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Assess the knowledge regarding paediatric oxygen administration done by and nursing students at narayana medical college and general hospital, Nellore

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Abstract

Oxygen is a non-metallic gas chemical element symbolized by <<O>>. It is the fifth constitutive element of the atmosphere and totally bonded to all life forms. The ancient Greeks and Chinese, believed that the atmosphere contains a substance necessary for life, and noticed the existence of oxygen. Leonardo da Vinci in 1500 AC. propounded the theory that the animal kingdom needs an element of the atmosphere to sustain life. In 1600 Robert Boyle propounded the theory that both respiratory function and fire use some common element that exists in the atmosphere.

Methodology: Quantitative research approach was utilized to assess the knowledge regarding Paediatric oxygen administration done by staff nurses at Narayana Medical College and General Hospital, Nellore. The sample size was 60, of the 30 were staff nurses and 30 were student nurses. Non-probability convenience sampling technique was used for selection of subjects. Semi structured questionnaire was used to assess the knowledge of staff nurses regarding Paediatric oxygen administration

Results: shows among 30 sample of nursing students 5 (16.7%) have inadequate knowledge, 15 (50%) have moderately adequate knowledge regarding and, 10 (33.3%) have adequate knowledge regarding paediatric oxygenation.

Conclusion: The study concluded that majority of nursing students have moderately adequate knowledge regarding paediatric oxygenation.

Keywords: paediatric oxygen, non-metallic gas, arterial blood

Introduction

The element of oxygen was officially discovered by Joseph Priestley in 1774 and took the name it carries today by Lavoisier who believed that this element is the necessary component of all acids, and so he named it oxygen or creator of acids. It constitutes an important therapeutic means to treat acute or chronic diseases. Two indicators determine the need to an immediate oxygen therapy: hypoxemia, that is, the low partial pressure of oxygen in the arterial blood, or hypoxia, that is, the necessity of oxygen in the cells. All the above prove that oxygen is a great medicine for many pathological cases.

Statement of the Problem

A Study to Assess The Knowledge Regarding Physical Examination Done By and Nursing Students At Narayana Medical College and General Hospital, Nellore.

Objectives

- To assess the level of knowledge regarding paediatric oxygen administration by staff nurses
- To find out the association between the level of knowledge regarding paediatric oxygen administration done by staff nurses with their selected demographic variables.

Assumptions

The nursing students have some knowledge regarding Paediatric oxygen administration.

Materials and Methods

Quantitative research approach was utilized to assess the knowledge regarding oxygen administration done by staff nurses in NMCH, Nellore. The sample size was 30 staff nurses. Non-probability convenience sampling technique was used for selection of subjects. Semi structured questionnaire was used to assess the knowledge of staff nurses regarding oxygen administration.

Criteria for Sample Selection

Inclusion Criteria

1. Staff Nurses who are available at the time of data collection
2. Staff Nurses who are available at the time of data collection.

Exclusion Criteria

1. Staff nurses who are excluded based on the following criteria
2. Staff nurses who are not willing to participate in this study
3. Staff nurses who are on leave

Description of the Tool

The tool consists of two parts.

Part-I

Deal with demographic data

Demographic variables including Age, Qualification, Year of experience, sources of information.

Part II

Deals with semi structured questionnaire to assess the knowledge regarding Paediatric oxygen administration.

Score Interpretation

S. No	Level of Knowledge	Score	Percentage
1.	Inadequate knowledge	0-12	<50%
2.	Moderately adequate knowledge	13-24	51-70%
3.	Adequate knowledge	25-36	>71%

Data Collection Procedure

The data collection procedure was done for a period of 1 week from 5/5/15 to 10/5/15. After obtaining the formal permission from the Narayana College of nursing. 30 samples were selected by non probability convenience sampling techniques. Staff nurses, who fulfilled the inclusion criteria, were included for this study after obtaining informed consent from them and the confidentiality of shared was assured. For the present study semi structural questionnaire method was adopted to collect the data, it took 30 minutes to complete the questionnaire by each nursing student.

Plan for data Analysis

Data analysis was done using descriptive statistics and inferential statistics.

Descriptive statistics

- frequency and percentage distribution of demographic variables
- Mean & standard deviation

Inferential statistics

- Chi-square test to find association with knowledge of staff nurses with paediatric Oxygenation.

Results

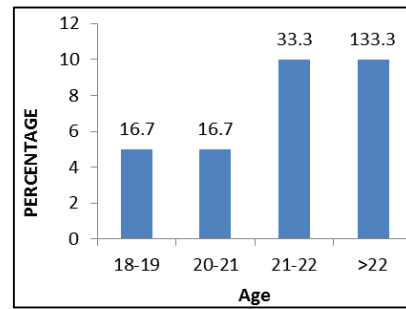


Fig 1: Percentage distribution of Nursing student based on age.

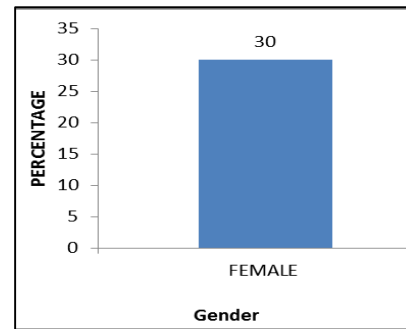


Fig 2: Percentage distribution of Nursing students based on gender.

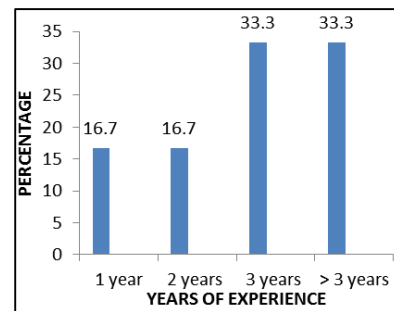


Fig 3: Percentage distribution of Nursing students based on Year of course.

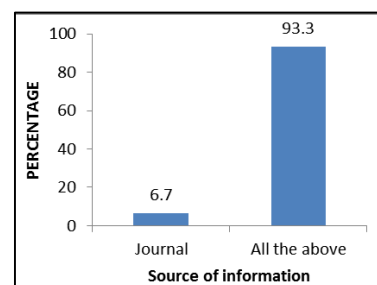


Fig 4: Percentage distributions of Nursing students based on Source of information.

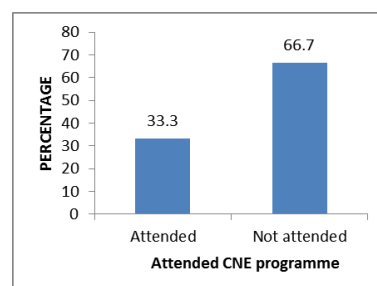


Fig 5: Percentage distribution of Nursing students who attended CNE related Oxygen administration.

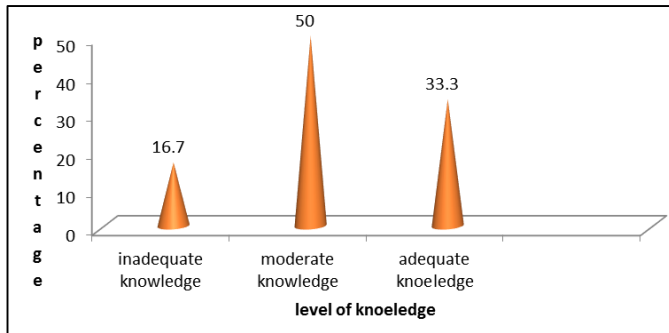


Fig 6: level of knowledge regarding Physical examination done by Paediatric staff nurses.

Shows among 30 sample of nursing students 5 (16.7%) have inadequate knowledge, 15(50%) have moderately adequate knowledge regarding and, 10(33.3%) have adequate knowledge regarding Physical examination.

Section-III

Table 1: Mean knowledge score and standard deviation of nursing students.

Group	Mean	Standard Deviation
Staff nurses	20.3	4.11

Association between the Level of Knowledge with Their Selected Socio Demographic Variables (n=30)

S. NO	Demographic variables	Inadequate		Moderately adequate		adequate		Chi-square
		f	%	f	%	f	%	
1.	Year of Experience							C=20.13
	a.I st year	3	10	1	3.34	1	3.4	T=12.6
	b.II nd year	3	10	1	3.34	1	3.4	df=6
	c)III rd year	5	16.66	4	13.4	1	3.4	S*
	d) Iv th year	5	16.66	4	13.4	1	3.4	P=0.05

The level of knowledge regarding oxygen administration by staff nurses.

Shows among 30 samples of nursing students 5 (16.7%) have inadequate, 15 (50%) have moderately adequate and, 10 (33.3%) have adequate knowledge regarding Paediatric oxygen administration.

Considine J, Botti M, Thomas S. (2007) [11] conducted a study on the effect of education on hypothetical and actual oxygen administration decisions. This study aimed to examine the effect of an education intervention on emergency nurses' decisions related to oxygen administration. A pre-test/post-test quasi-experimental design was used. The intervention was a written self-directed learning package. Outcome measures were (i) factual knowledge measured using parallel form multiple choice questions and (ii) clinical decisions measured using parallel form MCQs, parallel form patient scenarios and clinical practice observation. The study sample consisted of 88 nurses, 37 nurses were in control group and 51 were there in experimental group. Sub-groups of nurses from the experimental group participated in patients scenario (n=20) and clinical practice observation (n=10). The study findings showed that emergency nurses knowledge increased as a function of education, both patients scenario data and clinical practice observation showed decreased selection of nasal cannula, increased selection of masks and trend towards selection of higher oxygen flow rates following education. The researcher concluded that evaluation of educational interventions in nursing should focus on identifying strategies that enhance learning in a clinical environment, which are valid in terms of the clinical context and culture in which they are being used.

Description of demographic variables of staff nurses

with regard to age, 10 (33.3%) are >23 years old, with regard to Year of experience 10 (33.3) belongs to > 3years, with regard to source of information, 13 (86.6%) received from curriculum, with regard to attended workshop, 14(93%) have not attended.

The association between the level of knowledge of regarding oxygen administration with their selected socio demographic variables.

Year of course having significant association with level of knowledge regarding Paediatric oxygen administration done by staff nurses

Gender, Source of information, attended any CNE Programme had non significant association with level of knowledge of nursing students regarding administration of intravenous fluid. (P=0.05)

Chr. Marvaki, Z. Roupa, N. Rilalis, *et al* (2004) [1] Conducted a prospective study was carried out to assess the knowledge level of nurses working in hospitals concerning the oxygen supply to patients and the safety regulations that rule it. The study sample consists of 672 nurses. Data was collected by means of a questionnaire, which contained 35 closed ended questions. The study findings revealed that nurses have adequate knowledge in matters of oxygen therapy and the nurses who worked in ICU were found to be more informed by a significant difference of P = 0.005. The study findings concluded that the results while not disappointing, prove the constant need to renew knowledge with systematically organized programmes and the need to realize the responsibility one must show and have while exercising the profession as a nurse.

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