''Effectiveness of Self Instructional Module on knowledge regarding the use of Communication Board in Communicating with Mechanical Ventilated Patients among ICU Staff Nurses in selected hospitals at Udaipur City, Rajasthan.''

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Abstract :*A quasi experimental One group pre-test post-test study to assess the effectiveness of Self Instructional Module on knowledge regarding the use of Communication Board in Communicating with Mechanical Ventilated Patients among ICU Staff Nurses in selected hospitals at Udaipur City, Rajasthan by using simple random sampling technique method. The tool comprised of by using structured knowledge questionnaire. The pretest was conducted and the Self Instructional Module was administered. The post test was conducted after one week .The data obtained were analyzed by using differential and inferential statistics. the mean post-test knowledge score is 26.71 (89.03 Percent) is greater than the mean pre-test knowledge scores 17.91 (59.70 Percent). The enhancement in the knowledge level of respondents is 8.8 indicates gain in knowledge by respondents.*
Key words – *One group pre –test post –test quasi experimental study, staff nurses, Communication Board and Mechanical Ventilator.*

I. Introduction

The Communication is a process by which two or more people exchange ideas, facts, feelings or impressions in ways that each gains a common understanding of meaning, intent and use of message. The communication of ideas, facts, feelings and information is very vital for facilitating human interactions.1 Communication is a lifelong learning process for the nurse. Nurses make the intimate journey with clients and their families from the miracle of birth to the mystery of death. It is necessary to build therapeutic communications for this journey. Nurses interact with many persons in the course of their profession. Competency in communication helps the nurse maintain effective relationships within the entire sphere of professional practice and helps meet legal, ethical, and standards of care. Failure to effectively communicate causes serious difficulty, increase liability, and threatens professional credibility.[2]The practice of nursing utilizes constant communication between the nurse and the patient, the patient"s family, the nurse"s co-workers, supervisors, and many others. Communication in this profession can be a complicated process, and the possibility of sending or receiving incorrect messages frequently exists. It is essential that we know the key components of the communication process, how to improve our skills, and the potential problems that exist with errors in communication.[3]Good communication between nurses and patients is essential for the successful outcome of individualized nursing care of each patient. To achieve this,however, nurses must understand and help their patients, demonstrating courtesy, kindness and sincerity. Also they should devote time to the patient to communicate with the necessary confidentiality, and must not forget that this communication includes persons who surround the sick person, which is why the language of communication should be understood by all those involved in it. Good communication also is not only based on the physical abilities of nurses, but also on education and experience.[4]An individual may be left unable to verbally communicate for a number of reasons. Having a tube inserted in the throat, having an illness that weakens the voice muscles, having suffered a stroke or other trauma and/or suffering from one of a number of neurological diseases are all reasons that verbal communications skills may be limited. In such cases non-verbal communication replaces speaking complications [5].

II. Research Elaborations

Statement of problem –

"A study to assess the effectiveness of Self Instructional Module on knowledge regarding the use of Communication Board in Communicating with Mechanical Ventilated Patients among ICU Staff Nurses in selected hospitals at Udaipur City, Rajasthan."

III. Objectives

1. To assess the pretest knowledge score regarding the use of communication board in communicating with mechanical ventilated patients among ICU staff nurses.
2. To administer self-instructional module regarding the use of communication board in communicating with mechanical ventilated patients among ICU staff nurses.
3. To assess the post-test knowledge score regarding the use of communication board in communicating with mechanical ventilated patients among ICU staff nurses.
4. To determine the effectiveness of self-instructional module on knowledge regarding the use of communication board in communicating with mechanical ventilated patients among ICU staff nurses.
5. To find out the association between pre-test knowledge score with selected demographic variables of ICU staff nurses in selected hospitals at Udaipur city, Rajasthan.

IV. Hypothesis

H1: There will be significant difference between pre-test and post-test knowledge score regarding use of communication board in communicating with mechanical ventilated patients.
H2: There will be significant association between pre-test knowledge score with selected socio demographic variables.

V. Materials And Methods

Population – Staff Nurses
Sample- ICU Staff Nurses in different hospitals at Udaipur City.
Sample Size – 210 Patients.
Setting –Geetanjali, Pacific and Kanak Hospital, Udaipur Rajasthan, India
The conceptual framework for the present study is based on CIPP Model

VI. Research Design

The research design selected for the present study was a one group pre-test post-test research design

PRE-TEST)Dependent variable(	TREATMENT)Independent variable(	POST –TEST)Dependent variable(
RO1	X	RO2
Knowledge of Staff Nurses.	Self Instructional Module.	Knowledge of Staff Nurses.

Table 1 :Quasi experimental one group pre and post-test research design

The interpretations of the symbol are as below:
RO1 = Assessment of knowledge by pre-test.
X = Self Instructional Module on use of Communication Board in communicating with Mechanical Ventilated patients
RO2 = Assessment of knowledge by post-test.

Ethical Consideration

After obtaining permission from research committee of Geetanjali College of Nursing, prior permission was obtained from nursing superintendent and medical superintendent of , Pacific and Kanak Hospital, Udaipur Rajasthan, India.Consent was taken from each participant who had participated in the study.

Description of the Tool

The structured knowledge questionnaire consisted of two parts i.e .Part –I & II .
Part I: Consist of selected socio-demographic variables like age in years, gender, professional qualification, years of working experience, area of work experience, area of residence, source of information and attended any seminar/workshop/conference regarding communication board. This section consists of 8 items.

Part II: Consist of structured knowledge questionnaire on use of Communication Board in communicating with Mechanical Ventilated patients. This section consists of 30 items on selected aspects. The selected aspects are:

 Concept regarding Communication (6)
 Aspects regarding Mechanical Ventilation (7)
 Knowledge regarding Communication Board (17)

Each items had only one correct response and each correct response was scored one. The total possible score of the structured knowledge questionnaire was 30. The same questionnaire was used for the assessment of knowledge level in pre and post-test.

Data Collection And Data Analysis
The data was presented under the following sections

Section I: Description of socio-demographic variables of Respondents.

Section II: Findings related to area wise knowledge scores of respondents regarding use of communication board in communicating with mechanical ventilated patients.

Section III: Findings related to association between pre-test knowledge score with selected socio-demographic variables of ICU staff nurses.

VII. Results

Table 2: Area wise pre-test knowledge score of respondents on use of communication board in communicating with mechanical ventilated patients

N=210

N=210 Area	Maximum score	Mean	Mean percentage	Standard deviation
CONCEPT REGARDING COMMUNICATION	6	3.26	54.33	1.05
ASPECTS REGARDING MECHANICAL VENTILATION	7	4.11	58.71	0.98
KNOWLEDGE REGARDING COMMUNICATION BOARD	17	10.54	62.00	1.36
TOTAL	30	17.91	59.7	1.26

Table 2: Area wise analysis shows that in pre-test the maximum mean percentage obtained by the respondents was 62 % with SD of 1.36 in the aspect of knowledge regarding communication board, 58.71 % with SD of 0.98 in the aspect of aspects regarding mechanical ventilation & minimum mean percentage obtained by the respondents was 54.33% with SD of 1.05 in the aspect of concept regarding communication.

Table 3: Area wise post-test knowledge score of respondents on use of communication board in communicating with mechanical ventilated patientsN=210

Area	Maximum score	Mean	Mean percentage	Standard deviation
CONCEPT REGARDING COMMUNICATION	6	5.42	90.33	0.68
ASPECTS REGARDING MECHANICAL VENTILATION	7	5.97	85.25	1.64
KNOWLEDGE REGARDING COMMUNICATION BOARD	17	15.32	90.11	1.06
TOTAL	30	26.71	89.03	1.36

Table 3: Area wise analysis shows that in post-test the maximum mean percentage obtained by the respondents was 90.33 % with SD of 0.68 in the aspect of concept regarding communication, 90.11 % with SD of 1.06 in the aspect of knowledge regarding communication board & minimum mean percentage obtained by the respondents is 85.25% with SD of 1.64 in the aspect of aspects regarding mechanical ventilation.

Table 4: Distribution of respondents by the Level of Knowledge regarding use of communication board in communicating with mechanical ventilated patientsN=210

knowledge	Score	Frequency		Percentage	
		Pre test	Post test	Pre test	Post test

Inadequate knowledge (0-50%)	0-15	166	00	79	00
Moderately adequate knowledge (51-75%)	16-22	44	78	21	37
Adequate knowledge (76-100%)	23-30	00	132	00	63
Total	**30**	**210**	**210**	**100**	**100**

Table 4: Depicts the pre-test and post-test knowledge level of ICU staff nurses regarding use of communication board in communicating with mechanical ventilated patients. The result showed that in pre-test none of the respondents had adequate knowledge, 21% of the respondents had moderately adequate knowledge while 79% of the respondents had inadequate knowledge and in pot-test 63% of the respondents had adequate knowledge and 37% of the respondents had moderately adequate knowledge regarding use of communication board in communicating with mechanical ventilated patients.

Table 5: Effectiveness of self-instructional module regarding use of communication board in communicating with mechanical ventilated patients among ICU staff nurses.N=210

	Mean	Mean Percentage (%)	SD	Enhancement	Enhancement percentage (%)	df	t-value	Inference
Pretest	17.91	59.70	2.66	8.8	29.33	209	18.43	S
Post test	26.71	89.03	3.48					

Table 5: The result showed that the mean post-test knowledge score is 26.71 (89.03 %) is greater than the mean pre-test knowledge scores 17.91 (59.70 %). The above table also depicts that the enhancement in the knowledge of respondents is 8.8 (29.33 %) supporting the post-test knowledge score are higher than the pretest knowledge score. The data further represent that the„t‟ value of 18.43 is significantly higher than the table value 1.96 at 0.05 level of significance. This indicates that there was difference in pre- test and post-test knowledge score of respondents and self-instructional module is effective in improving the knowledge score of ICU staff nurses on use of communication board in communicating with mechanical ventilated patients.

H1 - There is a significant difference between the pre and post-test knowledge score of ICU staff nurses on use of communication board in communicating with mechanical ventilated patients. Hypothesis was tested at 0.05 levels. The calculated t value 18.43 is significantly higher than the table value 1.96 at 0.05 level of significance. This indicates that there is significant difference between the pre-test and post-test knowledge score hence the hypothesis is proved and accepted.

H2: There is a significant association between pre-test knowledge score with selected socio demographic variables.

The Chi-square test was carried out to determine the association between the pre-test knowledge and socio-demographic variables such as age in years, gender, professional qualification, years of working experience, area of work experience, area of residence, source of information and attended any seminar/workshop/conference regarding communication board.

Out of which age in years ($\chi 2$ =18.62*),professional qualification ($\chi 2$ =16.33*), years of working experience ($\chi 2$ =23.06*), area of work experience ($\chi 2$ =26.04*), source of information ($\chi 2$ =23.06*) and attended any seminar/workshop/conference ($\chi 2$ =16.32*) were found to be significantly associated with pretest knowledge score at 0.05 level and the rest of the socio-demographic variables such as gender ($\chi 2$ =2.68*) and area of residence ($\chi 2$ =2.48*) were not significant. Hence research hypotheses H2 is accepted. The data also revealed that researcher does not found significant with gender and area of residence. Hence H2 is recommended for modification.

VIII.   Conclusion

The overall comparison of pre and post-test knowledge scores on use of communication board in communicating with mechanical ventilated patients shows that the mean post-test knowledge score is 26.71 (89.03 Percent) is greater than the mean pre-test knowledge scores 17.91 (59.70 Percent). The enhancement in the knowledge level of respondents is 8.8 indicates gain in knowledge by respondents. The data further represent that the „t‟ value of 18.43 is significantly higher than the table value 12.71 at 0.05 level of

significance. This indicates that there was significant difference in pre-test and post-test knowledge score of respondents and that the self- instructional module was effective in improving the knowledge level of ICU staff nurses on use of communication board in communicating with mechanical ventilated patients.

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