

# Assess Nurses` Perception Regarding The Use Of Technological Devices In The Critical Care Units At Selected Hospital, Chennai.

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## Abstract

**Background:** In conditions of intensive therapy, where the patients treated are in a critical condition, alarms are omnipresent. Nurses, as they spend most of their time with patients, monitoring their condition 24 hours, are particularly exposed to so-called alarm fatigue

**Methods:** A descriptive study design and convenience sample was used and 50 nurses (males and females) who were working in day shift were included. Three tools were used in the study and analysed statistically.

**Result:** The majority of study participants were female, staff nurses, age < 25. The relation between received training on each technological equipment as total, individual & training on ventilator and perception regarding positive aspects of using technology were statistically significant and there is increased patient risk due to human errors or mechanical faults, increased stress and decreased autonomy was evident on negative effects of equipments.

## BACKGROUND

Technology is the making, modification, usage, and knowledge of tools, machines, techniques, crafts, systems and methods of organization, in order to solve a problem, improve a pre-existing solution to a problem, achieve a goal or perform a specific function. Critical care unit is a place where the challenge of machine technology in nursing which provide life support to patients and is vital to patient care management. A critical care unit is a high-technology environment and technological developments become incorporated into nursing practice. Accordingly the use of technological devices can ensure better outcomes for patients' health and decrease morbidity and mortality.

## SIGNIFICANCE OF THE STUDY:

Critical care nurses will need to keep pace with the latest information and develop skills to manage new treatment methods and technologies. On the same time nurses play a vital role in critical care units and as a result of advancement of science we can say that technology is involved in the most of nursing care received for critically ill patient. It was important to be aware of the effect of technology and needed to assess current perception of nurses about the effect of technology in critical care units to help them to enforce on positive effects and reduce negative effects in order to keep the patient in optimal health status.

## TITLE

A Study to Assess Nurses` Perception Regarding the Use of Technological Devices in the Critical Care Units at Selected Hospital, Chennai.

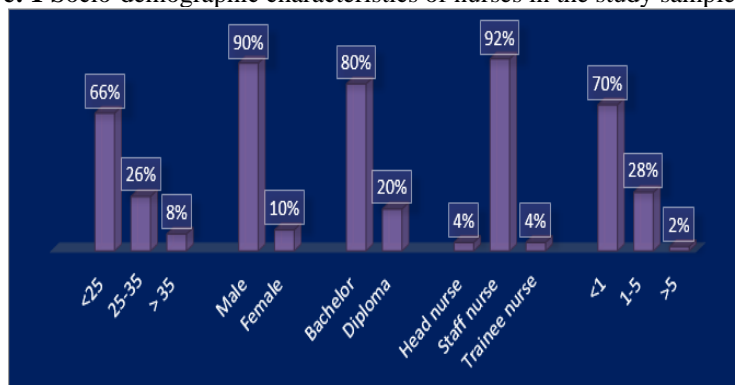
## OBJECTIVES:

- To assess the positive and negative perception regarding using technological devices in critical care units among nurses.
- To associate the positive perception regarding using technological devices in critical care units with the training.

## METHODS:

A descriptive study design and convenience sample was used to conduct this study. The setting of the study was selected high risk wards. 50 nurses (males and females) who were working in day shift were included. Three tools were used in the study were **Socio-demographic Data Sheet, Structured questionnaire sheet to assess positive aspects of using technology and Structured questionnaire sheet to assess negative aspects of using technology**. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means and standard deviations and medians for quantitative variables. Qualitative categorical variables were compared using chi-square test. Statistical significance was considered at p-value <0.05.

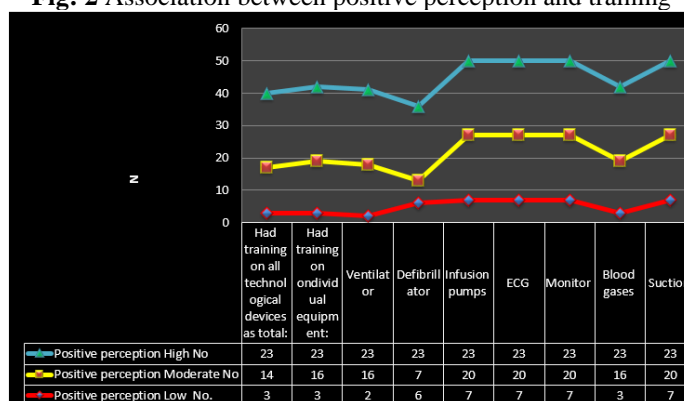
**Figure: 1** Socio-demographic characteristics of nurses in the study sample (n=89)



## INTERPRETATION :

- ❖ The majority of study participants were female, staff nurses, age < 25. Majority of nurses said dehumanization and technology cause focusing of interest on equipment and technical skills ignoring physical needs of patients. Nurses agreed that “technology increase prestige of nurses. Technology helps to create a better work environment and increased job satisfaction by improving efficiency, safety, easy, faster and quality of care.
- ❖ The negative effects of equipment, the participants agreed that there is increased patient risk due to human errors or mechanical faults, increased stress and decreased autonomy
- ❖ The relation between received training on each technological equipment as total, individual & training on ventilator and perception regarding positive aspects of using technology were statistically significant.

**Fig: 2** Association between positive perception and training



## Recommendations For Nursing Practice:

- Encourage nurses to attend regular, formal in-service educational programs to update their knowledge about technological devices.
- Encourage nurses to attend national and international congresses, seminars, symposiums and workshops in the field of technological equipments in critical care units to be aware about the new in technology.
- Employing only qualified and trained personnel in critical care units.
- Encourage nurses to initiate self-evaluation after using technological equipment continuously.

## Recommendations for Nursing Educational (undergraduate and continued):

- Nursing curriculums can include concept of technological devices in critical care units which include knowledge and skills about technology, with great emphasis on application through adequate training.

## Recommendations for Future Studies:

- An ongoing, well-structured education program for nurses about positive and negative aspects of using technology can be initiated in critical care units.
- Replication of this study using larger probability sample and different settings of the study is recommended.
- Further researches needed for investigate effect of the nurses' perception about using technology in ICU.

## REFERENCES

1. Lewandowska Katarzyna et al (2020), International Journal of Environmental Research and Public Health, 17(22), 8409.
2. Regmi Sudha and Thekkekara John (2020), International Journal of Health & Allied Sciences (Vol. 9, Issue 2), Publisher: Medknow Publications and Media Pvt. Ltd., April-June 2020.
3. Elizabeth A (2010): Patient safety technology: AACN Advanced Critical Care Volume 20, Number 2, pages 128-132.
4. Kiekkas P, Karga M, Pouloupoulou M, Karpouhsti I, Papadoulas V and Koutsojannis C (2006): Use of technological equipment in critical care units: nurses' perceptions in Greece. Journal of clinical nursing; 15(2):178-87.

5. Morton P, Fontaine D, Hudak C and Gallo B (2005): *Critical care nursing: A Holistic Approach*, 8th ed. Philadelphia: Lippincott Williams & Wilkins; 2-22, 36-45, 536-64.