Trends of Mortality in the Region of Heliopolis From Year 1930 to Year 1980

Thesis

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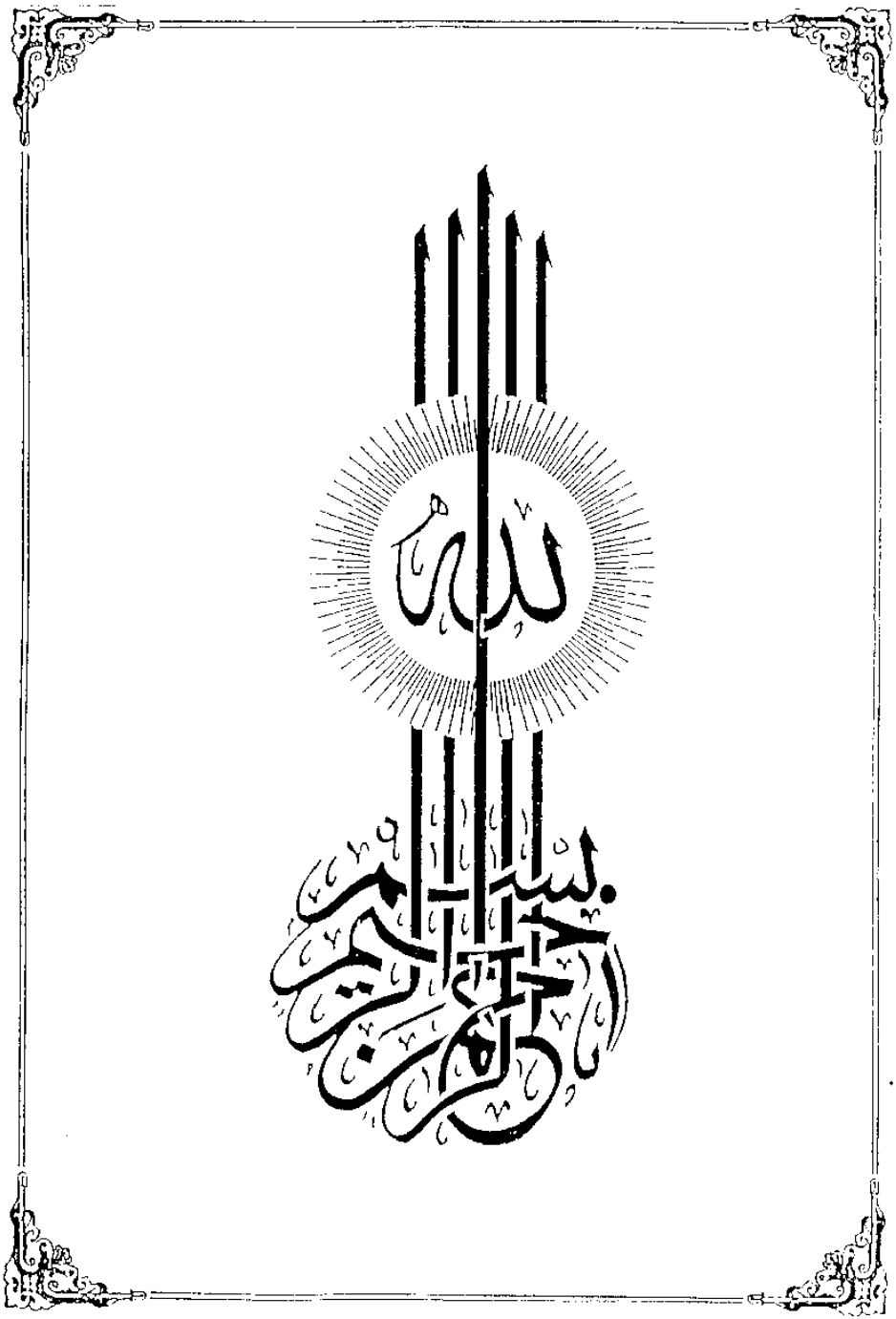

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Nasl Shah El Badawy

Introduction

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The decline of mortality levels in developed countries can be attrobuted to many factors such as the industrial revolution, the advances in medical science and the control of diseases.

e.g. the crude death rate per thousand population was :

	1979	1981
In Egypt	11	10.1
U.S.A.	8.7	8.7
Cuba	5.6	5.9
Finland	9.2	9.1

(World Health statistics, 1982)

From the 4th decade of this century, all the under-developed countries accelerated projects for the improvements in the health status of their population. In many of these countries, the main aspects of planning and development was and still is in the field of health and its related activities (population, 1977).

The quality of mortality statistics depends on many factors, including accuracy of population figures to which the data relate, the completeness of the registration of vital eventa and the accuracy and

refinement of the statement of cause of death (world health statistics, 1982) .

To reduce level of mortality in the world as a whole, the United Nation shares in the numerous compaigns to control diseases and epidemics. During the last two decades, Egypt devoted many efforts to achieve better health conditions through economic and social development to provide the means for progress in public health, medical aids and social services (population, 1977).

Vital Registration in Egypt

Registration of vital events concerning the records of births and deaths had been established since 1891 (Population, 1977).

The statistical department has, since 1929, followed the international list of diseases in the classification of deaths wherever possible in localities with health bureaus. After wards, the Egyptian Government joined the agreement on statistics of cause of death which was signed on the 19th june (1934) (Vital Statistics, 1937).

From the begining of 1st January 1950, the Egyptian Government has approved the application of the Manual No. (1) of the world Health organization concerning the international lists of diseases and causes of death, six revision, 1948. These lists are applicable on the following territories :

1. Big cities namely Cairo and Alexandria .
2. Urban namely Governorates, chief towns of provinces and districts .
3. Rural, only localities having health bureaus .

Notification of deaths is the responsibility of :

1. Relatives of the deceased or any male person residing at the same house .
2. In absence thereof, on doctor or health representative .
3. On Sheikh El Hara, Sheikh El Balad or Omda, should non of the above be present (Vital statistics, 1937).

Community Indices

Clark and Mac Mahon, (1981) stated that community health indices are quantitative measures that describe various aspects of the health status of a defined

population. Indices of community health are derived from many data sources e.g. records including admission to hospitals, clinics and insurance claims. Also health departments are a source of many kinds of data, e.g., personal services and enviromental surveillance reports. Other health data derived from systems where the primary purpose is to collect and analyze statistical information for the nation as a whole or for some definedd category of the population. These population data are the denominators for nearly all the rates used for measurement of community Health indices (Feldman, 1981).

Burton, (1975) reported that health indices depend upon their accuracy. Errors due to faulty diagnosis, incomplete reporting or mistakes in estimation of the population will greatly reduce the usefullness of the indices. Other sources of errors may be attributed to special interest in one or onother disease. This leads to a diagnosis of this disease more frequently and a tendency for physicians to attribute death to the disease currently in the spotlight, for example, coronary heart disease as a cause of death is now often reported. A few decades ago, many of these deaths might have been assigned to "acute indigestion" or to arteriosclerotic heart disease .

Feldman, (1981) stated that community indices provide intelligence about the current health status of the population and thereby permit measurement of community efforts to control specific diseases or disorders . Since health indices are based on the concept of health as the absence of disease, they mainly focus on the frequency of death, sickness and disability .

Morbidity

Health indices are mortality, morbidity and disability rates. Morbidity is basically a departure from a state of physical or mental wellbeing, resulting from injury or disease, of which the affected individual is aware. Morbidity includes not only active or progressive disease but also impairments, that is, chronic or permenant defects that are static in nature, resulting from disease, injury or congenital mal formation (Kark, 1974).

Hobson, (1975) showed that morbidity data are needed for the planning, development, and management of programmes concerned with all aspects of social security in its widest sense. The use of morbidity statistics are,

the control of infectious diseases, planning for development of preventive services, planning for adequate treatment services and national study of distribution of diseases and impairments .

Morbidity statistics must take account of several factors which do not affect mortality statistics, in that, as distinct from death, illness may occur many times in the same person, have a duration ranging from hours to years, vary in severity from the most trivial to the most serious, and lead to varying degrees of disturbance to the patient's ordinary mode of life from minimum disability to lengthy hospitalization (Hobson, 1975).

Taylor& Knowelden, (1964) mentioned that morbidity can be measured by incidence rate and prevalence rate .

(1) Incidence rate

This rate measures the frequency of occurence of new illness in a population .

$$\text{Incidence rate} = \frac{\text{Total number of new cases of certain disease}}{\text{Total number of population}} \times 1000$$

It is used in acute diseases of short duration .

(1) Prevalence rate

This rate measures the frequency of illness (new and old) in a group of population at a definit period of time .

$$\text{Prevalence rate} = \frac{\text{Total number of cases of certain disease (old + new) at a certain point of time}}{\text{Total number of population at that point of time}} \times 100$$

It is used in chronic diseases of more than one year duration (Taylor & Knowelden, 1964)

Mortality rates

Feldman, (1981) reported that the probability of dying from a specific condition is measured by the mortality rate. The numerator indicates the count of deaths during a specified time interval, and the denominator indicates the average population at risk. The advantages of mortality rates as indicators of community health are their relative ease of measurement and the availability of a long series of such data in many countries, the usefulness of mortality data depend on many factors e.g. accuracy of diagnosis and completeness of reporting.

Mortality statistics remain where they are available the most practical index of variation in the level of health of the population (Nelson, 1975).

Petri, (1978) summarized the problems encountered in the use of mortality data . They are :

1. Differences in the accuracy and completeness of medical information on death certificates .
2. Availability of physicians and specialized diagnostic services within different areas .
3. Accuracy of the population estimates .
4. Small number of deaths resulting in greater sampling variability .
5. Lack of certification of cause of death with pathological confirmation .
6. Use of different classification systems in different locations .
7. Changing classification systems with time .

Causes of mortality

In Egypt the main leading cause of death during infancy was infectious disease mainly acute gastroenterities (Omran, 1973 - Population, 1977), children of the age group 1-5 years had the highest mortality from infectious diseases like measles, pertussis and pneumonia together with malnutrition (WHO 1980 a), those of the age group 5-15 years showed the highest mortality from accidents (Elsawy, 1981-Hammam, 1960-WHO, 1977 a) .

In the age group 15-45 years, the main causes of death were circulatory system diseases and accidents in males and Complications of pregnancy, childhirth and puer perium and circulatory system diseases in Females. Those in the age group 45-65 years showed the highest mortality from circulatory system diseases namely arteriosclerosis, hypertension and ischemic heart disease. Those from 65 years and above showed the highest mortality from symptoms, signes and ill defined conditions and circulatroy system diseases (WHO, 1977 a).

In developed countries, Clark and Mac Mahon (1981), stated that among causes of death under one year of age, congenital anomalies rank as the highest cause of death in neonatal and postneonatal period along with asphyxia, immaturity and hyaline membrane disease account for over 50% of all deaths in the first Month. In the post-reonatul period, pneumonia, accidents and congenital anomalies are the major causes of death. After the first year, the principle cause of death is accidental injury until the age of 40years, where causes of heart disease especially ischaemic and cerebrovascular diseases, neoplasms account for over 60% of all deaths .