CHAPTER 5

FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter provides key findings of the study from various methods of data collection such as content analysis, observation and survey.

5.2 CONTENT ANALYSIS

Most of the posters contain only the key messages in bold colours and big font sizes with direct messages. The type face and rectangular shape of the posters look very formal and conventional. The familiar words in the banners and posters have an official and instructional tone in the RNTCP designed posters. Those of the state TB cell are less conventional and official in style. The tone of these messages is friendly and less instructional.

The popular sports celebrities used in the RNTCP posters are those of cricketers Rahul Dravid and Zaheer Khan stressing on the seriousness of the disease. These will appeal mostly to the cricket lovers in the youth segment. The local audience in Tamil Nadu will identify more with the actor Surya’s posters as he is a Tamil actor and is seen as a charismatic fitness icon. The pictures used in the ‘Freedom and My wife’ banners are distinctly different from the Tamil audience and they seem to represent people belonging to other parts of India. Some photographs of lab technicians and doctors also do not go with the local cultural context.
The cartoons used in the booklets supplement the text in the brochures and booklets. Some cartoons are over exaggerating the physical frailties of the TB affected people. A few cartoons look very comical appearing less serious. The figures in the posters look poor though one of the key messages is that ‘TB can affect anybody’.

There seems to be a lot of information in the brochures and booklets resulting in text heaviness. Neatness, attractiveness and pictographs are lacking in them. Better layout with more space between the lines and suitable pictures highlighting the key points in boxes will lend more neatness to the content.

The stickers containing one key message in black and bold letters against the colorful backdrop are very direct and effective. The high contrast appearances with precise text using familiar words have a high level readability, comprehension and attractiveness.

The patient’s charter poster looks very colourful and attractive containing the rights to information and responsibilities of the patients though the cartoon figures look a little comical lacking in seriousness. The layout and design with its neatness and logical sequencing the information using simple words lend a high level of readability.

The overall consistency in terms of the messages, facts and key words is uniform in all formats of the print materials. The key messages have been reinforced through repetition and summary in some of the posters.

Fliers and leaflets have been printed in low quality papers making them a little unattractive compared to posters and banners. The conventional style fonts against the plain, white background lend a dull and uninteresting look to most of them though a few leaflets like the ‘Dos and Don’ts of the
disease’ stands out from the other fliers due to their colourful design and layout. The tone of the key messages is formal and official. Most of them have only texts. The overall readability of the fliers and leaflets are good with simple language and direct approach using simple, familiar words explaining the key messages. For many people these are one of the major sources of Tuberculosis information.

In terms of message content, all aspects of the disease are covered. The duration of the treatment period, six to eight months, is mentioned as only six months in some materials. The contact information has been given clearly in all the materials including phone numbers.

Most of the IEC print materials have been designed with prevention and case reporting aspects in mind. They are produced for general public. There are only a few posters and booklets for the patients and family members of the patients. Many posters imparting information and knowledge on symptoms of standard, lung Tuberculosis disease do not mention the symptoms of non-pulmonary tuberculosis.

5.3 NON-PARTICIPATORY OBSERVATION

From the Tuberculosis patients seen at the DOTS centers, it can be said that the disease seem to affect all kinds of people irrespective of age, religion, class and occupation. There were more male patients compared to females. Few young school going children were also seen taking the medication. Most of the patients seem to be from the lower socio-economic backgrounds. More than half of them were illiterate and could not read the IEC materials though they showed interest in the pictures and photographs present in posters and brochures. Many patients including women dropped in at the DOTS centers to have their medication on the way to their work places.
Mostly DOTS centres are part of the government hospitals and PHC’s. The physical surroundings were kept very clean at all the hospital. The typical image of a government hospitals being unclean and noisy with too many people does not seem to be true. Many of them had large halls except for a few in the suburbs. Since the free TB treatment is given only at Government hospitals people have to regain their faith in them. Then, more people will avail RNTCP’s free service instead of going to private practitioners.

Some people visiting the general outpatient department were seen drinking water from the DOTS centers. At some small centers like Pulianthope TB hospital, the TB patients had to sit in close proximity with the other general patients. This might increase the chances of infection to others.

Very few health workers were seen wearing face masks. The health staff at the DOTS centers should be instructed to wear masks all the time.

The IEC environment of the hospital was very poor. Few hospitals had handwritten charts put up on the walls. There were no brochures, booklets and fliers about the disease at the hospitals though all hospitals have one or two posters and banners explaining the classical symptoms of TB. Television sets were seen in almost half the centers. Many of them were showing film songs and news programmes except at a couple of places.

A couple of centres did not have water facility and patients were seen going out to the nearby tea shops for water to swallow the tablets. This may increase the chances of spreading of the disease.
The behavior and attitudes of majority of the health workers, lab technicians and pharmacists towards the patients was found to be largely friendly and positive. The official and instructional tone was taken seriously by the patients. Almost all patients were covering their mouths while coughing and collecting sputum outside the centers.

The family members, relatives and friends who come with the patients to the centers were also seen asking health workers some disease related questions. These people are a potential target group for IEC at the hospitals.

There was not much interaction among patients. Some patients seem to have queries related to side effects. There seems to be an information gap regarding the nutritious food to be taken and it has to be addressed through IEC materials like posters. Information and education about the ill effects of drinking alcohol has to be given through video and other print materials as many patients were seen being advised about it by health workers.

Patient’s charter explaining the rights and responsibilities of TB patients was not seen at any hospitals and it should be displayed at the centres. Health workers were seen insisting on the mobile numbers of the patients to be mentioned on the treatment cards for further follow up and counseling as this can be helpful in case of default.

5.4 MAJOR FINDINGS FROM THE SURVEY

5.4.1 Findings from hospital visitors category

Awareness about the Tuberculosis disease is low (24%) among hospital visitors before the exposure to IEC materials. The general health literacy level seems to be very low. The ignorance of the TB disease among a
large proportion (76%) of the people calls for many immediate awareness programmes about the disease.

Posters seem to be the main source of information about TB for many hospital visitors (54.3%). In terms of reach, slide shows, photo exhibitions, leaflets and friends have made more impact than television and other sources.

A majority of hospital visitors (81%) think of cough as the main cause of TB. But there is still a misconception of the disease being hereditary among hospital visitors (15.5%). Sputum test is the most reliable method of TB diagnosis and it is strongly registered on their minds (83%). Most of the respondents (80.4%) rightly mentioned medication as the treatment method for curing TB.

IEC materials seem to very clearly communicate the message that TB is treatable, among 92% of the respondents. The strongly worded message- ‘TB might lead to death’, has made an impact on the hospital visitors (84%). The fact that it is infectious is also registered in the minds of people to some extent (57.5%). A vast majority of about 92% are aware of the free TB treatment as stated in many fliers and posters.

The path of transmission is well understood by 88% of hospital visitors as it is also an indicator of prevention knowledge. Though a high percentage of people correctly know the fact that anyone can get infected with TB the IEC materials should educate about the weak immune system being the correct reason for infection of the TB bacteria.

As for health seeking knowledge of the respondents with regard to TB treatment, 89% think of the Government hospitals /Primary health centers as the place for treatment as recommended in the given IEC messages. Two
thirds of the respondents (66.5%) are aware of the importance of completing the treatment regimen.

A large proportion of respondents think that only lungs are affected by TB (78%) whereas only 13% are aware of the fact that TB can affect any part of the body. This fact is not stressed upon in many IEC materials. This has to be simplified and communicated well as many people with non-pulmonary TB tend to miss the symptoms initially.

Only about 42% of the hospital visitors seem to know that HIV affected people are more prone to getting TB. About three fourth of the respondents state that they get quality treatment at Government hospitals while the other one fourth is skeptical of the health care provided at Government run health centers.

About 9% of respondents have the habit of spitting in the open and 31% do it sometimes. Since spitting is directly related to the spread of other diseases besides TB, it should be emphasised in the IEC materials.

A considerable percentage (41%) of the respondents from hospital visitors category find the Tuberculosis IEC print materials such as fliers, posters, banners, brochures and booklets attractive.

The IEC print materials were found interesting to go through by about 62% while around 16% of the respondents found only some portions interesting. Nearly half of them are able to understand the messages of RNTCP IEC materials. About 32% say that there is too much information crammed into brochures and booklets. Uncluttered information and details are needed to lend neatness to the materials.
A substantial proportion of the respondents (46%) feel that it will be easier to read if the font size is bigger. 19.8% feel that humorous, funny looking cartoons lessen the seriousness of messages and 34.5% of respondents feel the need for more pictographs in these print materials. A considerable proportion (29.8%) of the respondents could not understand the technical jargons such as BCG, Mantoe test, DOTS mentioned in them.

As for the people’s media habits, television and mobile phones are widely used followed by newspapers and magazines. More interesting and engaging programs about TB should be telecast on television channels to reach a wider audience.

About half the hospital visitors think of interpersonal communication as the most preferred way to create awareness about TB followed by mixed media approach. More than 26% could not relate to the pictures and photographs in the print literature because of its cultural inappropriateness. Messages should be culture specific and tailor made for the local community.

A significant association between the age group of the people and the usage of the television media was seen. People in the age group of 26-35 tend to watch more of it. Though television is a popular medium among the people there are a lot of channel options for people. TB messages on the chosen channel have to be interesting and attractive enough to compete with a lot of other channels.

There is a significant association found between the educational levels of people and awareness about consequences of stopping the treatment midway. Many group communication events involving health workers and patients, and video short films should be produced for people with low
literacy levels emphasising this aspect of the disease as it is related to MDR and further spread of the disease.

There exists a significant relationship between educational qualification of people and the usage of newspapers/magazines every day. Reading habit seems to be more at graduation and higher secondary school level.

Among graduates there appears to be more internet use (49.3%) compared to others. Audio-visual clips and other interactive ways of communication like quizzes, games can be useful in spreading awareness through this medium.

Self-employed people (12.4%) like mechanics, drivers, masons and plumbers tend to indulge in spitting behavior compared to others groups. Many IEC interventions should be targeted at this audience segmentation.

With respect to overall readability of IEC materials there is no significant difference between male and female respondents. There is a significant difference between educational levels with respect to overall readability of IEC materials. The current IEC materials are more understood by the graduates. To make it more suitable for primary and high school level people different sets of IEC materials with more pictorial elements and easy, familiar text can be designed.

5.4.2 Findings from Tuberculosis patients undergoing DOTS

As many as 63% seem to have understood that TB is an airborne disease and it spreads through the air. But there is still a misconception that coming in physical contact with TB patients can cause the disease. The
clearing of this wrong notion among people is important for the removal of stigma.

The path of transmission is well understood by the patients. Patients may realize that they could be potential sources of the disease through this knowledge. This might result in changing some unhealthy behaviors like spitting and covering one’s mouth while coughing and sneezing.

Though a large proportion of patients (88.7%) feel that stopping treatment midway is not good, 11.3% feel that there is nothing wrong with interrupting the treatment course. Importance of completion of the treatment course has to be reinforced at the DOTS centers. Even among 73.9% of TB patients there is a wrong perception that only lungs are affected by TB.

Awareness about association between HIV and TB is low even among TB patients. Only 38.3% of the respondents seem to know that HIV affected people are more prone to TB infection while about 32% seem to think that HIV people do not get infected with TB. This information about HIV-TB co infection has to be simplified in all the brochures.

A high percentage (89.2%) of patients express faith in Government hospitals while the other 10.8% is skeptical of the quality of health care provided there. More than half the patients have the spitting habit though a majority of them (76.6%) agree that everyone should cover one’s mouth while coughing and sneezing.

Half the number of patients says that the messages of the stickers and posters are clear, but find the details cluttered in brochures and booklets. A majority of patients (76.6%) think they can understand the message better with pictorial elements.
IPC through health workers is the most preferred medium according to 33.2% of the respondents. Health worker’s role becomes important in disseminating information and motivating patients to complete the treatment course. A high percentage of patients (82.4%) have gained knowledge about various aspects of the disease after starting DOTS through health workers followed by posters and banners at the hospitals.

More than three fourth of the TB patients own mobile phones and 15.8% patients have access to it through friends and family members. A large proportion of patients call the health workers at least once a week. A considerable number of patients (30.63%) make calls to health workers regarding the disease. About 18% clarify their doubts about side effects of the drugs followed by around 13% asking food related questions.

Patients from 26-35 years age group are using the alarm facility on mobile phones more than any other age group. This finding has an importance as the alarm facility can be used as reminders to take medicines as many patients tend to miss their regular, daily doses of TB medication. A vast majority of the patients (92%) feel comfortable talking to health workers on mobile phone.

More than three-fourth of TB patients (77.9%) believe that celebrities are always correct and say the right thing when it comes to spreading the health message. The public image and credibility of the celebrities play an important role besides the popularity factor. Engaging former celebrity patients could be effective.

It was found that with increase in educational levels of patients, understanding of technical jargons in the IEC materials becomes easier and better. Patients at the primary level should be educated with simple, easy and accurate words as they face difficulties grasping the technical points.
There is no significant association between educational qualification and gaining of knowledge about TB through fellow patients. Patients should be encouraged to communicate and share their experiences.

There exists a significant difference between educational levels of patients with respect to overall readability of IEC materials. The current IEC materials are more understood by the graduates. To make it more suitable for primary and high school level patients different sets of IEC materials with more pictorial elements and easy, familiar text can be designed.

5.4.3 Findings from health workers category

Main reasons for not completing DOTS treatment course include feeling better with disappearing of the symptoms after a few weeks of medication and side effects of the drugs according to a majority of health workers. The common side effects like vomiting and nausea should also be addressed in the materials. The registration cards could also mention these in detail so that the family members are also aware and can anticipate them. There are very few exclusive IEC materials for the patients.

About half of the health workers see an increase in knowledge about the disease during the treatment among patients. For a better cure rate and treatment adherence, good understanding of the disease and knowledge about the medication period is necessary. Parents should be encouraged to ask questions about the disease.

About 58% of the health workers think that engaging former, cured patients in the communication programme, interpersonal communication with TB patients, family members and community members will be more effective.
More than half of health workers say that there is awareness among patients about infecting others. The knowledge about the transmission route has to be further reinforced through interpersonal communication with patients as their immediate family members and neighbours in the community are at greater risk of getting infected. Patients have to be educated about covering their mouths while sneezing and coughing to avoid further spreading.

Among various IEC activities public meetings and patient-provider meetings are very effective for creating awareness among public according to a considerable proportion of health workers. Well organized public meetings can address a lot of people thus having a wide reach. Patient-provider meetings can break the formal power barrier leading to mutual understanding and this healthy relationship could achieve better adherence rate among patients. These IPC channels and television are considered most effective by a majority of health workers. Strategies like rallies, human chain and celebrating World TB day can create more visibility for the disease and get the attention of the powerful government leaders and bureaucrats.

Flip charts and video films are the most common audio-visual aids used on the field by many health workers. Only a small percentage of 11.8% have shown video health clips on their mobiles to TB patients.

About two thirds of the health workers call at least 5 to 15 patients in a day on their mobile phones. It can play a useful role in DOTS treatment. Mobile phones can be a cheap medium to contact the defaulting patients. Health workers can also make calls to the family members of the patients and cross check with them about medication adherence.

The stigma attached to the TB disease affects women more, especially the dependent housewives at homes. Communication through
mobile phones and employing more female health workers can help solve these issues along with regular and consistent dissemination of messages about myths and misconceptions in the community. Television and IPC through health workers are the most effective mediums according to 36.36% of health workers.

There is no significant difference between hospital visitors and TB patients with respect to overall readability of IEC materials. But with regard to faith in the government hospitals, there is a significant difference between Tuberculosis patients and people visiting the hospital. Patients are more satisfied with the services of health workers and facilities at government hospitals.

5.4 CONCLUSION

The generalizations from the findings tend to support the tenets of the health belief model. It stresses the importance of the TB health messages and understanding of them by the target audience as it is directly related to their health seeking behaviour. Information and knowledge about the disease can increase their self-efficacy leading to action. As the findings from patient’s questionnaire and hospital visitors suggest, the interpersonal communication plays a key role and acts as a catalyst for this positive behavior change.

The knowledge part of the IEC materials about Tuberculosis symptoms, diagnosis method, DOTS treatment, mode of transmission, TB being a curable disease and free treatment at Government hospitals has been understood well by a majority of people. The IEC materials designed by RNTCP and state unit of TB at Chennai have created an awareness/impact regarding these aspects. Health workers play an important role in the treatment aspect of the disease. There has been an increase in the knowledge
level of TB patients after starting the DOTS treatment at the centers mainly through interpersonal communication with health workers.

There is unhealthy behavior of spitting in the open among patients and hospital visitors though there is awareness about the possible ill effects of coughing and sneezing. This knowledge has not reflected in their behavior. So there is a need for IEC materials aimed at behavior change. Interpersonal communication and mixed media strategy using many appropriate mediums for reinforcement of the messages can bring about the desired behavior changes among people.

The IEC materials have failed to communicate the HIV/TB co-infection clearly among public and patients. Improper understanding of the association between HIV and TB can further worsen the stigma attached to the disease in society thereby affecting case detection and treatment adherence rates.

The key messages in the posters, banners and fliers have reached a majority of the audience. There is a tendency to cram too much information into leaflets and brochures resulting in text heaviness. More pictographs and attractive layout and design will make the messages in these materials more effective.

The mobile phones have a potential in the area of treatment adherence of the patients. They could be more effective if the other facilities on the mobile such as alarm, SMS and FM radio are utilised. Short films and photographs can be shown on mobile phones and tablets to the patients.

These IEC materials tend to appeal to the younger people. The audience segmentation has to be specific. Actors and cricketers in the posters appeal more to the youth. Some photographs in the IEC material are not
culture specific and such messages may not be received well by all kinds of audience.

Using local cable networks, involving community leaders and doctors in events like cultural programs, music concerts and rallies could be effective strategies. TB communication programs should be comprehensive and cover other areas like general hygiene, sanitation, women and children health besides Tuberculosis to receive attention and support from all.

Tuberculosis has been referred to as the perfect expression of an imperfect civilization (Dormandy et al 1998). Besides the unequal and slow overall socio economic development, neglect of the right to health information is also partly responsible for the current Tuberculosis scenario in these high TB incidence countries like India. Health programs can be successful only if those who could potentially benefit from it get the information they need. Education and information can promote understanding, respect, tolerance, and nondiscrimination in relation to persons with TB (Jill & Heidi 2001). They can also create awareness about the disease leading to health seeking behavior through IEC materials.

5.5 RECOMMENDATIONS

Based on the findings of this research study, the following recommendations are given.

Attractive posters and banners explaining the treatment aspects of the disease should be displayed at the DOTS centers. Tuberculosis displays about the symptoms and diagnosis of the disease could be put up for the people visiting the outpatient department at Government hospitals. Hand written charts on the walls should be replaced with colorful, eye-catching posters and displays.
Short films and spots about TB should be shown on the television sets at the DOTS centers. A separate DVD copy can be given to each patient explaining the importance of the treatment completion and possible side effects. Patient’s charter explaining the rights and responsibilities of the TB patients should be displayed at the centers. Posters about sputum collection for examination should be designed. A conducive environment for learning about the disease has to be created at the hospitals.

Some kind of food incentive can be given to poor TB patients. This may improve the patient’s adherence rate among women TB patients. Free talk time and SMS facility on the mobiles for the patients will encourage communication with health workers.

The fact that TB is an airborne disease and it does not spread through water or physical touch should be addressed in some IEC materials to reinforce the message. IEC materials should educate about the weak immune system being the correct reason for getting infected with TB bacteria.

The symptoms of non-pulmonary Tuberculosis should be included in the IEC materials meant for the public. There are only a few print materials for the patients. Many different types of posters, booklets and brochures including the probable side effects of TB medication and information regarding inexpensive nutritious food for patients at various educational levels should be designed. Specific messages aimed at bringing about behavior change about spitting in public and the importance of covering one’s mouth while sneezing and coughing should be part of IEC.

More images and illustrations explaining the concept of HIV-TB co-infection and DOTS procedure showing various stages of treatment can be designed for various target groups of patients. Messages about the ill effects of
alcoholism and smoking should form a part of content as it tends to affect the effectiveness of the anti TB drugs.

Forming TB clubs among patients and regular patient-provider meetings can be empowering for the patients. Local cable television networks with popular doctors and personalities of the locality can be used as an effective medium.

Community leader, celebrities and former patient’s participation can create a stronger impact in the community. Events like rallies, human chain, music concerts and marathons involving the influential people should be organized regularly.

Lessons about Tuberculosis and the most prevalent communicable diseases should become part of the curriculum at the high school level as students can also help find cases in their locality. Tuberculosis sensitisation programs and advocacy meetings with the local community leaders, opinion leaders and religious leaders will get more support for the TB control programme. Periodic evaluations and assessments of the IEC materials are necessary for improving and updating them.

5.6 SUGGESTIONS FOR FURTHER RESEARCH

Further evaluation and analysis of short films, radio spots and television spots by the state TB unit and RNTCP can be done to get more insights into their IEC strategies.

Needs assessment studies with special target groups such as transgender, tribal people, and patients with HIV/TB co-infection will throw light on their special information needs and will help design effective, target specific IEC materials.
A qualitative study involving the family members of the Tuberculosis patients can be done to get a different perspective of the problems and the needs of the patients.

There have not been many studies with the private medical practitioners and their TB patients about the patients default rate and treatment adherence rate. There is no systematic follow up on the TB patients taking treatment at private hospitals. Research in this area is much needed to design an effective communication program for Tuberculosis control.