



SAINT PAUL'S HOSPITAL MILLENNIUM MEDICAL COLLEGE

LEVEL OF KNOWLEDGE ABOUT LEPROSY, ITS TRANSMISSION  
AND ATTITUDE TOWARDS PATIENTS WITH LEPROSY IN  
PATIENTS VISITING ST'PAULS HOSPITAL MILLINIUM  
MEDICAL COLLEGE OPD FROM MARCH 25-29, 2018 AND  
APRIL 1-5, 2018.

TESFAYE ESHETU (INTERN) -MMR/0136/05

ADVISORS Dr. Hiwot MD, DERMATOLOGIST  
Mr. Tewodros BSC, MPH

SUBMITTED TO PUBLIC HEALTH DEPARTMENT OF SPHMMC

FEBRUARY, 2018 ADDISABABA, ETHIOPIA



## Contents

|                                                       |    |
|-------------------------------------------------------|----|
| Tables .....                                          | 4  |
| Abbreviation .....                                    | 4  |
| Acronym .....                                         | 4  |
| Summary .....                                         | 5  |
| 1. Introduction .....                                 | 6  |
| 1.1 Background of the Study .....                     | 6  |
| 1.2 Statement of the problem .....                    | 6  |
| 1.3 Significance of the study .....                   | 8  |
| 2. Literature review .....                            | 9  |
| 3. Objectives of the study .....                      | 12 |
| 3.1 General objective: .....                          | 12 |
| 3.2 Specific objectives: .....                        | 12 |
| 4. Methods & Materials .....                          | 13 |
| 4.1 Study area .....                                  | 13 |
| 4.2 Study design .....                                | 13 |
| 4.3 Population .....                                  | 13 |
| 4.4.1 Source population .....                         | 13 |
| 4.3.2 Study population .....                          | 13 |
| 4.3.3 Study subjects .....                            | 13 |
| 4.4 Sampling .....                                    | 14 |
| 4.4.1 Sample size determination .....                 | 14 |
| 4.4.2 Sampling technique .....                        | 14 |
| 4.5 Data collection .....                             | 15 |
| 4.6 Study variables .....                             | 15 |
| 4.6.1 Dependent variables .....                       | 15 |
| 4.6.2 Independent variables .....                     | 15 |
| 4.7 Operational definitions .....                     | 15 |
| 4.8 Data Processing and Management and Analysis ..... | 16 |
| 4.9 Ethical Consideration .....                       | 16 |
| 4.10 Dissemination of Findings .....                  | 16 |
| 5. Budget required .....                              | 16 |
| 5.1 Material cost .....                               | 16 |
| 5.2 Secretarial cost .....                            | 17 |
| 5.3 Human power cost .....                            | 17 |
| 5.4 Cost summary .....                                | 17 |
| 6. Work Plan .....                                    | 17 |
| 7. Reference .....                                    | 18 |

|                                                   |    |
|---------------------------------------------------|----|
| 8. Annexes.....                                   | 20 |
| 8.1 Questioners .....                             | 20 |
| 8.2 Assurance of the principal investigator ..... | 22 |

## Tables

Table 1. Description of material cost

Table 2. Description of secretarial cost

Table 3. Description of human power cost

Table 4. Description of cost summary

Table 5. Description of work plan

## Abbreviation

WHO- World Health Organization

## Acronym

SPHMMC- Saint Paul's Hospital Millennium Medical College

OPD- out patient department

KAP- knowledge, attitude and practice

SPSS- statistical package for the social sciences

## Summary

Leprosy is caused by bacteria mycobacterium leprae though very few believed this. In perception of community leprosy is disabling, incurable, hereditary disease, and associated with dirtiness, oozy and bad smelling wounds. [4] Negative perceptions result in reduced quality of life for leprosy patients and hold back their access to health care services. In Ethiopia Leprosy was identified as major health problem since 1950 and it is still endemic in Oromia, Amhara and Southern Ethiopia. [11]

This study aimed to determine the level of knowledge about leprosy, its transmission and attitude towards patients with leprosy among patients visiting St Paul's OPD from March 25-29, 2018 and April 1-5, 2018.

A cross sectional, descriptive study will be undertaken. 234 individuals (aged 18 years and above) who visit the St Paul's OPD will be included in the study. Data will be assessed by using a pre validated interviewer administrated questionnaire. Descriptive statistics will be used for elaborating patients' demographic characteristics. The analyses will be performed using SPSS 21.

The research will cost total of 2592.7 Ethiopian birr for material cost, human power cost and secretarial service cost including contingency. It's expected to be completed before July 30, 2018.

# 1. Introduction

## 1.1 Background of the Study

Leprosy is a chronic infectious disease caused by *Mycobacterium leprae*, an acid-fast, rod-shaped bacillus. The disease mainly affects skin, peripheral nerves, mucosa of the upper respiratory tract and the eyes, apart from some other structures. It affects persons in all age groups and both sexes. The age group mainly affected is between 15 and 45 years. [1]

Leprosy is transmitted through air-borne spread of droplets, from the nose and mouth, containing the bacilli expelled by untreated leprosy patients and inhaled by healthy persons. Persons living in the same household or who otherwise are in frequent contact with an infectious person have the greatest risk of being exposed to the bacilli. [2]

Leprosy is not highly infectious and under normal circumstances, only a very small proportion (less than 5%) of all individuals who are infected by the leprosy bacilli will develop the disease during their lifetime. In the majority of people, the immunological defense kills all the bacilli. The disease has a long incubation period, ranging from 3 to 5 years, but it may vary from 6 months to more than 20 years. If not treated, leprosy can cause severe disability, mainly as a result of peripheral nerve damage. [1]

## 1.2 Statement of the problem

Leprosy is caused by slowly multiplying bacteria called *Mycobacterium leprae*, an acid-fast bacillus which can remain potent even when dried out. It occurs in large numbers in the lesions of lepromatous leprosy and has a unique ability to enter nerves. In the perception of community leprosy is a disabling disease that is incurable, hereditary, and associated with dirtiness, oozy and bad smelling wounds. It was found that both the leprosy patients as well as community members were still not sure about the cause of leprosy. Leprosy is a form of punishment for wrong actions or deeds committed sometime in the past or present life according to perception of community. [4] Leprosy, often referred to as the oldest disease known to man remains poorly understood and often feared by the general public and even by some in the health care professions, although (contrary to popular folklore) it is not highly contagious, and very effective treatment is available. [7] Although the infection is highly responsive to treatment, disabilities of the eyes, hands, and feet due to neuropathy are often not reversible and may require lifelong care and rehabilitation. Therefore, early diagnosis and management are necessary to minimize the likelihood of these disabilities. [12] In the 1990s, the World Health Organization (WHO) established a goal of eliminating leprosy as a public health problem by the year 2000; "elimination" was defined as a reduction in prevalence to <1 case per 10,000 population in all endemic countries. Between 1985 and 2010, the number of

registered cases fell from 5.4 million to 244,796; the prevalence rate per 10,000 fell from 21.1 to 0.37; these figures exclude Europe. [8]

The prevalence of leprosy is variable; the overwhelming majority of cases are found in developing countries. Of the 16 countries reporting more than 1000 new cases annually in 2009, the greatest number of new cases was seen in India, Brazil, Indonesia, Bangladesh, and Nigeria. With increasing international travel, however, patients with leprosy may present anywhere. [1] In general leprosy is more common among males with a ratio of approximately 1.5 to 1. In 2009, lepromatous (multibacillary) cases accounted of 61 percent of new patients in the United States; the figure ranged from 33 to 94 percent globally. [1]

Leprosy as a social disease has been a major public health problem because of the social stigma and ignorance attached to it. This has made it difficult for our health care delivery system in their pursuit for early diagnosis and prompt treatment. [3]

About 10 million people in the world, mainly in developing countries, are infected by 12 % are found in Africa. Ethiopia covers an area of 1· 25 million sq km and has a population of 90,000,000. It belongs to the leprosy-endemic regions of the African continent. A review of the leprosy control programs in the country (1976 - 89) revealed that the cumulative national average prevalence rate was 2·6 per thousand. Although a decline in the detection rate has been noticed since 1982, coinciding with the introduction of multiple drug therapy (MDT), leprosy remains a serious public health problem in the country. Besides the physically disfiguring and disabling effects of the disease, its victims and their families suffer a great deal from social prejudices and isolation. The situation in Ethiopia is similar to that recorded from other developing countries. As Giel wrote in 1968, 'Among the outcasts of the society, concentrated around the churchyards and cemeteries of Ethiopia, lepromatous lepers are the most easily recognized'. The objective of the present study is to evaluate the knowledge and traditional beliefs and attitudes toward leprosy in a rural Ethiopian community. An attempt will also be made to compare the attitude toward leprosy with that previously recorded for epilepsy in the same community. [8]

Of all the communicable diseases, leprosy is the most important for its potential to cause permanent and progressive physical disability. In addition the disease and its visible deformities in particular contribute to intense social stigma and social discrimination of the patients. Leprosy understood as God's retribution, has been present since the colonial times. Stigma attached to leprosy is typically a social process, experienced or anticipated, characterized by exclusion, rejection, blame or devaluation that result from experience, perception or reasonable anticipation of an adverse social judgment about a person or group. The practice of isolating patients which was based on old religious traditions served the purpose of keeping leprosy sufferers part out of sight. While knowledge is an important factor, there are social and cultural

pressures that have an impact on decision making and contribute to the delay in treatment seeking behavior of those affected. Even in situations where social pressures are minimal the individual's own perception of the risks involved in diagnosis is a further pressure on decision making. In his article on Health Related Stigma's, Graham Scambler describes about different forms of stigma especially about "enacted" and "felt stigma", the latter referring to fear of discrimination rather than to actual stigma. [7]

In most leprosy endemic countries, leprosy control activities have been integrated into the general health services or are in the process of being integrated. Research priorities should be directed at assessing and improving the quality of leprosy services in integrated settings, addressing in particular issues of access, case detection, compliance, prevention of disability, and referral services. Multidisciplinary approaches that enhance research are essential to each research theme, including social sciences approaches, which have been somewhat neglected recently as scientists have focused more on the causative agent of leprosy. The Scientific Working Group produced a clear consensus on the major possibilities for leprosy research based on the expressed research needs from endemic countries and the current Report of the Scientific Working Group on Leprosy, 2002 • TDR/SWG/02 2Leprosy research opportunities. The next step will be to develop these major research priorities into detailed programmes and research protocols. Specific proposal development workshops will be convened in 2003 to develop the proposals and protocols for research programs in the identified areas: transmission/diagnostics, nerve damage, and integration into the general health services. [8]

So I want to assess the knowledge about leprosy and its transmission and the attitude towards patients with leprosy and assess current thoughts about the disease in one of the biggest hospital in Addis Ababa.

### 1.3 Significance of the study

The identification the knowledge and attitude of patients about leprosy could be significant for the following reasons;

- ✓ It helps to identify the current level of knowledge and the attitude towards leprosy
- ✓ It helps St. Paul hospital to increase the awareness of patients on leprosy
- ✓ The study may also initiate researchers who have an interest to make further study on the issue.

## 2. Literature review

Leprosy as a social disease has been a major public health problem because of the social stigma and ignorance attached to it. This has made it difficult for health care delivery system in their pursuit for early diagnosis and prompt treatment. [1]

Study was done with the objective of assessing the present knowledge, attitude and practice of leprosy affected persons and their family members in a rural setting using cross sectional study was conducted by using a pre tested, structured questionnaire among 100 registered Leprosy patients and 100 adult members of patient's family in Thiruvallur district of Tamil Nadu. About 32% of the patients and 37% of family members were aware that leprosy is caused by a germ. Skin patches and loss of sensation as symptoms of Leprosy were known to 55% of patients and 73% of the family members. 84% of Patients and 64% family members said that leprosy was curable. About 90% of the patients and 82% of the family members stated that deformities can be prevented by early and regular treatment. The patients showed a negative attitude after contracting the disease. Most of the family members (73%) did not share articles used by patients. 91% of the family members felt leprosy patients can be employable. About 45% the family members opined that a cured leprosy patient can marry. About 90% of the patients participated in social functions and 64% didn't hesitate to take food along with others. All family members were found to be willing to support their leprosy affected relatives. This study revealed inconsistency and deficiencies in the knowledge, attitude and practice among the leprosy affected patients and their family members. The patients and family members had adequate level of knowledge about leprosy, but their attitude toward the disease was average but their practices were not satisfactory. [7]

A research was done to assess the level of knowledge, social attitude towards patients, and diagnostic and management capabilities of general practitioners (KAP) regarding leprosy, practicing at Hyderabad, Pakistan using Cross-sectional study method in Hyderabad, Sindh, Pakistan, during October to December 2007. A pre-tested and well-structured questionnaire consisting of 54 questions was administered to general Practitioners working at various areas in Hyderabad. The questions were grouped under different headings and covered clinical features, common and uncommon presentations, complications, referral practices and stigma. The sum of correct answers marked by doctors was taken to classify the respondents. The doctors who responded correctly for up to 10 questions were assigned level 1 (poor), from 11 to 25: level 2 (average), from 26 to 40: level 3 (good), while those who marked correct answers for more than 40 questions were assigned level 4 (excellent). Chi-square test was used to determine significance at  $p < 0.05$ . From the total of 200 doctors who were surveyed, fourteen doctors (7%) had poor knowledge of disease (number of correct answers less than 10), 32 (16%) had average (number of correct answers between 11 and 25), 140 (70%) doctors good (number of correct answers between

26 and 40) while 14 (7%) had excellent (number of correct answers more than 40) knowledge of the disease. The research concluded that there is inconsistency and deficiencies in the knowledge, referral pattern and treatment of leprosy among general practitioners, which needs to be improved by conducting awareness activities. [10]

Research done in a fishing community in KARACHI Pakistan using cross sectional method of study showed lack of knowledge about the cause, sign symptom, treatment and prevention of disease. The attitude towards the patient was found positive showing sympathy but at the same time significant level of stigma was found about the leprosy patient among the community. The majority of people did not receive any health education session or attended any seminar on leprosy and only 3% were aware of leprosy centers in the area. The conclusion were the community lacks knowledge about leprosy. Emphasis must be given on Health education. A high positive attitude was found with significant level of stigma. Only educational efforts can bring about change to overcome the disease and improve knowledge of the people. [3]

A Research on Assessment of Knowledge and Attitude of Community on Leprosy Patients in Kuyera Town, West Arsi Zone, Oromia Region Southeast Ethiopia showed 57 (19.31%) of the respondents had high level knowledge on leprosy. Majority 205 (69.26%) knew that leprosy can lead to deformities and disfigurements, 143 (48.31%) believe the disease is caused by bacteria, 120 (40.54%) believe it is due to curse or punishment by God and 228 (77.03%) said it is hereditary. 105 (35.47%) believe leprosy is transmitted by having sexual contact with leprosy patients. 275 (92.91%) said leprosy can be treated by drugs. 107 (36.15%) did not want to sit with leprosy patients. Age, religion and educational status had association with knowledge of leprosy. This research Concluded About four fifth had low level knowledge and majority had negative attitude on leprosy. Majority knew multiple causes for leprosy. Less than half replied that leprosy is caused by bacteria and more than one third said it is caused by curse or punishment from God. Health education to reduce stigmatizing behaviors and improve the community knowledge of and attitude to leprosy should be given focus. [4]

A descriptive cross-sectional study in University students' knowledge and attitudes towards leprosy in Developing Countries on September 2013 included 1,300 students over 18 years of age from various Thematic University Centres in Guadalajara, which included students from the health sciences, humanities, exact sciences (i.e., chemistry, physics), arts, biological agricultural sciences, and administration. Using simple random sampling regardless of gender showed an intermediate level of knowledge of leprosy. Results showed that 67% correctly responded that leprosy is an infectious disease, 64% knew of the presence of skin lesions, and 60% knew that a microbe causes the disease. Furthermore, 45% correctly responded that leprosy is a disease associated

with poverty and 40% responded that leprosy is disabling. Only 31% stated that leprosy is curable. Negative attitudes were evident regarding the question of employing a leprosy patient (57%) and having a leprosy patient as a spouse or partner (30%). The results revealed that there is insufficient knowledge of and poor attitudes toward leprosy among students at the University of Guadalajara. It is necessary to improve current health education measures by using updated educational strategies to reduce the stigma of leprosy and the segregation of leprosy patients and their families. [6]

To find out public attitudes toward leprosy a door-to-door survey was carried out in 1546 sampled households in the rural farming community of Meskan and Mareko in central Ethiopia, where the prevalence of leprosy is estimated to be 1 : 1000. Attitudes toward leprosy were compared with attitudes to epilepsy, studied in a previously performed survey in the same community. Eighty-seven per cent of the respondents were above the age of 25, and 59.5% were females. There were slightly more Muslims (54%) than Christians. The majority of the interviewees (87%) were farmers, with an illiteracy rate of 84%. Ninety-five per cent and 83%, respectively, were not willing to employ or work with a person having the disease. Seventy-five percent would not allow their children to associate with a playmate suffering from leprosy. Comparative analysis of attitudes in the same community showed that negative attitudes toward leprosy were stronger than those toward epilepsy, particularly with regard to matrimonial associations, sharing of accommodation, and physical contact with an affected person. The reasons for these differences appear to be the community's deeply entrenched belief that leprosy is both hereditary and contagious, expressed respectively by 48 % and 53% of the respondents. In order to minimize the perpetuation of negative attitudes, there is a need to educate and impress on the population that leprosy is a treatable infectious disease which is not congenitally acquired, and that it is even curable if detected early. The study reinforces previously proposed suggestions that, in developing countries such as Ethiopia, leprosy care should be integrated into the general health services. [9]

A cross-sectional study was conducted from September 2011 to February 2012 at different public health facilities in selected eight zones in Oromia and Amhara Regional States. A multistage sampling method was used to obtain representative samples. High and low endemic zones for leprosy were included in the study in both regional states. Data were collected from general health workers through a structured self-administered questionnaire and at on-site assessment of their performance. Baseline socio-demographic data, health workers' attitude towards leprosy and their knowledge and skill in the management of leprosy were assessed. Bloom's cut off point was used to describe the knowledge and practical skills of the respondents while Likert's scale was used for attitude assessment. A total of 601 general health

workers responsible for leprosy control activities at public health facilities were included in a knowledge and attitude assessment and 83 of them were subjected to practical evaluation, with on-site observation of how they handle leprosy patients. These included medical doctors (4%), health officers and nurses with Bachelor degree in Science (27%), clinical nurses with diploma (66%) and health assistants (2.8%). The median age of the respondents was 26.0 years and females made up of 45%. Generally the knowledge and skills of the respondents were found to be poor while attitude towards leprosy was positive for the majority of the respondents. The result showed that 519 (86.3%) had poor knowledge. Overall 155 (25.8 %) of the respondents had positive attitude towards leprosy while 205 (34.1%) had intermediate (mixed) attitude and 241 (40.1%) had negative attitude to the disease. Among 83 respondents assessed for diagnosis of leprosy only 15(18.0%) diagnosed leprosy correctly. Variation in knowledge and attitude indicated a significant difference ( $p < 0.05$ ) among different health institutions, professions, gender, in-service training and years of experience. The research underlines that although leprosy control activities are integrated to the general health services in the country, the knowledge and skills of leprosy diagnosis, treatment and management by health workers was unsatisfactory. Hence, attention should be given to develop training strategies that can improve health worker knowledge and promote better leprosy management at public health facilities. This could be achieved through pre-service and in-service training and giving adequate emphasis to leprosy related practical work and continuous follow-up. [11]

### 3. Objectives of the study

#### 3.1 General objective:

To determine the level of knowledge about leprosy, its transmission and attitude towards patients with leprosy among patients visiting St Paul's OPD from March 25-29, 2018 and April 1-5, 2018.

#### 3.2 Specific objectives:

- To assess the level of knowledge about leprosy and its transmission among patients visiting St Paul's OPD from March 25-29, 2018 and April 1-5, 2018 in relation to socio-demographic factors.
- To assess the attitude towards patients with leprosy among patients visiting St Paul's OPD from March 25-29, 2018 and April 1-5, 2018 in relation to socio-demographic factors

## 4. Methods & Materials

### 4.1 Study area

The study will be conducted at SPHMMC which was built in 1969 by Emperor Haile Siassie in collaboration with the German Evangelical Church. It currently has 700 beds, with annual averages of 200,000 patients and a catchment population of more than 5 million. There are over 2800 clinical and non-medical staff in over 13 departments including most recently launched its new hemodialysis unit. The medical school opened in 2007, the new millennium era of the Ethiopian calendar, which is 7 years behind the Gregorian calendar. It's intended to alleviate the severe shortage of medical doctors in the country.

### 4.2 Study design

A hospital based descriptive cross sectional study will be implemented on from March 25-29, 2018 and April 1-5, 2018.

### 4.3 Population

#### 4.4.1 Source population

All out patients of SPHMMC

#### 4.3.2 Study population

Patients visiting selected cluster (OPD) OF SPHMMC

#### 4.3.3 Study subjects

Out patients of SPHMMC, that full fill exclusion and inclusion criteria at patient waiting area

##### 4.3.3.1 Inclusion Criteria

- Age greater than or equal to 18 years old
- Patients visiting SPHMMC OPD as outpatient during the time of study
- Patients that are willing to participate in the study

##### 4.3.3.2 Exclusion criteria

- Age less than 18 years old
- All patients with severe illnesses, acute life-threatening conditions, and severe injury, including patients with head injuries, were excluded from the study.
- All known leprosy patients

## 4.4 Sampling

### 4.4.1 Sample size determination

**Sample size is calculated as follow:**

- ▶ There are 3 OPD'S in each cluster in average, each OPD'S can accompany an average of 20 patients per day. Data will be collected for 2 weeks, 10 working days= total population will be,  $N=20 \times 3 \times 10 = 600$
- ▶ The degree of accuracy required (d). That is, the allowed deviation from the true proportion in the population as a whole is taken as 5% from literatures. Margin of error =  $d = 0.05$
- ▶ The confidence level required specified as 95% at  $\alpha = 0.05$  significance level.
- ▶  $Z = 1.96$  (i.e., for a 95% C.I.)
- ▶  $P = 0.5$  from literatures

$$n_0 = \frac{Z_{\alpha/2}^2 p(1-p)}{d^2} = \frac{(1.96)^2 (0.5 \times 0.5)}{(0.05)^2} = 384$$

- ▶ The size of the entire population (n) in the study is less than 10,000 so the above formula should be corrected using the correction formula:

$$n = \frac{n_0}{1 + \frac{n_0}{N}} = \frac{384}{[1 + 384/600]} = 234.146 \approx 234$$

### 4.4.2 Sampling technique

Cluster sampling method will be used to make groups of study units(OPD'S) and one study unit(OPD) will be selected from the clusters using lottery method and then Convenience sampling technique will be used to collect data from the selected study unit(OPD).

## 4.5 Data collection

An interview administered questionnaire comprising of demographic data, knowledge towards leprosy and questions focused on attitude towards leprosy prepared. Respondents will be asked to answer in limited as well as multiple choice formats. The primary version of the questionnaire developed through extensive literature review in English language. The questionnaire will then be piloted with # of respondents for its acceptability and consistency.

The questionnaire has three parts. The first part of the questionnaire was used to assess socio-demographic characteristics of the community, the second part was used to assess knowledge of the community and the third part to assess attitude of the community towards leprosy and leprosy patients.

Data will be collected by 4 trained 4th year medical students through face to face interview from patients visiting St Paul's OPD. The respondents will be asked in their language by translation. The purpose of data collection will be explained first to respondents to increase their awareness about the study before the start of the interview.

## 4.6 Study variables

### 4.6.1 Dependent variables

Knowledge about leprosy and attitude towards leprosy patients

### 4.6.2 Independent variables

Age, Sex, Education, Occupation, Income, Locality, Religion

## 4.7 Operational definitions

**Poor knowledge** will represent to the respondents that scored below below 70% on the knowledge section.

**Adequate knowledge** will represent to the respondents that scored 70% and above on the knowledge section.

**Positive attitude** will represent to the respondents that scored 50% and above on the attitude section of the questionnaire.

**Negative attitude** will represent to the respondents that scored below 50% on the attitude section of the questionnaire.

#### 4.8 Data Processing and Management and Analysis

The data will first be checked for completeness and internal consistency. Data will then be entered into SPSS version 21 software package (IBM Corporation, Armonk, NY, USA) the researcher. Data will be cleaned by doing simple frequency and cross-tabulation between each independent and dependent variable. A chi-square test will be used to analyze the associations between different variables.

#### 4.9 Ethical Consideration

Permissions will be taken from IRB, SPHMMC. All interviews will be conducted maintaining privacy with prior informed consents of respondents taken stating clearly the purpose and benefits of the study and freedom of refusal to participate. All the data collected will be kept anonymous, maintaining confidentiality of all participants.

#### 4.10 Dissemination of Findings

After being completed, the research paper will be submitted to SPHMMC's department of public health.

### 5. Budget required

#### 5.1 Material cost

| Material cost item | Unit in price in Birr | Quantity | Total |
|--------------------|-----------------------|----------|-------|
| Pen                | 5                     | 5        | 25    |
| Pencil             | 4                     | 8        | 32    |
| Eraser             | 5                     | 4        | 20    |
| Total              | 14                    | 17       | 77    |

Table 1 Description on material cost

## 5.2 Secretarial cost

| Activity                  | Unit Price | Quantity | Total |
|---------------------------|------------|----------|-------|
| Typing<br>(Questionnaire) | 10         | 2        | 20    |
| Printing Material         | 5          | 2        | 10    |
| Photocopy                 | 1          | 250      | 250   |
| Total                     |            |          | 280   |

Table 2. Description on secretarial cost

## 5.3 Human power cost

|                         |      |
|-------------------------|------|
| Each person payment     | 500  |
| Number of people needed | 4    |
| Total                   | 2000 |

## 5.4 Cost summary

|    |                          |        |
|----|--------------------------|--------|
| A. | Material cost            | 77     |
| B. | Secretarial service cost | 280    |
| C. | Human power cost         | 2000   |
|    | Total                    | 2357   |
|    | With 10% contingency     | 2592.7 |

Table 3. Description on cost summary

## 6. Work Plan

| No | Activities            | Date |
|----|-----------------------|------|
| 1  | Concept paper writing |      |

|   |                                                  |  |
|---|--------------------------------------------------|--|
| 2 | Proposal writing and<br>Questionnaire finalizing |  |
| 3 | Data collection                                  |  |
| 4 | Data entry and analysis                          |  |
| 5 | Report writing                                   |  |
| 6 | Presentation of research                         |  |

Table 4. Description of work plan

## 7. Reference

1. UpToDate 21.3
2. Federal ministry of health guidelines for clinical and programmatic management of TB, TB/HIV and Leprosy in Ethiopia fifth edition March, 2013 Addis Ababa

3. Knowledge attitude and practices about leprosy in a fishing community in Karachi Pakistan. Nighat Nisar, Iftikhar Ahmed Khan, Majid Hafeez Qadri, Pir Ghulam Nabi Shah, Pak J Med Sci 2007 Vol. 23 No. 6
4. Assessment of Knowledge and Attitude of Community on Leprosy Patients in Kuyera Town, West Arsi Zone, Oromia Region Southeast Ethiopia. Tesema AA and Beriso M Jimma University, College of public health and medical sciences, Department of Nursing and midwifery, Ethiopia 2015
5. Knowledge and attitudes to leprosy of Pacific People living in New Zealand ALLAMANDA FAATOESE, SELA SIKALETI, PATRICIA PRIEST & STEPHEN CHAMBERS, Department of Medicine University of Otago Christchurch, Department of Pathology University of Otago Christchurch, Department of Preventive and Social Medicine University of Otago Dunedin, Department of Infectious Diseases Christchurch Hospital Christchurch ,21 June 2016
6. University students' knowledge and attitudes Towards leprosy Article in Developing Countries September 2013 Omar Graciano-Machuca<sup>1</sup>, Erandi Enif Velarde-de la Cruz, María Guadalupe Ramírez-Dueñas, Anabell Alvarado-Navarro, Licenciatura de Ingeniería en Biotecnología, Universidad Politécnica de Sinaloa, México Laboratorio de Inmunología, Departamento de Fisiología, Centro Universitario de Ciencias de la Salud, Universidad de Guadalajara, México Centro de Investigación, Inmunología y Dermatología, Centro Universitario de Ciencias de la Salud. Universidad de Guadalajara, México, journal of infection 2013
7. Assessment of Knowledge, Attitude and Practice about leprosy among patients and their families in a rural community in Tamil Nadu T.Stephen, I.Selvaraj, S.Gopalakrishnan National Journal of Research in Community Medicine. Vol. 3. Issue 2. Apr-Jun. 2014 (164-170)164 NJRCM- ISSN - Print: 2277 – 1522, Online: 2277 – 3517
8. Report of the Scientific Working Group meeting on Leprosy Geneva, 26–28 November, 2002
9. Attitudes of rural people in central Ethiopia towards leprosy and a brief comparison with observations on epilepsy, R TEKLE-HAIMANOT, L FORSGREN, A GEBRE-MARIAM, M ABEBE, G HOLMGREN, J HEIJBEL ET J EKSTEDT Department of Internal Medicine, Addis Ababa University, Addis Ababa, Ethiopia Department of Neurology , Umea University, Sweden ; Department of Paediatrics, Faculty of Medicine, Department of Clinical Genetics , Umea University , Sweden ; and Department of Paediatrics , Umea University, Sweden Accepted for publication 15 November 1992
10. Knowledge, Attitude and Practices Regarding Leprosy Among General Practitioners at Hyderabad Doulat Rai Bajaj, Bhajan Lal Matlani, Farooque Rehman Soomro and

Muhammad Pervaiz Iqbal, Journal of the College of Physicians and Surgeons Pakistan 2009, Vol. 19 (4): 215-218

11. Performance of General Health Workers in Leprosy Control Activities at Public Health Facilities in Amhara and Oromia States, Ethiopia Tadeye Abeje, Edessa Negera, Eshetu Kebede, Tsegaye Hail, Ismaile Hassen, Tsehaynesh Lema, Lawrence Yamuah, Birru Shiguti, Melkamu Fenta, Megersa Negasa, Demissew Beyene, Kidist Bobosha, Abraham Aseffa. Armauer Hansen Research Institute, Addis Ababa, Ethiopia, February 2012
12. Current perceptions and Practices(KAP) about Leprosy among Leprosy Patients: A Comparative Study between High Prevalent & Low Prevalent Districts of West Bengal, G Saha , NK Mandal and RN Dutta, Received :06.12.2013 Revised : 12.01.2015 Accepted : 15.01.2015

## 8. Annexes

### 8.1 Questioners

#### PART 1

#### **Socio-demographic characteristics of the patients**

1. Age    A. 18-24    B. 25-34    C. 35-44    D.  $\geq 45$
2. Sex    A. Male    B. Female

3. Ethnicity    A. Amhara    B. Oromo    C. Tigray    D. Others
4. Marital status    A. Single    B. Married    C. Widowed    D. Divorced
5. Religion    A. Orthodox Christian    B. Muslim    C. Protestant    D. Others
6. Educational status    A. Illiterate    B. Read and Write    C. Grade 1-8    D. Grade 9-12  
E. college or university
7. Occupational status    A. Government employee    B. Merchant    C. Farmer    D.  
House wife    E. Daily worker    F. Factory worker    G. Others

### **Knowledge of the community**

1. Have you ever heard of the disease leprosy?    A. Yes    B. No
2. Do you know anyone who suffered from leprosy?    A. Friend    B. Family member  
C. Work colleague    D. Other    E. No, I don't know
3. What do you think causes leprosy?    A. Bacteria    B. A Curse from ancestors    C. Dirty  
water    E. Hereditary    F. immoral conduct    G. Eating too much cool food    H.  
Due to bad blood    I. Don't know
4. How might you catch leprosy?    A. Drinking bad water    B. not washing hands    C. from  
the air/inhaled    D. from animals    E. Touching someone with it    F. don't know
5. How leprosy do transmits?    A. Air or flatus of a patient    B. bathing in a river with leprosy  
patients    C. contaminated soil    D. sexual contact with leprosy patients    E. prolonged  
close contact with leprosy patients    F. sitting close to the leprosy patients    G.  
sharing personal items such as towel, toothbrush etc. with Leprosy patients
6. Which part(s) of the body leprosy can affect    A. skin    B. Bone    C. nerves    D. kidneys  
E. heart    F. Hand/feet    G. brain    H. stomach    I. liver    J. face    K. don't know
7. What are the symptoms of a patient with leprosy?    A. It causes skin irritation or itchiness  
B. It can present as skin patches    C. Leprosy can present as loss of sensation    D.  
It can lead to deformities or Leprosy patients always end up with deformities    E. don't  
know
8. Do the deformities caused by leprosy get better?    A. Always    B. sometimes    C. never  
D. don't know
9. What do you think is the treatment of leprosy?    A. Pharmaceutical drugs    B. Medicinal  
herbs    C. Religious rituals    D. don't know
10. Can leprosy be cured?    A. Always    B. sometimes    C. never    D. don't know

### **Attitude of the community**

1. Do you sit side by side with leprosy patient in a public conveyance? A. Yes B. No C. Don't know
2. Do you avoid a leprosy patient For example, avoid having food or activities with him/her? A. Yes B. No C. Don't know
3. Can you share food with the patients? A. Yes B. No C. Don't know
4. Do you marry to family members who have history of leprosy? A. Yes B. No C. Don't know
5. Is it difficult for leprosy patient to get married? A. Yes B. No C. Don't know
6. Can you Work in the same environment with a leprosy patient? A. Yes B. No C. Don't know
7. Do you allow your children to playing with a child of a leprosy patient? A. Yes B. No C. Don't know
8. Do you Feel ashamed to tell others if having any leprosy patient in your family? A. Yes B. No C. Don't know
9. Can you Take food cooked by leprosy patients? A. Yes B. No C. Don't know
10. Do you Support them throughout the duration of treatment of there is affected family members? A. Yes B. No C. Don't know
11. Do you participate on healthy education regarding leprosy if any? A. Yes B. No C. Don't know
12. Do you Help leprosy patients financially if he or she is unable to work? A. Yes B. No C. Don't know
13. Can you Share cloths or other materials with cured leprosy patients? A. Yes B. No C. Don't know

## 8.2 Assurance of the principal investigator

I the undersigned agree to accept all responsibilities for the scientific and ethical conduct of the research project. I will provide timely progress report to my advisors and seek the necessary advice and approval from them in the course of the research.

**Name of the investigator: TESFAYE ESHETU MOHAMMED**

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**Approval of the clinical advisor**

**Name of the clinical advisor:** \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**Approval of the public health advisor**

**Name of the public health advisor:** \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_