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Nursing Competence and Quality of Nursing Care: Experience from a Low Income Country

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Abstract

Aims: Provision of high quality health care require presence of competent providers. This study aims to document nurses' competence under direct observation of nurses' practicing in Saint Paul's Hospital Millennium Medical College (SPHMMC), a tertiary center in Ethiopia.

Methods: A cross sectional descriptive study was conducted using direct observation of practicing nurses using a checklist designed by the authors based on the hospital nursing practice and available literature. The study was conducted by observing nurses working in the departments of pediatrics and child health, surgery, obstetrics and gynecology and Internal medicine from March 2016 to April 2016. The competency areas evaluated were continuum of care, documentation, communication, procedural skill, urgency and dedication. The nurses' activities were evaluated without notifying that they are being observed. Descriptive statistics were applied to analyze the data using SPSS-20.

Results: We directly observed the practice of 142 nurses. The overall (average) competence was 66.7% based on national and international standards. The nurses perform best for Urgency for physicians' order (84.5%) and least for self-initiated performance (dedication (50.4%)).

Conclusion: The nursing competence is low in most competency scales. The hospital administrators and responsible stakeholders including ministry of health and professional associations should work together to improve the competence of practicing nurses in Ethiopia.

Keywords: Quality of health care; Ethiopia; Nursing competence; Direct observation

Introduction

Despite extensive research on health care quality, little attention has been given to the different stakeholders' perspectives of high-quality health care services [1]. The provision of high quality care requires the presence of competent providers and the center of quality health care is the nursing quality management [2]. The quality of nursing care is affected by many factors including available resources, nursing documentation, nursing system and working environment, nursing competence including knowledge, nursing skill and attitude, and their communication with other care takers and care receivers in one or the other ways [3,4].

Studies from developed countries have shown optimal competence of nurses in their clinical practice enabling them provide high quality nursing care. This issue is however inadequately addressed in developing countries including Ethiopia [5,6]. Ethiopia has recently expanded the nursing human resource with opening of many private and government nursing schools. Additionally, administration of Certificate of Competence (COC) exam at end of nursing training before practice was aimed at insuring the nursing competence. Despite these and the Higher Education Relevance and Quality assurance Agency (HERQA) establishment, the realization of producing competent nurses appears to be a farfetched achievement. There had been persistent blame and dissatisfaction with respect to health care deliveries particularly nursing care services across the Ethiopian healthcare settings [6-9].

These complaints have their root at the poor quality of nursing care as demonstrated from previous studies and might also be related to inadequate competence of practicing nurses [10,11]. If the nursing competence is found to limit our quality of care, improving the nursing competence will achieve better quality of health care [1].

Nursing competence including professional skill mix, documentation, practical and communication skills are important determinants of quality of nursing care [12-17]. The Ethiopian national guideline of health care services gives the nurse the major responsibility of documentation [12]. Documentation is an integral part of nursing practice, and an important tool to ensure high-quality client care. It sounds that nothing can reflect the total amount of nursing care giving to the patients as documentation does [17]. Despite these facts, studies showed that the knowledge and practice of nurses on documentation is low and deficient on how and what to document [1,17].

Assessing the status of quality of nursing care and nursing competence, as its most relevant factor, is important for continuous improvement of clinical care and identify deficiencies which could

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Table 1: Nursing performance result.

Variables (competency scales)	Yes/Done right N (%)	No/Not done at all N (%)	Partially done N (%)	Total N (%)	
Continuum of care					
- Shift nurse waits till the next duty nurse comes	123(86.6%)	19(7.7%)	-	142 (100%)	
- Hand over involves individual patient exam and written communication	97(68.3%)	9(6.3%)	36(25.4%)	142 (100%)	
- Drugs & instruments checked together during handing over	90(63.4%)	18(12.7%)	34(23.9%)	142 (100%)	
Documentation					
- Admission assessment	92(64.8%)	41(28.9%)	9(6.3%)	142 (100%)	
- Nursing care plan	97(68.3%)	37(26.1%)	8(5.8%)	142 (100%)	
- Nursing patient progress	103(72.5%)	32(22.5%)	7(4.9%)	142 (100%)	
Communication and patient education					
- Educate patient/caregiver about his/her illness	47(33.1%)	83(58.5%)	12(8.5%)	142 (100%)	
- Communicates in a respectful manner	112(79.9%)	9(6.3%)	21(14.8%)	142 (100%)	
- Answer patient/caretaker's questions properly	110(77.5%)	10(7.0%)	22(15.5%)	142 (100%)	
- Wear identification badge	35(24.6%)	39(27.5%)	68(47.9%)	142 (100%)	
Nursing procedure skills					
- Taking vital signs	65(45.8%)	60(42.3%)	17(12.0%)	142 (100%)	
- O2 administration	120(84.5%)	20(14.1%)	2(1.4%)	142 (100%)	
- Secure intravenous (IV) line	133(93.7%)	9(6.3%)	0(0.0%)	142 (100%)	
- Bed making and cleaning	78(54.9%)	32(22.5%)	32(22.5%)	142 (100%)	
- Antiseptic before and after caring for each patient	102(71.8%)	11(7.7%)	29(20.4%)	142 (100%)	
Urgency					Total
	Immediately	<5min	In 10min	In>30min	
- Time Nurse perform doctors order	75(52.8%)	45(31.7%)	18(12.7%)	4(2.8%)	142(100%)
Dedication					
	<60 min.	1-2hr	2-3hr	>3hr	
- How long was spent for meal & tea?	111(78.2%)	28(19.7%)	1(.7%)	0(0.0%)	140(98.6%)
	Patient side all times	Patient side most of time	Away most of time	Left before shift time is over	
- How does the nurse spend his/ her time? (excluding meal time)	32(22.5%)	62(43.7%)	41(28.9%)	7(4.9%)	142 (100%)

be addressed by education and training. It is with this intention that we evaluated the competence of our nurses under direct observation to document the level of nursing competence in continuum of care, documentation, communication and patient education, practical skill, urgency and dedication.

Operational Definition

The following operational definitions were used in our study.

- Average performance is defined as the average performance in percentage calculated from the items under each competency scale.
- Overall performance is the mean performance of all average performances in percentage
- Urgency of nurses to physicians order is defined as Immediate if the physician order is taken care of in less than 5 minutes; Delayed if done in 5-30 minutes and Very delayed if not done in 30 min.
- Dedication is defined as the amount of time the nurses spent at the patient side performing nursing care activities during his/her shift as compared to meal (break) time.
- Competence refers to nurse's essential skill related to the job performance in all the six variables: continuum of care, urgency, communication, documentation, practice and dedication.

Materials and Methods

Setting

The study was conducted in SPHMMC departments of pediatrics and child health, surgery, obstetrics and gynecology and Internal medicine. SPHMMC is one of the few specialized hospitals in Addis Ababa, Ethiopia, with total annual patient load exceeding 500,000.

Study design and period

Cross-sectional study was conducted over a period of 6 weeks from March 1, 2016 to April 14, 2016. Direct observation check list was developed by the authors based on literature and basic components of nursing competence applicable to our functioning nursing structure [13,16]. Our variables covered six areas of nursing competence

scales including competencies in continuum of care, documentation, communication and patient education, nursing basic procedure skills, urgency and dedication, all of which are vital competencies in nursing care and applicable for our hospital specifically. The variables used were operationalized by: Continuum of care (nursing handover) (3 items), Documentation (3 items), Urgency to physicians order (1 item), Education / communication (4 items), Dedication (2 items) and Nursing procedures (5 items). While our tool is not inclusive of all the vital components of nursing competence, these 6 scales were selected based on our hospitals nursing philosophy on nurse's responsibility and competence frame work with some modification for measurability of the variables.

Sampling and data collection procedure

Data collection was done by two nurses trained in specialty nursing care and expert in nursing care. All nurses working in the departments of pediatrics and child health, surgery, obstetrics and gynecology and Internal medicine during working hours in the data collection period were included in the study.

The observers were not staff of the hospital and they collected the information being disguised to the practicing nurse (appearing as shadowing whenever a direct contact is inevitable but no permission to participate in patient care). The observation was carried out until the observer will be able to collect all the necessary information. Data was collected by using an observation check list prepared by the authors based on the Ethiopian nursing practice guideline and international standards [8,11,12].

Data analysis

Data was cleaned and checked for consistency and analyzed using SPSS for windows version 20.0. Descriptive statistics was applied for analysis and presentation of results.

Results

We directly observed 142 practicing nurses working in the departments of pediatrics and child health, surgery, obstetrics and gynecology and Internal medicine. The overall performance of the nurses competence was 66.7% based on national and international nursing practice standards. The nurses perform best for Urgency for physicians' order (84.5%) and least for dedication (50.4%) (Figure 1 and Table 1).

Continuum of care as evaluated by handover of patients at the end of the shift time on individual patients was done in 97(68.3%) whereas 19(7.7%) nurses left before the next shift team takeover without handing over.

Admission assessment, Nursing care plan and nursing patient progress were not documented in 41(28.9%), 37(26.1%) and 32(22.5%) respectively.

The nurses communicate in a respectful manner and answer patient/caretaker's questions properly in 112(80%) and 110(77.5%) respectively. Only 35(25%) nurses wore visible name tags. Patient/caregiver education about his/her illness was not done by 83(58.5%) of the nurses.

Nursing procedures including taking vital signs, O_2 administration, securing IV line, bed making and cleaning and use

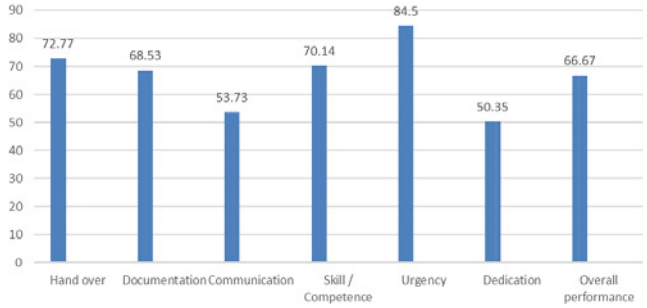

Figure 1: Average performance of nurses for the main competency scales (%).

of antiseptic were properly done by 65(45.8%),120(84.5%),133(93.7%),78(54.9%), and 102(71.8%) nurses respectively. However 60(42.3%) nurses didn't take patients vital sign during their shift (Table 1).

About 120(84.5%) nurses took care of the physician order within 5 minutes scoring the highest performance from all the competency measures. But 4 nurses (2.8%) didn't perform the order in 30 minutes.

Dedication scored least of all the performances measured with only 32(22.5%) nurses being at the patient side all the times; and 41(29%) nurses were away from patient side for most of the time and even 7(4.9%) nurses left before their shift time is over.

Discussion

We directly observed the competence of 142 nurses working at SPHMMC. The overall performance of the observed nurses was found to be low at 66.7% based on national and international nursing practice standards [11-16]. The performance rate was highest for taking physician orders and lowest for self-initiated activities.

Though continuity of care is key part of nursing care, only 68% of the handovers were done properly. This will create information gap and incomplete and fragmented care by the incoming team compromising the continuity of care. Additionally a significant number of them (37%) didn't check presence of essential equipment and medications during their handover. This will lead to chaos in cases of emergency because of poor preparedness and wastes the golden time of resuscitation while looking for unavailable drugs or trying a non-functional equipment.

The other significant limitation we noted was with nursing documentation. Although documentation is the center of nursing care and an important tool to ensure high-quality of care [15]. While the time of the nurse away from the patient should have been spent for proper documentation, this was not noticed in our study. Documentation was never done in a quarter of patients (Table 1). Although deficiencies in nursing documentation had been reported from other developing countries, differences in study design and setting makes comparison difficult [1, 15].

Communication skill and patient education are among the most important factors in nursing quality care [12-14], hat were unmet in our study. Only a third of the nurses educate their patients about their illness and 20% of the nurses' communication were "Not respectful". Deficiency in nursing performance was least for securing intravenous (IV) lines and highest for taking proper vital sign (still done

properly only in 46%). Another important and alarming observation is that nearly one-third of the nurses didn't practice proper infection prevention which is a cost effective way to decrease cross contamination and heath care related infection. Failure to adhere to infection prevention strategies predisposes patients and staffs to health care associated infections with increased cost, morbidity and mortality from these preventable but difficult to treat infections.

Our study demonstrated that the nursing care was mainly focused on executing physicians order like medication administrations. A third of the nurses spent more than an hour for meal and coffee and spent most of their time away from their patients. Only 22% nurses spent all the time with their patients while 5% of them left before their shift is over. This could raise a question whether our nurses are becoming more passive in patient care focusing more on taking physician's orders rather than being patient advocate and actively participating in patient care.

Overall the study showed inadequate nursing competence based on national and international standards and reflected the objectivity of the publics' dissatisfaction [8,9]. The deficiency is probably both during training and mentorship on practice. In a recent study from two Ethiopian universities in nursing BSc graduates, more than half of the participants perceived themselves as incompetent [18]. In order to solve this problem, the regulatory bodies and training institutions should work together to make sure that the training follow the standard set by HERQA and National Accreditation and Quality Improvement Standards for Nursing Program [7,15]. Another possibility to be considered is the nursing professionalism which is low in Ethiopia. A recent study found that only 30% of practicing nurses were highly professional [19]. The Federal Ministry of health, professional associations and other stakeholders should give due attention and work on nursing professionalism to base the quality of health care in the right hands, The Professional Nurse!

The implication of our finding is that low nursing competence translates to poor quality patient care, unnecessary increase in health care expenditure, patient dissatisfaction, and loss of patient and public trust at large, as well as loss of respect to the profession which could lead us to a serious crisis. We thus, call for an urgent action before it is too late to intervene and revert the problem.

Though we assessed nursing competence by direct observation for the first time, our tool is neither comprehensive nor exhaustive and is prepared to evaluate the competencies only in the most important, applicable (observable) components of nursing competence in our setting. In conclusion our research has shown that nurses' competence is below the national standard and needs to be addressed from different perspectives including the nursing education and training, nursing professionalism, and quality improvement of nursing care. We also have shown that the publics' dissatisfaction has its root at the low nursing competence calling for an immediate action.

Ethical Consideration

The study was conducted after obtaining ethical clearance from the Institutional Review Board/IRB of SPHMMC.

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Conflict of Interest

We have no conflict of interest to declare.

Author's Contribution

All the 3 authors have substantial contributions to conception and design, data acquisition, data analysis and interpretation and manuscript preparation.

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