

# A Study to Assess the Effectiveness of Structured Teaching Programme Regarding Knowledge of Tuberculosis and DOTS Therapy among Tuberculosis Patients Attending DOTS Center at Pune

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**Abstract:** Worldwide, tuberculosis (TB) remains the most frequent and important infectious disease causing morbidity and death. One-third of the world's population is infected with *Mycobacterium tuberculosis* (MTB), the etiologic agent of TB. The World Health Organization estimates that about eight to ten million new TB cases occur annually worldwide and the incidence of TB is currently increasing. In this context, TB is in the top three, with malaria and HIV being the leading causes of death from a single infectious agent, and approximately two million deaths are attributable to TB annually. In particular, pulmonary TB, the most common form of TB, is a highly contagious and life-threatening infection. Tuberculosis (TB) is a growing international health concern, since it is the leading infectious cause of death in the world today. In particular, the increasing prevalence of multidrug-resistant (MDR)-TB has greatly contributed to the increased difficulties in the control of TB. Tuberculosis (TB) is a growing international health concern, since it is the leading infectious cause of death in the world today. In particular, the increasing prevalence of multidrug-resistant (MDR)-TB has greatly contributed to the increased difficulties in the control of TB.

## Statement of the problem

**Keywords:** Tuberculosis, knowledge, tuberculosis patients, MDR-TB, structured teaching programme, Revised national tuberculosis control programme (RNTCP).

## 1. Introduction

### “Be solution focused, not problem focused”

— Mike Brescia

In India, Tuberculosis remains a major public health problem. Every year approximately 18- lakh people develop Tuberculosis and about 4 lakh die from it. India accounts for one fifth of global incidence of Tuberculosis and tops the list of 22 high Tuberculosis burden countries. Unless sustained an approximately 20 lakh people in India are estimated to die of Tuberculosis in next five years.<sup>1</sup>

Tuberculosis is a infectious disease caused by *Mycobacterium Tuberculi*. The disease primarily affects the lungs and cause pulmonary tuberculosis. It can also affect structure such as Intestine, meninges, bones and joints, lymph gland, skin and others tissue and body parts. The disease also affects animals like cattle; which is known as “bovine tuberculosis” which may also communicate to man. Pulmonary tuberculosis is the most common form of Tuberculosis, which affect the man.<sup>2</sup>

DOTS Therapy is the strategy to ensure cure by providing the most effective medicine and confirming that it is taken. It is only strategy, which has been documented to be effective worldwide on the programme basis. In DOTS therapy, during the intensive phase of treatment a health worker or other trained person observe in his presence patient swallows the drugs in presence. During continuation phase, the patient is issued the medicine for one week in a multiblistter comb pack, of which the first dose id swallowed

by the patient in presence of health worker or trained person. The consumption of the medicine in the continuation phase is also checked by health worker by return of empty multiblistter comb pack, when the patient comes to collect the medicine for next week. The drugs also provided in patients –wise boxes with sufficient shelf life. In the programme alternate-day treatment is used. The cases are divided into three types of categories- categoru1y 1, 2, and category 3. In the end it may be stated that the main problem of chemotherapy today is not needed to introduce new regimens or more potent drugs, but to apply the existing ones successfully.<sup>3</sup>

## 2. Literature Survey

**A study conducted in 2002 by Thomas C** he investigated the reasons for delayed presentation for treatment and non-completion of treatment for tuberculosis and ways of addressing their problems in undeveloped countries. Study shows that there is a little evidence that DOTS enhances treatment completion unless combined with other strategies. Community based patient oriented DOTS appears to be an appropriate way of addressing many of these issues. Study recommended the further research in this area.<sup>41</sup>

**A study conducted in 2004 by Koay TK** to assess the knowledge and attitude towards tuberculosis by using a multi stage random sampling method. A total of 2005 respondents from 210 selected houses were interviewed using a standardized questionnaire. Results showed that knowledge about tuberculosis was poor. Only 46.2% of

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respondents knew about coughing blood as a symptom of TB. 51.1% of them knew about cough as a symptom and 34.5% were knew that weight loss as a symptom of TB. Although more than 90% of the respondents considered TB as socially acceptable within their family and community, 41% of them expressed that getting TB was embarrassing. 4% of them said it was a disgrace to the family and 16% said that it was too sensitive to discuss about it. Study concludes that negative social attitudes towards tuberculosis are still prevailing in people.<sup>42</sup>

### 3. Methodology

The research method adopted for the study quasi experimental study. The population of the present study comprises tuberculosis patients who are on DOTS therapy. A convenient sampling technique was used for the selection of the representative samples for the study. The study was conducted in selected DOTS centre of Pune. The sample of 60 tuberculosis patients attending DOTS centre were selected by purposive sampling technique.

#### Tool and Technique

The tool used for the study was structured questionnaire to assess knowledge of tuberculosis clients. The tool consisted of three sections,

**Section-I:** Demographic characteristics

**Section-II:** Self- structured questionnaire regarding knowledge related to tuberculosis.

**Section III:** Self- structured questionnaire regarding knowledge related to DOTS therapy

#### Validity and Reliability

The content validity and reliability of the tool was obtained by experts in the field and the Pilot study was done from 2 February 2014 to 8 February 2015. Split half method was used to obtain the reliability. Reliability was found to be 0.91.

### 4. Results and Discussion

The following are the major findings of the study

#### Section I

Most 41.7% of the samples were from age group 20-30 years, 75 % of them were male and 25% of them were females. 43.3% of them had primary education, 33.3% of them had higher secondary education and 23.3% of them were illiterates. Most 38.3% were working in private sections. 46.7 % were from joint families. 83.3 % of people had no family history of TB, 38.3 % of them were taking DOTS treatment for 2-6 months.

#### Section II

**Analysis of data related to knowledge of tuberculosis and dots therapy among tuberculosis patients attending dots centre.**

This section deals with the analysis of data obtained regarding knowledge of tuberculosis and DOTS among

tuberculosis patients the selected DOTS centers of Pune. In pretest, more than half (58.3%) of the tuberculosis patients had poor knowledge (score 0-6) and 41.7% of them had average knowledge (score 7-13) regarding tuberculosis and dots therapy. The study conducted by **Wandwalo ER, Morkveo (2000)** to determine patient's general knowledge regarding tuberculosis and its management is similar to the present study. Results showed that only 30% of the study of population had satisfactory knowledge of disease and treatment.<sup>65</sup>

The present study confirms that the overall mean knowledge score in the post test is 16.2 This shows the enhancement of knowledge after structured teaching programme. Similar study was conducted by **Croft RP and Croft RA (1990)** in which significant differences in the knowledge score was found between the groups receiving health education and without health education.<sup>66</sup>

#### Section III:

**Analysis of data related to effectiveness of structured teaching program regarding knowledge of tuberculosis and dots therapy among tuberculosis patients attending dots centre.** It consist of analysis of data related to Effectiveness of structured teaching program regarding knowledge of tuberculosis and dots therapy among tuberculosis patients attending dots centre. Similar study was conducted by **Amusura N. Edding (2006)** to determine the effect of TB education on the compliance of patients to short course chemotherapy for Tuberculosis. There was an increase in knowledge and positive change in attitude in the group of patients with TB education.<sup>67</sup>

Results of the study are in par with the study conducted by **Morisky DE, et al (1990)** in which an improvement of continuity of care and adherence behavior among patients with tuberculosis was found after structured health education programme.<sup>68</sup>

**Hoa NP, et al (2004)** conducted a study to describe patients' knowledge of TB and to evaluate the impact of the National Tuberculosis Programme's health education. Study recommends reducing stigma and the impact of social consequences of TB by an ongoing health education programme designed to increase the knowledge level in the whole population<sup>69</sup>.

### 5. Conclusion

The conclusions were drawn from the findings of the present study :

The study has been concluded to assess the effectiveness of structured teaching programmet on knowledge regarding tuberculosis and DOTS among tuberculosis patients attending DOTS centre in Pune.

In the present study it is found that the structured teaching programme was effective to improve knowledge regarding tuberculosis and DOTS therapy among tuberculosis patients attending DOTS centre. The demographic variables selected were age, gender, educational status, type of work, family

income, type of house ,place of residence, history of TB in family and duration of treatment.

## 6. Limitations of the Study

Tuberculosis Clients who are receiving DOTS therapy who are

1. In the age group of 20-60 years.
2. Willing to participate in the study.
3. Available at the time of data collection and structured teaching programme.
4. Can speak and understand marathi language

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