

Nursing staff Perception about Quality Improvement and Organizational Development

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Abstract

Background: The ability to use quality improvement activity in different situations of healthcare lead to organizational development. **The study aimed to** assess nursing staff perception about quality improvement and organizational development. **Design:** a descriptive study was utilized in this study. **Setting:** the study was conducted at all inpatient units and critical care units at Kafr El Dawar General Hospital. **Sample** composed of 280 of nursing staff. **Tools:** two tools were used for data collection; quality improvement questionnaire and organizational development questionnaire. **Results:** The highest percentage of nursing staff perception was related to knowledge regard quality improvement followed by attitude then knowledge regard quality improvement tool, and the least one was related to knowledge regard quality improvement methods. The highest percentage of nursing staff perception regard organizational development was related to organizational clarity and standards, followed by management and human resource while financial management of organizational development was last one. **Conclusion:** There was a statistically significant positive correlation between quality improvement and organization development. **Recommendation:** Encourage training courses, seminars and workshop for improving nurse's knowledge about quality improvement and educate nursing staff how to use best practice when selecting interventions for improving quality.

Key words: Nursing staff, Organization development, Perception, Quality improvement.

Introduction

In contemporary times, there is evidence of a growing concern about the quality improvement in health care. Quality is defined as a set of attributes that includes a level of professional excellence, efficient use of resources, a minimum of risk to the customer, a high level of satisfaction by users, considering the existing social values so the need for quality improvement is very important (**World Health Organization (WHO), 2018**).

Clinical quality improvement practices are defined as “any systematic, data-guided activity that is designed to bring about the immediate improvement of care in a local setting”. Quality improvement practices seek

to bring about immediate changes in the local setting (**Mormer & Stevans, 2019**).

Quality improvement models present a systematic, formal framework for establishing QI processes in health care. The common QI models include: (Plan-Do-Study-Act [PDSA] cycles); PDSA cycles is used to test interventions on a small scale, Six Sigma is a method of improvement that strives to decrease variation and defects, and Lean is an approach that drives out waste and improves efficiency in work processes so that all work adds value (**Dahlin 2017**).

Quality improvement in health care organization is to improve patient health (clinical) outcomes that involve both process outcomes and health outcomes, improve efficiency of managerial and clinical

processes through improving processes and outcomes relevant to high-priority health needs and organization reduces waste and costs associated with system failures, avoided costs associated with process failures, errors, and poor outcomes. (Cramer, Singh, Flaherty & Young, 2017).

Nurses play a pivotal role in help hospitals meet quality improvement guidelines, define initiatives for quality improvement, thereby enable hospitals and other health care settings to effectively use the expert role of the nurse in quality improvement (Draper, Felland, Liebhaber & Melichar, 2018). focusing on nursing training and education is most important to achieve improvement and organization development (Krau, 2019).

Organization development based upon the behavioral sciences that either in the short term period or the long term period have the potential to develop in an organizational setting. Enhanced knowledge, expertise, productivity, satisfaction, income, interpersonal relationships, team spirit, and other desired outcomes such as goodwill are the factors that are meant to prove to be advantageous to the individual, group, team, society, region, nation or the whole humanity. The dimensions of organization development are; human resources, financial management and organizational clarity (James, 2018).

Significance of study:

Improving quality of nursing care has been a core concern for all professional health care providers and patients. Nurses are the 'frontline', who patients most likely encounter, spend the greatest amount of time with and depend on for recovery during hospitalization. Furthermore, patients, identified as the experts on receiving quality nursing care, are wiser and more assertive these days (Singer, Benzer & Hamdan, 2015).

An organization development is a system, comprised of individual parts working alone and in concert with others. Rarely there can be failure or success of one part without a corresponding effect on other and /or the whole system. Essentially organization development, when done right, makes the inevitable and challenging change—a group effort amongst internal and external willing participants (Vukic, 2015).

From my experience, the hospital chain of activities is cyclic and needs quality improvement to seek a higher level of performance. Quality improvement can pull out hospital from inefficient traditional concepts to perform efficiently and hence generate better patient outcomes by utilize technology and tools. Quality improvement is very important to nurses to improve knowledge, skills and attitudes that impact on patient health outcomes, so this study was conduct to assess nursing staff perception about quality improvement and organization development.

Aim of the study

The study aimed to assess nursing staff perception about quality improvement and organizational development.

Research Questions:

- What is the nursing staff perception about quality improvement?
- What is the nursing staff perception about organizational development?
- What are the relation between nursing staff perception about quality improvement and organizational development?

Subjects and method

Research design:

A descriptive correctional design was utilized to conduct this study.

Setting:

The current study was conducted at Kafr Eldawar General Hospital in all inpatients departments and critical care units. Inpatient departments consisted of: Medical

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departments include general medical (1unit), Hepatic and hematemesis (1 unit), Pediatric (1 unit), Burn (1 unit), Psychological and nervous (1 unit), and Cardiac (1 units). **Surgical departments** include general surgical unit A, general surgical B and vascular surgery (3 units), Urology (1 unit), ENT (1 unit), Orthopedic (1 unit) Obstetric (1 unit) and Brain and neurology. **Critical care units** include General Intensive Care Unit (ICU), Poisoning unit, Pediatric ICU, Burn Intensive Care Unit, Psychological ICU, ICU incubator, Preeclampsia unit, Hemodialysis unit and Cardiac care unit.

Sample:

The study subject consisted of 280 nursing staff who are responsible for providing directly care to patient who working at the above mentioned setting, were calculated according to sample size using the following formula **Emmelle & Nickl (2014)**.

$$n = \frac{N}{1 + N(e)^2}$$

'N' is the total number of nurses who are present at Kafr Eldawar General Hospital N= 665.

'e' is coefficient factor = 0.05 .

Sample size is = 280 of nursing staff.

Tools of data collection:

Two tools were used for data collection:

Tool (1): Quality Improvement questionnaire: It was developed by **(Governor & Haveman, 2012)** to assess nursing staff perception toward quality improvement, and it was modified by researcher.

It was included two parts:

It consisted of two parts:

Part I: Personal characteristics: to collect data related to personal data of nursing staff included, age, gender, marital status, qualification, department, department years of experience, hospital years of experience and

attending courses about quality improvement and participation in quality committees).

Part II: Quality improvement questionnaire: Intended to identify nursing staff perception toward quality improvement; it consisted of 56 items, divided into four dimensions; knowledge about quality improvement (12 items), attitude about quality improvement (23 items), knowledge about quality improvement tool (16 items) and knowledge about quality improvement methods (5 items).

Scoring system: The dimensions of QI score as the follow:

- 1- Knowledge about quality improvement, the nursing staff responses were measured by three points Likert scale as follow: always (3), sometimes (2) and rarely (1). The total scoring was 36 score. The score convert into percentage: good knowledge $\geq 75\%$ (≥ 27), average knowledge 60% to 75% (21 to 27) and poor knowledge $< 60\%$ (< 21).
- 2- Attitude about quality improvement: nursing staff responses were measured by five points scale Likert scale, the total scoring was 115 score. The score convert into percentage: positive attitude $> 75\%$, (> 86), negative attitude $< 60\%$ (< 68).
- 3- Quality improvement tool and method: nursing staff responses were measured by yes (2), no (1). **(Wafaa, Mohamed and Ahmed, 2019)**.

Tool II: Organizational development questionnaire

It was developed by **(Riland trust council & Rivers council, 2018)** and it was modified by researcher, to assess nursing staff perception regarding organizational development. It consisted of 43 items, divided into three dimensions; organizational clarity and standards (11 items), management and human resource (18 items), and financial management (14 items).

Scoring system:

Staff nursing responses were measured on a five points Likert scale ranged from strongly agree (5) to strongly disagree (1). The scores of each dimension summed up, converted into percent score, the total perception scoring was 215 score. The score convert into percentage: high perception $\geq 75\%$, (≥ 161), moderate perception 60% to 75% (129 to 161), low perception $< 60\%$ (< 129) (Zakaria et al., 2019).

Pilot study:

A pilot study was conducted in the last week of December 2019 to ensure clarity and relevancy of the study tools. It was carried out on 10% of the total sample (28) nursing staff, and included from the subjects. It has also served to estimate the time needed for filling the tools. It ranged between 10 to 15 minutes.

Reliability of tools:

It was measured using Cronbach's Alpha test. Quality improvement questionnaire were 0.923 and organizational development scale were 0.817.

Ethical consideration:

The study conducted with careful attention to ethical standards of research and the rights of the participants. The participants rights were protected by ensuring voluntary participation, so the informed consent obtained by explaining purpose, nature, time of conducting the study, potential benefits of the study, how data was collected, expected outcomes and the respondents rights to withdrawing from the research study at any time in case of violation of this rights. The respondents assured that the data was treated as strictly confidential; furthermore, the respondents' anonymity maintained as they were not required mentioning their names.

Statistical design:

The collected data were revised, coded, tabulated and using statistical Package for Social Sciences (SPSS version 23). Descriptive statistics were applied in the form

of means, standard deviation for quantitative variables and frequency and percentages for qualitative variables. Qualitative categorical variables were compared using chi-square test. Pearson correlation coefficient was calculated between variables. Statistical significance was considered at p-value $P < 0.05$, and considered highly statistical significance at p-value $P < 0.001$.

Results:

Table (1): Shows that more than one third of nursing staff (47.5%) were aged from 30- <40 years old with mean age 30.58 ± 6.71 years. The majority of nursing staff (98.9% and 74.6%) of the nursing staff were female and married respectively, in addition (49.3%) of the nursing staff had nursing diploma and more than two thirds of the nursing staff (71.4%) had training courses in nursing and more than one third of nursing staff (48.6%) participate in quality committees.

Table (2): Shows that the highest percentage of nursing staff perception regard quality improvement was related to knowledge regard quality improvement (67.8%) followed by attitude (61.6%) then knowledge regard tool with (61.5%) and the least one was related to knowledge regard methods regarding quality improvement (57.4%).

Figure (1): Reveals that nearly more than half of nursing staff (52.5%) have good knowledge level regarding quality improvement.

Table (3): Shows that highest percentage of nursing staff perception regard organization development was related to organizational clarity and standards with Mean \pm SD (22.76 ± 4.42) and percentage (71.1%), followed by management and human resource with Mean \pm SD (49.00 ± 14.14) and percentage (68.1%). while financial management of organizational development was last one with Mean \pm SD (37.51 ± 13.55) and percentage (63.6%).

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Figure (2): Reveals that half of nursing staff (50%) had high perception level regarding organizational development.

Table (4): As shown in the table there is positive statistically significant correlation between quality improvement items and total organization development items.

Table (1): Frequency distribution of nursing staff regarding demographic characteristics (n=280)

Demographic characteristics	No	%
Age		
<30	118	42.1
30-<40	133	47.5
40+	29	10.4
Mean ±SD	30.58±6.71	
Gender		
Female	277	98.9
Male	3	1.1
Married status		
Un married	71	25.4
Married	209	74.6
Qualification		
Nursing diploma	138	49.3
Nursing institution	62	22.1
Bachelor of nursing	80	28.6
Department		
Critical	94	33.6
Medical	98	35.0
Surgical	88	31.4
Experiences		
<5	94	33.5
5-<10	87	31.1
10+	99	35.4
Mean ±SD	7.84±5.24	
Training courses		
Yes	200	71,4
No	80	28.6
Participation in quality committees		
Yes	136	48,6
No	144	51,4

Table (2): Mean and standard deviation of nursing staff perception regarding quality improvement

Quality improvement	Minimum	Maximum	Mean \pm SD	%	Ranking
Knowledge regarding quality improvement	7.00	19.00	12.88 \pm 4.03	67.8	1
Attitude regarding quality improvement	4.00	87.00	53.57 \pm 24.49	61.6	2
Knowledge regarding tool of quality improvement	.00	16.00	9.84 \pm 5.71	61.5	3
Knowledge regarding method of quality improvement	1.00	5.00	2.87 \pm 1.24	57.4	4

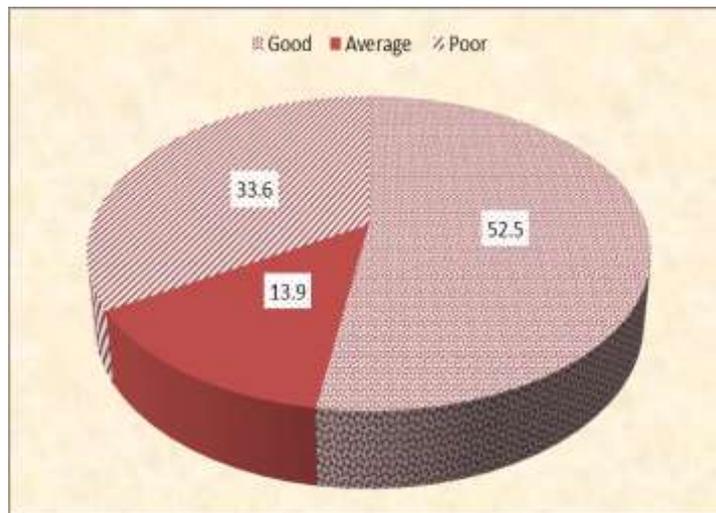


Figure (1): Nursing staff knowledge levels regarding quality improvement

Table (3): Mean and standard deviation of nursing staff perception regarding organizational development

Organizational development	Minimum	Maximum	Mean \pm SD	% score	Ranking
Organizational clarity and standards	11.00	32.00	22.76 \pm 4.42	71.1	1
Management and human resource	8.00	72.00	49.00 \pm 14.14	68.1	2
Financial management	3.00	59.00	37.51 \pm 13.55	63.6	3
Total	13.00	121.00	109.28\pm28.43	71.9	

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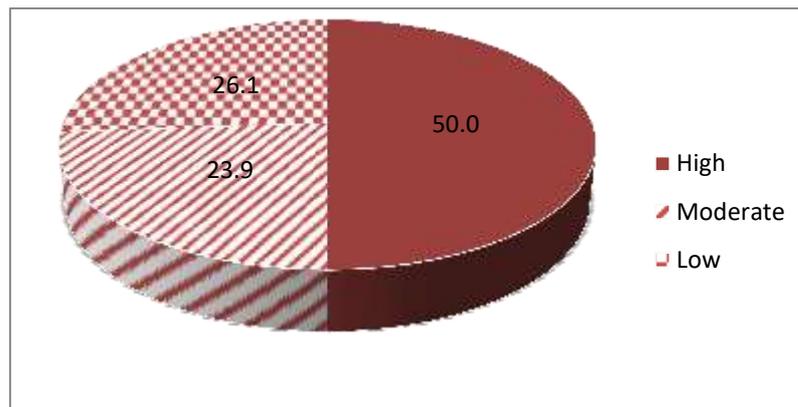


Figure (2): Nursing staff perception levels regarding organizational development

Table (4): Correlation matrix between quality improvement and organizational development

		Total knowledge	Total attitude	Total knowledge tool	Total knowledge methods	total organizational clarity and standards	total management and human resource	total Financial management
Total knowledge	r	1	.889**	.919**	.822**	.638**	.704**	.677**
	p-value		.000	.000	.000	.000	.000	.000
Total attitude	r	.889**	1	.882**	.794**	.589**	.838**	.824**
	p-value	.000		.000	.000	.000	.000	.000
Total experiences	r	.919**	.882**	1	.858**	.683**	.705**	.645**
	p-value	.000	.000		.000	.000	.000	.000
Total methods	r	.822**	.794**	.858**	1	.522**	.697**	.617**
	p-value	.000	.000	.000		.000	.000	.000
total organizational clarity and standards	r	.638**	.589**	.683**	.522**	1	.396**	.276**
	p-value	.000	.000	.000	.000		.000	.000
total management and human resource	r	.704**	.838**	.705**	.697**	.396**	1	.840**
	p-value	.000	.000	.000	.000	.000		.000
Total Financial management	r	.677**	.824**	.645**	.617**	.276**	.840**	1
	p-value	.000	.000	.000	.000	.000	.000	

Discussion

In relation to quality improvement dimension, the present study revealed that the highest percentage of nursing staff perception regard quality improvement was related to knowledge followed by attitude then knowledge regarding tool of quality improvement, and the least one was related to knowledge regard methods regarding quality improvement. From the investigator point of view, nurses need much information, plentiful data, courses, training on quality improvement methods and tools and how applied quality improvement in nursing care.

According to **Hwang and Park, (2015)** who conduct study on " Relationships between evidence-based practice, quality improvement and clinical error experience of nurses" he reported that nurses had positive attitudes towards quality improvement and there was a perceived lack of skills regarding the use of quality improvement methods and utilizing QI tools.

In relation to distribution of nurses' knowledge regarding quality improvement, the finding of the current study illustrated that nearly half of the nursing staff always participate in quality improvement activities. From the investigator opinion, the hospital applies quality and there is a quality unit at hospital so nurses participated in quality improvement activities. This result agreed with **Eberhardt et al. (2016)** who conducted study about "Perception of nurses about the quality management in nursing care" he reported that despite nurses have a lot of function, they participate in quality improvement activities. On the other hand, the finding inconsistent with **Izumi, (2012)** who conducted study on " Quality improvement in nursing: Administrative mandate or professional responsibility" He

reported that insufficient staffing is a major cause of deterioration of participation in quality improvement activity.

In relation to distribution of nurses' attitude regarding quality improvement, the finding of the current study illustrated that more than half of the nurses have positive attitude about quality improvement. From the investigator point of view, the hospital encourages nursing staff to attend courses and workshops related to quality improvement so nurses have positive attitude. This finding agreed with **Hwang and Park, (2015)** who reported that nurses had positive attitudes towards quality improvement.

In relation to distribution of nursing staff ' perception of nursing knowledge regarding methods of quality improvement, the finding of the current study illustrated that more than two thirds of the nursing staff have knowledge about Plan Do Study Act as methods of quality improvement, from investigator point of view. Nurses have knowledge due to nurses taken training courses about quality improvement. This finding agree with **Taylor et al. (2014)** stated that Plan-do-study-act (PDSA) cycles method is widely accepted in healthcare improvement. This finding inconsistent with **Hwang and Park, (2015)** he found that nurses had lack of knowledge and skills in applying specific quality improvement methods especially Plan Do Study Act method.

Concerning to distribution of nursing staff ' perception regard organizational development, the finding of the current study illustrated that half of nursing staff had high perception level regarding organizational development. This may be due to the nurses are involved and engaged in development of

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hospital and hospital give opportunities to nurses to engaged. This finding accorded with **Kutney, (2016)** who conducted study on "Nurse Engagement in shared governance and patient and nurse outcomes "he reported that highest percentage of nurse engage in hospital development and had higher job outcome scores.

The current study declared that there was a statistical positive significant correlation between quality improvement and organizational development. From the investigator point of view, the nurses had high level of quality improvement knowledge, and had positive attitudes towards quality improvement lead to organization development.

This finding is accordance with the finding of **Shirey et al. (2015)** who conducted study about "differences between quality improvement, evidence-based practice, and research" he Showed that there was a positive, correlation between quality improvement and organization development.

Conclusion:

The present study was concluded that the highest percentage of nursing staff perception was related to knowledge regard quality improvement followed by attitude then knowledge regard tool, and the least one was related to knowledge regard methods regard quality improvement. In addition to the highest percentage of nursing staff perception regard organizational development was related to organizational clarity and standards, followed by management and human resource while financial management of organizational development was last one. There was a statistically significant positive correlation between quality improvement and organizational development.

Recommendations:

For hospital administration:

- Educate nursing staff about quality improvement to provide the essential skills to participate in quality improvement activities in nursing care.
- Encourage training courses, seminars and workshop for improving nurse's knowledge about quality improvement.
- Educate nursing staff how to use best practice when selecting interventions for improving quality.
- Hospital should provide adequate resources that will be required to sustain work environment improvement such as adequate staffing and budget for training nursing staff.
- Encouraging all members of the nursing staff to contribute in developing of a hospital policy.
- Articulate the values of quality improvement in meetings.
- Reward nurses that participate in quality improvement contributions in their performance evaluations.
- Improving communication system which enables transfer of information about hospital activity.

For nursing staff:

- Provide opportunities for all nursing staff to participate in quality improvement teams.
- Promote integrity and openness with staff nursing by sharing their thoughts and feelings that enhances organizational development.

For further research

- Assess the effects of quality improvement on hospital productivity.
- Investigate barrier to implement quality improvement in hospital.

- Evaluate the effectiveness of training programs regarding quality improvement on patient safety.

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ادراك طلاب ومعلمي التمريض تجاه حقوق طلاب التمريض وعلاقتها برضاء طلاب التمريض

هاله كمال فوزى - كريمه احمد السيد - فوزيه فاروق كامل

القدرة على استخدام نشاط تحسين الجودة في مواقف الرعاية المختلفة تؤدي إلى التطوير التنظيمي. لذا هدفت هذه الدراسة إلى تقييم ادراك افراد التمريض حول تحسين الجودة والتطوير التنظيمي. حيث أجريت الدراسة في جميع الوحدات الداخليه ووحدات العناية المركزة بمستشفى كفر الدوار العام. على ٢٨٠ من افراد التمريض. وقد اظهرت النتائج بإرتباط أعلى نسبة لادراك افراد التمريض بالمعرفة (٦٧.٨%) المتعلقة بتحسين الجودة يليها الموقف (٦١.٦%) ثم المعرفة فيما يتعلق بأدوات (٦١.٥%) تحسين الجودة ، وأقلها كانت مرتبطة بالمعرفة فيما يتعلق بأساليب تحسين الجودة (٥٧.٤%). وكانت أعلى نسبة ادراك لموظفي التمريض فيما يتعلق بالتطوير التنظيمي تتعلق بالوضوح التنظيمي والمعايير ، تليها الإدارة والموارد البشرية في حين جاءت الإدارة المالية للتطوير التنظيمي في المرتبة الأخيرة. وقد لخصت الدراسة بوجود علاقة ارتباط موجبة ذات دلالة إحصائية بين تحسين الجودة وتطوير المنظمة. وقد اوصت الدراسة بتشجيع الدورات التدريبية والندوات وورش العمل لتحسين معرفة الممرضات حول تحسين الجودة وتنقيف طاقم التمريض حول كيفية استخدام أفضل الممارسات عند اختيار التدخلات لتحسين الجودة.