POPULATION AGING AND MORBIDITY OF ELDERLY BRAZILIANS: A STUDY WITH SOCIOECONOMIC INDICATORS

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Abstract
Population aging is a worldwide phenomenon that has been increasingly processed. Started in developed countries, it expanded to the world, and since the 1960s, more than half of the elderly population already lived in developing countries. In Brazil, a plural but unequal country, where historical economic and social contradictions persist, the process of population aging occurs in a scenario of socioeconomic and regional disparities. The objective of this paper is to review this thesis whose objective is to verify whether regional peculiarities in Brazil produce different morbidity profiles among the elderly in different Brazilian regions and, to what extent, socioeconomic and health indicators impact the morbidity profile of elderly people in the country.

Key Words: Population - Ageing. Socio Economic Indicators, Sanitary Indicators, Regional Disparities, Elderly Morbidity. Brazil.

Under the authorship of Dr. Máximo Alessandro Mendes Ottoni, Brazilian, Bachelor in Social Work from Faculdade Santo Agostinho, Master and Doctor in Social Development from the State University of Montes Claros – Unimontes . He works as a professor at Faculdade Prisma, where he is also part of

the editorial board of the Scientific Journal of the Institution; is a member of the Study and Research Group in Management and Health at the State University of Montes Claros; has publications that explore the themes: elderly people and public policies in Brazil and, Brazilian inclusive education policies, the thesis entitled "Population aging and elderly morbidity in Brazil: an assessment of the impact of socioeconomic indicators in the light of regional peculiarities", carried out in the Graduate Program in Social Development, at the State University of Montes Claros – Unimontes , Montes Claros – MG, together with the research line "Socioeconomic Relations and State", between 2016 and 2020, aims to verify whether the peculiarities Regional data in Brazil produce different morbidity profiles of elderly people in different Brazilian regions and, to what extent, socioeconomic and health indicators impact the morbidity profile of elderly people in the country.

The thesis defended is that population aging in Brazil, a growing and continuous phenomenon that gives rise to public policies aimed at the elderly, occurs, in practice, in a scenario of disparities, according to regional peculiarities and that inequities in relation to socioeconomic indicators and health in the five Brazilian macro-regions produce different morbidity profiles to the detriment of the poorest and most vulnerable regions of the country, revealing that socioeconomic and health indicators impact the morbidity of elderly people in Brazil.

The author established four hypotheses for the thesis, exploring them in detail throughout the study:
I) In recent decades, Brazil has experienced a process of continuous and growing population aging, which has given rise to the need to create and implement public policies aimed at this population segment, in addition to the 1988 Citizen Constitution and the creation and implementation of the SUS;

II) In Brazil, the aging of the population, although it is a growing phenomenon, occurs, in practice, in a scenario of disparities, according to regional peculiarities, and inequities in relation to socioeconomic and health indicators in the five Brazilian macro-regions make that those who age in poorer regions of the country age with greater vulnerability;

III) The morbidity profile of the elderly in the five Brazilian regions presents important differences, especially in the poorest regions of the country, which is justified by the differences in socioeconomic and health indicators, which interfere with the illness of the Brazilian elderly;

IV) socioeconomic and health indicators impact the morbidity of the elderly in Brazil, highlighting the need for investments, public policies and actions aimed at improving these indicators, and the morbidity profile of the elderly in the country.

The justification for carrying out this thesis is the need to understand the process of population aging in a large, plural and unequal country such as Brazil, from the perspective of understanding how regional disparities, or regional differences in relation to the socioeconomic and health profile of the population can produce different profiles of morbidity and hospitalizations of the elderly, impacting local health systems and giving rise to the need for public policies to face this very current and important problem.

Based on authors such as Ana Amélia Camarano (2004; 2013), Elisabeth Mercadante (2012), Elton Alisson (2016), Karla Cristina Giacomin (2012), Simone de Beauvoir (1990), and IBGE data (1982; 2008; 2017; 2019; 2020), WHO (2005), PAHO (2016) and the Brazilian Government, the thesis is structured in five chapters; in the first " Population Aging: the population aging process in the world and in Brazil", the author promotes a discussion highlighting the difficult task of conceptualizing the elderly

from different perspectives and bringing to light the need for public policies in this scenario of population aging , in addition to discussing the phenomenon of feminization of aging and the economic and social implications of an aging country; in the second chapter "Public Policies in the Context of Brazilian Population Aging", it approaches the history of public policies aimed at the elderly population before the SUS; the creation of the SUS and the main public policies aimed at the elderly from then on, with emphasis on the National Policy for the Elderly (PNI) and its set of actions to ensure citizenship rights for the elderly; the Statute of the Elderly (EI), which reorganized the right and social protection of the elderly population in Brazil, improving laws and policies; and the National Health Policy for the Elderly (PNSPI), which guarantees comprehensive health care for people aged 60 or over in Brazil.

Under the title "Profile of the Elderly in Brazil in the light of Regional Disparities", the third chapter presents the socio demographic and spatial characteristics of a controversial country, highlighting the longitudinal trajectory of population growth in Brazil and a brief retrospective of the age pyramid in the country, fostering the understanding of how socio demographic changes were being processed in the country over time. Also, the profile of the Brazilian elderly is outlined, showing who they are, where and under what conditions this elderly person lives, highlighting issues of age and sex, in addition to discussing the main economic, social and health indicators under which the general population lives (and elderly people) in Brazil and in the five Brazilian regions.

In the fourth chapter "Hospital Morbidity Profile of the Elderly in Brazil and in the Brazilian Macro-regions", the profile of hospital morbidity among the elderly in Brazil and in the five Brazilian macro-regions is outlined in order to seek to understand to what extent the socioeconomic and health peculiarities in the macro-regions produce morbidity profiles of different elderly. Entitled "Impact of socioeconomic and health factors on the morbidity of elderly people in Brazil: an assessment using the technique: Panel Data Analysis", in the fifth chapter, the effects of some of the main socioeconomic and health indicators in Brazil on the morbidity profile of elderly in the country in the light of the statistical tool called panel data analysis.

With regard to methodological aspects, the thesis is characterized as a bibliographic, descriptive and analytical, documental, cross-sectional and population-based study. The research data source consisted of official *websites,* which provide data and information about the major topics discussed, namely:
a) Brazilian Institute of Geography and Statistics (IBGE), which is the main provider of data and information in the country and provides demographic, socioeconomic and health data for Brazil;

b) the Atlas of Human Development in Brazil, which is published by the United Nations Development Program (UNDP), Institute of Applied Economic Research (IPEA) and João Pinheiro Foundation (FJP), which offers a platform for consulting the Index of Municipal Human Development (IDHM) of all Brazilian municipalities;

c) The SUS Public Information System (DATASUS), which provides information on general and elderly morbidity in Brazil and in Brazilian regions, more specifically, the SUS Hospital Information System (SIH-SUS);

The study period comprises the period 1991-2019, and at certain times a longitudinal analysis is also carried out (from 1950 to 2019) to contextualize the behavior of age indicators in Brazil, the aging process and the behavior of indicators socioeconomic and health conditions in Brazil and in the regions,

in order to allow an understanding under the conditions in which aging and the profile of morbidity was being designed in the country over time. As a basis for defining morbidities, the International Classification of Diseases (ICD-10) was used, which is currently a reference in the world and in Brazil.

For data tabulation, the DATASUS base was used, TABNET, which is a data tabulation application, in the public domain, which allows you to organize data, according to the objectives you have. The limit for age cutoff, in the morbidity profiles of the elderly, followed the criteria recommended by the World Health Organization (WHO) and, considering, also, the definition of the elderly in Brazil, as individuals aged 60 or over in developing countries. By consolidating and grouping some indicators of the Brazilian states to outline the morbidity profile of the macro-regions, descriptive statistics (arithmetic mean) were used in order to minimize the effects of seasonal variations, in the respective years analyzed.

Regarding the statistical technique used to measure the impact of socioeconomic and health indicators on the morbidity of elderly people in Brazil, Panel Data Analysis, or *panel data,* refers to information from units, individuals, municipalities or a country , which can be monitored over time , which in the thesis consisted of the morbidities of the elderly in Brazil and their possible interference from socioeconomic and health indicators.

The proposed study points out that socioeconomic and health indicators impact the morbidity of elderly people in Brazil, as tests have shown that a 1% increase in average per capita income reduces the morbidity of elderly Brazilians by 0.1527%, showing a inverse relationship between average per capita income and morbidity of the elderly in the country, revealing that morbidity or hospitalizations of the elderly is sensitive to the average per capita income and that, for this reason, increases in this economic indicator may favor the reduction of the health indicator morbidity of the elderly in the country. Brazil, which constitutes relevant data given that, in some regions of the country, especially in the North and Northeast regions, which, in addition to being the poorest and least developed, also present morbidity profiles of elderly people that are different from other regions of the country. country, and this emerges the need to think about effective public policies and encourage improvements in average incomes in favor of possible reductions in hospitalizations of seniors SOS.

It was found that among public policies for social inclusion, those related to 'increasing average income' and 'improving access to basic sanitation' are the most effective in reducing morbidity rates among the elderly in Brazil. In this sense, the author recommends that public managers in the country invest in these public policies, with a view to reducing morbidity rates and hospitalizations of the elderly in the country and, thus, improving the health *status* and well-being of this stratum. Population that, in addition to growing in numbers, gains greater longevity in Brazil.

With regard to the texture, the thesis presents a clear connection between the chapters, valuing the cultured norm and cohesive bonds, which provided clarity and scientific academic language.

The presentation allows identifying the problem of the study, the guiding question, the hypothesis and the objectives of the thesis and the literature review underlies, from a theoretical and empirical point of view, the study carried out. The introduction is clear, concise, objective and allows the apprehension of the author's motivation for the elaboration of the thesis

From the methodological point of view, the thesis has a scientific character, with coherence between the central position and explanation, discussions and scientific evidence. The use of specific methods and

techniques were adequate, especially the Panel Data Analysis (p. 190 and 197), presenting, in a clear and objective way, the route taken in obtaining the data.

It is verified that the objective of the study was accomplished and that the results are presented clearly, objectively and are sufficient to fulfill the objectives of the study and support the conclusions, but could be better interpreted, contextualized and compared critically with the cited authors.

The author discusses the limitations of his study and contextualizes it in relation to existing knowledge, making clear the contribution arising from the thesis. The study's findings show that the relationship between schooling and income of elderly Brazilians can provide elements for structuring actions and public policies of a socioeconomic and cultural nature, aimed at development, better quality of life, and access to goods and services, which concerns emphatically recommending the reading to scholars in the area of regional/social development, public policies and population and demographic aging.

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