



Effect Of Self-Instructional Module On Knowledge Regarding Prevention And Management Of Child Hood Tuberculosis Among Nursing Students Of Selected Nursing College At Bengaluru.

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Abstract

Background & Objectives

Tuberculosis (TB) is an ancient disease, with evidence of skeletal TB found in mummies in both the Old and New World. The causative agent is Mycobacterium tuberculosis, a fastidious, aerobic, acid-fast bacillus. In the wake of human immunodeficiency virus (HIV) infection, the number of children and adults afflicted with TB has escalated tremendously worldwide in the past 25 years. Control of TB in children often has been neglected because children are ineffective transmitters of the bacillus and frequently escape the attention of TB control programs. However, much of the morbidity and mortality of TB occurs in childhood, and acquisition of TB infection during childhood contributes to the future reservoir of cases. Risk factor based screening of children for TB infection, appropriate implementation of chemoprophylaxis. Aim of the study is to find “Effectiveness of a Self Instructional Module (SIM) On Knowledge Regarding Prevention and Management of Child Hood Tuberculosis among Final Year B Sc Nursing Students.

Methods

An evaluative approach with pre-experimental one group pre-test post-test design was used with purposive sampling technique to select the sample (N=40). A structured knowledge questionnaire was used to assess the knowledge and SIM was administered to find its effectiveness. The collected data was analyzed by using descriptive & inferential statistics.

Results

The mean percentage of post-test knowledge score (56.19%) was higher than the mean percentage of pre-test knowledge score (32.87%). The calculated 't' value (43.18) is greater than the table value (0.05, 39df) = 2.57. It showed a significant difference between mean pre and post- test knowledge scores. Calculated χ^2 values is more than the table value with respect age and gender hence it showed significant association between age, and gender with post-test knowledge scores.

Interpretation & Conclusion

The findings of the study showed that there was a deficit in knowledge of final year students before administration of SIM. The results indicated that the SIM is effective in increasing the knowledge of final year students regarding the prevention and management child hood TB.

Key words: Effectiveness; SIM; Knowledge; Tuberculosis Prevention; Management; Students.

Introduction

Tuberculosis (TB) is an infectious disease usually caused by Mycobacterium tuberculosis (MTB) bacteria. Tuberculosis generally affects the lungs, but can also affect other parts of the body. Most infections show no symptoms, in which case it is known as latent tuberculosis. About 10% of latent infections progress to active disease which, if left untreated, kills about half of those affected. The classic symptoms of active TB are a chronic cough with blood containing mucus, fever, night sweats, and weight loss. It was historically called consumption due to the weight loss.

A child is more at risk for TB if they: Live with someone who has TB, Are homeless, Come from a country where TB is common Have a weak immune system, including from diabetes, HIV, or medicines that can weaken the immune system, poor nutrition or mal nutrition, Very young children are more likely than older children to have TB spread through their bloodstream and cause complications, such as meningitis

NEED FOR STUDY

TB is now among the 10 major causes of mortality among children, with a global estimate of 130,000 deaths per year (WHO Report, 2009). Mortality has a strong correlation with socioeconomic status, underlying nutritional status and immune-competence (Palme, 2002). TB has also been reported to be the third most common cause of death in HIV-infected children with a clinical diagnosis of acute severe pneumonia and a much higher risk of severe disease and death among young children than adults, paediatric TB remains a public health emergency and this is particularly evident in developing countries with poor public health infrastructure

STATEMENT OF PROBLEM

Effect of self-instructional module on knowledge regarding prevention and management of child hood tuberculosis among nursing students of Selected Nursing College at Bengaluru.

OBJECTIVES OF THE STUDY:

- To assess the existing level of knowledge regarding prevention and management of child hood tuberculosis among final year B Sc nursing students
- To evaluate the effectiveness of self-instructional module on knowledge regarding prevention and management of child hood tuberculosis among final year B Sc nursing students
- To find out the association between post-test knowledge scores of the students and selected demographic variables of the students.

OPERATIONAL DEFINITIONS

- ▶ **Effectiveness:** In this study it refers to the extent to which the self-instructional module achieves the desired effect in improving the knowledge students regarding prevention and management of child hood tuberculosis
- ▶ **Self-instructional module:** It refers to systematically developed self-learning material prepared by the researcher to impart the knowledge regarding prevention and management of child hood tuberculosis
- ▶ **Knowledge:** It refers to the gained information or awareness of final year B Sc nursing students regarding prevention and management of child hood tuberculosis. Which is explored by the score of knowledge questionnaires
- ▶ **Prevention:** Precautionary measures followed by the risk children to avoid occurrence of TB
- ▶ **Tuberculosis:** refers to a communicable disease caused by mycobacterium tuberculosis bacteria
- ▶ **Management:** Treatment options followed by the patients to cure the tuberculosis or treatment prescribed by the physicians against tuberculosis.

HYPOTHESES

- ▶ **H1:** The mean post-test knowledge scores final year B Sc nursing students regarding prevention and management of child hood tuberculosis will be significantly higher than the mean pre-test knowledge score.
- ▶ **H2:** There will be a significant association between the selected demographic variable and the post-test knowledge score of final year B Sc nursing students regarding prevention and management of child hood tuberculosis.

REVIEW OF LITERATURE

The review of literature is systematic selection of source work. The literature relevant to this study was reviewed and arranged in the following sections.

- **Studies related to risk factors and burden of tuberculosis in children**
- **Studies related to effectiveness of self-instructional module.**
- **Studies related to knowledge of nurses or student nurses related to TB.**

The Non-Experimental - Descriptive research design study was conducted to assess the knowledge on prevention of tuberculosis among 40 patients' family members in chest ward. Samples were selected by non-

probability convenient sampling technique in Rohilkhand Medical College and hospital Bareilly (U.P). The tool consisted of 2 sections. Section A dealt with demographic area of pulmonary tuberculosis patients among the family members and section B consisted of structured questionnaire to assess the knowledge. The present results reveals that 6(%) of them had inadequate knowledge on Pulmonary Tuberculosis, 34%Of them had moderately & 0% had adequate knowledge on PTB. Conclusion: To overall knowledge status of family members, among the family members majority 34% of them moderate knowledge on PTB. So we had provided self-instructional module that can be to improve family member's knowledge level on prevention of pulmonary tuberculosis.

METHODOLOGY

- **RESEARCH APPROCH-** Quantitative research approach.
- **RESEARCH DESIGN-** Non experimental descriptive survey design
- **STUDY SETTING:** Selected College of Nursing, Bengaluru

VARIABLES

- ❖ **INDEPENDENT VARIABLE:** Self instructional module on prevention and management of child hood tuberculosis
- ❖ **DEPENDENT VARIEABLE:** knowledge of older adults regarding prevention and management of child hood tuberculosis final year B Sc nursing students

POPULATION-

SAMPLE SIZE- The sample size for the present study is 40.

Sampling technique: Purposive sampling technique is used for the present study

SAMPLING CRITERIA

INCLUSION CRITERIA

- ▶ Final year B Sc nursing students of Selected College of Nursing, Bengaluru.
- ▶ Final year B Sc nursing students are willing to participate in the study.
- ▶ Final year B Sc nursing students who are available at the time of data collection.
- ▶ Final year B Sc nursing students who are able to communicate English

EXCLUSION CRITERIA:

- ▶ Final year B Sc nursing students who are physically sick.
- ▶ Final year B Sc nursing students who are not willing to participate in the study

ETHICAL CONSIDERATION

Prior permission was obtained from the research committee and informed consent was obtained from the participants.

DESCRIPTION OF THE FINAL TOOL

Development of tool:

- ▶ The following steps were carried out in preparing the tool.
- ▶ Literature review.
- ▶ Preparation of blue print.
- ▶ Consultation with the guide, statistician, subject experts of nursing.
- ▶ Establishment of validity and reliability.

The tool used in this study consists of two parts;

- ▶ **Part-A:** Questions associated with demographic variables like age, sex, religion, marital status, family income, type of family, residence, and previous source of learning
- ▶ **Part-B:** Structured knowledge questionnaire consisted of 40 items on knowledge regarding prevention and management of child hood tuberculosis. This consists of 2 aspects.
- ▶ **ASPECT-I:** Knowledge regarding meaning, causes, incidence, types and assessment of child hood tuberculosis
- ▶ **ASPECT-II:** Knowledge regarding prevention and management of child hood tuberculosis.
- ▶ **Scoring of items:** For knowledge questions each correct answer was given a score of 'one' and wrong answer a score of 'zero'. Maximum score is 40 and minimum score is zero.

RESULTS

The findings were presented under the following headings:

Section I: Analysis of demographic characteristics of respondents under study.

Section II: Analysis of pre-test and post-test knowledge scores of respondents and finding effectiveness of SIM.

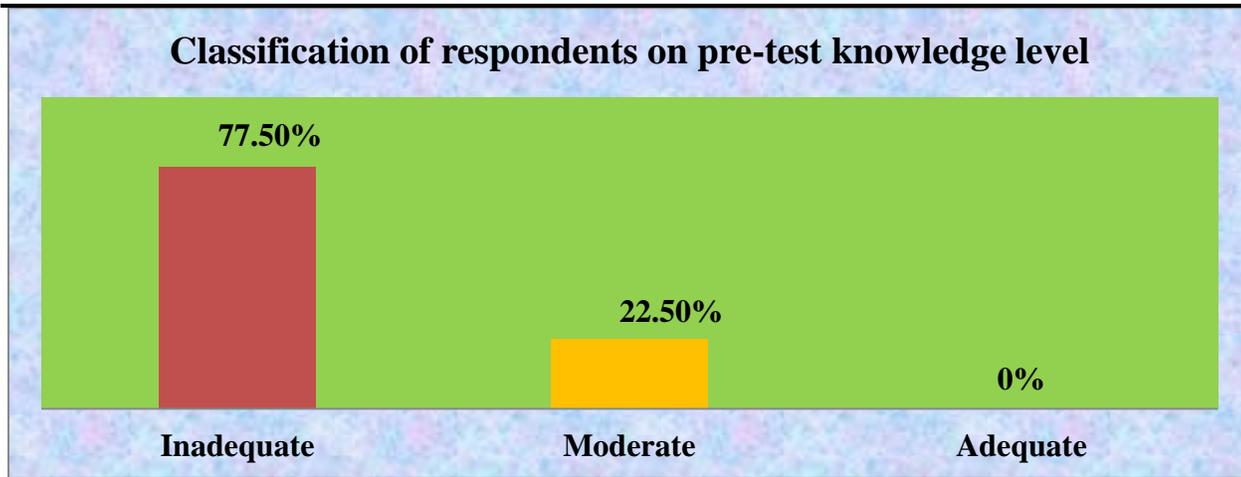
- a) Analysis of pre-test knowledge scores.
- b) Analysis of post-test knowledge scores.
- c) Effectiveness of SIM on knowledge scores of whole test.

Section III: Analysis of association between demographic variables with post-test knowledge scores.

Section I:**Analysis of demographic characteristics of respondents under study.**

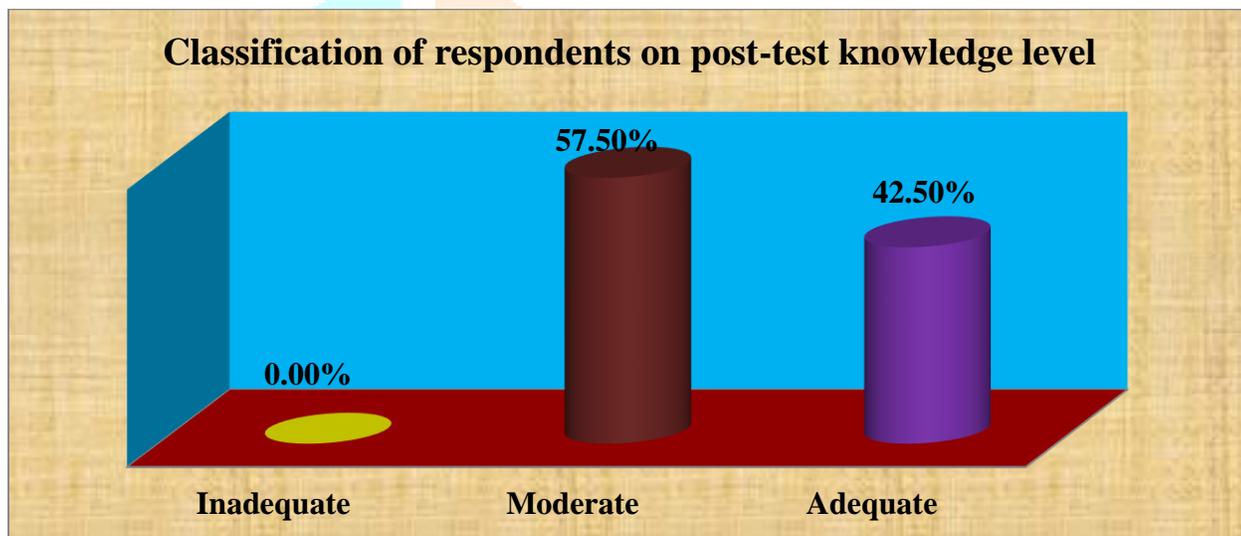
Socio-demographic Characters		Total	Percentage
Age	22 year	29	72.50
	23 year	06	15.00
	24 year	04	10.00
	>25 year	01	2.50
Gender	Female	35	87.50
	Male	05	12.50
Religion	Hindu	12	30.00
	Christian	21	52.50
	Muslim	04	10.00
	Others	03	7.50
Marital Status	Unmarried	38	95.00
	Married	02	5.00
	Others (specify)	00	0.00
Type of Family	Nuclear Family	33	87.50
	Joint Family	07	12.50
Place of Residence	Urban	16	40
	Rural	24	60
Dietary pattern	Vegetarians	12	30
	Mixed	28	70
Family Income/Month	<10000/M	2	5
	10001-20000/M	4	10
	200001-30000/M	24	60
	>30000/M	10	25
Previous information about child hood tuberculosis	Yes	38	95
	No	2	5
Source of information regarding child hood tuberculosis	Printed materials	37	92.5
	Contact with health personnel	3	7.5
	Mass media	0	0

Section - II: Analysis of Pre-Test and Post-Test Scores and Effectiveness of self instructional module.



Knowledge level in the pre-test. The data showed that, majority of the respondent's (77.50%) had inadequate knowledge, 22.50% had Moderate knowledge and none of them had the adequate knowledge.

Analysis of post-test knowledge scores.



Knowledge level in the post-test majority of the respondent's (57.50%) had moderate knowledge, 42.50% had adequate knowledge and none of them had the inadequate knowledge.

Effectiveness of self instructional module on knowledge scores of whole test

Aspects	Max. Score	Respondents Knowledge				Paired 't' Test
		Mean	SD	Mean (%)	SD (%)	
Pre-test	30	13.15	1.91	32.87%	4.78%	43.18
Post test	30	22.48	1.77	56.19%	4.42%	
Enhancement	30	9.33	1.41	23.73%	3.54%	

The overall pre-test mean of knowledge score of respondents on prevention and management of child hood TB was 13.15 (32.87%) and post-test mean was 22.48 (56.19%) with an enhancement 9.33(23.73%). The calculated paired 't' test value of **43.18*** is greater than the table value at 0.05 level of significance which indicate that there is a significance between pre-test and post-test knowledge scores of whole test of respondents. It was concluded that the self instructional module was effective in increasing knowledge of final year students regarding prevention and management of child hood tuberculosis

Section III: Analysis of association between demographic variables with post-test knowledge scores.

Socio-demographic Characters		Total	Moderate	Adequate	X ² value
Age	22 year	29	20	09	10.91 S
	23 year	06	1	5	
	24 year	04	1	3	
	>25 year	01	0	1	
Gender	Female	35	21	14	4.19 S
	Male	05	1	4	
Religion	Hindu	12	6	6	0.38NS
	Christian	21	12	9	
	Muslim	04	2	2	
	Others	03	2	1	
Marital Status	Unmarried	38	21	17	0.01

	Married	02	1	1	NS
	Others (specify)	00	0	0	
Type of Family	Nuclear Family	33	17	16	1.08
	Joint Family	07	5	2	NS
Place of Residence	Urban	16	6	10	3.56
	Rural	24	16	8	NS
Dietary pattern	Vegetarians	12	5	7	1.26
	Mixed	28	17	11	
Family Income/Month	<10000/M	2	2	0	4.08
	10001-20000/M	4	3	1	
	200001-30000/M	24	10	14	
	>30000/M	10	7	3	
Previous information about child hood TB	Yes	38	21	17	0.02
	No	2	1	1	NS
Source of information regarding child hood TB	Printed materials	37	19	18	0.80
	Contact with health personnel	3	3	0	
	Mass media	0			

Table revealed that the calculated X^2 values with regard to age ($X^2= 10.91$) and gender ($X^2= 4.19$); were more than the table values at 0.05 level of significance, hence the null hypothesis H_0 is rejected and research hypothesis H_1 is accepted with regard to above other mentioned demographic variables but the calculated X^2 values were less than the table values at 0.05 level of significance. It is concluded that, post-test knowledge level of respondents are significantly associated with age, and Gender at 0.05 level of significance.

RECOMMENDATIONS

- ▶ Based on the study findings, the following recommendations were made for further study.
- ▶ The findings of the present study can be used as a guide of future research
- ▶ The comparative study can be conducted.
- ▶ A study can be conducted in preventing aspects

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