# CHAPTER-I

## INTRODUCTION

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CHAPTER-I
INTRODUCTION

"Leprosy work is not merely medical relief, it is transforming frustration in life into the joy of dedication".

- Mahatma Gandhi

1.0.0. INTRODUCTION

Leprosy is a grossly misunderstood disease over the generations as a potentially crippling disease since it is a visible ailment. Unlike other diseases, social stigma arising out of fear, ignorance and superstitious beliefs creates barriers in detection, treatment and cure of leprosy. Leprosy is more a social than a physical illness and in spite of dramatic advances, it remains a stigmatised disease. Park said, "Leprosy is rightly termed as a social disease". Verma and Prasad quoted that no other disease is surrounded by so much prejudice in the eyes of general public.

1. ARK. Pillai, **Scientific Facts About Leprosy**, ILEF, Bombay.
3. Park, J. **Text Book of Preventive and Social Medicine**, 1985
Leprosy is a complex infectious disease known for more than two thousand years. Some of the Egyptian mummies indicate the presence of leprosy. References to leprosy are found in the Indian scriptures. It was widely prevalent in the Western countries during the 14th century.

Leprosy Eradication Programme in India is one of the most challenging fields of public health interest in which professional social workers can contribute significantly. Leprosy problem in India is very special in several aspects. In terms of its magnitude, we have in India about one third of the total population of leprosy patients available all over the world. Eventhough scientific findings establish beyond doubt that this disease is least infectious, the patients still remain most discriminated. The medical, social, psychological, economical and religious, legal impacts of leprosy on the patient and his environment are so enormous and varied that it requires the services of social workers endowed with special skills for handling such special problem situations.\(^5\)

Prof. Lechat, the President of the International Association of Leprologists, declared in 1980 that leprosy will never be eradicated by medical means alone and doctors are only part

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of the picture. The WHO has mentioned that the control of leprosy depends on health education. The prejudice is more difficult to treat than the disease.

1.1.0. **Definition of Leprosy**

Leprosy is a chronic mildly infectious disease caused by a germ called *Mycobacterium Leprae* (M. Leprae). It is a disease of the nerves, affecting the skin and certain other organs.

It is the least infectious among communicable diseases. Leprosy is completely curable now with modern drugs.

The Sixth WHO Report defines a case of leprosy as "a person showing clinical signs of leprosy with or without bacteriological confirmation of the diagnosis and requiring chemotherapy".  

1.1.1. **Leprosy - History and Symptoms**

Hansen, a Norwegian scientist, discovered in 1873 a germ *Mycobacterium Leprae* which caused leprosy. It is not caused by the curse of God, as some people believe.

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Leprosy is transmitted from one person to another through air as a major channel. Skin to skin contact for long period may transmit the disease. Patients under regular medical treatment cannot transmit the disease to other people. Leprosy is not hereditary, as children born of leprosy patient's do not have leprosy at the time of birth.

If a pale patch or patches on the skin with loss of sensation can be leprosy, non-painful oily, shiny, copper coloured skin can also be a sign of leprosy. However, all patches on the skin do not indicate leprosy.

About 80% of patients in India belong to the non-infectious pauci-bacillary variety.

20% come under the infectious multi-bacillary variety.

1.1.2. Kinds of Leprosy

Leprosy is of two kinds - Paucibacillary (PB) and multi-bacillary (MB). In PB cases the bacilli are few in number and therefore do not pose a public health hazard. In MB cases the bacilli are present in enormous numbers and they can transmit leprosy to susceptible individuals.

1.1.3. Early Signs of the Disease

Leprosy is a disease of the nerves, affecting the skin. The germs mainly affect the peripheral nerves and the damage is mostly for the limbs, viz. the hands and the feet. The disease takes 2 to 5 years to show up. The resistance in the
body is the factor which decides the progress of the disease. A pale patch or patches on the skin accompanied by loss of sensation or partial sensation can be leprosy. However, all patches are not leprosy. Oily, shiny, copper coloured skin can also be symptoms.\footnote{ARK, Pillai, \textit{Scientific Facts About Leprosy}, ILEF, Bombay, p.12.}

Persons with such symptoms should go to a doctor for a check-up. If it is identified as leprosy, there should take adequate and regular treatment. There is no need to panic because leprosy is completely curable now and that too within a comparatively short span of treatment.

Leprosy is known and accepted more as a social problem rather than a medical one. The recent achievement in the medical field have created a turning point in the history of the disease and enough hope in the victims, to wipe out the disease from the globe.

It is a person without a scientifically oriented mind finds it difficult to accept the fact that leprosy is caused by a bacterium and spreads through droplet infection, like many other diseases. Leprosy is caused by a bacteria called \textit{Mycobacterium Leprae}, found in the patient's skin, nerves, mouth, nose and throat. The transmission is by air and skin to skin contact. A very high resistance of the human body will make \textit{M. Leprae} inactive even when it enters the body.
1.1.4. Diagnosis

It is fairly easy to recognise leprosy. Many cases of leprosy are diagnosed by the patient himself or by his neighbours. Early diagnosis with early, regular and continued treatment can cure most cases of leprosy and prevent most damages and deformity. Wrong diagnosis will make the patient labelled with leprosy for the rest of his/her life. Due to social non-acceptance and disability the patient is often rejected by his family and turned out. This is due to the fact that most people still do not know the cause of leprosy.  

1.1.5. Types of Leprosy

The different kinds of leprosy can be described reasonably well. This is based on (i) the degree of resistance (ii) the number of M. Leprae found in the skin smears. There are three main groups of leprosy i.e. Lepromatous, Borderline, Tuberculoid.

1. **Lepromatous Leprosy** (LL) occurs in people with no resistance and innumerate M. Leprae multiplying in the body.
2. **Borderline Leprosy** (BL) develops in those with only moderate amount of resistance and this moderate resistance can reduce the number of M. Leprae. It means that a "fight" is going on between the M. Leprae and the body's resistance. 3. **Tuberculoid Tuberculoid Leprosy** (TTL) occurs in patients with high resistance and few M. Leprae. 4. **Indeterminate Leprosy**

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(IL) means that the type cannot be determined at present time. 5. Borderline Tuberculoid (BT) can only be classified after histopathological examination of the affected nerves and the lapromin Macule single or few. The skin is dry. Borderline Borderline (BB) can be found out through histopathology.

The Spectrum of Leprosy Types

| TT | BT | BB | BL | IL | LL |

At the two ends of the spectrum are the polar types TT and LL and intervening between them are the intermediate groups BT, BB, BL and IL, according to their grades of resistance with reference to the polar types. Ridley and Jopling have defined each group very precisely on the basis of their clinical, histological, bacteriological and immunological findings.11

1.1.6. Multidrug Therapy

Though Hansen discovered the germ M. Leprae in 1873, it was only in 1950 that sulphone drugs (Dapson) were available as an effective tool. Dapson was used as a Single Drug till nearly 1980. Multidrug Therapy using a combination of three drugs has brought about good results. Instead of life-long treatment, leprosy can now be completely cured in about two years' treatment through multidrug therapy.

10 ALERT - A guide to Leprosy for Field Staff.
1.1.7. IMPORTANCE OF THE PROBLEM

There are 12 million estimated Leprosy afflicted cases in the world, of this, India has 4 million cases — one-third of the total number. The prevalence rate of leprosy in India is as high as 6 per 1000 population. This prevalence has variations in every state, district, city and town. Tamil Nadu has the largest number of leprosy patients in the country with 7.3 lakh patients per 1000, followed by Andhra Pradesh having 6.2 lakhs.

Out of the 40 lakh of leprosy cases in the country, 33 lakh have been recorded and nearly 29 lakh have been brought under treatment by the end of August 1987. It is noteworthy that 25.8 lakh patients were treated and discharged by that period.

1.1.8. The Need for the Study

The investigator has evinced interest in helping lepers in many ways. This generated interest in him to know more about Leprosy and he did a review of literature.

Since the investigator was very much interested in leprosy eradication, it was decided to take up a doctoral level research.
STATE-WISE PREVALENCE OF LEPROSY IN INDIA

1981

1987

1989

- 10 & above per 1000 population
- 7 - 10 per 1000 population
- 5 - 7 per 1000 population
- 3 - 4.9 per 1000 population
- less than 2.9 per 1000 population
# LIST OF STATE-WISE PREVALENCE OF LEPROSY

<table>
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<tr>
<th>S.No.</th>
<th>State/U.T.</th>
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<th>Leprosy patients in lakhs</th>
<th>Prevalence rate per 1000 population</th>
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<td>6</td>
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Source: Facts & Figures on Leprosy, 1987, DGHS, Government of India
STANDARD INCIDENCE OF LEPROSY IN INDIA
A lot of research has been done on leprosy on medical grounds. But very few research on health educational aspect has been conducted. Educational strategies have always proved to produce good results in other areas. In leprosy also, education has its effectiveness and may be tested with various strategies.

1.1.9. Scope of the Study

Health Education in Leprosy is an essential component of the Health Care Delivery System designed for the control and management of the disease.

Health education is a good tool to change the attitude of the public. The NLEP focussed its attention on SET. Each word is important in the field of health education. Stigma against leprosy is far more in the urban areas of the educated population than among the rural masses. The hard cores appear to be doctors themselves.

Health education through mass media, dramas and other communicative methods should reach the target group. This group should respond to the stimuli of health education. Health education must change the attitudes and values. The duty of the health workers is to meet the opinion leaders, community leaders, elites, teachers and others to disseminate scientific facts.

The Investigator lives in Devakottai which is in Pasumpon
Muthuramalinga Thevar District, part of the State of Tamil Nadu. The district is considered endemic in leprosy with the prevalence rate at 5.9/1000 as per National Leprosy eradication programme 1991.

In this district two voluntary agencies are working in the field of leprosy. Here the prevalence rate is decreasing as per the national sample survey. The Government control area is Karaikudi Control Unit which has twenty sub-units. Devakottai is one of the sub-units and it has 5 drug delivery points.

The prevalence rate in Devakottai Revenue District is 4.2/1000. There are about 400 long absentees in the Karaikudi Control Unit.

Hence, with the permission of District Leprosy Officer, Sivaganga, the investigator selected 60 long absentees in Devakottai Sub-Unit, comprising Devakottai Town and surrounding villages.

These long absentees, who were the sample for the study, were divided into two groups: Experimental Group and Control Group. Each group had 30 long absentees. Further the Experimental Group was divided into three groups of 10 each for trying three different strategies of health education.

The three strategies are: 1. Post card campaign, 2. House visit campaign and 3. Group Discussion Campaign
Health education materials, video shows, maps and cured patients' talks were arranged to the long absentees. The reasons for the drop-out were recorded by the investigator.

Attitude Scales and Check Lists were used for gathering data.

1.2.0. **Absenteeism**

The investigator wants to know the facts on drop-outs in the government control units and drug delivery points. Absenteeism is a great peril to the institution. In the Leprosy Eradication absenteeism has always been one of the persistent problem in India. Consequently, the problem of absenteeism has received considerable attention from leprologists, social workers and government control units. Various explanations have been given such as sickness, monotony, living environment, fatigue, attitude towards the drug, approach of the medical personnel, doctors, Para Medical workers (PMWs) and patient-inter-personnel relationship etc.

The investigator attempts to throw light on the traits of absence-prone patients, including chronic absentee. A chronic absentee means 'a patient who has remained absent from the medicine taking for at least 3 years'.

(including talk by a Leprosy cured patient).
1.2.1. **Absenteeism - Definition**

"When an employee fails to attend to work when he is expected to attend he may be regarded as absent".\(^1\) In this study 'absenteeism' means 'being absent for a long time', i.e. one or two years without taking medicines by the leprosy patients.

1.2.2. **Educational Strategies**

"The educational strategies for controlling leprosy must be designed and planned and developed broadly".\(^2\)

The investigator developed three educational strategies to know the real factors for absenteeism. They are post card campaign, house visit campaign and group discussion campaign.

To make communications effective, the health educator has to find out various devices through which he can transmit the information effectively. The processes of learning is more effective if different perception mechanism are utilised properly. The Chinese proverb is worth quoting here:


\[\text{\footnotesize\textit{Dr.C.S. Chaudhury, Topics on Health Education Based on Workshop on Health Education in Relation to National Leprosy Control Programmes, Published by ADRA Leprosy Project, 1984.}}\]
"If I hear it, I forget; If I see it, I remember; If I do it, I know".\(^{14}\)

Finally the strategies are compared to find out which strategy is best to administer on long absentees.

1.2.3. The Task of Changing Attitudes

The application of various strategies are tools to change the attitudes. Attitude change is a difficult task and mere awareness will not bring about any change in one’s attitudes and beliefs. To connect with performed attitude of the people, we have to change the social environment. The masses are to be exposed to new beliefs, facts and attitudes towards a new social order. There should be more mass media exposure, more personal contacts with the agents. The educational aspects, a complete process fulfill the aspirations of medical and health education personnel in the field of leprosy. The success of the health education depends on the effective attitude change. Attitude change will not be held in a few years. It is a long-drawn process in the path of leprosy eradication. It is a difficult task and hard process for the health workers.

\(^{14}\) Parameswaran Pillai, Development of AIDS for Health Education in Relation to Leprosy Control, Published by ADRA Leprosy Project, 1984, p.25.
1.2.4. STATEMENT OF THE PROBLEM

In order to minimise absenteeism among leprosy patients in Devakottai Revenue District, certain health education strategies were developed and tested to know their relative effectiveness.

1.2.5. Title of the Study

"Developing Health Education Strategies for Minimising Absenteeism Among leprosy Patients in Devakottai Revenue District".

1.2.6. Definitions of Key Terms in the Title

Health

Health is a state of complete physical, mental and social well being and not merely the absence of disease of infirmity.

Strategy

Approach, techniques, methods.

Absenteeism

Being absent for a long time.

1.2.7. Operational Definitions of the Key Terms in the Study

Most concepts refer to phenomena that are not measurable or visible to the naked eye. Coode and Hatt state that by "defining these phenomena through a set of directions there
is greater assurance that scientists from other nations, thinking in other language will mean the same thing.  

Hence giving, operational definition of the variables in the study is a necessity. This can help repeatability and verification.

Health Education Strategies

As far as the present study is concerned, this refers to the three strategies - Post card campaign, House visit campaign and Group discussion campaign, developed by the investigator for the purpose of minimising absenteeism among lepers.

Absenteeism

The practice of dropping out from taking medicines for leprosy by patients in Devakottai Revenue District. Such patients abstain from visiting leprosy sub-units for more than six months. Long absentees are patients who fail to take medicines from 6 months to 18 months or more.

1.2.8. Objectives

1.2.9. Major Objectives

To find out the effectiveness of the health education

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strategies in minimising the problem of absenteeism among leprosy patients in Devakottai Revenue District.

1.3.0. **Additional Objectives**

1. To identify appropriate health educational strategies to minimise the problem of absenteeism among leprosy patients in Devakottai Revenue District.

2. To test the effectiveness of the health education strategies identified, by applying them in experimental situation to selected group of leprosy patients (experimental group).

3. To assess the attitude of leprosy patients in Devakottai Revenue District towards taking medicines for the disease.

4. To find out post-test difference in the attitude of leprosy patients in Devakottai Revenue District towards taking medicines.

5. To find out the problems faced by para-medical workers and medical officers in administering medicines to the leprosy patients, using statistical procedure.

6. To assess the relative effectiveness of the strategies identified in minimising absenteeism among Leprosy patients in Devakottai Revenue District, using statistical procedure.

7. To assess the relative effectiveness of the strategies
identified in changing the attitude of Leprosy patients towards taking medicines.

1.3.1. Assumptions

1. Lepers are not regular in taking medicines and hence absenteeism is prevalent.

2. Intervention strategies are helpful in removing absenteeism among leprosy patients.

3. It is possible to change the attitude of the lepers towards drug intake.

4. There are problems in regular intake of drugs.

HYPOTHESES

1.3.2. Major Hypothesis

Health educational strategies employed by the investigator will significantly minimise the problem of absenteeism among leprosy patients in Devakottai Revenue District.

1.3.3. Additional Hypotheses

Additional Hypothesis-1

There will be significant improvement in attendance of leprosy patients of Devakottai Revenue District after the application of health education strategies identified by the investigator.

(i) There will be significant difference in the post-test attendance of experimental and control groups.
(ii) There will be significant difference between the pre-test and post-test attendance of experimental group.

(iii) There will be significant difference between the pre-test and post-test attendance of control group.

**Additional Hypothesis-2**

The attitude of leprosy patients towards taking medicines is significantly low.

**Additional Hypothesis-3**

There will be significant improvement in the attitude of leprosy patients of Devakottai Revenue District after the application of health education strategies identified by the investigator.

(i) There will be significant difference in the post-test attitude scores of experimental and control groups.

(ii) There will be significant difference between the pre-test and post-test attitude of experimental group.

(iii) There will not be any significant difference between the pre-test and post-test attitude of control group.

**Additional Hypothesis-4**

There will be significant difference in effectiveness of the three health education strategies identified in improving the attendance of leprosy patients in Devakottai Revenue District.
Additional Hypothesis-5

There will be significant difference in effectiveness of the three health education strategies in improving the attitude of Leprosy patients.

Additional Hypothesis-6

The problems faced by medical officers, para-medical workers in administering the medicines to leprosy patients in Devakottai Revenue District are significantly high.

The next chapter on conceptual framework provides a detailed discussion on Leprosy and health education strategies.