

# A Study to Assess the Effectiveness of Individual Teaching Program on Knowledge Regarding Prevention of Default of Tuberculosis Treatment Among Newly Diagnosed Cases Visiting to Tuberculosis Centre at Selected Hospitals of Vijayapur District

Prithviraj Parankar<sup>1</sup>

<sup>1</sup>PG Nursing Tutor, Department of Community Health Nursing, BLDEA'S Shri B M Patil Institute of Nursing Sciences Vijayapur-586103

Suchitra A Rati<sup>3</sup>

<sup>3</sup>Professor, Dept of Community Health Nursing, BLDEA'S Shri B M Patil Institute Of Nursing Sciences Vijayapur-586103

Akash<sup>5</sup>

<sup>5</sup>Assistant Professor. Dept of Community Health Nursing, BLDEA'S Shri B M Patil Institute of Nursing Sciences Vijayapur-586103

Jayashree Pujari<sup>2</sup>

<sup>2</sup>Associate Professor, Dept of Community Health Nursing, BLDEA'S Shri B M Patil Institute of Nursing Sciences Vijayapur-586103

Santosh Indi<sup>4</sup>

<sup>4</sup>Associate Professor. Dept of Community Health Nursing, BLDEA'S Shri B M Patil Institute Of Nursing Sciences Vijayapur-586103

Anil Padaganur<sup>6</sup>

<sup>6</sup>Nursing tutor (PG) Dept of Medical surgical Nursing, BLDEA'S Shri B M Patil Institute of Nursing Sciences Vijayapur-586103

## Abstract

### ➤ *Background:*

Tuberculosis (TB) 100% curable is one of the major public health problems that is the leading cause of death among adults. Almost a third of the world's population has been infected. Default is one of the unfavorable outcomes for patients on DOTS and represents an important challenge for the control program.

### ➤ *Aim:*

The present study was aimed to evaluate the effectiveness of individual teaching program on prevention of default tuberculosis treatment among newly diagnosed cases.

### ➤ *Design:*

A pre experimental –one group pre and post test design conducted at TB hospitals of Vijayapur.

### ➤ *Methods and Materials:*

Quantitative, evaluative research approach with pre – Experimental research design was adopted for the present study. 50 newly diagnosed tuberculosis cases were selected by using convenient sampling technique. The knowledge was assessed by using structured knowledge questionnaires. Frequency, percentage, Mean and standard deviation, chi square test and t test was used for statistical analysis.

### ➤ *Result:*

Individual Teaching Programme was effective in increasing student's knowledge regarding MDRT and it was observed that paired mean pre-test post-test is - 20.740 where as standard deviation is 7.2829 the calculated value is less than (<0.0001). **Conclusion:** Individual Teaching Programme can be a better prevention of default of tuberculosis treatment among newly diagnosed cases of tuberculosis.

**Keywords:-** Tuberculosis, Default Tuberculosis, Prevention, Knowledge, Newly Diagnosed Cases.

## I. INTRODUCTION

Tuberculosis (TB) 100% curable, is one of the major public health problems that is the leading cause of death among adults. Almost a third of the world's population has been infected.<sup>1</sup>

Tuberculosis (TB) is one of the top 10 causes of death in the world. Around one-third of the world's population is infected with the tuberculosis bacillus, and eight million people get tuberculosis disease each year, killing 1.8 million people worldwide. Approximately 80% of tuberculosis cases are located in 23 countries, with Africa and Southeast Asia having the greatest incidence rates. In Africa, due to the HIV/AIDS epidemic, and in Eastern Europe, due to antibiotic resistance and deterioration of the health system, the TB

situation has gotten worse over the last two decades. Tuberculosis is carried from person to person through the air. Droplet nuclei are released by an infected person through talking, coughing, sneezing, laughing, or singing. Larger droplets settle, whereas tiny droplets float in the air.<sup>7</sup>

Mycobacterium tuberculosis, a bacteria with humans as its primary reservoir, causes tuberculosis. Patients with pulmonary tuberculosis, particularly those with positive sputum smears, disseminate M. tuberculosis. After a time ranging from weeks to decades, 10–12% of persons who become infected acquire TB disease. With time, the chance of sickness decreases dramatically. Re-infection can potentially result in disease.<sup>2</sup>

## II. METHODOLOGY

### ➤ **Research Approach:**

The Quantitative research approach.

### ➤ **Research Design**

Pre experimental design one group pre and Post-test design is used for the study.

### ➤ **Study Setting**

Study is conducted by TB hospital Vijayapur.

### ➤ **Variables**

Variables are qualities, properties or characteristics of persons, things or situations that change or vary. Variables of the present study were the following.

➤ **Independent variable:** Individual Teaching Programme.

➤ **Dependent variable:** Knowledge regarding Prevention of default of TB treatment.

➤ **Demographic variable:** Age, gender, educational status, occupation, economic status, information regarding prevention of default of TB treatment.

### ➤ **Population**

The population is the entire set of individuals or objects having common characteristics that meet certain criteria for inclusion in the study. The target population for the present study comprised of newly diagnosed TB cases.

### ➤ **Sample**

Sample refers to the portion of the population which represents the entire population. In this study the sample consisted of newly diagnosed TB cases of selected TB hospital of Vijayapur.

➤ **Sample Size:** The sample size was 50

### ➤ **Sampling Technique**

Convenient sampling technique

### ➤ **Criteria for selection of samples**

#### • **Inclusion Criteria:**

- ✓ The newly diagnosed tuberculosis cases visiting tuberculosis Centre and who are willing to participate in the study
- ✓ The TB patient present at the time of data collection
- ✓ TB patients who are able to understand either English / Kannada / Hindi

#### • **Exclusion Criteria:**

- ✓ The cases suffering with MDR TB
- ✓ Diagnosed cases of multi drug resistance tuberculosis

## III. RESULT AND DISCUSSION

### Section 1:

#### Description of socio demographic profile of newly diagnosed TB cases

Age	Frequency	Percentage
< 20	10	20.0
21-25	11	22.0
26-30	12	24.0
31-35	12	24.0
> 36	5	10.0
<b>Sex</b>		
Male	37	74.0
Female	13	26.0
<b>Religion</b>		
Hindu	11	22.0
Muslim	18	36.0
Christian	09	18.0

Any other	12	24.0
<b>Place</b>		
Rural	23	46.0
Urban	27	54.0
<b>Education Status of Mother</b>		
Married	34	68.0
Unmarried	10	20.0
Divorced/seperated	3	6.0
Widow/Widower	3	6.0
<b>Types of family</b>		
Nuclear	9	18.0
Joint	25	50.0
Extended	16	32.0
<b>Education Status</b>		
Non-Formal	9	18.0
Secondary	22	44.0
Higher Primary	13	26.0
Graduates	3	6.0
PG	3	6.0
<b>Occupation</b>		
Unemployee	6	12.0
Self-Employee	7	14.0
Private Employee	12	24.0
Labour/Coolie	12	24.0
Housewife	8	16.0
Agriculture	2	4.0
Government employee	3	6.0
<b>Family Income</b>		
< 5000	2	4.0
5000-10000	23	46.0
10000-15000	11	22.0
15000-20000	11	22.0
> 20000	3	6.0
<b>Heard About MDRTB</b>		
No	25	50.0
Yes	25	50.0
<b>Source</b>		
Mass Media	7	28.0
Friends anNeighbors	6	24.0
Family Members	8	32.0
Health Persons	4	16.0

Table 1:- Frequency and percentage distribution of study subjects according to their age  
N = 50

**Table No1:** Reveals that majority of TB cases in age of (31 - 35) (24%). Shows that 96%(48) of TB patient had in adequate and knowledge level and 04%(02) of tb patient had moderately adequate knowledge at pre test. Where as in post test 32% (16) of tb patient had adequate knowledge 10 %(05) had modertaley adequate and 58%(29) tb patient had inadequate knowledged It also shows that there is an effect of individual teaching programme on MDRTB. Represents that mean difference between pretest and post test is-20.740, whereas sd is 7.2809,the standard error mean was 1.0280, the paired t test value is -20.12 it shows significant difference between pre test and post test at df=49 at 0.05 level of significance.the calculated value is less than table value i e”(<0.0001)the result of t test indicates that individual teaching programme is effective among TB patient. Represents that there is a no significance association between knowledge scores with selected demographic variable of TB patient at 0.05level of significance

Level of knowledge	Test			
	Pre-Test	Percentage	Post-Test	Percentage
Inadequate	48	96	29	58
Moderately Adequate	02	04	05	10
Adequate	00	00	16	32
Total	50	100	50	100

Table 2:- Pre-test and post – test knowledge score of respondents  
N = 50

**Comparison of the pre-test and post-test knowledge score of newly diagnosed TB cases.**

Paired Differences					t	df	p-value
Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
			Lower	Upper			
-20.740	7.2809	1.0280	2.8092	8.6707	-20.12	49	< 0.0001(S)

Table 3:- Paired t-test to asses Structured teaching program of participants.  
N = 50

S. no	Demographic variable	Chi square value	df	Table value	P value	Significant	Remark
1	Age in year	1.313	4	2.71	0.859	NS	Null hypothesis is accepted and research hypothesis is rejected
2	Gender	0.000	1	3.21	0.990	NS	Null hypothesis is accepted and research hypothesis is rejected
3	Religion	2.179	3	5.21	0.536	NS	Null hypothesis is accepted and research hypothesis is rejected
4	Marital status	0.823	3	3.16	0.844	NS	Null hypothesis is accepted and research hypothesis is rejected
5	Type of family	0.404	2	1.75	0.817	NS	Null hypothesis is accepted and research hypothesis is rejected
6	Occupation	2.338	6	2.95	0.886	NS	Null hypothesis is accepted and research hypothesis is rejected

Table 4:- Association of Pretest Knowledge With Socio Demographic Variables

S-Significant NS-Not Significant

:There was no association between levels of knowledge with socio demographic variables such as age, Sex, religion, place of living, Marital Status, types of family, education status, occupation family income and heard about MDRTB but there was high association between level of knowledge and source of information as its chi-square value = 3559 and p-values was 0.0001. Heard about MDRTB from Family members and only few 4 had heard about it through health persons.

#### IV. DISCUSSION

A similar study was conducted on individual teaching programme on Mdrtb was effective in promoting knowledge regarding newly diagnosed TB patient. The present study shows that individual teaching programme was effective in enhancing knowledge regarding newly diagnosed patient. Reveals that majority of TB cases in age of (31 - 35) (24%). Shows that 96 % (48) of tb patient had in adequate and knowledge level and 04% (02) of tb patient had moderately adequate knowledge at pre test. Where as in post test 32% (16) of tb patient had adequate knowledge 10 % (05) had moderately adequate and 58 % (29) tb patient had inadequate knowledge. It also shows that there is an effect of individual teaching programme on MDRTB.

Represents that mean difference between pretest and post test is -20.740, where as sd is 7.2809, the standard error mean was 1.0280, the paired t test value is -20.12 it shows significant difference between pre test and post test at df=49 at 0.05 level of significance. The calculated value is less than table value  $t_{\alpha/2, df}$  ( $<0.0001$ ) the result of t test indicates that individual teaching programme is effective among tb patient. Represents that there is a no significance association between knowledge scores with selected demographic variable of tb patient at 0.05 level of significance.

#### V. CONCLUSION

The conclusion of the investigation is described in this chapter. It also explains the study's limits, as well as the implications for many fields such as nursing education, nursing service administration, nursing practise, nursing research, and study constraints. It includes the study's conclusions and suggestions.

The purpose of this study was to analyse the efficiency of an individual education programme on knowledge regarding the avoidance of Tuberculosis treatment default among newly diagnosed cases visiting Tuberculosis centres in Vijayapur, Karnataka. The information was gathered from 50 samples using a simple sampling procedure.

The data was analysed using descriptive statistics such as frequencies and percentages, as well as inferential statistics such as the 't' test and chi-square test, to determine the correlation.

The Conclusions drawn from the study are as follows:

- It was observed that out of 50, 25 (50%) had not heard about MDRTB and remaining 25 (50%) had heard about MDRTB. Of these 25, 7 study participants had heard about MDRTB from mass media, 6 had heard about it through Friends and relatives, 8 had heard about MDRTB from Family members and only few 4 had heard about it through health persons.

- It means there is significant difference between the pre-test and post-test knowledge score level of newly diagnosed TB cases regarding prevention of default of TB Treatment. Hence, the hypotheses stated there will be significant difference between the pre-test and post-test knowledge level of TB cases regarding prevention of default of TB treatment.
- There was no statistically significant association between the knowledge score of the TB cases with the selected demographic variables at the probability level of  $p < 0.05$ . Hence the research hypotheses stated there will be significant association between the knowledge score of newly diagnosed TB cases regarding the prevention of default of tuberculosis treatment and selected demographic variable is rejected.

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