

ADULT AND ELDERLY MORTALITY IN BRAZIL: KEYS AND TRANSITIONS.

Neir Antunes Paes

Department of Statistics of the Federal University of Paraíba - Brazil

The rapid increase of the aging process in Brazil since the 80's, when Brazilian epidemiological and demographic transition started having its strongest impact on population, motivated the investigation of this study. Countries in which good statistics on mortality are available tend to place extreme importance on understanding the relationship between diverse social and economic indicators and mortality rates. Although a strong relationship has been recognized to exist between these variables, very little is known about such associations mainly in developing countries, particularly in Brazil. The importance of this study is based on the implication that such relationships hold for scholars and planners in general with a final goal being the elaboration of plans and programs aimed the improvement the overall health of the population. Therefore the main goal of this paper is to examine to examine trends, differentials and determinants of adult and elderly mortality for Brazil and regions by the main causes of death and determine associations with socioeconomic indicators in the period from 1980 to 1995.

The Brazilian states were classified according to the quality of the registry of death and then standardized mortality rates for the main causes of death were calculated for adults and elderly by age and sex. The basic data were obtained from the System of Information of Mortality of the Ministry of Health for all 26 states in the country for the average years 1979/80/81, 1984/85/86, 1990/91/92 and 1994/95. The selected indicators refer to: illiteracy rate over 15 year-old population, gross domestic product per capita, percentile of homes with inadequate sanitary draining, number of hospital beds per inhabitants, percentage of urban population and women's proportion in the active economic population.

For the study of the associations between the mortality rates between the main causes of death and socioeconomic indicators for both adult and elderly, generalized linear models were used and the final model was selected using the "stepwise" procedure. The impact of different causes was considered by means of a decomposition of the correlation into cause-specific associations.

Mortality rates of the adults in the country decreased significantly for several causes of deaths and a sex-gap emerged and widened as a byproduct of a larger decline in female mortality. But the rapid decrease was not enough to eliminate the presence of ill-defined causes among the main causes of death and also to break an extraordinary increase of the external causes for adults, but for

the latter, this tendency was not observed for elderly. An important reduction in mortality rates for diseases of the circulatory system for both adults and elderly was found. In contrast, neoplasm and respiratory diseases inflated Brazilian mortality figures and a control of infectious and parasitic diseases was observed. These causes of death were the key points of the mortality transition in the period.

The ecological analysis of province-level data revealed suggestive indications of the relationships between adult and elderly mortality and a set of socioeconomic indicators for both sexes. Some causes of death showed a significant association with variables, which suggest a higher risk of dying for regions with higher economic power, higher urbanization degree and higher education levels. On the other hand, for homicides, for instance, no significant association was found, indicating a certain independence of this cause of death with socioeconomic factors in the regions during the period of investigation.

The advancements and backwards of the adult and elderly mortality in Brazil suggest a weak and uncertain development from 1980 to 1995. Despite the social and economic deceleration in the 80's and in the 90's, the trends suggest a rapid epidemiological and demographic transition in all over the country, particularly for the most developed regions.