

A Descriptive Study to Assess the Knowledge Regarding Mechanical Ventilator among Staff Nurse Working in Critical Areas of Selected Hospitals, Kolhapur with a View to Develop an Informational Booklet

Suraj Chopade

Abstract: Background: Mechanical ventilation, assisted ventilation or intermittent mandatory ventilation (IMV), is the medical term for artificial ventilation where mechanical means are used to assist or replace spontaneous breathing.^[1] This may involve a machine called a ventilator, Mechanical ventilation is termed "invasive" if it involves any instrument inside the trachea through the mouth, such as an endotracheal tube or the skin, such as a tracheostomy tube.^[2] Face or nasal masks are used for non-invasive ventilation in appropriately selected conscious patients. The two main types of mechanical ventilation include positive pressure ventilation where air (or another gas mix) is pushed into the lungs through the airways, and negative pressure ventilation where air is usually, in essence, sucked into the lungs by stimulating movement of the chest. A part from these two main types, there are many specific modes of mechanical ventilation, and their nomenclature has been revised over the decades as the technology has continually developed. Objectives of the Study: 1) To assess the knowledge regarding Mechanical Ventilator among staff nurses. 2) To find out an association between knowledge scores of Mechanical Ventilator and its selected socio-demographic variables. Method: The research approach adopted for the study was descriptive. By using Non-probability purposive sampling technique 100 staff nurses working in critical areas were selected for the study. Structured knowledge questionnaire was used to assess the knowledge of mechanical ventilator. Data were analysed by using mean, median, mode, standard deviation and range. Results: The calculated paired 't' value ($t_{ab} = 7.38$) was greater than tabulated value ($t_{ab} = 2.02$). Hence H_1 is accepted. This indicates that the gain in knowledge score is statistically significant at $P < 0.05$ level. i.e. $H_1: \mu \neq \mu_0$, therefore the findings revealed that the learning package was effective in increasing the knowledge among staff nurses. In present study, there was significant association between knowledge scores and selected socio-demographic variable like gender ($t_{cal} 26.86$ & $t_{ab} 4.30$), area of work ($t_{cal} 05$ & $t_{ab} 2.45$) and staff nurses attended the in service education ($t_{cal} 60$ & $t_{ab} 2.78$). Therefore the calculated Chi-square values was higher than tabulated value at $P < 0.05$ level of significance. Interpretation and Conclusion: The present study revealed that majority of staff nurses had average knowledge on mechanical ventilator. Therefore it was concluded that the study is effective in increasing knowledge regarding mechanical ventilator among staff nurses working in critical areas.

Keywords: Assess; Staff nurses; Mechanical Ventilator