Tuberculosis (TB) is a chronic infectious disease primarily caused by the bacillus *mycobacterium tuberculosis* (MTB). It mainly spreads by airborne route when the infectious patient expels droplets containing the bacilli. The symptoms of active TB of the lung are persistent coughing, sometimes with sputum or blood, chest pains, weakness, weight loss, fever and night sweats. Tuberculosis is treatable with a course of antibiotics. TB is a serious global health concern and the incident rate of the disease is still increasing over the years. There were 8.7 million new cases reported in 2012 and 2.3 million TB deaths (WHO 2013) worldwide. Tuberculosis (TB) is one of the leading causes of mortality in India- killing two persons every three minute, nearly 1,000 persons every day (TBC India 2013).

The magnitude of TB is high among the poor, displaced, homeless, drug addicts, elderly, malnourished and women (Frieden et al 2003). TB was declared a ‘global emergency’ by World Health Organization (WHO) in 1993 because of its toll on the health of individuals and the wider social and economic impact on overall development of a country. There is a strong fear of stigma and rejection from family members and society. HIV affected people are more prone to TB infection as the HIV virus lowers the immune response to TB bacteria. Tuberculosis mortality rates are also increasing in high HIV-prevalent settings (Mukadi 2001).

RNTCP in India, based on the principles of Directly Observed Treatment, Short-course (DOTS), is one of the largest and fastest growing TB control programmes in the world (Khatri & 2000). The Objectives of the RNTCP are to achieve and maintain a cure rate of at least 85% among newly
detected infectious cases and to achieve and maintain detection of at least 70% of such cases in the population. To achieve these goals RNTCP relies on its communication programme. For active case detection in the communities and treatment completion among patients, knowledge and understanding of various aspects of the disease is necessary.

India’s TB control programme, RNTCP, has produced a variety of Information, Education and Communication (IEC) materials about different aspects of Tuberculosis including symptoms, diagnosis and treatment using diverse media in creating and spreading awareness among the masses. IEC materials play a key role in reducing delays in case detection, increasing self-reporting and treatment seeking behavior among people and patients. IEC strategies of RNTCP communication programme include the interpersonal communication strategies through health workers and advocacy, social mobilization techniques besides communication.

In spite of diverse IEC interventions by RNTCP and NGO’s there are a lot of new cases reported in India every year. The current IEC strategies do not seem to be effective enough to bring about positive changes in the attitudes and the behavior of the patients and public.

Aim of this research is to study the role and effectiveness of TB IEC materials in generating awareness about TB among hospital visitors and TB patients. The objectives of this study are to analyse the content of the Tuberculosis IEC material produced by RNTCP and to evaluate the effectiveness of them among the hospital visitors and TB patients undergoing DOTS Treatment. The research also attempts to understand the perceptions and opinions of the TB health workers regarding the patients, the disease and effective communication strategies.
Mixed-method research has been selected to understand the nature of research problem. The present study has adopted survey method, content analysis, and non-participatory observation methods. The survey involves the people visiting the government hospitals, TB patients undergoing the DOTS treatment. The study attempts to find out how much of the knowledge, facts and information in the RNTCP IEC materials have been understood by them besides the communicative aspects present in them. The other part of the survey records the perceptions of health workers about TB and effective communication strategies. The settings for the study are the government hospitals and TB centers located in the high TB burden districts of Chennai and Salem districts of Tamilnadu. Convenient sampling method and multi-stage cluster sampling methods were used for hospital visitors and TB patients respectively.

The communication content of these printed materials were analysed for various parameters such as attractiveness, text heaviness, comprehension, cultural appropriateness, pictorial elements and use of technical jargon which contribute to the overall readability of the materials. The researcher used non participatory observation where data are collected by observing hospital settings, behavior of the health workers, DOTS providers and other staff, IEC environment of the centers and accompanying family members of patients.

The findings of the study reveal that awareness about the Tuberculosis disease is low (24%) among hospital visitors. The general health literacy level seems to be very low. Posters seem to be the main source of information about TB for many people (54.3%). The knowledge part of the IEC materials about TB symptoms, diagnosis method, DOTS treatment, mode of transmission and free treatment at Government hospitals has been understood by a majority of people and patients.
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 DOTS treatment at the centers mainly through interpersonal communication (IPC) with health workers. The present IEC materials are found to be more appealing to younger people though it is more understood by graduates. More TB patients seem to have faith in the government health services than others.

The mobile phones have a great 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 utilized. Using local cable network and involving the community leaders and doctors in events like cultural programs, music concerts and rallies can be effective.

The IEC environment of the hospital, especially the TB centers, was very poor. 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 not seen in almost half the centers. There is unhealthy behavior of spitting in the open among patients and hospital visitors though there is awareness about the ill effects of coughing and sneezing. IPC and mixed media strategy using multiple media for reinforcement of the messages can bring about the desired behavior changes among people.

There should be more IEC materials for the patients and family members as only information and knowledge can empower them to take healthy decisions. 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 in the communities leading to health seeking behavior among public and patients.