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Assessment of Knowledge and Practice of Staff Nurses Regarding Ryle's Tube Feeding in a Selected Hospital of Kolkata, West Bengal.

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Abstract

A descriptive survey was conducted in a selected hospital, Kolkata with the aim to assess the knowledge and practice of staff nurses regarding Ryle's tube feeding, to find out relationship between knowledge and practice and to find out association with knowledge, practice and some selected variables. 42 staff nurses were selected by convenient sampling technique from the intensive therapeutic unit and high dependency unit of Rabindranath Tagore International Institute of Cardiac Sciences hospital. A structured knowledge questionnaire and structured observation checklist were used to collect data. It was found that 32 (76%) participants had adequate knowledge and all (100%) had more than average practice level regarding Ryle's tube feeding. There was moderately positive correlation between knowledge and practice of staff nurses regarding Ryle's tube feeding ($r=0.46$). There was significant association between knowledge with professional qualification and period of

experience but there was no significant association found between practice with period of experience and professional qualification.

Though the study findings indicated that the nurses had necessary knowledge and practice regarding Ryle's tube feeding but it was found that the hospital was not having any written guideline regarding Ryle's tube feeding for the patients. So the researchers recommended for continuous teaching program and establishment of evidenced based guideline in the hospital on Ryle's tube feeding.

Keywords : Knowledge, Practice, Ryle's tube feeding

Introduction

A nasogastric tube is a thin, soft tube that is passed through nostril down the throat, through the esophagus into stomach. A nasogastric tube is also called NG tube. An NG tube is normally put in so that prepared liquid can be put down the tube to feed the client or to administer medication. The use of NG tube is associated with respiratory (pulmonary aspiration), gastrointestinal (nausea, pain or bleeding due to stomach mucosal injury), nasopharyngeal trauma or ulceration, tube occlusion, tube displacement and metabolic (dehydration, electrolyte imbalances) complications.[1]

A descriptive-correlational study was conducted by Ruth A. et. al. on nasogastric tube(NGT) feeding practices of nurses in the critical care units at the Philippine Heart Center Critical Care Units (1999). Utilizing the non-probability convenient sampling, 50 staff nurses who were specifically assigned to critically-ill patients with naso-gastric tube were included. A questionnaire along with an observational tool and a self-report checklist were the instruments used in this study. The findings revealed that the respondents had a mean age of 28, majority were female and most of them were single. Most of the staff nurses were without Master's degree and had an average length of 2-years stay in the ICU. Majority of the nurse respondents (66%) had moderate knowledge regarding NGT feeding; 44% had neutral attitude and 40% had positive attitude. For the skills, 98% of the nurses rated themselves having very high skill in giving NGT feeding but only 56% were rated very skilful during the actual observation. Findings of the study implied that much effort must be given to enhance the nurses' skills and knowledge by seminar-workshops, a more accurate Standard Operation Procedure (S.O.P) on NGT feeding and research involvement on the NGT feeding practices.[2]

Many studies have reported that, despite the importance of enteral nutrition and existing data on

evidence based nutritional guidelines; nutrition is still a significant concern in hospitals (Kobe, 2006; Persenius et al., 2006).[3,4] Minimal attention has been paid to how enteral nutrition is experienced by nurses (Persenius, Larsson, & Hall-Lord, 2009).[5] There were wide variations in the management of nutritional support, and many adult patients experience deterioration of nutritional status during their hospital stays (Behara et al., 2008; Marshall, 2008; Persenius et al., 2006).[6,7,4] Likewise, maintaining consistency in feeding the critically ill had been a problem due to the inadequate knowledge of the nurses (Williams & Leslie, 2004).[8] It is therefore important to take this concept seriously, to ensure that nurses' nutritional practices for the critically ill adults are evidence-based.

Attention to be given in tube size selection, assessment of tube position, methods of securing tube or method of feeding which are important components to minimize the risks of NG tube related complications and to provide optimal patient safety and comfort.

Thus investigators felt the need for the study to assess the knowledge and practice of staff nurses regarding Ryle's tube feeding.

Objectives

- to assess the knowledge of staff nurses regarding Ryle's tube feeding
- to assess the practice of staff nurses regarding Ryle's tube feeding
- to find out relationship between knowledge and practice of staff nurses regarding Ryle's tube feeding
- to find out association between knowledge and selected variables
- to find out association between practice and selected variables

Methods

Research approach – Descriptive Survey approach

Research design – Descriptive Survey design

Symbolic presentation of research design –

Variable 1-----→ }
Variable 2-----→ } Description ----→ analysis and interpretation of result----→Hypothesis formation
of variables

Variables

- Knowledge and practice of staff nurses
- Selected variables : age, sex, professional qualification, working experience

Setting - Rabindranath Tagore International Institute of Cardiac Sciences (RTIICS), Kolkata, West Bengal.

Population - Registered staff nurses

Sample - Forty two staff nurses

Sampling technique – Convenient sampling technique

Sampling criteria – staff nurses who are present on the day of data collection and willing to participate in the study.

Data collection tools and technique -

Tools	Variables	Technique
1. Structured Knowledge Questionnaire	Knowledge	Paper pen test
2. Structured Practice Questionnaire	Practice	Observation

Definition of terms

Knowledge – it refers to the written response to the items of structured knowledge questionnaire.

Practice – it refers to the steps followed by the participants during Ryle’s tube feeding as assessed by structured observational checklist.

Staff nurses – registered staff nurses who are working in intensive therapeutic unit (ITU) and high dependency unit (HDU) of the selected hospital.

Selected variables – in this study this refers to the staff nurses professional qualification and working experience.

Data collection procedure

- Formal permission was taken from the General Manager, Nursing of RTIICS and principal, college of nursing, Asia Heart Foundation.
- Sister In-charges of the ITU and HDU were informed about the purpose of the study
- Purpose of the study was also explained to the samples and their informed written consent were taken

- The samples were coded in number so that anonymity could be maintained
- Data collected for final study from 14th June to 19th June, 2010
- At first structured knowledge questionnaire was administered to them
- They were given approximately 15 minutes to respond to the questionnaire
- Then the investigators observed the practice of the subjects on Ryles tube feeding by the help of structured observational checklist.

Results and Discussion

Out of 42 participants, all were in the age of 20-29 years. Among them 23 (55%) were females and 19 (45%) were males. Majority of the participants (62%) had General Nursing and Midwifery (GNM) qualification, 36% had B.Sc Nursing and only 2% were having GNM with diploma in Cardiovascular-Thoracic nursing training. 60% of participants had 0-<1 year of experience, 26% had 1-<2 years, 12% had 2-<3 and only 2% had 3 or more years of experience.

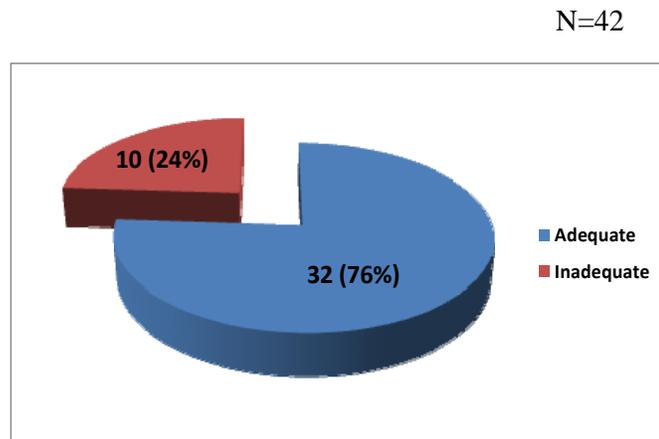


Figure 1 : Pie diagram showing distribution of staff nurses in terms of their knowledge on Ryle's tube feeding.

The data presented in figure 1 show that 32 (76%) out of 42 participants have adequate knowledge whereas 10(24%) have inadequate knowledge regarding Ryle's tube feeding.

Table 1 : Range, frequency and percentage distribution of staff nurses practice regarding Ryle’s tube feeding.

N=42			
Practice level	Score Range	Frequency	Percentage
Average	<50	00	00
Good	51-80	11	26.19
Very Good	81-100	24	57.14
Excellent	>100	07	16.16

Date presented in table 1 show that all participants have more than average practice level and 24 (57.14%) have very good practice level with practice score range 81-100.

Table 2 : Correlation between knowledge and practice of staff nurses regarding Ryle’s tube feeding.

N=42				
Variable	Mean	Median	SD	‘r’ value
Knowledge	11.71	12	2.49	0.46
Practice	87.07	85	10.85	

The data presented in table 2 show the value of correlation coefficient 0.46 which lies between 0 and +1 (0<0.46<1) signifies moderately positive correlation between knowledge and practice of staff nurses regarding Ryle’s tube feeding.

Table 3: Association between knowledge of staff nurses regarding Ryle’s tube feeding and selected variables.

Variable	Chi-square value	df	Remarks
Professional qualification	8.15	2	significant
Period of experience	8.2	3	significant

$$\chi^2 (2) = 5.991, (3) = 7.815, p = < 0.05$$

Data presented in table 3 show that there is significant association of knowledge of staff nurses regarding Ryle’s tube feeding with the professional qualification and period of experience which is evident from the obtained chi-square value at df 2 and 3 respectively at 0.05 level of significance. Thus it can be inferred that above mentioned variables are influencing the knowledge of staff nurses regarding Ryle’s tube feeding.

Table 4: Association between practice of staff nurses regarding Ryle’s tube feeding and selected variables.

Variable	Chi-square value	df	Remarks
Professional qualification	2.1	4	not significant
Period of experience	1.1	6	not significant

N=42

$$\chi^2 (2) = 5.991, (3) 7.815, p = > 0.05$$

Data presented in table 4 show that there is no significant association of practice of staff nurses regarding Ryle’s tube feeding with the professional qualification and period of experience which is evident from the obtained chi-square value at df 2 and 3 respectively at 0.05 level of significance. Thus it can be inferred that above mentioned variables are not influencing the practice of staff nurses regarding Ryle’s tube feeding.

Formulation of hypothesis

After the end of the study the following hypotheses were formulated –

- H1 : There is significant relationship between knowledge and practice of staff nurses regarding Ryle’s tube feeding at 0.05 level of significance.
- H2 : There is significant association of knowledge of staff nurses regarding Ryle’s tube feeding with period of experience and professional qualification at 0.05 level of significance.
- H3 : There is no significant association of practice of staff nurses regarding Ryle’s tube feeding with period of experience and professional qualification at 0.05 level of significance.

Though this study has shown that the nurses have necessary knowledge and practice regarding Ryle’s tube feeding but many reviewed study showed that inspite of having theoretical knowledge about

Ryle's tube feeding many nurses do not apply the knowledge in their practice, so nurse researcher needs to conduct more studies on this subject on a continuous basis.

This study findings are limited to a small group of critical care nurses of a selected hospital only and adopting Convenient sampling technique. Thus the generalization of the findings would not be possible. On the basis of the study findings the following recommendations can be offered for future research –

- similar study can be done for a large group
- random sampling technique can be adopted
- a comparative study can be conducted between male and female nurse
- a comparative study can be conducted between staff nurses of government and private hospitals
- an experimental study can be carried out using teaching strategies like planned teaching program, information booklet, pamphlet, video based CD etc.

Conclusion

The knowledge and practice of 42 staff nurses from special units of the hospital were assessed and it was found that 32 (76%) out of 42 participants had adequate knowledge and all participants had more than average practice level regarding Ryle's tube feeding. Though the study findings indicated that the nurses had necessary knowledge and practice regarding Ryle's tube feeding but it has been found that the hospital was not having any written guideline regarding Ryle's tube feeding for the patients which may help the nurses to know the standard protocol to be followed during their care. So the researchers felt the need for continuous teaching program and establishment of evidenced based guideline in the hospital on Ryle's tube feeding.

N.B. The research project was conceptualized and guided by Ms. Nargis Ahamed and Ms. Debarchana Mondal and executed by the following P.C B.Sc students of College of Nursing, Asia Heart Foundation, Kolkata. – Arpita Jana, Anita Chanda, Abha Bhunia, Anju chettri, Neeta Rai, Priyanka Bera, Ruma Majumder, Smriti Mahalanabis, Sangita Manna and Sarbani Ghosh

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