

Effectiveness of Communication Board on Level of Satisfaction Over Communication among Mechanically Ventilated Patients

Dr. Metilda, M.Sc. (N), Ph.D.,
Asst. Quality Manager cum Asso. Nursing Superintendent,
Co-Author: Dr. A. Jaganath, MBBS., D.A., DNB (Neuro anesth),
Asso. Prof., Department of Anesthesia, Intensivist.
PES Institute of Medical Sciences & Research, Kuppam, Andhrapradesh.

Abstract:

➤ Background:

Mechanical ventilation is widely used to treat patients with critical conditions. This treatment is usually applied for difficulty in breathing. The use of mechanical ventilation devices has unique benefits to the patient. However, it can also cause various problems. Reduction in communication rank as one of the most negative experiences in mechanically ventilated patients. Effective communication with ventilator-based patients is essential. Nursing management of a mechanically ventilated patient is challenging on many levels, requiring a wealth of high technical skills. The Patient Communications Board improves communication, maintains information and creates a comfortable, attractive setting for patient, family and health care workers.

➤ Methods:

The research methodology used for the study is a Quasi experimental approach, post-test only design with a comparison group to assess the effect of the communication board on the level of satisfaction over communication among clients on mechanical ventilator. The sample was selected by purposive sampling technique and included 30 (experimental group-15, control group-15), mechanically ventilated patients in PESIMR hospital, Kuppam. The control group patients were provided with routine communication methods, while the experimental group were communicated with communication board. The level of satisfaction on communication was assessed by a 15 items rating scale. Data was analysed using both the descriptive and inferential statistics.

➤ Results:

There was a significant difference in the level of satisfaction on communication among the patients who were communicated using communication board compared to the routine method of communication.

➤ Conclusion:

The communication board had significantly improved the communication pattern and increased the satisfaction among the patients who are mechanically ventilated.

Keywords:- Communication Board, Level of Satisfaction, Communication.

I. INTRODUCTION

“Good communication is the bridge between confusion and clarity”

Interpersonal communication is important for our daily activities. Verbal and gesture communication allows us to share our thoughts, pay attention to our needs, and express feelings and emotions such as anxiety, sadness, joy, gratitude and love.

Critically ill patients admitted to the Critical Care Unit (ICU) require general life-saving treatment, including mechanical ventilation and endotracheal intubation. As a result, the ability to communicate verbally is impaired.

The use of low sedation in mechanically ventilated patients which is the current practice in the Critical Care Unit, increases the opportunity to be awake & communicate their needs & feelings. They are unable to communicate verbally and may use nonverbal communication techniques related to their needs, such as speaking orally, writing, or using gestures. However, these techniques that can be subjectively understood by communication partners can misinterpret the patient's intent, thereby contributing more to the patient's frustration and distress.

At the ICU, nurses are critical caregivers for mechanically ventilated patients and they typically spend more time with patients than other health care workers. Therefore, it is important to have good nurse-patient communication in the ICU to promote health and autonomy in patients who have compromised communication.

Critical care nurses working in critical care units provide care for critically ill patients and can communicate with patients' loved ones and caregivers in their workplace. In such settings, nurses need to make timely decisions based on their expertise and a high level of communication ability to comprehensively assess the needs of patients and their families.

Communication with hospitalized patients is essential to improve the quality and safety of the health care. Nurses are skilled at understanding the communication demands of mechanically ventilated patients. In spite of this, most nurses agree that they do not understand the needs or problems of patients who are mechanically ventilated. They reported that they did not receive specialized training to communicate with intubated patients. Also this in-turn causes lowered satisfaction on nursing care given to mechanically ventilated patients.

A mechanically ventilated patient experiences many barriers to communicate their needs which results in unrecognized pain, feeling of loss of control and depersonalization, anxiety, fear, distress and frustration. Therefore, to increase the satisfaction on communication in mechanically ventilated patients, adjuvant communication procedures should be widely applied. One of these methods was the communication board method first described by Apple-Hardin in 1984. The contents of this board include patients' basic needs, pain, appetite, pictures of body parts and names of individuals such as spouses and family members. This study was intended to assess the effectiveness of such board to improve the patient satisfaction on communication skills of critical care nurses, thereby improving nursing care quality in the Critical Care setting.

II. REVIEW OF LITERATURE

Literature related to effectiveness of communication board:

Vandana Pakhede (2019) conducted a quasi-experimental study to assess the effect of the modified Communication Board on post-surgery CABG patients' communication skills at a selected hospital in Bhopal, Madhya Pradesh, India. Subjects of the study were 60 postoperative CABG patients, 30 in each group; the control group and the experimental group were selected by purposive sampling technique. Non equivalent control group design was used to assess the effect of the modified communication board on the communication ability of postoperative CABG patients. Study results suggest that the modified communication board may be effective in enhancing the communication efficiency of patients with postoperative CABG. The study concluded that there was a significant relationship between the modified communication board and the post-operative CABG patient communication ability. These types of studies help nurses working in intensive and critical care units to communicate with mechanically ventilated patients.

Sayed-Rose Hosseini et al (2018) conducted a study on the use of communication boards on ease of communication and anxiety in mechanically ventilated conscious patients admitted to intensive care units of Imam Khomeini Hospital, Urmia, Iran. In this semi-experimental study, 30 conscious patients who underwent mechanical ventilation were recorded using the continuous sampling

method and assigned to the experimental (n = 15) and control (n = 15) groups. The control group consisted of patients adopting basic communication methods, while the experimental group included patients who used the communication board for communication. Both groups completed the Hospital Anxiety and Depression Scale (HADS) and the Communication of Communication Scale (ECS). Data were analyzed using detailed-decreasing statistics. Study results indicate that patient communication scores did not significantly differentiate between control and experimental groups prior to intervention. However, after the intervention, there was a significant difference in communication scores between the two groups. The anxiety scale showed a significant difference between control and experimental groups after intervention and significantly reduced patient anxiety in the experimental group. The study concluded that the use of a communication board is possible in mechanically conscious patients and contributes to the ease of communication and patient anxiety during mechanical ventilation.

Drovin DAS (2015) carried out a quasi experimental study to assess the effect of communication boards on the level of satisfaction of patient communication patterns on a mechanical ventilator. Non-probability convenient sampling was used as sampling technique and 20 patients were selected on a mechanical ventilator at the Bombay Hospital in Indore. Data were collected with the help of demographic proforma and structured questionnaires. The results of the study indicate that the mechanical ventilator using the communication board in the experimental group had a significant degree of satisfaction with the patient's communication pattern, while the control group had little or no satisfaction.

➤ *Statement of the Problem:*

“A QUASI EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF COMMUNICATION BOARD ON LEVEL OF SATISFACTION IN COMMUNICATION AMONG MECHANICALLY VENTILATED PATIENT AT PESIMR HOSPITAL, KUPPAM, ANDRA PRADESH”

➤ *Objectives:*

- To assess the level of satisfaction in communication among mechanically ventilated patients in experimental group using communication board and in control group without using communication board.
- To evaluate the effectiveness of communication board on the level of satisfaction in communication among mechanically ventilated patients between experimental group and control group.
- To associate the level of satisfaction in communication among mechanically ventilated patients in both experimental and control group with their selected demographic variables.

III. MATERIALS AND METHODS

The research approach adopted for this study was quasi experimental research approach. By Using posttest only design used to assess the effectiveness of communication board on level of satisfaction in communication among mechanically ventilated patient in PESIMR hospital Kuppam, AndhraPradesh, the study was carried out after the written approval by administrative authorities of the Institution and informed consent of patients and their family.

The purposive sampling method was used. A total of 30 samples were selected for the study in that 15 were under control group and 15 were under experimental group. Only experimental group was administered with communication board. The rating scale was developed with 15 items to assess the level of satisfaction of the communication among the patients on mechanical ventilator of both the groups.

Group	Intervention	Post test
Experimental group	Communication board	Rating scale to assess level of satisfaction on communication
Control group	No intervention	Rating scale to assess level of satisfaction on communication

Table 1

Selection and Development of Tool:

The tool had two sections.

- **SECTION A** consisted of demographic variables such as age, gender, marital status, occupation, income, indication of mechanical ventilation and diagnosis of the patient.
- **SECTION B** consisted of Self-structured observation four point likert scale which constituted 15 items which was used to assess the level of patient’s satisfaction. The maximum score for level of satisfaction was 60 and the minimum score considered to be 15.

Score interpretation:

The scores were;

- 1 – Strongly disagree; 2 – Disagree; 3 – Agree; 4 – Strongly agree

Pilot study: The pilot study was conducted to find out the feasibility and practicability of the study. It was conducted on 10 patients with duration of one-week in the critical care unit. Among 10 patients, 5 patients assigned to control group and remaining 5 patients in experimental group.

Data collection Procedure: Data was collected by the researcher being with the patient for eight hours. Investigator assessed the level of satisfaction in communication in control group was checked through the level of satisfaction scale. Similarly, the same scale was used to estimate the experimental group who received the communication board.

IV. RESULTS

➤ SECTION A

S.N	Demographic & clinical variables	Experimental group n=15		Control group n=15	
		Frequency	%	Frequency	%
1	Age :				
	18-35	2	13	1	7
	36-55	9	60	8	53
	56-75	4	27	6	40
2	Gender:				
	Male	11	73	12	80
	Female	4	27	3	20
3	Marital status:				
	Single	1	7	2	13
	Married	13	87	10	67
	Divorced/separated	1	6	3	20
4	Occupation:				
	Private employee	8	53	9	60
	Govt. employee	1	7	2	13
	Self employed	6	40	4	27
5	Clinical diagnosis:				
	Cardiac diseases	6	40	4	27
	Respiratory diseases	7	46	8	53
	Poisoning	1	7	1	7
	Road traffic accident	1	7	2	13

6	Duration of Mechanical ventilation:				
	12-24 hrs	6	40	5	33
	25-57 hrs	7	47	9	60
	58-70 hrs	2	13	1	7

Table 2:- Frequency & percentage distribution of demographic variables in experimental & control group

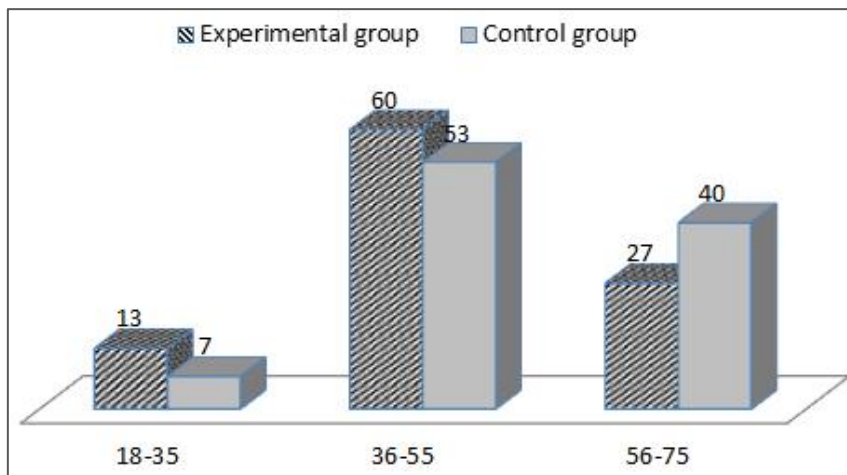


Fig 1:- Percentage distribution of Age

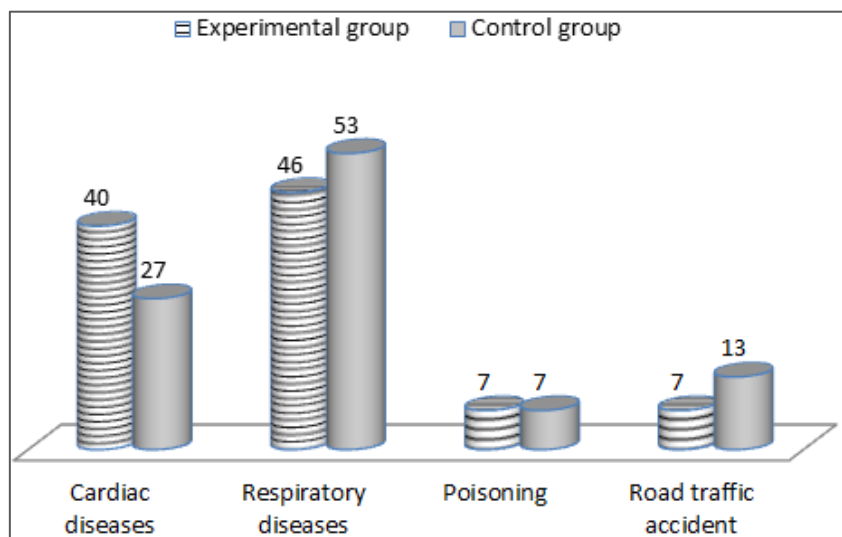


Fig 2:- Percentage distribution of Clinical Diagnosis

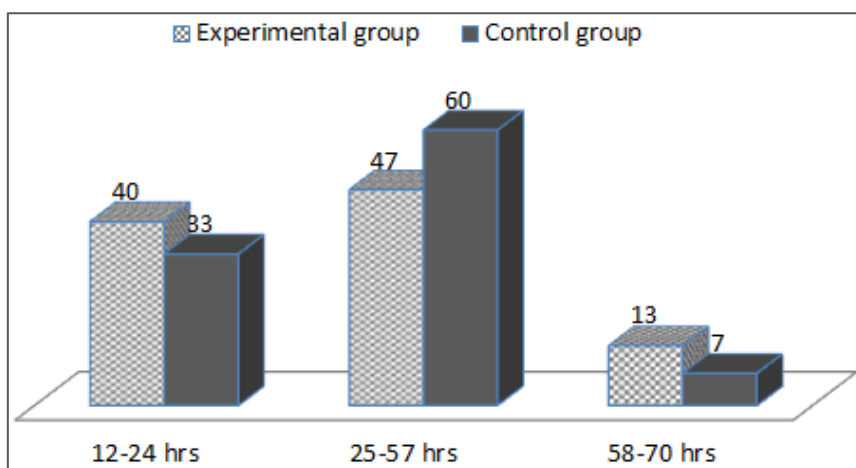


Fig 3:- Percentage distribution of Duration of Mechanical ventilation

➤ SECTION B:

S.No	Group	Mean	SD	t' Value
1.	Experimental	50.26	1.94	28.68**
2.	Control	27.6	2.40	

** p<0.05

Table 3:- Comparison of level of satisfaction in communication among mechanically ventilated patients among experimental group and control group.

The above table showed that ‘t’ value was 28.68, for the mean difference in satisfaction score of the experimental and control group is significant (p<0.05). The mean satisfaction score of the experimental and control group were 50.26 and 27.6 respectively. Hence the researcher inferred that the level of satisfaction over communication pattern among clients on mechanical ventilator is significantly higher in experimental group than in control group.

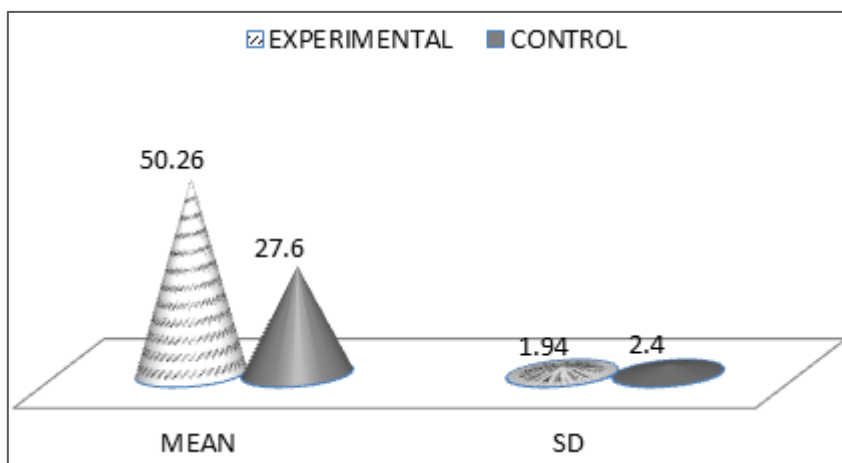


Fig 4:- Level of satisfaction in communication among mechanically ventilated patients among experimental group and control group

V. DISCUSSION

This study was a post test only quasi experimental study intended to assess the effectiveness of communication board on level of satisfaction in communication among mechanically ventilated patients.

Sample size was 30, 15 were allotted to experimental group & 15 were in control group. Among the subjects in experimental group, 60% belonged to age group 36-55 years, 73% were Male, 80% were married, 46% had respiratory disease, 40% had cardiac disease, 47% were mechanically ventilated for about 25-57 hours.

Among the subjects in control group, 53% belonged to age group 36-55 years, 80% were Male, 67% were married, 53% had respiratory disease, 60% were mechanically ventilated for about 25-57 hours.

In this study, the mean level of satisfaction in communication was 50.26 in experimental group & 27.6 in control group. The t-value was highly significant at 0.05 level which revealed that the level of satisfaction in communication was high in experimental group who was administered communication board.

There was no significant association between the level of satisfaction in communication among mechanically ventilated patients in both experimental and control group with their selected demographic variables.

VI. CONCLUSION

The study findings concluded that mechanically ventilated patients were satisfied with communication pattern using communication board. The communication board had great potential in improving communication with mechanically ventilated patients.

RECOMMENDATIONS

This study has strong implications to nursing education, nursing practice, nursing research & nursing administration. The nurse administrators can train the critical nurses in innovative ways to promote high quality patient care. Further detailed study can be done in relevant to the same topic with larger samples. The curriculum can be updated with the nursing measures which have been updated by such evidence bases. The practice nurse could incorporate the evidences developed by researches to improve the quality of nursing care.

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