

Factors Influencing Clinical Competencies of Intensive Care Unit Nurses in Selected Hospitals of Kamrup (Metro), Assam

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ABSTRACT

Background: ‘Competency’, is a controversial word in health care settings. It is thought to involve many aspects of the nurses’ professional attributes, including the individual’s personality trait, level of education, experience in practice and health care management skill. ICU nurses are expected to have superior professional knowledge and skills, be familiar with modern technical equipment and dedicated to the patient. Nurses previously registered just once, after graduation, but are now required to demonstrate continuing competence if they are to maintain their registration. At the same time, communities expect safe and competent health care as a right. To fulfill their expectation, nurses need to be professionally and clinically competent.

Method: The pilot study of the present research was conducted on 40 registered nurses selected by simple random sampling. The purpose of the study was explained to the nurses and written consent was taken from them and also assurance was given to maintain the confidentiality. The baseline data was collected from the samples using the structured interview schedule. Level of nurses clinical competencies was assessed by using the observational checklist and the factors influencing the clinical competencies of the ICU nurses was assessed by the Nurses competence scale (Rating Scale).

Result: As per the nurse competence scale, the score of clinical competencies are within the range of low and quite good (15-48) with percentage of nurses 31.3%, mean of 35.42 and S.D 11.06. The factors especially teaching - coaching & work role has high score of 60 , mean 39.63 , SD 15.52 and 57, mean 34.25, SD 11.84 respectively suggesting that has influence on the clinical competencies of ICU nurses. Analysis of association between factors influencing the clinical competencies of ICU nurses with demographic variables by a chi square test found none of the demographic variables considered were statistically significant ($P>.05$).

Conclusion: The pilot study concludes that the factor such as teaching - coaching & work role influences the clinical competencies of ICU nurses.

Key words: Clinical competencies, ICU nurses, teaching - coaching & work role.

INTRODUCTION

Competencies are holistic entities that are carried out within clinical context

and are composed of multiple attributes including knowledge, psychomotor skills, and affective skills. The measurement of

nurses' clinical competencies related to various patient care activities is a standard ongoing activity in a multitude of health care organizations across the globe. Nurses require highly specialized clinical competencies to accurately determine patients' states and predict and cope with problems that may occur during treatment. A study conducted by Kyunghye K, ^[1] on Professional Quality of Life and Clinical Competencies among Korean nurses. A total of 335 nurses completed questionnaires assessing professional quality of life, clinical competence, demographic and professional characteristics. Nurses were divided into 3 clusters. There were significant differences in age, marital status, religion, educational status, and position between clusters. Results revealed that nurses with high compassion satisfaction and low compassion fatigue (burnout, secondary traumatic stress) tended to have higher clinical competence. Thus, interventions to increase nurses' compassion satisfaction and relieve compassion fatigue are needed, as professional quality of life may affect clinical competence. Sources of job stress and levels of job satisfaction are extensively investigated abroad, but no extensive studies have been conducted in India to identify nurses' problems. Nurse-per-bed ratio in India is 0.87 the world average of 1.2 nurses per bed, which has been arrived at based on data from the World Health Organization (WHO). The nurse-to-bed ratio was 1.4 in 2006. This ratio may fall to 1.29 in 2011 and ultimately to 1.15 in 2016. According to the planning commission, India faces a shortage of about one million nurses. ^[2] In order to prevent this shortage it is important to retain the nurses who are active in India. Due to the shortage, active nurses experience lot of problems, and heavy workload can have a devastating effect and threaten the life and security of patients as the study by Tarnow, M ^[3] found that inadequate nursing staffing in an Intensive Care Unit increased patients' mortality rate. The investigator, all through her nursing career has observed that

generally the nurses working in hospitals, clinics or nursing homes routinely carry on with their functions and very few among them are concerned about their efficiency to work in those particular areas. The nurses working in Intensive care units are seldom exceptions. Why is it so! It is a commonly accepted fact that the human nature is to excel under pressure, either internal or external. Does it apply to nurses' taking self-responsibility for improving their own capability to function in the Intensive care units? The investigator feels that exploring the answers to these questions may bring into light the undercurrent issues that would also help in integrating nursing education and practice.

MATERIALS & METHODS

The present study is based on descriptive survey design where the investigator is interested to assess the clinical competencies of ICU nurses, identify the factors influencing nurses' clinical competencies in ICU. The factors could be theoretical knowledge, experiences, environment, independence and work satisfaction. The investigator is also interested to find out if any significant association is present or not between the level of clinical competencies and the demographic variables. The pilot study was carried out in the selected ICU's of GNRC Hospitals & Hyatt Hospitals of Kamrup (Metro). The sample size was 40 registered ICU nurses & sampling method used was simple random sampling. The tools used for data collection were Demographic Performa (to collect the baseline information), Level of nurses clinical competencies was assessed by using the observational checklist and the factors influencing the clinical competencies of the ICU nurses was assessed by the Nurses competence scale (Rating Scale). For the content validity & reliability the tool along with the statement and objectives is given to 5 experts'. Based on their expert opinion, modification is done. Nurse Competence Scale is a standardised scale used in the interest of

public domain. The reliability of the tool is tested by using Guttman Split - Half Coefficient and 'r' was obtained 0.84 which indicated the tool is reliable. The investigator obtained a formal administrative permission from Medical Superintendent & Nursing Superintendent of both the hospitals. The purpose of the study was explained to the nurses and written consent was taken from them and also assurance was given to maintain the confidentiality. The baseline data was collected from the samples using the structured interview schedule.

RESULTS

Majority of nurses (37.5%) are in the age group of < 25 years, all the nurses are female, 50% nurses are GNM and 50% nurses are BSc. Majority of nurses (62.5%)

works in the morning shift and their (70%) usual length of shift is 6 hours. Nurses (62.5%) get an average of two – three patient allocation. Majority (42.5%) nurses have 6months – 3 years of working experience in ICU. Majority (35%) of nurses under study has salary of Rs. 11000-15000 and > Rs. 20000/ month respectively. Majorities (72.5%) of nurses are unmarried and 80% has no children.

Table1: Level of clinical competencies

Score	Percentage (%)	Mean	S.D
15-48	31.3%	35.42	11.06

The score of clinical competencies are within the range of low and quite good (15-48) with percentage of nurses 31.3%, mean of 35.42 and S.D 11.06.

Table no.2: Score, Mean & S.D of factors influencing clinical competencies of ICU nurses

Factors	Min score	Max score	Mean	S.D
Helping Role	6	21	15.03	3.81
Teaching- Coaching	10	60	34.25	11.84
Diagnostic functions	3	21	14.35	4.94
Managing situations	0	24	16.15	6.24
Therapeutic interventions	0	30	18.95	8.04
Ensuring quality	0	25	11.25	5.79
Work Role	0	57	39.63	15.52

The factors especially teaching – coaching & work role has high score of 60, mean 39.63, SD 15.52 and 57, mean 34.25, SD 11.84 respectively suggesting that has influence on the clinical competencies of ICU nurses.

Table no.3: Correlations of clinical competencies with the factors influencing competencies of ICU nurses

Factors	Clinical competencies score (Mean)	S.D	Correlation Coefficient (r)	P - Value	Inference
Helping role	15.03	3.81	0.382	.015	S
Teaching Coaching	34.25	11.84	0.116	.477	NS
Diagnostic functions	14.35	4.94	0.282	.078	NS
Managing situations	16.15	6.24	0.314	.049	S
Therapeutic interventions	18.95	8.04	0.171	.292	NS
Ensuring Quality	11.25	5.79	0.198	.221	NS
Work role	39.63	15.52	0.449	.004	Highly Significant

The factors such as work role is highly significantly associated with the clinical competencies of ICU nurses, helping role and managing situations are significantly associated and teaching - coaching, diagnostic functions and ensuring quality were not significantly associated with the level of clinical competencies.

There is significant association of level of clinical competencies of ICU nurses such as knowledge, experiences, environment, independence and work satisfaction with only one selected demographic variable i.e. usual length of shift the nurses' work that was calculated by Chi square.

DISCUSSION

The study shows that the majority of the ICU nurses are in the age group of below 25 years, Majority (42.5%) nurses have 6 months- 3 years of working experience in ICU. Majority (35%) of nurses under study has salary of Rs. 11000-15000 and > Rs. 20000/ month respectively. Majority (72.5%) of nurses are unmarried and 80% has no children. The score of clinical competencies are within the range of low and quite good (15-48) with percentage of nurses 31.3%. The factors such as work role is highly significantly associated with the clinical competencies of ICU nurses. There is significant association of level of clinical competencies of ICU nurses such as knowledge, experiences, environment, independence and work satisfaction with only one selected demographic variable i.e usual length of shift the nurses' work. The present study was supported by a study conducted by Istomina, N^[4] (2011) on competence of nurses and factors associated with it. It was a multicenter descriptive study to explore nurse competence and factors associated with it from perspective of nurses for predicting the possible ways for upgrading the nursing practice. 218 nurses participated in this study. Nurses assessed the competencies in managing situations and work role the highest and in teaching-coaching and ensuring quality the lowest. Socio demographic factors such as nurse education, experience, professional development, independence and work satisfaction as well as the evaluation of quality of nursing care were identified as factors associated with nurse competence.

CONCLUSION

The findings of the study revealed that the level of clinical competencies of ICU nurses is in the range of low to quite good. As it is only a pilot study, more extensive review will be done in due course of time. The present study is supported by a correlational study conducted by Wei, W, Niu, Y & Ge, X^[5] (2018) on "Core

competencies for nurses in Chinese intensive care units". A convenient sampling method was used to investigate 451 nurses working at five tertiary hospitals in Shanghai. Data were collected using self-administered questionnaires. The core competencies of ICU nurses were above average among the seven dimensions measured were medical ethics, clinical practice, nurse-nurse cooperation, assessment and decision making, personal and professional development, teaching and research and nurse physician cooperation.

Similar kind of study was conducted by Zhang, Z^[6] (2001) on nursing competencies: personal characteristics contributing to effective nursing performance. Following the Mcber method, 50 experienced nurses were asked to report 82 valid critical incidents in their jobs. Ten competencies including interpersonal understanding; commitment, information gathering etc were identified. Skills, traits, motives and attitudes all contribute to effective nursing performance. It is required to develop nursing competencies and to provide realistic working behaviours for nursing education and management

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