

Effectiveness of Video Assisted Teaching on Knowledge and Practice of Nasogastric Tube Insertion among a Group of Newly Joined Staff Nurses

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Abstract: Background: A healthy lifestyle isn't just diet and exercise. Today we go over the components of leading a healthy lifestyle and how it's important to lead a balanced life. The World Health Organization in 1946 defined health as 'A complete state of mental, physical and social well - being not merely the absence of disease'. The actual definition of Healthy Living is the steps, actions and strategies one puts in place to achieve optimum health. So for a admitted patient in a hospital needs the adequate amount of Nourishment, Care, Medication and various therapies to get healed faster. To provide nourishment to those who are unable to take Nutrition orally needs Parenteral nutrition or the Nutrition through the Nasogastric Tubes. Nasogastric tubes are used to both deliver and remove things from your stomach. They are frequently used to give hospitalized patients to provide oral drugs and short - term tube feeding. In order to release pressure or remove poisons, they can also suction out stomach contents. So the main aim of the study is to explore the practice regarding the knowledge and practice of the nasogastric tube insertion among the newly joined staff nurses in the Hospital and to provide them the Teaching by Video Assisted Teaching to promote the easy and comfortable insertion of Nasogastric tube. Therefore the present study is aimed to assess the effectiveness of Video Assisted Teaching on the practice and knowledge of the newly joined staff nurses on the Nasogastric tube insertion. Objectives: 1) To assess the knowledge regarding Nasogastric Tube Insertion among Newly joined Staff Nurses. 2) To evaluate the effectiveness of Video assisted Teaching Program on the Level of knowledge regarding Nasogastric Tube Insertion. 3) To find out the association between Demographic Variables and on the level of pre - test knowledge and practice scores regarding Nasogastric Tube Insertion. 4) To find out the correlation between Knowledge scores and Practice scores. Materials and Methods: Pre - experimental research design was adopted to accomplish the objectives. NonProbability purposive sampling technique was used under which they were assigned in groups by using stratified simple random sampling to select the samples. The sample consists of 60 newly joined staff nurses having Experience under 1 year. The pretest and post - test assessment of knowledge of Staff nurses was carried out using the structured practice questionnaire. The obtained data were analyzed and interpreted using descriptive and inferential statistics. Results: The findings of the study revealed that, post test overall mean score of level of knowledge was 21.88 which was found to be higher than the pre test overall mean score of level of knowledge was 13.12. The overall improvement in the mean score of knowledge was 8.76 and the obtained paired t - value was 54.46 which was significant at $p < 0.05$ level. The results show that there was significant improvement in level of knowledge in post test after administration Video Assisted Teaching of nasogastric Tube insertion. Thus, Video Assisted Teaching was effective in improving the level of knowledge and practice among newly joined staff nurses. In the study it was also found that there was a significant association between mean difference levels of knowledge and practice regarding Nasogastric tube insertion to their selected demographic variables. Conclusion: This study concluded that the Video Assisted Teaching is effective on Knowledge and Practice of Nasogastric Tube insertion.

Keywords: Effectiveness, Video Assisted Teaching, Nasogastric Tube insertion, Staff Nurses

1. Introduction

Nasogastric Tubes were utilized for a very long time; the first use of their insertion traces back to the seventeenth century. Their only primary intent was to provide nourishment. Nasogastric Tubes are employed directly for a variety of various applications, including medication administration, gastric decompression, and gastric irrigation. The methods used to verify the Nasogastric Tubes placement have also seen a major development. A nursing words written in the 1930s by Scott claimed that putting the Nasogastric Tubes into the larynx was uncommon and that the asphyxiating reaction that happens when the Nasogastric Tubes is placed into the airways would make incorrect positioning clear. The label on the tube must line up with the nose opening for the Nasogastric Tubes to be placed correctly in the stomach, according to the same source, and individual variance is

thought to be minor. Now, we are aware that even in patients with an intact gag reflex, it is a misconception that a malposition of the Nasogastric Tubes to the lung may be detected by just seeing acute respiratory distress. It is indeed conceivable for the Nasogastric Tubes to be introduced into the airway without the patient experiencing any negative reactions and for the patient to remain symptom - free for several hours following the procedure and repeated feedings. The Nasogastric Tubes may move up or down even if the external section is taped to the nose.

Worldwide the major causes of Nasogastric tube placement were stroke (44%), cancer (16%), head injury (14%), and dementia (12). The adjusted hazard ratios were 28.1 (95% CI = 26.0, 30.3) for acute and chronic respiratory infections; 26.8 (95% CI = 24.1, 29.8) for pneumonia, 8.84 (95% CI = 7.87, 9.93) for diseases of the esophagus, stomach, and duodenum; and 7.5 (95% CI = 14.7, 20.8) for mortality. Only 13% and

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0.62% of the patients underwent rehabilitation therapy and percutaneous endoscopic gastrostomy, respectively. There is also an increase in the Global Enteral Feeding tubes market of the Nasogastric tube is increasing by 6% in every 5 years due to these conditions. Nationally, As per the report published by the Lancet Global Health in July 2021, the largest contributors to the total neurological disorder disability - adjusted life years (DALYs) in India were stroke (37.9%), headache disorders (17.5%), epilepsy (11.3%), cerebral palsy (5.7%), and encephalitis (5.3%). Hence, the burden of chronic diseases is growing in India.

Durgesh Nandani, Rashmi Choudhary, Poonam Sharma conducted a study to Assess the Knowledge and Skills Regarding Nasogastric tube Feeding among Staff Nurses in year 2018. Nasogastric tube feeding (is also known as enteral nutrition) given to meet the nutritional requirements when oral intake is inadequate or not possible as long as gastro intestinal tract is not functioning properly. This study aimed to assess the knowledge and skills regarding nasogastric tube feeding among staff nurses working in selected hospitals of district Mohali, Punjab. A quantitative research approach with descriptive research design was adopted for the study. 100 staff nurses were selected through convenient sampling technique. Study showed that majority of staff nurses were having AVERAGE knowledge (54%) and fair practices (58%) regarding nasogastric tube feeding. There was no significant association with age, gender, educational qualification, total work experience, present area of work, duration of work in the present area and in - service education program attended related to nasogastric tube feeding at p< 0.05.

A Randomized, Clinical Trial of Frozen Versus Standard Nasogastric Tube Placement was done by **Duk - Hee Chun, Na Young Kim, Yang - Sik Shin & Soo Hwan Kim**. Insertion of a nasogastric tube (NGT) in

an anesthetized, paralyzed, and intubated patient is difficult, and many methods have been proposed to aid in the procedure. They presented a simple insertion technique. The Methods used were a silicone NGT was made rigid by filling it with distilled water and freezing it and the Patients were randomized into either the control or the frozen group, and an NGT was inserted after intubation. The Results were A total of 100 patients (50 in each group) were included in this study. The success rate increased significantly by making the tube more rigid (control: frozen = 58%: 88%; p = 0.001). There was no difference between groups in the incidence of nasal bleeding. The Conclusion of study was A simple method of freezing an NGT with distilled water increased the success rate of insertion for intubated patients

2. Material and Methods

Pre - experimental research design was adopted to accomplish the objectives. Non - Probability purposive sampling technique was used under which they were assigned in groups by using stratified simple random sampling to select the samples. The sample consists of 60 newly joined staff nurses having Experience under 1 year. The **inclusion Criteria for this study was the** Newly joined staff nurses of Shri Mahant Indresh Hospital, Dehradun, The Staff that will be present at the time of teaching, The staff who are willing to Participate in the Research. The Process took 7 days for single sample. It took about 30 - 35 minutes to fill the questionnaire by the each participant and took 15 mins to perform the procedure on the patient.

The pretest and post - test assessment of knowledge of Staff nurses was carried out using the structured practice questionnaire. The obtained data were analyzed and interpreted using descriptive and inferential statistics.

S. No.	Pretest level of knowledge	Max Score	Pre test	
			Frequency	Percentage
1	Poor (<25%)	<8	6	10%
2	Average (26% - 50%)	9- 17	43	71.6%
3	Good (51% - 75%)	18- 27	11	18.4%
4	Excellent (>76%)	>28	0	0%
	Total		60	100%

S. No.	Post test level of knowledge	Max Score	Post test	
			Frequency	Percentage
1	Poor (<25%)	<8	0	0%
2	Average (26% - 50%)	9- 17	7	11.6%
3	Good (51% - 75%)	18- 27	46	76.6%
4	Excellent (>76%)	>28	7	11.6%
	Total		60	100%

Mean and Standard Deviation of pre - test and post - test knowledge scores of Nasogastric tube insertion by newly joined staff.

	Mean	Mean Difference	Standard Deviation	Standard error mean	t- value	df	Table value	Level pf Significance (0.005)
Pre test	13.12	-8.77	4.33	0.56	23.3095	59	2.001	Significant
Post test	21.88		4.35	0.56				

3. Instrument/Tool

Tool consists of Section A and section B, Section A consist of Description of demographic profiles of study participants

such as **Age, Religion, Educational Qualification, Area of working, Gender, Practice and Knowledge of newly joined staff nurses**. Section B Section consist of Analysis based on the objectives of the study.

Section A: Description of demographic profiles of study participants.

Section B: Analysis based on the objectives of the study.

4. Statistical Analysis

Table 1

The assessment of pretest level of knowledge regarding nasogastric tube insertion, **10% (06)** were in poor knowledge

level, **71.6% (43)** were in AVERAGE knowledge level, **18.33%** were in good knowledge level and **0%** no one was having Excellent knowledge of nasogastric tube insertion. After administering Video assisted Teaching, in the post - test results, the staff was at **0%** for poor knowledge, the **11.6% (7)** staff was having AVERAGE knowledge, Most of the staff **76.6% (49)** was having good knowledge and **11.6% (7)** of the staff were having Excellent knowledge in their post - test regarding lifestyle modification.

Table 2

S. No.	Pretest of knowledge	Max Score	Pre test		Post test	
			Frequency	Percentage	Frequency	Percentage
1	Poor (<25%)	<8	6	10%	0	0%
2	Average (26- 50%)	9- 17	43	71.6%	7	11.6%
3	Good (51- 75)	18- 27	11	18.33%	46	76.6%
4	Excellent (>76%)	>28	0	0%	7	11.6%
	Total		60	100%	60	100%

The result of mean and standard deviation of pre test and post test knowledge score regarding the nasogastric tube insertion by the newly joined staff nurses. The result depicts that the mean value of pre test knowledge score was lesser than the

post test knowledge score. The mean of pre test was 13.12 on the other hand the mean of post test was 21.88. It shows that the video assisted teaching was effective in increasing the knowledge of staff.

	Mean	Mean Difference	Standard Deviation	Standard error mean	t- value	df	Table value	Level pf Significance (0.005)
Pre test	13.2	-8.77	4.33	0.56	23.3095	59	2.001	Significant
Post test	21.88		4.35	0.56				

5. Discussion

The findings of the study revealed that, post test overall mean score of level of knowledge was 21.88 which was found to be higher than the pre test overall mean score of level of knowledge was 13.12. The overall improvement in the mean score of knowledge was 8.76 and the obtained paired t - value was 54.46 which was significant at p<0.05 level. The study concluded that there was significant improvement in level of knowledge in post test after administration Video Assisted Teaching of nasogastric Tube insertion. Thus, Video Assisted Teaching was effective in improving the level of knowledge and practice among newly joined staff nurses. In the study it was also found that there was a significant association between mean difference levels of knowledge and practice regarding Nasogastric tube insertion to their selected demographic variables.

Ethical Consideration

The permission from principal of College Of Nursing, Shri Guru Ram Rai University, Patel Nagar, Dehradun. Then the Permission was taken from Nursing Superintendent, Shri Mahant Indresh Hospital, Patel Nagar, Dehradun. Approached the newly joined staff nurses and maintained IPR. Obtained written informed consent from participants who were willing to participate in study. Data collection was done on the basis of structured interview, using self developed questionnaire.

Conflict of Interest

None declared

Financial Support

Nil

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