

Assessing the Staff Nurses' Perception toward Working Conditions Affecting Patient's Safety

Heba N. Khalifa¹, Safaa A. Zahran², rasha I. El-Sayed³

*B.Sc. Nursing, Faculty of Nursing, Mansoura University¹, Assist. Prof. of Nursing Administration,
Faculty of Nursing -Tanta university², Lecture of Nursing Administration, Faculty of Nursing –Port
said university³*

ABSTRACT

Background: There is widespread interest in measuring nursing perception about issues relevant to patient safety to ensure both the individual health care providers and health care system to contribute to safe delivery of care. The present study aims to assess staff nurses' perception toward working conditions affecting patient's safety at Sherbeen General Hospital and Mansoura New General Hospital. A descriptive comparative study was utilized with a sample of 204 staff nurses in Sherbeen General Hospital and 250 staff nurses in Mansoura New General Hospital. Data were collected by using the hospital survey of patient safety culture questionnaire. Results revealed that, the highest percent of staff nurses' perception at Sherbeen General Hospital was shown in personal and social factors but at Mansoura New General Hospital was in hospital environmental factors. In conclusion, the staff nurses' at Mansoura New General Hospital were highly perception with health care working condition that affect patient safety than Sherbeen General Hospital, there was statistically significance difference between the staff nurses' perception in both hospitals regarding the personal and social factors. The study recommended that there should be a blame-free environment for identifying threats to patient safety, sharing information and learning from events. Nurses should be focused in area of errors as shift changes, patient transition and handover

Keywords: *Patient Safety, Perception, Staff Nurses*

INTRODUCTION

Safety in health care has received substantial attention worldwide since the late 1990s Reichley, Seaton, and Resetar (2005). The Rapid change in health care has mandated greater attention to safety which is essential to efficient and competent delivery of quality care Kohn, Corrigan, and Donaldson (1999). Safety is a condition or state of being resulting from modification of human behavior and/or designing of physical environment to reduce hazards, there by reducing the chance of accidents (Khattab 2005).

Patient safety is a global issue affecting countries at all levels of development. Although estimates of the size of the problem are scarce, particularly in developing and transitional countries, it is likely that millions of patients worldwide suffer disabilities, injuries or death every year due to unsafe medical care Sorra and Nieva (2011). Patient safety is defined as the prevention of harm to patients with emphasis on the system of care delivery that prevents errors, learns from the errors is built on a culture of safety that involves health care professionals, organizations, and patients Mitchell (2011).

American Hospital Association (2004) reported that patient safety is one of the most important elements of health care today. Hospitals are focused on creating safe healthy environments within their organizations,

safe environment starts with an atmosphere that is free of harm to patients seeking health care. In November (2008), the National Priority Partnership deemed patient safety as one of the six national priorities, with specific focus on reduction of hospital-level mortality rates, serious adverse events, and health care associated infections. According to the American Association of Critical-Care Nurses (2005), there is mounting evidence that unhealthy work environments contribute to medical errors, ineffective care delivery, and stress among health care professionals.

Achieving a culture of 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 are expected and appropriate. Also, they present a report about the effect of health care working condition on patient safety and has characterized working conditions as factors that can either improve work quality or impede work quality. The quality of work, in turn, affects patient

safety. Working condition was classified to five categories which include: workforce staffing, workflow design, personal/social issues, physical environment, and organizational factors. Agency for Healthcare Research and Quality (2010).

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, the style and proficiency to health organization's and safety management World Health Organization (2013) Creating and encouraging a working environment in health care organizations which health care professionals have a strong patient safety culture and applying and keeping this concept though out the process is an important in promoting patient safety practice and improve patient safety. El-Jardali et al., (2014).

Nurses are the front liners in patient care. Nurses are responsible for medication administration, patients' condition assessment, supervision of patients' activities, and all patients' medical process of. The roles of nurses play an important part in prevention of patient injury and patient safety Ramanujam et al., (2008).

Patient safety aims to provide a safe environment, to explore the possibility of failure, and to create defenses that will change the current system of operation in order to reduce harm Walshe and Boaden (2009). Patient safety should become a top strategic priority, to advance patient safety in healthcare organizations collaborative efforts must begin with an assessment of the current culture to identify the positive and negative perceptions and attitudes toward the safety environment and relationships that promote or hinder safe patient care. Abdelhai et al, (2012). There for, it is very important to assess nurses' perceptions of safety culture and understand the factors that affect register nurses in this area in order to encourage them to participate and engage in the patient safety culture Kim et al., (2007).

AIM OF THE STUDY:

Assess the staff nurses' perception toward working conditions affecting patient's safety in Sherbeen General Hospital and Mansoura New General Hospital.

Research question:

What are the staff nurses' perceptions toward working conditions affecting patient's safety?

SUBJECTS AND METHOD:

The subjects and methods for this study were portrayed under four main designs as follows:

- I- Technical design.
- II- Operational design.
- III- Administrative design.
- IV- Statistical design.

I-Technical design:

The technical design included the research design, study setting, subjects and tools for data collection.

Research Design:

A descriptive comparative research design was used for the current study.

Study Setting:

The present study was carried out at two major hospitals in Dakahlia Governorate; these are Sherbeen General Hospital, and El Mansoura New General Hospital which affiliated to Ministry of Health

Description of Study Setting:

(I): Sherbeen General Hospital:

The total hospital capacity is 175 beds and total nursing staff 384. It consists of two buildings as follows:

- **First building includes four floors:**

- **First floor:** includes; the Emergency Department, Accident Department, Ultrasound Ray Department, and Storages .
- **Second floor:** includes; medical director office, nursing director office, managerial office, Hemodialysis Pharmacy.
- **Third floor:** includes; Hemodialysis Unit, Operation Room, Cardiac Department, and Surgical Unit.
- **Fourth floor:** Obstetrics Department and Gynecology Department, Pediatrics Unit, and Pediatric Intensive Care Unit.

- **Second building includes four floors:**

- **First floor:** - includes; Out-patient Clinics, and Blood Bank
- **Second floor:**- includes; Out- patient Clinics, and laboratory
- **Third floor:** - includes; Female Internal Medicine department.
- **Fourth floor:** - includes; Male Internal Medicine department.

(II): El Mansoura New General Hospital;

The total hospital capacity is 190 beds and total nursing staff 435. The hospital consists of one building as follows:

- **First floor:** includes; Emergency Department, Out-patient Clinics, Managerial Offices, Sterilization Department, and Ultrasound Ray Department.
- **Second floor:** includes Oncology Department, Operation Room, and Medical director Office.
- **Third floor:** includes; Intensive Care Unit, Medical department and surgical department.
- **Fourth floor:** - includes; Surgical Intensive Care unit, Obstetrical and Gynecological department, Pediatrics department, and Pediatric Intensive Care Unit.
- **Fifth floor:** -Storages.

Study Subjects

- The subjects of this study included all the staff nurses who working at all inpatients units with at least one years of experience; who were working in the study setting. They were four hundred fifty four (454) staff nurses. Where, two hundred and four (204) staff nurses working in Sherbeen General Hospital, and two hundred fifty (250) staff nurses working in El-Mansoura New General Hospital.

TOOL OF DATA COLLECTION:

To achieve the aim of the study" Hospital survey on patient safety culture questionnaire" used, which was adopted by Salem (2008), it consisted of the following two parts.

Part 1: This part was included the information on the personal and job characteristics as, age, sex,.....ect.

Part 2: This part utilized to assess nursing staff perception toward working conditions affecting patient safety it consists of eight sections.

Scoring System:

The nurses staff perception about patient safety culture questionnaire were scored from 5 to 1 as follows: strongly agree =5, agree=4, natural=3, disagree=2 and strongly disagree=1 in which strongly agree + agree = agree and strongly disagree + disagree = disagree. Also, the frequencies of event report were scored from 5 to 1 as follows: always=5, often=4, sometimes=3, rarely=2, and never=1 in which always +often =always, and rarely +never =rarely. These scores were converted into a percent score. Satisfactory for total grade was $60\% \leq$, and unsatisfactory for a total grade was $<60\%$.

(II) OPERATIONAL DESIGN:

Operational design includes three stages namely, preparatory stage, pilot study and fieldwork.

Preparatory Stage:

The intended tools of data collection were revised by the researcher and got supervisor's approval as the tool was previously translated into Arabic. It was tested for its validity and applicability.

Pilot Study:

A pilot study was carried out on 44 staff nurses who represent 10% of the total sample, to test the applicability of tools before starting data collection and estimated the time needed to complete questionnaire, and they were excluded from the entire sample of research work to assure stability of the answers. Completion of tool took 15-20 minutes.

Content validations of the tools:

The utilized tool was tested for clarity, relevance, applicability, comprehensiveness, understanding and ease of implementation. The stage was developed by a jury of seven experts (assistant professors and lecturer) of nursing administration from the faculty of nursing, Port Said University and Tanta University, and modifications of tool were done according to their opinions.

Field Work:

The data were collected from staff nurses in the study settings using self-instructions questionnaires. This process of data collection was carried out in the period started since end of February 2014 to end of May 2014. Firstly, obtain an official agreement from the directors of the studied hospitals. Also, meeting with the directors of nursing service was conducted by the researcher on an individual basis to explain the objectives of the study and to gain their cooperation. Data were collected by the researcher from staff nurses at three shifts after explaining the objectives of the study and how to complete the tool. Data were collected by the researcher about 3 month's period.

(III) ADMINISTRATIVE DESIGN:

Before conduction of the study, an official letter was taken from the directors of hospitals as well as to the nursing directors at Sherbeen General Hospital, and El-Mansoura New General Hospital to obtain their approval.

(IV) Ethical Consideration:

- Official permissions through formal agreement were taken from hospital medical and nursing directors to carry out the study.
- The aim of the study was explained to the staff nurses who included in the study and their permission to participate was taken.
- Staff nurses included in the study was assured about confidentiality of the information gathered and it was used only for the purpose of the study.
- Staff nurses included in the study was informed about their right to refuse or to withdraw at any time.

(V) STATISTICAL DESIGN:

Data entry and statistical analysis were done using SPSS 16.0 statistical software package. Data were presented using descriptive statistics in the form of percentages, and means and standard deviations. Categorical variables were compared using Chi-square test, Monte Carlo test and

Mann Whitney test. The statistical significance was considered at P-value ≤ 0.05 and highly significance at $P \leq 0.001$.

RESULT:

Table (1): Describes the staff nurses' perception towards working condition of the workforce that affect patient safety in Sherbeen General Hospital and Mansoura New General Hospital. The table reveals that most of the staff nurses in both Sherbeen and Mansoura general hospital (92.6% and 87.6 % respectively) were agree of "using extra staff more than what is needed for patient care". Whereas the least agreement (65.7% and 62.4%) among staff nurses were "There is compliance with nurse to patient ratios". The table also indicates, there was statistically significant difference between the two hospital staff nurses perception regarding the items "we have enough staff to handle the workload, and nursing staff member who plan the care who give the care to

Table (2): Describes the staff nurse perception towards working condition of the personal and social factors in Sherbeen General Hospital and Mansoura New General Hospital. The table was observed that regards supervisor/ manager expectations and action promoting safety the high percentage of staff nurses in both Sherbeen and Mansoura hospital (86.8%) were agree that when supervisor/manager says a good word when sees a job don according to established patient safety, and this was statistically significant at $P=0.05$ when supervisor/manager seriously consider staff suggestions for improving patient safety. Also according to teamwork within the hospital units the highest percent of staff nurse were agree (97.1% and 91.6 %) respectively when a lot of work need to be done quickly they work together as a team to get the work done and this was statistically significant, when a lot of work need to be done quickly they work together as a team to get the work done.

Table (3): Represent the staff nurses' perception towards working condition to the workflow design in Sherbeen General Hospital and Mansoura New General Hospital. It was observed that the highest percentage of staff nurses in both Sherbeen and Mansoura General Hospital (82.4% and 82.0 %) respectively were agree that departments that need to work together cooperate well with each other which related to teamwork crosses hospital department. Whereas regarding hospital handoffs and transition about half percentage (49.0% and 58.4%) respectively were

agree that "Problem often occur in the exchange of information across hospital department". As indicated from the table, there was statistically significant between the two hospital staff nurses' perception regarding teamwork crosses hospital department about the item "It is often a burden to work with staff from other institute departments".

Table (4): Shows staff nurses' perception towards working condition to the organizational factors within the hospital at Sherbeen General Hospital and Mansoura New General Hospital. The results indicates that the highest percentage of staff nurses in both Sherbeen and Mansoura General Hospital (80.4% and 91.6 %) respectively were agree that we are actively doing things to improve patient safety which related to organizational learning and continuous improvement. Whereas regarding communication openness the highest percentage 80.9% and 81.2% of them reported agree that " staff well freely speak up if they see something that may negatively affect patient care. Also according to non-punitive response to errors the highest percent of staff nurse were agree (81.4% and 80.0%) respectively when staff feels like their mistakes are held against them when they wrote the event report. As well as, the table indicated that, there was statistically significant between the two hospital regarding Organizational learning and continuous improvement about the sub item "we are actively doing things to improve patient safety", and regarding all sub items to non-punitive response to errors".

Table (5): Display staff nurses' perception towards working condition to hospital environmental factors among the staff nurse in Sherbeen General Hospital and Mansoura New General Hospital. The table revealed that highest percent of staff nurses in Sherbeen General Hospital (89.7%) were agree about the item "there is a hospital fire extinguishing system". On the other hand, it was found that only 49.5% of staff nurse were agree to item "there is a special room for smoking". According to Mansoura New General Hospital, it was found that highest percent of staff nurses (94.4%) were agreed about "the hospital adopts infection control policy in all nursing practice". On the other hand, it was found that only 50.8% of staff nurse were agree to item " there is a special room for smoking. Also the table displays that there was statistically significant between the two hospitals staff nurses perception regarding hospital environmental factors about the item "providing special training for the nursing team to deal with the fires".

Table (1): Staff nurses' perception towards working condition of the workforce nursing staff

Working conditions of the workforce nursing staff	Sherbeen G. Hospital (n=204)						Mansoura New G. Hospital (n=250)						Significance
	Agree		Neutral		Disagree		Agree		Neutral		Disagree		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
We have enough staff to handle the workload	165	80.9	8	3.9	31	15.2	172	68.8	28	11.2	50	20.0	$\chi^2=11.167$ P=0.004*
We use extra staff more than what is needed for patient care	189	92.6	5	2.5	10	4.9	219	87.6	7	2.8	24	9.6	$\chi^2=3.681$ P=0.159
There is compliance with nurse to patient ratios	134	65.7	14	6.9	56	27.5	156	62.4	24	9.6	70	28.0	$\chi^2=1.208$ P=0.547
Staff in this unit work longer hours than what is needed for patient care	145	71.1	18	8.8	41	20.1	170	68.0	14	5.6	66	26.4	$\chi^2=3.702$ P=0.157
Nursing staff respond timely to patient requests for assistance	181	88.7	4	2.0	19	9.3	205	82.0	14	5.6	31	12.4	$\chi^2=5.322$ P=0.07
We depend on patient helper in given patient individual care	144	70.6	11	5.4	49	24.0	169	67.6	11	4.4	70	28.0	$\chi^2=1.053$ P=0.591
Nursing staff member who plan the care they are the one who give the care to the patient	175	85.8	14	6.9	15	7.4	213	85.2	6	2.4	31	12.4	$\chi^2=7.907$ P=0.019*

χ^2 : Chi-Square test *Significant at $P \leq 0.05$ Strongly agree and agree = Agree Strongly disagree and disagree = Disagree

Table (2): Staff nurses' perception towards working condition to the personal and social factors in Sherbeen General Hospital and Mansoura New General Hospital

Personal and social factors	Sherbeen G. Hospital (n=204)						Mansoura New G. Hospital (n=250)						Significance
	Agree		Neutral		Disagree		Agree		Neutral		Disagree		
	No	%	No	%	No	%	No	%	No	%	No	%	
<i>Supervisor/ manager expectations and action promoting safety</i>													
My supervisor/manager says a good word when he /she sees a job don according to established patient safety	177	86.8	7	3.4	20	9.8	217	86.8	14	5.6	19	7.6	$\chi^2=1.777$ P=0.411
My supervisor/manager seriously consider staff suggestions for improving patient safety	166	81.4	14	6.9	24	11.8	186	74.4	35	14.0	29	11.6	$\chi^2=6.119$ P=0.05*
<i>Teamwork within the hospital units</i>													
Staff supports one another in the unit	181	88.7	12	5.9	11	5.4	221	88.4	16	6.4	13	5.2	$\chi^2=0.058$ P=0.971
When a lot of work need to be done quickly we work together as a team to get the work done	198	97.1	4	2.0	2	1.0	229	91.6	9	3.6	12	4.8	$\chi^2=6.725$ P=0.035*
In the unit staffs treat each other with respect	185	90.7	12	5.9	7	3.4	223	89.2	16	6.4	11	4.4	$\chi^2=0.342$ P=0.843
When one area in the unit gets really busy other staff in the same unit help out	192	94.1	8	3.9	4	2.0	225	90.0	14	5.6	11	4.4	$\chi^2=2.883$ P=0.237

χ^2 : Chi-Square test *Significant at P \leq 0.05 Strongly agree and agree = Agree Strongly disagree and disagree =Disagree

Table (3): Staff nurses' perception towards working condition that affects patient safety to the workflow design in Sherbeen General Hospital and Mansoura New General Hospital.

Workflow design	Sherbeen G. Hospital (n=204)						Mansoura G. New Hospital (n=250)						Significance
	Agree		Neutral		Disagree		Agree		Neutral		Disagree		
	No	%	No	%	No	%	No	%	No	%	No	%	
<i>Teamwork crosses hospital department</i>													
Departments that need to work together cooperate well with each other	168	82.4	15	7.4	21	10.3	205	82.0	27	10.8	18	7.2	$\chi^2=2.696$ P=0.26
Hospital Departments work well together to provide the best care for patient	152	74.5	16	7.8	36	17.6	187	74.8	28	11.2	35	14.0	$\chi^2=2.263$ P=0.323
Hospital Departments don't coordinate well with each other	135	66.2	14	6.9	55	27.0	149	59.6	27	10.8	74	29.6	$\chi^2=2.98$ P=0.225
It is often a burden to work with staff from other hospital departments	160	78.4	12	5.9	32	15.7	169	67.6	17	6.8	64	25.6	$\chi^2=7.188$ P=0.027*
<i>Hospital handoffs and transition</i>													
Some information will be missing when transferring patient from one unite to another	96	47.1	23	11.3	85	41.7	142	56.8	22	8.8	86	34.4	$\chi^2=4.302$ P=0.116
Important patient care information is often lost during shift changes	82	40.2	32	15.7	90	44.1	126	50.4	31	12.4	93	37.2	$\chi^2=4.761$ P=0.093
Problem often occur in the exchange of information across hospital department	100	49.0	27	13.2	77	37.7	146	58.4	24	9.6	80	32.0	$\chi^2=4.218$ P=0.121

χ^2 : Chi-Square test *Significant at P \leq 0.05 Strongly agree and agree = Agree Strongly disagree and disagree =Disagree

Table (4): Staffnurses' Perception towards working condition to the organizational factors within the hospital in Sherbeen General Hospital and Mansoura New General Hospital

Organizational factors within the hospital	Sherbeen G. Hospital (n=204)						Mansoura G. New Hospital (n=250)						Significance
	Agree		Neutral		Disagree		Agree		Neutral		Disagree		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
<i>Organizational learning and continuous improvement</i>													
We are actively doing things to improve patient safety	171	83.8	20	9.8	13	6.4	229	91.6	13	5.2	8	3.2	$\chi^2=12.307$ P=0.002*
After we make changes to improve patient safety we always evaluate their effectiveness	153	75.0	32	15.7	19	9.3	201	80.4	31	12.4	18	7.2	$\chi^2=1.91$ P=0.385
<i>Communication openness</i>													
Staff well freely speak up if they see something that may negatively affect patient care	165	80.9	26	12.7	13	6.4	203	81.2	27	10.8	20	8.0	$\chi^2=3.261$ P=0.196
Staff feel free to question the decisions or action of those with more authority	134	65.7	28	13.7	42	20.6	161	64.4	47	18.8	42	16.8	$\chi^2=2.651$ P=0.266
<i>Feedback and Communication about errors</i>													

Organizational factors within the hospital	Sherbeen G. Hospital (n=204)						Mansoura G. New Hospital (n=250)						Significance
	Agree		Neutral		Disagree		Agree		Neutral		Disagree		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
We are informed about errors that happen in this unit	132	64.7	30	14.7	42	20.6	166	66.4	42	16.8	42	16.8	$\chi^2=0.181$ P=0.913
In this unit we discuss ways to prevent errors from happening again	139	68.1	33	16.2	32	15.7	184	73.6	38	15.2	28	11.2	$\chi^2=5.497$ P=0.064
<i>Non-punitive response to errors</i>													
Staff feels like their mistakes are held against them when they wrote the event report	166	81.4	21	10.3	17	8.3	200	80.0	32	12.8	18	7.2	$\chi^2=10.962$ P=0.004*
When an event is reported it like the person is being written up not the problem	102	50.0	22	10.8	80	39.2	134	53.6	35	14.0	81	32.4	$\chi^2=14.489$ P=0.001*
Staff worry that mistakes they make are kept in their personal file	140	68.6	32	15.7	32	15.7	180	72.0	38	15.2	32	12.8	$\chi^2=12.219$ P=0.002*
<i>Hospital management support for patient safety</i>													
Hospital management provide a work climate that promotes patient safety	110	53.9	44	21.6	50	24.5	154	61.6	49	19.6	47	18.8	$\chi^2=3.066$ P=0.216
The actions of hospital management show	141	69.1	33	16.2	30	14.7	184	73.6	38	15.2	28	11.2	$\chi^2=2.25$

Organizational factors within the hospital	Sherbeen G. Hospital (n=204)						Mansoura G. New Hospital (n=250)						Significance
	Agree		Neutral		Disagree		Agree		Neutral		Disagree		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
that patient safety is a top priority													P=0.325

χ^2 : Chi-Square test
=Disagree

*Significant at $P \leq 0.05$

Strongly agree and agree = Agree

Strongly disagree and disagree

Table (5): Staff nurse perception towards working condition to the hospital environmental factors in Sherbeen General Hospital and Mansoura New General Hospital.

Hospital environmental	Sherbeen G. Hospital (n=204)						Mansoura G. New Hospital (n=250)						Significance
	Agree		Neutral		Disagree		Agree		Neutral		Disagree		
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
There is a special room for smoking	101	49.5	49	24.0	54	26.5	127	50.8	61	24.4	62	24.8	$\chi^2=0.167$ P=0.92
There is a hospital fire extinguishing system.	183	89.7	17	8.3	4	2.0	222	88.8	24	9.6	4	1.6	$\chi^2=0.293$ P=0.864
Are providing special training for the nursing team to deal with the fires.	167	81.9	19	9.3	18	8.8	185	74.0	45	18.0	20	8.0	$\chi^2=6.999$ P=0.03*
There is a dequate lighting system in the unit especially in patient room	180	88.2	13	6.4	11	5.4	202	80.8	27	10.8	21	8.4	$\chi^2=4.679$ P=0.096
Available Bravana the curtains suitable to maintain the privacy of patients.	151	74.0	26	12.7	27	13.2	179	71.6	40	16.0	30	12.0	$\chi^2=1.244$ P=0.537
Available air-conditioners and heat generators to control the room temperature.	152	74.5	32	15.7	20	9.8	170	68.0	44	17.6	36	14.4	$\chi^2=2.841$ P=0.242
There is a program or plane for proper removal and dispose of contaminated material	177	86.8	13	6.4	14	6.9	222	88.8	19	7.6	9	3.6	$\chi^2=2.654$ P=0.265
There is a regular checkup for equipment	168	82.4	22	10.8	14	6.9	203	81.2	31	12.4	16	6.4	$\chi^2=0.306$ P=0.858
Material such as volatne disinfectant and air freshener are used when cleaning the unit	179	87.7	13	6.4	12	5.9	229	91.6	14	5.6	7	2.8	$\chi^2=2.849$ P=0.241
Will be protected from diseases, especially the transmission of the priorities of health care at the hospital.	179	87.7	12	5.9	13	6.4	228	91.2	11	4.4	11	4.4	$\chi^2=1.464$ P=0.481
The hospital a dopt infection control policy in all nursing practice	181	88.7	13	6.4	10	4.9	236	94.4	10	4.0	4	1.6	$\chi^2=5.614$ P=0.06

χ^2 : Chi-Square test
=Disagree

*Significant at $P \leq 0.05$

Strongly agree and agree = Agree

Strongly disagree and disagree

DISCUSSION:

Issues of patient safety have become a priority in health policy and health care management. The rapidity by which health care technologies evolve have required greater attention to safety issues necessary for effective, and efficient delivery of high quality services Yang et al., (2011). Since work in health care is becoming more and more complex the potential for errors is high. Studies from a number of countries indicate unacceptably high rates of medical injury and preventable deaths. Therefore, the challenge of achieving significant improvements in patient safety is one of the key tasks facing healthcare at the start of the 21st century Jones et al., (2013).

Patient safety is a critical component of health care quality. As health care organizations continually strive to improve, there is growing recognition of the importance of establishing a safety culture. Safety culture assessment provides an organization with a basic understanding of safety- related perceptions and attitudes of both managers and staff, it is vital to understand concerns and opportunities from the front-line health care's perspectives regarding patient safety strategies Abdelhadi et al., (2012). Improvement of patient safety in terms of risk and outcomes in a health care system depends on the building of a patient safety culture. A strong patient safety culture is a necessary component to promote patient safety and improve quality of patient care Pettker (2011).

The present study was conducted to assessing the staff nurses' perception toward working conditions affecting patient's safety in Sherbeen General Hospital and EL- Mansoura New General Hospital, which affiliated to Ministry of Health in Dakahlia Governorate. The perception of working conditions was measured regarding factors: workforce-nursing staff factors, personal and social factors, workflow design factors, organizational factors, hospital environmental factors.

Concerning staff nurses' perception towards working condition of workforce that affects patient safety. The finding of the current study showed that the majority of staff nurses in both hospitals, Sherbeen General Hospital and Mansoura New General Hospital agree about using extra staff more than what is needed for patient care. This finding could be due to that there is

adequate staff nurses' to handle workload. These findings in agreement with, Handler et al., (2006) who found that nurses perceived enough staff to handle the workload that positively affect patient outcomes as proved by increased patient satisfaction. These finding was supported by Sandars and cook (2007) who have concluded that the staffing is a major predictor of patient safety. This finding was disagreed with Farag et al., (2011), who stated that the health care sector in Egypt suffers from a severe shortage of bachelor degree nurses and the perceived shortage of all nurses' categories has an implication both on the quality and the efficiency of the health services and patient outcome. In the same line Kane et al., (2007) who mentioned in his study about nursing staffing and quality of patient care revealed that shortage in nurses has a relation to patient outcomes there is an association between decreased number of nurses and failure to rescue.

On the same line, a statistically significance difference was found between both hospitals Sherbeen General Hospital and Mansoura New General Hospital as regards the present enough staff to handle the workload, plan and give the care to the patient. This finding is in agreement with Salem (2008) who has found that the majority of nurses who plan the care they should be one who gave the care to the patients and there are enough nurses to provide patient care.

Concerning staff nurses' perception towards working condition of the personal and social factors regarding supervisor/ manager expectations and action promoting safety. Findings of the study clarified that, the majority of staff nurses in both hospitals, Sherbeen General Hospital and Mansoura New General Hospital were agree about the unit supervisors says good word when sees a job done according to established patient safety. This finding could be related to the supervisor consider her suggestion and reward for improving patient safety as an encouragement of the staff nurses. These finding was supported by Sammer et al., (2010) who reported that a key concept of safety culture is a management that creates and encourages the staff in continuous safety improvements. Khattab (2005) who found that when senior managers in health care provide feedback on their perceived commitment to safety the hospital units experienced fewer errors. Moreover, a study carried out by Shipton et al., (2008) who found that staff perceptions of the effectiveness of senior managers' leadership were linked to lower rates of patient complaints and better clinical governance ratings.

On the same line, a statistically significance difference was found between both hospitals, Sherbeen and Mansoura General Hospitals as regards supervisor/manager seriously consider staff suggestions for improving patient safety, more than half of staff nurse reported that the supervisor / manager seriously consider staff suggestion for improving patient safety. This result come in accordance with Carmel et al., (2006) who have assessed nurse's and nursing assistant's perceptions of patient safety culture in nursing homes, found that majority of nursing staff indicated that their supervisors seriously considered staff suggestions to improve patient safety.

Staff nurses' perception to the teamwork within the hospital units. The findings of this study showed that the highest percent of staff nurses' in both hospitals, Sherbeen General Hospital and Mansoura New General Hospital were agree that when a lot of work need to be done quickly work together as a team to done these work and it was statistically significance. This finding may be due to the staff nurses treat each other with respect and support; also it might be due to the team spirit within the seam unit. This finding was consistent with the study conducted by Bahrami et al., (2013) at Afshar Hospital in Iran who found that teamwork between staff nurses' within hospital units was appositive. In this regard Alahmadi (2010) conducted a study for assessment of patient safety in Saudi Arabian hospitals and found that the nursing teamwork within units has highly perception in King Fahd General Hospital and Ajjad Emergency Hospital. In addition, a study carried out by Sorra and Dyer (2012) who revealed that teamwork between nurses within the unit had the highest percentage of positive response. Also, the findings were in consistent with Salem (2008) who stated that nursing staff perceives they are working as a team and gaining support from each other when there is workload, and they treat each other with respect.

Concerning staff nurses' perception towards working condition of the workflow design regarding teamwork crosses hospital departments. The findings clarified that, the highest percentage of nurses' in both hospitals, Sherbeen General Hospital and Mansoura New General Hospital were agree that departments that need to work together cooperate well with each other. This finding may be due to that the staff nurses have collaborative efforts to provide care for the patients and prefer to work in a team with respecting and supporting themselves, which increase the teamwork abilities. This finding supported by Guise and Sigel (2008) who emphasized that good teamwork is essential for the delivery of effective and efficient care in any clinical setting.

Additionally, Salas and Rosen (2013) who has found that teamwork can improve patient safety and quality of care as the daily interaction between nurses create a back-up behavior among them. This findings were in the same line with Tabrizehi and Sedaghat (2012) who reported that in his study about more than three quarters of staff nurses received high positive response rate to teamwork cross hospital departments. These findings were in consistent with salem (2008) who stated that nursing staff perceives they are working as a team and gaining support from each other when there is workload, and they treat each other with respect. While the results of this studs was contradicting with the finding by Ballangrud et al. (2012) who founded that teamwork cross hospital departments received a low percent among staff nurses. Also Aboulfotouh, et al. (2012) conducted a study to assist patient safety culture among health care providers at a teaching hospital in Egypt and reported that, a low percent responsive for that departments cooperate well with each other.

As regards staff nurses' perception of the hospital handoffs and transition. The study findings clarified that about half percentage of staff nurses' in both Sherbeen General Hospital and Mansoura New General Hospital were agree that problem often occur in the exchange of information across hospital department. This finding could be due to that the documentation process have some disturbances which lead to loss of some information during the transferring from unit to another This finding in accordance with Chen and Lie (2010) conducted a study for measuring patient safety culture in Taiwan using the Hospital Survey, and these stated that medical problems and accidents may occur during shift changes, therefore safe handoff and transition is desirable to assure patient safety in hospital. However, most staff respondents in Taiwan agree that hospitals are not doing enough and the average percentage of positive responses for this dimension hospital handoffs and transition. Also, the finding of this study was disagreed with El-Jardali et al., (2010) whose reported that higher scores on hospital handoffs and transitions were linked to greater likelihood of better perception of safety and also greater likelihood of reporting a higher patient safety grade.

Staff nurses' perception towards working conditions to the organizational factors regarding organizational learning and continuous improvement. Findings of this study showed that, the highest percentage of staff nurses in both hospitals, Sherbeen General Hospital and Mansoura New General Hospital were agree about actively doing things to improve patient

safety. This could be due to that continues organization learning and praising the staff to perform tasks according to patient safety procedure. This finding is agreement with Page (2004) who reported that health care organizations should understand that knowledge and skills are essential issues for safety practice. Also it requires a shared recognition among all the health care providers and leaders that health care process can be designed not only to prevent patient harm but also to avoid the high risk undertaking through implementing a learning culture in which mistakes lead to positive changes, as well as the continuous organizational learning has been known in playing a major role in the development and maintenance of patient safety if the nurse learn from their mistakes. This findings were in the same line with Bahrami et al., (2013) in their study about patient safety culture in Afshar Hospital in Iran, revealed that, staff nurses perceived highly score about the organizational learning and continuous improvement. Moreover a study carried out by AboulFotouh, et al., (2012) whose stated that, the main area of strength regarding patient safety culture in Ain Shams University hospitals was organizational learning which gained the highest positive score.

Whereas staff nurses' perception regarding communication openness. The finding of this study showed that the highest percentage of staff nurse in both hospitals, Sherbeen General Hospital and Mansoura New General Hospital reported agree about freely speak up if see something that may negatively affect patient care. This finding may be due to the staff nurses indicate that they able to speak freely to discuss safety issues or raise concerns related to mistakes or errors that may affect patient safety. This finding supported by Cuthbertson et al., (2007) and Baker et al., (2009) who concluded that effective communication openness and coordination are recognized as being crucial for improving quality and safety in acute medical setting. On the other hand this findings are contrast with Abdou and Saber (2011) who revealed that the nursing staff can't speak up freely if they saw something that may negatively affect patient safety and they can't fell free to question those with more authority. According to Aboulfotouh et al., (2012), whose mention that communication openness dimension was low as a weakness area and need improvement, and stated that, communication openness a method for risk reduction in organization, and this is being addressed at Ain Shams University hospitals with the implementation of quality improvement policy with in different departments.

Concerning to perception levels of feedback and communication about error among staff nurses'. The finding of the present study revealed that the majority of staff nurse in both hospitals, Sherbeen General Hospital and Mansoura New General Hospital agree that they are informed and discuss ways to prevent errors from happening again. This finding could be due to the relationship between nurses and their direct managers seem to be open communication and thier feeling of support from direct managers. This finding congruent with Salem (2008) who found that the staff nurses perceived that they are informed about the errors that happen, it is necessary for them to gain feedback about changes implemented and discuss ways to prevent errors. Moreover, this finding was agree with Al-Ahmadi (2009) who found that public hospitals have high positive response about feedback and communication about error among staff nurses'. Also, this finding was disagreed with Aboul Fotouh et al., (2012) who conducted a study to assessment of patient safety culture among health-care providers at a teaching hospital in Egypt, they results indicated that a low percent of awareness of these dimension feedback and communication about errors and area that potential for improvement. In this regard Tabrizichi and Sedaghat (2012) in their studies about patient safety culture in Iranian primary health centers and concluded that the feedback and communication about errors received low positive response among staff nurses'.

According staff nurses' perceptions to non-punitive response to errors. The present study clarified that, the highest percent of staff nurse in both hospitals, Sherbeen General Hospital and Mansoura New General Hospital were agree about feels like their mistakes are held against them when they wrote the event report. This finding could be due to presence of the punitive culture in the hospital. Therefore, nurses were afraid to report errors and probably afraid from being punished for making errors. This finding was congruent with El-Jardali et al., (2011) in their studies about predictors and outcomes of patient safety culture in Lebanon's hospitals and concluded that non punitive response to error show a weakness area and need for improvement. In addition, Alahmadi (2010) who conducted a study to assessment of patient safety in Saudi Arabian hospitals and he revealed that the lowest percent of positive response by staff nurse related to non-punitive response to errors. In the other hand this finding conversely with Boyle (2004) and Kim et al., (2007) whose reported that the highest percentage of nurses as well as head nurses responded positively about non-punitive response to errors. As well as, the finding indicated that, there was statistically significant between the two hospitals regarding

organizational learning and continuous improvement regarding to non-punitive response to errors. This finding is consistent with the Agency for Healthcare and Quality (2008) who showed that the cultural dimension of non-punitive response error received the highest negative response percent.

Regarding to staff nurses' perception towards working condition to hospital environment factors. The finding revealed that highest percent of staff nurses in Sherbeen General Hospital were agree about that there is a hospital fire extinguishing system. This finding could be due there is adequately nurses aware about the important of fire safety and providing special training for the nursing team to deal with the fires. In this respect supportively Aspden et al., (2010) who reported that health care professionals need to be adequately aware of the environment in which they practice and seeks to eliminate obstacles to prevent errors and frequently monitor the hazardous situations.

On the other hand, the finding of this studs showed that highest percent of staff nurses were agree about that the hospital adopt infection control policy in all nursing practice according to Mansoura New General Hospital. This finding could be due to good committee to infection control policies in these hospitals. This finding congruent with Omran (2006) who mentioned that staff nurse which have enough knowledge about infection control measure that helping to apply principles of safe patient care. In the same line Ahmed, (2007) who mentioned that, health care worker can protect through themselves cooperation from team of infection control. In the same context, only half of staff nurses' in both hospitals were agree with should be percent of a special room for smoking. This finding consistent with Abdou and Saber (2011) whose found that staff nurse perceived the working environment as weak, unsafe work environment and not supporting patient safety, also there is a lack of healthy working conditions in the physical environment.

CONCLUSION:

In the light of the main study findings, it was concluded that the staff nurses' at Mansoura New General Hospital were highly perception with health care working condition that affect patient safety than Sherbeen General Hospital. Moreover the highest percent of perception was shown in personal and social factors at Sherbeen General Hospital, but it was in hospital

environmental factors at Mansoura New General Hospital. While the lowest percent of perception was in work-flow design factors at Sherbeen General Hospital, but it was reporting frequency factors at Mansoura New General Hospital. Additionally, there was statistically significance difference between the nurses' perception at both hospitals regarding personal and social factors.

RECOMMENDATION:

Based on the findings of this study, the following recommendations are suggested:

- 1- Nurses should be focused in area of errors as shift changes, patient transition and handover. Also, provide feedback to staff following their notification of adverse events.
- 2- Improve capacity of health care staff and managers for developing and implementing a patient safety plan.
- 3- There should be a blame-free environment for identifying threats to patient safety, sharing information and learning from events.
- 4- Nurses should encourage participating in enhancing safety activates and communication channels in order to obey safety regulation.
- 5- Nurses are in need to be encouraged to improve reporting of events or incidents related to patient safety.
- 6- There should be a collaborative environment so that all health workers in the healthcare organization can share and exchange information about patient safety.
- 7- It is necessary to establish an appropriate organizational error reporting policy. It is important to educate nurses that reporting error is not shameful and organization needs to learn from errors to build a safer healthcare system
- 8- Implement a reward-based reporting system and ensure timely feedback to staff on how reports are used to improve patient safety.
- 9- Encouraging nurses to speak up and discuss situations on a regular basis will lead to raising awareness and awakening consciousness of patient safety.
- 10- The hospital should construct a team to improve patient safety; this team has roles of assessment, planning programs for safety, monitoring, evaluation and corrective action.

11- Further research is recommended in the field of patient safety to further investigate the relationship between the nursing staff perception about working condition that affect patient safety and their actual performance.

REFERENCES:

- Abdelhai. R., Abdelaziz, S. and Ghanem, N. (2012): Assessing Patient Safety Culture And Factors Affecting It Among Health Care Providers At Cairo University Hospitals. *J. Am. Sci.*; 8(7): 277-285. Available at: <http://www.jofamericanscience.org>. 43
- Abdou, H. and Saber, K., 2011: A baseline Assessment of Patient Safety Culture among Nurses at Student University Hospital, 2011 Department of Nursing Administration, Faculty of Nursing, Alexandria University, Alexandria, Egypt
- Aboul-Fotouh, A.M., Ismail, N.A., Ez Elarab, H.S. & Wassif, G.O. (2012) Assessment of patient safety culture among health-care providers at a teaching hospital in Cairo, Egypt. *Eastern Mediterranean Health Journal*, 18 (4), 372–377.
- Agency for Health Care Research and Quality (2008): Nursing Home Survey on Patient Safety Culture; Background and Information for Translators. 2010. Available at: <http://www.ahrq.gov/legacy/qual/patientsafetyculture/infotransNHSOPS.pdf> [Accessed May 24, 2010]
- Ahmed A. (2007): Assessment of Nursing care provider for children undergoing heamodialysis.
- Alahmadi, H. (2010): Assessment of patient safety in Saudi Arabian hospitals. *Qual. Saf. Health Care*; 19, 17. Available at: Doi: 10.1136/qshe.2009.033258.
- AlAhmadi, H., (2009). Measuring Patient Safety Culture in Riyadh's Hospitals: A Comparison between Public and Private Hospitals. *Egypt Public Health Assoc.*, 84:479-500
- Unpublished master thesis faculty of Nursing Alexandria University; pp. 87-92.
- Aspden P, Corrigan J, Wolcott, J. (2010): editors. Patient safety: achieving a new standard for care. Washington, DC: National Academies press.

- Bahrami, A., Montazeralfaraj, R., Chalak, M., Tafti, D., Tehrani, G. and Ardakani, E. (2013): Patient safety culture challenges: Survey result of Iranian Educational Hospital. Middle-East Journal of Scientific Research 14 (5): 641-649
- Baker, R., Norton, P., Flintoft, V., Blais, R., Brown, A., Cox, J., Etchells, E., Ghali, W., Hébert, P., Majumdar, S., O'Beirne, M., Palaicos Derflinger, L., Reid, R., Sheps, S. and Tamblyn, R. (2004) The Canadian Adverse Events Study: The incidence of adverse events among hospital patients in Canada. *Canadian Medical Association Journal*, 170, 1678-1686. <http://dx.doi.org/10.1503/cmaj.1040498>.
- Ballangrud R., Hedelin B., and Lord L.M., (2012). Nurses' perception of patient safety climate in intensive care units : Across- sectional study. *Intensive and Critical Care Nursing*(2012) 28, 334, Available online at www.sciencedirect.com, journal homepage: www.Elsevier.com/iccn.
- Boyle, S.M. (2004): Nursing unit characteristics and patient outcomes. *Nursing Economics*; 22 (3): 111-123.
- Carmel, M., Hughes, S. and Lapane, K. (2006): Nurses' and nursing assistants' perceptions of patient safety culture in nursing homes. *International Journal Quality Health Care*, 18:281-286.
- Chen C. and Li H. H., (2010). Measuring patient safety culture in Taiwan using the Hospital Survey on Patient Safety Culture (HSOPSC). *BMC Health Services Research* 2010,10:152.
- Cuthbertson, B.; Flin, R. and Reader, T. (2007): Interdisciplinary communication in the intensive care unit. *Current Opinion in Critical Care*, 13: 732- 736.
- El-Jardail F., Jaafar M., Dimassi H., Jamal D, and Hamdan R., (2010). The current state of patient safety culture in Lebanese hospitals: a study at baseline American university of Beirut, faculty of health sciences. *International Journal for Quality in Health Care* 2010; Volume 22, Number 5: pp. 386-395.

- El-Jardali, F.; Dimassi, H.; Jamal, D.; Jaafar, M. and Hemadeh, N. (2011): Predictors and outcomes of patient safety culture in hospitals. *BMC Health Services Research*, 11(1): 45-56. doi:10.1186/1472-6963-11-45.
- Farag, A., Anthony, M., McGuinness, S. and Burant, C. (2011): Keeping patient safe: Work Environmental Predictors Safety Climate and Safe Medication Practices. Midwest Nursing Research Society. Columbus.
- Handler, S., Castle, N., Studenski, S., Erera, S. and Fridsma, D. (2006): Patient Safety Culture Assessment in Nursing Home. *Quality and Safety in Health Care*, 15: 400-40. Available at: [http:// www.qshco.bmj.com](http://www.qshco.bmj.com).
- Jones, K., Skinner, L., Xu, J. and Mueller. K., (2013): The AHRQ Hospital Survey on Patient Safety Culture: A Tool to Plan and Evaluate Patient Safety Programs. Available at: [http://www.ahrq.gov/ downloads pub/advances2/vol2/advancesjones_29.pdf](http://www.ahrq.gov/downloads/pub/advances2/vol2/advancesjones_29.pdf). Last access 10/2013
- Khattab, M. (2005): Development of Manual for Safety Measures in General Critical Care Units. Published Doctoral Thesis. Faculty of Nursing, Alexandria University, *World Journal of Medical Sciences*. 6 (1): 17-26, 1817-3055
- Kane R.L., Shamliyan T.A., Mueller C., Duval S., and Wilt T.J., (2007): The association of registered nurse staffing levels and patient outcomes systematic review and meta-analysis. *Med care*. 45(12): 1195-1204.
- Kim, J., An, K., Kim, M. and Yoon, S. (2007): Nurses perception of error reporting and patient safety culture in Korea. *Western Journal of Nursing Research* 7(9): 827-44.
- Omran A. (2006): Strategies for quality improvement of care on client oriented provider efficient in family planning services, doctoral thesis faculty of Nursing Benha University Egypt.
- Pettker, C., Thung, S. and Raab, C.A., (2011): A comprehensive obstetrics patient safety program improves safety climate and culture. *Am. J. Obstet. Gynecol.*; 204: 216. 1-6.
- Salas, E. and Rosen, M. (2013): Building high reliability teams: progress and some reflections on teamwork training. *BMJ Quality and Safety*; 2(5): 369-373.

- Salem, H. (2008): Nursing Staff Perception toward Factors Related to working conditions Affecting Patient Safety, Master Thesis. Alexandria University, Egypt.
- Sammer, C., Lykens, K., Singh, K. , Mains, D. and Lackan, N. (2010): What is patient safety culture? Journal of Nursing Scholarship; 42(2): 156-165.
- Shipton, H., Armstrong, C., West, M. and Dawson, J. (2008): The impact of leadership and quality climate on hospital performance. International Care; 12(2): 17–23. Available at: <http://www.ahrq.gov/legacyqual/patientsafetyculture/hospappb.pdf>
- Sorra, F. and Dyer, N. (2012): Hospital Survey on Patient Safety Culture: Available at: patient safety culture/hos pap pb
- Tabrizehi N. and Sedaght M., (2012). The First Study of Patient Safety Culture in Iranian Primary Health Centers, Department of Community Medicine, Tahrn University of Medical Science, Tehran, Iran, Acta Medica Iranica journal, 50(7): 505-510. Downloaded from <http://journals.Tums.ac.ir/> on Saturday, April 12, 2014.
- Yang, G., Kelly, E. and Dazi, A. (2011): Patient safety for global health. The Lancet; 337(9769): 886- 87.

تقييم إدراك هيئة التمريض تجاه ظروف العمل التي تؤثر على سلامة المرضى

هبه ناجح خليفة²، صفاء عبد المنعم زهران²، رشا ابراهيم السيد³

الخلاصة

هناك اهتمام واسع النطاق في قياس إدراك هيئة التمريض حول القضايا ذات الصلة بسلامة المرضى لضمان تقديم رعاية صحية آمنة، ولقد هدفت الدراسة الحالية إلي تقييم إدراك هيئة التمريض تجاه ظروف العمل التي تؤثر على سلامة المريض في مستشفى شربين العام ومستشفى المنصورة العام الجديد، وقد أجريت دراسة مقارنه وصفية شارك فيها أعضاء هيئة التمريض وكان عدد التمريض في مستشفى شربين العام 204 وعدد التمريض في مستشفى المنصورة العام الجديد 250 حيث تم استخدام استبيان لقياس ثقافة سلامة المرضى. أسفرت النتائج علي أن أعلى نسبة من إدراك التمريض في مستشفى شربين العام كانت لظروف العمل الخاصة بالقوى العاملة من هيئة التمريض، بينما كانت معايير السلامة البيئية المحيطة بالمريض في مستشفى

المنصورة. ونستخلص من هذه الدراسة إلى أن هناك دلالة إحصائية مختلفة بين أعضاء هيئة التمريض في مستشفى شربين العام والمنصورة العام الجديد فيما يخص ظروف العمل الخاصة بالقوى العاملة. وكانت التوصيات كالاتي ينبغي على هيئة التمريض التركيز على المشاركة الفعالة في أنشطة تعزز سلامة المرضى مثل كتابة تقارير عن الأخطاء التي قد تحدث في الأقسام الخاصة بهم . توفير بيئة آمنة تهتم بسياسة تصحيح الخطأ وليس العقاب وتبادل المعلومات الخاصة بسلامة المرضى. تشجيع الممرضات على التحدث عن الأخطاء ومناقشتها بشكل صريح حتى تستفيد من معالجتها وعدم تكرارها.

الكلمات المرشدة: سلامة المريض ، إدراك التمريض ، هيئة التمريض