



The National Health Survey and the health of older adults in Brazil

National health surveys are useful tools for identifying the health needs of a population, and allow a greater understanding of the health-disease process. The information generated by these surveys is of relevance to the academic field, as it provides knowledge about the occurrence of diseases, health problems and health behaviors at a populational level, contributing to the planning and management of social and health policies.

The Brazilian experience of national health surveys began with a comprehensive and systematic approach, through the inclusion of a health module in the National Household Sample Survey (or PNAD), the first edition of which was implemented in 1998, with subsequent editions every five years. From 2013 onwards, as the result of a joint strategy of the Ministry of Health, the Oswaldo Cruz Foundation and the IBGE, PNAD Health was replaced by the National Health Survey (or PNS), which became one of the most important tools in the Brazilian health surveillance program, producing primary data on the health conditions of the country's population. Data from the last edition of the PNS, carried out between August 2019 and March 2020, are already partially available on the website of the Brazilian Institute of Geography¹. The microdata of the survey comprise information on 23,144 people aged 60 years and over, who answered the complete survey questionnaire, while information about the living, housing and health conditions of another 20,410 people in this age group was reported by a respondent in the home.

Some important methodological characteristics of the last edition of the PNS are worth noting. It is a household-based survey, whose sample consists of residents residing in permanent private households throughout Brazil². Considering the particular characteristics of the older population, this study does not include residents of Long Term Care Facilities for Older Adults, a limitation which should be discussed in studies that use such data sources.

The research sampling plan consists of a three-stage cluster approach. The first stage corresponds to the selection of a primary sampling unit, the second to the selection of households and the third to the selection of the resident aged 15 years or over who is to respond to the complete survey questionnaire².

The questionnaire is formed of three parts. The first consists of the characteristics of the household, answered by the head of household, and is composed of questions about housing conditions, sanitation and registration of the household in the Family Health Strategy. The second contains information about all the residents in the household, in relation to level of education, income, occupation, physical or intellectual disability, health plan coverage, access to and use of health services, health of residents aged 60 years and over and of children under the age of 2².

This health information can be provided by a respondent who is responsible for the household, who provides the answers about the other residents. The first and second part of the questionnaire, which consist of modules A to L, makes available data from 279,382 people, of whom 15.6% (43,554) are aged over 60 years.

Module K of the questionnaire is an important source of information for the area of geriatrics and gerontology, containing 62 questions about the health of individuals aged 60 years and over. The first part of this module has 36 questions about the presence of limitations or incapacities in the performance of activities of daily living. Also included in this module are questions on the use of health services, use of medications, diagnosis and treatment of cataracts, immunization against influenza, occurrence of falls and fractures, and associated treatments³.

The third part of the questionnaire, corresponding to modules M to Y, is answered only by residents aged 15 years or over, who are selected by simple random sampling from eligible members of the household. The total number of residents selected in the survey was 90,846 and of these, 25.5% (23,144) were aged 60 years or over at the time of the interview. This section contains questions in relation to work and social support, perception of health status, accidents, chronic diseases, women's health, prenatal care, paternity and prenatal care of partner, violence, oral health, communicable diseases, sexual activity and medical and health care^{1,2}.

Given the plethora of current data produced by the PNS available in the area of geriatrics and gerontology, researchers can choose to conduct studies based on the household sample or the sample of selected respondents. The first has information about all older adults living in the households selected for the sample. The second contains information about the sample of older adults selected as respondents to the third part of the questionnaire.

In the sample composed of all older adults living in the selected households, the sample is larger, although the information available for this group is limited. In the sample of selected respondents, there is a smaller sample size, but a greater amount of information is available. Both options consist of excellently sized samples that are representative of the population residing in permanent private households in Brazil, and it is up to the researcher to select the best option for the topic of interest.

Due to the use of complex samples, special care must be given to the analysis of data from the PNS and other studies that use this type of sampling design, which should not be carried out in a conventional manner, as though the observations were taken from simple casual sampling. In complex samples, the probabilities of participant selection are different in each of the sampling stages⁴.

As a result, during data analysis, different weights should be assigned to each of the study participants. These weights consist of the inverse product of the selection probabilities of these participants at all stages of the sampling plan. The design effect, caused by the use of clusters in the drawing stage, must also be considered. Thus, the analysis of PNS data must be performed using statistical packages that contain modules for complex samples. Most software packages used in the area of health have modules for this type of analysis, such as the Complex sample module of the Statistical Package for the Social Sciences (SPSS), the Survey data (svy) of STATA, and the Survey library of the R software package⁵.

Thus, there is a concrete possibility of the production of new scientific evidence when using data made available in public repositories, from studies developed with methodological rigor on a nationwide basis. The PNS is a valuable source of current information about the health conditions of the older Brazilian population, which can and should be better explored in studies in the area of geriatrics and gerontology.

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