

A STUDY OF REHABILITATION ACTIVITIES
FOR LEPROSY PATIENTS AND FORMER
LEPROSY PATIENTS AT ALUPE
LEPROSY HOSPITAL
AND IN
BUSIA DISTRICT - KENYA.

A THESIS

DR. BENJAMIN ADERINOLA AYODELE

1992

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AND IN BUSIA DISTRICT - KENYA.

A thesis submitted
in part-fulfilment for the degree
of Master of Public Health of the
University of Nairobi.

1992

BY

DR. BENJAMIN ADERINOLA AYODELE,
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I certify that this thesis is my original work, and has not been presented for a degree in any other University.

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DEDICATION

To the Leprosy patients and former Leprosy patients who are experiencing the loneliness of being outcasts and the poverty of beggars. This study will help to remove the social stigma attached to leprosy all over the world.

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1.2 Objectives

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LIST OF ABBREVIATIONS

- ALERT = All Africa Leprosy Training and Rehabilitation Centre.
- AMREF = Africa Medical and Research Foundation.
- COTLEP = Clinical Officer Tuberculosis and Leprosy.
- E.N.L = Erythema Nodosum Leprosum.
- K.A.P = Knowledge Attitude and Practice.
- KEMRI = Kenya Medical Research Institute.
- M.D.T = Mutiple Drug Therapy.
- N.T.L.P = National Tuberculosis and Leprosy Programme.
- P.H.C = Primary Health Care.
- T.D.R = Tropical Diseases Research.
- UNESCO = United Nations Education, Scientific and Cultural Organization.
- WHO = World Health Organization.

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SUMMARY

Between October and December 1991 a descriptive epidemiological survey was carried out among 70 leprosy and former leprosy patients, 45 health workers and 266 community members in different communities of Busia District, Kenya.

This study was aimed at finding the rehabilitation activities at Alupe Leprosy Hospital for leprosy patients and the impact of rehabilitation in the socio-cultural setting that might affect their integration into these communities.

The study revealed, very poor knowledge of leprosy in the district where 77% had little knowledge of aetiology and curability of leprosy. In spite of this poor knowledge 82.6% of community members were willing to accept back the former leprosy patients if they were certified to be well by a physician.

Both community members (98.5%) and health workers (95.6%) agreed that everybody should help leprosy patients. About 90% of all the interviewed agreed on vocational rehabilitation as the only way to make former patients self reliant and less dependent on the community.

The study revealed that physical, occupational, verbal, medical, surgical and orthopedic types of rehabilitation were going on at the time of the study. The study also revealed that 64.4% of health workers said disability is a pre-condition to undergo any type of rehabilitation. 66.5% of health workers knew what to do as regards to health education.

The analysis of data was performed using an IBM-Compatible computer with the EPI-INFO statistical package at the department of Community Health, University of Nairobi.

Attempts were made to determine association between all demographic variables and the attitude towards leprosy using contingency tables and the Chi-square Test. This further revealed that there was no association between type of rehabilitation and patients' satisfaction. There was no association between leprosy patients' education and their knowledge of the disease. There was an association between low level of education and poor knowledge of leprosy by the community members.

From these results, aspects of the objectives were discussed and it was concluded that leprosy is still a big problem. Further research work is needed if rehabilitation is to have an impact on the social aspect of the disease in order to integrate fully this former leprosy in the communities.

CHAPTER 1

1.1 INTRODUCTION

Leprosy (also known as Hansen's disease) is a chronic communicable disease caused by bacilli mycobacterium leprae. The pathogen was first identified by Armer Hansen of Norway in 1873. Hence the disease was named after him.

It is characterised by a very long incubation period of several years but incubation as short as three months and as long as forty years has been recorded (9). It is claimed that 85% of the population are immune to the disease while about 15% can be infected but only 5% can get the disease: who is actually susceptible to leprosy is still debatable. However, it appears that the number of registered cases of leprosy is on the decline worldwide (33) and is most common in tropics and sub-tropics (18) (see fig.1 page 1a for prevalence of registered world cases).

Classification of the Disease.

The disease is usually classified using two methods:

- a. For purpose of field work we have paucibacillary leprosy and multi-bacillary leprosy.
- b. The classification involving both clinical and immunological consideration grouped leprosy into six groups as follows(24) & (25).
 - (1) Indeterminate (I)
 - (2) Tuberculoid Tuberculoid (TT)
 - (3) Borderline tuberculoid (BT)
 - (4) Borderline Borderline (BB)
 - (5) Borderline Lepromatous (BL)
 - (6) Lepromatous Leprosy (LL)

Leprosy in its milder form is self healing disease (7) and curable (18) even in severe form it never kills immediately



Fig. 1. Prevalence of registered cases of leprosy throughout the world in 1987

Courtesy of World Health Organisation

inspite of its affinity for skin, mucous membrane and peripheral nerves. It leads to anaesthesia, muscle weakness, paralysis with certain chronic atrophic changes in the skin, muscles, bones and eyes resulting into debilitating, disabling or disfiguring conditions which may kill only after a long drawn out illness.

It causes Impairment whereby, there is appearance of basic pathological conditions (i.e. lacking part or all of a limb, or having defective limb or organ. If impairment is minor, it is corrected and function is restored, but if it is major, it produces disability with loss or reduction of functional ability the effect of which depends on the individual's personal circumstances and condition (16).

It may well amount to:

- a) Handicap which is a disadvantage or restriction of activity caused by disability. If this is severe, it may lead to:
- b) invalidity a state of being unable to carry out accustomed work and hence the person is called a disabled person; which the UNESCO'S international Bureau for Education Special Education glossary rightly defined a disabled person as a person or an individual whose prospects of securing and retaining suitable employment are substantially reduced as a result of physical or mental impairment.(16)

And this makes Thangaraj to conclude that the consequences of leprosy disease have more devastating effects on the patients and the society than its close associate-tuberculosis which is a more serious disease (26). Its affection of peripheral nerves anywhere in the body and that of the eyes also led to the statement that "there is no disease which so frequently gives rise to disorder of the eyes as leprosy does" (15).

Because of the nature of this disease, W.H.O. included leprosy on the list of the six tropical diseases chosen for attention in the special T.D.R. programme in order to get it wiped out.

This led to trial of some vaccine in Venezuela and Malawi for preventive purposes which may lead to leprosy prevention since it is still a Public Health problem with high socio-economic consequences.

Apart from preventive vaccines, drug therapy have recorded success as well. Dapsone (100mg) per tablet given unsupervised to patients was introduced in 1946 was the drug of choice for a very long time. Due to drug resistance and long duration of drug intake which is cumbersome to patients, multiple drugs therapy, M.D.T., was introduced in 1982 by WHO which comprises of the following:

Drugs for Paucibacillary Treatment:

- (a) Rifampicin 600mg monthly supervised for 6 months.
 - (b) Dapsone 100mg daily for 6 months unsupervised.
- Duration of treatment is between 6 to 9 months.

Drugs for Multi-bacillary:

- (a) Rifampicin 600mg monthly supervised.
- (b) Clofazimine 300mg monthly supervised.
- (c) Clofazimine 50mg daily unsupervised.
- (d) Dapsone 100mg daily unsupervised.

Duration of treatment is 2 years. (19)

Recently the Japanese have started a new chemotherapy by combining antibiotics Ofloxacin and Rifampicin which if successful may wipe out leprosy by year 2000 (34). This drug combination would reduce treatment for Paucibacillary leprosy from 6 months to 1 month also treatment for Multi-bacillary

leprosy from standard 24 months to 1 month. Seven countries have been chosen as the places for trial of this latest drug combination. These countries are Brazil, Mali, Pakistan, the Phillipines, Vietnam, Myanmar and Kenya.

In support of WHO of action, a scholar had earlier on in 1971 said, "If the existing knowledge about leprosy were conscientiously and persistently applied, the disease could be controlled in our generation and eradicated in the next" (7) & (8).

It is perturbing to note that early researchers in Kenya actually neglected the rehabilitation aspect for the disabled as a result of this disease.(4) They have mostly concentrated on chemotherapy because such areas provide easy accessibility of facts and it is very convenient to continue what others have done or join the ongoing project.

With the above points in mind, the magnitude of the burden of rehabilitating former leprosy and leprosy patients is to be reviewed. Previous work done by other scholars in Kenya and elsewhere is highlighted in order to build a fundamental basis for the future understanding of the study.

Rehabilitation was defined according to the second leprosy expert committee of WHO as follows: "the physical and mental restoration as far as possible of all treated patients to normal activity, so that they may be able to resume their place in home, society and industry (32). To achieve this, treatment of physical disability is obviously necessary, but it must be accompanied by the education of the patient, his family and the public, so that not only can he take his normal place, but society will also be willing to accept him and assist him in his complete rehabilitation.

Hence these activities and procedures designed to assist the physically disabled in this instance, to achieve or maintain the highest attainable level of function through an evaluation and treatment programme providing under a physician's direction, one or a combination of medical, paramedical, psychological, social and vocational services determined by the needs of these patients is called rehabilitative services or activities. Accordingly the rehabilitation programme should include the following: (10).

- (a) Medical Rehabilitation: This is early diagnosis of patients and treatment to prevent the complications and this should also combine promotive and preventive measures as a part of medical rehabilitation (17).
- (b) Physical Rehabilitation: This is building up the body of these former patients and patients by applying various exercises to enable the bodies of these patients return to normal so that they can assume usual functions.
- (c) Psychological Rehabilitation: With the help of a psychologist where possible, psychotherapy is given to all patients to ensure that there is no depression among *these patients and social stigma attached to this disease* is no more of a problem to these patients and their psychic being is thereby well improved.
- (d) Social Rehabilitation: With the help of a social worker and the rest of the health workers, social activities among the patients is improved and this will also remove social stigma attached to this disease. Also the social worker should be the one to identify any social problems that can arise as a result of former patients or patient too long stay away from home. Community members should know the reasons for the patients long stay away from home. Here Health Education is emphasized to achieve the goal.

(e) Surgical Rehabilitation: This is restoration of lost function by means of surgical repair to enable that part of body resume normal function.

(f) Verbal Rehabilitation: (Health Education)

This is a type of rehabilitation whereby health workers give patients and Community members talks, lectures, instructions about the disease, its aetiology, curability and care of the body parts. The Health Education of the community members about this disease should also be a big part of the health education so that these community members can live with these former patients without much problems and embarrassment. The six D's of health education (31) must be mastered by all health workers and these are:

- i. Duration: how long will he need to take his treatment?
- ii. Drugs: tablets and capsules are known to be better than injection for curing leprosy.
- iii. Disappearing: skin patches disappear slowly.
- iv. Disability: The patient may be fully cured even if the deformity is still present. N.B Disability grade II & III never disappears.
- v. Diet: No diet restriction because drugs for leprosy are very powerful so diet has little or no effect on the efficacy.
- vi. Danger: some patients develop reaction. So patients should be warned of symptoms of reactions and they should report promptly.

g) Vocational Rehabilitation which has acquired many names like occupational, economic, and industrial rehabilitation. This is the training of these patients in many vocational courses to enable them to earn a living after they get cured from this prolonged disease before returning to their various communities.

Review of the Types of Rehabilitation Activities at Alupe

At the time of the study, Alupe hospital had no standard rehabilitation programme but restorative activities were being carried out whenever possible (2)

However the types of rehabilitation activities at Alupe at the time of survey were the following:

- a) Physical rehabilitation: Various forms of physical rehabilitation were seen at Alupe. They were in form of physiotherapy exercise, assessment of nerve damage and some forms of hand exercise involving making of baskets, bags and some small decorations all of which help to restore hand movements and function.
- b) Occupational rehabilitation was being practised but not as expected because the actual occupational training which involved a standard programme was yet to begin (2). The occupational therapy unit was also involved in physical exercise of the limbs of these patients in order to help them gain or recovery functions of the limbs. Here as a result of these exercises, the patients produced some baskets, bags on a small scale and made some money from it but it was not enough to sustain or maintain any of these patients.
- c) Surgical rehabilitation or repair, was being carried out properly and infact it was a major component of the rehabilitation activities at Alupe. This involved the Medical Doctors at the hospital with the aid of some AMREF's flying doctors who came once in a month to assist in doing some plastic repairs.

d) Orthopaedic rehabilitation, was also done with production of artificial limbs, rubber shoes and prosthetics that the department felt would be necessary for the patients. Other forms of rehabilitation activities like social rehabilitation programmes were not properly done may be due to lack of proper funding to equip the department materially or to employ personnel to these departments. This was because the Ministry of Health was yet to establish a proper programme of rehabilitation.(2)

1.2 LITERATURE REVIEW

In Kenya, the origin of leprosy is poorly documented just like in any other developing countries where prevalence is marred by poor availability of statistical records. However, statistical data currently in use put recorded cases as between 20,000 to 50,000 but earlier on, a scholar said it could be 100,000 cases since not all cases reported for treatment (29).

Work was done on survey of leprosy in Alupe with a view to see if early case finding could reduce disability complication of the disease (14). Mugenya also wrote on the pattern of complication seen in Alupe with the view that if these complication can be prevented by early case detection and case finding then disability will be reduced hence there is a need to intensify the control programme (20).

Similarly a paper was written on complication seen in leprosy and at Alupe which its reduction will lead to the reduction of disability which is a serious complication of leprosy. This will have an impact on rehabilitation of patients and re-integrating them would not be a problem.(1) Work also began on the social aspect of the disease with a view to see relationship between beliefs and attitude of society towards the disease (21).

It is then clear that although rehabilitation was not mentioned directly by these scholars but reduction of complication of leprosy will also give no cause for prolonged rehabilitation.

Ethiopia for instance, has a centre for rehabilitation of these patients called All Africa Leprosy training and rehabilitation centre (ALERT). Apart from being a vocational

centre for leprosy and former leprosy patients, it also practices community-based rehabilitation (10). Here the leprosy workers go into the communities and give training in community-based activities to those former leprosy patients who could not return to their original occupation as a result of their disability. A simple sandal to protect insensitive feet of patients has been produced at ALERT (22).

Also in Nigeria, a scholar reaffirmed that rehabilitation activities alone is not enough in helping the former patients but a standard programme of rehabilitation whereby every member of the society is involved is the only solution to the pathetic cases of leprosy patients who turned to begging as the only way of earning their living in the Northern part of Nigeria.(13)

Similarly, a call for proper rehabilitation of these patients to enhance their early integration into the society not only in Africa or Asia but in all the developing world where leprosy is still a major health problem.(9 & 10)

Rehabilitation in Asia with India as an example has taken a different approach from the aforementioned where epidemiological survey of deformities in leprosy precedes any treatment and is a way of preventing disabilities which in itself is a preventive rehabilitation.(25) Those with deformities and disabilities could be detected with proper survey as it is practised in India.

Emphasis is made on the vocational training in India more than any other places in developing world. Here many patients have benefitted and have undergone training in various vocational courses like carpentry, wood carving, tailoring or sewing, typewriting, training in using various machine tools and large scale farming in co-operative group (28). There is no doubt

about India's leading role in rehabilitations of former leprosy patients in developing world. Many rehabilitation training centres are established in India as a result of these frequent surveys. The people's knowledge, attitudes, and their socio-cultural practices are geared towards the rehabilitation of these former leprosy patients and this might have helped in re-integrating them into the communities.

It is also the aim of this study to go directly into the communities and to study the awareness of the people in these communities about this disease so that a community-based approach to treatment whereby patients come directly from home to receive treatment and go back to their communities. This approach may facilitate the reduction of social stigma attached to disease once and for all.

The major intention of this study therefore, is to determine to what extent knowledge, attitude and practices of the community members would influence the reinstating of these former leprosy patients. The study would also determine to what extent the socio-economic rehabilitation of the latter help in their re-settlement. WHO in its guide to leprosy control highlighted community based rehabilitation with Primary Health Care approach as the only approach to solving the problems caused by this disease. (33)

There are many cases however who stay back in several hiding places who are never found out and whose diseases are not reported. It is evident from aforementioned that leprosy complication resulted from inability of patients to report early for treatment and lack of health education on the part of the society. The removal of social stigma attached to the disease will remove social discrimination against leprosy patients (35). Then the measures of controlling leprosy would be carried out properly. Patients would win sympathy from the

community and therefore they would receive treatment regularly in accordance with doctor's order.

However, what is of paramount importance as far as this study is concerned is to try and establish whether there is any relationship between socio-economic rehabilitation and patients adjustment into the society.

Needless to say, findings of these studies will hopefully provide appropriate clues that will be helpful in the future implementation of the strategic control and rehabilitation programmes that will try to help bring the supposed unacceptably high dependence of these former leprosy patients on the society. This will also help to increase knowledge of the society about leprosy which will lead to the removal of the social stigma attached to leprosy not only in this district but in every corner of Kenya.

CHAPTER 2

2.1 JUSTIFICATION OF THE STUDY

The following were the key factors that motivated the research.

- 2.1.1 Of all the six major Tropical diseases W.H.O. is researching into, leprosy does not kill in time but leaves at least a third of the patients with permanent physical disabilities and deformities. This prevents their acceptance into the society with a serious socio-economic consequences (12). With an estimated 20,000 patients (5) in Kenya leprosy is one of the major health problems.
- 2.1.2 Lack of a standard programme on rehabilitation anywhere in Kenya inspite of the high prevalence of the disease.
- 2.1.3 Previous neglect of leprosy patients everywhere has actually resulted into gross neglect of their rehabilitation and hence their integration.
- 2.1.4 Lack of socio-cultural orientation of the people to the actual aetiology of the disease and present curability.

2.2 STUDY HYPOTHESIS

- 2.2.1 The operational rehabilitation activities for leprosy patients at Alupe are not adequate.
- 2.2.2 Classification of patients into the degree of disability is not necessary for a suitable rehabilitation activity.
- 2.2.3 Reintegration of leprosy patients into the community does not depend on the knowledge, attitude and practices of the community members.
- 2.2.4 Health workers' role in rehabilitation of leprosy patients does not depend on their knowledge of leprosy.

2.3 STUDY OBJECTIVES

- 2.3.1 General: To evaluate the rehabilitation activities for leprosy patients and former leprosy patients at Alupe Leprosy Hospital and in Busia District with a view to develop a suitable rehabilitation programme *for each type of disability in order to integrate these patients into the community.*
- 2.3.2 Specific:
- 2.3.2.1 to determine types of rehabilitation activities operational at Alupe Leprosy Hospital in Busia.
- 2.3.2.2 to determine if degree of disability is a precondition to undergo a particular type of rehabilitation at Alupe.
- 2.3.2.3 to determine knowledge, attitude and practices (KAP) towards leprosy by the community members.
- 2.3.2.4 to study knowledge of leprosy among health workers with regards to disability, rehabilitation and the role played by Health Education on leprosy.

CHAPTER 3

3.0 MATERIALS AND METHODS

3.1 STUDY DESIGN.

This was a cross-sectional descriptive study of rehabilitation activities for leprosy patients and former leprosy patients at Alupe Hospital, Alupe community and different communities within the same district.

3.2 STUDY AREA

For practical and logistic reasons Busia District was considered for the study being a part of Western Kenya with one of the highest prevalence of the disease sharing same socio-economic consequences for patients, their relatives and the community (12) (see also fig 2 page 14).

Also Alupe hospital was chosen being a referral hospital for leprosy patients and control centre of leprosy in the Western part of Kenya. Then the study was conducted in Alupe leprosy hospital, Alupe community, and other communities in Busia District.

Busia district borders with Bungoma District in the North east, Kakamega district to the East, Siaya district to the south, the Republic of Uganda to the West and lake victoria makes its south Western boundary (see figure 3 & 4 pages 15 & 16).

It is approximately 1,776 sq.km including 137 sq.km of permanent water surface. It has a population of 404,049 (11). The population in the district is mainly dominated by Luhya, Iteso, and Luo ethnic group but other tribes like Kikuyu, Kalenjin, Kisii are also found as well. Since the district is shared by many ethnic groups, there are traditional difference throughout the district (See table 1 & 2 page 17).

However, most of Busia district falls within the lake Victoria basin with altitude ranging from 1,128m above sea level in the extreme South to an average 1,463m in the central and northern parts of the district.

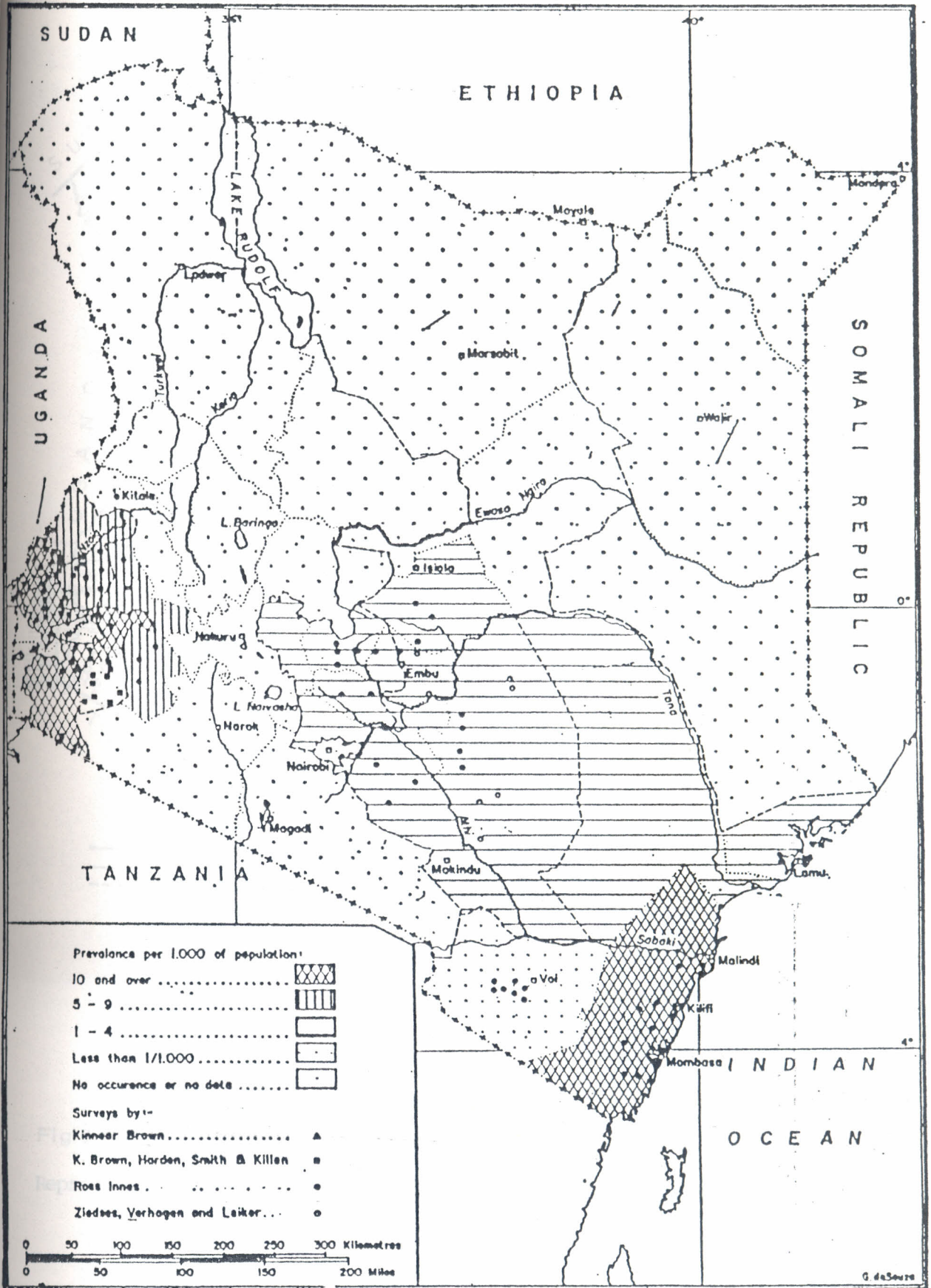


Fig. 2. Prevalence Rates of Leprosy

Reproduced from Health and disease in Kenya

Location Of District



Fig 3. Location of Busia District

Reproduced from Busia District Development Plan - 1989 - 1993

BUSIA DISTRICT ADMINISTRATIVE BOUNDARIES



Fig 4. Busia District Administrative Boundaries

reproduced from Busia District Development Plan - 1989 - 1993

TABLE I

Ethnic composition of District 1969 - 1979

Ethnic Group	1969		1979		1969 - 1979 % Change
	Number	%	Number	%	
Luhya	130,571	65.00	177,330	60.00	3.60
Iteso	61,844	30.80	90,159	30.00	5.80
Luo	5,377	0.26	20,174	6.80	278.00
Kikuyu	273	0.14	2,074	0.70	8.60
Kalenjin	478	0.24	1,493	0.50	58.80
Kisii	356	0.18	497	0.17	35.80
Akamba	107	0.50	359	2.12	226.00
Others	1,520	0.76	7,849	3.60	327.00
Total	200,220		295,676		

TABLE 2

Divisional Population Projections: 1979 - 93

Division	1979	1988	1993
Amagoro	40,851	61,276	71,948
Amukura	40,675	60,346	70,856
Nambale	58,731	85,978	103,888
Butula	55,662	62,641	73,551
Funyula	47,514	48,426	56,860
Budalangi	32,065	48,097	56,474
Busia Township	24,857	37,285	43,777
TOTAL	298,355	404,049	477,354

Reproduced from Busia District Development Plan - 1989 - 1993

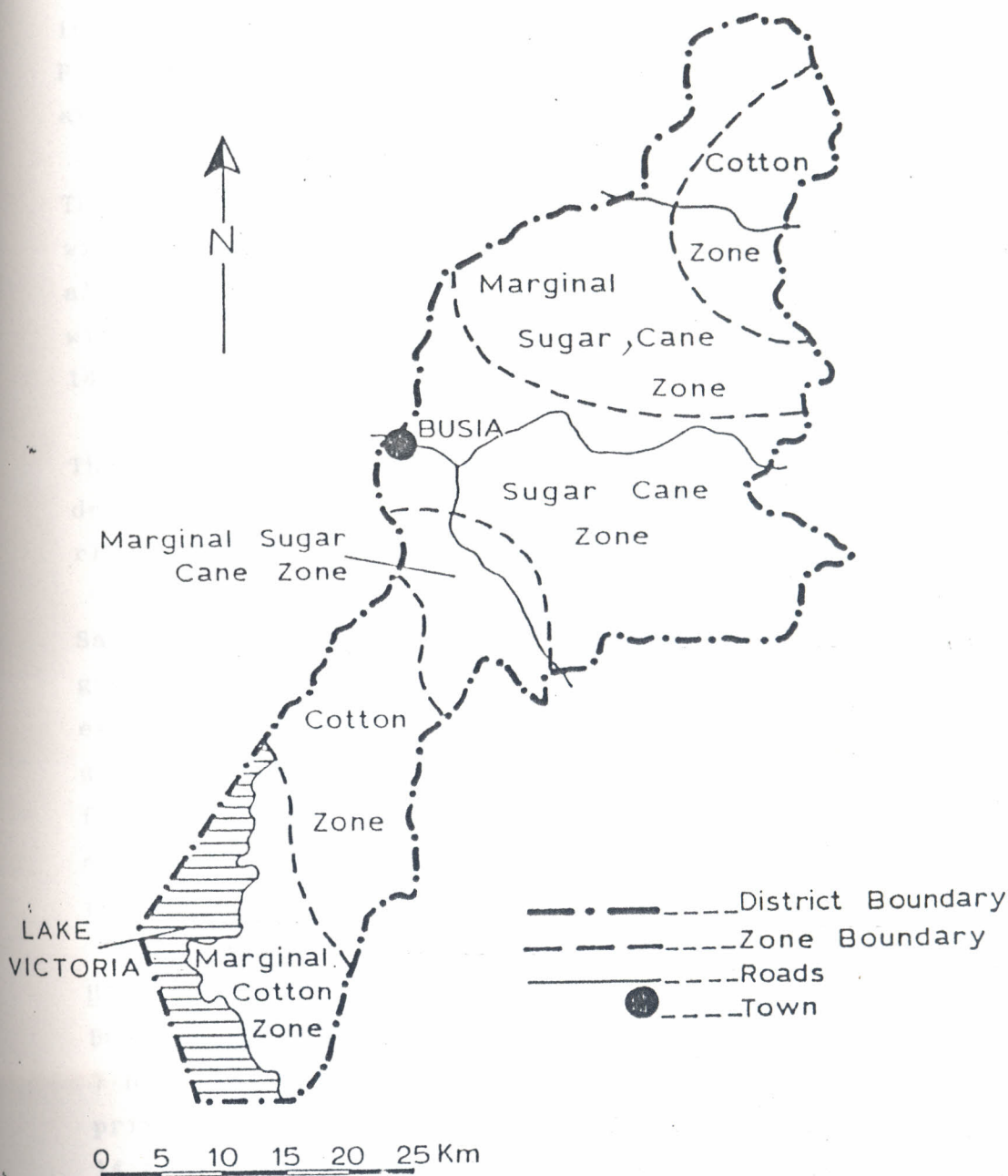
Busia District Health Facilities



Fig.5. Busia District Health Facilities .

Reproduced from Busia District Development Plan 1989 - 1993

Busia District Simplified Agro-Ecological Zones



From Farm Management Handbook Of Kenya 1982

Fig 6. Busia District - Simplified Agro- Ecological Zones

It also has an undulating plateau at its centre and highlands in North Teso division. It is well served by rivers with Permanent and seasonal streams as well. Most important rivers are the Nzoia, Malakisi and Malaba.

The rainfall is approximately 1,220mm mean annual rainfall with the uplands receiving highest of 2000mm while a strip along the shores of lake Victoria receives 760mm as the lowest without a definite seasonal pattern. Temperature is between 14⁰C and 30⁰C.

The district geography is a good base for agricultural development - Nzoia/Yala Swamp area is an excellent area for rice growing.

Samia hills is ideal for small scale animal husbandry i.e. goat keeping. The undulating plateau and valley bottoms are excellent for rain-fed rice, areas towards north and East are good for sugar cane (see fig 6 page 19). All these features favour farming and most of the community members are farmers except for those few civil servants and businessmen in Busia township.

Health infrastructure

Busia District has 39 health facilities, namely,
7 hospitals (4 are government and 3 are either owned by private or mission).

14 health centres (11 government 3 private)

18 rural dispensaries (see fig. 5 page 16)

Amukura and Nambale divisions are poorly covered by Medical facilities while Amagoro and Funyula are better covered with medical facilities. Access to most health facilities is good except for those at Yala swamp. Alupe leprosy hospital is the only referral hospital for leprosy in the district.

Water supply is insufficient to most dispensaries and this accounts for poor personal hygiene in most of these areas.

A good network of roads is an asset to the District. Major roads include the A 104, an international trunk road linking Kenya with Uganda at Busia and Malaba and also the B1, a national trunk road linking Kisumu and Busia. This gives the district a total length of 791 km of good road network (11).

3.3 SAMPLING METHODS

3.3.1 Patients Sampling

In order to obtain a non-biased representative sample of the population a simple random sampling method was used to select patients and former leprosy patients who had undergone rehabilitation of any kind at Alupe leprosy hospital in Busia. Using the formula below:

Sample Size was obtained as follows

$$n = \frac{Z^2 P(1-P)}{d^2}$$

where P = estimated prevalence (given as 0.5)

d = desired width of the confidence interval

z = standard normal deviate corresponding to significance level of $\alpha = 0.05$

n = sample size

$$: n = \frac{(1.645)^2 \times 0.5 \times 0.5}{(0.1)^2}$$

= 67 minimum required sample and 70 was obtained during the period of the survey. The selection was based on the fact that leprosy in-patients can be reached at Alupe hospital but

the former leprosy patients live in sporadic forms in the district. First of all, a list of 50 in patients was obtained. Using simple random sampling method their numbers were read from random table and 31 were selected for the survey.

The total number of former leprosy patients that had been released from treatment between 1985 and 1991 was obtained (courtesy of Busia district COTLEP) and 39 were selected randomly for the survey.

3.2.2 Community Members Sampling.

Selection was done randomly from 3 sections of communities.

1. Alupe community
2. Busia township
3. Communities in the district

In Alupe Community, the community members were selected randomly and interviewed regarding their K.A.P. Those staying in the neighbourhood of former patients were also interviewed.

In Busia twonship, government officials, businessmen and women were also selected randomly in order to compare their knowledge, attitude, and practice towards leprosy. Communities in the district were chosen from the 26

sublocations where the former patients had been selected. 266 members of the community were interviewed.

3.3.3 Health workers sampling.

30 health workers from Alupe and 15 health workers from other health centres in the district, in the sublocations where former patients had been selected were interviewed to get an idea of their knowledge, attitude and practices on leprosy.

3.3.4 Data collection

Field interview questionnaires were used for the collection of data from leprosy patients, former leprosy patients, health workers and general members of the community within the study area.

The questionnaire for leprosy patients and former leprosy patients was divided into 4 main parts:

- i) Demographic
- ii) Information for inpatients
- iii) Information for those who stayed around
- iv) Information for those who went back to former community.

A loosely structured questionnaire was used for the indepth interview with the health workers concerning their role in rehabilitation activities at Alupe Hospital.

3.3.5 Data editing, verification and validation

Data editing including checking for internal consistency, reliability and completeness was done in three stages; in the field, before coding and at the time of entry into the IBM compatible computer of the department of community health using DBase III plus software.

3.3.6 Data Analysis.

The Epidemiological program EPIINFO version 5 was used in the analysis of the data. Univariate statistics frequency tables were used to describe the sample. Association between various characteristics were investigated using contingency tables and the chi-square test. Significance level was taken as $\alpha = 0.05$.

Diagrams (bar charts and pie charts) were drawn using Harvard Graphics.

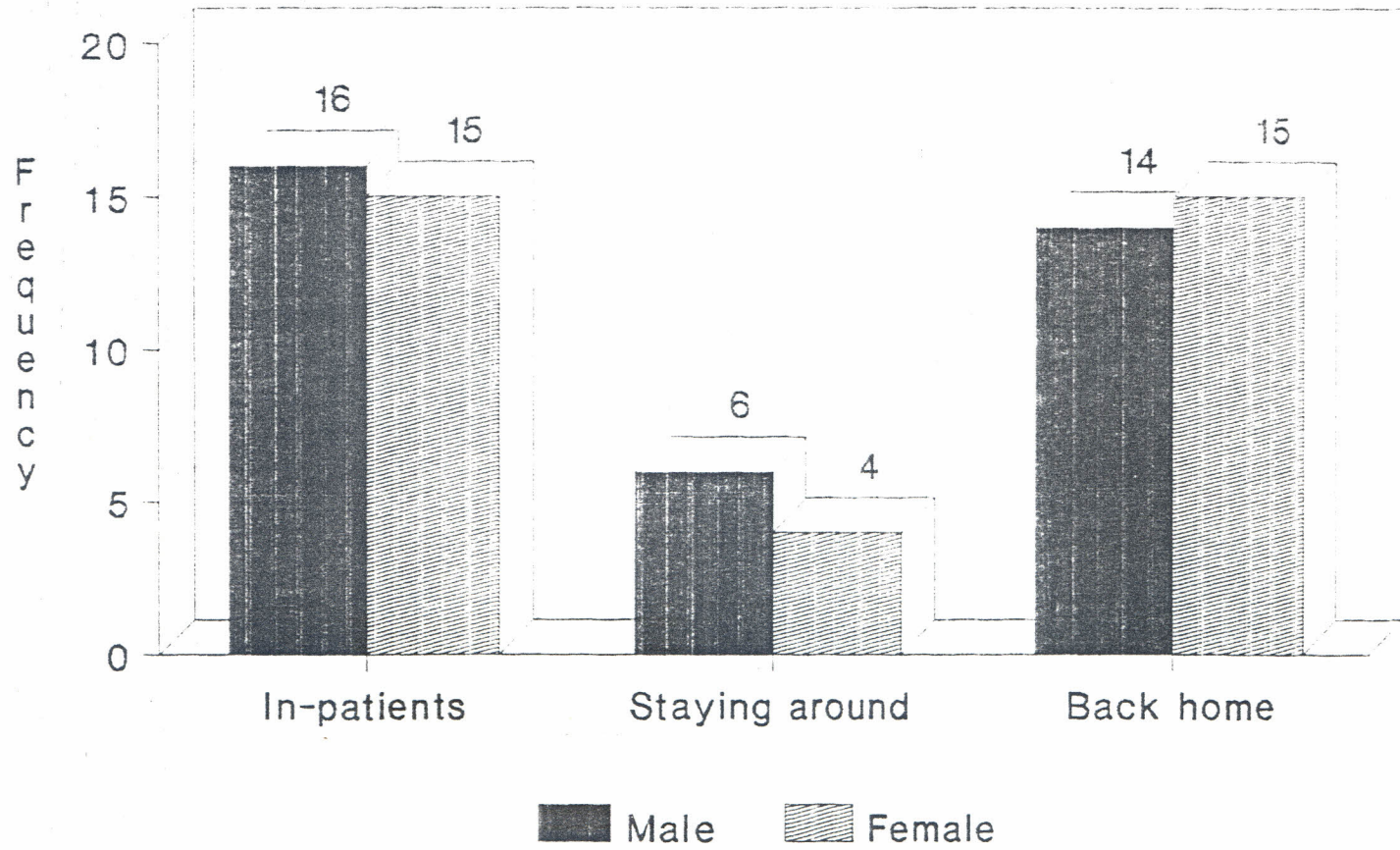
CHAPTER 4

RESULTS4.1 Patients Results

A total of 70 respondents 31 being leprosy patients and 39 former leprosy patients were interviewed. For the distribution according to sex and category see figure 7 and table 3. The inpatients consisted of 16 males and 15 females. There were 6 males and 4 females former patients who did not go back to their community but stayed around Alupe. 14 males and 15 females went back to their communities.

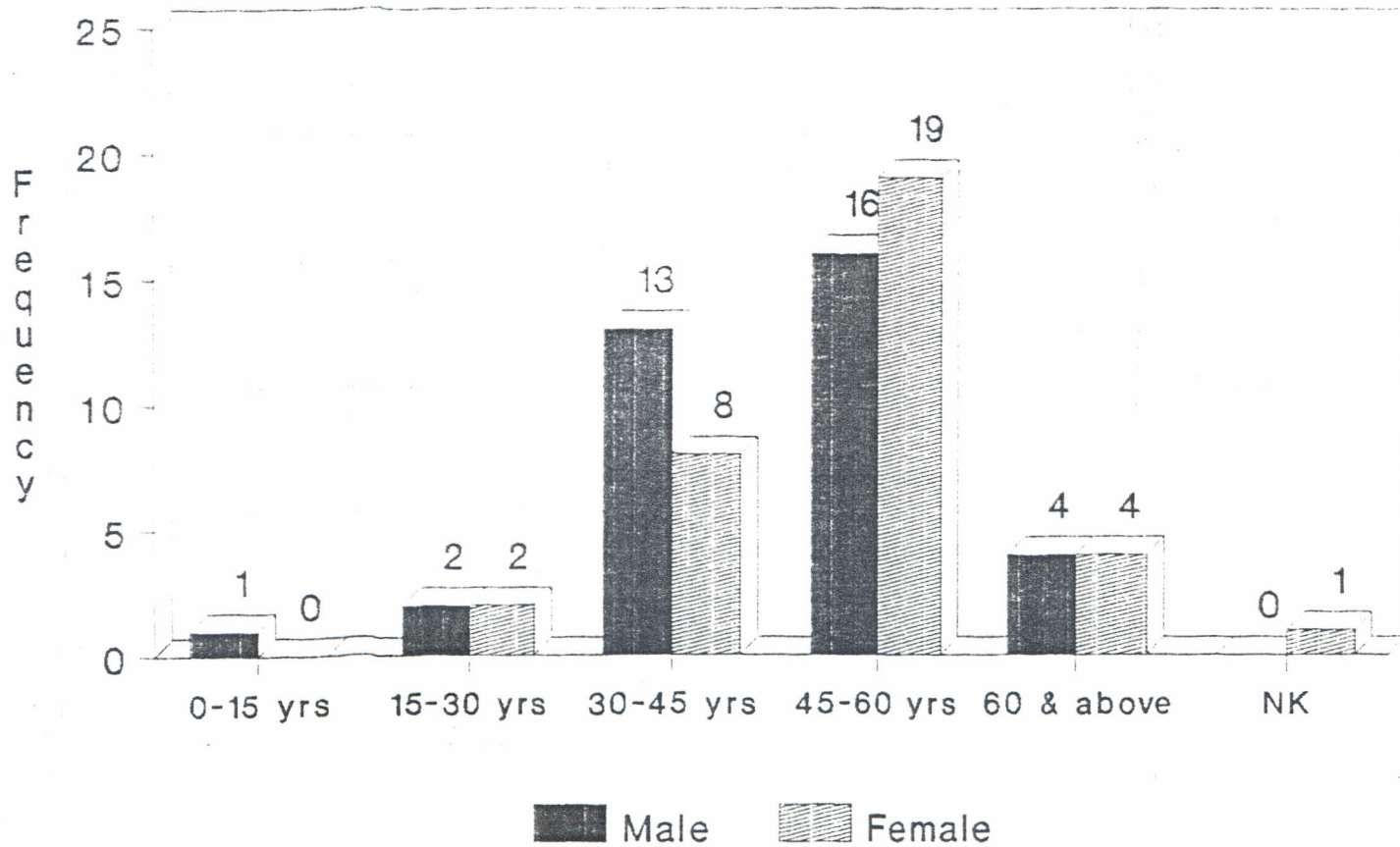
Table 3. Distribution according to category and sex of leprosy and former leprosy patients surveyed in Alupe Leprosy Hospital and Busia District.

Category	Sex		Total
	Male	Female	
In-patients	16	15	31
Staying around Alupe	6	4	10
Back home	14	15	29
Total & %	36(51.4)	34(48.6)	70(100)



Staying around • settled around Alupe

Fig. 7: Distribution of the leprosy patients according to category and sex



NK - Age not known

Fig. 7a: Distribution of the leprosy patients by age and sex

Table 4. Distribution of Age and Sex of leprosy and former leprosy patients surveyed in Alupe Hospital and Busia District.

Age-group	Male	Female	Total & %
0-15	1	0	1(1.4)
15-30	2	2	4(5.7)
30-45	13	8	21(30.0)
45-60	16	19	35(50.0)
60 +	4	4	8(11.4)
N/Known	0	1	1(1.4)
Total & %	36.(51.4)	34(48.6)	70(100)

30% of the respondents were from age group 30 to 45 with 13 males and 8 females. 50% of the respondents were from age group 45 to 50 with 16 males and 19 females. 11.4% were from the age group of 60 and above (see table 4 and figure 7a).

The percentage of patient according to their disability grades is shown by using a pie chart.

Grade 0- 8.6%
 Grade 1- 27.6%
 Grade 2- 21.4%
 Grade 3- 42.3%

(See figure 8)

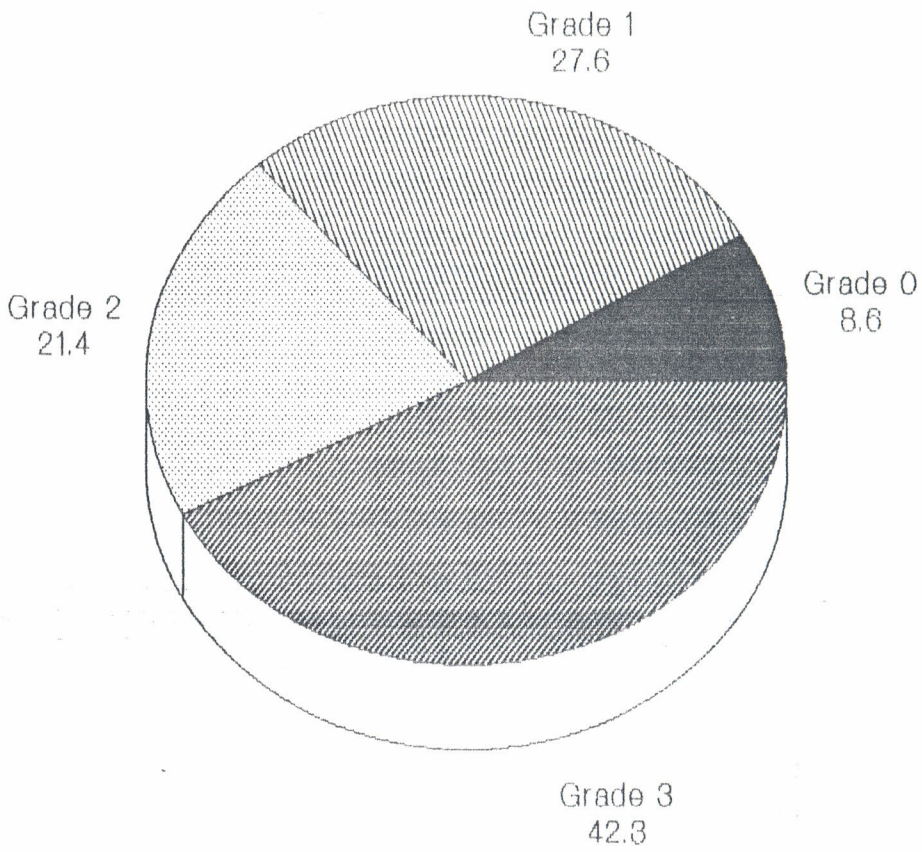


Fig 8: Disability grading of the patient respondents

Table 5. Distribution according to marital status and sex of the leprosy and former leprosy patients in Alupe Hospital and Busia District, Oct-Dec. 1991.

Marital Status	Sex		Total & %
	Male	Female	
Single	6	1	7(10.0)
Married	21	23	44(62.9)
Separated	1	2	2(4.3)
Divorced	4	3	7(10.0)
Widowed	4	5	9(12.8)
Total	36	34	70(100.0)

62.9% of the patients were married with a higher percentage of females (67.6%) being married as compared to 58.3% of males.

Table 6. Distribution of level of education according to sex of the leprosy patients and former patients in Alupe Hospital and Busia District (Oct-Dec. 1991)

Level of Education	Sex		Total & %
	Males	Females	
None	15(41.7)	32(94.1)	47(67.1)
Primary	18(50.0)	2(5.9)	20(28.6)
Adult Education	0(0.0)	0(0.0)	0(0.0)
Secondary	3(8.3)	0(0.0)	3(4.3)
University	0(0.0)	0(0.0)	0(0.0)
Total	36(100.0)	34(100.0)	70(100.0)

47 out of 70 respondents (67.1%) had no formal education. 28.6% had primary education out of which 50% were males and 5.9% were females. 4.3% had secondary education and were males.

Table 7. Occupation of leprosy patients and former patients before illness, after diagnosis and treatment in Alupe leprosy hospital and in Busia District (Oct.- ec.1991)

Occupation after	Occupation before illness (Category)						
	1	2	3	4	5	6	7
	No. of Patients						
1	1	-	-	-	-	-	-
2	1	2	9	-	1	-	-
3	2	4	33	7	3	-	-
4	-	1	2	-	-	-	-
5	-	-	1	-	-	-	-
6	-	-	-	1	-	1	-
7	-	-	-	-	-	-	-

1 = student

2 = unemployed

3 = self-employed

4 = unskilled

5 = civil servant

6 = professionals

7 = housewife

The majority of the patients before illness were self-employed and were still self-employed after illness. 9 out of the patients had been self-employed and were now unemployed.

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Table 8. Patients and former patients source of first hand information about the disease leprosy in Alupe and in Busia District (Oct.-Dec. 1991).

Source of Information	Group			Total & %
	In-patients	Back Home	Not back	
From Hospital	13	7	5	25(38)
Neighbour	5	4	3	12(17)
Former lep. patient	1	2	2	5(4)
Health Worker	2	2	0	4(6)
Relatives	1	3	1	5(7)
Herbalist	1	0	0	1(1)
The Church	1	0	0	1(1)
Own Observation	6	9	1	16(23)
Father with leprosy	0	1	0	1(1)
Mother with leprosy	0	1	0	1(1)
No idea	1	0	0	1(1)
Totals	31	29	10	70(100)

38% of the patients had first knowledge of leprosy by the time they reached hospital. 23% got the knowledge from their own observation. 17% got the knowledge from their neighbours.

Table 10. Leprosy and former leprosy patients' knowledge about the cause of leprosy in Alupe and Busia District.

Cause of Leprosy	No. of patients and percentage.
Caused by germs	23(32.8)
Inherited disease	7(10.0)
By certain foods	2(2.9)
Occurs like other diseases	2(2.9)
Infected people	1(1.4)
Comes from God	4(5.7)
Caused by evil spirits	3(4.3)
Do not know	28(40.0)
Total	70(100.0)

40% of the patients declared that they did not know the cause of leprosy while another 26.9% gave wrong causes.

Table 6 describes the distribution of level of education according to sex of the former leprosy patients in Alupe. Table 10 gave the breakdown of the knowledge of the cause of leprosy. Chi-square test was used to find any association between patients' education and knowledge of leprosy as follows:

	Correct	Incorrect	Total
None	15	13	28
Primary or more	19	23	42
Total	34	36	70

N.B

None = No formal education

Primary or more = primary and above primary education

Using Chi-square test

$$\chi^2 = 2.046$$

$$df = 1$$

$$p \text{ value} = 0.153$$

This result shows that there is no association between former leprosy patients and leprosy patients education and their knowledge of leprosy.

Table 13. Types of rehabilitation activities undergone by leprosy patients and former leprosy patients in relation to their satisfaction.

		Type of rehabilitation			
Satisfied		Physical	Occupational	Surgical	Verbal
Yes	Yes	31(91.2)	8(88.9)	9(75.0)	4(100)
No	No	3(8.8)	1(11.1)	3(25.0)	0(0)
No	Total	34(100.0)	9(100.0)	12(100.0)	4(100)

$$\chi^2 = 1.281$$

$$df = 3$$

$$p = 0.734$$

Considering patients' satisfaction in relation to the types of rehabilitation undergone, of those who had verbal rehabilitation (health education) all of them said they were satisfied. 91.2% of those who had physical rehabilitation were satisfied. There was no association between type of rehabilitation and their satisfaction.

Table 14(a). Willingness to go home among the in-patients interviewed at Alupe leprosy hospital (Oct.-Dec. 1991).

Willing	When or Why not			Totals
	Immediately after treatment	No body to help back home	Working away from home	
Yes	29	-	-	29
No	-	1	1	2
No. of patients	29	1	1	31

93.5% of the inpatients interviewed were willing to return to their communities after treatment.

Table 14(b). Reasons for returning home from Alupe leprosy hospital after treatment among patients who went back to their original community (n=29).

Reason	No. of patients & Percentage
Completed treatment	16(55.2)
Called back by relatives	2(6.9)
To join the family	11(37.9)
Total	29(100.0)

Of 29 patients who went back to their original community, 55.2% did so because they had completed treatment, 37.9% did so to join the family while only 6.9% were called back by relatives.

Table 14(c). Reasons for not going back home from Alupe leprosy hospital among those patients who have settled around Alupe Community (n=10).

Reason	No. of patients & Percentage
Not liked by people at home	4(40.0)
Have no family back home	1(10.0)
Have land around Alupe	1(10.0)
Was chased by brothers	1(10.0)
Sent away by husband	2(20.0)
Stays with relatives around	1(10.0)
Total	10(100.0)

Some of those who settled around Alupe community did so because they thought that they were not liked by people at home.

Some also stayed because of their interest in petty trading around Alupe and some gained employment at the hospital. They bought land around Alupe.

4.2 COMMUNITY MEMBERS

266 community members were interviewed during the survey period. Their ages ranged from 15 to 70 years with a mean age of 33.2 years (see figure 9). The sample was composed of 110 males and 156 females of whom 72.2% were married and 18.5% were single. Education level of the respondents revealed 45.5% with primary education, 23.3% had no formal education, 23.7% had secondary education, 5.3% had post secondary and 1.5% had university education as shown in figure 10.

Occupation of the community members varied as follows:

40% of the community members interviewed were peasant farmers. 10.1% were housewives , 10.9% were businessmen while 9.3% were civil servants and 8.2% were professionals (see figure 12).

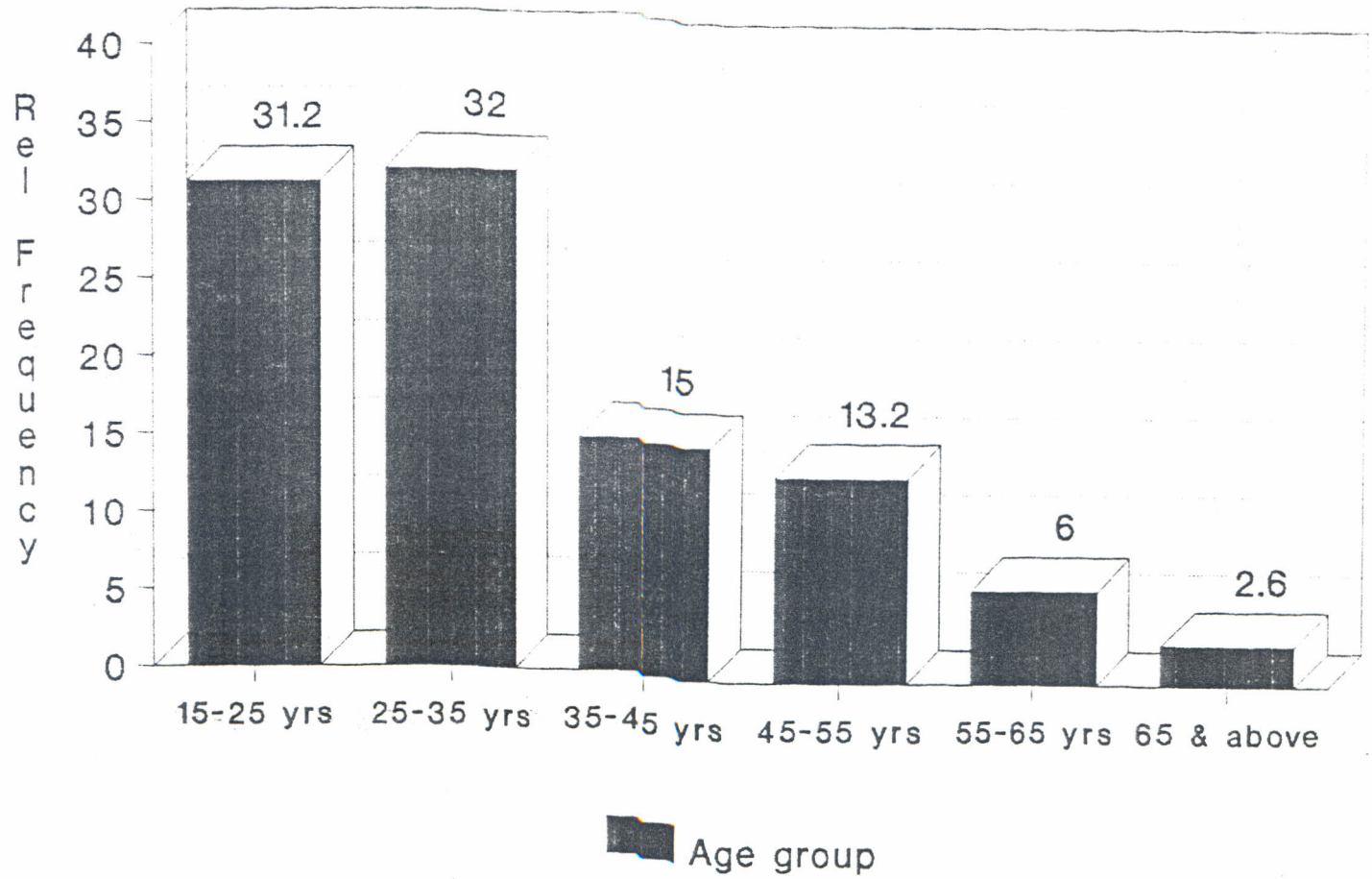


Fig. 9: Age distribution of the community members

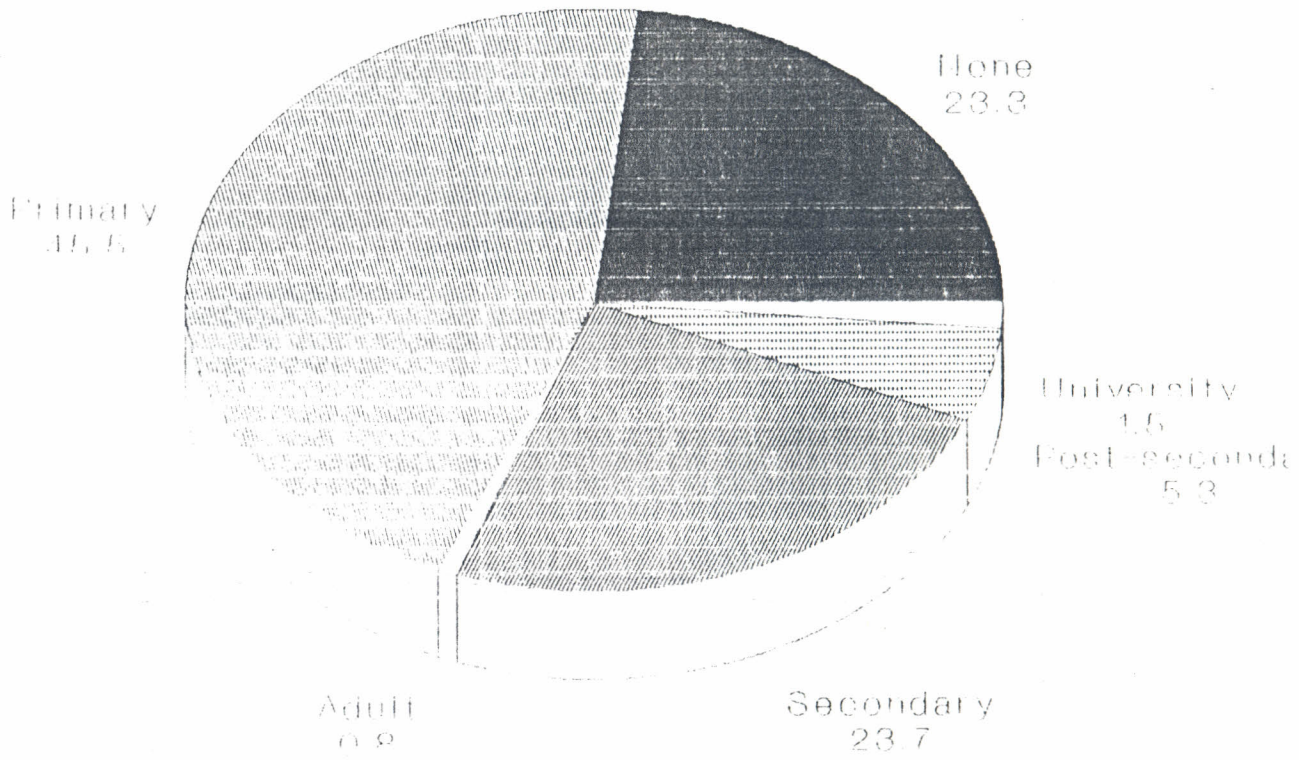
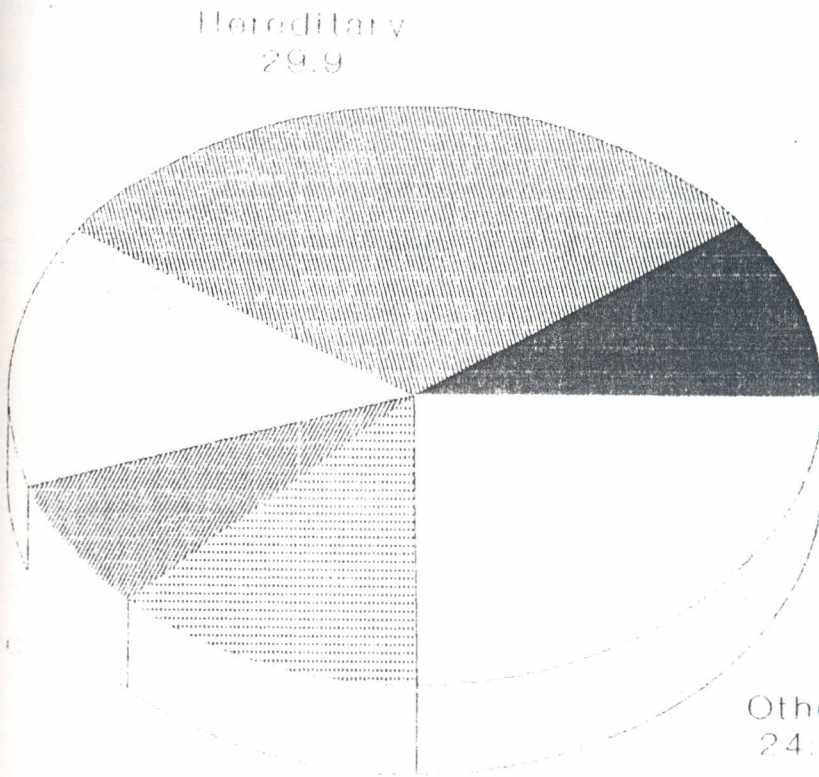


Fig. 10: Education level of the Community members



Hereditary
29.9

Disease without cure
10.2

Other
24.6

Punishment from God
12.3

What Community members
deprosy was

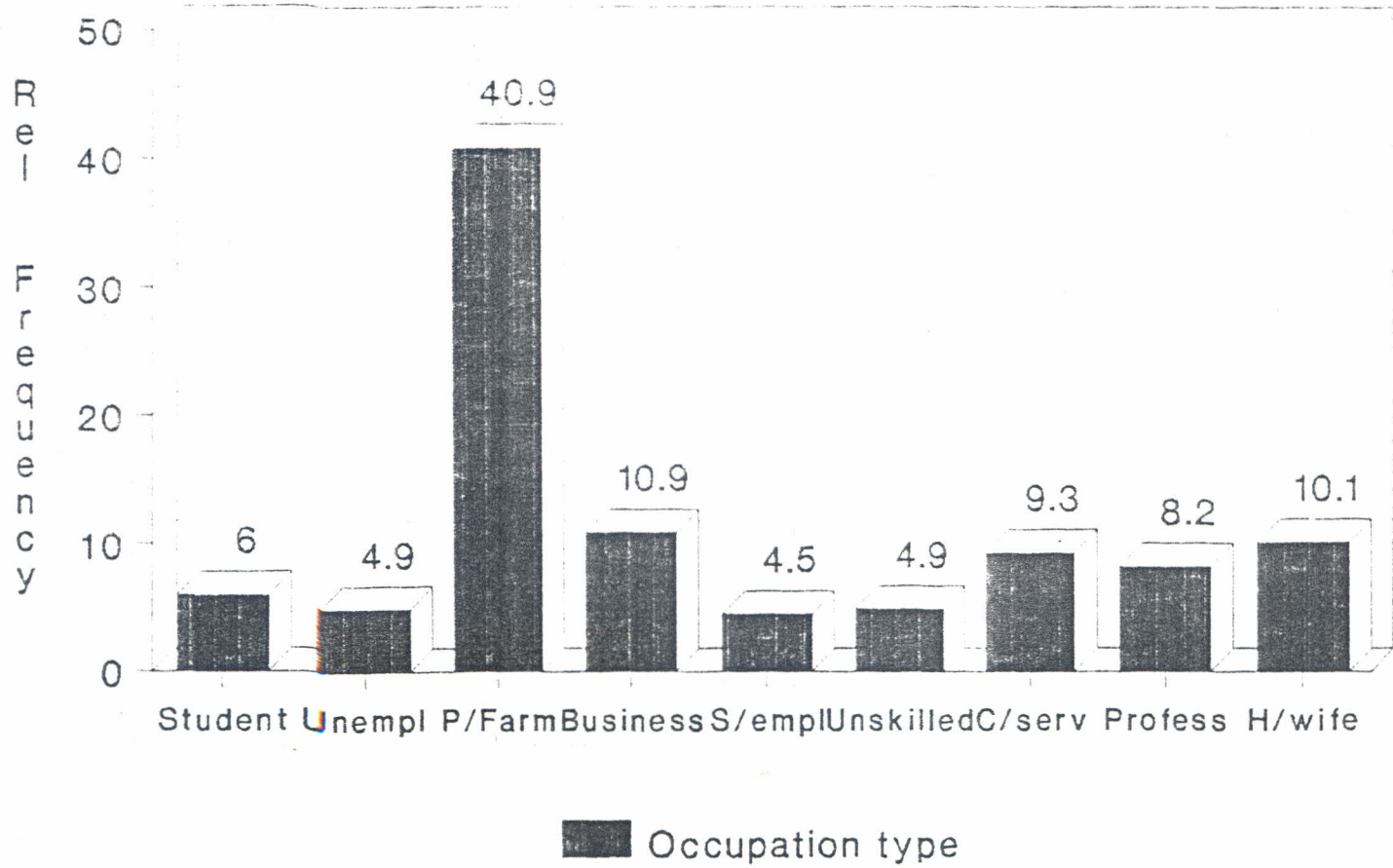


Fig. 12: Occupation of the Community members interviewed

A further statistical test was carried out to determine what community members thought leprosy was Fig. 10 from what leprosy is actually known to be. The result is as follows:

Education	Correct	Incorrect	Total
Yes	51	169	220
No	3	17	20
Total	54	186	240

Using Chi-square test

$$\chi^2 = 0.313$$

$$df = 1$$

$$p \text{ value} = 0.576$$

This result shows that there is no association between community member's knowledge of leprosy and what the actual meaning of leprosy.

HEALTH WORKER'S RESULTS

All the 45 health workers interviewed during the survey, 33.3% came from Busia and 31.2% came from Kakamega, 17.7% came from Mbaraka district. There were 28 males and 17 females. Most of them (56.6%) had post secondary training at various Medical Training Colleges in Kenya. 2.2% had University education.

Regarding occupation, it was found out that 40.9% of those interviewed were in the Nursing Profession. 9.1% were T.b/Leprosy field workers, 9.1% were occupational therapist, 6.8% were clinical officer and 2.3% medical officer.

6% of the health workers had medical training while only 4.4% had no medical training of any kind. 91% had knowledge of leprosy and 8.9% had no knowledge of leprosy.

The health workers gave the types of rehabilitation at Alupe as the following: 36% talked about occupational rehabilitation, 32% mentioned physical rehabilitation, 22% mentioned social rehabilitation, 21% agreed on surgical rehabilitation while only 4% mentioned health education. (See figure 13.)

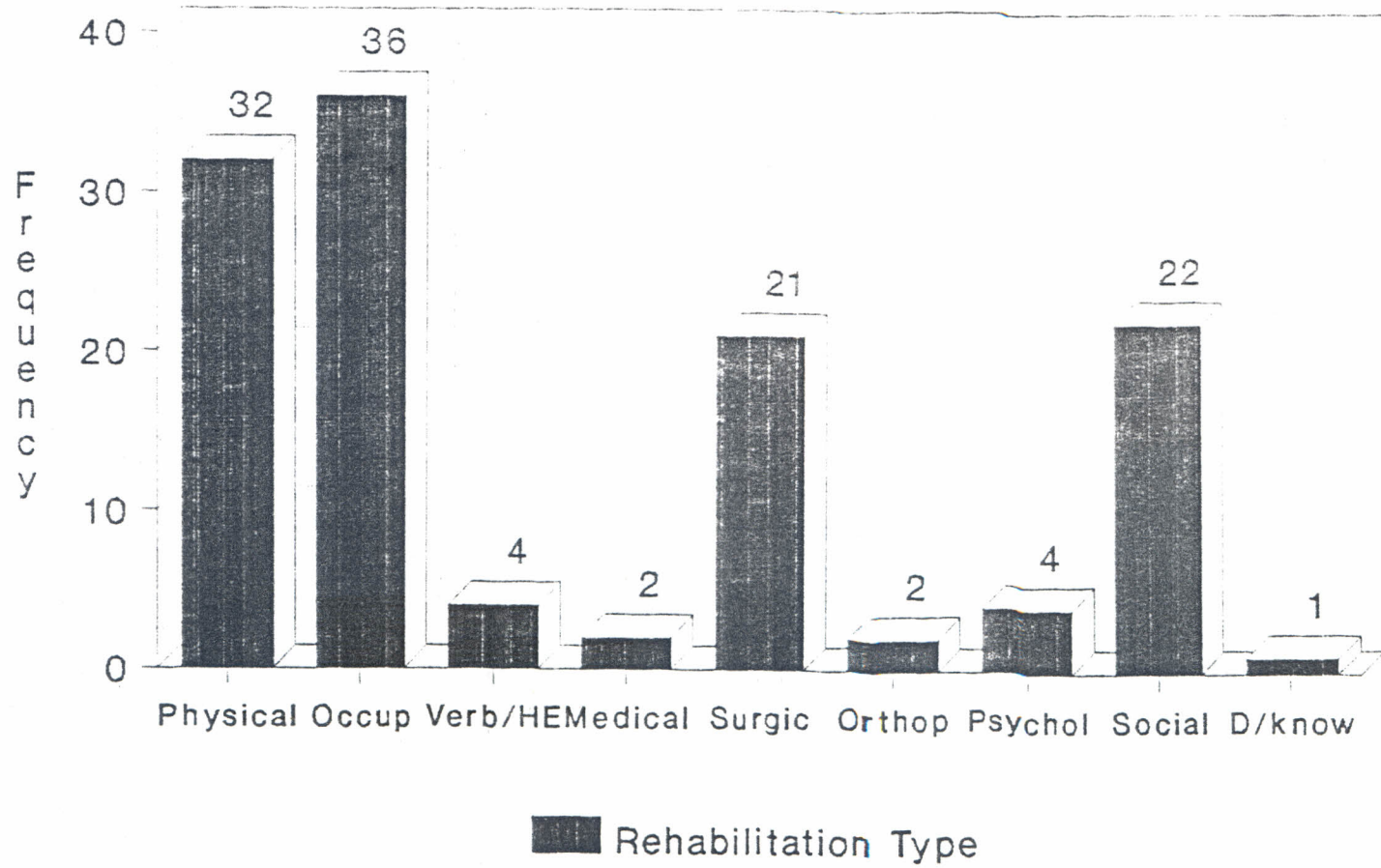


Fig. 13: Types of Rehabilitation available at Alupe

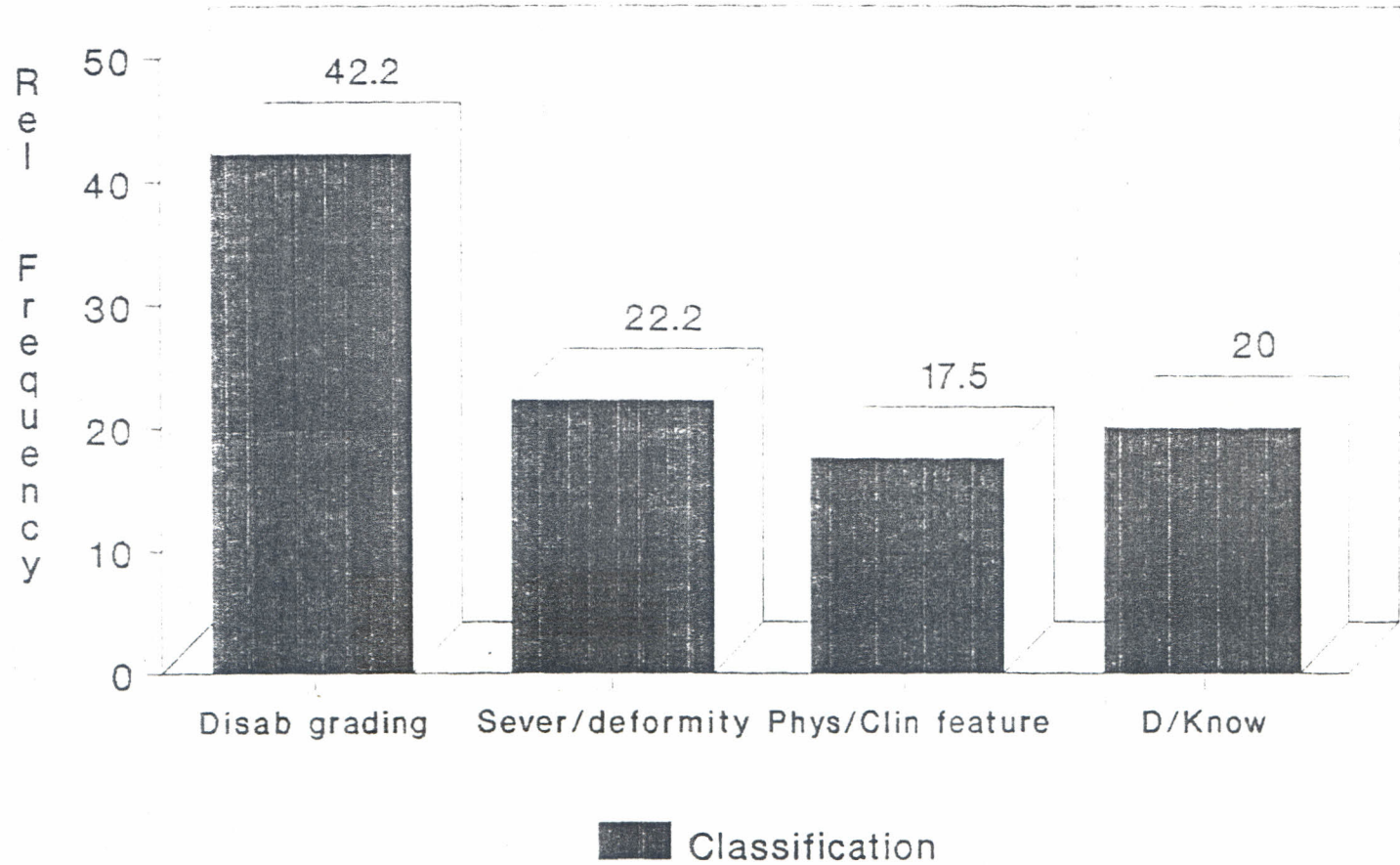


Fig. 14: Health Workers opinion of Patient classification

Health workers opinion about rehabilitation showed that 42% believed rehabilitation of patients is due to disability grading. 22.2% said rehabilitation is given according to severity of the deformity. 17.5% believed that physical or clinical features determine the type of rehabilitation to be given. 20% do not know why the rehabilitation is given.

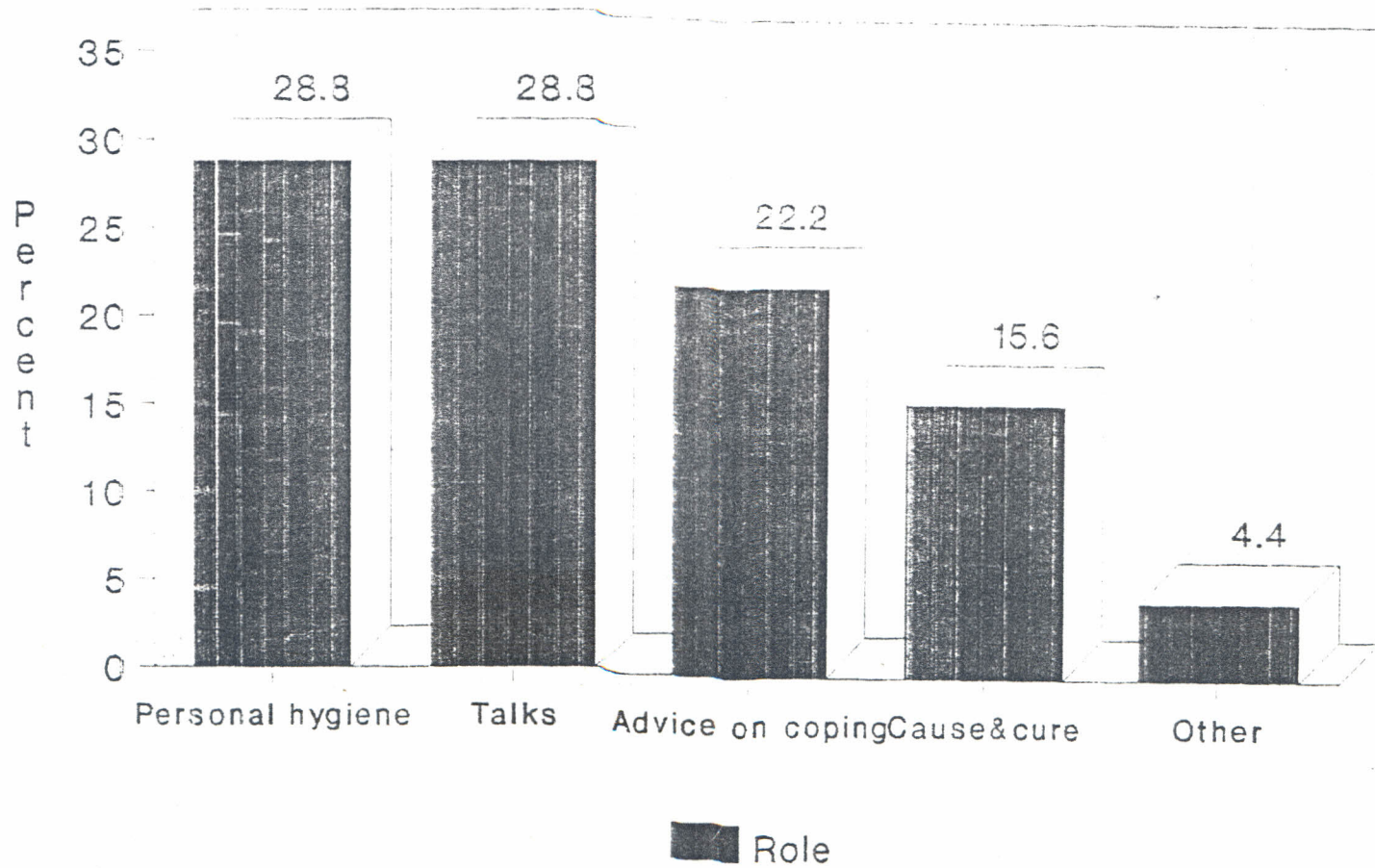


Fig. 15: Role of health workers in health Education

The role of health workers in health education is described as follows:

28.8% agreed that they gave talks on personal hygiene.

28.8% said they gave talks on non-specific subjects.

22.2% gave advice on how patients and relatives can cope.

15.6% gave talks on cause of disease and curability.

4.4% gave other reasons for either not giving talks or do not know what to do.

In spite of these results, 100% knew what disability was but only 64.4% knew that rehabilitation depended on degree of disability grading or severity of disability. This must have affected their role in health education about leprosy. This showed that 66.5% of the health workers knew what to do as regards to health education. While 33.5% did not know what their contribution was in health education. (see fig. 15).

97.8% of health workers agreed that all patients should have vocational rehabilitation. 95.6% said leprosy patients should be helped and 76.7% agreed that everybody should help these patients.

CHAPTER 5

5.1 GENERAL DISCUSSION

This study has attempted to find out what the impact of rehabilitation of former leprosy and leprosy patients would have on integration of these patients in the area studied and to examine the relationship between these former patients and the community members as regards to full acceptance by them and the dependence status.

From what has been presented so far, it is quite clear that leprosy is a big problem and the study did reveal among other things that the low knowledge of leprosy and curability is not peculiar to patients alone but to all the communities in Busia.

The level of education of patients and former patients affected their compliance with drug therapy. 67.1% had no formal education, with these results it is very difficult to convince these patients about the effectiveness of any drug therapy. Hence their specific health education might be difficult to achieve. That should not discourage any health worker about the curability of the disease.

Also the level of education of the community members was shown to have direct association with their knowledge of the disease. In order to improve the knowledge of the disease, general knowledge should also be improved.

It is interesting to note that vocational rehabilitation is accepted by all interviewed as a means of making former patients self reliant but has little influence in bringing women back to their original community because it appears that strong family ties played a big role in bringing women back.

As for disability, 42% of the patients surveyed had disability of grade 3 which is permanent. These disability percentage is not too different from that recorded for Kenya (5).

Table 11 showed disability grading with relationship to treatment attendance. This revealed that those in disability grade 3 attended treatment most regularly due to the fact that some of these had belief in treatment as the only way to cure them. It also showed that here irregular attendance was highest as well. This may be due to the fact that these patients do not trust chemotherapy any more or they now see the hopelessness of their conditions. Much work is needed in health education to educate patients specifically and community members generally as regards to disappearance of disability. If it is grade II or grade III disability, which is permanent, never disappears even when the patient is cured. Also in children at times some present with disability at first visit to the hospital which is in support of high prevalence of leprosy of and disabilities in the community and these confirm virulent strain of leprae bacilli and the early incubation period for the disease (23).

The knowledge of leprosy among health workers needs to be considered carefully. The role played in health education by these health workers was obtained from the type of rehabilitation available at Alupe. Only 4 mentioned health education as rehabilitation. From table 10 patients first had information about the disease leprosy 38% knew from the hospital. What is clear from this is that health education is either not clearly understood by some health workers as rehabilitation process or they thought Health Education is something else hence they fail to mention it as rehabilitation during the survey.

From this study, 40.9% of the health workers were nurses and since they come closer to patients than any other health worker, then they should be considered first for knowledge update of leprosy. This can be done on regular basis through seminars. Unless this is started now, the role of health workers in health education will not be achieved by the year 2000. Health workers have a big role to play in order to achieve health for all by every one.

93.5% of inpatient interviewed were willing to return to their community after treatment. This is an interesting finding because according Adalla patients themselves were not willing to go back (2). The willingness of the patients to return is higher than community members' willingness to accept them back (82.2%). This is in line with Vogel reference to social aspect of the disease of which little was known about (30). Work had started earlier on the

beliefs and attitudes towards the disease and its treatment (21) and it is still going on. Attitudes to leprosy are difficult to change and a survey which does not take sufficient account of the sociological aspects of the disease, the prejudices and customs surrounding it, will fail (6). Frequent survey in the communities regarding attitudes can bridge the gap so that the attitude can change gradually with time.

According to WHO, community based rehabilitation within the primary health care should be the only approach to solving re-integration of these patients and since a high percentage of the community members are willing to accept back all these patients, then the need for long hospital stay should be minimised by early case finding, appropriate and adequate chemotherapy with prevention of disabilities, so that patients can go back to their homes as early as possible and stay in the family. Then they can undergo any community based vocational training that could make them self-reliant (33).

The main limitation of this study were:

-) Rehabilitation study of this type has not been tried neither in Alupe nor else where in Kenya to actually see its impact on integration.
-) The number of rehabilitation facilities are limited in terms of personnel and materials.
-) The word rehabilitation itself is not clearly understood by

patients and community members alike.

- d) Some of the community members, approximately 6% were not willing to discuss leprosy. Most claim that Busia was not their district of origin. Refusals were mainly from female members of the community.

Nevertheless, the study showed that rehabilitation has an impact on the patient because those who had it were satisfied with the types they underwent. As a result of this finding, rehabilitation programme is important and should be an integrated part of a good control programme that might be planned in future to control leprosy disease.

5.2. CONCLUSION

Leprosy is still a public health problem. It should not be seen as a special disease any more. Health planners, should allocate resources to provide facilities for management of leprosy cases in all hospitals, health centres and dispensaries.

Complicated cases like reaction type II erythema nodosum leprosum or any case refractory to treatment should be referred to Alupe or any other referral centre.

This will definitely make the management of leprosy an integral part of primary Health Care strategy which was spelt out in the Alma Ata declaration of 1978.

So, if health for all by year 2000 is to be achieved then the medical and social problems still attached to leprosy must be removed. Hence further work must be done to find permanent solutions to the problems of integrating fully former leprosy patients into various communities not only in Kenya but every corner of the world where leprosy is still a major public health problem.

Basic principles for the rehabilitation of leprosy patients should be the following:

- 5.2.1. Health education, both general and specific, must be the basis of rehabilitation.
- 5.2.2. A natural and emphatic approach to the patient is required to reduce psychological trauma and loss of identity to the minimum.
- 5.2.3. Hospitalization should be for short periods, each with definite objectives, long-term treatment should include periods at home from time to time to avoid long separation from family.
- 5.2.4. Much time should be spent by the health care team in instructing the patient on the care of his hands and feet and prevention of injuries.
- 5.2.5. The approach of rehabilitation should not be confined to one channel such as sheltered industry or domiciliary employment, but all efforts should be made to find out the type of rehabilitation most suited to the country; the environment, the patient's attitude, skills and social status and available funds for capital costs per workplace. In short it should be a multi-channel approach, if proper rehabilitation is to be achieved by all rehabilitation workers.

5.3 RECOMMENDATION

- 5.3.1. Leprosy is a major health problem with serious socio-economic consequences. Its control programme should be intensified and wherever possible, should involve everybody.
- 5.3.2. Standard rehabilitation programme should be an integral part of a National Leprosy Control Programme. This should be started immediately with the formation of rehabilitation team whereby an experience health care provider with working experience in leprosy preferable is the head of this team. (The author here is in disagreement with WHO literature (16) that the head of rehabilitation team should be a physician. He is of the opinion that any experienced health care provider could head the team. This is in line with primary health care approach).
- 5.3.3. Vocational rehabilitation which is also occupational, economic or industrial rehabilitation should be integrated into rehabilitation programme for all leprosy patients who stay longer than a year.
- 5.3.4. Provision should be made for special vocational training for those severely disabled so that from this particular training they could begin income generating activities like starting a theatre group.
- 5.3.5. Health Education about the causative agent, treatment and curability of leprosy should be started immediately in

the communities to improve K.A.P. towards leprosy not only in these communities but in Kenya as whole.

5.3.6. Provision should be made for knowledge update for all health workers on leprosy especially nurses. Special training and encouragement for all leprosy field workers, training of more skilled workers in leprosy as required.

5.3.7. There should be an improvement in public health in the communities which should involve construction of pit latrines, provision of safe drinking water and proper housing. Improvement in public health in Europe, was attributed to decline in leprosy disease even before *Dapsone* (33).

5.3.8. Community health workers should be encouraged to visit former leprosy patients in order to review periodically their health status and care of the affected parts. They should also inspect their housing conditions and would report back to the team.

5.3.9. A part of funding money used for purchase of drugs should now be used for rehabilitation. Leprosy cases are on the decline and rehabilitation has been shown to be beneficial to patients with permanent disabilities. Instead of looking for funding, the budget allocated for chemotherapy of leprosy can be shared with rehabilitation.

- 5.3.10. a) From this study it was concluded that further research should be carried out in the area of rehabilitation with emphasis on community operational research (33).
- b) Further studies should be carried out to cover social aspect of the disease to accelerate integration of former leprosy patients.
- c) Further studies should be carried out to justify training of new cadre of nurses such as rehabilitation nurses.

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APPENDICES

DATA COLLECTION QUESTIONNAIRE
(FOR COMMUNITY MEMBERS)

ID.NO ()

SECTION A

1.Surname Other names

2.District origin Location

3.Age (Years) ()

4.Sex ()

Male - 1

Female 2

5.Marital Status()

Single-1

Married-2

Separated-3

Divorced-4

Widowed-5

6.Religion()

Christian-1

Muslim-2

Hindu-3

Others (Specify)

7.Level of Education attained()

Name-1

Primary School-2

Adult Education - 3

Secondary School -4

Post secondary-5

(excluding University)

University-6

If p o s t s e c o n d a r y , (p l e a s e s p e c i f y)

.....

8.What is your main occupation?

.....

SECTION B

9.(a)Do you know of any leprosy patient in this community?()

Yes-1
No-2

(b)If yes, how do you know that he/she has leprosy?

.....

(c)Do you know something about leprosy?

Yes-1
No-2

(d)If yes, what do you think leprosy is?

- Punishment from goddisease - 1
 - Disease without cure but disability - 2
 - Hereditary disease - 3
 - Disease caused by germs - 4
 - Disease with a cure - 5
- (Others specify)
patient? Yes/No

10.What are your feelings about this patient?

.....
.....

11.(a)Would you want any of the leprosy patients to come back and stay in this community?()

Yes-1
No-2

(b)If no, then please give reasons

.....
.....

12.(a)Would you say these leprosy patients need to be helped?()

Yes-1
No-2

(b)If yes, who should help them?

.....
.....

13. How much help do you think the government and the hospital should give to post-leprosy patients and leprosy patients?

.....
.....

14(a) Do you think the community should also help them?()

Yes-1
No-2

(b) If yes, in what way?

.....
.....

15. How do people in this Community perceive the disease?

- Punishment from god/disease - 1
- Disease without cure but disability - 2
- Hereditary disease - 3
- Disease caused by germs - 4
- Disease with a cure - 5
- (Others specify)

.....
.....

16. How will you rate these questions we have asked you?()

- Helpful-1
- Very helpful-2
- Not helpful-3

17. Comments if any?

.....
.....
.....

"THANK YOU VERY MUCH FOR THIS INFORMATION"

Interviewer

Date

DATA COLLECTION QUESTIONNAIRE
(FOR HEALTH WORKERS)

ID.NO ()

SECTION A

1.Surname Other names

2.District of origin Location

3.Age (Years) ()

4.Sex ()

Male - 1
Female 2

5.Marital Status()

Single-1
Married-2
Separated-3
Divorced-4
Widowed-5

6.Religion()

Christian-1
Muslim-2
Hindu-3
Others (Specify)

7.Level of Education attained()

Name-1
Primary School-2
Adult Education - 3
Secondary School -4
Post secondary-5
(excluding University)
University-6

If p o s t s e c o n d a r y , (p l e a s e s p e c i f y)
.....

8.What is your main occupation?
.....

9.(a)Have you undergone any medical related
training?()

Yes-1
No-2

(b)If yes, where were you trained?
.....

(c)What was the nature of the training?
.....
.....

(d)How long was the training?
.....
.....

10.(a)In your work, do you deal directly with the leprosy patients?()

Yes-1
No-2

(b)If yes, in what way?
.....
.....

11.What do you know about leprosy?
.....

12.(a)Are you aware of the types of disabilities caused by leprosy?

Yes-1
No-2

(b)If yes, please mention the types:
(i).....
(ii).....
(iii).....
(iv).....
(v).....

13.Would you please mention the types of rehabilitation activities available for the leprosy patients here?

(i).....
(ii).....
(iii).....
(iv).....
(v).....

14.In your opinion, how do you classify patients in these types of rehabilitation?

.....
.....
.....

15.(a)Do you think leprosy patients should have vocational rehabilitation also as well as other rehabilitation? ()

Yes-1
No-2

(b)If yes or no give reasons
.....
.....

16.In what ways are you involved in giving health education about leprosy?
.....
.....

17.(a)Would you say these leprosy patients need to be helped?()

Yes-1
No-2

(b)If yes, who should help them?()
Government-1
Community-2
Family and friends - 3
All the above - 4

Others (specify)

18.How would you rate the questions we asked you?()

Very adequate-1
Adequate-2
Not adequate-3

19.Comments if any?
.....
.....
.....

"THANK YOU VERY MUCH FOR THIS INFORMATION"

Interviewer
Date

DATA COLLECTION QUESTIONNAIRE
(FOR LEPROSY AND FORMER LEPROSY PATIENTS ONLY)

ID.NO ()

SECTION A

(Section 1 A-C Applies to all)

1.Surname Other names

2.District of origin Location

3.Age (Years) ()

4.Sex ()

Male - 1

Female 2

5.Marital Status()

Single-1

Married-2

Separated-3

Divorced-4

Widowed-5

6.Religion()

Christian-1

Muslim-2

Hindu-3

Others (Specify)

SECTION 1.B

7.Level of Education attained()

None-1

Primary School-2

Adult Education - 3

Secondary School -4

Post secondary-5

(excluding University)

University-6

If post secondary, (please specify)

8.What was your main occupation before
 you got the disease?

9.What is your main occupation now?
.....

10.(a)Do you have any other source of income?()

Yes-1

No-2

(b)If yes, (please specify)

11.What would you say is your average monthly income (KShs.)?
.....

12.When do you think you got the disease?
.....

13.How do you know that it is leprosy?
.....
.....

14.When it became known that it was leprosy what did you do to get treatment?
.....
.....

15.(a)How often do/did you attend for your treatment?()

Regularly-1

Very regularly-2

Irregularly-3

Very irregularly - 4

(b)What do you think causes this disease?
.....

16.The present disability grading of the patient/post leprosy patient is?()

Grading scale is from 1 - 3

17.(a)What is the form of the patient's disability?
.....

(b)What is the status of the patient's disability?()

Permanent-1

Temporary-2

18.(a)Have you undergone or undergoing any type of rehabilitation at Alupe?()

Yes-1
No-2

(b)If yes, please specify the type
.....

19.Do you think this type of rehabilitation was necessary for you?()

Yes-1
No-2

20.(a)Are you satisfied with the type of rehabilitation given?()

Yes-1
No-2

(b)If yes or no, please give reasons
.....
.....

SECTION 2

21.(a)With your present rehabilitation training and condition, would you like to go back to the community where you came from?()

Yes-1
No-2

(b)If no, please give reasons
.....

(c)If yes, when do you wish to return?
.....

(d)Would you require some kind of help *or assistance to facilitate your* going back?

Yes-1
No-2

(e)If yes, what type of help or assistance would you require?
.....
.....

(f) From who/where would you like to be assisted?()

- Alupe Hospital-1
- The Government-2
- Your family-3
- The community-4

Others (specify)

22. Comments if any?
.....
.....

(Applicable to those who are out but not back to their own community)

23. What made you choose to live in this community?
.....
.....
.....

24. Would you say you are happily settled here?()
Yes-1
No-2

25.(a) Are you making a living from the rehabilitation training you received at Alupe?()

- Yes-1
- No -2

(b) If yes, how much money do you make averagely per month (Kshs.)?
.....

(c) If no, how do you earn your living here?
.....
.....

SECTION 4

(Applicable to patients back to their original community)

26. Why did you decide to return to this community?
.....
.....
.....

27. Who arranged for your coming back?
.....

28.The first time you returned to your community, how did you feel?
.....
.....

29.What are your feelings now that you are back into your own community?
.....
.....

30.How did your relatives, friends and the community receive you upon your return?
.....
.....
.....

31.(a)Are you making a living with the rehabilitation training you received at Alupe?()

Yes-1
No-2

(b)If yes, how much do you earn on average per month (Kshs.)

(c)If no, how do you earn your living around?
.....

32.(a)Do you stay in your own home?()

Yes-1
No-2

(b)If no, who owns or pays for your residential place?
.....

33.How would you rate these questions we have asked you?

Helpful-1
Very Helpful - 2
Not Helpful - 3

34.Other comments if any?
.....
.....

"THANK YOU VERY MUCH FOR THIS INFORMATION"

Interviewer.....

Date



PLATE 1: A FEMALE PATIENT WITH LIMBS DEFORMITIES

(Courtesy of Alupe Leprosy Hospital)



PLATE 11: A CHILD WITH MULTI-BACILLARY LEPROSY

(Courtesy of Alupe Leprosy Hospital)

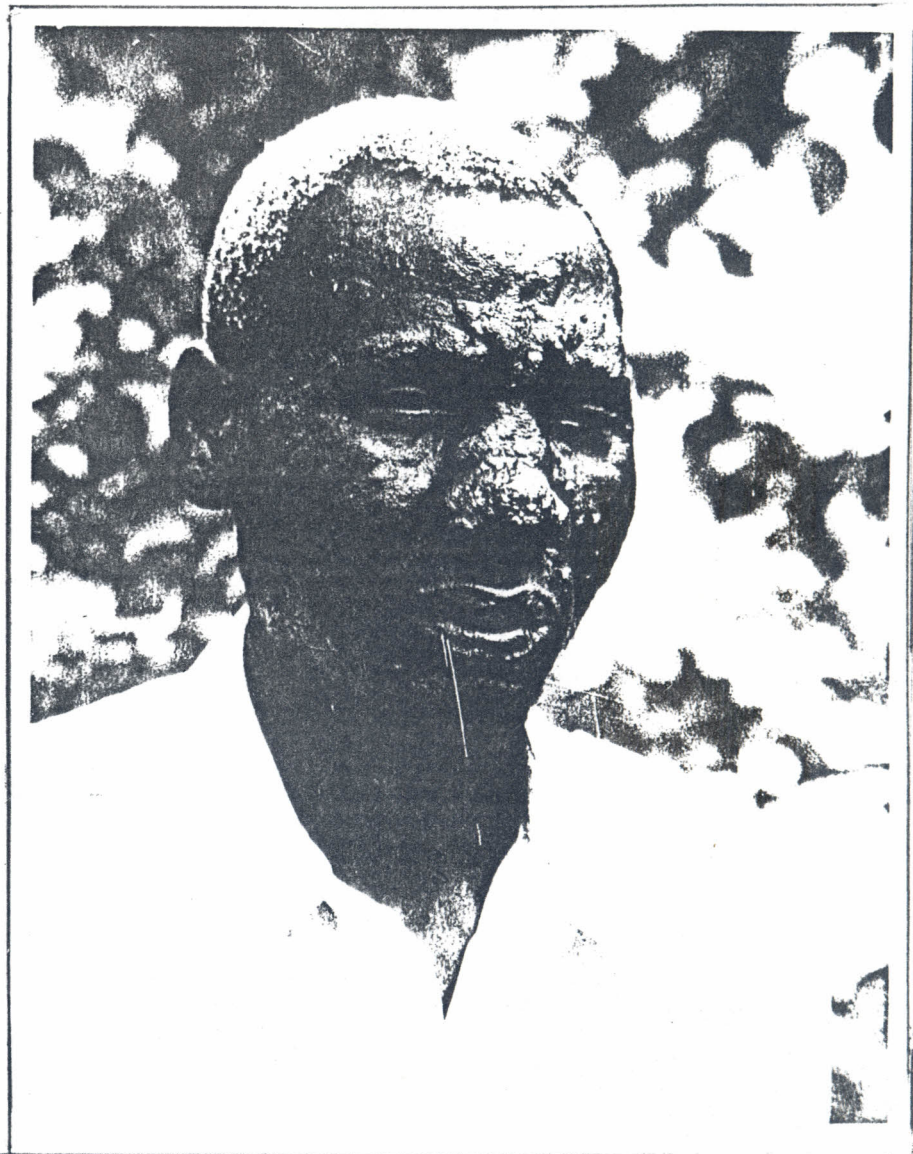


PLATE 111: ADULT MALE WITH MULTI-BACILLARY LEPROSY
(Courtesy of Alupe Leprosy Hospital)



PLATE 1V: ALUPE LEPROSY HOSPITAL PATIENT IN PLASTER OF PARIS
CAST (P.O.P. A TOOL IN ORTHOPAEDIC REHABILITATION)
(Courtesy of Alupe Leprosy Hospital)



PLATE V: A PATIENT UNDERGOING PHYSICAL REHABILITATION BY LEARNING HOW TO USE BALL PEN TO WRITE INSPITE OF THE HAND DEFORMITY (HERE FINGERS ARE BEING EXCERCISED)

(Courtesy of Alupe Leprosy Hospital)

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PLATE VI: A SMILING PATIENT HOLDING A HOE AN IMPORTANT
TOOL FOR VOCATIONAL REHABILITATION IN FARMING
(Courtesy of Alupe Leprosy Hospital)