

A Study to Assess the Knowledge and Practice Regarding Endotracheal Suctioning among Staff Nurses Working in Selected Hospitals At Jaipur, Rajasthan With a View to Develop an Information Booklet

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How to cite this article: Sharma J.K., Rao K.S., a study to assess the knowledge and practice regarding endotracheal suctioning among staff nurses working in selected hospitals at Jaipur, Rajasthan with a view to develop an information booklet. GFPSS-IJMR 2024; 5:3: 2522-2525

Submitted: 16-March -2024: **Modification:** 19-March: **Accepted:** 26-March-2024: **Published:** 31-March -2024

Abstract

Introduction: The main goal of nursing is to provide evidence-based care in order to promote quality results for patients, families and to the entire healthcare system. A procedure that deserves particular attention, given its direct relationship with the risk of infection, is the Endotracheal Suctioning (ETS) of incubated patients.

Materials & Methods: The descriptive research design was used to assess the knowledge and practice of staff nurses regarding endotracheal suctioning. Convenient sampling technique was used to select 100 Staff Nurses working in SMS hospital, Jaipur, Rajasthan. The researcher collected information from the research subject by using a structured questionnaire and observational checklist.

Results: Majority of Staff Nurses had poor knowledge (56%) and inadequate practice (64%) regarding Endotracheal Suctioning. Karl Pearson coefficient of correlation showed positive correlation (0.49) between knowledge and practice regarding Endotracheal Suctioning among Staff Nurses.

Conclusion: Majority of Staff Nurses had poor knowledge and inadequate practice regarding Endotracheal Suctioning. Karl Pearson coefficient of correlation showed positive correlation between knowledge and practice regarding Endotracheal Suctioning among Staff Nurses.

Keywords: Knowledge; Practice; Endotracheal Suctioning; Staff nurses; Information booklet.

Introduction

Endotracheal Suction (ETS) is a common procedure which is done to keep the airways patent by mechanically removing accumulated pulmonary secretions in patients with artificial airways.

With an increasing trend of providing quality and

evidence-based care to the patient by the nurse it is mandatory for the Staff Nurses to be more knowledgeable and skillful while doing any procedure and while providing care to their patient. As the demand of intensive care beds are increasing day by day more nurses are required to provide competent care to the patient with endotracheal tube.

Different complications such as cardiac and respiratory failure, hemodynamic instability, tracheobronchial injury, increased intracranial pressure and hypoxemia; especially infection Ventilator Associated Pneumonia (VAP) may occur if the procedure is performed incorrectly. In the present context, risky practices of ETS remains the global problem.

The current dilemma facing nurses is the overwhelming view that ETS should be performed only when indicated as necessary by assessment, to minimize the exposure of the patient to the hazards of ETS, but also recognition that ETS is a necessary procedure to maintain a patent airway and clear secretions.

The major recommendations are suctioning only when necessary, using a suction catheter occluding less than half the lumen of the endotracheal tube, using the lowest possible suction pressure, inserting the catheter no further than carina performing continuous rather than intermittent suctioning, avoiding saline lavage, providing hyperoxygenation before and after the suction procedure, providing hyperinflation combined with hyperoxygenation on a non-routine basis, always using aseptic technique, and using either closed or open suction systems.

Need of the Study:

Various researchers have analyzed the application of guidelines by the Staff Nurse but they found that nurses were often not aware of the existence of those guidelines. In fact, one study (Celik & Elbas 2000) identified that all nurses (n=42) failed to explain the suctioning procedure to patients prior to suctioning. The majority of the nurses suctioning the control group did not evaluate the ABGs after Endotracheal Suctioning, none of these patients was given oxygen both before and after the suctioning, and suctioning took longer time than recommended.

Investigators also have personal experiences of witnessing poor suctioning practice among staff nurses during practical experience and doing supervision in hospital. This motivate them to conduct a study related to endotracheal suctioning.

Objectives

1. To assess the knowledge regarding Endotracheal Suctioning among Staff Nurses working in selected hospitals Jaipur, Rajasthan.
2. To assess the practice regarding Endotracheal Suctioning among Staff Nurses working in selected hospitals Jaipur, Rajasthan.
3. To find out the relation between knowledge and practice regarding Endotracheal Suctioning among Staff Nurses working in selected hospitals Jaipur, Rajasthan.
4. To find out the association between knowledge regarding Endotracheal Suctioning with selected demographic variables among Staff Nurses.
5. To find out the association between practice regarding Endotracheal Suctioning with selected demographic variables among Staff Nurses.
6. To develop an information booklet regarding Endotracheal Suctioning techniques.

Materials & Methods

Research approach: A quantitative research approach was used for this study.

Research design: Descriptive research design was used.

Sample and sample Size: A total of 100 Staff Nurses of 21 – 60 years of age group were selected

Sampling techniques: Convenient sampling technique was used for the study.

Setting of the study: The setting was selected hospital, Jaipur, Rajasthan.

Tools for data collection: The Structured knowledge questionnaire was used to assess the knowledge of Staff Nurses regarding Endotracheal Suctioning and Observational Checklist was used to assess the Practice of Staff Nurses regarding Endotracheal Suctioning. Data was collected after collecting formal permission from the concerned authority and inform consent was taken from the participants. The result was analyzed by using Descriptive and Inferential Statistics

Table No 1: distribution of participants according to the socio- demographic characteristics

S.N.	variables	Category	Frequency {f}	Percentage {%}
1.	Age (in years)	21-30	25	25
		31-40	35	35
		41-50	30	30
		51-60	10	10
2.	Gender	Male	60	60
		Female	40	40
3.	Professional education	GNM	40	40
		B.sc Nursing	20	20
		Post basic B.sc Nursing	30	30
		M.Sc. Nursing	10	10
4.	Working experience	Less than 1 years	5	5
		1-5 year	40	40
		6-10 year	30	30
		More than 10 years	25	25

Table No 2: Distribution of knowledge of Staff Nurses.

(N =100)

S. No.	Level of Knowledge	Score	Frequency (f)	Percentage {%}
1.	Poor	0-13	56	56
2	Average	14-26	33	33
3	Good	27-40	11	11

Table No 3: mean, mean percentage, median, mode and standard deviation of knowledge score of Staff Nurses regarding Endotracheal Suctioning.

(N =100)

S. No.	Max. score	Mean	Mode	Median	Mean	SD
1.	40	13	6	11	32.5	6.6

Table No 4: frequency and percentage distribution of practice of Staff Nurses regarding Endotracheal Suctioning.

(N =100)

S. No.	Level of Practice	Score	Frequency{ f }	Percentage %
1	Inadequate	1-20	64	64
2	Adequate	21-40	36	36

Table No-5 mean, mean percentage, median, mode and standard deviation of practice score of Staff Nurses regarding Endotracheal Suctioning.

(N =100)

S. No.	Max. score	Mean	Mode	Median	Mean	SD
1.	40	19.5	17	13	48.75	7.25

Table No 6: relation between knowledge and practice regarding Endotracheal Suctioning among Staff Nurses.

(N =100)

Correlation value	Type of correlation
0.49	Moderate positive correlation

Discussion

The result of the study showed that the majority of respondents 56 (56%) had poor knowledge, 33 samples (33%) had average knowledge and only 11 (11%) had good knowledge regarding Endotracheal Suctioning. The mean score of participants was 13, mean percentage was 32.5%, median was 6, mode was 11 and standard deviation was 6.6.

Similarly result showed that majority of respondents 64 (64 %) had inadequate practice and 36 (36%) had adequate practice regarding hand hygiene. The mean score of participants was 19.5, mean percentage was 48.75%, median was 17, mode was 13 and standard deviation was 7.25.

Correlation between knowledge and practice calculated by Karl Pearson's correlation coefficient formula calculated 'r' value was (0.49). It shows that the calculated value is higher than the tabulated value which shows that there is a Moderate positive correlation between knowledge and practice among Staff Nurses.

There was a significant association between knowledge of Staff Nurses regarding Endotracheal Suctioning with selected demographic variables such as gender, Professional education and working experience at 0.05 level of significance whereas there was no significant association between knowledge of Staff Nurses regarding Endotracheal Suctioning with selected demographic variables such as age (in years) at 0.05 level of significance.

There was a significant association between practice of Staff Nurses regarding Endotracheal Suctioning with selected demographic variables such as age (in years), Professional education and working experience at 0.05 level of significance whereas there was no significant association between practice of Staff Nurses regarding Endotracheal Suctioning with selected demographic variables such as gender at 0.05 level of significance.

Conclusions

Majority of Staff Nurses had poor knowledge and inadequate practice regarding Endotracheal Suctioning. Karl Pearson coefficient of correlation showed positive correlation between knowledge and

practice regarding Endotracheal Suctioning among Staff Nurses.

Acknowledgment: We would like to thank the God almighty and participants of this study.

Financial support and sponsorship: No

Conflict of Interest: There are no conflicts of interest

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