

THE EPIDEMIOLOGIC TRANSITION IN AFRICA: END OF THE PROCESS?

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The epidemiologic transition has been defined in 1971 by Omran Abderahmen as the shift from a sanitary situation dominated by bacterial, viral and parasitic diseases (malaria, plague, cholera, rabies, smallpox, etc...) to a health profile where the main causes of mortality are lifestyle diseases (road injuries, cancers, cardiovascular diseases, stress pathologies, etc...) ¹.

Epidemiologic and demographic transitions (decline in both fertility and mortality levels) are two demographic phenomena closely related. In fact, a population who has achieved her epidemiologic transition will reduce mechanically its infant mortality and increase its life expectancy, contributing to the general decrease in mortality rates. On the other hand, a rising number of surviving seniors will increase the prevalence of diseases specific to the elder, as cancers, mental troubles or cardiovascular pathologies.

Many African populations can be considered today in the third stage of the process (on a total of 4 stages). In such populations, lifestyle pathologies (cancers, stress, cardio vascular diseases, respiratory diseases, etc...) are now dominating the national epidemiologic profile. For example, today, cardiovascular diseases represent the first cause of mortality in Northern Africa, while the second position is occupied by unintentional injuries ² and malignant neoplasm. Those three factors cause today more or less two thirds of the mortality in Northern Africa.

¹ Omran Abderahmen, "*The epidemiologic transition: a theory of the epidemiology of population change*", The Milbank memorial fund quarterly N° 49/4, 1071, pp. 509-538

² Mainly road incidents

But the health situation is not homogeneous in Africa. In fact, in other regions in Africa, the epidemiologic profile is completely different, as the majority of the population is still dying from infectious diseases. Many studies reveal today the various stages of the different countries in Africa. But there is still no research concerning the specificities of the urban African areas concerning the epidemiologic transition process.

I propose to study the epidemiologic transition in Africa, focusing on the urban areas. The main questions to which I will try to find answers are the following: did urban Africa achieve its epidemiologic transition? Are all African populations in the same stage concerning urban health? Is there still a dichotomy between Northern and Sub Saharan Africa? What are the determinants of the process? What are today the main causes of death in the African cities? Is urban Africa following the urban European model? Are there differences between urban and rural populations in Africa, concerning health and mortality?

ORGANIZATION OF THE STUDY

The research is organized into four parts. In each part I will try to outline the specificities of the urban spaces in Africa, comparing the health situation in the urban areas with what is happening in the rural ones.

Part one: methodological framework

In the first part of the study, I will present the methodological framework of my research and define the main concepts I will use.

For example, I will try to present a clear definition of an “urban space” in Africa. In fact, there exist more than 30 definitions of “urban”, “urbanisation”, “urbanity”, “citizen”, etc..., according to the United Nations. It is important to start clarifying what we intend by “urban mortality” in Tunisia and in Burundi, for example, because each country has its own official definition of the urban, the city, the citizen, etc...

I will also propose here a definition of the “epidemiologic transition” that could cover all African countries (the shift from a health profile to another). This part will also be an occasion to present the sources of my data and the way of calculation of the

various demographic indicators (urban mortality rate, urban life expectancy, urban mortality sex ratio, etc,...).

Part two: the causes of death in urban Africa

The second part of the study examines the main causes of death in urban Africa, trying to show to what extent some countries have achieved their epidemiological transition, while others are still in the beginning of the process.

The analyses will be conducted in three steps, according to the following chronology: I will start examining the health profile of Africa in the postcolonial period (roughly, XIXth century-1960's). In a second step, I will try to show to what extent the colonisation era has introduced major improvements in the health of the African populations, through the introduction of modern European medicine (what we use to call the "Pastorian medicine"). In the last step, I will examine the today situation.

During these three steps, I will try to verify the hypothesis of the African epidemiological transition, looking for an answer to the following fundamental question: did causes of death shift from infectious and parasitic diseases (Malaria, hookworm, trypanosomiasis, onchocerciasis, etc...) to lifestyle diseases (Kuru, cancer, heart diseases, ...)?

In this second part of the research, I propose also to make a comparison between the situation in urban Africa and in the Nordic countries cities. I will try to show that, although African countries are behind the Nordic ones in the epidemiological transition, some Northern and Southern African urban populations have made very rapid progresses in the last decade.

Part three: the determinants of the epidemiological transition in Africa

In the third part of the research, I will try to understand why African citizens are not at the same level of morbidity and mortality. In fact, some African cities are healthy (citizens die at old ages and for "modern" reasons, as cardiovascular diseases or cancers), while other cities are terribly unhealthy (most causes of death of the urban population is cholera, plague, yellow fever, etc...).

The determinants could be economic (richer African countries have the means to build modern hospitals in the cities, train doctors, import or produce locally medicines,

etc...), cultural (some societies are more open to the modern medicine, some societies are culturally more exposed to diseases like AIDS, etc...), or simply natural (some African urban areas are host of vectors of diseases, as mosquitoes, flees, worms, louses, etc,...).

Part four: perspectives

The last part of the study will be in terms of perspective. I will examine the possible scenarios of causes of death in the African cities in the coming years, within the horizon 2025. This part of the study will be also an occasion to discuss the needs of new medical services in African cities, that could result from the epidemiologic transition in urban Africa.

In fact, as a consequence of the epidemiologic transition, some African countries (in particular in Northern and Southern Africa) entered an ageing process. That will certainly have consequences on the urban health systems. In fact, African seniors have specific health needs, as they have higher risks of contracting what we call “social diseases”, as for example diabetes, cancers or cardiovascular diseases.

That is the reason why African governments have to think from now about the future sanitary strategies, so that they can match the future needs of their seniors in the urban areas.

SOURCES

I plan to use quantitative data published by the United Nations (World Health Organization, United Nations Fund for Population Activities, etc...) and the Population Reference Bureau. These documents, when available, will provide me with official statistics concerning the causes of death in the past, today and in the near future (within 2025).

One of the most statistic documents I will work on is the International Classification of Diseases (ICD). ICD is the standard diagnostic tool for epidemiology, health management and clinical purposes. This includes the analysis of the general health situation of population groups. It is used to monitor the incidence and prevalence

of diseases and other health problems. It is used to classify diseases and other health problems recorded on many types of health and vital records including death certificates and health records. In addition to enabling the storage and retrieval of diagnostic information for clinical, epidemiological and quality purposes, these records also provide the basis for the compilation of national mortality and morbidity statistics by WHO Member States.

But the most important documents I will work on are those that will permit me to analyse the changes in the causes of death. I will collect such documents in the Nordic Africa Institute. I will also discuss with researchers in the Institute, in order to understand how and why did some African cities improve their health characteristics, while others made it become worst (return of cholera epidemics in Harare, for example).

During my research, I will use the following demographic tools: mortality rate, life expectancy, mortality sex ratio, etc...