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Original Research Article

## Training Need Assessment of Nursing Personnel at Super Specialty Tertiary Care Hospital in Northern India

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### ABSTRACT

**Background** - Super specialty tertiary care hospital equips nurses with the requisite knowledge and skills to deliver high quality care in their practice areas. This has necessitated adopting a structured approach to the training needs assessment (TNA) to identify the development needs of the nursing workforce at a tertiary care centre.

This study involves Micro Level – Task/Job analysis i.e. identifies and describes all the skills performed by employees in a particular job and the knowledge, skills, attitudes and other behaviours needed for successful job performance.

**Aim and objectives:** The study explores the training needs of nursing personnel at super specialty tertiary care hospital in northern India by analyzing the areas of knowledge and skills deficit as perceived by the nurses and assessing the expectations of doctors, about the role of nurses and deficiencies in their current knowledge, skills

**Design:** Structured questionnaire based descriptive cross sectional study

**Methods:** A set of questionnaire were framed using core competencies of nurses listed by Massachusetts department of higher education and nursing council of Hongkong and A questionnaire based descriptive cross sectional study among nurses, faculty, senior residents and patients were done.

**Results:** The total sample collected for the study was 274 which included 19 faculty, 44 senior residents, 211 nurses.

- ✓ Training needs identified to be further developed for Grade II and grade I nurses both by nurses and doctors are maximum in patient care and research domain followed by managerial/administrative and communication domain.
- ✓ Training needs agreed to be promoted for ANS's are maximum in managerial/ administrative and communication domain.
- ✓ Training needs recognized for DNS's /NS/CNO are maximum in managerial/ administrative and research domain followed by communication domain

**Conclusion** – This study reflects the training need assessment of nurses in a super specialty tertiary care hospital

**Keywords:** training need assessment, nursing skill, nursing practice, knowledge.

#### SUMMARY BOX

1. This study reflects the training need assessment of nurses in a super specialty tertiary care hospital however; findings are not generalized to small health sectors such as PHC, CHC.
2. It also shows the perception of doctors as well as the nurses about their performance
3. It identifies the skills and knowledge which need training

**Relevance to clinical practice** - Nursing is a dynamic profession that is subject to rapid changes in health care provision, hence there is need for training for nurses. Newly employed registered nurses require in-service training in order to update them regarding the latest developments in nursing practice.

## **INTRODUCTION**

Nurses constitute the main professional group in each tier of health care delivery service provision. A well-trained and skilled nursing workforce is crucial to the delivery of efficient and effective care that is evidence based. The **need for continuing education** for nurses has been increasingly recognized in **nursing** literature since the time of Florence Nightingale. Nurses, as adult learners should be able to self-evaluate and identify the areas of further development necessary in order to cope with the rapid technological advancements and associated changes within the healthcare environment.

Super specialty tertiary care hospital equips nurses with the requisite knowledge and skills to deliver high quality care in their practice areas. This has necessitated adopting a structured approach to the training needs assessment (TNA) to identify the development needs of the nursing workforce at AIIMS. This is the first step in the training and educational strategy of this organization and is crucial to meet the continuing professional development needs of the healthcare workforce and service. <sup>(1)</sup> TNA is a process of gathering and interpreting information regarding the learning and development needs of staff. Therefore, it must be carefully planned,

conducted and have clear outcomes to ensure that training interventions are implemented effectively leading to meaningful changes in service delivery and eventually improve patient satisfaction and experience.

Research in this area has been carried out primarily in the UK, in the USA, and in other countries. Unfortunately, TNA for nurses in India is very much an under-researched topic. Equally, there is scant research available into the importance and benefits of conducting appropriate TNA for nurses.

**Background** - The present study has been undertaken recognizing the significant roles and responsibilities nurses hold in safeguarding the health and well being of persons under their care. Nurses must engage in maintaining their competences and clinical skills through regular and professional development so as to demonstrate their continued 'fitness to practice'.

The training needs assessment will affirm the areas of knowledge and skills gaps of nurses at AIIMS and their perceived needs for further training and education in order to maintain the standards of practice. This will help managers to identify the early warning signs of poor performance that could jeopardize the effectiveness or

efficiency of their organization. Consequently, development of new training programmes and engagement of nurses in updating their knowledge and skills will fulfill organizational mission, improve productivity, and provide quality products and services. Accurate needs assessment can help in developing a programme or a course based on the real needs of the practicing nurses.

With the increasing demand for improved productivity and quality of service in organizations, strategies for improving the work performance of personnel have become increasingly important. If an organization's greatest asset is its people, then the development of this asset is critical to the continued health of the organization. The need for improved productivity has become universally accepted and that it depends on efficient and effective training is not less apparent. Thus the role played by staff training and development can no longer be over-emphasized. Usually, before training or development programs are organized, efforts should be made through individuals and organizational appraisals to identify the training needs. The training needs assessment is a critical activity for the training and development function. It is against this backdrop the study is addressed to study training needs identification of nursing staff in a health care organization.

**Aim-** A study on the training needs of nursing personnel at super specialty tertiary care hospital in northern India

### **Objectives**

- To analyze the areas of knowledge and skills deficit as perceived by the nurses.
- To assess the expectations of doctors, about the role of nurses and deficiencies in their current knowledge, skills which may require training.
- To identify knowledge and skills deficit which needs training.

## **MATERIALS AND METHODS**

The study setting includes patient care areas of super specialty tertiary care hospital - main hospital and its centres.

The study was carried out from October 2012 to June 2013. A questionnaire based descriptive cross sectional study among nurses; faculty and senior residents were done.

The study population includes Doctors – Faculty and Senior Residents and Nursing personnel of AIIMS .Doctors from non clinical departments of AIIMS were excluded from the study.

**Pilot study-** The developed questionnaire was distributed among faculty, residents and nurses, patients to assess the clarity and adequacy of the questions. Reliability and content validity of the questionnaire were established. Reliability was calculated by ‘Cronbach Alpha’ and the value computed was >0.9

A set of questionnaire were framed using core competencies of nurses listed by Massachusetts department of higher education and nursing council of Hongkong<sup>(2)</sup> and also Hennessy Hicks training analysis questionnaire.<sup>(3,4)</sup>

Questionnaire were distributed at the faculty offices, rooms, residents rooms, nursing station. The response was good and a total of 274 personnel responded which includes 21Faculty, 46 senior residents, 211nurses.

All the statistical analysis was done by using Stata 11.2.Data are expressed in percentage, mean±SD for normally distributed variables in each group and in median (minimum, maximum) if data are skewed in each group. Student's t-test/ Wilcoxon Rank-Sum test was used to compare mean/median values in two groups and for more than two groups, one-way ANOVA/Kruskal-wallis test followed by bonferroni correction was used. All the p-

value<0.05 were taken as significant. Likert scale was used for collecting responses.

## RESULT AND OBSERVATIONS

The study was carried out in super specialty tertiary care hospital. The study was conducted among nurses, faculty, senior residents. The total responses obtained were 274. The questionnaire formed for nurses, faculty and senior residents has sections. First section tells about performance of the skills and knowledge by nurses, Second section is about the importance of those skills and knowledge, third section narrates about the need of training for skills and knowledge. The observation made by nurses, faculty and senior residents have been grouped as per the four domains of /

- communication,
- patient care,
- managerial /administrative and
- Research

The influence of each variable on the concerned domain has been observed as against the cadre. Where ever a significant level of association has been found, multilevel comparison was done.

The total sample was 274

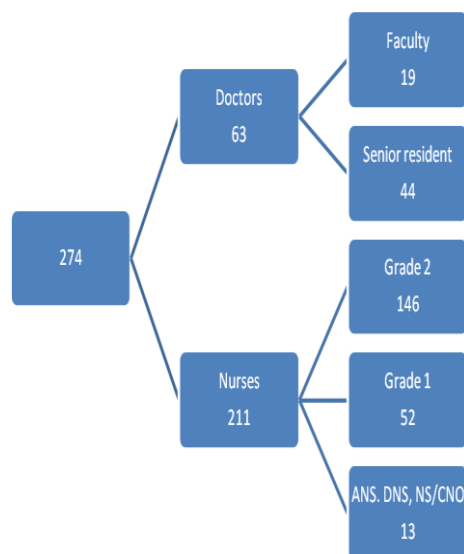


Figure -1: categorization of sample

## Perception of Nurses and Doctors Regarding Nurses Performance

**Communication domain** - More than half of the nurses 63.09% perceives that they are above satisfactory level in performing skills in communication domain, while 10.45% of the doctors were observed to align with the same view. However, Senior residents have rated nurses performance satisfactory/good while faculty have rated nurses barely adequate. Regarding importance, nurses (87.85%) and doctors (79.10%) rates communication skills from very important to critical important for the successful performance of nurses' job. This difference in opinion regarding performance of nurses among senior residents and faculty may be because faculty are more experienced and look into finer aspects of activities. Following Bonferroni correction significant difference is seen in perception of doctors with experience  $\leq 10$  years and doctors with experience  $\geq 31$  years. Doctors with experience  $\geq 31$  perceives nurses performance barely adequate while doctors with experience  $\leq 10$  years considers nurses performance satisfactory/good. This difference may probably be because with experience insight to visualize nuances become sharper.

Significant difference is seen in the perception of nurses of different cadre regarding importance of communication domain ( $p=0.04$ ). Bonferroni correction tells about difference in perception regarding importance between Grade II nurses and ANS's ( $p=0.03$ ), Grade I nurses and ANS's ( $p=0.01$ ), ANS's and DNS's /NS/CNO ( $p=0.04$ ). ANS's grades this domain more towards very important and strongly recommends for training while nurses with other cadre perceives it very important. ANS's perception is higher about themselves may be because they are in managerial post taking care of a unit and interact maximum with doctors,

subordinates, patient and relatives in comparison to nurses of other cadre. More than two thirds of the nurses (82.71%), doctors (92.03%) recommends for training in communication domain.

**Patient care domain:** More than half of the nurses (58.41%) feels that they are above satisfactory level in performing patient care skills, while 10.45% of the doctors were observed to align with the same view. This difference in the views of doctors and nurses regarding performance of skills by nurses may be because nurses must have overrated about their performance and doctors must have been unbiased in rating nurses performance. Almost more than 90% of the doctors, nurses are of the view that patient care skills are very important to critical for successful performance of nurses' job.

Significant difference is seen in the perception of nurses of different grades on the subject of importance of skills in patient care skills ( $p=0.01$ ). Following Bonferroni correction significant difference is found between Grade II and ANS's ( $p=0.04$ ), ANS's gives more importance to this domain in comparison to nurses of other grades. ANS's are administrative in-charge of a ward and they are well acquainted with problems nurses come across in clinical skills so this may be the reason they have graded it more towards very important. It is evident from the graph that all doctors and 92.53% nurses believe in training for patient care skills

**Managerial /Administrative:** It is evident from the graph that 47% of nurses performance is above satisfactory/good level in managerial/administrative domain. However just 9% doctors perceives nurses performance above satisfactory/ good level. In comparison to doctors, nurses have given more importance to managerial/administrative skills. 52% doctors consider

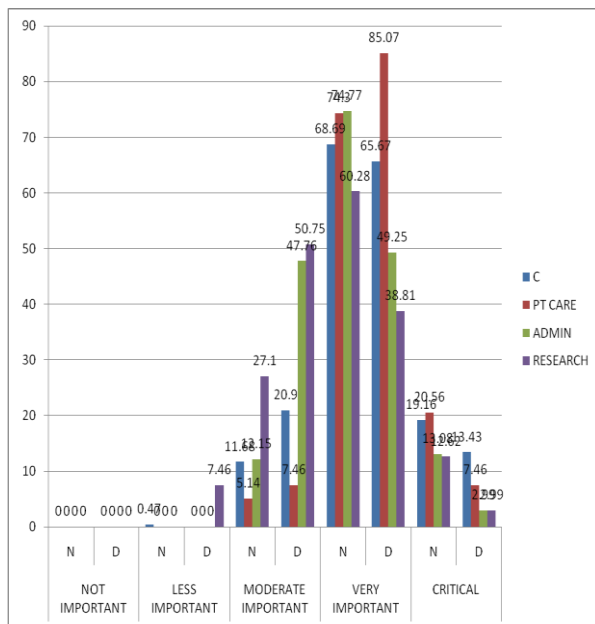
it very important to critical while 84% nurses considers it very important to critical. Nurses consider this domain very important. Doctors have not considered it as very important one as clinician place clinical skills above administration acumen. Grade II nurses grades themselves satisfactory/good while Grade I nurses, ANS's DNS's/NS/CNO rates themselves very good This is because they hold managerial/administrative responsibility and feel more confident. Both the nurses and doctors are in favor of training.

**Research:** 80.59% doctors have rated nurses performance poor to barely adequate in research domain. On the other hand 40.18% nurses have rated themselves from poor to barely adequate. Less than half of the doctors 41.80% rated research as a very important to critical domain while two third nurses 72.90% considered it very important to critical. Nurses with M.Sc. qualification perceives their performance very good in this domain while rest of the nurses with other educational qualification perceives this domain satisfactory/good Perception of nurses with different educational qualification regarding importance and training required of skills mentioned in research domain is not significant. More than two third of the doctors 82.09% and nurses 94.45% believes in training for research domain.

Statistically significant difference exists in the perception of doctors and nurses regarding performance of nurses of skill in all four domains ( $p=0.01$ ). Nurses have rated themselves very good in performing these skills than what doctors perceives about nurse satisfactory/ good. Both doctors and nurses have considered these domains very important. They both support training in skills mentioned in all domains.

**Table 1: Perception of nurses and doctors regarding nurses performance, importance and training in four domains**

	Sections	Doctors (n=67) Mean ±SD	Nurses ( n=214)	p-value
Communication domain	Performance	2.9±0.5	3.6±0.6	0.01
	Importance	3.9±0.5	4.0±0.5	0.40
	Training	4.2±0.4	4.0±0.6	0.60
Patient care domain	Performance	3.7±0.6	2.9±0.5	0.01
	Importance	4.1±0.4	4.0±0.3	0.60
	Training	4.1±0.6	4.3±0.3	0.10
Managerial / Administration domain	Performance	3.2±1.0	3.6±0.6	0.03
	Importance	3.5±0.4	4.0±0.04	0.01
	Training	4.1±0.3	4.0±0.5	0.70
Research domain	Performance	2.8±0.6	2.2±0.5	0.01
	Importance	3.7±0.4	3.3±0.3	0.60
	Training	4.2±0.6	4.2±0.3	0.10



**Figure -2: Perception of Nurses and Doctors Regarding Nurses Performance**

## DISCUSSION

A training need assessment was carried out in at super specialty tertiary care hospital in northern India. A total of 274 personnel responded which includes 21Faculty, 46 senior residents, 21nurses. Training needs identified in consensus by nurses and doctors domain are (annexure-I and II):

- Establishing collaborating plan of care with other members of the health care team,
- Use of information technology in their work place and observing legal imperative in record keeping.

- Tasks related to blood and blood products, pain management, patient safety measures, golden rules of medication administration, hospital infection control measures and surgical procedures which nurses perform in their respective work place.
- Care of patients guided by the applicable laws, regulations and guidelines, patient rights, material management and continuous quality management.
- designing a research study
- applying research results to their own practice

There was some considerable overlap in the training needs identified by doctors and nurses. For example, doctors and nurses both felt that patient care domain is very important. In addition, safe working practice and communication to patients were identified as important issues

### Communication Domain

In performing skills mentioned in communication domain more than half of the nurses felt that they are very good and just 3.74% nurses graded themselves excellent while 10.45% doctors graded nurses' performance very good and none of the doctor have perceived nurses excellent in communication domain. Experience doctors perceived nurses' performance barely

adequate while doctors with less years of experience perceived nurses' performance satisfactory/good. In a similar study conducted in the year May 2012 by Dr. V. Rama Devi, M. Malika Rao <sup>(5)</sup> on training needs identification of nursing staff, significant percentage (41%) of the nursing respondents felt that their communication tasks are outstanding but none of the doctors perceived the same. This variation in perception of nurses and doctors may be because communication is a subjective phenomenon. In another study conducted in October 2011 in Greece, by Anatoli Moschovopoulou et.al <sup>(6)</sup> on training need assessment of nurses of Psychiatric ward it is revealed that nursing staff chooses to get trained in communication skills. Good communication skill improves patient satisfaction and quality of care, so to provide quality care to patients' communication of care providers need to be excellent. But nurses are lacking in this domain. This may be because of greater patient load in the public sector hospital and with less time available with the nursing cadre per patient. In a similar study conducted in Yale by Auguste H. Fortin it is observed that good communication skill improves patient satisfaction and quality of care, so to provide quality care to patients communication of care providers need to be excellent. <sup>(7)</sup>

#### **Patient care**

Half of the nurses felt that they are very good and 8.88% nurses felt that they are excellent in performing skills and knowledge mentioned in patient care domain, while just 10.45% doctors graded nurses' performance very good and none of the doctor have perceived nurses patient care skills excellent. In a study conducted in the year May 2012 by Dr. V. Rama Devi, M. Malika Rao <sup>(5)</sup> on training needs identification of nursing staff, it is observed that (14%) of the nursing respondents perceived that their level of

patient care skills is outstanding and remaining respondents perceived as very good /good. Whereas doctors perceived that the nursing staff has good/very good patient care skills. Patient care domain is the core function of nurses and even nurses have not graded themselves over enthusiastically for performance in patient care skills and knowledge in the above study by Dr. V. Rama et.al. Experienced doctors perceive nurses' performance barely adequate as they have a greater understanding of nursing skills and possibly greater expectations from nurses' personnel and consider this domain very important. In a study conducted in Greece in the year 2009, statistically it was observed that nurses shows significant requirement for training in clinical skill. In a similar study conducted in Indonesia in the year 2006 by Hennessy et al, it was found that nurses' requirement for training in clinical skills and knowledge (patients care domain) is significant. <sup>(8)</sup>

#### **Managerial / Administrative Domain**

In performing skills mentioned in managerial / administrative domain 46.43% nurses have rated themselves very good and excellent, while 8.96% doctors are of the same view. 87.85% nurses consider this domain very important and critical while 70.14% doctors ranges importance of this domain between moderately important and very important. None of the doctors considered it as a critical domain. Both nurses and doctors agree for training in this domain. In a study conducted in the year May 2012 by Dr. V. Rama Devi, M. Malika Rao <sup>(5)</sup> on training needs identification of nursing staff, it is observed that (27%) of the nursing respondents felt that their managerial/administrative skills are outstanding while doctors did not perceive them to be outstanding. Doctors have not considered this domain as a critical one as clinician may place nursing skills above administration acumen. In another study



conducted by Diana S. Contino in USA in the year 2004, it is found that to lead effectively nurses need to have, skills, aptitude, knowledge for leadership competencies. <sup>(9)</sup>

### **Research Domain**

In research domain 40.18% nurses have rated themselves poor to barely adequate while 80.59% doctors graded nurses poor to barely adequate. Doctors as well as nurses agree for training in this domain. In a study conducted in Greece in the year 2009 by Adelais Markaki, Anthanasios Alegakis, et.al among nurses, statistically it was found that most of the training emerged from research domain. <sup>(10)</sup> Nurses with varying years of experience and of different cadre perceived their performance satisfactory/good.

### **CONCLUSION**

Training helps the nurses to equip themselves with better knowledge and skills. The training needs of the nurses have to be properly identified and they could be sent to some workshop and increase their awareness on the new updates in the technology in the field of medicine. They should be trained internally. There should not be any compromise in the quality of services to be provided to the patients as the health care organization deal with the valuable life of the people and the need for trained professionals in health care sector can hardly be overemphasized. This study reflects the training need assessment of nurses in a super specialty tertiary care hospital. However, findings are not generalized to small health sectors such as PHC, CHC. Further study required in this field to develop a structured programme for providing training to nurses. It is found from the study that nurses self perception about their performance in various domains i.e. communication, patient care, managerial/ administrative and research domain is higher while doctors

perception about nurses performance in the above domains is lesser. Nurses have identified training needs as respective to their positions. for example: Training needs identified to be further developed for Grade I and II nurses are maximum in patient care and research domain followed by managerial/administrative and communication domain. Whereas Training needs recognized for DNS's /NS/CNO are maximum in managerial/ administrative and research domain followed by communication domain.

Relevance to clinical practice - Today the health care industry is considered as one of the largest industries throughout the world. It includes thousands of hospitals, clinics, and other types of facilities which provide primary, secondary and tertiary levels of care. The demography of the patient population is changing globally and the health care needs and expectations are creating a demand for better quality of care from health care professionals. It is essential that health care organizations focus on developing the requisite skills and competencies for its employees through formal training in order to maintain the quality of patient care services. The delivery of valuable health care depends on the expanding team of trained health care professionals. As people are critical assets for the organization, the development of this asset is essential for the continued health and prosperity of the organization. Nursing is a dynamic profession that is subject to rapid changes in health care provision; hence there is need for training for nurses. Newly employed registered nurses require in-service training in order to update them regarding the latest developments in nursing practice. <sup>(11)</sup>

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