



Original Article

Nurses' attitudes toward quality improvement in hospitals: Implications for nursing management systems

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ABSTRACT

Background & Aim: Quality improvement in hospitals is a systematically widely used framework that improves patient care quality delivered by health care professionals. This study assessed the attitude of nurses toward Quality Improvement.

Methods & Materials: A quantitative research approach was used. A total of 361 nurses working in two government hospitals and two private hospitals in the Philippines were selected using convenience sampling. The data collected using a self-administered questionnaire was started in March-April 2019. To identify the association between nurse demographic characteristics and perceived quality improvement, an independent sample *t*-test, a one-way analysis of variance with a post-hoc Tukey HSD test, and a Pearson's product-moment correlation were conducted using SPSS.

Results: Nurses have high positive quality improvement attitude scores. The age, salary, and hospital type, influence quality improvement attitude scores.

Conclusion: Nurses have a positive attitude towards qualitative improvement. In addition, nurses' age, salary, and public hospitals' work have a positive qualitative improvement than nurses working in private hospitals.

Introduction

During the past decades, the importance and momentum of hospital quality improvement (QI) has dramatically increased internationally. In health care, QI is a systematically widely used framework that improves patient care quality delivered by health care professionals (1). QI involves unceasing efforts in achieving steady and established process results for both patients and the health care institution (2). The implementation of QI in a health care organization has several benefits, including improved patient health, decreased morbidity and mortality, (1) effective and efficient

managerial processes, and decreased medical errors and failures (2,3).

In health care systems, QI is used to improve patient quality care (2). Also, health care professionals have an important role in refining the quality of care in hospitals. Like other professionals, nurses play a pivotal role in improving quality care services, since they are the primary patient care providers and the part of health care teams concerned with patient safety (3). This might be the reason why nurses play a significant role in improving overall hospital quality.

In connection to this, the Philippines is acknowledged as having a highly trained



nursing workforce. Improving the country's quality of health care is on the government's health agenda (4). Consequently, hospitals in the country have to become more sophisticated in trailing activities that fundamentally contribute to hospital quality achievement and performance and patient safety (5). This increase in hospital sophistication could enhance the use of existing resources in carrying out work tasks. Meanwhile, the country's private health care system offers more constant care and better facilities compared to public hospitals (6). Because of these higher-quality private hospitals' issues, staff nurses from public hospitals intend to leave their workplaces (4).

Private hospitals demonstrated better performance in comparison to the public hospital towards environment control and nurses inter collaboration. Also, if patients seek treatment, they will generally have more choice about the type of care they receive. It is most likely one reason for better performance of nurses for private hospitals (7). Meanwhile, there is an outcry in health care delivery services concerning the lack of quality patient care and the poor health care standard in public hospitals. For example, one integrative review reported concerning working conditions in public hospitals that affects QI. These are increased patients' workloads, longer working hours, lack of staff, limited health equipment, and budgetary constraints (8).

This might affect nurses not engaging in hospital QI in public hospitals. An unsatisfied employee increases its absenteeism and turnover rates affecting rendering quality improvement care. Thus, improving QI is therefore critical if we want to accelerate quality patient care. Meanwhile, several kinds of research noted that the necessity of nurses' attitude affects its QI permeates health care. The rationale for measuring the nurse's QI quality attitude is that good performance imitates good-quality care practice. Comparing performance among other health care providers could inspire better performance. (9). To put on perspective, if nurses have put extra effort toward QI, have more positive fulfilling

work, perceive trust and common values, and more engaging employees and potentially leading to higher nurse retention rate and improved quality of patient care.

This might result in nurses suffering from overload and understaffing as well as delayed patient treatment, thus affecting the quality of care provided. This challenge is significant, and, in some hospitals, the quality is deteriorating rather than improving (10). Hence, the hospital must value the nurses' potential contribution to carrying out QI processes. Better public health contributes to progress and development in different spheres of society.

Nevertheless, regardless of any healthcare institutions in the country, it has been carefully changing the health care system to progress the quality of care. These strengths are looked-for, particularly for the nurses who are the primary care provider is the best person to assess the patient's health status towards the delivery of health care services (8).

Professional nurses in QI's role constitutes of ability in carrying out organizational QI goals practices and QI assessment-improvement influencing patient outcomes related to nursing practices (3). In these QI roles, nurses' professional quality care standards could improve nurses' professional status and inspire nurses to pursue excellence in their practice. The QI services are thoroughly related to the attitude level relative to these services (7). So, it is noteworthy to note that if nurses have a positive attitude towards IQ, it creates a positive nurse-patient relationship, then improving patient outcomes. Therefore, the nursing administrator must configure the clinical setting to assist the staff nurse's ability to undertake QI action for care improvement

Extensive research has shown that providing baseline data on the nurses' attitude pertaining to QI could improve healthcare quality. It is also extensively acknowledged that nurses' active involvement is vital for QI in any organizational setting (3,10,11). However, the Philippines' QI initiatives have not usually

obtained the full engagement of nurses due to recent changes to QI policy. While several hospitals have considered nurses' role in QI as crucial, much uncertainty still exists about the relationship with QI attitudes among Filipino nurses. To date, there has been little agreement on what is the attitude of Filipino nurses pertaining to QI.

Given the scarcity of related studies in Filipino nurses' culture and context, this study assessed such attitudes; the present study was conducted to assess the attitude of nurses toward QI and the challenges they experience. This study can also offer significant insights into how hospitals can enhance human resources in improving quality care, nurses' empowerment, and QI initiatives moving forward. This study aimed to assess the attitude of nurses toward QI.

Methods

Study Design

A cross-sectional design of a quality-improvement attitude among Filipino nurses was conducted in this study.

Settings and participants

A total of 361 nurses working in two government hospitals and two private hospitals in the Northern Philippines were selected using convenience sampling. These hospitals were all tertiary, and each had a bed capacity for 300 to 400 patients. The inclusion criteria were the following: a) being a registered nurse, b) working as a nurse in the current hospital for the past 6 months, and c) consenting to participate in the study.

The data collected using a self-administered questionnaire was started in March-April 2019. The surveys were then distributed to each nursing staff member along with a detailed cover letter. A blank manila envelope was left in the room for survey collection, and the researcher left the room while participants were filling out the surveys. Completed information from the

survey was returned in specially marked envelopes placed in each clinical setting.

This study was carried out after receiving approval from the Ethics Review Committee of each health care institution. Verbal approval for this study was additionally obtained through the Private Hospital Nursing Research Council. Each department's manager approved permission to survey each department. Informed consent was implied by participation in the survey, and the confidentiality of information was discussed. Each survey also included a cover letter explaining the study purpose, the right to refuse to participate, and the fact that participation implied consent.

Questionnaire

Quality Improvement Nursing Attitude Scale (QINAS). The QINAS is a 35-item scale that assesses nurses' attitudes regarding quality competency values in QI based on their workplace practices (12). It contains a 5-point Likert scale (strongly agree to strongly disagree), and the scores are summated to give a total ranging from 35 to 175. Higher QINAS scores indicate nurses' positive attitudes regarding quality competency values in QI and their workplace practices. The Cronbach's alpha reliability of the previous study was high at 0.97 (12). In this study, Cronbach's alpha is 0.91.

Statistical Analysis

The data were examined using Statistical Package for the Social Sciences (SPSS1) software (SPSS Inc., Chicago, IL, USA) version 24. To identify demographic characteristics associated with the QI scores, descriptive statistics such as frequency, percentage, mean, and standard deviation analyses generated descriptive statistics. To identify the association between nurse demographic characteristics and perceived QI, an independent sample *t*-test, a one-way analysis of variance with a post-hoc Tukey HSD test, and a Pearson's product-moment correlation were conducted. The *p*-value of <0.05 was defined as significant.

Results

A total of 445 questionnaires were distributed in four hospitals; however, only 361 questionnaires were retrieved due to incomplete ones (response rate=81.12%).

The nurses' demographic characteristics are shown in table 1. More than half of the respondents were female ($n=230$, 63.7%), single ($n=296$, 79.1%), and working in a

private hospital ($n=231$, 64%). Meanwhile, most of the respondents were holders of bachelor's degrees ($n=327$, 90.6%) with an average age of 29.47 years ($SD=7.107$). The nurses' monthly average wage was Php 13545.38 ($SD=6128.153$), with them working 43.32 ($SD=4.974$) hours per week on average.

Table 1. Nurses' demographic characteristics ($n=361$)

Demographic characteristics	N	%	Mean	SD
Age			29.47	7.107
Gender				
Male	131	36.3	1.64	.481
Female	230	63.7		
Marital status				
Single	266	73.7		
Married	81	22.4	1.33	.641
Separated	4	1.1		
Widow	10	2.8		
Educational attainment				
BSN Grad	327	90.6	1.12	.394
MSN Unit	25	6.9		
MSN Grad	9	2.5		
Years in the area			3.51	2.790
Area of practice				
Emergency room	125	34.6		
Patient department	62	17.2		
Medical-ward	24	6.6		
Surgical-ward	12	3.3		
Intensive care unit	71	19.7	3.37	2.445
Operating room	14	3.9		
Obstetrics-Gynecology ward	36	10.0		
Pediatric ward	16	4.4		
Dialysis room	1	0.3		
Salary (Php*)			13545.38	6128.153
Working hours			43.32	4.974
Hospital type				
Government	130	36.0	1.64	.481
Private	231	64.0		

* 1 US dollar=52 Php

Table 2 reveals the QI scores of nurses. The statement, "I enjoy being a part of a change in my unit to improve quality of care," was rated the highest (rank 1) among the QI statements ($m=3.95$; $SD=0.882$), while the statement, "When I see a risk of compromised safety, I keep it to myself," was rated the lowest (rank 35). The overall QI score was 128.43 ($SD=0.70$), indicating high positive nursing attitudes.

The association between the nurses' demographic and work setting characteristics and the nurses' QI scores are discussed in table 3. The age, area of practice, salary, and hospital type is significantly associated with the QI attitude. Age ($r=0.315$, $p=0.000$) and salary ($r=0.271$, $p=0.000$) have a weak positive correlation. In terms of hospital type, nurses who work in public hospitals have better QI attitude scores than nurses working in private hospitals ($t=6.798$, $p<0.001$).

Quality improvement in the nursing management

Table 2. Nurses' quality improvement attitude scores (n=361)

Item#	Item	Rank	Mean	SD
2	I enjoy being a part of a change in my unit to improve the quality of care.	1	3.95	0.882
13	I believe I have a role in analyzing unsafe practices, errors and designing system improvements.	2	3.93	2.401
1	I value my own contributions to positive quality outcomes of care in local care settings.	3	3.92	0.933
14	I believe quality outcomes are dependent on the following: my personal acceptance of patient contributions to care, accurate use of electronic medical records, nursing research, and ongoing collaboration with team members.	4	3.91	0.81
7	I value an active partnership with patients in the planning, implementation, and evaluation of care.	5	3.9	0.967
10	I believe I should participate in structuring the work environment to facilitate the integration of new evidence into standards of practice.	6	3.89	0.764
6	I believe that continuous quality improvement is an essential part of the daily work of the bedside nurse.	7	3.89	1.021
16	I respect other health care team member's perspectives and expertise in making decisions about patient care.	8	3.88	0.842
8	I respect and encourage the individual expression of patient values, preferences, and expressed needs in my patients' care.	9	3.81	0.982
15	I believe I should be able to communicate with all healthcare team members to provide quality care effectively.	10	3.81	1.034
11	I value technologies that support clinical decision-making, error prevention, and care coordination.	11	3.78	0.805
19	I believe technology and the use of the electronic medical record allow me to collaborate with other nurses and healthcare professionals to achieve safe quality outcomes for my patients.	12	3.78	0.807
33	When I see a risk for compromised safety, I tell a supervisor.	13	3.77	0.784
3	I believe I have value in the institutional efforts to improve care.	14	3.77	0.875
18	When evaluating safety risks for my patient, I consider ALL of the following: the input from the patient, family members, other healthcare professionals, documented information in the electronic medical record, and current evidence.	15	3.75	0.945
17	When I plan to care for my patient, I believe best practice, patient preferences, and interdisciplinary contributions are essential to safe quality care.	16	3.68	0.97
20	When I see a risk for the compromised safety of my patient, I immediately consider if this is a system-wide problem.	17	3.68	3.55
24	I believe that my managers' valuable information about the work habits that affect the quality of care in my unit.	18	3.66	0.755
26	I feel that I am involved in the process of quality improvement in important ways.	19	3.66	0.912
28	When patient safety is compromised, I feel that it is reliably reported.	20	3.65	0.914
35	When I see a risk for compromised safety, I hope it will get better.	21	3.64	0.968
30	I feel that my voice is heard when I express my views about my unit's quality of care.	22	3.63	0.883
5	I believe good patient care is dependent on the use of tools that measure quality improvement.	23	3.62	0.95
4	I believe that consistent deviation from standards of care negatively affects the quality of care.	24	3.6	1.073
29	I feel that we have a 'culture of safety' in my unit.	25	3.59	0.956
21	I believe nurses should not deviate from best practices in order to save time or work effort.	26	3.55	1.007
31	When I see a risk for compromised safety, I report it by documentation.	27	3.53	0.86
25	I believe that issues and problems involving patient safety and quality care are adequately addressed by my unit manager or other leaders in a timely manner.	28	3.53	0.928
22	I often seek to examine patient preferences and current research to guide me in my efforts to reduce patient harm or enhance quality outcomes.	29	3.53	0.937
9	I value how research contributes to my practice by providing evidence for best practice.	30	3.5	1.239

12	I believe I should be involved in the design, selection, and use of information technologies to support patient care.	31	3.48	1.15
27	I feel that issues with patient safety are seen as a 'system problem' by my managers.	32	3.47	0.796
34	When I see a risk for compromised safety, I express concern to another employee.	33	3.4	0.944
23	When I see other nurses deviating from the standard of care, I feel powerless to influence their practice.	34	3.29	0.823
32	When I see a risk for compromised safety, I keep it to myself.	35	3	1.135
Total quality improvement attitude scores			128.43	0.70

Table 3. Association between the nurses' demographic characteristics and the quality improvement attitude (n=361)

Variables	Mean±SD	Statistics	P-value
Age^a	29.47±7.107	$r = 0.315$	0.000**
Gender^b			
Male	3.71±0.16	$t = -0.579$	0.563
Female	3.65±0.22		
Marital status^b			
Single	3.66±0.14	$t = 0.509$	0.676
Married	3.67±0.28		
Educational attainment^c			
Bachelor degree	3.66±0.21	$t = 4.429$	0.133
Postgraduate	3.13±0.16		
Years in Area^a	3.51±2.79	$r = 0.092$	0.080
Area of practice^c			
Emergency room	3.24±0.17	$df=34, F= 16.331$	0.665
Patient department	3.13±0.32		
Medical-ward	3.61±0.17		
Surgical-ward	3.70±0.42		
Intensive care unit	3.47±0.28		
Operating room	3.66±0.19		
Obstetrics-Gynecology ward	3.43±0.24		
Pediatric ward	3.32±0.38		
Dialysis room	3.34± 0.17		
Salary^a	13545.38±6128.153	$r = 0.271$	0.000**
Working hours^a	43.32±4.974	$r = 0.030$	0.570
Hospital type^b			
Government	3.98±0.484	$t = 6.798$	0.000**
Private	3.49±0.739		

Note: **Significant at .001 level.

Abbreviations: ANOVA, analysis of variance; NQS, nurse quality safety; PE, practice environment. ^aPearson correlation coefficient. ^bIndependent *t*-test

^cANOVA.

1 US dollar = 52 Php

Discussion

In this study, nurses reported high positive QI attitude nursing attitudes. This result is slightly higher than in previous studies conducted in Saudi Arabia (13). This might mean that different countries have different cultural backgrounds pertaining to the QI attitude approach. However, while all nurses in the Philippines consist of Filipino nurses, the majority of nurses in Saudi Arabia were expatriate nurses (e.g., Indian, Filipino, Egyptian, etc.). In addition, in the

analysis of QI attitude, Alshehry et al. (14) described that each country has its own culture and population needs, which share a set of goals with the health care system. These unique cultural differences might contribute to the different QI attitudes of nurses. According to Fong et al. (15), a homogenous culture is defined as a set of behavioral expectations coupled with skills that can easily address issues and problems pertaining to QI. There are different reasons

why distinct hospitals have varying types of QI attitude, and they can include leadership style, organizational culture (16), a lack of consensus (17), and resource constraints. However, factors affecting QI attitude and cultural differences were not discussed in this study. Thus, further research could be explored pertaining to the above factors.

The statement, "I enjoy being a part of a change in my unit to improve quality of care," was rated the highest (rank 1) among the QI statements. This implies that nurses might view themselves as part of a team, which could result in feeling a sense of ownership (17). Thus, it could also stimulate enthusiasm and teamwork, enhancing a positive QI attitude. In the study by Cruz et al. (4), nurses who felt part of a team strived to contribute positively and with enthusiasm and work proactively. In the analysis by Almazan et al. (18), the feeling of being part of a team increased the participants' motivation, initiative, and creativity. Therefore, teamwork and collaboration are vital in the quest for success in providing quality patient care.

The statement, "When I see a risk of compromised safety, I keep it to myself," was rated the lowest among the QI statements. This implies that nurses are assertive in promoting patient safety. In a previous study by Alshehry et al. (19), nurses were likely to show clinical excellence in bedside care when provided with clear direction and support by patients and the health care team. Nurses' assertiveness in notifying doctors and nursing administrators is also expected when they are unsure about nursing care, carrying out diagnoses, and patient treatment, in order to reduce risk and prevent major medical errors (20). Also, notifying higher authorities when nurses commit errors can immediately provide patients with appropriate care and prevent further harm (19). Some demographic work characteristics of nurses significantly influence QI attitude. Specifically, age is associated with QI attitude. The average age in this study was 29.47 years old. This means that nurses of this age might have already acquired learning experience pertaining to QI. According to Wood et al.

(21), this average age is considered the period of life in which an individual faces a large number of individual transition experiences. Regardless of whether they are negative or positive, these experiences improve individual well-being, which is expected to lead to optimism and task-focused behavior (4). Also, once individuals have already gained experience, they can provide adaptive task-focused strategies, which lead to success (22), taking into account that individuals with experience have strategies and have been found to have high work achievement. However, a developmental context among nurses, relating to the age at which achievement strategies are developed, has not been examined in this study. Thus, further studies could explore the achievement strategies that nurses use during their developmental age.

Compensation plays a significant role in motivating and retaining nursing staff. In this study, salary is associated with QI attitude. This is worth considering since the greater the compensation that nurses receive, the better their work performance is (23). This might be because the salary brings a feeling of security and is a financial reward for the work. Another study stated that compensation plays an important role in defining employees' job satisfaction levels and QI (10). For example, Alshehry et al. (20) described that lower compensation could lead to job dissatisfaction, less motivation to work, higher absenteeism, and intent to leave. According to the Department of Labor and Employment (24) in the Philippines, the average monthly salary in this study is higher than the government's minimum. This might mean that the nurses studied have higher pay satisfaction and create more quality work improvements in the workplace.

Health care organizations have made considerable efforts to improve the quality of nursing services. In this study, hospital type is associated with and a predictor of QI attitude. Specifically, government hospitals have more QI attitudes than private hospitals. This is worth noting since the Philippines' health care services have

undergone massive changes to improve the quality of health care and compete effectively with the private sector (5). This is similar to one previous study conducted in the Middle East, which specified that continuous training courses and nurses' skills and competencies were more established in government hospitals (25).

Meanwhile, public hospitals have a positive QI attitude than nurses working in private hospitals. This is worth noting since public hospital health services usually have a higher number of patients than private hospitals. They are found to have a stressful environment with inadequate conditions, where the nursing staff are overworked, there is a lack of drugs for the patients, and the professionals' physical and emotional exhaustion is favored, leading to increased absenteeism and work accidents (15). Thus, all of these might create less motivation and commitment to patients at work. Efforts are needed, and many nurses welcome the idea of QI. However, without reflecting on the attitudes towards QI, this can affect a quality standard in nursing care. Therefore, strategies towards QI standards to provide high quality and safe care is warranted. This could be clear communication in specifying the QI purpose and strategy, enabling the voicing of concerns throughout creating change process; Greater QI awareness and consistent practice in the health care setting, consistent QI training, and workshop, improvement of necessary equipment must be in place and properly maintained, warranting that everybody is heard and felt involved, and celebrating successes, no matter how small or big.

Limitations

The study was carried out in two private hospitals and two government hospitals in the Philippines, limiting the results' generalizability. A cross-sectional design was also used, which does not allow for causal inference with QI attitude. In addition, when using a self-administered questionnaire, participants may not feel encouraged to provide accurate, honest

answers. The psychometric properties, including construct validity, were not measured in the study, affecting the results' overall validity.

Conclusion

This study assessed the attitude of nurses toward QI. Nurses attained high positive QI attitudes. Nurses have a positive attitude towards qualitative improvement. In addition, nurses' age, salary, and public hospitals' work have a positive qualitative improvement than nurses working in private hospitals. This study can also offer significant insights into how hospitals can enhance human resources in improving quality care, nurses' empowerment, and QI initiatives moving forward.

The basis in assessing QI attitude is the belief that noble performance mirrors good quality practice; thus, comparing nurses' performance could encourage better performance and quality care. These findings can serve as a guide in establishing approaches to awareness of and confidence improvements in nurses' QI attitude. Methods such as simulation techniques (e.g., case studies, mock equipment, standardized) can be used for QI attitude, involving complete practice and pertaining to teamwork across all ages. In addition, continuous professional development, such as courses, workshops, and training, can create a continuous reflection for ongoing improvement. Similarly, if staff nurses experience time constraints, one-to-one training could be recommended. Finally, benchmarking of the good practices in public and private hospitals could be promoted. This benchmarking can be used to evaluate quality performance.

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Conflict of Interest

The author declares no conflict of interest.

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