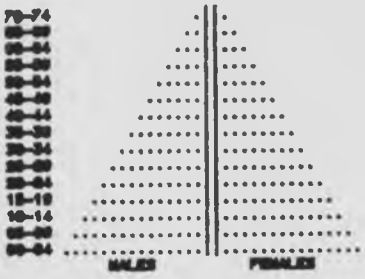


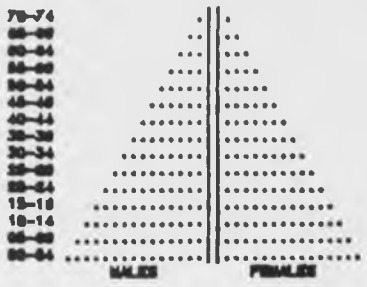
WORKING PAPERS IN DEMOGRAPHY

MORBIDITY AND MORTALITY IN LESOTHO: REFLECTIONS FROM HEALTH STATISTICS

by
Israel Sembajwe

Working Paper No. 7
September
1986

DEMOGRAPHY UNIT
DEPARTMENT OF STATISTICS
NATIONAL UNIVERSITY OF LESOTHO



WORKING PAPERS IN DEMOGRAPHY

MORBIDITY AND MORTALITY IN LESOTHO: REFLECTIONS FROM HEALTH STATISTICS

by
Israel Sembajwe

Working Paper No. 7
September
1986

DEMOGRAPHY UNIT
DEPARTMENT OF STATISTICS
NATIONAL UNIVERSITY OF LESOTHO

FOREWORD

This study presents a brief discussion of the causes of morbidity and mortality in the country based on health statistics records. The results indicate that infectious and communicable diseases are common in Lesotho, and suggest that there is a need for a more concerted effort by the government to carry out programmes for improving environmental sanitation in the country and to adopt appropriate preventive measures.

This information is presented to those who will find it useful as another attempt by the Demography Unit, National University of Lesotho, to disseminate available population and related information. Similar contributions by any researcher are accepted and considered for publication in the series.

TABLE OF CONTENTS

TABLES

FIGURES

Morbidity and Mortality in Lesotho: Reflections from Health Statistics

1. INTRODUCTION

Statistics from health institutions on outpatients and inpatients are one of the sources of morbidity and mortality data. But they are usually incomplete and unrepresentative. Incomplete because the returns from different health institutions are usually not all brought to the central hospital and therefore fluctuate from year to year; and unrepresentative because the information is related only to those individuals who are able to visit or to be admitted in any of the health facilities available in the country. Many thousands of the population of Lesotho may rarely have any luck to do so.

Despite these limitations, however, health statistics may be used to assess the general pattern and trends of causes of morbidity and mortality in the country. Therefore it is the purpose of this study to utilize this information to analyse the pattern of causes of morbidity and mortality in Lesotho. The data will cover the period 1981 to 1985.

2. THE GENERAL MORTALITY SITUATION IN LESOTHO

Available information from censuses and surveys indicates that in the decade 1971 to 1980 expectation of life at birth was in the range 49.3 to 52.7 years for both sexes and infant mortality was around 110 per thousand (Table 1). Information on mortality

1. Kingdom of Lesotho, 1981. 1976 Population Census, vol. IV, p.3.14; Kingdom of Lesotho, 1981. 1977 World Fertility Survey, p.8; Sembajwe, I. 1984 Lesotho Demographic Profile and Research Agenda, Working Papers in Demography, Paper N°.4, p.9; Timaeus, I. 1984. Mortality in Lesotho: A Study of Levels, Trends and Differentials Based on Retrospective Survey Data, I.S.I. N°.59,p.13

Table 1 **Infant Mortality and Expectation of Life at Birth by Area/Zone of Residence 1976**

Area Zone	Males		Females	
	$_1q_0$ Per 1000	e_0. (Years)	$_1q_0$ Per 1000	e_0. (Years)
Mountain and Senqu Valley	109	49.8	92	53.2
Lowlands and Foothills	111	49.3	94	52.7
Maseru Urban	88	54.1	74	57.7
Other Urban	108	50.0	91	53.5
Rural	112	49.1	95	52.5
Lesotho	111	49.3	94	52.7

Source: 1976 population census, vol iv. p.3.19 (Bureau of Statistics, 1981; Sembajwe, 1984)

differentials revealed that Maseru urban and other urban areas have lower mortality than rural areas. This is due, to a certain extent, to the concentration of health facilities and services in urban areas. In addition, people who are better educated and in high status occupation groups are also concentrated in urban areas. Because of their knowledge, they are able to improve their sanitary environment and to readily utilize modern medical and health care. In fact Table 2 indicates that as education and socio-economic status improve, mortality declines. Zonal differences also suggest differences in socio-economic conditions among the country's zones. The lowlands with a concentration of urban areas, with more persons with better education and in high status occupations, and with better agricultural production also experience lower mortality than other zones, especially the Mountain Zone where accessibility to health and other facilities is poor, and agricultural production is relatively limited.

Table 2 **Probabilities of Dying Between Birth and Age 2 by Education and Zone**

Education/Zone	Probability of Dying ($_2q_0$)
Education	
No Schooling	.2025
Lower Primary	.1481
Upper Primary	.1383
Secondary+	.0779
Zone	
Lowlands	.1263
Foothills	.1463
Orange River Valley	.1490
Mountains	.1757

Source : 1977 Lesotho Fertility Survey, Vol.1, p.130 (Bureau of Statistics, 1981; Sembajwe, 1984).

Seasonal effects on morbidity and mortality are somewhat reflected by Timaeus' analysis of child mortality in Lesotho. It is shown in that study that about 18½ per cent of children born in autumn and winter months (March to August) died before reaching the age of five compared to 16 per cent of children born in spring or summer dying before the same age.[2] He also observed seasnonal fluctuations in post-neonatal mortality which he attributed to possible changes in the prevalance of disease and in the nutritional status of children[3].

2. Timaues, 1984. Mortality in Lesotho, p.18

3. Ibid, p.19

Table 3 **Mortality Rates by Within Infancy According to Season of Birth (per 10,000)**

Age in months	Rates				Indices: Summer=Base Period			
	Spring Sept-Nov	Summer Dec-Feb	Autumn Mar-May	Winter June-Aug	Spring	Summer	Autumn	Winter
0	532	543	695	673		100		
1	151	142	102	100		100		
2	91	105	89	85		100		
3-5	247	202	152	186		100		
6-8	123	113	220	216		100		
9-11	86	84	134	108		100		

Source: Timaeus, I. Mortality in Lesotho, p.19 (based on children born in the last 15 years, LFS: Individual Survey).

Mortality in the first year of life is determined by the mother's health condition at birth, by genetic factors, by the infants exposure to infection from the environment and by the child's resistence to such infection (itself a function of nutrition and other environmental factors). Therefore a number of factors interplay to bring about the fluctuations shown in Table 3. It is not the aim of this paper to dwell on the interplay of these factors, but to utilize available health statistics to identify the possible causes of morbidity and mortality in the country. However, before this is done, there is need to discuss the distribution of health facilities and services in the country, as well as the water supply and sanitation conditions.

3. DISTRIBUTION OF HEALTH FACILITIES AND SERVICES

Some indicators of the health care system coverage have been calculated for Lesotho from available statistics. For the country as a whole it is shown that in 1982:

(i) population per nurse ratio was 3020 people,

(ii) population per doctor ratio was 13920 people,

(iii) population per village health worker was 1168 people, and

(iv) population per adequately staffed health centre was 18811 people.[4]

These indicators vary from district to district as shown by Tables 4,5,6 and7. (The population estimates used are shown in Appendix 1.)

Table 8 provides indices of rank based on information in Tables 4 to 7. First, the districts are ranked from 1 to 10 in ascending order of being well served (in other words the district with the highest rank is the best served one). Then an average of the ranks based on population per nurse, population per village health worker, population per doctor and population per health centre is calculated. Again the districts are ranked according to the value of this composite index. The district with the highest index being the one which is best served.

The results show that Quthing and Mohale's Hoek are the least served

4. These indicators are somewhat different from those calculated by the World Bank possibly due to differences in the population estimates used and the number of health centres included. World Bank, 1983, Health Resources Group for Primary Health Care-Country Resources Utilization Review: Lesotho HRG/CRU/14

Table 4 **Population Nurse Ratio by District, 1982**

District	Number of Nurses	Pop/Nurse	Rank
Thaba-Tseka	22	4384	5
Butha-Buthe	26	3367	7
Leribe	45	5136	4
Berea	51	3201	8
Maseru	200	1313	10
Mafeteng	32	5504	3
Mohale's Hoek	27	5653	2
Quthing	17	5869	1
Qacha's Nek	25	2227	9
Mokhotlong	16	4176	6
Total	**461**	**3020**	-

* Includes Matrons, Nurse Clinicians, Public Health Nurses, Other double qualified, Single qualified and Enrolled.

Table 5 **Doctors by District and Type of Employer, 1982**

District	Govt.	Phal	Private Practice	District Total	Population per Doctor	Rank
Thaba-Tseka	0	3	-	3	32,148	3
Butha-BUthe	2	2	-	4	21,886	7
Leribe	2	1	4	7	33,015	2
Berea	2	6	-	8	20,405	8
Maseru	38	6	13	57	4,608	10
Mafeteng	4	0	2	6	29,353	4
Mohale's Hoek	4	0	2	6	25,440	5
Quthing	2	0	1	3	33,258	1
Qacha's Nek	2	1	-	3	18,555	9
Mokhotlong	3	0	-	3	22,274	6
	59	**19**	22	100	**13,920**	-

Source: Ministry of Health

Table 6 **Population per Village Health Worker (VHW), 1982**

District	Number VHW's	Pop/VHW	Rank
Thaba-Tseka	43	2243	3
Butha-Buthe	102	858	7
Leribe	122	1894	4
Berea	40	4081	2
Maseru	350	750	8
Mafeteng	172	1024	6
Mohale's Hoek	88	1734	5
Quthing	14	7127	1
Qacha's Nek	121	460	10
Mokhotlong	140	477	9
Total	**1192**	**1168**	-

Table 7 **Population per adequately staffed Health Centre by District, 1982**

	Health Centres with Nurse Clinicians or Doubly qualified Nurses	Average Population per Health Centre	Rank
Thaba-Tseka	6	16,074	8
Butha-Buthe	6	14,590	9
Leribe	13	17,777	6
Berea	8	20,405	4
Maseru	14	18,760	5
Mafeteng	8	22,015	3
Mohale's Hoek	6	25,440	1
Quthing	4	24,943	2
Qacha's Nek	5	11,133	10
Mokhotlong	4	16,706	7
Total	74	**18,811**	-

Table 8 **Districts Ranked by Health Facility/Service, 1982**

District	Mean Score	Rank
Quthing	5 1.3	1
Mohale's Hoek	13 3.3	2
Mafeteng	16 4.0	3
Leribe	16 4.0	4
Thaba-Tseka	19 4.8	5
Berea	22 5.5	6
Mokhotlong	28 7.0	7
Butha-Buthe	30 7.5	8
Maseru	33 8.3	9
Qacha's Nek	38 9.5	10

districts in the country. Qacha's Nek, Maseru and Butha-Buthe are the best served districts. Generally, however, the mountain areas are seriously underserved, and this was clearly noted in the Third Five-Year Development Plan which among other things aimed at alleviating the uneven distribution of health facilities over the country.[5] Even in the case of Qacha's Nek which is indicated to be one of the best served districts by the aggragate index, there is no information to determine whether the nature of the tarrain does actually permit the district's population to utilize the health facilities and services. If this is not the case (which is most likely) then the aggregate index may not be as useful in this case as in the case of the lowlands where accessibility is relatively easier. This clearly suggests the need for a survey on the distribution and utilization of health facilities and services in Lesotho, which will pay special attention to geographical, socio-economic and socio-cultural factors that may constrain the optimum utilization of these facilities and services.

5. Kingdom of Lesotho, 1980. Third Five-Year Development Plan 1980-1985, p.327.

The unfavourable position rural areas occupy in the health delivery system of African countries is highlighted by the table below.

Table 9 **Population per Physician in Selected African Countries**

Country	Population per Physician		
	Whole country	Capital	Whole Country excluding capital
Lesotho	24,490	958	47,080
Botswana	10,923	1,190	15,568
Swaziland	7,538	1,077	11,846
Ghana	10,788	1,657	22,367
Nigeria	54,217	3,826	116,865

Source: WHO Contribution to Studies on African Health Demography, Brazzaville, 1976

Among the selected countries, Lesotho was second to Nigeria in showing the worst indicators of population per physician, although for the capital cities alone, Lesotho had the best served population. In all countries the rural areas were extremely underserved. This situation prevails up to now in all these countries although to a lesser degree than it was the case then.

Thus, it is well demonstrated that in Lesotho, the mountain areas are generally underserved than the lowlands, and that urban areas are significantly better served than rural areas. This gives some explanation to the existence of lower mortality in the lowlands than in other zones, and in urban than in rural areas.

4. WATER AND SANITATION

With regard to water supply and general sanitary conditions, it is known that only about 6.7 per cent of the population has access to piped water or safe water supply and this population is in urban areas. In the rural areas access to clean water supply is restricted to a few villages with self-help schemes or near a few rural institutions with piped water. Therefore water borne diseases are said to be a severe problem in the country. In addition, hygienic sewerage disposal is available to very few areas rendering the prevalence of sewerage-related disease such as typhoid and gastro-enteritis. For example in a rural household survey carried out in a selected number of pilot villages by the rural sanitation project, information on morbidity and sanitation revealed that those who were chronically ill were mainly those in old ages (over 80 per cent above 45 years of age) and those who were affected by diarrhoeal diseases were mainly those under 5 years of age (over 72 per cent between 0 and 5 years of age).[a] Diarrhoea was said to peak dramatically during the summer months reaching its highest point in January. It was noted further that ignorance of water and sanitation in related diseases was widespread.

The study suggested further that most rural households in Lesotho had no toilets for excreta disposal. Instead they had common areas in and around each village set aside for this purpose. Over 45 per cent of the villages surveyed did not have a latrine. Most households claimed that it was costly to have one. Even in cases where latrines were available, most children did not use the latrine until they were over five years old. Yet it is mostly children who are affected by diarrhoeal diseases.

---

[a] Evans P.A. et al Rural Household Survey , Rural Sanitation Project, Ministry of Health, 1985 pp. 26-34

5. MORBIDITY BY CAUSE

Utilizing all outpatient records from both Government and non-Government health facilities, it can be observed that the most important causes of morbidity are diseases of the respiratory system, closely followed by diseases of the digestive system (Table 10). From 1981 to 1985 the contribution of diseases of the respiratory system to morbidity is shown to have been at least 21 per cent in each year, while the contribution of diseases of the digestive system is shown to have been 10 per cent per annum. These two groups of diseases are followed by symptoms and ill-defined conditons, skin and subcut tissue diseases, genito-urinary system diseases, and gastro-enteritis (including diarrhoea). Diseases of the nervous system and injuries, fractures and dislocations also feature prominently.

Accidents and acts of violence represented by fractures and other injuries, have a relationship to migrant workers. They reflect occupational health hazards in the form of the dangers of mining, mental problems created by the social environment at the work place and separation from one's family, and drunkeness caused by lack of sufficient recreational activities at the place of work. Roughly 1865 cases of fractures and injuries per 100,000 members of the population in age group 45-54 were recorded in 1984. Most of the affected cases were males. This reflects that Lesotho is one of the countries with such many cases. Comparable rates from other countries were 57 per 100,000 in Argentina (1981); 42 per 100,000 in Chile (1983); and 34 per 100,000 in USA (1982)6

---

6. WHO World Health Statistics, 1986, Geneva: 1986

Table 10 **Morbidity by Cause, 1981-1986**

Cause	Year				
	1981	1982	1983	1984	1985
Respiratory System	21	21	22	22	23
Digestive System	10	10	10	10	10
Symptoms and ill-defined conditions	9	10	10	8	9
Skin and sub-cut tissues	9	9	8	9	10
Genito-Urinary System	8	8	9	8	8
Gastro-enteritis	5	5	5	5	4
Nervous System	5	5	5	6	6
Injury, Frac. and Dislocations	4	5	5	5	5
Gonorrhea	4	4	4	5	4
Mus. Skel. Systems and Senses	4	4	4	5	4
Syphilis	2	2	2	2	2
Pellagra	2	1	1	1	1
Infective Parasitic	2	2	1	1	2
Circulatory System	2	3	3	3	3
Complications of Pregnancy and Birth	2	2	2	2	2
Diseases of Teeth	2	2	2	2	2
Other	9	7	7	6	4
Total (percentage)	**100**	**100**	**100**	**100**	**100**
(number)	**615034**	**602699**	**553699**	**621910**	**697284**

Turning to the two major causes of morbidity, and utilizing the techniques of simple moving averages to identify the seasonal effects of these diseases, the following observations can be made:-[7]

1. For respiratory diseases there is higher prevalance in the months of March and April before the on-set of winter, and in the months of August and September during the transition from winter to summer (Figure 1). In other words, the rather more unpredictable weather in autumn and spring makes the population somewhat more vulnerable to respiratory infections. Vulnerability seems to be more prevalent in spring than in autumn. Winter and summer are reflected to be periods of lower infection. Minimum occurrence appears to be in summer.

2. For digestive dieases, the high prevalence period ranges from December of one year to April of the following year (Figure 2). This is the period which roughly coincides with the lean period or the period of food scarcity when people are waiting for the next harvest to replenish their granaries. Lack of adequate food and consumption of possibly insufficient and imbalanced foodstuffs combine to create unfavourable effects.[8]

---

7. The seasonal effects were calculated by averaging the monthly cases over a three year period and by finding the differences between the monthly averages and the overall three year period average.
8. See Annual Statistical Bulletin, 1983, p.12 on Food Donations to Lesotho.

In FAO's world food report for 1985, Africa was pointed out as the only region in the world failing to keep food production ahead of population growth.[9] Despite the fact that in some years (which FAO calls normal years) overall production has been increasing, per caput production has fallen by an average of 1 per cent a year since 1970. One of the 21 countries facing exceptional food shortages in 1984 as in 1983 was Lesotho.

Lesotho's food problems seem to have existed long before the 1980's. The participants at the First Annual Lesotho national Nutrition Conference held in December, 1975 recognized two important problems related to food supply in the country. [10] These were the following:-

(1) The nation was heavily reliant on donated food; and
(2) The remittances of miners in the RSA provide a large share of the money for commerical imports of food.

Should anything disturb any of these external sources of food, the national well being of Lesotho would be endangered.

---

9 FAO World Food Report, Rome 1985 : pp. 18-19

10 Lesotho Food and Nutrition Council, 1977. An Exploratory Study of the Food System of Lesotho (A Report) p.3

These patterns of prevalence for the major disease groups do not, however, clearly reflect the observations made earlier that mortality is higher among infants born in autumn and winter than among those born in spring and summer. It is worthwhile to note, however, that taking selected childhood causes of morbidity as reflected by inpatient discharges, in 1984, it can be observed that these causes are either most prevalent in autumn and winter months or are somewhat uniform throughout the year (Table 11). Nevertheless, the exact interplay of factors which bring about mortality in infancy and childhood in Lesotho requires further research. It will suffice to mention here that the factors which cause morbidy in Lesotho are similar to those in other developing countries and vary to a certain extent from children to adults.

For infants and children aged 1-4 years, intestinal infections, diseases of the respiratory system, nutritional deficiencies and certain conditions of the perinatal period seem to have the upper hand (Tables 12 and 13). On the other hand, tuberculosis, fractures, and degenerative diseases such as those of pulmonary circulation assume an important role to supplement those of the respiratory system (Table 14) for adults.

---

11 Signs, symptoms and ill-defined conditions are left out of the discussion as they are indeterminate.

Table 11 **Monthly Distribution of Outpatients by Selected Diseases 1984-85 (Combined Figues)**

Disease		Month											
	Total	January	February	March	April	May	June	July	August	September	October	November	December
Measeles: (N°.)	13091	1333	942	1025	1185	1166	1116	850	887	1234	1162	1164	1027
(%)	100	10	7	8	9	9	9	6	7	9	9	9	8
Whooping Cough : (N°.)	947	35	68	66	83	132	133	68	29	39	34	33	27
(%)	100	5	8	9	11	18	18	9	4	5	5	4	4

FIGURE 1: THE SEASONAL EFFECTS OF RESPIRATORY DISEASES.

1981–1983

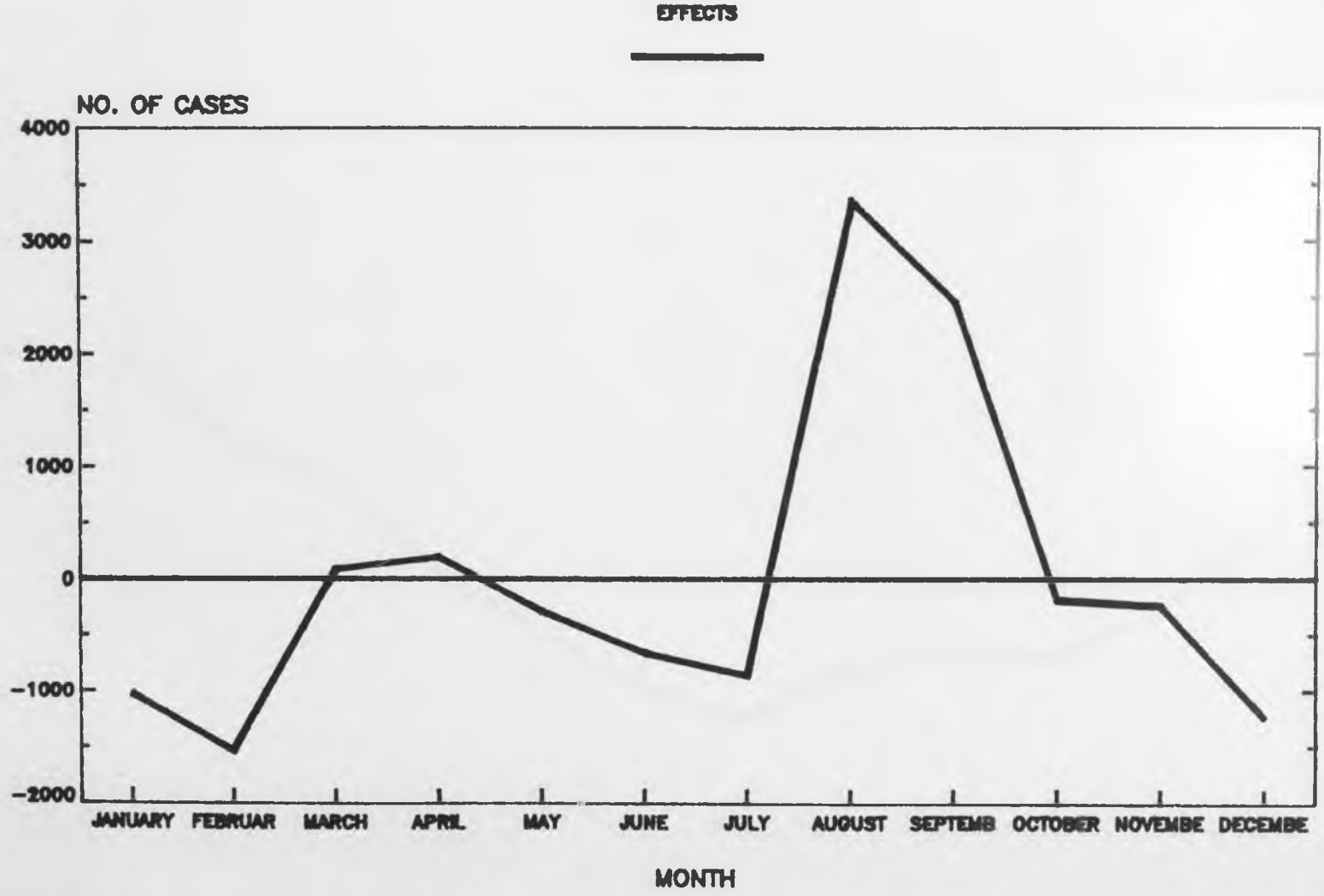


FIGURE 2: THE SEASONAL EFFECTS OF DIGESTIVE DISEASES.

1981-1983

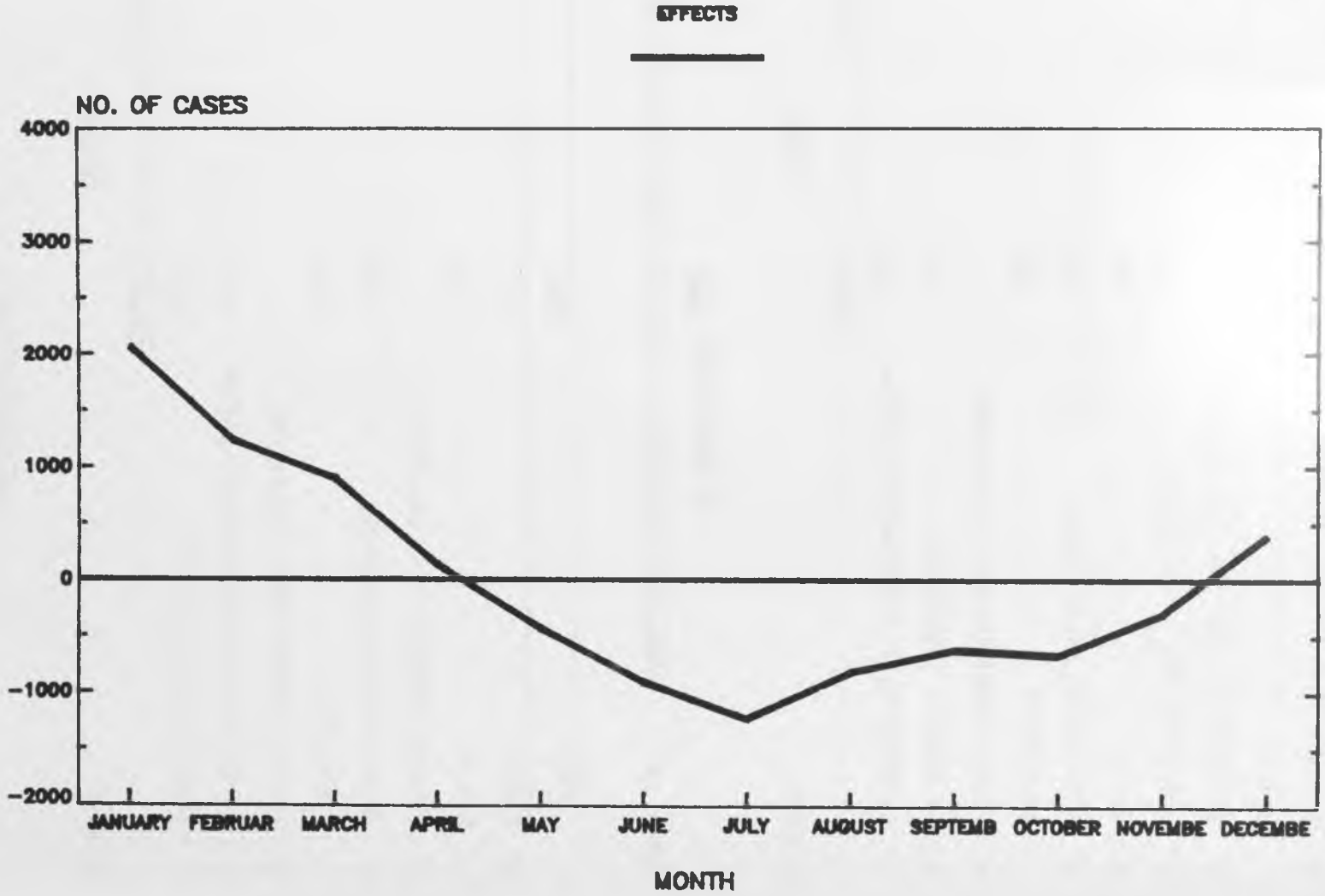


Table 12 **Inpatient discharges of Infants (Age o Years) by cause of Morbidity, 1984**

Disease	Causes	
	Number	Percentage
1. Intestinal Infections	619	30
2. Diseases of the Respiratory System	530	25
3. Signs, Symptoms and ill-defined conditions	223	11
4. Nutritional deficiencies	108	5
5. Certain conditions in Perinatal Period	99	5
6. Other	502	24
Total	**2081**	**100**

Table 13 **Inpatient discharges of children (age 1-4 years) by cause of Morbidity, 1984**

Disease	Causes	
	Number	Percentage
1. Diseases of the Respiratory System	569	19
2. Intestinal Infections	451	15
3. Signs, symptoms and ill-defined conditions	308	11
4. Nutritional Deficiencies	230	8
5. Burns	224	8
6. Poisoning and Toxin Effects	177	6
7. Diseases of skin and sub-intaneous Tissue	126	4
8. Factors	117	4
9. Other	724	25
Total	2926	**100**

Table 14 **Inpatient discharges of Adults (Age 45-54 years) by Cause of Morbidity, 1984**

Disease	Cases	
	Number	Percentage
1. Tuberculosis	270	12
2. Signs, Symptoms and ill-defined conditions	251	11
3. Fractures	185	8
4. Diseases of the Respiratory System	158	7
5. Diseases of Pulmonary Circulation/ Heart	125	6
6. Mental Disorders	120	5
7. Open wounds and Injury to Blood Vessels	105	5
8. Diseases of other parts of the Digestive System	86	4
9. Other Injuries	85	4
10. Hypertensive Diseases	81	4
Other	766	34
Total	**2232**	**100**

Causes of Death

Deaths in the first year of life are largely due to intenstinal infections, diseases of the respiratory system, nutritional deficiencies and complications arising from the perinatal period (Table 15). The same diseases cause death in the childhood ages of 1 to 4 years except for complications of the perinatal period which are no longer applicable in this age range (Table 16).

On the other hand, tuberculosis, malignant neoplasms and diseases of the pulmonary circulation cause adult death (Table 17). These observations agree with the general expectation of causes of mortality and morbidity in developing countries.

Table 15 Infant (Age o Years) Inpatient Death by Cause of Death, 1984

Cause of Death	Cases	
	Number	Percentage
1. Intestinal Infectious Diseases	78	34
2. Diseases of the Respiratory System	31	13
3. Nutritional Deficiencies	30	13
4. Perinatal Conditions	26	11
5. Signs, Symptoms and ill-defined conditions	17	7
6. Diseases of the Nervous System	15	6
7. Other	35	16
Total	232	**100**

Table 16 **Child (Age 1-4 Years) Inpatient Death by Cause of Death, 1984**

Causes of Death	Cases	
	Number	Percentage
1. Intestinal Infectious Diseases	44	29
2. Diseases of the Respiratory System	31	21
3. Nutritional Deficiencies	30	20
4. Diseases of the Nervous System	15	10
5. Signs, Symptoms and ill-defined conditions	9	6
6. Other	21	14
Total	**150**	**100**

Table 17 **Adult (Age 45-54 years) Inpatient Deaths by cause of Death, 1984**

Cause of Death	Cases	
	Number	Percentage
1. Tuberculosis	37	20
2. Signs, Symptoms and ill-defined conditions	23	13
3. Malignant Neoplasms	12	7
4. Diseases of Pulmonary Circulation/ Heart	12	7
5. Diseases of other parts of the Disgestive System	10	6
6. Other	87	47
Total	**181**	**100**

Therefore in Lesotho as in many other developing countries the major causes of death are infectious and communicable diseases. These types of diseases can be greatly reduced by environmental sanitation and by preventive measures such as immunization. It is therefore commendable that the government of Lesotho, through the Ministry of Health, is taking appropriate steps to improve environmental sanitation conditions of the population, and to adopt necessary preventive measures. But given the limited resources, both in terms of manpower and in terms of finance, a great deal still remains to be done. Hence the need for assistance from as many sources as possible.

Conclusion

There is uneven distribution of health facilities in Lesotho. Urban areas are more served than rural areas, and within rural areas, the lowlands are more served than the mountains. Diseases of the circulatory system and cancer are some of the chronic and degenerative dieases which afflict people who are mainly in advanced ages. These are termed diseases of old age and they are the major diseases in developed countries.

On the other hand infectious and parasitic diseases such as diarrhoeal diseases, respiratory diseases, tuberculosis and cholera are common diseases in developing countries and can be overcome by improvements in environmental and living conditions and by specific preventive measures. These diseases are common in Lesotho.

Thus there is a need to increase immunization coverage in Lesotho as an essential element of primary health care; to provide public health educational programmes on such aspects as oral rehydration therapy (ORT) which may not be popular due to lack of awareness on the part of the general population as to the seriousness of diarrhoea and the benefits to be gained from the therapy.

Therefore, as Lesotho makes more effort to achieve health for all by the year 2000, it will need to look into ways of:-

1. Correcting national health facility and service supply disparities.
2. Correcting general socio-economic disparities.
3. Mobilizing both government and non-governmental organizations in this effort.
4. Mobilizing the community in self-help projects.
5. Managing the health system efficiently so that limited resources can be used optimally.

6. Collecting, analysing and using information both for managing resources and for monitoring and evaluating trends to ascertain that unpreviledged or under-served groups or areas are eliminated.
7. Calling upon the international community to provide extra support whenever necessary.

With regard to collecting, analysing and using information both for managing resources and for monitoring and evaluating trends, it is noteworthy to mention that suggestions have been made to carry out a National Health Survey. Such a survey will be useful for identifying in a more detailed manner the causes and consequencies of ill-health and the role played by such factors as nurition, water and sanitation, housing, education and income in ill-health. In addition, relatively representative estimates and rates of morbidity and mortality will enhance the ability of planners and policy-makers to evaluate the impact and equity of policies, programmes and services.

Appendix 1 **Population by District, 1976 and 1982**

District	Population	
	1976[1]	1982[3]
Butha-Buthe	77178	87542
Leribe	198913	231104
Berea	145651	163239
Maseru	223364	262645
Mafeteng	154339	176118
Mohale's Hoek	135378	152638
Quthing	88491	99773
Qacha's Nek	49967	55666
Mokhotlong	59981	66822
Thaba-Tseka	84517[2]	96443
Total	**121777**	**1391990**

1. 1976 Population Census.

2. The population of Thaba-Tseka was estimated by identifying the enumeration areas that fell into the new district, and the districts in which they were formerly located (see Gene C. Wilken, "Interim Determination of District Populations in Lesotho in 1976", an unpublished paper, LASA-MOA, 1980).

3. Estimates made by the author.