



## THE IMPACT OF USING ELECTRONIC COMMUNICATION BOARD ON THE LEVEL OF SATISFACTION AMONG MECHANICALLY VENTILATED PATIENTS

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### ABSTRACT

**INTRODUCTION:** Nurse-patient communication is essential in the development of therapeutic relationship. But most of the critically ill patients who were under the mechanical ventilation not able to communicate because of anxiety, panic, and insecurity.. Breakdowns happen when patients become demented with or inattentive to the nurses' queries about symptoms of pain and when nurses have difficulty in building up the responses. **OBJECTIVES:** To assess the impact of using electronic communication board on the level of satisfaction of the communication pattern among patients on mechanical ventilation.. **METHODOLOGY:** A quantitative evaluative research approach was used in this study. The research design was quasi experimental post test design. The sample size was 30 mechanical ventilator patients selected by non-probability purposive sampling technique. The structured satisfaction scale was used to assess the level of satisfaction of mechanical ventilator patients. **RESULTS:** In experimental group, majority of the sample 12(80%) were very satisfied and 3 (20%) of sample were satisfied using communication board on mechanical ventilation. In control group, majority of the sample 12(80%) were dissatisfied and 3 (20%) were very dissatisfied. **CONCLUSION:** The study finding reveals that patient who uses electronic communication board on ventilation had significant increase in the level of satisfaction in communication.

### KEYWORDS :

#### BACKGROUND OF THE STUDY

"It is the responsibility of the health care practitioners to assess and determine an effective means for their patient's ability to communicate while they are verbally unable to do so" - Lance Patak

A communication act is a component of communicative behavior, non-vocal or verbal, that is directed from one conversational applicant to another in an attempt to convey a message. An exchange is a group of communication acts related to the communication of a single idea. Interpersonal communication is considered to be a fundamental human behavior necessary for normal psychosocial functioning.

Nurse-patient communication is essential to the development and function of a therapeutic relationship. But most of the critically ill patients who were under the mechanical ventilation were not able to communicate because of anxiety, panic, and insecurity. The good news is that nurses communicate with the patient about pain and their disabilities.. Unfortunately, these communication exchanges are not able to understandable by both the parties. Breakdowns happens when patients become demented with or inattentive to the nurses' queries about symptoms of pain and when nurses have difficulty in building up the responses.

Communication difficulties are often experienced by intubated patients and the critical care staffs who manage them endotracheal tubes becomes a hurdle for the patient as it prevents them to communicate verbally. Usually, this is due to the misplacement of the tube in the throat, which prevents the passage of air across the vocal cords. In spite of their inability to speak out, these patients are often keen to communicate effectively via other techniques. The intubated patients normally rely on communication methods like shaking their heads, actions through hands and pin pointing. This is specially focused to enhance the basic needs regarding their physical comfort such as positioning and suctioning.

#### NEED FOR THE STUDY

Clients under mechanical ventilation are not in the situation to bring out their feelings and their need through verbal communication because the endotracheal tubes in their vocal

cords make their verbal communication not possible, contributing to their frustration and anxiety. As a result, the health team member is in a condition to deal the patients' gesture communication such as facial expression, chewing, nodding and writing — which can be hard for the seriously ill clients. Nearly 40% of critically ill clients who expires in hospitals spend their final days in critical care unit receiving mechanical ventilation. Most of the patients lose their life in pain without the ability of expressing their needs, eagerness about end-of-life care, or last messages to the family members and the intubated patients, those who are the most severely ill have the greatest anger about the inability to speak.

During the clinical postings, the investigator witnessed a situation where the patient found it difficult to communicate with the nurse. The situation was so disheartening as the patient couldn't express or convey the messages as they wish. These kinds of situations would bring down the patients satisfaction over communication between themselves and staff nurses. Since then, the investigator felt the need for having a communication system for the patient with mechanical ventilation to aid them to express their wishes to the care givers. Effective communication aids can bring back the level of satisfaction of patients . Hence the investigator decided to find out whether the electronic communication board has the potential to improve communication and the level of satisfaction among mechanically ventilated patients.

#### STATEMENT OF THE PROBLEM

"A study to assess the impact of using communication board on the level of satisfaction among mechanically ventilated patients at a selected hospital, Meerut."

#### OBJECTIVES OF THE STUDY

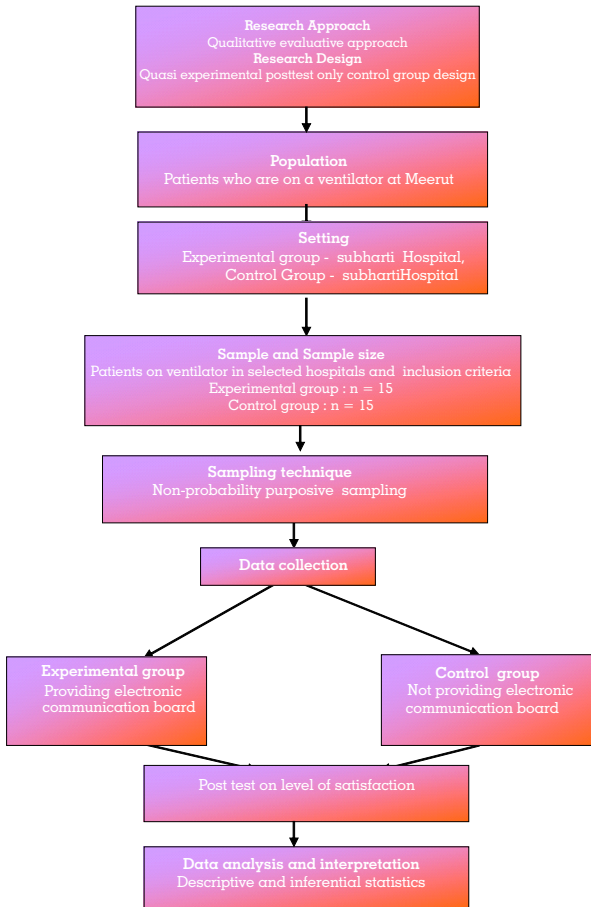
- To prepare and validate the electronic communication board for a patient with a mechanical ventilator.
- To assess the impact of using electronic communication board on the level of satisfaction in the experimental group and as compared with the control group.
- To find out the association between level of satisfaction with their demographic variables in the experimental group & control group.

**RESEARCH HYPOTHESIS**

- H<sub>1</sub>: The score of level of satisfaction will be significantly higher among mechanically ventilated patients who use electronic communication board than who do not use electronic communication board.
- H<sub>2</sub>-There will be a significant association between the post-test score of level of satisfaction among the experimental group with their selected demographic variable.

**REVIEW OF LITERATURE :** a)Review of Literature related to Communication, b) Review of Literature related to Communication of intubated patients, c)Review of Literature related effectiveness of electronic communication board

**RESEARCH METHODOLOGY**



**VARIABLES :**A variable is a symbol to which numerators or values are assigned.

**INDEPENDENT VARIABLE:** impact using of communication board is the independent variable.

**DEPENDENT VARIABLE:** the dependent variable is mechanically ventilated patients.

**SETTING OF THE STUDY:** The study was conducted in Chatterpati Shivaji Subharti Hospital at Meerut

**POPULATION:** The population selected for the study which comprises of Mechanically Ventilated patients in selected hospital at Meerut.

**SAMPLE AND SAMPLING TECHNIQUE:** Purposive sampling technique will be used for collecting the sample, who is fulfilling the inclusion criteria.

**SAMPLE SIZE:**

Sample size included in the study was 30 (15 in experimental group & 15 in control group) from Chatterpati Shivaji Subharti Hospital at Meerut.

**INCLUSION CRITERIA –**

1. Patients who were conscious and oriented to person, place and time during mechanical
2. Ventilation on CPAP with Pressure Support mode.
3. Patients who had requirement of mechanical ventilation from 18-72 hours of intubation.
4. Patients of age above 18 years

**EXCLUSION CRITERIA**

1. Patients who were mechanically ventilated .
2. Patients who were hemo dynamically unstable at the time of Mechanical ventilation

**TOOLS AND METHODS OF DATA COLLECTION**

**TOOL 1. Demographic variable of the samples**

It included variables like age, gender, education, occupation, length of ICU stay.

**TOOL 2.**

**PART A: Structured level of satisfaction.**

This part contains 15 structured questions to assess the impact of using electronic communication board among mechanically ventilated patients in selected hospital at Meerut.

**Reliability of Tool:-**

In this, the reliability of the tools is determined by administering the questionnaire to 30 Mecanically ventilated patient in selected hospital at Meerut. Reliability co-efficient of structure level of satisfaction scale was calculated by using KR-20 formula.

The reliability of knowledge questionnaire was found to be (r = 0.8)

**DATA ANALYSIS AND INTERPRETATION**

**Assessment of level of satisfaction among patients on a ventilator in the experimental and control group.**

Data represented that 12(80%) majority mechanically ventilated patients in the post-test level of satisfaction very satisfied, 3 (20%) of mechanically ventilated patients satisfied.

The majority of patients 23(76.66%) in the experimental group are highly satisfied and the majority of the patients 16(53.33%) were not satisfied in the control group. This reveals that the experimental group is having more levels of satisfaction than the control group.

**Impact of using electronic communication board among mechanically ventilator patients.**

In the experimental group, the mean posttest score was 48.932.56, whereas in the control group the mean score 26.533.75. The calculated 't' value was 18.41 is greater than the table value (2.05) at the p 0.05 level of significance. Hence the research hypothesis H<sub>1</sub> is retained. It shows that the electronic communication board was effective in the level of satisfaction among mechanically ventilator patients in the experimental group.

**Association between the level of satisfaction among patients on a ventilator in the experimental and control group with their selected demographic variables.**

In the experimental group, there was no significant association between the level of satisfaction with wearing duration only at the p 0.05 level. Hence the research hypothesis H<sub>2</sub> is failed.

In the control group, there was no significant association between the level of satisfaction with education status and the

use of anxiolytics at  $p < 0.05$  level. Hence the research hypothesis  $H_2$  is retained.

### IMPLICATIONS

The findings of this study have the following implications in the various areas of nursing service, nursing education, nursing administration, and nursing research.

#### Nursing Service

- The nurse can develop sensitivity to the effect of an electronic communication board on the level of satisfaction among patients on a mechanical ventilator
- The nurse should understand the importance of electronic communication boards in nursing practice.
- The nurse should teach other nurses the benefit of electronic communication board on the level of satisfaction among mechanically ventilated patients.
- The nurse can provide adequate clinical exposure to the student's where the electronic communication board was used in among mechanically ventilated patients.

#### Nursing Education

- The medical-surgical and advanced clinical oriented curriculum imparted to nursing students should emphasize more on electronic communication board on the level of satisfaction patients on a ventilator.
- Nursing educators should encourage the nursing students to know about the measures to improve the level of satisfaction patients on a ventilator.
- Staff nurses must be encouraged to actively participate in in-service education and workshop regarding the importance of improving the level of satisfaction of patients on a ventilator.

#### Nursing Administration

- The administrator should collaborate with governing bodies in formulating policies to employ qualified nurses in medical units and periodically supervise their use of an electronic communication board.
- The administrator should organize in-service education program on the use of electronic communication board for the nursing personals.
- The administrator should provide an opportunity for nurses to attend a training program on the use of electronic communication boards for patients on a ventilator.

#### Nursing Research

- The researcher should encourage further research on the use of electronic communication board on the level of satisfaction patients on a ventilator.
- The investigator should disseminate the findings through conferences, seminars, publications in professional, national and international journals and the World Wide Web.
- The findings of the study help to expand the scientific body of professional knowledge upon which further research can be conducted.
- The study can be a baseline to build upon future studies.

#### Recommendations

- A similar study can be conducted for a large group.
- A comparative study on the electronic communication board and magic slate or alphabets board can be conducted.
- A comparative study can be done on the effectiveness of the electronic communication board versus other measures on the level of satisfaction patients on a ventilator.
- A similar study can be conducted on a different population like laryngectomy patients.

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