design systems that make it hard for nurses to do the wrong thing and easy for them to do the right thing which in turn will prevent errors (Institute of Medicine, 2000 in Ulrich & Kear, 2014).

Patient safety from the perspective of psychiatric inpatient care had a little concern until Psychiatric researchers reported that number of death was 142 throughout whole notion caused by emotional and physical restrain in Psychiatric hospitals (The American Psychiatric Association, 2003).

It is essential to know the concept of patient safety, its strength and its constitutive factors in psychiatric inpatient care from the perspective of organization management, staff and patients. Organization management has a major role in creating good working conditions for the staff through maintaining organization safety culture in all aspects of patient safety which in turn influence the nurses output. In future, there will be a positively need to stress the patient's role in developing patient safety practices and organization safety culture (Kanerva, Lammintakanen & Kivinen, 2013).

The successful implementation of patient safety can be affected by Organizational factors such as its culture, style of leadership, the degree of leader participation, communication channels, involvement of patients and families in care and workforce management (Singer, et al, 2003, Hughes, 2008 & Stavarianopoulos, 2012). Organizational culture is the most important factor among these factors because of it can communicate the behavior and attitudes that the organization prefers or expects through spreading of culture verbally, role models and other considerations (Chiu, Pan, & Wei, 2008).

Organizational culture is a compound mixture of different items that affect the way things are done, understood, judged and valued (Kaufman & McCaughan, 2013). Therefore, facilities able to generate more desired attitude that requests more secure patients' environment (Chiu, Pan, & Wei, 2008).

The importance of organizational culture lies in its omnipresence. It could be the glue that fixes the organization together or it could set the limitation for the values and behavior of its employees. Also, it plays the role of societal control in clarifying and understanding if the behavior and attitude revealed by organizational employees is appropriate (Chiu, Pan, & Wei, 2008) Therefore, the role of culture in an organization is very important, particularly when it comes to implementing new policies that require culture to drive and shape them (Tasi, 2011).

### **Significance of the study**

The patient safety movement began to accelerate its progress in the United States in 1999 when the Institute of Medicine (IOM) reported that 44,000 to 98,000 individuals die each year from medical errors in hospitals, making it the fifth leading cause of death in the country. IOM researchers discovered that many of the healthcare errors were commonly caused by faulty systems and processes. According to many researchers, the best way to prevent these errors from occurring was to focus on organizational systems and the culture within these systems. So, this study aims to assess patient safety and its relation to organizational culture.

### **Aim of the study:**

The aim of the present study was to explore the relation between patient safety and organizational culture at psychiatric hospitals through assessing patient safety and the organizational culture inpatient care at Mansoura and Benha psychiatric hospitals.

### **Research questions:**

*The study answered the following questions:*

- 1-What are the measures of patient safety inpatient care at psychiatric hospitals?
- 2-What is the organizational culture inpatient care at psychiatric hospitals?
- 3-Is there a relation between patient safety and organizational culture inpatient care at psychiatric hospitals?

## **II. Subjects and methods**

**Research design:** Descriptive correlational design was used

### **Setting of the study:**

The study was conducted in all inpatient care units at Mansoura and Benha Psychiatric hospitals.

### **Sample: (Inclusion and Exclusion criteria)**

The study included all convenient nurses who were working in the previously mentioned units at Mansoura and Benha Psychiatric hospitals and accepted to participate in this study. A total number was 200 nurses (80 from Mansoura and 120 from Benha). No exclusion criteria

### **Tool of the Study:**

A structured interview questionnaire for collecting data was used in this study. It was divided into three parts: demographic characteristics, WHO Medical School Curricular Guide for Patient Safety and Organizational Culture Assessment. It was adopted by the researcher after reviewing the related literature.

**Part one:** demographic characteristics of nurses such as nurses' age, sex, place of residence, qualification, years of experience and duration in the current workplace.

**Part two: WHO Medical School Curricular Guide for Patient Safety**, to assess patient safety. It composed of 5 items namely: Error and patient safety (7 sub items), Safety of health care system (6 sub items), Personal influence over safety (7 sub items), Personal attitude to patient safety (4 sub items) and Safety at work place (5 sub items).

**Scoring system:** The responses were measured on a five-point Likert scale ranging from 1= never know, 2=rarely know, 3= little know, 4= sometimes know, and 5= know more. Items were respectively scored 1, 2, 3, 4 and 5 for the responses..

**Part three: Organizational Culture Assessment Instrument** developed by Cameron and Quinn (2010) to assess organizational culture. It consists of 6 items namely: Dominant characteristics (4 sub items), Organizational leadership (4 sub items), Management of employees (4 sub items), Organization glue (4 sub items), Strategic emphases (4 sub items) and Criteria for success (4 sub items).

**Scoring system:** The responses were measured on a three-point Likert scale ranging from 0= not agree, 1= sometimes agree, 2= agree. Items were respectively scored 0, 1 and 2 for the responses.

**Method of data collection:**

Approval to conduct the study was obtained from the Scientific Research Ethics Committee at faculty of nursing Mansoura University and from Dean of faculty of nursing Benha University. Also, administrative approval was obtained from the responsible persons (the managers of Mansoura and Benha Psychiatric and Mental Health hospitals.) to carry out the study after clarifying the goal of the study.

\**Validity:* The tools were transferred to Arabic language and reviewed to ascertain their content validity by five experts in nursing from Mansoura and Benha universities. The validity was 95.8%.

**Pilot study:**

It was carried out before starting data collection. It consisted of 10% of the study sample selected randomly their number was (20 nurses) to test the applicability and clarity of the tools. Also it helped to determine time needed for filling up the questionnaire, and Chronbach alpha coefficient was calculated and was 0.86, indicating good reliability. The time need to fill out the sheet was 15-20 minutes. The pilot subjects were not included in the main study sample.

**Ethical considerations:**

The researcher explained to each nurse the aim of the study and informed that the information obtained will be confidential and used only for scientific research. Nurses have ethical rights to participates or refuse participation in the study. Consent to participate in the study was written from the managers and oral from the nurses.

**The field work**

The field work included all available nurses working in psychiatric hospitals (Benha and Mansoura). They consisted of 80 nurses in Mansoura and 120 nurses in Benha hospitals. First, the researcher collected all available nurses to be acquainted with them, explained to them the goal of study and its expected outcomes, and they filled in the questionnaire through three days/week (Saturday, Monday & Wednesday). This process took one month (July). They took about 15-30 minutes to fill in the tools in the unit and the researcher took about 10 minutes to explain any vigorous items.

**Statistical design:**

Data was collected, coded, organized, categorized, and then transferred into especially designed formats. The statistical analysis of data was done by using SPSS program (statistical package for social science).The data was tabulated and presented. The description of the data was done in form of mean and standards deviation for qualitative data using by chi square test (X<sup>2</sup>). The p value is degree of statistical significance.

**III. Results**

**Table (1):Distribution of Personnel data of the studied sample (No= 200)**

personnel characteristics	Mansoura N=80		Benha N=120		Chi square test	P value
	No	%	No	%		
<b>Age in years</b>					3.12	>0.05
Less than 20 years	0	0.00%	0	0.00%		
20-25 years	28	35.0%	34	28.3%		
26-30 years	9	11.3%	8	6.7%		
31-35 years	18	22.5%	29	24.2%		
More than 36	25	31.3%	49	40.8%		
Mean ±SD	25.94±7.23		24.98±6.78			
<b>Years of experience</b>					8.67	>0.05
less than 1 year	3	3.8%	0	0.00%		
from 1-5 year	22	27.5%	34	28.3%		
from 6- 10 years	5	6.3%	8	6.7%		
from 11-15 years	19	23.8%	44	36.7%		
more than 16 years	31	38.8%	34	28.3%		
Mean ±SD	8.47±4.35		9.35±5.46			
<b>Gender</b>					1.20	>0.05
Male	39	48.8%	68	56.7%		
Female	41	51.3%	52	43.3%		
<b>Educational qualification</b>					4.06	>0.05
BSc degree	33	41.3%	36	30.0%		
technical institute	17	21.3%	22	18.3%		
Diploma	30	37.5%	62	51.7%		

Two hundred nurses were studied in this study represent all nurses in Psychiatric Hospitals at Mansoura and Benha; the total number of each hospital was nearly equal. Personal characteristics of the studied nurses presented in **table (1)**. It was noticed that in Mansoura hospital the highest percentage of nurses (35.0%) aged from 20 - 26 years old with mean of (25.94) compared to 40.8%. of studied nurses' age in Benha were more than 36 years old with mean of (24.98). More than one third of nurses in Mansoura hospital (38.8%) had years of experience more than 16 years and more half of them (51.3%) were female. On the other side, the highest percentage of studied sample in Benha (36.7%) had 11-16 years of experience and (56.7%) of them were male. Also, 41.3% of nurses in Mansoura had BSc. degree while in Benha (51.7%) were graduates from secondary diploma.

**Table (2): Mean total distribution of patient safety at studied Psychiatric Hospitals (Mansoura and Benha) (N=200).**

Item	Mean ±SD		T- test	P value
	Mansoura	Benha		
Error and Patient Safety	21.9875±6.66655	24.6333±5.52448	2.94	<0.05*
Safety of the Healthcare System	19.7875±4.17859	22.2167±2.48756	4.67	<0.001**
Personal Influence over Safety	22.6375±3.58352	22.9000±3.87060	0.491	>0.05
Personal Attitudes to Patient Safety	15.7750±3.56131	15.4500±3.99338	0.602	>0.05
Safety at the Workplace	27.1125±5.33200	28.4500±5.11523	1.76	>0.05
<b>Total of patient safety</b>	<b>107.3000±16.39883</b>	<b>113.6500±12.56623</b>	<b>2.93</b>	<b>&lt;0.05*</b>

**P <0.001\*\* highly significant                      p<0.05\* significant**

In order to assess patient safety at studied Psychiatric Hospitals (Mansoura and Benha) **Table (2)** showed the mean total distribution of patient safety at studied Psychiatric Hospitals. It was found that, safety of the health care system was a highly significant item regarding patient safety measures. In addition to Error and patient safety was significant at studied hospitals. Regarding total of patient safety were statistically significant differences.

**Table (3): Mean total distribution of organizational culture at studied Psychiatric Hospitals (Mansoura and Benha ) (N=200).**

Items of organizational culture	Mansoura	Benha	Independent t test	P value
	Mean ±SD	Mean ±SD		
Dominant Characteristics	3.3500±2.18800	3.9333±2.20669	1.84	>0.05
Organizational Leadership	2.4000±2.19666	3.4000±2.58112	2.93	<0.05*
Management of Employees	2.2125±2.16236	3.0500±2.60204	2.47	<0.05*
Organization Glue	2.6875±2.47823	3.9333±2.90966	3.24	<0.001**
Strategic Emphases	3.0500±2.75083	3.5333±2.62161	1.24	>0.05
Criteria of Success	3.1000±2.56362	4.0667±2.22942	2.75	<0.05*
<b>Total of organizational culture</b>	<b>16.8000±12.04780</b>	<b>21.9167±12.81319</b>	<b>2.83</b>	<b>&lt;0.05*</b>

**P <0.001\*\* statistically highly significant                      p<0.05\* statistically significant**

In order to assess organizational culture at studied Psychiatric Hospitals (Mansoura and Benha) **Table (3)** showed the mean total distribution of organizational culture at studied Psychiatric Hospitals (Mansoura and Benha). It was found that, organization Glue item of organizational culture was highly significant in both studied hospitals. In addition to, organizational leadership, management of employees and criteria of success were also significant and the total of organizational culture was significant in both hospitals

**Table (4): Correlation between nurses’ personal characteristics, organizational culture and patient safety at Mansoura psychiatric Hospital**

	Organizational			Patient safety		
	Mean ±SD	f/independent t test	P value	Mean ±SD	f/independent t test	P value
<b>Age in years</b>		9.71	<0.001**		1.71	>0.05
20-25 years	10.4643±7.59377					
26-30 years	16.2222±11.02018					
31-35 years	14.6111±9.33141					
More than 36	25.6800±13.34391					
<b>Years of experience</b>		4.14	<0.05*		1.61	>0.05
less than 1 year	19.6667±10.06645					
from 1-5 year	11.0909±6.48007					
from 6- 10 years	12.4000±.54772					
from 11-15 years	14.3158±12.81081					
more than 16 years	22.8065±13.35769					
<b>Gender</b>		4.10	<0.05*		2.04	>0.05
Male	21.9744±10.49433					
Female	11.8780±11.45032					
<b>Educational qualification</b>		6.56	<0.001**		4.86	
Baclore	16.8485±10.72416					
technical instate	6.5833±7.35414					
Diploma	20.2571±12.74257					

**P <0.001\*\* highly significant**

**p<0.05\* statistically significant**

In order to assess the correlation between nurses’ personal characteristics, organizational culture and patient safety at Mansoura psychiatric Hospital **Table (4)** showed the correlation between nurses’ personal characteristics, organizational culture and patient safety at Mansoura psychiatric Hospital. It was found that, There is a highly significant correlation between nurses’ personal characteristics (Age and educational qualification) and organizational culture. Also, there is a significant correlation between (years of experience and gender) and organizational culture. In opposite to there is no significant correlation between nurses’ personal characteristics and patient safety at Mansoura Psychiatric Hospital.

**Table (5): Relation between nurses’ personal characteristics, organizational culture and patient safety at Benha psychiatric Hospital**

personnel characteristics	Organizational			Patient safety		
	Mean ±SD	f/independent t test	P value	Mean ±SD	f/independent t test	P value
<b>Age in years</b>		2.27	>0.05		0.504	>0.05
20-25 years	23.1765±13.9576					
26-30 years	30.5000±8.2980					
31-35 years	22.9655±14.3688					
More than 36	19.0204±10.9534					
<b>Years of experience</b>		1.58	>0.05		0.129	>0.05
less than 1 year						
from 1-5 year	23.1765±13.9576					
from 6- 10 years	30.2500±8.1196					
from 11-15 years	20.3182±11.6514					
more than 16 years	20.7647±13.5312					
<b>Gender</b>		1.83	>0.05		0.698	>0.05
Male	20.0294±12.0310					
Female	24.3846±13.4895					
<b>Educational qualification</b>		4.61	<0.05*		0.954	>0.05
B.Sc. degree	23.0000±13.0581					
technical instate	39.5000±4.0414					
Diploma	20.5500±12.3717					

**p<0.05\* statistically significant**

In order to assess the correlation between nurses' personal characteristics, organizational culture and patient safety at Benha psychiatric Hospital. **Table (5)** showed the correlation between nurses' personal characteristics, organizational culture and patient safety at Benha psychiatric Hospital. It was found that, There is no significant correlation between nurses' personal characteristics and organizational culture and patient safety except educational qualification is only significant with organizational culture at Benha Psychiatric Hospital.

**Table (6): Correlation between organizational culture and patient safety at Studied Psychiatric Hospitals**

Patient safety	Benha hospital		Mansoura hospital	
	Organizational culture		Organizational culture	
	R	p- value	R	p- value
	.467**	<0.001**	.262**	<0.001**

**Table (6)** shows the correlation between organizational culture and patient safety at studied psychiatric Hospital. It was found that, there is a significant positive correlation between organizational culture and patient safety at studied psychiatric Hospitals.

#### IV. Discussion

Nowadays, health providers do their best for giving care and providing treatment for all patients without hazards throughout the world. Within psychiatric inpatient settings, patient risk is conceptualized as affecting not only the individual, but also other patients, staff and the general public, widening the sphere of risk. In inpatient nursing care within this context, safety is not merely a consideration or goal, but the highest value. Patient safety in psychiatric health is more different than in medical health because of patient population and entire environment which make it unique and exclusive. In some condition, patient diagnosis participates more with patient population in the uniqueness and in other condition location participates more than patient population and diagnosis. Continuously, the hospital should assess these factors like organizational culture and manage it to decrease patient harmful and keep them safety.

In order to explore the relation between patient safety and organizational culture the finding of the present study revealed that there is a highly significant positive correlation between patient safety and organizational culture at both Psychiatric hospitals. This result may be related to that both Psychiatric hospital getting attention in its management for patient safety through providing the organizational structure with the safety measures for Psychiatric patients. Update documentation system that enables the staff to inform about hazards and errors received by the patient and training the nurses about how to use it. Also, encourage the staff to inform about any mistakes or hazards for the patients. This result is supported by **Silva, et al, 2016, Schein, 2010 and Donaldson, 1999** who mentioned that to increase patient safety, support of the people whose efforts to correct unsafe processes, in alignment with the organization's vision, mission and values, enable change in patient safety culture and organizational culture. These changes, in turn, are reflected in shared behaviors, beliefs, attitudes and values regarding goals, functions and procedures.

The results of the present study showed that there is no significant correlation between nurses' personal characteristics and patient safety at studied Psychiatric hospitals. This result may be related to the patient safety measures are connected with organization systems management, vision, mission and objectives of the organization rather than nurses' personal characteristics.

This result is accepted with **jaimie, (2017)** who mentioned 6 elements of a true patient safety cultures and all these elements were related to organization vision, leadership, commitment, level of management, require some evolution.

The result of the present study revealed that there is a highly significant correlation between organizational culture and the nurses' personal characteristics at Manasoura Psychiatric hospital. This result may be related to the organizational culture is connected with persons values, beliefs and ideas rather than management systems of the organization.

This result is accepted with **Kaufman, McCaughan (2013) & Schein, (2004)** who mentioned that Organizational culture is a complex mixture of different elements that influence the way things are done, as well as the way things are understood, judged and valued. Culture is associated with more concrete elements such as the symbols, rituals, and language peculiar to an organization. In addition, culture is associated with attitudes, values, beliefs and norms of behavior

On the other hand, the result of the present study revealed that there is no significant correlation between nurses' personal characteristics and organizational culture in Benha psychiatric hospital except nurses' educational qualification. This result may be related to the nurses' educational qualification participate in developing personal values, beliefs and ideas concerned with doing things. This result is accepted by **Kaufman,**

**McCaughan (2013)** who mentioned that culture is associated with attitudes, values, beliefs and norms of behavior.

In order to assess the measures of patient safety at studied hospitals, the result of the present study revealed that safety of the health care system was a highly significant item regarding patient safety measures in addition to error and patient safety was significant at studied Psychiatric hospitals. This result may be related to the safety of the health care system and error and patient safety are dealing with reduction of errors within health care system and this is objectives of any organization to maintain patient safety measures. This result is go in line with **Davies, Hébert, & Hoffman, (2003)** who recommends that patient safety is the reduction and mitigation of unsafe acts within the health care system, as well as through the use of best practices shown to lead to optimal patient outcomes.

In order to assess the organizational culture at studied hospitals, the finding of the present study mentioned that organization Glue item of organizational culture was highly significant in both studied hospitals. In addition to, Organizational leadership, Management of Employees and Criteria of success and the total of organizational culture were significant in studied hospitals. This result goes in line with **Firth-Cozens, 2001; Flin & Yule, 2004; Tucker, 2006 & Chiu, Pan, & Wei, 2008 & Hamdan, 2013**). According to these authors, organizational characteristic factors such as organizational culture, leadership style and the degree of leader involvement, communication systems, participation of patients and families, and human resource management methods could all affect the successful implementation of patient safety.

## V. Conclusion

This study concluded that there is a highly significant positive correlation between patient safety and organizational culture at both Psychiatric hospitals. on the other hand, no significant correlation between nurses' personal characteristics and patient safety at studied Psychiatric hospitals but there is a highly significant correlation between organizational culture and the nurses' personal characteristics at Manasoura Psychiatric hospital in opposite to Benha Psychiatric hospital.

## VI. Recommendations

- Develop nursing curriculum and add patient safety as a basic topic for nursing students.
- Training program for nurses about maintaining patient safety at psychiatric hospitals.
- Developing organizational systems that face undesirable behavior for psychiatric patients.
- Increase nurses' awareness about methods of notifying errors.
- Encourage nurses for notifying about errors for patients
- Develop patient safety culture as an important part from organizational culture.
- Further research about factors affecting patient safety rather than organizational culture.

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