A Study to Assess the Effectiveness of Planned Teaching Program On Knowledge Regarding Pneumonia among the Second Year Basic BSc Nursing Students in Selected Nursing College

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Abstract: *Pneumonia is major cause of mortality and morbidity in both developing countries and developed countries. It affects all age groups. Pneumonia is the major cause of death in children under five years and extremes of age. Objectives of the study were to assess the post-test knowledge scores regarding pneumonia. Data was collected using structured questionnaire. Research Approach was used as experimental research approach and Research Design was pre-test and post-test control group design. The conceptual framework used for the present study is "general system model". Total sample size was 30 and selected by non probability purposive sample technique. inclusion criteria: 1. Second year Basic B. Sc. nursing students in selected nursing college 2. Second year Basic B. Sc. nursing students who are willing to participate in the study. Based on the objectives and the hypothesis the data were analyzed and by using various statistical tests i. e. frequencies, percentage, mean, chi square and standard deviations 't' test. Data analysis was done by using descriptive and inferential statistics. The 't 'value obtained was 19.46which accepted the research hypothesis suggesting that the structured teaching was effective in increasing the knowledge of nursing students on pneumonia. The finding of the study showed that, the mean pretest score was 14.53 with the standard deviation 3.40, whereas in post test the mean score was 22.73, with the standard deviation 3.11, the mean difference pretest and post test score was 8.20, the calculated t-value was 19.46 it shows that calculated "t" value. The table value is smaller than calculated value so, there was the significant improvement in knowledge regarding study related to pneumonia among the selected students. Hence the H_1 is accepted.*

Keywords: assess, effectiveness, structured teaching program, knowledge, pneumonia

1. Introduction

Pneumonia is major cause of mortality and morbidity in both developing countries and developed countries. It affects all age groups. Pneumonia is the major cause of death in children under five years and extremes of age. Due to over usage and misusage of oral and intra venous antibiotics, patients are infected with multidrug resistant pathogens. This can lead to healthcare associated pneumonia. There are several types of pneumonia encounter such as bacterial caused due to streptococcus pneumonia and is responsible for 60% of community acquired pneumonia. Atypical and nonbacterial caused due to mycoplasma pneumonia and Virus is such as influenza, respiratory Syncytial viruses. Fungal pneumonia caused due to aspergillus fungus etc.

2. Background of Study

Pneumonia is the leading cause of mortality in children under five and is a major cause of child mortality in every region of the world, with most deaths occurring in Sub Saharan Africa and South Asia. Pneumonia kills more children under five than AIDS, Malaria and Measles combined, yet increased attention in recent years been on the latter diseases. The 2004 priority medicines for Europe and the world report had 17 chronic and acute priority diseases whose inclusion were based on data from the World Health Organization (WHO), Global Burden of Disease and Database. Poor maternal and child health remains a significant problem in developing countries. Although the under-five mortality rates has dropped 85% since 1990, with every developing region seeing a 30% reduction, progress at the global level to reduce under five mortality is behind schedule for 2015.

3. Need of the Study

Pneumonia is an inflammatory condition of lungs primarily affecting the small air sacs known as alveoli. Symptoms typically include some combination of productive for dry cough, chest pain, fever and difficulty in breathing the severity of the condition is variable. Pneumonia is caused by infection with viruses or bacteria and less commonly by other micro-organisms, the disease may be classified by where it was acquired such as community or hospital acquired or healthcare associated pneumonia. [9]

The study is to justify about pneumonia, its causes, and also to identify awareness of students regarding pneumonia. The study is to find out the knowledge and practices among students regarding childhood pneumonia and to identify factors of pneumonia. Pneumonia is one of the common causes of death in children.

Objectives

1) To assess the pre-test knowledge score regarding pneumonia among the selected students.
2) To assess the post-test knowledge score regarding pneumonia among the selected students.
3) To determine pre-test knowledge score and post-test knowledge score.

4) To find out the association between post-test knowledge score with selected demographic variable.

Operational Definition Assess

According to oxford dictionary "Assess" means:

* Estimate the size of quality
* Decide the amount of or value

In the study "assess" refers to "estimating the amount of knowledge regarding pneumonia."

Effectiveness

According to oxford dictionary "Effectiveness" means: The degree to which something is successful in producing desired result. In this study "effectiveness" refers to extent to which the planned teaching program on knowledge regarding pneumonia has achieved.

Planned Teaching Program

It refers to systematically planned teaching program designed to provide information regarding pneumonia among the second year B. B. sc. nursing students.

Knowledge

According to oxford dictionary "Knowledge" means:

* Awareness / Familiarity
* Person's range of information
* Understanding a subject

In this study "knowledge" refers to the awareness and variable response of students of 2nd year Basic B. Sc. nursing regarding pneumonia.

Pneumonia

Pneumonia is defined as infection that inflames air sacs in one or both lungs which may fill with fluid.

Assumption of Study

-Planned teaching program may help the student in gaining knowledge regarding pneumonia.
-Student may have inadequate knowledge regarding pneumonia.

Limitation

1) The study is limited to the student who is studying in B. B. sc. nursing second year.
2) The study did not use any control group.
3) The period of study is limited to six weeks.
4) Data collection is limited through structured questionnaire and structured observation checklist, prepared by the researcher.

Delimitation

1. Student who are not present during data collection.
2. The study is limited to not more than 30 students.

Hypothesis

H0:-There will be a significant difference between knowledge of student regarding pneumonia before and after planned teaching program.

H1:-There will be no significant difference between knowledge of student regarding pneumonia before and after planned teaching program.

Conceptual Framework

According to "Modified general systemic model" a system consists of a set of interacting components that is input, throughput, and output within a boundary that filter the type and rate of exchange with the environment.

4. Review of Literature

A literature review is an account of what has been already established or published on a particular research topic by scholars and researches University of (Toronto 2001).

Section A: Review of literature on pneumonia.

Methodology

Research Approach

The research approach for the present study is the **experimental research approach**.

Research Design

In the present study the **pre-test and post-test control group design** was adapted.

Setting of the Study

Selected nursing college

Sampling Technique

Non probability purposive sample technique

Sample Size: 30

Sample: Basic B. Sc. nursing second year.

Variables:

Independent Variables:

According to pilot and beck (2008), independent variable is the variable that is believed two causes of influence the dependent variable in the study independent variable is knowledge.

Dependent Variables:

According to pilot and beck (2008), dependent variable is the variable hypothesized to depend on or be caused by another variables; the outcome variable of interest in this study dependent variable is pneumonia.

Population:

A target population consists of the total number of people for subject which are meeting designated set of criteria in this study the target population consists of 2nd year basic B. Sc. nursing student in the selected nursing college.

Accessible Population:

The assessable population is the aggregate of case that conforms to designated criteria and also accessible as subject for the study. In this study are accessible population consists of second year basic B. Sc. nursing students in the selected nursing.

Sampling Criteria

Following criteria were set for the selection of sample.

Inclusion Criteria:

1) Second year Basic B. Sc. nursing students in selected nursing college
2) Second year Basic B. Sc. nursing students who are willing to participate in the study.

Exclusive Criteria:

1) Students who are not studying in second year basic B. Sc. nursing
2) Students who are not willing to participate.

Tool Preparation

The researches prepared structured questionnaire release as the tool for study the structured questionnaire is include two sections.

Section A: This section includes five questions on information regarding demographic profile of sample.

Section B: This section includes 25 questions two assess the knowledge on 2nd year basic B. Sc. nursing students in selected nursing college.

Reliability

Reliability of research instrument is defined as the extent to which the instrument is the sum result of repeated measure it is then concerned with consistency accuracy precision stability equivalence and homogeneity. The self-structured questionnaire reach schedule was tested for reliability.

Validity

Validity refers to getting result that accurately reflect the concept been measured in practice validity can also refer to the success of research in retrieving valid result. The content validity at tool was introduced questionnaire with two section pertaining question on assessing the demographic information and knowledge assessment regarding pneumonia the validity was established by expert in nursing. As a whole and valid suggestion and comment of experts include grammatical correction of sentence else the tool found to be relevant the necessary modification has been done as per the expert advice.

Pilot Study

Formal permission was obtained from the authorities prior to the pilot study. 2nd year basic B. Sc. nursing students in selected nursing college at Nagpur, were selected by probability simple random technique and excluded from the main study. The pilot study conducted from 19/10/21 to 27/10/21. It was found feasible to conduct the study.

Procedure of Data Collection:

A formal permission was obtained from the authority of selected nursing college the data collection on 29/10/21 a sample are collected on the basis of criteria of the study, Samples (nursing students) were selected purposive sampling technique from selected nursing college.

Plan for Data Analysis:

The researcher planned to analysis data by using descriptive and inferential statistics.

- Frequency and percentage distribution where used to analysis to demographic data of the second year Basic. B. Sc. Nursing students in selected Nursing College.
- Knowledge score of second year Basic. B. Sc. Nursing students about pneumonia was analyzed by frequency and percentage.
- Effectiveness of structured teaching program was assessed by 't' test.
- Association between demographic variable and knowledge score second year Basic. B. Sc. Nursing students.

5. Result

Organization and Presentation of Data

Section-A: Percentage Distribution of the Demographic Variables

Table 1: Frequency and percentage distribution of subject according to their age
N-30

Age	Frequency	Percentage
19-20	14	46.66%
21-22	16	53.33%
23-24	0	0%
25-26	0	0%

Table 2: Frequency and percentage distribution of subject according to their previous knowledge regarding pneumonia
N-30

Previous Knowledge	Frequency	Percentage
Yes	30	100%
No	00	0%

Table 3: Frequency and percentage distribution of subject according to their source of knowledge
N-30

Source Of Knowledge	Frequency	Percentage
Books	26	86.66%
Internet	02	6.66%
Other	02	6.66%
No	0	0%

Table 4: Frequency and percentage distribution of subject according to their gender
N-30

Gender	Frequency	Percentage
Male	10	33.33%
Female	20	66.66%

Table 5: Frequency and percentage distribution of subject according to their nutritional status
N-30

Nutritional Status	Frequency	Percentage
Vegetarian	08	26.66%
Non vegetarian	04	13.33%
All	18	60%

- Percentage distribution of sample according to their age shows that majority were 14 of them (46.66%) aged 19-20 year, 16 of them (53.33%) were aged 21-22 years and 0 of them (0%) were aged 23-24 years, 0 them (0%) were aged 25-26 years.
- Percentage of sample according to their relation to previous knowledge regarding pneumonia shows that, majority of the student's 30 (100%) had previous knowledge and 0 (0%) had no previous knowledge.
- Percentage distribution of sample according to their source of knowledge shows that, majority were 26 of them used Books (86.66%), 2 of them uses Internet (6.66%), 2 of them uses Others (6.66%), 0 of them uses no source of knowledge (0%).
- Percentage of sample according to their gender shows that in relation to gender, majority of the students 20 (66.66%) were females and 10 (33.33%) were male.
- Percentage distribution of sample according to their nutritional status shoes that 8 (26.66%) of them were vegetarian, 4 (13.33%) were non-vegetarian and other all 18 (60%) were both vegetarian and non-vegetarian.

Section B: Students Knowledge Regarding Pneumonia.

Table 6: Frequency and percentage of level of knowledge of students regarding Pneumonia

Level of knowledge	Pre test score		Post test score	
	Frequency	Percentage	Frequency	Percentage
Poor (0-10)	2	6.67%	0	00%
Good (11-20)	26	86.66%	08	26.66%
Excellence (21-30)	02	6.67%	22	73.34%

Table 7: Mean, Median, Mode and Standard deviation of knowledge of students regarding pneumonia.

Sr. No	Knowledge Level	Mean	SD	MD	T Valve	Significance
1	Pre test	14.53	3.40	8.20	19.46	**P<0.05**
2	Post test	22.73	3.11			

Section C: Association between the Socio Demographic Variables and Knowledge of Students

Table 8: Association between post-test knowledge of pneumonia among students with selected socio-demographic variable

S. NO	Socio demographic	Total students	Level of Knowledge			DF	Chi square
1	**Age**		Poor	Good	Excellent		0.267
	19-20	14	01	04	09		S
	21-22	16	01	06	09	03	
	23-24	0	0	00	00		

	25-26	0	0	0	00		
2	**Previous Knowledge**						
	Yes	30	02	11	17	01	**00**
	No	00	0	10	15		**NS**
3.	**Source of Knowledge**						
	Books	26	01	09	16		
	Internet	02	0	01	01	03	3.45
	Other	02	0	02	01		NS
	No	0	0	0	0		
4.	**Gender**	**Frequency**					
	Male	10	01	04	05	01	0.41
	Female	20	01	07	12		S
4	**Nutritional Status**						
	Vegetarian	08	0	03	05		
	Non vegetarian	04	0	01	03	02	0.70
	All	18	01	07	10		NS

6. Summary

The present study was conducted to assess the knowledge regarding Pneumonia among selected Basic B. Sc. nursing students. The pre-experimental design was adopted for the present study, purposive sampling techniques was used to select the samples. The data was collected from 30 student's using self-structured questionnaire. The finding of the study has been discussed with reference to the objectives and hypothesis and with the finding of the studies.

Demographic profile of selected sample

The characteristics of the demographic variables as described in term of their frequency and percentage distribution which showed that majority 53.33% were aged group of 21-22 year, most samples 66.66% were female, most of the samples had previous knowledge 100%, and 86.66% samples uses books as source of knowledge and most sample 60% are both (vegetarian-non-vegetarian).

The first objective was to assess the pre-test knowledge score regarding pneumonia among the selected students.

Out of 30 student's, assessment of knowledge reveals in table-6 that majority 26 (86.66%) of student's had good knowledge regarding Pneumonia.2 (6.67%) had poor knowledge and 2 (6.67%) had excellent knowledge regarding pneumonia. The mean for overall knowledge of student's as represented in table 7-was 14.53 (S. D.-3.40).

The second objective was to assess the post-test knowledge score regarding pneumonia among the selected students.

The assessment of knowledge of student's revealed in table-6 that majority 22 (73.34%) of student's had excellent knowledge regarding pneumonia, 8 (26.66%) had good knowledge pneumonia. The mean score of overall knowledge was 22.73 (S. D.-3.11).

The third objective was to find out the association between demographic variable.

Table-8 represented association of demographic variables with the level of knowledge using chi-square test. Although there was no statistically significant association found between level of knowledge and demographic variables such as age, gender and source of knowledge. There was a no statistically association found between level of knowledge and demographic variable.

The fourth objective was to determine the pre-test knowledge score and post-test knowledge score

The of pre-test knowledge score and post-test knowledge score revealed that, 2 (6.67%) had excellent knowledge, 26 (86.66%) had good knowledge and 2 (6.67%) had poor knowledge in pre-test.22 (73.34%) had excellent knowledge, 8 (26.66%) had good knowledge and (0%) had poor knowledge. The mean difference between pre-test and post-test is 8.9.

7. Conclusion

The present study assessed the knowledge regarding Pneumonia among selected nursing students. On the basis of finding of the study the following of the study the following conclusion were made.

- Majority of the student's adequate knowledge regarding Pneumonia.
- The study shows that there is no significant difference between pre-test and post-test knowledge.

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