Editorial

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# Successful aging in Brazil

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The risk factors for dementia and for other conditions highly prevalent in the elderly have been investigated by several epidemiologic studies around the world, including by studies performed in Brazil[1,2]. The other side of the coin, successful aging, has been much less evaluated by epidemiologic studies. The difference is rather impressive: in August 19, 2011, we found 14,738 studies under the terms "epidemiology AND dementia" in PubMed, whereas for "epidemiology AND successful aging" there were only 338 studies.

In Brazil, Chaves et al. evaluated 345 community-dwelling individuals aged 60 years and older in Porto Alegre, south region of Brazil, and found that the participation in more leisure activities was associated with successful aging[3]. In another study also performed in Porto Alegre, with 400 elderly, de Moraes and de Azevedo reported that stronger family and friend relationships, self-perceived well being, functional capacity and psychosocial support were associated with successful aging[4].

To investigate the causes for successful aging is the main purpose of the Pietà study, by Paulo Caramelli and colleagues, who are now presenting its methods and baseline characteristics of the participants in Arquivos de Neuro-Psiquiatria[5]. As it is very clearly stated by the authors, their aims are to investigate several aspects related to brain aging, but successful aging ranks highest among them.

There are many reasons to believe that this is going to be a successful study. The authors included only individuals aged 75 or older living in Caeté, a town in Minas Gerais state, located in southeast Brazil. The choice of relatively small town (around 40 thousands inhabitants) with 1,251 aged 75 or older is appropriate for studying a large sample of the population. The high level of miscegenation found in Minas Gerais state, altogether with the low educational and socioeconomic levels of the elderly in Caeté, probably make the population of this study representative of the oldest-old Brazilian population.

The study was conducted in three phases, starting with questionnaires assessing sociodemographic characteristics, quality of life, previous and current physical and leisure activities, as well as semiquantitative evaluation of weekly consumption of food items. In the second phase, the main target was to obtain all medical data using a broad evaluation with anamnesis, questionnaires, physical examination and abridged cognitive assessment. Special attention was given to signs and symptoms of vascular diseases, parkinsonism, psychiatric symptoms and cognitive impairment. Individuals with suspected cognitive impairment were referred to a comprehensive neuropsychological evaluation including tests for memory, language, praxis, executive functions, and more general batteries such as the Mattis Dementia Rating Scale and the Clinical Dementia Rating. In the third phase, blood laboratory tests were performed, which also included DNA extraction for genetic evaluation. A representative sample of 200 individuals underwent a magnetic resonance imaging of the brain in a 3.0 T device.

These data have been already collected and are now been analyzed. In this first

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publication we are informed on the demographic characteristics of the cohort participants. As previous epidemiologic studies have shown, there is a strong heterogeneity in the elderly in Brazil. In this study, almost 30% of the elderly were illiterate, one of the highest frequencies when compared to other Latin-American epidemiologic studies[6]. Illiteracy has been associated with dementia by Brazilian and Latin-American studies[1,6], although several of the other constraints associated with illiteracy such as low income, poor health surveillance and bad nutrition habits have not been properly evaluated. To investigate these other confounders, cohort studies are necessary to go beyond assumptions of association and to reach incidence rates of diseases and successful aging. So far, only a few Brazilian studies investigated incidence of dementia[7,8], and as far as I know, no one evaluated the causal factors for successful aging in Brazil. It is clear, even from the title of its first publication that the Pietà study is going to proceed as a cohort study.

The heterogeneity of the population of the Pietà study is probably one of its main strengths. Albeit almost two-thirds of the elderly were classified into D and E socioeconomic leves, 8% were in the A and B levels. Regarding the educational level, approximately one-third of the elderly population had four years or more of schooling years. These differences between participant socioeconomic and educational backgrounds, which are more intense in developing countries, are simultaneously a relevant social problem and a window to better understanding the impact of these factors on successful aging and diseases.

Assumptions on successful aging and disease are often understood as if the social, economic, cultural and ethnic characteristics of the region or country in which they occur have no bearing on their occurrence. This is an obvious mistake. To derive explanations for these outcomes based on studies performed in developed countries is probably wrong, and we need to perform studies in our country to make recommendations or to suggest public measures to improve the health quality of Brazilian elderly. This is what Pietà study may be able to convey with follow-up of the participants using methods as meticulous as were used in this first evaluation of the cohort.

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