

Nurses Awareness Regarding Some Quality Healthcare Concepts at University Students' Hospital in Alexandria

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Abstract: Nurses constitute a major bulk of health service manpower. Additionally, nursing care is a major determinant of successful health care delivery worldwide and identifying nurses' opinion and perceptions toward quality care program is crucial for successful implementation of such program. The aim of this study is to assess the nurses' knowledge and perceptions regarding some concepts of health care quality at Alexandria University Students Hospital. Cross-sectional descriptive study design was conducted in which self-administrated questionnaire was introduced to all nurses available in all shifts (310 nurses) at the selected hospital to assess their knowledge about quality activities in the study hospital and their perceptions regarding certain quality aspects. Results indicated that 57.1% of nurses were aware about the presence of the quality department in their hospital and only 27.1% of them were knowledgeable about the presence of quality standards in the hospital. The majority of nurses responded positively to statements of the suggestions for quality improvement and barriers that hinder the implementation of quality in health services. In relation to nurses' awareness regarding certain quality aspects, there was statistically insignificant increase in the percent frequencies for nurses attending training courses concerning both "quality concepts" items (77.4%) and "suggestions for quality improvement" items (86.8%). It was concluded that planning and implementation of continuous in-service quality training programs for nurses to improve their awareness and acceptance of quality of care are very critical for staff development. Also, designing organizational charts for quality department with name, authority and responsibilities is recommended together with, dissemination of mission, vision and objectives of quality department through the organization, so everyone become aware about them.

Key words: Quality, nursing care, quality awareness, nurses' opinion and quality care

INTRODUCTION

Currently, organizations in several sectors are increasingly concerned with the quality of their services. In this context, the health sector is certainly growing because of its increasing influence on the economy of several countries and also because its clientele has increasingly demanded quality in the satisfaction of its health needs. ⁽¹⁾ In a study done in Saudi Arabia it was found that although the medical professions, particularly

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physicians and nurses, have been aware of the importance of quality in health for centuries, the approaches towards improving quality of care were not structured. Therefore, under the existing conditions of healthcare systems in the developing countries there is a fundamental need to address the issue of quality in healthcare.⁽²⁾ Quality is difficult to define because it means different things to different people,⁽³⁾ and no single definition of health service quality applies in all situations.⁽⁴⁾ The Institute of Medicine defined quality as the degree to which services and treatment increase the likelihood of desired outcomes and are consistent with current professional knowledge.⁽⁵⁾ The most comprehensive and perhaps the simplest definition of quality is that used by advocates of total quality management: "doing the right thing right, right away".⁽⁴⁾

Health care quality is difficult to measure owing to inherent instability, heterogeneity and inseparability features.⁽⁶⁾ Many factors negatively affect the quality of hospital care,

including weak governance and management, health workforce shortages, pharmaceutical shortages, malfunctioning equipment, inadequate record-keeping and diagnostic capabilities, the absence of quality improvement programs and the poor coordination of care with other facilities.⁽⁷⁻⁹⁾

Nurses are leaders in the care delivered to clients and they are the main source of continued contact, which includes orientation regarding standards and rights, as well as providing complete, precise and truthful information regarding the procedures performed by the nursing team and other professionals.⁽¹⁰⁾

Evaluating the quality of nursing practice began with measurement of patient outcomes and usage of statistical methods to generate reports correlating patient outcomes to environmental conditions.⁽¹¹⁾

Besides improving the quality of nursing care, nurses are taking a pivotal role in hospital-wide quality improvement. They are an integral part of hospitalized patients' care;

therefore hospitals demand that nurses more often participate in quality activities with the number of quality activities increasing as quality demands for hospitals increase.⁽¹²⁾

Nurses must be prepared to collect data for quality assessment purpose. They should also be encouraged to be involved, take leadership, and translate their knowledge into an effective quality improvement effort. But there is a limit to how much work can be added to nurses who are already short staffed. It is a trade-off whether to allocate nursing resources to direct patient care or to quality improvement.⁽¹³⁾ Providing quality care is the foundation of professional ethics in nursing.^(14,15) Moreover, nurses have an ethical obligation not only to provide quality care but also to continually strive towards excellence in the quality of the care they provide.⁽¹³⁾

The concept of quality awareness may be defined simply as having knowledge of quality. This means a profound totality of physical, psychological, and philosophical aspects of sensations, perceptions, ideas, attitudes, and

feelings related to an individual or a group having knowledge of the abstract and comprehensive object of quality of a certain item, at any given time, or within a given time span.⁽¹⁶⁾

Identifying nurses' perception toward quality and factors affecting it will explain the way they will function with. Also it will determine their perception's area that requires improvement or corrective action. Moreover, perception of nurses will reflect to some extent their needs, expectations, and desires that they wish to have in their work environment.⁽¹⁷⁾

SUBJECTS AND METHODS

Study Design and Setting

This study was conducted through a cross-sectional descriptive approach at the University Students Hospital. This hospital affiliated to Alexandria University and it provides services to 50000 individual, including university students' undergraduates and post graduates, staff of different faculties, different employees working in the university and their families. The hospital capacity is 216

beds of all specialists except maternal services.

Sampling

All nurses available in all shifts at the selected hospital who accepted to participate were included in the study. All nurses were informed about the aim of the study and oral consents were obtained from the participants. The total number of nurses was 310.

Data Collection Methods

Nurses were subjected to self-administered questionnaire. The questionnaire was divided into 3 parts and included 15 items.

Part 1 included data about some personal and professional characteristics of nurses including name (optional), department, age, marital status, qualifications, years of experience and attending training courses related to quality health care.

Part 2 included nurses' knowledge about quality care activities, objectives and quality standards in the study hospital.

Part 3 included nurses' perception towards

some items related to quality health care, including, concepts of quality, suggestions to improve quality and the barriers that hinder the implementation of quality.

Degree of knowledge and perception were ascertained by yes, no or do not know on all items.

Before starting the field work a pilot study was conducted at some wards in the hospital where 10 nurses were included. In the light of the findings, the questionnaire was put in the final form.

Statistical Analysis

- Cronbach's Alpha coefficient was used to assess the reliability of developed tool through their internal consistency, giving value of more than 0.7
- Statistical Package for Social Science (SPSS) version 13.0 was used for data analysis. Mann Whitney test was used as a test of significance. Spearman's coefficient test was used to assess correlation. Differences at a *P* value of less than 0.05 were considered statistically

significant.

- Percent frequencies of positive responses were calculated and the resulting number is the percentage of positive responses for that particular item.

Percent frequencies =

$$\frac{\text{Number of positive responses (yes) to the statements in the item}}{\text{Total number of responses to the statements (yes,no,and do not know) in the item}}$$

RESULTS

Part A: Personal and professional characteristics of nurses

Ages ranged from 18 to 58 years with mean age of nurses was 33.25 ± 9.41 years. About two thirds (64.2%) of nurses were married. Concerning nurses qualifications, about two thirds of nurses had secondary nursing diploma (64.5%) and about one third (32.9%) had a bachelor degree of nursing, while the lowest percentage of them (1.0% and 1.6%, respectively) had Master degree and technical institute diploma. The highest proportion of nurses was from inpatient department (40.5%), while the infection control was the department of the lowest proportion

of nurses (1.3%).

In relation to years of experience, years of experience ranged from 2 years to 31 years with an average of 13.27 years. As regards the training courses, the majority of nurses didn't attend any training courses related to quality of care (80.0%), compared to only (20.0%) who attended either one quality related training courses (14.8%) or more than one training courses (5.2%).

Part B: Nurses' knowledge about quality activities, objectives and quality standards in Alexandria university student's hospital

Table (1) reveals knowledge of nurses about quality activities in the selected hospital. It indicates that, about one quarter of nurses (27.1%) didn't aware about the presence of quality department in the study hospital; while 57.4% of them reported the presence of quality department in the study hospital. About one half of those reported the presence of quality department mentioned that, quality department in the study hospital didn't provide

them with sufficient information about the concepts of quality (53.4%) and how to improve the quality (58.4%).

Concerning quality objectives in the study hospital, around 40% of nurses had no idea about quality objectives in their hospital ranging from 44.2% for the objective of improving work process, to 35.8% for the objective of optimal utilization of available resources. On the other hand, the lowest percentage of nurses mentioned the absence of all quality objectives in their hospital ranging from 16.5% for "ensuring external customer satisfaction" to 27.1% for "ensuring employees satisfaction".

Regarding the nurses' knowledge about quality standards in the selected hospital. It reveals that, around one half of nurses had no idea about the presence of quality standards in their hospital (45.2%) compared to only 27.1% who are knowledgeable. The majority of those reported the presence of quality standards in their hospital reported that, these quality standards had been explained to them

(89.3%), they trained on its implementation (71.4%); they implement them (84.5%), they compare their work with standards and benefit from the comparison of results with equal percentage of 85.7%.

Part C: Nurses' perceptions regarding certain quality aspects

Table (2) illustrates perceptions of nurses at the study hospital regarding concepts of quality of health services, suggestions and barriers for quality improvement. The highest proportion of nurses responded positively to the statements of "quality concepts" ranging from 84.5% for "the art of care" to 65.5% for "service the maximum number of patients as possible".

As regards nurses' perceptions about the suggestions for improvement of quality in their hospital. The majority of nurses (around 80 %) responded positively to statements of "the suggestions for quality improvement" with the highest proportion for "to improve the human resource management" statement (89.3%). On the other hand, the lowest proportion of

nurses responded negatively to these statements with nearly equal frequencies ranging from 1.5% for "ensuring patient satisfaction" to 2.9 % for 3 out of 7 suggestions for quality improvement.

Regarding their perceptions about the barriers that hinder the implementation of quality of health services. The highest proportion of nurses responded positively to the statements of "barriers that hinder the implementation of quality ' ranging from 82.3% for both "misunderstanding of quality principles" and "non- involvement of all staff in the programs of quality" to 58.1% for" employees' resistance to change". On the other hand, the lowest proportion of nurses responded negatively to statements ranging from 19.7%for "employees' resistance to change" to 5.1% for "traditional managerial systems".

Table (3) reveals percent frequencies of nurses' positive responses to certain quality aspects in relation to nurses' qualifications and attending training courses at the study

hospital. In relation to nurses awareness regarding certain quality items, there was statistically significant association with qualifications except for the item of "quality concepts" ($P=0.092$). It was noticed that the highest frequencies was attributed to nurses who had bachelor degree for all items ranging from 80.0% for "quality concept" item to 89.6% for "suggestion for quality improvement" item.

In relation to attending training courses, there was statistically insignificant increase in the positive frequencies for nurses attending training courses related to "quality concept" items and "suggestions for quality improvement" items and "barriers that hinder the implementation of quality" ($p > 0.05$).

Table (4) shows nurses' positive responses to certain quality items in relation to years of experience at the study hospital. In relation to nurses' awareness regarding quality concepts and barriers that hinder the implementation of quality, there was weak direct significant correlation ($p < 0.05$) i.e. increased years of experience was associated

with slight increase in the frequencies of positive responses. While, regarding suggestions for quality improvement, there was weak direct insignificant correlation ($p=0.471$) with years of experience .

DISCUSSION

In recent years, emphasis on improving the quality of care provided by the hospital has increased significantly and continues to gain momentum. As hospitals face increasing demands to participate in a wide range of quality improvement activities, they are reliant on nurses to help address these demands. Gaining a more in-depth understanding of the role that nurses' play in quality improvement and the challenges nurses face provide important insights about how hospitals can optimize resources to improve patient care quality.⁽¹²⁾

The present study revealed that, only 57.4% of nurses were aware about the presence of quality department in their hospital and less than 50% of them provided with sufficient information about quality

concepts and how to implement quality. In addition a few percent of nurses ranged from 32.6% to 41.6% were aware about the quality objectives in their hospital. Also 45.2% of nurses were not aware about the presence of quality standards in their hospital (Table 1).

This could be due to inappropriate structure of quality department in the hospital where roles and responsibilities of quality department should appear in job description for individuals as well as in the scope of work for organizational units.

Concerning staff development, there is a need for staff development and educational programs to improve quality. The results of the present study showed that, only 20% of nurses had attended training courses related to quality health care compared to 80% didn't attend. Also the findings of the present study (Table 3) showed statistically insignificant increase in the percent frequencies for nurses attending courses related to quality for both "quality concepts" items (77.4%) and "suggestions for quality improvement" items

(86.8%).

In concordance with the findings of the current study, a study conducted at two hospitals affiliated to Health Insurance Organization and Ministry of Health and Population in Alexandria revealed that, attendance of quality training courses is crucial for improving the awareness and acceptance of quality care program which can lead to success of the program.⁽¹⁸⁾

A study conducted in UK to discover sisters' and charge nurses' thoughts about quality assurance and whether their needs and those of their patients were satisfied by the process shows the differences of opinion within the sample towards quality and illustrates that although nurses have a good knowledge of what is quality, they acknowledge that others working within their clinical areas may not be similarly aware. In addition, this study recommends that quality needs to be formally included in pre-and post-basic training.⁽¹⁹⁾

The results of the current study

demonstrated that, high percent of nurses stated both "misunderstanding of the quality principals" (82.2%) and "unqualified staff" (75.5%) as barriers for implementation of quality (Table 2). This supports the finding that only 20% of nurses had attended training courses related to quality. Moreover, Deming who is considered as one of the main contributors of quality revolution pointed that training and retraining of employees is critical to the success of the corporation. He stated that, education and training are investment in people; they help to avoid employee burnout, reenergizing employees, and give them a clear message that management considers employees to be a valuable resource.⁽²⁰⁾

The majority (82.3%) of nurses mentioned "noninvolvement of all staff in the quality program" as a barrier for implementation of quality (Table 2). This directs the attention to the importance of participation of all staff in designing and implementing quality programs as a mean to facilitate its implementation and success.

Moreover, participation is considered as a very powerful motivator and a mean to overcome resistance to change.⁽²¹⁾

Members of the sample in a study conducted in UK were unhappy with certain problems of quality assurance associated with external and internal auditing, training needs and financial implications.⁽¹⁹⁾

For the highest percentage of nurses (84.5%), quality in health services means "art of medical care" (Table 2). This is supported by the finding that, 89.1% of nurses suggested that ensuring patient satisfaction can improve quality. Also it directs the attention that patient satisfaction is highly considered by nurses.

Concerning suggestions for quality improvement, the majority of nurses (85.1%) suggested that "ensuring employees' satisfaction" can improve quality (Table 2). This could be contributed to the worth shortage of nursing staff that result in bad professional, social and psychological effect on the nurses, so employees' satisfaction become one of the most important items

that draw the attention of most nurses.

The results of the present study also revealed that, although there were some differences among nurses' in their awareness of quality health care, the majority of them are commonly agreed that quality health care as a concept related mainly to the art of medical care (84.5%). Also, their suggestions to improve quality health care were mainly to both improvement of human resources management and "ensuring patient satisfaction" with nearly equal proportion (89.3% and 89.1% respectively) and the barriers that hinder the implementation of quality related mainly to "non involvement of all staff in the programs of quality" and "misunderstanding of the quality principles" with nearly equal proportion (82.3% and 82.2% respectively) (Table 2). These findings are supported by similar study which suggested that, although quality may mean different things to different people, at different times, there must be elements

"common" to all definitions and reflect appreciation of the particular involvement and role of the patient in determining policy affecting care provision.⁽²²⁾

The revealed differences among nurses within the study setting supported by Handy⁽²³⁾ who mentioned that organizations are as different as the nations and societies of the world, they have different cultures, set of values, norms and beliefs reflected by the events of the past and by climate of the present, by the technology and the type of work, by their aims and the kind of people that work in them.

In relation to factors affecting nurses' responses regarding certain quality items analysis of nurses in the present study sample by qualifications, revealed differing perceptions to quality concepts, suggestions for quality improvement and barriers that hinder the quality implementation (Table 3).

Similarly a study conducted in

Australia to investigate factors which influenced nurses' attitudes to cost effectiveness and quality management strategies indicated that, overall the nurses surveyed had positive attitudes to quality management techniques since this was perceived as professionally positive. Analysis of nurses in the sample by educational levels revealed differing attitudes to these management interventions.⁽²⁴⁾

Concerning nurses' responses to certain quality items in relation to years of experience the current study showed that, nurses with greater years of experience had more positive responses regarding quality concepts and barriers that hinder the quality implementation (Table 4). Similarly another study done in USA revealed that nurses with greater than 10 years experience had more positive attitudes and perceptions than nurses with 10 years or less experience. Also nurses in administration/management positions had

more positive attitudes than did staff nurses and no significant correlation was found between education level and nurses attitudes. The majority of participants agreed that education in cost-effectiveness and quality of care issues should begin in basic nursing school and should be included in employer orientation programs.⁽²⁵⁾

Nursing care is a major determinant of successful health care delivery worldwide.⁽²⁶⁾ Additionally unpublished thesis done in Alexandria it was found that nurses constitute a major bulk of health service manpower. Their role in maintaining and promoting health, preventing illness and upgrading health services and quality of care can't be de-emphasized.⁽²⁷⁾ Consequently, knowledge of nurses' and perception can provide a basis for the development of educational, administrative

and practice modalities that impact positively on the quality of care.⁽²⁸⁾

RECOMMENDATIONS

Concepts of quality care should be introduced in health care organization through seminars and meetings. In addition, planning and implementation of continuous in-service quality training programs for nurses to improve their awareness and acceptance of quality of care are very critical for staff development. Participation of all working nurses in the different quality activities is important to generate commitment to quality and facilitate its implementation and success. Designing organizational charts for quality department with name, authority and responsibilities is recommended. Also, dissemination of mission, vision and objectives of quality department through the organization, so everyone become aware about them.

Table 1: Nurses' knowledge about quality activities, objectives and quality standards at Alexandria University Students' Hospital (Alexandria, 2010/2011)

Items	No. of Respondents	Response					
		Yes		No		Don't know	
		No.	%	No.	%	No.	%
Presence of quality department in the hospital	310	178	57.4	48	15.5	84	27.1
Provision of sufficient information about the concepts of quality	178	83	46.6	95	53.4	-	-
Provision of sufficient information about how to implement quality	178	74	41.6	104	58.4	-	-
Objectives of Quality program:							
Improving work process	310	112	36.1	61	19.7	137	44.2
Ensuring patients satisfaction	310	129	41.6	51	16.5	130	41.9
Ensuring employees satisfaction	310	101	32.6	84	27.1	125	40.3
Optimal utilization of available resources	310	127	41.0	72	23.2	111	35.8
Improving the performance of nursing staff	310	119	38.4	74	23.9	117	37.7
Use of modern technology in the used equipment	310	110	35.5	76	24.5	124	40.0
Presence of Quality Standards	310	84	27.1	86	27.7	140	45.2
Standards in the hospital:							
Have been explained to you	84	75	89.3	9	10.7	-	-
You have been trained on its implementation	84	60	71.4	24	28.6	-	-
You always implement them in your work	84	71	84.5	13	15.5	-	-
Compare your work with standards	84	72	85.7	12	14.3	-	-
You benefit from the comparison of results	84	72	85.7	12	14.3	-	-

Table 2: Perception of nurses at Alexandria University Students' Hospital regarding certain aspects of health services quality (Alexandria, 2010/2011)

items	Response (n=310)					
	Yes		No		Don't know	
	No.	%	No.	%	No.	%
<u>Statements of perception of quality concepts items:</u>						
Accurate diagnosis and proper treatment.	245	79.0	10	3.3	55	17.7
The art of medical care.	262	84.5	15	4.8	33	10.7
Availability of luxurious services in the hospital.	228	73.5	32	10.4	50	16.1
Using modern technology in providing health services.	232	74.8	26	8.4	52	16.8
Service providers' knowledge of different information relevant to their jobs.	232	74.8	20	6.5	58	18.7
Availability of adequate technical services.	237	76.4	21	6.8	52	16.8
The optimal utilization of available resources.	247	79.7	20	6.4	43	13.9
Service the maximum number of patients as possible.	203	65.5	52	16.8	55	17.7
<u>Improvement of quality need:</u>						
Top management support for the quality application	266	85.8	9	2.9	35	11.3
Improving the process (The work steps, methods and system)	258	83.2	9	2.9	43	13.9
Ensuring patients satisfaction	276	89.1	5	1.5	29	9.4
Ensuring employee's satisfaction	264	85.2	9	2.9	37	11.9
The existence of laws, regulations and channels of communication that organize the work in hospital	258	83.2	6	2.0	46	14.8
Improving the human resources management	277	89.3	7	2.3	26	8.4
The optimal utilization of available resources	270	87.1	8	2.6	32	10.3
<u>The barriers that hinder the implementation of quality:</u>						
Employees' resistance to change	180	58.1	61	19.7	69	22.2
Top management does not support the quality programs	232	74.8	29	9.4	49	15.8
Traditional managerial systems	233	73.2	16	5.1	61	19.7
Unavailability of the appropriate environment for implementation	247	79.7	27	8.7	36	11.6
Misunderstanding of the quality principles	255	82.3	18	5.8	37	11.9
Not involving all staff in the programs of quality	255	82.3	18	5.8	37	11.9
Reduced budget	253	81.6	19	6.1	38	12.3
An increasing demand on health services	240	77.4	18	5.8	52	16.8
Unqualified staff	234	75.5	33	10.6	43	13.9

Table 3: Percent frequencies of nurses' positive responses to certain quality aspects in relation to qualifications and attending training courses at the study hospital. (Alexandria, 2010/2011)

Quality Items	*Percent frequencies of nurses' positive responses									
	Qualifications						Attending training courses			
	Secondary nursing diploma		Technical institute diploma		Bachelor degree of nursing		Yes		No	
	No.	%	No.	%	No.	%	No.	%	No.	%
Quality concept	1219	74.0	0	0.0	659	80.0	384	77.4	1486	75.2
**Test of significance	P= 0.092						P= 0.586			
Suggestions for quality improvement	1211	84.0	5	71.4	646	89.6	377	86.8	1478	84.4
Test of significance	**P= 0.001						P= 0.621			
Barriers that hinder the implementation of quality	1352	72.9	0	0.0	767	82.7	407	72.9	1704	76.6
Test of significance	**P= 0.028						P= 0.183			

*percent frequencies of Positive responses = $\frac{\text{Number of responses to the statements in the item}}{\text{Total number of responses to the statements (yes, no and don't know) to items}}$
 ** P based on Mann – Whitney test P < 0.05 is significant

Table 4: Nurses' positive responses to certain quality items in relation to years of experience at the study hospital (Alexandria, 2010/2011)

Quality awareness items	Years of experience	Test of significance
Quality concepts	* rs=0.052	**P=0.035
Suggestions for quality improvement	rs=0.041	P=0.471
Barriers that hinder the implementation of quality	rs=0.122	**P=0.032

* rs means correlation coefficient

** P correlation is significant at the 0.05 level

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