



Research Paper

“A study to assess the Effectiveness of Structured Teaching Module on Non Verbal Communication in improving the Knowledge and Practice among third year B.Sc., Nursing students while caring clients with Endotracheal Intubation at SMVMCH, Puducherry”.

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ABSTRACT

Communication is an essential part of patient-centred nursing care. Communicating with the intubated patient is difficult for the caregiver. When the patient not able to speak alternative methods of communication, such as picture boards, note pads, magic slates, or computer keyboards. This study was conducted to assess the Effectiveness of Structured Teaching Module on Non Verbal Communication in improving the Knowledge and Practice among third year B.Sc., Nursing students while caring clients with Endotracheal Intubation at SMVMCH, Puducherry. The design was quasi experimental one group Pre-test and Post-test design. The setting of the study was conducted in SMVMCH, Puducherry and duration is of six weeks. Totally 70 B.Sc., Nursing third year students were selected by using simple random sampling technique. The knowledge and practice was assessed with self prepared multiple choice questionnaire and practice checklist. The study concluded that nursing students 8 (11.5%) of them had adequate knowledge, 57 (81.4%) of them had moderately adequate knowledge and 5 (7.1%) of them had inadequate knowledge. After intervention 42 (60%) of them had adequate knowledge, 28 (40%) of them had moderately adequate knowledge and none of them had inadequate knowledge. After intervention 24 (34.3%) of them had Satisfactory level of practice and 46 (65.7%) were had excellent level of practice and none of them was Unsatisfactory level of practice.

I. INTRODUCTION:

“Communication is the solvent of all problems and is the foundation for personal development”.

- Peter Shepherd

Communication is an essential part of patient-centred nursing care. Patient safety requires effective communication among members of the health care team as patients move from one caregiver to another or from one care setting to another. Competency in communication helps maintain effective relationships within the entire sphere of professional practice and meets legal, ethical, and clinical standards of care. Intubation is a common and generally safe procedure that can help save a person's life. Patients in the ICU need mechanical assistance to maintain airway patency. Inserting a tube into the trachea, bypassing upper airway and laryngeal structures, creates an artificial airway. Most people recover from it in a few hours or days, but some rare complications can occur such as Aspiration. Intubation is a major stressor for the patient. The intubated patient may experience anxiety from not being able to talk.

Communicating with the intubated patient is difficult for the caregiver. When the patient not able to speak alternative methods of communication, such as picture boards, note pads, magic slates, or computer keyboards. For maintaining verbal communication look directly at the patient and use hand gestures when appropriate. Clinical practice of nursing students helps to aware of the importance of the communication that exist between them and the patient or family. It is imperative to teach nonverbal communication skills to the nursing students who take care of patients in hospitals. The most nursing students required improvement in their communication skills in both clinical communication and behaviour communication.

Jarrold M Mosier (2020) in United States Tracheal intubation in critically ill patients is common. It is the third most frequently performed procedure in U.S. hospitals, increasing >50% in just 4 years. Tracheal intubation was performed in more than 300,000 of the approximately 2 million patients admitted from U.S. emergency departments to the ICU and in 90% of ICU admissions from a UK audit. This narrative review describes the historical evolution of emergency airway management, explores the current challenges, and offers recommendations and important future research considerations for airway management in the critically ill.

II. REVIEW OF LITERATURE:

Ms. Mrityika Chakraborty, Ms. Sutapa Das et al. (2021) the study revealed that Critically ill patients on mechanical ventilation in intensive care units. The aim of the study was to assess the effectiveness of visual communication board on the level of satisfaction regarding communication needs of the communication compromised patients admitted in critical care units. Quantitative evaluative approach was adopted for this study, with Non-equivalent only control group Post-test study design. 60 samples from Apollo Gleneagles Hospital, Kolkata were selected by purposive sampling technique and assigned to experimental and control group equally. A visual communication board was given to the experimental group patients as intervention. The data were collected by using a proforma assessing background information and a patient satisfaction scale. Level of satisfaction regarding communication needs of communication compromised patients does not depend on use of visual communication board. Study concluded that there were several other factors which may influence the patients' satisfaction regarding communication needs.

STATEMENT OF THE PROBLEM

A study to assess the Effectiveness of Structured Teaching Module on Non Verbal Communication in improving the Knowledge and Practice among third year B.Sc., Nursing students while caring clients with Endotracheal Intubation at SMVMCH, Puducherry.

OBJECTIVES OF THE STUDY:

- To assess the knowledge and practice of B.Sc., nursing third year students regarding non – verbal communication while caring clients with endotracheal intubation.
- To evaluate the effectiveness of structured teaching module on non verbal communication among third year B.Sc., nursing students while caring clients with endotracheal intubation.
- To correlate the knowledge and practices among B.Sc., nursing third year students regarding non – verbal communication while caring clients with endotracheal intubation.
- To associate the level of knowledge and practice among B.Sc., nursing third year students on non verbal communication while caring clients with endotracheal intubation with their selected demographic variables.

HYPOTHESIS:

- H₁: There is a significant difference between pre and post test level of knowledge and practice on non verbal communication among third year B.Sc., Nursing students while caring clients with endotracheal intubation.
- H₂: There is a significant correlation between level of knowledge and practice on non verbal communication among third year B.Sc., Nursing students regarding structured teaching module while caring clients with endotracheal intubation.
- H₃: There is a significant association in level of knowledge and practice regarding non verbal communication for endotracheal intubated clients among third year B.Sc., Nursing students with their selected demographic variables.

III. MATERIALS AND METHODS

The chapter describes the research methodology followed A study to assess the Effectiveness of Structured Teaching Module on Non Verbal Communication in improving the Knowledge and Practice among third year B.Sc., Nursing students while caring clients with Endotracheal Intubation at SMVMCH, Puducherry. It deals with the research approach, research design, setting of the study, population, criteria for sample selection, sample size, sampling techniques development and description of the tool for data collection, content validity, pilot study, procedure for data collection and statistical analysis.

Section – A: This section consist of demographic data such as Age, Gender, areas of clinical posting, Have you ever make a communication with endotracheal intubated clients, Previously attended class regarding communication method, Hobbies, Sources of information, Courses completed in critical care nursing.

Section – B: This section consist of 25 knowledge questionnaire on structured teaching module of non verbal communication of endotracheal intubated clients. Each question consists of 1 mark. And scoring interpretation as,

SCORING INTEPRETATION:

KNOWLEDGE	SCORING INTEPRETATION
1 – 8	Inadequate knowledge
9 – 16	Moderate adequate knowledge
17 – 25	Adequate knowledge

Section – C:

The Practice checklist consist of component such as student goes near to the bed side and excellent use of information gathering, proper selection of communication method (flash card, alphabetical board, chalk board, note book and pen, phrasal board), appropriate level of eye contact, hold the flash card visible at the chest level with pointer, help to make a sentence by using alphabetical board and phrasal board, providing notebook and pen for expressing the needs, ensuring active listening by shaking the head and nodding the head, eye blinking, thumbs up and thumbs down, providing confidential and emotional support by touch, demonstrating empathy and responding to emotion, implementing care with respective needs, make independent observation throughout the practices and effective termination of the communication.

SCORING INTEPRETATION:

PRACTICE	SCORING INTEPRETATION
1 – 4	UNSATISFACTORY
5 – 8	SATISFACTORY
9- 12	EXCELLANT

RESEARCH APPROACH:

A Quantitative research approach was adopted for this present study.

RESEARCH DESIGN:

Quasi Experimental design and one group Pre-test Post-test design

Pre-test	Intervention	Post-test
Q1	X	Q2

Q1 – Assess the Pre-test level of knowledge and practice regarding non verbal communication for endotracheal intubated clients

X – Structured teaching module on non verbal communication method

Q2- Assess the post - test level of knowledge and practice regarding non verbal communication method for endotracheal intubated clients.

SETTING OF STUDY:

This study will be conducted in Sri Manakula Vinayagar Medical College and Hospital Puducherry. This hospital is 100 meter away from SMVNC. The hospital is 1050 bedded multi - specialty hospital.

POPULATION:

The population of the study comprises all the B.Sc., Nursing students at Puducherry.

SAMPLE:

The sample of the study comprises of third year B.Sc., Nursing students at Sri Manakula Vinayagar Nursing College, Kalitheerthalkuppam, Puducherry.

SAMPLE SIZE:

The sample size was calculated by using open Epic software with prevalence rate of 80%, 95% confidence interval. The obtained sample size consists of 70 B.Sc., Nursing students.

SAMPLING TECHNIQUE:

The data was collected by using Simple random sampling technique.

SAMPLING CRITERIA:

Inclusion criteria

- All III – Year B.Sc., Nursing students
- Both Gender (male and female)

Exclusion criteria

- Students who already attended the teaching class or seminar regarding communication method for endotracheal intubated clients.
- M.Sc., and P. B. B. Sc., Nursing students

STUDY DURATION:

After getting clearance from SMVMCH ethical committee the study will be undertaken for 6 weeks.

VARIABLES:

Independent Variables: Structured teaching module on non - verbal communication method.

Dependent Variables: Knowledge and Practice among third year B.Sc., nursing students.

IV. RESULTS:

Frequency and percentage wise distribution of before and after intervention of structured teaching module the level of knowledge among 70 third year B.Sc., Nursing students 8 (11.5%) of them had adequate knowledge, 57 (81.4%) of them had moderately adequate knowledge and 5 (7.1%) of them had inadequate knowledge. This might be due to lack of awareness of knowledge on non verbal communication for endotracheal intubated clients. After intervention 42 (60%) of them had adequate knowledge, 28 (40%) of them had moderately adequate knowledge and none of them had inadequate knowledge.

Frequency and percentage wise distribution of before and after giving intervention of structured teaching module the level of practice among 70 third year B.Sc., Nursing students 42(60%) of them had practised satisfactory level and 19(27.1%) were had excellent level of practice and 9(12.9%) of third year B.Sc., Nursing students had Unsatisfactory level of practice . This might be due to lack of awareness of practice on non – verbal communication for endotracheal intubated clients. After intervention 24(34.3%) of them had Satisfactory level of practice and 46(65.7%) were had excellent level of practice and none of them was Unsatisfactory level of practice.

It shows that Paired t-test shows that the overall pre-test mean and standard deviation of knowledge is 12.77 ± 3.181 after the implementation of structured teaching module on non – verbal communication for endotracheal intubated clients the level of knowledge was improved to 16.74 ± 3.408 . The improvement was statistically tested with paired t-test value for pre and post-test knowledge is -7.69 and p value is 0.000.

It shows that Paired t-test shows that the overall pre-test mean and standard deviation of practice is 6.53 ± 1.759 after the implementation of structured teaching module on non – verbal communication for endotracheal intubated clients the level of practice is 8.59 ± 1.830 . The improvement was statistically tested with paired t-test value for pre and post-test practice paired t value is -6.29 and p value is 0.000 this shows the significant p value <0.001, because of the intervention.

The results revealed that out of 8 variables gender was found to be statistically association with the level of knowledge (0.053).

The results revealed that there is no variable found to be significantly association with the Pre-test level of practice.

Frequency and percentage wise distribution of demographic variables among third year B.Sc., nursing students. (N=70)

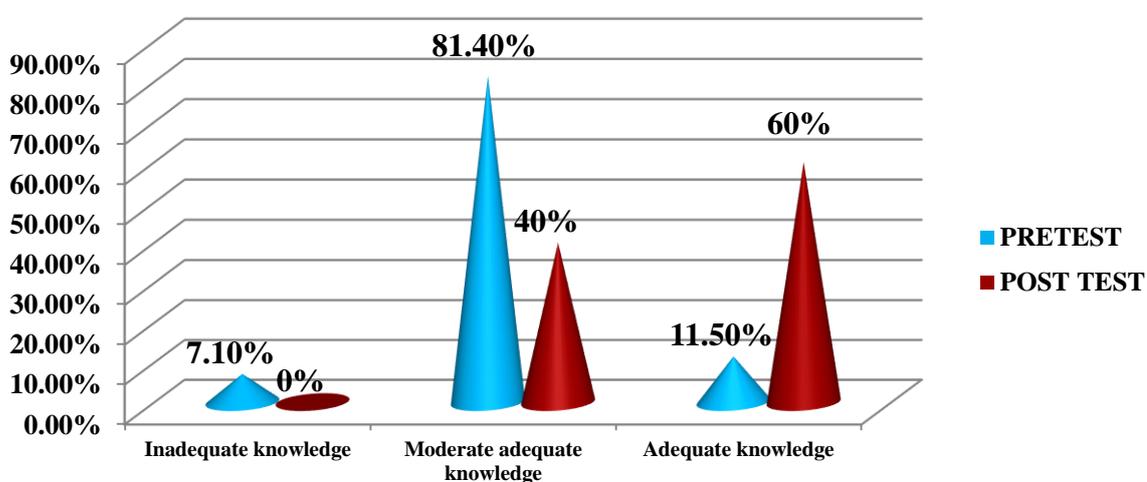
SL.NO	DEMOGRAPHIC VARIABLES	FREQUENCY(N)	PERCENTAGE(%)
1	Age in years		
	a) 16 – 18 years	1	1.4
	b) 19 – 21 years	68	97.1
	c) 22 - 24 years	1	1.5
	d) Above 25 years	0	0
2	Gender		
	a) Male	19	27.1
	b) Female	51	72.9
3	Areas of clinical posting		
	a) Critical care unit	10	14.3
	b) Emergency department	4	5.7
	c) Operation theatre	8	11.4
	d) All of the above	48	68.6
4	Hobbies		
	a) Drawing	26	37.1
	b) Story telling	12	17.1
	c) Public speaking	8	11.4

	d) Dancing	24	34.4
5	Have you ever make a communication with intubated clients		
	a) Yes	20	28.6
	b) No	50	71.4
6	Previously attended a class on communication method for intubated clients		
	a) Yes	17	24.3
	b) No	53	75.7
7	Sources of information		
	a) Internet	36	51.4
	b) Newspaper	2	2.9
	c) Books	32	45.7
8	Courses completed in critical care nursing		
	a) Yes	3	4.3
	b) No	52	74.3
	c) Trainee	15	21.4

Frequency and percentage wise distribution of Pre-test and post -test of the level of knowledge among third year B.Sc., Nursing students on non verbal communication for endotracheal intubated clients. (N=70)

LEVEL OF KNOWLEDGE	PRE-TEST		POST-TEST	
	N	%	N	%
Inadequate knowledge	5	7.1	0	0
Moderate adequate knowledge	57	81.4	28	40
Adequate knowledge	8	11.5	42	60
Mean & Standard deviation	12.77± 3.181		16.74 ± 3.408	

Frequency and percentage wise distribution of pretest and post -test of the level of knowledge among third year B.Sc., nursing students on non verbal communication for endotracheal intubated clients



Frequency and percentage wise distribution of Pre-test and post -test of the level of practice among third year B.Sc., nursing students on non verbal communication for endotracheal intubated clients. (N=70)

LEVEL OF PRACTICE	PRE-TEST		POST-TEST	
	N	%	N	%
Unsatisfactory	9	12.9	0	0
Satisfactory	42	60	24	34.3
Excellent	19	27.1	46	65.7
Mean & Standard deviation	6.53± 1.759		8.59 ± 1.830	

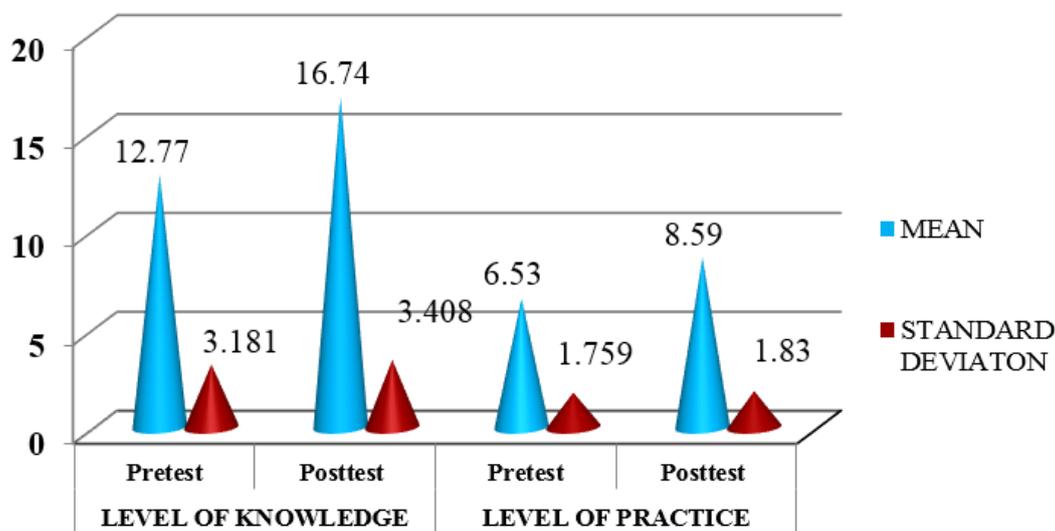
Frequency and percentage wise distribution of pretest and post -test of the level of practice among third year B.Sc., nursing students on non verbal communication for endotracheal intubated clients



Effectiveness of structured teaching module on non verbal communication for endotracheal intubated clients among third year B.Sc., nursing students while caring endotracheal intubated clients. (N=70)

GROUP	TEST	MEAN	STANDARD DEVIATON	MEAN DIFFERENCE	Paired -t test	df	'p' VALUE
Level of Knowledge	Pre-test	12.77	3.181	-3.97	-7.69	69	0.000** HS
	Posttest	16.74	3.408				
Level of Practice	Pre-test	6.53	1.759	-2.05	-6.29	69	0.000** HS
	Posttest	8.59	1.830				

Effectiveness of structured teaching module on non verbal communication for endotracheal intubated clients among third year B.Sc., nursing students while caring endotracheal intubated clients.



Correlation of the level of knowledge and practices before and after the structured teaching module on non verbal communication methods for endotracheal intubated clients among third year B.Sc., nursing students while caring endotracheal intubated clients. (N=70)

Correlation of the level of knowledge and practices before and after the structured teaching module on non verbal communication methods for endotracheal intubated clients		MEAN	STANDARD DEVIATION	'r' VALUE	'p' VALUE
PRE-TEST	Knowledge	12.77	3.18	0.061	0.616 NS
	Practice	6.53	1.75		
POST-TEST	Knowledge	16.74	3.408	0.073	0.041 *S
	Practice	8.59	1.830		

Association between the Pre-test level of knowledge on non verbal communication for endotracheal intubated clients among third year B.Sc., nursing students with their selected demographic variables while caring endotracheal intubated clients. (N=70)

SL. NO	DEMOGRAPHIC VARIABLES	Pre-test level of knowledge						X ²
		Inadequate		Moderate		Adequate		
		N	%	N	%	N	%	
1	Age in years							X ² = 0.470 Df = 4 p = 0.976
	16 – 18 years	0	0.0%	1	1.8%	0	0.0%	
	19 – 21 years	5	100.0%	55	96.5%	8	100.0%	
	22 - 24 years	0	0.0%	1	1.8%	0	0.0%	
	Above 25 years	0	0.0%	0	0.0%	0	0.0%	
2	Gender							X ² = 5.728 Df = 2 p = 0.053
	Male	1	20%	13	22.8%	5	62.5%	

	Female	4	80%	44	77.2%	3	37.5%	*S
3	Areas of clinical posting							$X^2= 5.112$ $Df= 6$ $p = 0.530$
	Critical care unit	0	0.0%	9	15.8%	1	12.5%	
	Emergency department	1	20.0%	2	3.5%	1	12.5%	
	Operation theatre	1	20.0%	7	12.3%	0	0.0%	
	All of the above	3	60.0%	39	68.4%	6	75.0%	
4	Hobbies							$X^2= 3.523$ $Df= 6$ $p = 0.741$
	Drawing	2	40.0%	22	38.6%	2	25.0%	
	Story telling	0	0.0%	11	19.3%	1	12.5%	
	Public speaking	1	20.0%	5	8.8%	2	25.0%	
	Dancing	2	40.0%	19	33.3%	3	37.5%	
5	Have you ever make a communication with intubated clients							$X^2= 0.377$ $Df= 2$ $p = 0.828$
	Yes	2	40.0%	16	28.1%	2	25.0%	
	No	3	60.0%	41	71.9%	6	75.0%	
6	Previously attended a class on communication method for intubated clients							$X^2= 0.055$ $Df=2$ $p =0.973$
	Yes	1	20.0%	14	24.6%	2	25.0%	
	No	4	80.0%	43	75.4%	6	75.0%	
7	Sources of information							$X^2= 6.711$ $Df= 4$ $p = 0.152$
	Internet	2	40.0%	31	54.4%	3	37.5%	
	Newspaper	1	20.0%	1	1.8%	0	0.0%	
	Books	2	40.0%	25	43.9%	5	62.5%	
8	Courses completed in critical care nursing							$X^2= 2.119$ $Df= 4$ $p = 0.714$
	Yes	0	0.0%	3	5.3%	0	0.0%	
	No	3	60.0%	42	73.7%	7	87.5%	
	Trainee	2	40.0%	12	21.1%	1	12.5%	

The results revealed that gender was found to be statistically association with the level of knowledge (0.053) and other variables were not associated. Most of the participant in the study was female and both gender was shows significantly associated in level of knowledge.

Association between the Pre-test level of practice on non verbal communication for endotracheal intubated clients among third year B.Sc., nursing students with their selected demographic variables while caring endotracheal intubated clients. (N=70)

SL. NO	DEMOGRAPHIC VARIABLES	Pre-test level of practice						X ²
		Unsatisfactory		Satisfactory		Excellent		
		N	%	N	%	N	%	
1	Age in years							$X^2= 7.525$ $Df= 4$ $p =0.111$
	16 – 18 years	0	0.0%	1	2.4%	0	0.0%	
	19 – 21 years	8	88.9%	41	97.6%	19	100.0%	
	22 - 24 years	1	11.1%	0	0.0%	0	0.0%	
	Above 25 years	0	0.0%	0	0.0%	0	0.0%	
2	Gender							$X^2= 4.300$ $Df= 2$ $p = 0.116$
	Male	0	0.0%	12	28.6%	7	36.8%	

	Female	9	100.0%	30	71.4%	12	63.2%	
3	Areas of clinical posting							$X^2= 3.969$ Df= 6 p = 0.681
	Critical care unit	1	11.1%	6	14.3%	3	15.8%	
	Emergency department	1	11.1%	1	2.4%	2	10.5%	
	Operation theatre	0	0.0%	5	11.9%	3	15.8%	
	All of the above	7	77.8%	30	71.4%	11	57.9%	
4	Hobbies							$X^2= 3.642$ Df= 6 p = 0.725
	Drawing	3	33.3%	15	35.7%	8	42.1%	
	Story telling	2	22.2%	8	19.0%	2	10.5%	
	Public speaking	1	11.1%	3	7.1%	4	21.1%	
	Dancing	3	33.3%	16	38.1%	5	26.3%	
5	Have you ever make a communication with intubated clients							$X^2= 0.262$ Df= 2 p = 0.877
	Yes	2	22.2%	12	28.6%	6	31.6%	
	No	7	77.8%	30	71.4%	13	68.4%	
6	Previously attended a class on communication method for intubated clients							$X^2= 2.655$ Df= 2 p = 0.264
	Yes	1	11.1%	9	21.4%	7	36.8%	
	No	8	88.9%	33	78.6%	12	63.2%	
7	Sources of information							$X^2= 3.547$ Df= 4 p =0.471
	Internet	7	77.8%	21	50.0%	8	42.1%	
	Newspaper	0	0.0%	1	2.4%	1	5.3%	
	Books	2	22.2%	20	47.6%	10	52.6%	
8	Courses completed in critical care nursing							$X^2= 6.829$ Df= 4 p = 0.145
	Yes	0	0.0%	2	4.8%	1	5.3%	
	No	9	100.0%	27	64.3%	16	84.2%	
	Trainee	0	0.0%	13	31.0%	2	10.5%	

It revealed that association of Pre-test level of practice on non verbal communication for endotracheal intubated clients among third year B.Sc., nursing students with their selected demographic variables while caring endotracheal intubated clients. The results revealed that there is no variable found to be significantly association with the Pre-test level of practice.

V. CONCLUSION AND RECOMMENDATIONS:

This study implies that among third year B.Sc., Nursing students had inadequate knowledge and unsatisfactory level of practice on non – verbal communication for endotracheal intubated clients. After the structured teaching module the knowledge and practice on non – verbal communication for endotracheal intubated clients was increased.

IMPLICATION OF THE STUDY:

The results obtained from the present study proclaimed that, use of Structured teaching module can reduce complaints and improve status of endotracheal intubated clients. The study may help the endotracheal intubated clients in order to preventing form further complications in related to non verbal communication needs.

NURSING PRACTICE:

- The nurse working in the hospital, clinical setting and in community can practice structured teaching module on non verbal communication method for endotracheal intubated clients as integral part of nursing profession.
- The study can also be used by the nurse to educate and instruct about the non verbal communication method for caregivers of intubated clients.

- The findings of the study could be utilized as a basis for in – service education of nurses so that constant awareness and clear understanding may be created regarding non verbal communication method for endotracheal intubated clients.

NURSING EDUCATION:

- Effort could be made to improve and expand nursing curriculum to provide more content in the area of nursing care like non verbal communication for intubated clients.
- Conference, Workshops and Seminars can be given for nurses and student to impact the education towards the structured teaching module on non verbal communication method for intubated clients.
- Students could be provided with adequate opportunities in developing skills in handling such intubated clients and how to identify their difficulties and help them to promote their needs.
- In Medical Surgical Nursing and Nursing Foundation, curriculum needs to strengthen to enable the nursing students to know about the non verbal communication for endotracheal intubated clients.
- Nursing educators need to strengthen the evidence-based nursing practices among the Undergraduate and Post Graduate Nursing Students.

NURSING ADMINISTRATION:

- Nurse administrator can make necessary polices to implement the nursing care service for endotracheal intubated clients.
- Nurse administrator could give attention on proper selection, and effective utilization of the structured teaching module on non verbal communication for endotracheal intubated clients.
- The nursing administrator can supervise the intervention done for the clients by student nurse and nursing officer to monitor the standards of practice to promote excellence in nursing care.

NURSING RESEARCH

- The findings of the study help the nurses and students to develop the inquiry by providing baseline.
- Nursing researcher can encourage the clinical nurse and student nurse to apply the research findings in their daily nursing care activities and can bring out new innovative ideas in caring endotracheal intubated clients.
- The researcher can take step to conduct periodic review of research findings and disseminate the findings through conference, seminar, publications in journals and in the world wide web.

NURSING SERVICES:

- Nurses working in medical, surgical, CCU and causality unit should have enough knowledge and special skills to identify the Critically Ill endotracheal intubated clients as early as possible and to take immediate action on overcoming such complications.
- Nurses as a counsellor and educator should provide adequate guidance and knowledge about the endotracheal intubated clients outcome to their family member about the care needed.

RECOMMENDATIONS:

Based on findings of the present study, the following recommendations have been made,

- Similar study can be conducted in other parts of the country with a large sample.
- The same study can be conducted with true experimental research design.
- Based on the study findings suggested to incorporate in the nursing curriculum and medical curriculum.
- The study can be replicated with larger study participants for better generalization.
- The study can be done as a longitudinal study.
- A comparative study can be conducted between endotracheal intubated and tracheostomy patients.

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