

# Effectiveness of self-instructional module on knowledge regarding revised national tuberculosis control programme among male health workers at selected primary health centers.

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## ABSTRACT:

**Background:** The Revised National Tuberculosis Control Programme (RNTCP) thus formulated, adopted the internationally recommended Directly Observed Treatment Short-course (DOTS) strategy, as the most systematic and cost-effective approach to revitalize the TB control programme in India. **Objectives:** 1) To assess the knowledge regarding revised national tuberculosis control programme among male healthworkers. 2) To evaluate the effectiveness of self instructional module on knowledge regarding revised national tuberculosis control programme among male healthworkers. 3) To find the association between the level of knowledge and selected socio-demographic variables. **Research Setting:** The study was conducted in selected Primary Health Centres at Vijayapura. **Samples:** 60 samples consisting male healthworkers are selected for the study. **Results:** The study findings revealed that the level of knowledge of male health workers working in Primary Health Centres of Vijayapura after using self instructional module. In that 46(76.7%) of male health workers were having adequate knowledge, 14(23.3%) of them had moderate knowledge and none of the health workers had inadequate knowledge regarding revised national tuberculosis control programme.

**KEY WORDS:** Evaluate Effectiveness, Self Instructional Module (SIM), Revised National Tuberculosis Control Programme, Male Health Workers.

## INTRODUCTION:

*“Infectious diseases will last as long as humanity itself”* 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. Prevention of TB involves screening of those at high risk, early detection and treatment of cases and vaccination with the bacillus Calmette-Guerin (BCG) vaccine. The Revised National TB Control Programme (RNTCP), based on internationally recommended Directly Observed Treatment Short-course (DOTS) strategy, was launched in 1997 expanded across the country in phased manner with the support from World Bank and other development partners. Full nation-wide coverage achieved in March 2006. In terms of patients, RNTCP has been recognized as the largest and the fastest expanding TB control programme in the world.

## NEED FOR STUDY:

**Worldwide,** tuberculosis (TB) is one of the top 10 causes of death, and the leading cause from a single infectious agent (above HIV/AIDS). In 2017, TB caused 1.3 million deaths among HIV negative people and there were additional 3000000 deaths from TB (range, 266000-335000) among HIV positive people. **India** accounts for about quarter of the global TB burden. Worldwide India is the country with the highest burden of both TB and MDR TB. There is an estimated 79,000 multi-drug resistant TB patients among notified cases of pulmonary TB each year. Six districts of Karnataka- **Vijayapura**, Bellari, Bidar, Belagavi, Bagalkot, Koppal are among 50 declared tuberculosis prone across the country. In Karnataka, RNTCP was implemented from 1998 and entire state was covered in 2004. Nearly 65,000 TB patients were put on treatment annually in Karnataka TB control program itself.

With all the above findings, the investigator observed and felt that the prevention of tuberculosis by education regarding RNTCP is atmost important step to stop the further decline of tuberculosis. This type of preventive education programme through SIM for health workers of selected PHCs of Vijayapur will help them prevent such TB cases. Because the education at grass root level will be more effective in gaining more knowledge on prevention of TB. Hence this SIM will be useful to provide appropriate knowledge and information on prevention of TB through RNTCP. The above facts and research work earlier shows that there is a need for such SIM among health workers in selected PHCs of Vijayapur.

## STATEMENT OF PROBLEM:

“A study to evaluate the effectiveness of self instructional module on knowledge regarding revised national tuberculosis control programme among male health workers at selected primary health centers of Vijayapura district, Karnataka”

## OBJECTIVES OF THE STUDY:

1. To assess the knowledge regarding revised national tuberculosis control programme among male health workers.

- To evaluate the effectiveness of self instructional module on knowledge regarding revised national tuberculosis control programme among male health workers.
- To find the association between the level of knowledge and selected socio demographic variables.

### HYPOTHESIS:

- H<sub>1</sub>:** There is significant difference between pre-test and post-test knowledge scores regarding revised national tuberculosis control programme among male health workers at 0.05 level of significance.
- H<sub>2</sub>:** There is significant association between level of knowledge and selected socio demographic variables of male health workers at 0.05 level of significance.

### 3. OPERATIONAL DEFINITIONS:

- EVALUATE:** In this study, it refers to the impact of self instructional module on knowledge regarding revised national tuberculosis control programme.
- EFFECTIVENESS:** In this study it refers to gain in knowledge regarding revised national tuberculosis control programme among male health workers as determined by significant difference between pre-test and post-test score.
- SELF INSTRUCTIONAL MODULE (SIM):** In this study it refers to a visual teaching aid that consist of information regarding history, incidence and prevalence, life cycle, agent-host factors, clinical features and diagnosis, prevention and control measures of tuberculosis diseases, and it also contains general information on tuberculosis and it's control programme which helps the male health workers to incorporate knowledge.
- KNOWLEDGE:** In this study it refers to the correct response given by male health workers regarding revised national tuberculosis control programme which is elicited through self administered knowledge questionnaire.
- REVISED NATIONAL TUBERCULOSIS CONTROL PROGRAMME:** In this study it is one of the national health programme which is being launched by government in order to control the burden of tuberculosis.
- MALE HEALTH WORKERS:** It refers to the male health professionals who are appointed on regular bases and working in selected primary health centers at Vijayapura district.

### RESEARCH METHODOLOGY:

- Research approach:** Quantitative evaluative approach was used in this proposed study.
- Research design:** A pre-experimental (one group pre-test post-test design) is used in this proposed study.

Group	Pre-test	Intervention	Post-test
Male Health Workers	Knowledge regarding RNTCP before administration of SIM	Administration of self instructional module (SIM)	Knowledge regarding RNTCP after administration of SIM
	O <sub>1</sub>	X	O <sub>2</sub>

- Research study setting:** The study was conducted in selected Primary Health Centers at Vijayapura.
- Population:** Male health workers working at selected Primary Health Centers at Vijayapura.
- Sample:** Sample selected for this study was male health workers at selected Primary Health centers at Vijayapura.
- Sampling procedure:** Non probability purposive sampling technique is used for the present study.
- Sample size:** The sample size consists of 60 male health workers in selected primary health centers at Vijayapura.

### CRITERIA FOR SAMPLE COLLECTION:

#### Inclusion criteria

Male health workers who are

- Working in the selected Primary Health centres at Vijayapura.
- Co-operative and willing to participate in the study.
- Available during the time of data collection.
- Able to read & write English and Kannada.

#### Exclusion criteria

The health workers who are

- Other than male health workers.
- Not co-operative and not willing to participate.

- Not available at the time of data collection.

## DESCRIPTION OF THE TOOL:

**Section A:** Socio-demographic data

**Section B:** Self administered knowledge questionnaires.

## PILOT STUDY:

A pilot study was conducted on 10 subjects in the selected Primary Health Centres at Vijayapura.

## DATA COLLECTION PROCEDURE:

Data collection was started after the permission obtained from the concerned Medical Officer of selected Primary health centre at Vijayapura. The interview was conducted in a one to one way. The investigator established rapport followed by a self-introduction to the subjects, explained about the purpose of the interview and the nature of the study. Duration of the study was 6 weeks.

## PLAN FOR DATA ANALYSIS:

The data obtained was analyzed in terms of objectives of the study by using inferential statistics (frequency and percentile distribution, mean, median, mode and standard deviation) and inferential statistics (chi square).

## RESULTS AND DISCUSSION:

**TABLE NO. 1: Frequency and percentage distribution of subjects according to demographic variables of Male health workers**

N=60

Sl.no	Socio Demographic Variables	No	%
1	<b>Age in years</b>		
	a) 18- 21	3	5
	b) 22- 25	19	31.7
	c) 26 and above	38	63.3
2	<b>Religion</b>		
	a) Hindu	48	80
	b) Muslim	12	20
	c) Christian	0	0
	d) Others	0	0
3	<b>Place of residence</b>		
	a) Rural	18	30
	b) Semi urban	29	48.3
	c) Urban	13	21.7
4	<b>Type of family</b>		
	a) Nuclear family	42	70
	b) Joint family	16	26.7
	c) Single parent family	2	3.3
	d) Extended family	0	0
5	<b>Qualification</b>		
	a) SSLC	19	31.7
	b) PUC	39	65
	c) Diploma in Health Inspector	2	3.3
	d) Degree and above	0	0
6	<b>Experience in years</b>		
	a) 1– 3	18	30

	b) 4– 6	33	55
	c) 7 and above	9	15
7	<b>Source of information</b>		
	a) Print media	2	3.3
	b) ICE programme	0	0
	c) Mass health education programme	16	26.7
	d) No information	42	70

- 1) The first objective was to assess the knowledge regarding revised national tuberculosis control programme among male health workers.

**Table No. 2 - To assess the pretest knowledge regarding revised national tuberculosis control programme among male health workers.**

Sl. No.	Level of knowledge	Score	No. of respondents	
			No.	%
1	Inadequate	<50%	40	66.7
2	Moderate	50-75%	20	33.7
3	Adequate	>75%	0	0
	<b>Overall</b>		<b>60</b>	<b>100</b>

**Table no. 2** reveals that the level of knowledge of male health workers working in Primary Health Centres of Vijayapura before using self instructional model. In that 40(66.7%) of Male health workers were having inadequate knowledge, 20(33.7%) of them were having moderate knowledge and none of male health workers had adequate knowledge about National Tuberculosis control programme.

**Table No. 3 - To assess the post test knowledge regarding revised national tuberculosis control programme among male health workers.**

Sl.No.	Level of knowledge	Score	No. of Respondants (%)	
			No.	%
1	Inadequate	<50%	0	0
2	Moderate	50-75%	14	23.3
3	Adequate	>75%	46	76.7
	<b>Overall</b>		<b>60</b>	<b>100</b>

**Table No. 3** reveals that the level of knowledge of male health workers in Primary Health Centres of Vijayapura using self instructional model. In that 46(76.7%) of Male Health workers were having adequate knowledge, 14(23.3%) of them had moderate knowledge and none of male health workers had inadequate knowledge.

- 2) The second objective is to evaluate the effectiveness of self instructional module regarding revised national tuberculosis control programme.

**Table No.4 - To evaluate the effectiveness of self instructional module regarding revised national tuberculosis control programme.**

Domain	Pretest		Post test		Enhancement		t value
	Mean	SD	Mean	SD	Mean	SD	
Basic information	3.4	0.94	6.5	0.6	3.1	1.1	21.8**
Revised RNTCP	11.5	3.5	17.9	3.1	6.4	3.1	16**
<b>Overall</b>	<b>14.9</b>	<b>2.1</b>	<b>24.4</b>	<b>1.9</b>	<b>9.5</b>	<b>3.5</b>	<b>21**</b>

**Table no.4** states that the effectiveness of self instructional module in terms of gaining knowledge scores in post-test.

According to this, the pre-test knowledge regarding revised national tuberculosis control programme is 14.9 among male health workers at Primary Health Centers at Vijayapura and post-test knowledge scores is 24.4, which is significant at the level of 0.05 level of significance so there is enough evidence that self instructional model is effective in enhancing knowledge of revised national tuberculosis control programme.

- Therefore 2<sup>nd</sup> objective is achieved and 1<sup>st</sup> research hypothesis is accepted.

- 3) The third objective is to find the association between the level of knowledge and selected socio demographic variables.

Table No. 5 - To find the association between knowledge scores with selected socio-demographic variables.

Sl. No.	Socio Demographic Variables	No	%	No of Respondents				Chi square Value
				≤ Median (25)		≥ Median (35)		
1	Age in years			No	%	No	%	
	a) 18- 21	3	5	3	100	0	0.0	5.33
	b) 22- 25	19	31.7	8	42.1	11	57.9	df-2
	c) 26 and above	38	63.3	14	0.0	24	0.0	NS
2	Religion							
	a) Hindu	48	80	17	35.4	31	64.6	4.5
	b) Muslim	12	20	8	66.7	4	33.3	df-1
	c) Christian	0	0	0	0	0	0	S
	d) Others	0	0	0	0	0	0	
3	Place of residence							
	a) Rural	18	30	13	72.2	5	27.8	13.1
	b) Semi urban	29	48.3	10	34.5	19	65.5	df-2
	c) Urban	13	21.7	2	0.0	11	0.0	S
4	Type of family							
	a) Nuclear family	42	70	19	45.2	23	54.8	2
	b) Joint family	16	26.7	6	37.5	10	62.5	df 2
	c) Single parent family	2	3.3	0	0.0	2	0.0	N.S
	d) Extended family	0	0	0	0.0	0	0.0	
5	Qualification							
	a) SSLC	19	31.7	13	68.4	6	31.6	10.4
	b) PUC	39	65	12	30.8	27	69.2	df 2
	c) Diploma in Health Inspector	2	3.3	0	0	2	100	S
	d) Degree and above	0	0	0	0.0	0	0.0	
6	Experience in years							
	a) 1- 3	18	30	10	55.6	8	44.4	2.4
	b) 4- 6	33	55	12	36.4	21	63.6	df-2
	c) 7 and above	9	15	3	33.3	6	66.7	N.S
7	Source of information							
	a) Print media	2	3.3	0	0.0	2	100.0	5.2
	b) ICE programme	0	0	0	0.0	0	0.0	df-2
	c) Mass health education programme	16	26.7	4	0.0	12	0.0	N.S
	d) No information	42	70	21	50.0	21	50.0	

S- significant at  $p < 0.05$  level

N.S- Not significant at  $P > 0.05$  level

**Table no.5** reveals that there was no association between knowledge scores with selected socio demographic variables such as: Age in years, religion, place of residence, type of family, qualification, experience in years, source of information for

knowledge regarding revised national tuberculosis programme. But there was significant association between knowledge score with religion, urban place of residence, Diploma in Health Inspector qualification and knowledge regarding revised national tuberculosis control programme among male health workers at selected Primary Health Centres of Vijayapura.

- Therefore 3<sup>rd</sup> objective is achieved and 2<sup>nd</sup> research hypothesis is accepted.

#### LIMITATIONS:

- The study sample was confined to 60 Male Health Workers in selected PHCs.
- The study is limited to assessment of knowledge of Male Health workers regarding Revised National Tuberculosis Control Programme.
- The study did not have a control group.

#### RECOMMENDATIONS:


- The similar study can be replaced on larger scale for better generalizations of the findings.
- A similar study can be undertaken by utilizing other domains like attitude and practice.
- The study can be conducted in various settings.
- A comparative study may be conducted to find out the knowledge of other health care workers.
- An experimental study can be conducted with control group.
- A study can be carried out to evaluate the efficacy of various teaching strategies like information booklet, video assisted teaching programme.

#### CONCLUSION:

The present study was undertaken “A study to evaluate the effectiveness of self instructional module on knowledge regarding revised national tuberculosis control programme among male health workers at selected Primary Health Centres of Vijayapura District, Karnataka”. In the assessment 60 samples, evaluation of knowledge regarding revised national tuberculosis control programme was done before and after self instructional module among Male health workers. The findings revealed that self instructional module was effective in improving knowledge of male health workers regarding revised national tuberculosis control programme.

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