

Nurse's Perception of Practice Environment and Its Relation to Quality of Patient Care in Port Said Selected Governmental Hospitals.

Sabah Mahmoud Ahmed Mahran

Lecturer in Nursing Administration Department, Faculty of Nursing, Port Said University

Abstract:

Background: Nurses practice environment has been identified as an important factor in improving the quality and safety of hospital care. However, there are few studies that assess the characteristics of the hospital work environment and its impact on patient outcomes. **Aim of the study:** To evaluate the characteristics of the nurses' practice environment in relation to quality of patient care as perceived by staff nurses. **Subjects & methods:** **Research design:** Quantitative descriptive design was utilized. **Setting:** This research was carried out in four selected governmental hospitals in Port Said city. These hospitals are; Port Said General Hospital; El-Nasser Psychiatric Mental health and Port –Fouad. Those hospitals affiliated to Ministry of Health. **Subjects** included (300) of staff nurses who are working in previous setting. They participated in research study dealing with characteristics of nurses' practice environment regarding the quality of patient care. **Tool of data collection:** One questionnaire was used to collect data about eight characteristics of nurses' work environment and quality of patient care. **Results:** It revealed that the highest level of agreement score (75.7%) of characteristics of the nursing practice environment scale on the unit level was for supportive nurse manager relationships, followed by working with other nurses who are clinically competent while 17.5% of studied nurses reported agreement regarding support for education in nursing work environment. **Conclusion:** There were statistically differences between characteristics of nurses practice environment and quality of patient care at units' levels from nurses' perceptions. **Recommendation:** implement continuous training for nurses' managers to enhance effective communication that create an environment which permits expressing ideas and encourage staff nurses to participate in decision-making and problem-solving process. Activate strategic plans need to include decentralization of decision-making.

Keyword: Nurses practice environment; quality of care; patient safety; Job satisfaction.

Introduction

The healthy practice environment is the crucial fact and challenge for the nurse managers and leaders so they have to usually apply frequent assessment for the nursing practice environment to maintain and improve the health of environment.⁽¹⁾

Evaluation of health care in the country tends to focus more on organizational and structural aspects than on empirical outcomes of health

care^(2&3). Thus, the vital characteristics of the practice environment were :working with other competent nurses, good nurse–physician relationships, nurse autonomy and accountability, supportive nurse managers and supervisors, control over nursing practice and work environment, support for education, research and evidence-based practice, adequate nurse staffing and high quality patient care” (American Nurses Credentialing^(4,5). The most critical components that impacts on the job satisfaction and nurses' evaluations of the quality of care provided at the unit

level are practice environment and the accessibility of sufficient assets^(6&7).

Many problems within the working environment condition include inadequate staffing, providing safe care, long working hours, and a sense of not being valued or involved in decision-making processes concerning patients' problems. These problems lead nurses to leave the profession early in their career.⁽⁸⁾

The environment is an impact on the patients, nurses, and organization outcomes wherein care is delivered. When nurses are given authority in line with their responsibility, autonomy, and control over patient care resources, they are in a better position to establish positive relationships with physicians. Additionally, nurses can manage the resources as appropriate for meeting patient needs and for communicating problems to the physician in a timely manner⁽⁹⁾.

Significance of Study:

Nurses' practice environment has been associated with the quality of patient care and nurse's satisfaction. So a healthy work environment is important to patients, nurses, nurse managers, and the community at large⁽¹⁰⁾. Many evidence of literatures provide that the professional work environment create high quality of patient care that attracts and retains nurses in a time of high nurse turnover and low retention rates⁽⁹⁾ The findings of this study might assist the hospital administrators, nurse's leaders, and nurses to initiate strategies for reducing the nursing shortage, increasing the quality of patient care, enhancing of nurses-physician collaboration, attracting and retaining nurses, and promoting health work environment in Egyptian healthcare system.

Aim of the study:

Evaluate the characteristics of the nurses' practice environment in relation to quality of patient care. This aim was achieved through;

1. Identifying characteristics of nurses' practice environment as perceived by staff nurses.
2. Analyzing the relation between nurses' practice environment and quality of patient care.

Research questions.

1-What are the characteristics of the nurses' practice environment in the Port Said hospitals?

2-Is there a relation between nurses' practice environment and quality of patient care?

Subject and Methods

Research Design:

In this study, the quantitative, descriptive design was used to describe the research question and achieve study aim. The researcher decided to use this design to provide detailed information about the characteristics healthy practice work environment for staff nurses and its relation to quality of patient care.

Study Setting:

The research was carried out at four governmental hospitals namely; Port Said General Hospital; El-Nasser ;Psychiatric Mental health and Port –Fouad. Those hospitals affiliated to Ministry of Health. Also, hospitals provide medical surgical care; maternity and childhood care and Psychiatric and mental health care.

Each hospital has one floor includes gynecology clinics, antenatal unit,

delivery and labor unit, operation rooms, postpartum unit, and neonatal intensive care unit except psychiatric and mental health hospital. The researcher decided to conduct this research in Port Said region exactly in governmental hospitals because they provide the healthcare for the majority of the population.

Study Subjects:

The total target population in this research was (300) staff nurses who are working at four governmental hospitals namely; Port Said General Hospital; , Al-Nasser, Psychiatric Mental health and Port –Fouad. Those hospitals affiliated to Ministry of Health. Systematic random sampling technique was used. The researcher calculated the sample size from the whole target population based on the equation used by^{(11) et.al}

$$\text{Equation: } n = \frac{Z^2 * (p) * (1-p)}{C^2}$$

Z = Z value (e.g. 1.95 for 95% confidence level)

p = percentage picking a choice, expressed as decimal (5 used for sample size needed)

C = confidence interval, expressed as decimal (e.g., .05 = ±5)

Tools of data collection:

The data was collected by using a self-administrated questionnaire developed by researcher. It consisted of three parts:

Part (I): The socio-demographic data developed to collect general information's about studied subjects. It included; age, gender, and level of education, holding specialty or sub specialty certification, years' experience of staff nurses in nursing and working hours).

Part (II): This part was developed by Aiken & Patrician⁽¹²⁾ which aimed to measures eight characteristics of a productive and satisfying work environment. This tool consists of 58 questions. It divided into eight essential professional nursing practices characteristics scales;1: Collegial/Collaborative RN/MD Relationships (6 items). 2: Perceived Support for Education (4 items). 3: Clinical Autonomous Decision-Making (9 items). 4: Control over the Context of Nursing Practice (8 items). 5: Perceived Adequacy of Staffing (6 items). 6: Working with other Nurses who are Clinically Competent (4items). 7: Supportive Nurse Manager Relationship (10 items). 8: Culture in which concern for the Patient is paramount (11 items). **Part (III):** It is used to assess the quality of patient care.

Scoring system:

Second part of the tool which measure the characteristics of the practice environment. It is a 4-point Likert scale; the answers were ranged from strongly agree (4point) to strongly disagree (1-points). Third part of tool measures the quality care scale started by 0 which, mean dangerously low; 5 mean safe but not much more; and 10 mean very high qualities.

Content Validity &Reliability

Practice work environment scale has been tested in many series studied. Coefficient of the NWI-R is 0.96; the coefficient for each subscale ranges from 0.75 to 0.79. In this research, the internal consistency was 0.85. The content validity of tool was done by the penal of experts who are professor in specialized nursing administration for the testing the content clarity,

sentences understanding &, time required filling up the tool. The experts finding indicated that the questionnaire was appropriate but it has some challenges in understanding the language used or in measuring the concepts being asked because may some of staff nurses were not familiar with it. Also, the tool was translated from English to Arabic language. The researcher carried out expert's comments.

Field work

After receiving the official permission from the directors of the four Hospitals to conduct the study, the researcher conducted meeting with nurse administrators and head nurses in four hospitals for the purpose of providing them information about the study that included the criteria for selection of the staff nurses and determined the methods of distribution in 40 units in four hospitals. The researcher provided structured questionnaires with a professionally written cover briefly explained the objectives of the study and asking staff nurses to participate with fully awareness of the participation is option in the study and no penalty.

Pilot Study:

The pilot study was carried out for assessing the feasibility of questionnaire, testing the clarity, and determining the time required to fill the tool. The researcher calculated the pilot study subjects based on 10% of total sample size of the research which equal of 30 registered nurses. It was done over two week's period covering three hospitals. The researcher gave 4 weeks' period for data collection from (1/3/ 2016) to (31/ 3/ 2016).

Administrative and ethical considerations:

The official permission obtained from the administration's (hospital directors) of the four hospitals in Port Said city to start data collection after explanation of the aim of the research. In addition, every staff nurse signed consent form paper which explained the objectives of the research and clarified their right to accept or refuse participation. Privacy and confidentiality are ensured to all participants' data.

Statistical analysis:

Data analyses were performed by using (SPSS) version 22. The data were analyzed to determine demographic data and environmental scale to obtain participants percentages and frequency proportions; a mean score and standard deviation for the practice environment scales and subscales to judge which the highest and the lowest means for figuring out the factors that required improvement in current nursing environment and analysis such as bivariate statistical test to the relationships between socio-demographic data and practice environment scale by using different statistical test of comparison which includes: Pearson correlations, independent t-Test, and Analysis of Variance (ANOVA) test.

Results

Based on the information of socio-demographic characteristics of the studied sample, nearly about one-third (31.1%) of studied sample age ranged from 25 to 30 years old. The majority of them (92.3%) were females. Maximum of them (93.3%) had a diploma in nursing. Only (6.7%) had bachelor of nursing

science. Most of the studied sample (92.2%) had more than 5 years of experience in nursing profession while above half (57.4%) of them had experience in current hospitals as well as 75.3% hadn't any plan in staying and serving in current hospitals. In regard to the work pattern shifts in is 12 hours shift or 8 hours shift which is rotated every two weeks on the day, afternoon and night shifts each month in each hospital. Most of studied nurses whose were working as 12 hours shift (80%). Moreover (55.4%) were working in the critical units at mean= 2.786 and SD is 0.3203. Two- third (69.65) of studied sample were agree regarding present of the characteristic of nurses' practice environment from staff nurses' perception.

Table 1: summarized the ranking Mean scores of eight characteristics of the nursing practice environment on the unit level as staff nurses perception. 75.7% was for supportive nurse manager relationships, followed by working with other nurses who are clinically competent (75.46%); and culture in which concern for the patient is paramount (75.2%). Perceived adequacy of staffing (69.6%); collegial/ Collaborative RN/MD relationships and clinical autonomous decision-making were mild level of agreement among studied nurses (62.7%). Only 17.5% of studied nurses reported less present of agreement regarding support for education in nursing work environment.

Regarding, assessed quality of patient care on the units as perceived by staff nurses presented in **table 2:** The staff nurses evaluated the quality of patient care on their units as (9.7%) equating to quality of care is dangerously low. While 5.7% responding it is safe but

not much more, and (85.6%) exposing very high quality of care. Over all response mean scores for nurse assessed quality of patient care indicated (very high quality) as perceived by staff nurses.

Table 3. Tabulated the characteristics of nurses' practice environment and demographic variables were performed to highlight the means differences between them. The results found that there were statistically significant difference in relationship to age and level of education, control over practice and practice competency at ($p= 0.010$). While there was no statistically significant difference in staff nurses gender and all characteristics of nurses' practice environment except the supportive nurses manager relationship at ($p= 0.055$). conversely, the level of education reflected no statistically significant difference in the relation to all practice environment characteristics except on the decision making of the nurses at ($p= 0.014$). Moreover, there were a clear statistical difference in years of experience in current hospital and control of nursing practice at ($p= 0.032$) as well as the organization culture at ($p= 0.039$) which is concern for the patient is paramount. However, staying and working at hospitals was highly significant to supporting staff education at , clinical autonomous decision making , over nursing practice and supportive nurses' manager relationship ($p=0.028$). Lastly, the working shifts hours was not statistically significant difference to all nurses' practice environment characteristics except supporting staff education at ($p=0.017$). The other independent variables were not significant.

Results indicated that there is a significant difference between the

practice environment scores and quality care of patients at units from nurses' perceptions at hospitals showed in **table (4)**: The results found that a medium correlation between practice environment with quality of care at four hospitals with ($r = .384, p = .000$).

Discussion

This study discussed the findings of research results which was about the characteristics of the nurses' practice environment in relation to quality of patient care from staff nurses perception.

Regarding, the ranking mean scores of eight characteristics of the nursing practice environment on the unit level as perceived by staff nurses, the highest agreement was for supportive nurse manager relationships, followed by working with other nurses who are clinically competent; and culture in administration boarding should conduct periodic assessments in order to ensure that a healthy work environment is maintained and/or improved. Healthy work environments mutually benefit patients, nurses, nurse managers, health care providers, the health team, administration, the institution and the community at large.

In terms of adequacy of staffing and collegial/collaborative nurses /and medical relationships and clinical autonomous decision-making were ranking in the mild positive agreement among studied nurses. This incongruent with Hinno,et.al,⁽⁷⁾ expressed more undesirable emotional state regarding adequacy of staffing, reflected low quality of care will be provided. This finding matching with which articulated by Aiken,et al.⁽⁹⁾ the burnout is low among staff nurses

which concern for the patient is paramount; perceived adequacy of staffing; collegial/ Collaborative RN/MD relationships. On the other hand, they reported that clinical autonomous decision-making were mild level of agreement among them. While the lowest agreement of studied nurses was regarding support for education in nursing work environment. This finding shared with Mosadeghrad,⁽¹³⁾ highlighted that the importance of cooperation and teamwork among healthcare providers and the ability to effectively communicate and collaborate with other health professionals or institutions as an important component of high-quality healthcare services. Asserted by Van-Bogaert⁽¹⁴⁾ found that nurse-physician relationships and nurse management had significant positive associations with job satisfaction. This finding respected by Aboshaiqah⁽¹⁰⁾ concluded that

when hospitals are consistently better work environments. More, lower probabilities of having nurses who were dissatisfied with their jobs and who thought that the quality of care on their unit was only fair or poor and higher likelihoods of having nurses report that their patients were ready for discharge.

In relation to support for education, the study was conducting by Abd-ElSalam⁽¹⁵⁾ concluded that nearly two third of studied nurses were dissatisfied with opportunities of advancement in their job, primarily regarding to benefits package, promotion and supervision as well as had a low commitment to the organization. This finding matching with current study was 17.5% of studied nurses reported less present to support for education in nursing practice environment. This finding on

the same line with Yakob,⁽¹⁶⁾ who reported that staff nurses' total empowerment scores were relatively low. This result is supported by Laschinger,etal⁽¹⁷⁾ who found that nurses were expressed that strongly disagreement regarding to present of access to empowerment structures in nurses practice environment.

The results found that there were statistically significant differences in relationship to demographic characteristics age, level of education, years of experience in current hospital, control over practice and practice , attitude, and cooperation while the care provider's subjective attributes, including the priority they give to care, would have a moderating influence on the delivery of care.

In relation, control over practice, in this study the nurses reported that do not have control over nursing practice. This result evidence matches that of Dickens⁽¹⁸⁾ reported that nurses characterized their work environment by relatively high levels of support, cohesion and managerial control but slightly lower levels of autonomy. Consequently, the influence nurses have and the control they can exert over their practice has been linked to nurse satisfaction. Emphasized that Okada⁽¹⁹⁾ the well training for nurses play a vital role that providing completely prepared to use in some specific condition for immediate action, which implied nurses requested more practical and immediately usable "how-to" information instead of core universal knowledge or skills. In addition, nurses wished to have opportunities to expose different health care systems or environment such as outside of hospitals or countries.

In term of quality of patient care, the nurse assessed quality of patient

competency as well as the organization culture as expressed by studied nurses. While, there was no statistically significant difference in gender and working hours in relation to characteristics of nurses' practice environment except the supportive nurse's managers relationship, matching of Mosadeghrad,⁽¹³⁾ found that there were several factors have moderating effect on the quality of care as individual factors; organizational factors; environmental factors as well as patients' factors such as socio-demographic variables

care very high quality as expressed by them. This result on the same line with Kvist,⁽²⁰⁾ found that Staff's evaluations of the quality of work in their respective working units had a clear relationship with experiences of job satisfaction. Those who evaluated the quality of work as excellent also rated their job satisfaction to be the highest in all subscales ($P < 0.0001$). This finding articulate with Hinno,et.al,⁽⁷⁾ found statistically significant relationships between nurses' perceptions of their work environment characteristics and quality of care provided and nurses' career plans. When work environment characteristics were evaluated to be better, nurse-assessed quality of care also increased and intentions to leave current job decreased linearly.

Regards, the relation between the practice environment scores and quality care of patients at units from nurses' perceptions at hospitals. The results found that a medium correlation between practice environment with quality of care at four hospitals. This finding supported by VanBogaert⁽¹⁴⁾ corporate that influence of nurses work environments on patient satisfaction, including staffing levels and nurses own perceptions of

the quality of their working environment. Additionally, Tervo-Heikkinen⁽²¹⁾ found significant variation reflects the complexity of both patient care and the current nursing work environment in relation to patient safety. Added tangible activities are required for effective development to create patient safety culture as supporting of nurse managers and leaders at all levels and nurse staffing evidence Kvist,⁽²⁰⁾. Asserted by Mahran& Ibrahim,⁽²²⁾ emphasized approximately half of studied nurses expressed that patient safety was very good. Although the critical areas evidenced, the mainstream of the studied sample rated patient safety as "acceptable" or "very good" in the intensive care units.

Conclusion

This study concluded that there was a statically relationship between nurses' practice environment and quality of patient care as perceived by staff nurses

Recommendation

Based on the result and to improve the nurses' practice environment, the following recommendations should be implemented;

- Continues training for nurse managers about evidence based nursing leadership and evidence based practice.
- Enhance effective communication by creating an environment which allows to staff nurses express their ideas and encourage them to participate in decision making and problem solving process.
- Encouragement of collaboration and teamwork as an important tool for respectable climate and empowerment of nurses.
- Conduct continuous staff development programs for leaders and staff nurses to establish pride in their work and recognition by superiors which enhance healthy work environment
- Activate strategic plans need to include decentralization of decision-making.

Table1. Summarized ranking Mean scores of characteristics of the practice environment scale as perceived by staff nurses (n=300).

No.	The Characteristics	Mean	Percentage	Ranking
1	Collegial/Collaborative RN/MD Relationships	2.691	67.2%	6
2	Perceived Support for Education	0.703	17.5%	8
3	Clinical Autonomous Decision-Making	2.510	62.7%	7
4	Control over the Context of Nursing Practice	2.696	67.4%	5
5	Perceived Adequacy of Staffing	2.786	69.6%	4
6	Working with other Nurses who are Clinically Competent	3.018	75.46%	2
7	Supportive Nurse Manager Relationships	3.029	75.7%	1
8	Culture in which Concern for the Patient is Paramount	3.011	75.2%	3

Table 2 :Assessed Quality of Patient Care at hospitals as perceived by staff nurses (n=

Patient Quality Care	Point on Indictor	Frequency	Percentage%
Dangerously Low!	1.0 - 4.0	29	9.7%
Safe but not much more	4.0 – 6.0	17	5.7 %
Very high quality	6.0 – 10.0	254	85.3%
Total		300	100%

300).

Table 3: The relation between practice environment and demographic characteristics as perceived by staff nurses (n=300).

No	The Characteristics	Age	Gender	Level of education	Years of Experience	Staying	Shift
1	Collegial/Collaborative RN/MD Relationships	0.200	0.547	0.300	0.095	0.176	0.582
2	Perceived Support for Education	0.032*	0,576	0.758	0.361	0.059*	0,017*
3	Clinical Autonomous Decision-Making	0.681	0.932	0.014*	0,753	0.000*	0,878
4	Control over the Context of Nursing Practice	0.024*	0.564	0.733	0.032*	0.003*	0,458
5	Perceived Adequacy of Staffing	0.423	0.261	0.147	0.096	0.665	0.95
6	Working with other Nurses who are Clinically Competent	0,010*	0.634	0.237	0.662	0.973	0,549
7	Supportive Nurse Manager Relationships	0,076	0.055*	0.178	0.770	0.028*	0.227
8	Culture in which Concern for the Patient is Paramount	0.261	0.874	0.951	0,039*	0.205	0.679

***The mean difference is significant at the $p < 0.05$ level.**

Table 4: Correlation between quality of patient care and essentials of a healthy practice environment.

		Practice environment	Quality Care
EOMII	Pearson Correlation	1	0.384**
	Sig. (2-tailed)		.000
	N	300	300
Quality Care	Pearson Correlation	0.384**	1
	Sig. (2-tailed)	.000	
	N	300	300

** . Correlation is significant at the 0.01 level (2-tailed).

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