Effectiveness of High-Tech Communication Board on Patients Response and Level of Satisfaction among Mechanical Ventilated Patients

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ABSTRACT
Communication is a crucial component and fundamental segment of nursing in all zones that renders it exercise to practice every one of its intercessions, including prevention, treatment, recovery, instruction and wellbeing advancement. Communication is a basic part of successful consideration in clinic setting, particularly in ICU where patients can encounter adjusted Communication capacities because of their basic sickness. Patient’s results are impacted by the patient’s capacities to impart successfully and take an interest in their consideration. Hence the present study aimed to assess the effectiveness of high-tech communication board on patient response and level of satisfaction among mechanically ventilated patients in an intensive care unit. True experimental - Post-test only design was employed with 60 patients in which 30 were allotted to the experimental and 30 to the control group. Demographic variables data were collected by using a structured questionnaire followed by assessing the response of the patients using patient response scale after using High-tech communication board. Patient’s satisfaction was assessed after usage of High-tech communication board using a satisfaction scale. The findings of the study revealed that most of the patients had a good response in the experimental group than the patients in the control group in which the comparison between the two groups showed a significant difference between the mean scores. Based on findings, comparative studies can be conducted with other High-Tech Communication Board in different settings with large samples.

INTRODUCTION
Communication is a crucial component and fundamental segment of nursing in all zones that renders
almost 40% of seriously sick patients who die in hospitals spend their last days and hours in clinical escalated care getting mechanical ventilation. (Wong et al., 2020) Many patients bite the dust in torment without the capacity to completely communicate their necessities, wishes about finish of life care, or last messages to friends and family and the intubated patients, the individuals who are the most seriously sick have the best outrage about the failure to talk. Over the most recent 20 years, the research considers identified with mechanical ventilation have zeroed in on the encounters of the patient and his/her correspondence with the medical care specialist and above all else, the encounters of patients who required mechanical ventilation were investigated in 3 subjective examinations. Patients who can’t impart adequately has trouble in communicating their sentiments and fundamental needs like washing, brushing, toileting, thirst, hunger, torment, and so forth. While examiner posted in basic consideration unit, the specialist felt very trouble in understanding the requirements of patients on ventilator. (Dithole et al., 2017) The patients are normally communicating their emotions and necessities through certain signals. Yet, more often than not, those motions are not perceived by the parental figure. Along these lines, the agent built up an understanding to utilize some imaginative strategies to improve the communication of intubated patients. The Communication Board is discovered to be a more compelling non-verbal specialized technique in intubated patients. Powerful communication helps can bring back the fulfilment of patients over correspondence design. Henceforth the examiner chose to see if the communication board can possibly improve communication and satisfaction among mechanically ventilated patients.

Figure 1: Comparison of pretest and post-test level of sensory function among patients with stroke

MATERIALS AND METHODS

The research approach adopted in the study was a quantitative approach by using True experimental post-test only design. The study was conducted...
Table 1: Frequency and percentage distribution of post-test level of patient response among mechanically ventilated patients in the experimental and control group.

| Patient Response | Not At All | Mild | Moderate | Very Much |
|------------------|-----------|------|----------|-----------|
|                  | No. | %  | No. | %   | No. | %   | No. | %   |
| Experimental     | 0   | 0  | 0   | 0   | 10  | 33.3| 20  | 66.7|
| Control          | 0   | 0  | 3   | 10.0| 27  | 90.0| 0   | 0   |

Table 2: Frequency and percentage distribution of post-test level of satisfaction among mechanically ventilated patients in the experimental and control group.

| Satisfaction     | Strongly Disagree | Disagree | Agree | Strongly Agree |
|------------------|-------------------|----------|-------|---------------|
|                  | No. | %  | No. | %   | No. | %   | No. | %   |
| Experimental     | 0   | 0  | 0   | 0   | 0   | 0   | 30  | 100.0|
| Control          | 0   | 0  | 0   | 0   | 4   | 13.3| 26  | 86.67|

Table 3: Comparison of the post-test level of patient response among mechanically ventilated patients between the experimental and control group.

| Patient Response | Mean | S.D  | Mean Difference Score | Student Independent ‘t’ Test |
|------------------|------|------|------------------------|-----------------------------|
| Experimental     | 8.03 | 1.07 | 2.33                   | t = 9.258                   |
| Control Group    | 5.70 | 0.88 |                        | 5***                        |
|                  |      |      |                        | P = 0.0001                  |

RESULTS AND DISCUSSION

The Sample characteristics are in the experimental group, most of them 12(40%) were in the age group of 36 to 45, 19(63.3%) were male, 11(36.7%) had respiratory distress syndrome and shock respectively, 15(50%) had a hearing and visual impairments respectively, 13(43.4%) were in mechanical ventilation for 18 hours, 25(83.3%) had no previous history of mechanical ventilation and 16(53.3%) were staying in ICU for 1 to 3 days. The table 1 also shows that in the control group, most of them 9(30%) were in the age group of 18 to 35 years, 36 to 45 years and 46 to 60 years respectively, 16(53.3%) were female, 12(40%) had respiratory distress syndrome, 17(56.7%) had visual impairments, 11(36.7%) were in mechanical ventilation for 18 hours, 20(66.7%) had no previous history of mechanical ventilation and 16(53.3%) were staying in ICU for 3 to 5 days. Homogeneity was maintained for all the demographic variables in the two groups.
The analysis of patient’s satisfaction in Table 2 shows that in the experimental group all 30(100%) had strongly agreed for satisfaction and in the control group, 26(86.67%) had strongly agreed for satisfaction and 4(13.3%) had agreed for satisfaction (Table 2).

The Table 3 shows that in the experimental group, the post-test mean score of patient response was 8.03±1.07 and the post-test mean score in the control group was 5.70±0.88. The mean difference score was 2.33. Student ‘t’ test was computed to and the calculated paired ‘t’ test value of t=26.035 was found to be statistically highly significant at p<0.001 level. The above finding clearly inferences that the sensory stimulation on sensory function administered to patients with stroke was found to be effective in improving the level of sensory function in the post-test. (Figure 1)

The findings revealed that only the demographic variable type of stroke had shown a statistically significant association with the post-test level of sensory function among patients with stroke at p<0.05 level. The statistical analysis further shows that only the demographic variable age had shown statistically significant association with the post-test level of satisfaction among mechanically ventilated patients in the experimental group at p<0.05 level.

Present study findings were supported by studies conducted by McCabe (2014) directed a subjective perspective study by utilizing a phenomenological subjective methodology. Eight patients were met and information was gathered by utilizing unstructured meetings. The examiner reasoned that the patients were discovered somewhat hard to impart through non-verbal communication while on a mechanical ventilator. (McCabe, 2004; Patak et al., 2006) uncovered that 69% of the patients saw that a communication board would have been useful, and they additionally distinguished explicit qualities and substance for a communication board. Along these lines, a correspondence board might be a viable intercession for diminishing patient’s disappointment and encouraging communication. Scarcely any more examinations done an examination uncovered that the patient was typically connected with sentiments of stress, hesitance to drive forward and brought about limiting or maintaining a strategic distance from the association regarding communication disappointment or dissatisfaction. Basic consideration attendants decipher the components, for example, knowing the patient, the patient’s capacity to cooperate and utilize assistive specialized gadgets and family presence to improve communication with precisely ventilated patients.

CONCLUSIONS

The study findings concluded the there was a significant improvement in patient response and level of satisfaction those who received high tech communication board intercession than the individuals who don’t have the communication board. This data offers understanding into the viability of cutting edge communication board in encouraging communication. Understanding likewise portrayed a few focal points of communication board with pre-printed text it expands the productivity and speed of correspondence and it encourages addressing of requirements.

Conflict of interest

The authors declare that they have no conflict of interest for this study.

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