

KNOWLEDGE OF TUBERCULOSIS IN A SOUTH INDIAN RURAL COMMUNITY, INITIALLY AND AFTER HEALTH EDUCATION

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Summary : A study was undertaken in a south Indian rural community to assess the initial level of knowledge of tuberculosis (TB) and again after providing health education on TB, to evaluate the effectiveness of health education, after 2 years. A total of 466 respondents from 24 randomly selected villages in Sriperumpudur taluk, Tamilnadu were interviewed. The community was then educated about the important aspects of tuberculosis by means of pamphlets, film shows, exhibitions, role plays and group discussions. After 2 years, the respondents were revisited and interviewed using the same interview schedule. There was an overall increase of knowledge on various aspects of TB, ranging from 18% to 58%.

Key words : Health education, Awareness about tuberculosis, Effect of health education.

INTRODUCTION

Tuberculosis case-finding under the National Tuberculosis Programme (NTP) in India is a passive process limited to chest symptomatics in the community who attend the Government health institutions on their own for relief of symptoms. It is, therefore; essential that the community is aware of the basic facts about tuberculosis and that necessary facilities are available under NTP. Hence, the Tuberculosis Research Centre, Chennai, undertook a study in a south Indian rural community, with the following objectives :

1. To find out the existing level of knowledge of tuberculosis and,
2. After providing health education on TB to the community, to reevaluate the level by repeating the exercise, after 2 years.

The study was conducted in 24 randomly selected villages of Sriperumpudur taluk, Chengai Anna district, Tamilnadu.

MATERIAL AND METHODS

A voluntary agency - "PREPARE" is rendering comprehensive welfare services, including health, in 48 villages of Sriperumpudur Taluk, Chengai Anna district. A random sample of 24 villages was chosen from this area and every 5th household, starting from a randomly chosen location, was visited by a Medical Social Worker. The head of household or in his/her absence, any other responsible family member was interviewed to find out the initial level of knowledge of tuberculosis using a pre-tested, semi-structured interview schedule. The interview schedule (a copy can be requested) contained questions on signs and symptoms of TB, knowledge of availability of investigation and treatment facilities in the government health institutions, duration of treatment, necessity of investigating the close contacts of TB patients, preventive measures and categories of people getting affected by tuberculosis. Subsequently,

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the community was educated on basic facts about tuberculosis by various health education methods available.

Health Education Methods

1. *Pamphlet* : A one-page pamphlet containing important facts on tuberculosis in the local language (Tamil) was given to each respondent and he/she was asked to read it or; get it read, if illiterate. They were requested to pass on the pamphlet to a neighbour or friend, after reading it.
2. *Film show* on tuberculosis was arranged in all the villages at strategic places at a time convenient to the majority of the residents.
3. *Exhibition* on tuberculosis was organised in two central places, exhibiting posters, charts and photographs. Medical officers and social workers explained the posters and charts to the villagers. Information about the arranged exhibition was given to the villagers by the field staff of "PREPARE".
4. Periodical training and health education programmes on tuberculosis were organised in the form of lectures with slides, flash cards, role plays, film shows, group discussions and field demonstration to *Dais* (traditional birth attendants) by selected Animators, Youth. Volunteers and Community Health Assistants belonging to these villages'. These people are in close contact with the community and were requested to spread the facts on TB to the community.

Two years later, another visit was paid to the same respondents to evaluate their then knowledge of TB following earlier health education.

RESULTS

In the 24 randomly selected villages, 466 respondents were interviewed to find out their initial knowledge of TB. After 2 years, in the same households 433 (93%) respondents were

Table 2. Distribution of the respondents according to sex, age and literacy

Total respondents	433*
Sex	%
Males	34
Females	66
Age (in years)	
18 - 24	22
25 - 34	27
35 - 44	23
45 - 54	15
55 and above	14
Literacy	
Illiterate	53
Literate	47

* Each respondent represents one household

interviewed using the same interview schedule; 33 persons could not be contacted due to reasons like death, migration, nonavailability at repeated visits and refusal to the second interview.

Two thirds of the respondents were female (Table 1) and half of them were in the age group of 25-44 years. As regards literacy status, 53% were illiterate.

Knowledge about TB before and after health education

The levels of knowledge of tuberculosis, initially and 2 years after health education are given in Table 2. In all, 45% of the respondents initially, and 91% after health education, answered correctly that both rich and poor are affected by tuberculosis. Initially, 38% were aware that both adults and children are affected by TB and afterwards, 93% were aware of this fact. Prior to health education, 37% knew prevalence of TB is similar in urban and rural areas; after health education this proportion increased to 95%. Regarding knowledge that investigation and treatment facilities are available free of cost at all government health institutions, 67%, to begin with and almost all (98%) afterwards, responded correctly. Prior to health education, 15% mentioned 6 months as the duration of treatment and afterwards 50% of them

Table 2. Knowledge of tuberculosis before and after health education

Question	Expected correct answer	Correct answers (n = 433)		
		Pre-%	Post-%	Change %
1.	TB affects			
	(i) both rich and poor	45	91	+46
	(ii) both adults and children	38	93	+55
	(iii) persons from rural and urban areas	37	95	+58
2.	Investigations and treatment are done free at Govt. health institutions	67	98	+31
3.	Duration of treatment is 6 months/12 months*	15	50	+35
4.	There is need for investigating family members of TB patients	67	98	+31
5.	Mouth should be covered while coughing	15	48	+33
6.	BGC vaccination is preventive measure	14	48	+34

* Conventional treatment is for 12 months

answered correctly. Around 67% of the respondents knew initially about the need for examining the close family members of TB patients and after health education almost all (98%) of them answered correctly. Regarding cough hygiene, initially, 15% responded that patients should cover mouth while coughing but after education 48% knew about it; 14% of them had mentioned prophylactic BCG vaccination initially but the proportion increased to 48% after education.

A similar comparison about the symptoms of tuberculosis is shown in Table 3; there was an overall increase of 3% to 18% in correct knowledge after health education.

As regards the source of information on TB, 70% mentioned verbal communication, that is through TB patients and others (friends, relatives and health workers), as the major source, followed by pamphlets (21%), mass media (14%) and others (15%). Some respondents mentioned more than one source.

DISCUSSION

This study brings out the effectiveness of direct and indirect methods of making the community more knowledgeable on

tuberculosis in addition to their basic understanding of TB. Distribution of pamphlets, film shows and exhibitions were the direct methods used. Periodic training given to *Dais*, Community Health Assistants, Youth Volunteers and Animators, who can influence the community, was the indirect method used. Improvement in knowledge (Table 2) varied from 31% to 58% under different heads.

In the present study, as regards symptoms of tuberculosis cough, haemoptysis and fever were mentioned by 60%, 15% and 8% of the respondents, respectively, before health education. Mukund Uplekar and Sheela Rangan¹ had reported similar findings (66%, 13% and 6% mentioning cough, haemoptysis and fever) confirming a fairly high degree of base line knowledge about symptoms.

It was found that 14% of the respondents, before health education, and 32% after health education mentioned BCG vaccination being a preventive measure against tuberculosis compared with 54% reported by S.C. Kim *et al*.²

The author had earlier reported³ that verbal communication was the main source of information in rural, urban and metropolitan areas; in the present study also, verbal

Table 3. Awareness of symptoms of tuberculosis

Symptom	Persons aware (n = 433)		
	Pre - %	Post - %	Change %
Cough	60	57	-3
Haemoptysis	15	20	+5
Fever	8	13	+5
Chest pain	5	22	+17
Loss of weight	13	31	+18
Loss of appetite	6	14	+8
Others	25	28	+3
No idea	36	0	-36

communication was the main source of information. S.C. Kim *et al*² had observed mass media to be the major source of information compared with only 14% in the present study.

It is necessary to consider the type of community and the available resources while planning health education strategies. For health education to be effective and sustained, it should be a continuous process.

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