

## ASSESSING THE REVISED NATIONAL TUBERCULOSIS CONTROL PROGRAMME (RNTCP) AT GRASS ROOT LEVEL: A PUBLIC SURVEY

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### ABSTRACT

The World Health Organization (WHO) has declared Tuberculosis (TB) as a 'Global Emergency' due to an increasing number of TB cases in the developing countries and India is no exception to the trend rather India is the highest TB burdened country in the World. Alone, it accounts for one fifth of the global incidence and for this reason even today, TB as disease continues to be one of the major public health problem in the country and for the same reason intensified efforts are required to reduce TB transmission and to check & control the incidence of the disease particularly in the rural areas. Nation is committed to tame this dreaded disease. Achieving Universal access is impossible without the awareness & deep involvement of the Public. It is of significance to examine the aspects like personal knowledge, attitudes of the public and aspects related with operation & success of the RNTCP. The present study assesses the public perception about the operation of RNTCP in Faridkot District of Punjab.

**KEYWORDS:** DOTS, Public, RNTCP, Satisfaction, Tuberculosis

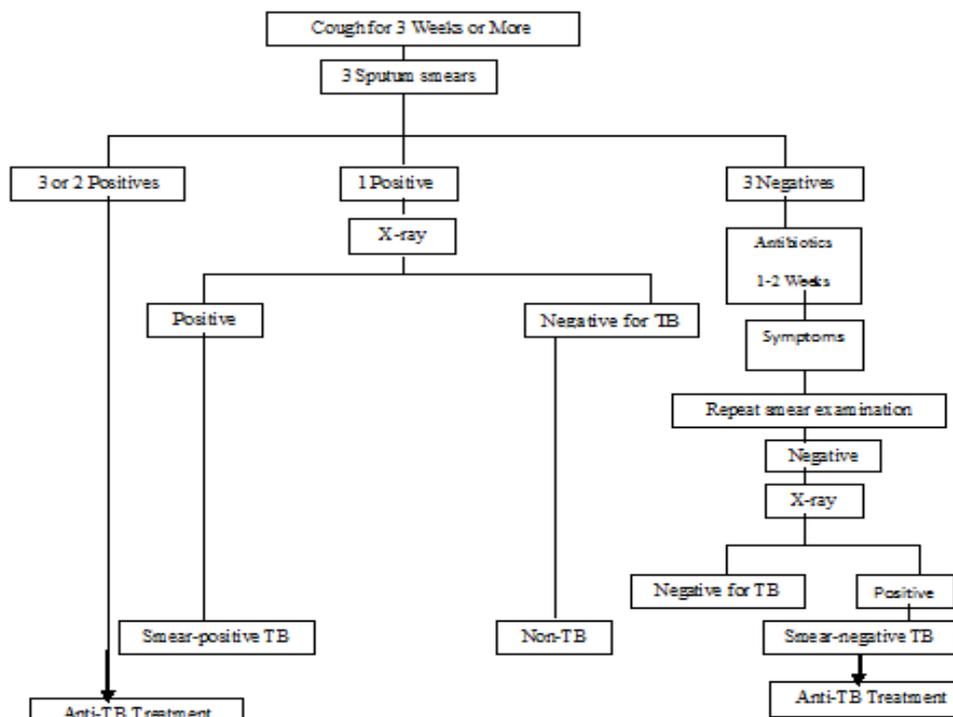
### INTRODUCTION

TB is prevalent in world since ages and its treatment was being revised with latest advances in medical sciences. India is the highest tuberculosis (TB) burden country in the world, accounting for nearly one-fifth of the global incidence. In 2009, out of the estimated global annual incidence of 9.4 million TB cases; 2.0 million was estimated to have occurred in India<sup>1</sup>. Tuberculosis (TB) continues to be one of the most common infectious causes of morbidity and mortality, which despite being a curable and preventable disease, continues to impose an enormous health and economic burden on India. Tuberculosis is responsible for 5% of all deaths worldwide and 9.6% of adult deaths in the 15-59 year old economic productive age groups<sup>2</sup>. It is also among three greatest causes of death among women aged 15 to 44 years<sup>3</sup>. To overcome this enormous burden of TB, the Directly Observed Treatment Short Course (DOT) strategy was introduced in India in 1997, under Revised National Tuberculosis Control Programme (RNTCP)<sup>4</sup>.

#### Revised National Tuberculosis Control Programme (RNTCP)

National TB Control Programme (NTCP) was initiated in 1962 as a decentralized Programme in India but the Programme could not achieve the desired results and was analyzed in 1992. In the year 1993, WHO declared TB as a global emergency then a new programme was evolved, which was named as RNTCP (Revised National TB Control Programme) which began as a pilot study in 1993 and was launched as a National program in India in 1997.

In the state of Punjab, RNTCP was implemented in a phased manner in the year 2001 starting with district Patiala, which was selected as a pilot district. Since December 2004, the whole state of Punjab has been covered under RNTCP. The RNTCP was an application of the WHO-recommended Strategy the Directly Observed Treatment, Short-course-Chemotherapy (DOTS) to control Tuberculosis. Under this revised strategy, the main diagnostic tool was sputum microscopy instead of chest X-ray. This project provided impetus to the private health care sector to join and participate in RNTCP by using the DOTS strategy for patient suffering from TB. Every year state level function is organized on World TB Day and activities like awareness rallies, magic shows are organized and best District for good performance under RNTCP and best DTOs and other good performing staff members from different districts of the state are awarded in the function<sup>5</sup>. The Programme has two important components, good quality diagnosis and treatment. It is very important to register every patient who is starting the treatment for tuberculosis under RNTCP in the Tuberculosis Register<sup>6</sup>.



Source: K. Park, Prevention and Social Medicine, Banarsidas Bhanot Publishers, Jabalpur, 2011, p.392.

Chart 1: Diagnosis of Tuberculosis in RNTCP

### Diagnosis of Tuberculosis in RNTCP

- Tuberculosis (TB) is an infectious disease caused by a bacterium, *Mycobacterium tuberculosis*. It is spread through the air by a person suffering from TB. A single patient can infect 10 or more respondents in a year.
- It primarily affects respondents in their most productive years of life and commonly associated with poverty, overcrowding, and malnutrition.
- India contributes about 1/3rd of the global burden of tuberculosis. Every year, there are approximately 22 lakh new cases in the country, of which approximately 10 lakh are new smear-positive and therefore highly infectious.
- Around 1.2 million TB cases are detected every years under the programme of which about 20-25 percent are sputum-positive and rest are sputum negative patients. It is estimated that almost an equal number of TB cases are

detected and treated by Non-Governmental Organisations and Private Practitioners. Trend of the TB cases in the country reported under the programme over last few years has been more or less static.

- National Tuberculosis Control Programme (NTCP) has been under implementation since 1962 on a 50:50 sharing basis between Center and State. The objective of the programme is to detect as many cases as possible and effectively treat them so as to render infectious cases as non-infectious. Since its inception the programme is integrated with the primary health care infrastructure in the states.
- Diagnosis of TB cases is made through quality sputum microscopy, by examining three sputum sample of the chest symptomatic. Facilities for sputum microscopy are available free of cost in all District TB Centers, Block PHCs, Taluk Hospitals, Primary Health Centres and other Govt. Health Institution.
- TB is completely curable if full course of treatment is taken by the patient Treatment facilities are available free of cost for TB cases in all District TB centers, Block PHCs, Taluk Hospitals, Primary Health Centres and other Government Health Institution. RNTCP was introduced in 1993 with a revised strategy called DOTs.

## MATERIALS AND METHODOLOGY

The present study was conducted in the Faridkot district of Punjab which happened to be one amongst the oldest districts of the State. This study was conducted in 2 Blocks of Faridkot district namely Jand Sahib and Bajakhana. While selecting the Blocks, care was taken that these Blocks were comparative on the basis of population, basic infrastructure and number of health institutions. The primary data was collected from the public and a sample of 100 respondents was taken on the basis of convenient sampling technique to assess the public perception about the operational aspects of TB programme. Out of selected 100 respondents only 98 persons responded. The interview schedule was devised to draw the responses. For the collection of secondary data, various books, journals, publications, reports, statistical abstracts, guidelines of the select programmes and policies of the both the Central and the State Government were consulted. Various Internet sites pertaining to health programmes were searched for relevant material. The secondary data wherever used has been supported by the reference from where it was obtained.

## RESULTS

The analyses of the data presented in the Table 1 indicated that more of the respondents senior in age (above 80.00 percent) agreed with the statement as compared to the respondents of other age groups whereas more of female respondents (79.50 percent) **agreed** with the statement that they were aware about the National TB Control Programme (NTCP). However, statistically, no significant association was found between the variables and the statement. The data presented in the Table 2 assessed the operative aspect of the Programme, it was found that more of respondents middle & younger in age group (above 58.00 percent) **agreed** as against the respondents senior in age group (47.10 percent) Whereas more of male respondents (60.70 percent) agreed as compared to the female respondents (56.40 percent) that the programme was operative in their area. However, statistically, no significant association was found between the variables and the statement.

On assessing the data presented in the Table 3, it was seen that more of respondents in all the age group (above 40.00 percent) **disagreed** with the statement that the medical practitioner visited their area to provide tuberculosis treatment. However, more of female respondents (59.00 percent) in comparison to the male respondents (41.00 percent)

disagreed with the aspect that no medical practitioner visited their area for providing tuberculosis treatment. On examining the data presented in the Table 4, it was noticed that more of respondents younger in age (64.70 percent) **favoured** the aspect that the facility of sputum and chest X ray tests was accessible in their area as against the respondents (above 55.00 percent) senior in age, whereas more of male respondents (66.70 percent) agreed as compared to the female respondents (59.00 percent) that facility of tests (sputum and chest X ray) was accessible in their area.

On analyzing the data presented in the Table 5 it was reflected that more of respondents in middle and senior most age group (above 80.00 percent) **agreed** that the beneficiaries availed free treatment facilities under the tuberculosis programme as against the respondents (76.46 percent) younger in age. However, nearly identical proportion of male & female respondents (above 80.00 percent) agreed with the view point. However, statistically, no significant association was found between the variables and the statement. The data presented in the Table 6 analyzed the aspect that community benefitted from programme and the responses reflected that cent percent of the respondents (100.00 percent) senior in age agreed in comparison to middle & younger in age respondents (above 70.00 percent) with the aspect. While analyzing the data on the basis of gender variable it was noticed that more of male respondents (83.60 percent) **favoured** the statement in comparison to female respondents (79.50 percent)

Statistically, highly significant association was found between the variable of age and the statement.

On analyzing the aspect whether the government efforts to disseminate knowledge regarding prevention and control of tuberculosis were adequate, it was found on the basis of responses presented in the Table 7 that more of respondents (above 50.00 percent) senior in age **agreed** than the respondents younger in age. In relation to gender variable, it was found that more of male respondents (54.10 percent) agreed with the statement whereas more of the female respondents (48.70 percent) disagreed with the statement thereby establishing that more of male respondents were satisfied with the efforts of the state government. However, statistically, no significant association was found between the variables and the statement.

From the analysis of the data presented in the Table 8 it was noticed that more of respondents in the younger and middle age group (above 49.00 percent) found the programme was effectively operating in their area. However, it was seen that respondents in senior most age group were unsure about the aspect as the responses were unequally divided between the three options. In context of gender variable majority of male respondents (55.70 percent) opined that the programme was effectively operating in the area whereas female respondents (38.50 percent) **were not sure** about the aspect as reflected by the split responses. Therefore, statistically, no significant association was found between the variables and the statement. On assessing the data presented in the Table 9 in relation to the statement that whether the TB programme was helpful in reducing the TB cases in the area, it was found that with the increase in the age the responses also increased there by suggesting that more of senior in age respondents (64.70 percent) found the programme was helpful in reducing the TB cases in the area. Further, on assessing gender variable, it was noticed that identical proportion (59.00 percent) of both male and female respondents opined that programme did reduce the TB cases in the area. However, statistically no significant association was found between the variables and the query.

While assessing the responses as presented in the Table 10, it got reflected that majority of respondents in both the variables were **satisfied** with the operation of the tuberculosis programme in their area whereas the noticeable proportion of disagreed responses (above 30.00 percent) suggested that all was not well with the programme as some of the respondents were dissatisfied with operation of the programme.

## DISCUSSIONS/MAJOR FINDINGS

- The study revealed that more of senior in age and female respondents **agreed** with the statement that they were aware of the National Tuberculosis Control Programme.
- More of younger in age and male respondents **supported** the view point that programme was operative in their area.
- More of younger in age and female respondents **disagreed** with the aspect that medical practitioner visited their area for providing tuberculosis treatment.
- It was found that the more of senior in age and male respondents **favoured** the view point that facility of tests (sputum and chest X ray) was accessible in their area.
- More of respondents in the middle & senior most age group and male respondents **agreed** with the view point that the beneficiaries availed free treatment facilities under the tuberculosis programme.
- It was found that more of the senior in age and male respondents **opined** that community benefitted from the programme.
- It was found that more of senior in age and male respondents **favoured** the poser that whether the government efforts to disseminate knowledge regarding prevention and control of tuberculosis were adequate.
- It was found that that more of younger in age and male respondents **agreed** with the statement that operation of the programme was effective.
- It was found that that more of senior in age and both male and female respondents **supported** the aspect that the programme was helpful in reducing the cases of tuberculosis in the area.
- It was also found that more of younger in age and male respondents were **satisfied** with the operation of the tuberculosis programme.

## CONCLUSIONS AND RECOMENDATIONS

From the above analysis it can be seen that the revise National Tuberculosis Programme was working satisfactorily in the rural area of the Faridkot district. However the overall analysis projected that more of senior in age and male respondents have shown their satisfaction with the operation of the programme whereas more of female and younger respondents have shown their dissatisfaction with some aspects of the Programme. On the basis above discussion some of the issues and challenges emerged which needs to be addressed to make the RNTCP more effective and efficient.

Some of the recommendations are: that there should be medically supervised treatment to ensure its effectiveness, systematic monitoring of the patients & the treatment, improved supply of drugs, good quality of diagnosis, commitment of health workers, involvement of Public with RNTCP should be encouraged, there is need to have better record management of the old patients & new patients, commitment of the patients with treatment & follow up to be ensured. To conclude the Public survey it was by & large satisfied with TB programme operation in the area though few grey areas were spotted which need to be taken care of.

## ACKNOWLEDGEMENTS

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## APPENDICES

**Table 1: You are Aware of the National Tuberculosis Control Programme**

Variables	Groups	Agree	Disagree	Undecided	P
Age	19-38years	37 (72.54)	14 (27.44)	0 (0.00)	0.78
	39- 58 years	26 (81.30)	6 (18.80)	0 (0.00)	
	58 year above	14 (82.40)	3 (17.60)	0 (0.00)	
Gender	Male	48 (78.70)	13 (21.30)	0 (0.00)	0.92
	Female	31 (79.50)	8 (20.50)	0 (0.00)	

Source: Computed from Primary data. Figures in Parentheses are Percentage, P Value Significant at 0.05 Level

**Table 2: Is this Programme Operative in Your Area**

Variables	Groups	Agree	Disagree	Undecided	P
Age	19- 38 years	30 (58.82)	13 (25.48)	8 (15.68)	0.82
	39- 58 years	19 (59.40)	10 (31.30)	3 (9.40)	
	58 years and above	8 (47.10)	7 (41.20)	2 (11.80)	
Gender	Male	37 (60.70)	17 (27.90)	7 (11.50)	0.84
	Female	22 (56.40)	13 (33.30)	4 (10.30)	

Source: Computed from primary data. Figures in parentheses are percentage. P value significant at 0.05 level.

**Table 3: The Medical Personnel Visit Your Area to Provide Tuberculosis Treatment**

Variables	Groups	Agree	Disagree	Undecided	P
Age	19- 38 years	18 (35.39)	24 (47.05)	9 (17.64)	0.83
	39- 58 years	13 (40.60)	15 (46.90)	4 (12.50)	
	58 years and above	7 (41.20)	8 (47.10)	2 (11.80)	
Gender	Male	26 (42.60)	25 (41.00)	10 (16.40)	0.21
	Female	12 (30.80)	23 (59.00)	4 (10.30)	

Source: Computed from Primary Data. Figures in Parentheses are Percentage.  
P Value Significant at 0.05 Level

**Table 4: The Facility of Sputum and X-Ray Chest Tests are Accessible in Your Area**

Variables	Groups	Agree	Disagree	Undecided	P
Age	19- 38 years	33 (64.70)	15 (29.41)	3 (5.88)	0.51
	39- 58 years	18 (56.30)	13 (40.60)	1 (3.10)	
	58 years and above	7 (41.20)	9 (52.90)	1 (5.90)	
Gender	Male	37 (66.70)	22 (36.10)	2 (3.30)	0.96
	Female	23 (59.00)	15 (38.50)	1 (2.60)	

Source: Computed from Primary Data. Figures in Parentheses are Percentage.  
P Value Significant at 0.05 level

**Table 5: The Beneficiaries Avail Free Treatment Facilities under this Programme**

Variables	Groups	Agree	Disagree	Undecided	P
Age	19- 38 years	39 (79.46)	5 (9.80)	7 (13.72)	0.60
	39- 58 years	28 (87.50)	4 (12.50)	0 (0.00)	
	58 years and above	14 (82.40)	1 (5.90)	2 (11.80)	
Gender	Male	51 (83.60)	5 (8.20)	5 (8.20)	0.66
	Female	32 (82.10)	5 (12.80)	2 (5.10)	

Source: Computed from Primary Data. Figures in Parentheses are Percentage.  
P Value Significant at 0.05 Level

**Table 6: The Community Benefited from this Programme**

Variables	Groups	Agree	Disagree	Undecided	P
Age	19- 38 years	36 (70.58)	1 (1.96)	14 (27.44)	0.00
	39- 58 years	27 (84.40)	5 (15.60)	0 (0.00)	
	58 years and above	17 (100.00)	0 (0.00)	0 (0.00)	
Gender	Male	51 (83.60)	3 (4.90)	7 (11.50)	0.82
	Female	31 (79.50)	3 (7.70)	5 (12.80)	

Source: Computed from primary data. Figures in parentheses are percentage.  
p value significant at 0.05 level.

**Table 7: The Government Efforts to Disseminate Knowledge Regarding Prevention and Control of Tuberculosis are Adequate**

Variables	Groups	Agree	Disagree	Undecided	P
Age	19- 38 years	21 (41.17)	20 (39.21)	10 (19.60)	0.12
	39- 58 years	18 (56.30)	13 (40.60)	1 (3.10)	
	58 years and above	9 (52.90)	8 (47.10)	0 (0.00)	
Gender	Male	33 (54.10)	22 (36.10)	6 (9.80)	0.41
	Female	16 (41.00)	19 (48.70)	4 (10.30)	

Source: Computed from primary data. Figures in parentheses are percentage.  
P value significant at 0.05 level.

**Table 8: The Programme is Operating Effectively**

Variables	Groups	Agree	Disagree	Undecided	P
Age	19- 38 years	25 (49.01)	8 (15.68)	18 (35.29)	0.59
	39- 58 years	16 (50.00)	10 (31.30)	6 (18.80)	
	58 years and above	7 (41.20)	5 (29.40)	5 (29.40)	
Gender	Male	34 (55.70)	13 (21.30)	14 (23.00)	0.22
	Female	15 (38.50)	10 (25.60)	14 (35.90)	

Source: Computed from Primary Data. Figures in Parentheses are Percentage.  
P Value Significant at 0.05 Level

**Table 9: This Programme is Helpful in Reducing the Case of Tuberculosis in Your Area**

Variables	Groups	Agree	Disagree	Undecided	P
Age	19- 38 years	28 (54.89)	10 (54.89)	13 (25.48)	0.65
	39- 58 years	19 (59.40)	3 (9.40)	10 (31.30)	
	58 years and above	11 (64.70)	0 (0.00)	6 (35.30)	
Gender	Male	36 (59.00)	5 (8.20)	20 (32.80)	0.47
	Female	23 (59.00)	6 (15.40)	10 (25.60)	

Source: Computed from Primary Data. Figures in Parentheses are Percentage.  
P Value Significant at 0.05 Level

**Table 10: You are Satisfied with Operation of this Programme in Your Area**

Variables	Groups	Agree	Disagree	Undecided	P
Age	19- 38 years	31 (60.78)	16 (31.37)	4 (7.84)	0.79
	39- 58 years	21 (65.60)	10 (31.30)	1 (3.10)	
	58 years and above	9 (52.90)	8 (47.10)	0 (0.00)	
Gender	Male	42 (68.90)	17 (27.90)	2 (3.30)	0.27
	Female	21 (53.80)	17 (43.60)	1 (2.60)	

Source: Computed from Primary Data. Figures in Parentheses are Percentage.  
P Value Significant at 0.05 Level