

Mexican Health and Aging Study 2018

MHAS

Methodological Document



Instituto Nacional de Estadística y Geografía

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Presentation

The **Instituto Nacional de Estadística y Geografía (INEGI)**, in conjunction with the University of Texas Medical Branch (UTMB), carried out the **Mexican Health and Aging Study (MHAS) 2018**, with the aim of providing information - statistical information on the population aged 50 years and over in Mexico, which allows evaluating the aging process, the impact of diseases, mortality and disability in carrying out their activities.

The study uses a representative panel of the population aged 50 years and over in our country (Mexico), which allows extensive thematic coverage in dimensions such as current and childhood health, migratory and work experience, family networks, income and their sources, assets and their components, demographic information, burden of diseases and disabilities, cognitive status, among others.

The studies theoretical and methodological design is comparable with other projects, since it belongs to a set of international studies that address the issue of aging in more than 30 countries, to compare data between developing and developed countries in research on the subject.¹

¹ Karina Orozco-Rocha, Rebeca Wong and Alejandra Michaels Obregón. Attrition in panel surveys in Mexico: the Mexican Health and Aging Study (MHAS). https://www.inegi.org.mx/rde/rde_24/rde_24.pdf

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Introduction

The decrease in fertility and the increase in life expectancy have produced changes in the age and sex structure of the population, placing the aging of the population as an important part of the current demographic change in Mexico.

Due to the increase in the number of older adults, the needs for this group of the population are increasing, especially in the field of health, due to the loss of functional, emotional and cognitive abilities associated with aging. This has economic implications at the individual, family, social and health policy levels.

Therefore, it is important to have statistical information that allows knowing the situation of the population of adults aged 50 years and over in different areas such as: physical and mental health, economy, lifetime trajectories, family and social networks, among others.

The purpose of this document is to present the background, methodological framework and aspects of the conceptual scope that define the characteristics and statistical information collected by the MHAS. In this way, users are provided with elements for the understanding and analysis of the data generated by the project.

The document consists of four chapters. The first presents the background of the project, both national and international, as well as the reference framework and legal framework.

The second refers to the methodological framework of the project, presenting general and specific objectives, target population, geographic coverage, characteristics of the survey instruments, statistical design of the sample and training strategy.

The third describes the context and some basic concepts on aging, for a better understanding and analysis of the population under study by the MHAS.

The fourth mentions the thematic coverage of the project and the conceptual framework that presents the usefulness of the data, characteristics of the variables and its specific criteria for each topic.

Finally, a conceptual scheme, a glossary of terms and a bibliography are attached.

1. Background

Worldwide, the population is aging. In most countries, the number and proportion of older adults is increasing more and more, so that the aging of the population is imminent and, therefore, inevitable. This will generate "one of the most social transformations significant events in the 21st century, with consequences for almost all sectors of society, including the labor and financial markets, the demand for goods and services (housing, transport, social protection), as well as for the family structure and intergenerational ties".¹

"Aging is occurring at a faster rate than that experienced historically by developed countries. The older adult population will grow at a rate of 3.5% in the period 2020-2025, three times faster than the growth rate of the total population".² Given this, it can be seen that, in the near future, the countries will face multiple problems due to the increased needs for care, health care, pensions and social protections.

Due to this situation, various countries have carried out research, studies or surveys to find out what conditions (physical, psychological, emotional, social, economic and health) their adult population is in and to foresee, as far as possible, the most pressing actions, programs and policies to address the needs or deficiencies of this population group and contribute to active and healthy aging.

1.1 International Surveys on Aging

Health and Retirement Studies have been conducted in many countries around the world. Due to the importance and need to have information on the health and aging of the population, and to have data that are internationally comparable, various countries carry out longitudinal studies or surveys on this population group.³

The United States Health and Retirement Study has achieved remarkable scientific success, generating substantial interest in collecting similar data from this population in all regions of the world, resulting in a series of surveys designed to be comparable to HRS.⁴

The number of countries that are providing harmonized data to better understand aging populations and the multifaceted lives of older people and their families is increasing.⁵

These harmonized international data sets on aging include both developed and developing countries. The HRS survey "family" (or sister surveys) comprises:

- The Brazilian Longitudinal Study of Aging (ELSI).
- The China Health and Retirement Study (CHARLS).

¹ United Nations. Aging. Available at: <http://www.un.org/es/sections/issues-depth/ageing/index.html>. Consultation: March 21, 2019.

² Centro Latinoamericano y Caribeño de Demografía (CELADE) – Population Division, Comisión Económica para América Latina y el Caribe (CEPAL). Older adults in Latin America and the Caribbean, Data and indicators, 2002. Available at: https://www.cepal.org/celade/noticias/paginas/3/9353/boletin_envejecimiento.PDF. Consultation: March 21, 2019.

³ Tools and resources for the HRS study harmonization are available from the USC Gateway to Global Aging Data, which includes a digital library of survey questions, a search to find comparable questions across all surveys, and identically defined variables for cross-country analysis. More information available at: <https://hrs.isr.umich.edu/about/international-sister-studies>. Consultation: March 22, 2019.

⁴ Peifeng Hu and Jinkook Lee, Harmonization of Cross National Studies of Aging to the Health and Retirement Study Chronic Medical Conditions. COUNTRY, YEAR.

⁵ Lee, J. 2007a. Harmonizing aging surveys and cross-national studies of aging. Washington, DC, National Institute on Aging – National Institutes of Health (Accessed on 06.07.2010).

- Costa Rican Longevity and Health Aging Study (CRELES).
- The English Longitudinal Study of Ageing (ELSA).
- The Survey of Health, Ageing and Retirement in Europe (SHARE).
- Longitudinal Aging Study in India (LASI).
- The Indonesian Family Life Survey (IFLS).
- The Irish Longitudinal Study on Ageing (TILDA).
- The Japanese Study of Aging and Retirement (JSTAR).
- Korean Longitudinal Study of Aging (KLOSA).
- Malaysia Ageing and Retirement Survey (MARS).
- Northern Ireland Cohort Longitudinal Study (NICOLA).
- Health and Aging in Africa: A Longitudinal Study of an INDEPTH Community in South Africa (HAALSI).
- Health Ageing in Scotland (HAGIS).
- Health, Aging, and Retirement in Thailand (HART).
- The Mexican Health and Aging Study (ENASEM/MHAS).
- Health and Retirement Study (HRS).

The HRS family of surveys captures the same key content: demographics, family, health conditions and status, work, retirement, pensions, economic status, and social network. The summary of this family of surveys, including their research designs, samples, and key domains can be found in Lee (2010).⁶

The Survey of Health, Ageing and Retirement in Europe (SHARE) is a micro, longitudinal and multidisciplinary database; it is an international and interdisciplinary project to promote European research on the aging process. Its longitudinal design allows to analyze the dynamic dimension of the aging process and its multidisciplinary approach provides a complete vision of said process. The application of common rigorous procedures and protocols ensures the harmonization of data among all participating countries. SHARE is harmonized with HRS in the United States and ELSA in the United Kingdom. The data it collects includes variables of health, bio-markers, psychological, economic and social support.⁷ SHARE covers 27 European countries and Israel.⁸

The World Health Organization (WHO) carries out the Study on Global Aging and Adult Health (SAGE), which “is a longitudinal study that collects data on adults aged 50 years or more, in addition to a smaller comparison sample of adults ages 18-49, from nationally representative samples in China, Ghana, India, Mexico, Russian Federation, and South Africa.”⁹

1.2 Surveys on Aging in Mexico

In Mexico, studies on health and aging have been carried out by international and national institutions.

In 1994, The National Population Council (CONAPO), collected the National Sociodemographic Survey on Aging to estimate the functional capacity of the elderly. The sample, which was representative at the national level, included 5,000 individuals.

In 1995, the United Nations University carried out the Cross-cultural Research on Nutrition of Older Subjects, which is a multinational cross-sectional study that provides information on the nutritional status of older adults and their relationship to health in general, functional status and socioeconomic conditions and, in addition, a comparison with middle-aged individuals, in three areas: urban, suburban and rural.

In 1999, the Pan American Health Organization (PAHO) conducted the Survey on Health and Well-being in Aging

⁶ Jinkook Lee. Data sets on pensions and health: Data collection and sharing for policy design. PGDA Working Papers 5910. Program on the Global Demography of Aging. 2010.

⁷ SHARE. Survey of Health, Ageing and Retirement in Europe, 50+ in Europe. Available at: <http://www.share.cemfi.es/>

⁸ SHARE. Survey of Health, Ageing and Retirement in Europe, 50+ in Europe. 27 countries are: Alemania, Austria, Bélgica, Bulgaria, Chipre, Croacia, Dinamarca, Eslovaquia, Eslovenia, España, Estonia, Finlandia, Francia, Grecia, Hungría, Italia, Letonia, Lituania, Luxemburgo, Malta, Países Bajos, Polonia, Portugal, República Checa, Rumania, Suecia y Suiza. Available at: <http://www.share-project.org/home0.html>

⁹ “SAGE is supported by the US National Institute on Aging, the Division of Social and Behavioral Research, and national governments. WHO provides salary and in-kind support”. Available at: <https://www.who.int/healthinfo/sage/en/>. Consultation: April 1, 2019.

with the purpose of describing the health status of this population and evaluate the levels of functional limitation, as well as the use and accessibility of medical services. It considered a total of 8 thousand individuals distributed in seven urban areas of seven Latin American countries, including Mexico.

Furthermore, research has been carried out on the elderly in more specific areas.

In 1995, the Mexican Institute of Social Security in Mexico City (formerly the Federal District), carried out with a sample of 5,500 beneficiaries.

In this same year, in Mexico City, the National Foundation of French Gerontology, under the sponsorship of PAHO, carried out an evaluation of the quality of life in homes for the elderly and observe the prolonged care provided by these care institutions.

In addition, in 1999, the Survey on Cognitive Aging was conducted in Mexico City, to a sample of just over 4 thousand individuals. This study emphasized dementia, cognitive impairment and depression, their functional implications, as well as their association with health status and sociodemographic factors.

The Mexican Health and Aging Study (MHAS) is the longitudinal study of adults aged 50 years and over in Mexico. It is a survey of the HRS family and a joint effort of researchers from the University of Texas Medical Center (UTMB), the University of Wisconsin, el Instituto Nacional de Geriatria (INGER, Mexico), el Instituto Nacional de Salud Pública (INSP, Mexico), University of California Los Angeles (UCLA) and el Instituto Nacional de Estadística y Geografía (INEGI). The survey is partially supported by the National Institutes of Health, the National Institute on Aging (R01AG018016, R Wong, PI), and INEGI in Mexico.¹⁰

The MHAS was carried out for the first time in 2001, in order to obtain information about the aging process of the population aged 50 and over, their socioeconomic, health and disability conditions, family and financial support networks, employment, life circumstances during childhood, migration history, characteristics of the dwelling they live in, the transfer system to cover health services, among others, and thus evaluate the impact of diseases and disability in completing activities.

Although studies on aging had previously been carried out in some states of the republic, MHAS 2001 was the first survey on aging carried out at the national level. From its inception, the study was thought of as a series of surveys to prospectively monitor aging, studying a sample of study subjects over time until they died. The survey provides a longitudinal data source with national and urban / rural representativeness, with information on diverse characteristics of the population aged 50 and over residing in Mexico to study the aging process, using a large socioeconomic context.

The baseline survey in 2001 included a representative sample of Mexicans over 50 years of age (born in 1951 or earlier) and their spouse/partner, regardless of their age, with a sample distributed in the 32 states of the country. All interviews were conducted in person with pencil and paper. An oversample was drawn in six states with the highest number of migrants to the United States, and a random subsample throughout the country to obtain anthropometric measurements.

In 2003, it was carried-out again to complete a follow-up to the people interviewed in 2001, and to update and provide information about the perceived health condition, cognitive state and use of health services of the population, both middle and old age; know the conditions of employment, income, well-being, availability of pensions and family networks among middle and elderly people; and to determine the role that family ties and migration play as a family strategy to improve the level of well-being of this population. The follow-up interview was carried out with all the participants who survived and with the relatives of the deceased participants; a full baseline interview for the new spouse / partner and a proxy interview for those interviewed who were unable to complete their own interview due to illness or temporary absence.

The third wave of the study was carried out in 2012 to follow-up those already in the sample, and 6,259 individuals aged 50-61 in 2012 (born between 1952 and 1961) who were added, in order to once again give representation

¹⁰ HRS, Health and Retirement Study. International sister studies. Available at: <https://hrs.isr.umich.edu/about/international-sister-studies>.

to the population of age 50 years or more. The study design made it possible to identify the predominant features in terms of the aforementioned characteristics and to investigate their evolution. It included the following interviews: each selected person who was part of the panel in 2003 and their new spouse or partner, if applicable, and the new sample. Interviews were conducted person-to-person through Computer Assisted Personal Interviews (CAPI). Direct interviews with informants were sought, but proxy interviews were conducted for health or cognitive reasons or temporary absence. An interview was also completed with relatives of the deceased person since the last interview. Additionally, a subsample was selected to obtain objective markers, such as a blood sample and anthropometric measurements.

In 2015, the fourth survey was carried out, with the purpose of updating and following-up the entire sample collected between 2001 and 2012 and thus evaluate the aging process, the impact of diseases and disability in the performance of their activities. A follow-up interview was conducted with all the surviving interviewees with at least one interview since 2001, and the people from the new sample added in 2012 who were not contacted in that year. The interviews were conducted person-to-person, using CAPI. Direct interviews with informants, proxy interviews and interviews with relatives of the study subjects who died between 2012 and 2015 were carried out.¹¹

It should be noted that, in 2016, the University of Texas Medical Center (UTMB), with financial support from the United States National Institute of Health (NIA / NIH), developed a harmonized protocol for cognitive aging (HCAP), in order to have an evaluation protocol on the cognitive state of older adults. For this study, subsamples of HRS sister studies in different countries of the world were used. In Mexico, interviewers from the Instituto Nacional de Salud Pública applied the survey instruments of this project to a subsample of the MHAS 2015. This study is known as The Cognitive Aging Ancillary Study linked to the MHAS (Mex-Cog) 2016.

The edition of the MHAS 2018, gives continuity to the study for the longitudinal follow-up of the individuals who have been interviewed in the previous surveys, including interviews by proxy informant in case of illness, language or temporary absence, and in the case of study subjects deceased, interviews close to people to learn about health conditions and causes of death. In this survey, a sample of approximately 4,500 people, aged 50 to 55 years (completed in 2018), was added to maintain representativeness of people aged 50 or over.

Therefore, MHAS represents a unique project in the country by having a panel that covers the period from 2001 to 2018. It is a database that allows studying the dynamics and evolution of the different aspects of the life of the elderly population.

ENASEM 2018 is carried out with the participation of INEGI and researchers from the University of Texas Medical Branch (UTMB), and Universities of Wisconsin and California, of the United States of America, as well as other institutions in Mexico, with the purpose of continuing the study. Until February 2020, important scientific publications using the databases can be documented, for example, in journals such as *Salud Pública de México*, *Revista Panamericana de Salud Pública*, *Trimestre Económico*, *Papeles de Población*, *Ageing and Society*, *International Journal of Epidemiology*, *Demographic Research*, *PLoS One*, *J of Epidemiology and Community Health*, *Demography*, *J of Aging and Health*, *J of Gerontology Social Sciences*, *J of Gerontology Medical Sciences*, *American J of Alzheimer's and Other Dementias*, *Latin American J of Economics*, *J of Latin American Geriatric Medicine*, *International Social Security Review*. In total, there are more than 175 in peer-reviewed scientific journals, 45 book chapters, and 55 undergraduate theses. These publications give an account of the multiplicity of disciplinary issues and approaches, as well as the documents for public policies both nationally and internationally that have made use of the data.

1.3 International Recommendations

The importance of having statistical information on the elderly population has been reflected in various actions of international organizations.

¹¹ Wong R, Michael-Obregon A, Palloni A. Cohort Profile: The Mexican Health and Aging Study (MHAS). *Int J Epidemiol*. 2017 Apr 1;46(2):e2. PMID:25626437.

The UN General Assembly convened the first World Assembly on Aging in 1982, which produced a 62-point “*Vienna International Plan of Action on Ageing*” and called for specific actions on issues of health, nutrition, protection of the elderly, consumers, housing and environment, family, social welfare, income and employment security, education, as well as research data collection and analysis.¹²

In 1991, the General Assembly adopted the *United Nations Principles for Older Persons*, listing 18 rights related to independence, social participation, care, personal fulfillment and dignity. The following year, *the International Conference on Aging* met to follow up on the Plan of Action, adopting a Proclamation on Aging.¹³

Action on behalf of aging continued in 2002, when *the Second World Assembly on Aging* was held in Madrid. With the aim of designing an international policy on aging for the 21st century, it adopted a *Political Declaration and the Madrid International Plan of Action on Aging*. The Action Plan called for changes in attitudes, policies and practices at all levels to achieve the enormous potential of aging in the 21st century. Its specific recommendations for action prioritize older people and development, advance health and well-being into old age, and ensure enabling and supportive environments.¹⁴

The United Nations Economic Commission for Latin America and the Caribbean (CEPAL), has accumulated valuable experience in research, technical assistance and training on the issue of population aging, and has a vast collection of documents. In *the Manual on quality of life indicators in old age* (2006), it proposes a series of concepts and useful indicators for the design and monitoring of policies and programs aimed at this group. The publication *Aging, older people and the 2030 Agenda for Sustainable Development (2018)* provides a framework to align the 2030 agenda with the human rights of older people with regard, primarily, to universality and equality as principles. guiding its implementation and offers an analysis of the social protection of the elderly within the framework of goals 1.3, 3.8 and 5.4.

For its part, the World Health Organization (WHO), in its *World Report on Aging and Health (2015)*, issues recommendations for profound changes in the way of formulating policies for aging populations and paying attention to them, which are based on an examination of the most recent data on the aging process; it establishes a framework for adopting public health measures and offers a series of concrete actions that can be adapted for use in countries at all levels of economic development.

The *2030 Agenda for Sustainable Development*, with its 17 Sustainable Development Goals (SDGs) constitutes the new global agenda for international development, with commitments to create development and prosperity for people of all ages, including those of older age groups. This process considers obtaining better data disaggregated by age.

In 2016, the United Nations Economic Commission for Europe (UNECE) published the document *Recommendations on statistics related to aging*, guided by the framework of the UNECE Regional Implementation Strategy for the *Madrid International Plan of Action on Aging and the Vienna Ministerial Declaration*. These Recommendations provide guidance to national statistical offices to improve the production of aging-related statistics, from the identification of concepts for measurement to the communication of results.¹⁵

The MHAS belongs to a network of sister surveys of more than 30 studies on aging in the world, of which the researchers involved in them meet periodically to compare approaches, to harmonize content and methodologies.

Likewise, the information from the MHAS is part of the Gateway to Global Aging Data, which is a data and information platform for population surveys on aging around the world. This site offers a digital library of questions, a search engine to find concordance information between surveys, as well as easy-to-use harmonized data for cross-sectional and longitudinal analysis.

¹² ONU. Second World Assembly on Aging. Madrid, Spain, 2002. Available at: <https://www.un.org/es/sections/issues-dep-th/ageing/index.html>

¹³ Ibid.

¹⁴ Ibid.

¹⁵ UNECE. Lisbon Ministerial Declaration 2017. Available at: https://www.unece.org/fileadmin/DAM/pau/age/Ministerial_Conference_Lisbon/Declaration/Declaraci%C3%B3n_Ministerial_de_Lisboa_2017_SPA.pdf

1.4 Framework

The theoretical foundations of the study on health and aging in Mexico are those proposed by international organizations such as the WHO, UNECE, CEPAL and others, on people aged 50 years and over, which the MHAS takes as references to measure the health and well-being of this segment of the population. Likewise, the MHAS follows a protocol comparable to its sister studies globally, adapted to the national context. Since 2001, the study has sought to be comparative over time with previous surveys, but it has also transformed as it has incorporated substantial areas that have emerged in the study of aging.

This study aims to design, locate and disseminate data to achieve research objectives to:

- Examine the aging processes and the burden of disease and disability in a representative panel of Mexican older adults.
- Evaluate the effects of individual behaviors, early life circumstances, migration history and economic history, characteristics of community, family, and transfer systems on multiple health outcomes.
- Allow comparison with the United States Health and Retirement Study (HRS) derived from its design as a longitudinal study.
- Compare the health dynamics of older Mexican adults with that of Mexican-born migrants to the United States and the second generation of Mexican Americans using databases comparable with MHAS, such as the biennial HRS survey to assess the durability of the health advantage of migrant health in the United States.
- Evaluate all the components of the population's health status to understand the conditions of three groups depending on their migration status: migrants born in Mexico who live in the United States, migrants who return to Mexico after several stays in that country, and Mexicans with no history of residence in the United States.
- Consider the ways in which intergenerational transfer systems in old age affect health dynamics in a country where migration is common and remittances can serve as payment for previous investments or as insurance against uncertainty in old age.¹⁶

Another pivotal study on health and aging is SHARE, which has become a role model for various aging surveys around the world. Similar to MHAS, its value is based on its panel design that captures the dynamic nature of the aging process. The multidisciplinary approach of this study provides a comprehensive overview of this process.¹⁷

MHAS, like SHARE, is an international, longitudinal and interdisciplinary project.

- **International:** uses the same questionnaire and the same data collection method in all countries, so that the data is consistent and comparable. This allows to have a relative vision of a determined country with respect to the SHARE population.
- **Longitudinal:** interviews the same participants over time, which allows us to compare data from the same person longitudinally, observe changes in certain situations, and facilitate the measurement of causal effects.
- **Interdisciplinary:** the questionnaire covers a large number of variables, which are rarely found in the same survey, which allows a global vision of the situation of the individuals, and to explore the interaction between areas generally studied separately.¹⁸

¹⁶ Mexican Health and Aging Study. Available at: <http://www.ENASEM.org>

¹⁷ SHARE. Survey of Health, Ageing and Retirement in Europe. Available at: <http://www.share-project.org/home0.html>

¹⁸ Ibid.

1.5 Legal Framework

Health and demographic surveys constitute one of the most important epidemiological investigations, because they collect information from the population that is essential for the design and orientation of public policies and programs, while providing updated information on the affected population, if currently receiving treatment, for the evaluation and formulation of health programs aimed at reducing the prevalence of risk factors and diseases.

The General Health Law states that the purpose of the National Health System is to comply with the right to health protection; Among its objectives is "to collaborate with the social welfare of the population through social assistance services, mainly to minors in a state of abandonment, homeless elderly and handicapped, to promote their well-being and encourage their incorporation into a balanced life economically and socially." This law legally supports the national system of basic information on health.¹⁹

This Law grants the power to capture, produce and process the information necessary for the planning, programming, budgeting and control process of the National Health System.

For its part, the Law of the National Statistical and Geographic Information System (LSNIEG) regulates the National Statistical and Geographic Information System (SNIEG), which has the purpose of providing society and the State with quality, pertinent, truthful information. and timely, in order to contribute to national development; It is integrated, among others, by the National Information Subsystems, focused on producing information of a certain class or with respect to specific topics, such as Demographic and Social information, responsible for addressing health issues.²⁰

The LSNIEG also established the constitution of the Specialized Technical Committees, including Health, as an instance of participation and consultation in the work related to the production and integration of statistical and geographic information for the National Information Subsystems.

The Sectorial Specialized Technical Committee in Health, instituted in 2009, is the sectoral coordination body where joint actions are identified and developed for the capture, integration, production, processing, systematization and dissemination of information that serve as the basis for the consolidation of the National Health Information System and its link with the National Statistical and Geographic Information System²¹, which is in charge of INEGI. The Committee had a plenary meeting in November 2017²², where ENASEM was discussed.

INEGI, therefore, is committed to gathering information of national interest, which is useful for designing and evaluating public policies in favor of the population and development of Mexico. Since 2001, the Institute has participated in the design of MHAS and is in charge of collecting and processing the information.

Likewise, the University of Texas Medical Center is a non-profit public entity dedicated to providing higher education, and has the legal authorization of the National Institutes of Health of the United States to collaborate with INEGI in the realization of the survey. The ethics committee of the UTMB periodically reviews the research protocols of the survey, in particular with regard to human subjects, ensuring that the rights of the informants are respected, as well as the confidentiality of the data.

Both collaborators disseminate the use of databases.

¹⁹ DOF. General Law of Health. Mexico, 1984. Available at: http://www.diputados.gob.mx/LeyesBiblio/ref/lgs/LGS_orig_07feb84_ima.pdf

²⁰ INEGI/SNIEG. Law of the National System of Statistical and Geographical Information. DOF, 2018. Available at: <https://www.snieg.mx/contenidos/espanol/normatividad/marcojuridico/LSNIEG.pdf>

²¹ INEGI. Agreement for the transformation of the Inter institutional Group of Health Information into a Sectorial Specialized Technical Committee in Health. Mexico, 2009.

²² SNIEG, National Subsystem of Demographic and Social Information. Semiannual Report of the Sectorial Specialized Technical Committee in Health. México, 2018.

2. Methodological framework

This section has the purpose of presenting the objectives, the population to which it is directed and the general characteristics of the project.

2.1 General objective

Update and follow-up the statistical information collected in the 2001, 2003, 2012 and 2015 surveys on the population aged 50 years and over in Mexico, with urban and rural representation, which allows evaluating the aging process, the impact of diseases, mortality and disability in carrying out their activities, with disregard of what they are.

2.2 Specific objectives

- Update the sociodemographic characteristics of the people, their spouses and the other members of the households of the study subjects previously interviewed.
- Obtain demographic data on selected individuals, including fertility, migration history, and residence in the United States.
- Obtain data that allows knowledge of the general health status of the study subjects and identify the health services to which they resort, as well as the expenses incurred to obtain the aforementioned services.
- Apply a series of cognitive exercises that allow researchers to determine the memory and cognitive status of the study subjects.
- Obtain information about the survival of the parents of the study subjects, as well as the relationship with them and the help that is provided to them.
- Gather information that makes it possible to quantify the amount and to identify the type of aid that is given and received to/from the children.
- Generate information that allows determining the state of physical functionality and the assistance received by the study subject for the completion of their daily activities.
- Provide information on the employment history, the activity status and the characteristics of the current employment of the study subjects.
- Obtain the characteristics, the condition of the property and the estimated value of the home, as well as the services it has.
- Gather information on income received from pensions or other sources other than employment, the existence of real estate and capital, as well as the perception of income through work.
- Add study subjects 50 to 55 years of age to the sample.
- Measure the exposure to metals in a subsample of the study subjects, through the analysis of hair samples.
- Take saliva samples from subjects 60 years of age or older, which will allow the analysis of genetic information (DNA) to supplement health profiles.

2.3 Target population

The target population is people residing in Mexico aged 50 and over, as well as their spouses or partners who reside in the same home at the time of the interview, regardless of their age.

The sample is distributed throughout the country, both in urban and rural locations, so that information is generated at the national level.

2.4 Survey instruments

The MHAS, being a longitudinal survey, collects information from the study subjects over time on various topics of national, institutional and social relevance.

The structure and topics of the instruments used in this survey do not differ from those used in previous studies; however, throughout the different surveys, small adjustments in the variables have been required. In addition to the above and derived from the requests and needs of the users of the information, some questions have been eliminated or, where appropriate, some others have been inserted.

2.4.1 Introductory questions

This instrument has the purpose of collecting or updating general data of the study subject (SE), such as survival condition, current address, marital status, address of the spouse or partner, therefore, an appropriate informant that co-reside with the selected subject²³ or the person who is identified as the study subject 1.²⁴

The importance of this instrument is that it inquires whether the study subject continues to reside in the same selected dwelling, otherwise it is investigated and identified where he or she lives now and is located to give continuity to the study. Furthermore, it indicates which survey instruments should be applied to each subject to start the interview and, therefore, the data collection.

This instrument is applied as soon as it is certain that the interview is accepted by an adequate informant.

It is made up of two sections:

- a) Introductory questions for Household with a single person or new sample. It consists of six blocks and nine questions:
 1. Residence of SE1
 2. Informant of the deceased SE1
 3. Marital status of SE1
 4. Partner or spouse of SE1
 5. Residence of SE3²⁵
 6. New address for SE1

- b) Introductory questions for Household with a partner. It consists of 16 blocks and 24 questions:
 1. Residence of SE1
 2. Informant of the deceased SE1
 3. Verification of marital status of SE1
 4. Residence of SE2²⁶
 5. Relationship between SE1 and SE2
 6. New address for SE2
 7. Informant of the deceased SE2
 8. New partner or spouse of SE1
 9. Residence of SE3
 10. New address for SE1
 11. Residence of SE2
 12. Informant of the deceased SE2

²³ Adequate informant is the person aged 18 years or over, a resident of the home and who knows the current situation (address, marital status and health) of the study subject.

²⁴ It is the selected study subject; SE1 may not have a partner or spouse. Likewise, it is the person in the household with a partner, who was chosen to be a part of the study and has the smallest number of people.

²⁵ It is the new partner or new spouse of the follow-up SE1.

²⁶ Spouse of the selected study subject, interviewed in past rounds.

13. Relationship between SE2 and SE1
14. New partner or spouse of SE2
15. Residence of SE4²⁷
16. New address for SE2

Once the follow-up or new sample study subject is identified, the Basic Questionnaire or the Proxy Informant Questionnaire is applied.

2.4.2 Basic questionnaire

As its name indicates, this questionnaire collects information on the topics of interest, through a direct interview with the selected person. The questionnaire contains two registration cards for household residents (one for a follow-up person and one for a new person), a format for the first interview (control sheet), an interview control, 11 sections, a section for information for future contact and another format for a second interview when there is a household with a partner. Below is the structure:

- TRH. Household residents roster for follow-up person.
- Section B. Non-resident children for follow-up person.
- Section A. Demographic data for follow-up person.
- TRH. Household residents roster for new sample.
- Section B. Non-resident children for new person.
- Section AA. Demographics for new person.
- Section C. Health.
- Section D. Control and health services.
- Section F. Parents and help for parents.
- Section G. Help and children.
- Section H. Functionality and help.
- Section I. Employment.
- Section J. Housing.
- Section K. Pension, income and assets.
- Section SA. Surviving widower.
- Second interview (TRH, B, G, J and K are omitted).

2.4.3 Cognitive exercise booklet

This booklet, also known as Section E, contains a series of cognitive exercises and is a complement to the Basic Questionnaire. It is an instrument to evaluate the memory status, mental health and cognitive ability of the study subject and her spouse. The exercises or activities that apply are:

1. Memory self-evaluation
2. Reading with or without glasses
3. Spontaneous memory
4. Verbal learning
5. Fine motor skills
6. Visual-motor ability
7. Semantic verbal fluency
8. Visual route
9. Orientation in time
10. Figure recall
11. Memory recall
12. Successive subtractions
13. Collection of saliva sample
14. Collection of hair sample

²⁷ New spouse of follow-up study subject 2.

2.4.4. Proxy Informant Questionnaire

This instrument collects information from the selected person when they are not able to complete it or are temporarily absent, by interviewing another person who knows their information.

If the study subject cannot answer due to illness, does not speak Spanish or his absence will extend beyond the period of survey of the MHAS, the Questionnaire for proxy informant²⁸ is applied instead. The interview is completed with the person who has contact frequent and is close with the study subject, and can provide truthful information. It includes the same topics as the Basic Questionnaire, but omits questions whose answers would be skewed if they were not answered directly by the person, for example, questions of personal appreciation, therefore, the number of questions is less.

- TRH. Household residents roster for follow-up person.
- Section B. Non-resident children for follow-up person.
- Section A. Demographic data for follow-up person.
- TRH. Household residents roster for new sample.
- Section B. Non-resident children for new person.
- Section AA. Demographics for new person.
- Section C. Health.
- Section D. Control and health services.
- Section F. Parents and help for parents.
- Section G. Help and children.
- Section H. Functionality and help.
- Section I. Employment.
- Section J. Housing.
- Section K. Pension, income and assets.
- Information for future contact.

2.4.5 Questionnaire on deceased person

This instrument gathers information on the selected person when he has died, through an interview with the family member or person who cared for him in the last months of life. The questionnaire contains nine sections to capture the information:

- Section SA. Demographic data.
- Section SB. Temporary living arrangements.
- Section SC. Health.
- Section SD. Health services.
- Section SE. Cognition.
- Section SG. Help and children.
- Section SH. Functionality and help.
- Section SI. Employment.
- Section SJ. Housing.

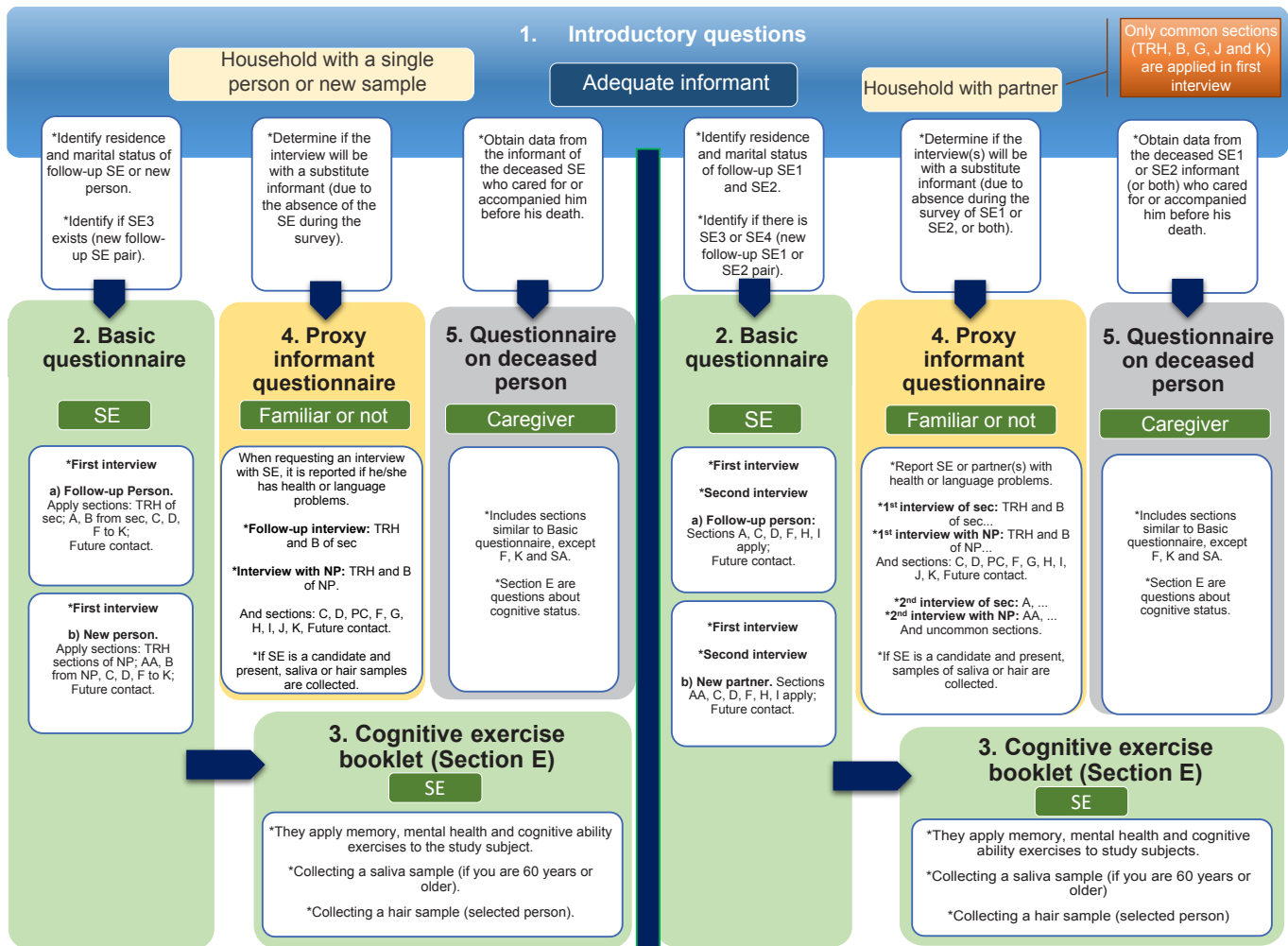
2.4.6 Questionnaire application flowchart

Upon arriving at the selected dwelling and achieving acceptance of the interview by a suitable informant, the interviewer first applies the *Questionnaire of introductory questions*, from which it is determined which survey instruments should be applied to collect the information of the subject or study subjects. If this or these are present at the time of the interview, they will apply the *Basic Questionnaire* and the *Book of cognitive exercises*; However, in the event that the study subject has died, the person who cared for him / her in the last months of life will be identified and the *Questionnaire on the deceased person* will be applied; If the study subject cannot respond to the interview at that

²⁸ The surrogate informant must be a person 18 years of age or older who knows the information of the study subject. A substitute informant is used in the event that the study subject is unable to complete the questionnaire due to an accident, illness, advanced age, language, or temporary absence.

time because it is reported that he will be absent during the survey operation, has health or language problems that make it difficult for him to respond to the interviewer, a family member or other person is asked to answer the *Proxy informant questionnaire*.

Below is the flowchart of the MHAS 2018 questionnaires application.



2.5 Sample design

The sample size is 20,207 study subjects, distributed in both urban and rural locations, with a subsample in six states with the highest number of migrants to the United States.

The observation unit corresponds to the people who were selected in the 2001, 2012 and 2018 MHAS surveys, their partner, as well as the possible new partners who had joined the various MHAS surveys.

The MHAS is a panel survey that covers the period from 2001 to 2018, so its database allows studying the dynamics of health and disability in older adults with all the topics included in the survey.

3. Basic conceptualizations

All stages of human development have been studied physically, socially, mentally, emotionally, spiritually, and so on. Researchers agree on certain characteristics of each stage, however, there are discrepancies in the number and names of the stages, as well as in the beginning age and end, due to the great heterogeneity that exists between individuals. Even so, conventions are adopted and a relative age is taken at which changes are more easily evident. There are those who only establish three stages: childhood, adolescence and adulthood. For other scholars, there are seven stages that make up the entire human being: prenatal, infancy, childhood, adolescence, youth or early adulthood, adulthood and old age.

Adulthood is the longest stage of human development, with an age range ranging from 25 to 60 years. In this period, physical and mental fulfillment is achieved.

The stage of 60 years onwards is conventionally considered as that of old age; it is the last in the course of a person's life and continues until the moment of death. It is said that it is at this point that the decline associated with age begins, when the physical, mental and intellectual abilities of the human being begin to be lost.²⁸

The MHAS is a study aimed at evaluating the aging process, the impact of diseases and disability in the performance of activities of the population aged 50 years and older in Mexico. The MHAS contributes to the scientific production of evidence about the aging process in Mexico, since the description and study of changes in the needs and quality of life of older adults requires a multi-thematic perspective, covering different stages of development in the life of the adult. Therefore, the MHAS uses a life cycle approach, inquiring about the health and socioeconomic conditions of childhood, ages during adulthood (education achieved, history of migration, unions, work and health in young adulthood), and about the family network including the parents, children and grandchildren of the older adult.

Emphasis is placed on the situation at the time of the interviews over time to measure the trajectory in: health in multiple dimensions including disability, depressive symptoms and cognitive function, use of health services and expenses, habits such as exercise, use of tobacco and alcohol, use of time in entertainment, religious or cultural activities; perception of the elderly in aspects such as their health, economic security, loneliness and satisfaction with life; the characteristics of its environment (home and surroundings); their social and family network and the frequency of interaction, as well as help given and received; sources and amounts of income and assets. Thus, evidence of the dynamics of different aspects of the life of the study subjects is generated as age advances, and it is documented how these phenomena have changed through several generations that are entering the age of 50 or 60, in different historical moments.

About the participants who die, the place of death and the health conditions and use of services during the last year of life and family decisions after death are captured.

The study of aging has been refined over time, and the technology to evaluate new dimensions in representative studies of the population through household surveys has made it possible to measure new indicators that allow the study of conditions associated with healthy aging. Thus, in MHAS 2018, hair samples were taken from a subsample of participating adults to measure exposure to metals in the environment. Saliva samples were also taken from adults aged 60 and older in order to study the genetic risk for Alzheimer's disease and other diseases such as diabetes and cardiovascular disease.

²⁸ Cognitive Development. Stages of human development in their growth. Available at: <https://eldesarrollocognitivo.com/desarrollo-humano/> Consultation: October 11, 2019.

Before continuing with the conceptual framework of the variables that define each MHAS study topic, it is convenient to define the main concepts related to aging for a better understanding and analysis of the older adults population.

3.1 Aging of the population

AGING

The changes that constitute and influence aging are complex. At the biological level, aging is associated with the accumulation of a wide variety of molecular and cellular damages. Over time, these damages gradually reduce physiological reserves, increase the risk of many diseases, and generally decrease the intrinsic capacity of the individual. Eventually, death ensues. But these changes are neither linear nor uniform, and are only loosely associated with a person's age in years.

In addition, advanced age often brings considerable changes beyond biological deterioration. It is about changes in social roles and positions, and the need to cope with the losses of close relationships. Faced with this situation, older adults tend to concentrate on fewer but more significant goals and activities, in addition to optimizing their existing capabilities through practice and new technologies, and compensating for the loss of some skills with other ways of performing tasks. Goals and motivational priorities and preferences also seem to change. Although some of these changes may be the result of adaptation to loss, others reflect ongoing psychological development in old age that may be associated with "the development of new roles, points of view, and various interrelated social contexts." These psychosocial changes may explain why, in many settings, old age can be a period of heightened subjective well-being.²⁹

Studies indicate that there are three types of social vulnerability among older adults and that they are linked to the risks of aging:

- physical vulnerability, which is associated with the risk of disability and disease inherent to the aging of the individual;
- social vulnerability that is related to the family, political systems, society and its culture; and
- environmental vulnerability, particularly related to the home, the neighborhood or the locality in which one lives.

These in turn are conditioned by economic factors (such as income, housing conditions, urban services and facilities) and subjective factors (such as proximity to relatives and neighbors, sense of belonging, and roots).³⁰

AGING OF THE POPULATION

It has been mentioned in previous paragraphs what is related to individual aging in people. For MHAS purposes, it is also necessary to specify the concept of population aging.

The aging of the population is a consequence of the evolution of the components of demographic change (fertility and mortality). It is defined as the progressive increase in the proportion of people aged 60 years and older with respect to the total population.³¹

HEALTHY AGING

Healthy aging is the process of promoting and maintaining functional capacity that enables well-being in old age. Functional capacity comprises the health-related attributes that enable a person to be and do what is important to them. It is made up of the intrinsic capacity of the person, the characteristics of the environment that affect that capacity, and the interactions between the person and those characteristics.³²

²⁹ OMS. World Report on Aging and Health. Resume. 2015. P. 12.

³⁰ Introductions to the content of the interviewer manual, questionnaire management, MHAS 2018.

³¹ CEPAL. Topic: Aging. Available at: <https://www.cepal.org/es/temas/envejecimiento> Consultation: October 11, 2019.

3.2 Health and capabilities of the elderly

HEALTH

Health, according to the WHO, is a state of complete physical, mental and social well-being, and not only the absence of diseases or illnesses.

MENTAL HEALTH

It is an integral and essential component of health; it is more than the absence of mental disorders or disabilities. It is determined by multiple social, psychological and biological factors.³³

FUNCTIONAL CAPACITY AND INTRINSIC CAPACITY

According to the WHO, functional capacity is the relationship that occurs between the individual and the environment in which they live, and how they interact. Likewise, it is associated with health and the value of the activities that allow us to be and do.³⁴

Healthy aging is the process of developing and maintaining the functional capacity that allows well-being in old age.

Other authors define functional capacity as the ability present in an individual to carry out the activities of daily life, without the need for supervision. That is, the ability to perform their tasks and perform their roles, interact in the environments and make the necessary adaptations to accommodate the changes inherent in the life cycle.

The intrinsic capacity, according to the WHO, is the combination of all the physical and mental capacities that an individual can use at a certain moment. It is directly linked to the concept of independence.

But not only the ability to carry out the activities determines the functionality of the elderly person, but also the interaction in the multiple environments where they live, that is the real environments where activities are performed. This interaction between the capacities of the individual and their relationship with the environment is functional capacity.

For the evaluation of functional capacity, it is necessary to analyze body structures and functions, the ability to perform activities and the impact generated by personal and environmental factors in said performance.

HEALTH IN OLD AGE

Extending life expectancy offers challenges, but also opportunities, not only for older people and their families, but also for societies as a whole. Even at this stage they can continue with studies, start a new profession or take up old hobbies; similarly, contribute in many ways to their families and communities; however, the extent of those opportunities and contributions depends largely on one factor: health.³⁵

³² OMS. World Report on Aging and Health. Geneva, 2015. P.14.

³³ OMS. Mental health: strengthening our response. Available at: <https://www.who.int/es/news-room/fact-sheets/detail/mental-health-strengthening-our-response> Consultation: October 15, 2019.

³⁴ Jimena Garriga. Functional capacity and intrinsic capacity. Gerontology, Occupational Therapy. Available at: <http://plenaidentidad.com/la-capacidad-funcional-y-la-capacidad-intrinseca/> Consulta: October 15, 2019.

³⁵ OMS. Aging and health. Available at: <https://www.who.int/es/news-room/fact-sheets/detail/envejecimiento-y-salud> Consultation: October 14, 2019.

If older people can live those extra years of life in good health and in a supportive environment, they will be able to do what they value most in the same way as a young person. On the other hand, if those extra years are dominated by the decline in physical and mental capacity, the implications for the elderly and for society are more negative.

Common conditions of old age that affect functional capacity or the loss of years of healthy life include hearing loss, cataracts and refractive errors, back and neck pain and osteoarthritis, chronic obstructive lung disease, diabetes, depression and dementia. What's more, as you get older, the likelihood of experiencing multiple conditions at the same time increases.

Old age is also characterized by the appearance of several complex health states that usually appear only in the last stages of life and that do not fall into specific morbidity (or multi-morbidity) categories. These health conditions are commonly called geriatric syndromes. They are usually the consequence of multiple underlying factors including, but not limited to, the following: frailty, urinary incontinence, falls, delusions, and pressure ulcers.

Thus, the functions that are lost or diminished with age are:

Motion functions. With aging, muscle mass tends to decrease with age, which may be associated with deterioration in strength and general musculoskeletal function and movement, which is reflected in a decrease in gait; there are major changes in the bones and joints. With age, bone density tends to decrease, especially in post-menopausal women, and can advance to a point where the risk of fracture increases considerably, leading to disability, poorer quality of life, and mortality; articular cartilage also undergoes structural, molecular, cellular, and mechanical changes, increasing the tissue's vulnerability to degeneration.³⁶

Sensory functions. Aging is associated with decreased vision and hearing. Hearing loss (or presbycusis) is due to cochlear aging, environmental factors, genetic predisposition, and greater vulnerability to physiological stressors and modifiable habits; it can contribute to social isolation and loss of autonomy, and be accompanied by anxiety, depression, and cognitive decline. Presbyopia is a decreased ability to focus that causes blurred near vision; lens clouding is a change that can lead to cataracts; Senile macular degeneration causes damage to the retina and quickly leads to severe visual impairment. These visual deficiencies can limit mobility, affect interpersonal interactions, trigger depression and be an obstacle to accessing information and reduce social contacts, increasing the risk of falls and accidents.

Cognitive functions. These functions vary greatly, depending on education and age. It is common for memory to fail a bit and to slow down the information processing speed. However, although aging is associated with a reduced ability to cope with complex tasks that require attending to several issues at the same time or changing the focus of attention, it does not appear to diminish the ability to maintain concentration or avoid distraction.

Similarly, although aging is related to a decreased ability to learn and master tasks that involve actively manipulating, reorganizing, integrating, or anticipating various elements of memory, it has little to do with memory of events, knowledge of words, and concepts, memory related to the personal past and procedural memory. Therefore, not all cognitive functions deteriorate with age, and functions associated with language, such as comprehension, reading ability, and vocabulary, in particular, remain stable throughout life.

The differences between one person and another in the decline of cognitive functions associated with age depend on many factors, such as socioeconomic status, lifestyle, the presence of chronic diseases and the use of medications, which indicates that there are opportunities to carry out public health interventions throughout the life course. There are also indications that normal cognitive decline due to age can be partially offset by practical skills and experiences gained throughout life, and mitigated with mental training and physical activity.

³⁶ OMS. World Report on Aging and Health. Geneva, 2015. P.57.

Frailty is a progressive age-related deterioration of physiological systems that causes a decrease in intrinsic capacity reserves, which confers extreme vulnerability to stressors and increases the risk of a series of adverse health outcomes. Frailty, care dependency, and comorbidity are distinct but closely related concepts.³⁷

3.3 Environments and financial and personal security

SOCIAL AND PHYSICAL ENVIRONMENTS

Enabling and favorable environments refer especially to sociocultural and environmental conditions that promote dignified and safe aging in the community of origin. These conditions are divided into two areas of intervention: social settings and physical settings. The first includes topics related to residential arrangements, support networks, violence and abuse against the elderly, participation and the social image of old age, and the second covers the issues of housing and use of urban space.³⁸

ECONOMIC SECURITY

The lack of economic security in old age is a major obstacle to healthy aging and to reducing health inequities. The prevalence of poverty among older people compared to the general population varies considerably globally, and those with low incomes face particular difficulties in meeting their basic needs for economic security and adequate housing.³⁹

Not having great financial worries is important throughout the course of life, but it is more so in old age, when the ability to generate income decreases. Having a certain amount of money makes people happier and reduces mental health problems, such as depression and anxiety.

Economic security in old age can come from various sources: pensions, social security benefits, income, assets and intergenerational transfers or aid, especially from other family members.

PERSONAL SECURITY

Older people need to be and feel safe and secure at home and in their community. Injuries, abuse, crime, and disasters undermine the personal safety of older adults.⁴⁰

In general, older people who are poor, who are in poor physical and mental health, who are dependent on care and who are socially isolated are more likely to see their personal safety and well-being threatened.

³⁷ OMS. World Report on Aging and Health. Geneva, 2015. P. 66.

³⁸ CEPAL/CELADE, Italian Cooperation and UNFPA. Manual on quality of life indicators in old age. Chile, 2006. P. 112.

³⁹ OMS. World Report on Aging and Health. Geneva, 2015. P. 176.

⁴⁰ Ibid. P. 183.

4. Conceptual framework

4.1 Thematic coverage

Below is presented the MHAS thematic coverage, the level of detail differs by questionnaire considering that to collect the information different instruments can be used: Basic questionnaire, Questionnaire for proxy informant and Questionnaire on deceased person.

Childhood characteristics. Health and socioeconomic conditions during childhood (age 10).

Sociodemographic characteristics of the selected person. Sex, age, relationship, place and date of birth, education, marital status, fertility, previous unions or marriages, migration history. With these variables we seek to identify and know the life context of the interviewee.

Characteristics of the property. Type of housing, construction materials and other indicators of quality of housing, regularity of ownership and availability of durable consumer goods.

Economic situation. Income from work and other sources, including pensions and government aid; type and value of real estate and money.

Migratory experiences. From the selected person, their parents, siblings and children.

Family. Lists of all children, including those who do not reside with the study subject; for each one, their demographic attributes, indicators that summarize their current health and childhood, education, current economic activity.

Personal impressions. Self-assessment of health in general, personal opinion of individual economic status, level of control in decisions and level of family support.

Health measures. Reports of conditions, symptoms, functional status, lifestyle (for example, history of smoking, alcohol use, and exercise), depression, medical conditions, reading ability, and cognitive status.

Job. Work history, occupation, job position, and current workplace.

Transfers. Help in money or in-kind, and time the help was given or received, from and to their children, and from the selected study subject to their parents.

Environmental health. Measure metal exposure using hair samples from a subsample of study subjects. Presence of commercial establishments that contain a high risk of exposure to environmental pollutants near the home.

Disease risks. Genetic analysis of saliva samples for subjects 60 years of age or older.

Widowhood. For people who become widows during the longitudinal study, it inquires about the economic, work and residence changes that have occurred as a result of the death of their spouse.

Mortality. For study participants who die, the conditions of death and the last year of life.

4.2 Conceptual scope

The three aforementioned recruitment instruments include topics that are common, but others are excluded. This section presents the justification, usability and objective of the topics or groups of variables contained in them.

In studies about the health and well-being of older adults, the informant is ideally intended to be the subject of the study. The intention is to obtain direct data from the person to know their history, their current conditions and activities, as well as opinions and personal perceptions, since it is interesting to capture information about the way they feel.

However, sometimes it is not possible for the selected person to directly answer the interview, especially due to illness or disability of the older adult. In population-based studies such as the MHAS, which seek to have a representative sample of older adults in Mexico, having information on this group of the population is crucial, since excluding all those who cannot answer directly would introduce a major bias.

For this reason, there is the option of conducting the interview with a substitute or proxy informant, as an alternative to the direct interview. The MHAS Proxy Informant Questionnaire is the survey instrument that allows collecting information from the selected person by interviewing a proxy informant who knows his or her information, when the study subject is not in a position to respond due to an accident, illness, advanced age, language or is temporarily absent during the survey period.

In longitudinal studies, it is important to obtain data at each survey to be able to analyze changes over time. The use of a proxy informant increases the follow-up and response rate, and the bias for some information is considered minimal. Having information obtained through a proxy interview, allows a more complete follow-up of study subjects, which would otherwise be missing information for study subjects who cannot answer for themselves.

However, there are also great limitations when information is obtained by a proxy informant. This is the main reason proxy interviews are sought only in very necessary cases.

The responses of the proxy informant, due to the fact that the respondent provides information about another person, may be imprecise since they may be influenced by their own characteristics, either by age, sex, education and the relationship they have with the study subject. Another inconvenience that it can present is the difficulty of locating the proxy informant or that the person who responds might not be the ideal informant.

Therefore, an interview by proxy informant is only applied in the following cases:

- Due to serious illness or disability that does not allow the study subject to answer the questions of the Basic Questionnaire.
- Due to temporary absence of the study subject, and their return is after the end date of the the MHAS survey.
- The study subject speaks a language other than Spanish. For no reason an interview is completed using a translator through due to the complexity and thematic variety of the questions.

The ideal proxy informant is a direct relative (spouse, children, siblings, parents), or any person 18 years of age or older who lives with him or her and who knows the information required in the questionnaire, for example: health status, cognitive status, employment, housing and income, sociodemographic information of all members of the household, and so on. It is important that the person answering the proxy informant interview has frequent and close contact with the study subject, and therefore can provide truthful information.

In previous MHAS surveys, only a small fraction of the interviews were conducted as a proxy informant (1,032 in 2001, 1,178 in 2003, 1,275 in 2012, and 929 in 2015, respectively). Most of the proxy informants are spouses or children, but other informants can also be found such as: daughters-in-law or son-in-law, grandchildren, adopted children, siblings, cousins or uncles, or unrelated caregivers.

When a proxy interview is completed, the reason for not completing a direct interview with the study subject is recorded, as well as the information about the proxy informant to establish the relationship he has with the selected subject.⁴¹

Regarding the design of the questionnaire for proxy informant, it has the same thematic content as the Basic Questionnaire, with a smaller number of questions, since it omits questions that could be biased if provided by another person instead of the selected person. For example, personal perception questions. Additionally, the texts of the questions were adapted to refer to a third person, that is, the study subject.

In addition, in this instrument, Section E. Cognitive exercises is replaced by Section PC. Cognitive proxy, which has the purpose of knowing the perception that the proxy informant has of the cognitive functionality of the study subject and comparing it with his condition in the past regarding certain variables: memory, judgments and decisions, daily activities, among others that the study subject performs daily.

For the 2018 survey, the study subjects who are present during the interview are likely to be candidates for taking a saliva and hair sample, as long as they are selected and give their consent orally or in writing.

In the case of interviews by a proxy informant, the sample can be taken from the selected person, only if the reason for completing the interview by proxy is that the study subject does not speak Spanish. However, the following criteria must be observed:

- From the beginning, the study subject must be indicated if he or she is the one selected to take a saliva or hair sample.
- If they are selected for the saliva sample, they should be told that after a few questions the sample will be taken, for which they are asked not to eat or drink anything until the sample is taken.
- If they are selected for the hair sample, they should be informed that after a few questions a small lock will be cut from their head.

In case of interviewing a couple and one of the interviews has to be by a proxy informant, the direct interview should be applied, followed by the interview by proxy informant.

In the event that the couple is interviewed and both are by proxy informant, it is recommended to first conduct the interview in which the sections by household will be answered, that is: TRH, B, G, J and K.

Since MHAS is a longitudinal study, information is collected on the people who participate in it through the interviews to find out if their conditions remain the same or have changed. Once the subjects are part of the study, they are followed until they die.

In aging studies, it is of great importance to study mortality. Mortality studies are based on the observation of deaths that occur in a population during a specified time. In these studies, in addition to knowing the number of deaths, it is of interest to inquire about the characteristics of the deceased persons.

Mortality, being such an important component of the health status of the population, is information that needs to be explored to understand more fully the conditions and characteristics surrounding the death of older adults in Mexico.

In Mexico, mortality in older adults is documented through vital statistics collected by institutions such as the Secretaría de Salud and INEGI, mostly through administrative records based on a death certificate. Although these vital statistics are of good quality to capture the deaths that occurred in a year, the collection of information on the characteristics of the deceased person is not as deep as that which can be captured through a survey or in a longitudinal study such as MHAS.

⁴¹ Technical Group on Health and Health Interview Survey (HIS) Statistics. Meeting 27-28 March 2011. Document Tech-HIS/11_10. Report of the Task Force on institutionalized people.

For this reason, the MHAS questionnaire on the deceased person is a very useful tool to understand the disease and mortality process of the elderly population, since it is rare that other studies or surveys in the country include a questionnaire that obtains this type of information.

The deceased person interview has been successfully applied in studies such as HRS in the United States and ELSA in England. It aims to close the subject's participation in the study. This information is related to that already collected about the subject in previous surveys when he was still alive. It can be used to detect possible changes in health, social and financial circumstances since the last interview, and to determine what happened to the assets after death.⁴²

The MHAS questionnaire on the deceased person is completed, as its name indicates, once the study subject has died, through an interview with the family member or person who cared for or accompanied the study subject before death. The information obtained allows us to know the physical, emotional and economic conditions of the study subject in the months prior to death. It also provides data on family networks, their interactions, commitments and intergenerational transfers.

The appropriate informant to answer the deceased person's questionnaire is a person 18 years of age or older (family member or person in charge) who had frequent contact with the study subject before dying, who can provide information on the personal situation and cause of death.

Also, the following considerations must be taken into account for the correct application of this instrument:

- This questionnaire should not be applied to people selected as part of the new sample who have died, since there is no information to follow up from previous surveys.
- In the case of an interview with a couple and both spouses have died, only apply the section SG. Help and children and SJ. Housing and property in the first interview, since they are sections common to both and the information should not be duplicated.

The questionnaire on the deceased person contains topics and questions similar to the basic questionnaire, but they are asked in a different way, with the purpose of following up on information that had been captured in previous surveys.

In order to understand the consequences of aging for the Mexican society, it is interesting to know details of the deceased's last year of life, both about the resources that were spent, and the care arrangements and family adjustments that had to be made. For this reason, the questionnaire of the deceased in MHAS contains questions regarding the time prior to the death of the study subject. For example, it asks about the temporary arrangements of the residence, if someone went to live with the deceased to help him, if he worked, if he was hospitalized and if he had the right to receive medical attention in a health institution.

With the information from the MHAS waves collected since 2001, more than five thousand interviews on the deceased person. This have been accumulated allows different analysis and questions of interest to be raised, such as the relationship between mortality and chronic diseases and infectious, socio-economic status in childhood, education and obesity, among other factors. Since MHAS collects information from the study subject before death, in some cases it can provide information for up to a decade of life before death.

In studies of the well-being of an aging population, the last year of a person's life is known to be the most expensive. This may be because the family and medical staff are doing their best to save an elderly adult, and hospitalizations and significant household finances may be required.

Effective measures are needed to reduce mortality and these measures can be better applied if there is adequate knowledge about the factors related to it, and intervention programs based on scientific evidence are proposed. MHAS offers the possibility of advancing in the generation of knowledge about mortality, since each of the concepts contained in the study can be used for its analysis.

⁴² Sally Bridges, David Hussey, Margaret Blake. The dynamics of ageing: The 2012 English Longitudinal Study of Ageing (Wave 6). Technical Report. Date: May 2015.

4.2.1 Demographic data

Knowing the basic characteristics of the elderly population, and their life context is essential for the generation of statistics that account for the conditions in which people aged 50 and over, that resided in our country in 2018, have developed and lived.

In the CEPAL CELADE Manual, it is mentioned that “in addition to inquiring about the characteristics of the demographic aging process, for the definition of old-age policies and the targeting of programs and projects associated with the elderly population, it is essential the analysis of the situation of the elderly through their sociodemographic characterization. This characterization must have information regarding their geographic distribution (urban or rural), marital status, educational level and ethnic origin, among other features ”.⁴³

In MHAS, this topic includes the following subtopics (included in sections A and AA of the Basic Questionnaire and the Proxy Informant Questionnaire, and in section SA of the Questionnaire on the deceased person): general data, childhood, marital status, fertility, migration to the United States (history or stay), language, religion, volunteer work and major events, although the application of some of these subtopics and questions depends on whether the study subject is a follow-up or a new person.

GENERAL DATA

The most basic data that should be known about a person are their sex, age, date and place of birth, and education. These variables are fundamental and are included in almost all statistical projects and, specifically, in the MHAS, they have been considered since the first survey in 2001.

A demographic survey, by definition, includes the variables *Sex and Age*, since their incidence is decisive for knowing and explaining the way in which a population is made up. Their need for inclusion lies in the basic structural character of both variables, which allows us to recognize the order of said population through them, so explaining any demographic change requires the identification of differential behavior according to age and sex, which they constitute essential elements in the sociodemographic analysis, mainly in the study of subgroups of the adult population.

These conceptual variables constitute in the censuses, surveys and administrative records, information of a basic demographic character of the individuals, whose combined classifications of said variables with other characteristics of the population, allow us to establish the base of any sociodemographic analysis and to structure an order towards any other variable or set of them that are the object of interest to produce statistical indicators.⁴⁴ In the case of the Mexican Health and Aging Study, they are fundamental to identifying the health conditions of the adult population by sex and age groups.

The *Sex* variable, understood as the biological condition that classifies people into men or women, represents, together with *Age*, the most basic type of demographic information collected about people. As important aspects such as mortality, morbidity, migration, economic activity, may differ between women and men, while something similar happens with age because, within the group of older adults, differences in living conditions are determined that as age increases, the probabilities of deteriorating health and dependency on care increase. The classification or crossing of these data with other characteristics of a population constitutes the basis for carrying out the analysis or study about a human community, alluding to a certain moment or its behavior or evolution, since it allows to specify the context in which all other data are framed, or, establish the analysis perspective. For example, gender, aging and poverty.

⁴³ CEPAL/CELADE. Manual on quality of life indicators in old age. Chile, 2006. Available at: <https://www.cepal.org/es/publicaciones/3539-manual-indicadores-calidad-vida-la-vejez>. P. 31.

⁴⁴ INEGI. National Survey of Demographic Dynamics (ENADID) 2018. Conceptual design. 2019. Available at: https://www.inegi.org.mx/contenidos/programas/enadid/2018/doc/dc_enadid18.pdf. Consultation: August 7, 2019. P. 187.

In the MHAS, the sex of the new person or follow-up study subjects is recorded, either by direct observation or preloaded. In turn, the age is asked of the follow-up study subjects, except if it is about a new person. Although the variable *Date of birth* is added to verify or know the day, month and year of birth of the study subjects, same with which the age is corroborated. This variable is very useful when it comes to a new person, since it is used to obtain their age.

The variable *place of birth* has been included in all the population censuses that have been carried out (from 1895 to 2010), although the question has been modified throughout this period.⁴⁵ Some surveys carried out by the Institute incorporate it with an objective in particular; MHAS includes the variable *Place of birth* to know or verify the state of the Mexican Republic, or the country, where the study subject was born.

The UN, in the *Principles and Recommendations for Population and Housing Censuses. Revision 3*, states that information on the place of birth is an input for the formulation of public policies related to migration and issues related to the mobilization of all people within a specific territory.⁴⁶ It suggests that it is necessary to distinguish the native population from those which were born elsewhere, regardless of the proportion that the latter represents of the total population. This will make it possible to distinguish between the population born in the country and the one born abroad. Likewise, it indicates that, to collect the information, it must be taken into account that the place of birth is the political-administrative unit in which the person was born—or for those who were born in other countries, the country of birth—; and that the place of birth of the natives of a place is defined as the geographical unit where the birth took place.⁴⁷

MHAS 2018 asks the study subjects of a new person directly the place or country of birth. For the follow-up study subjects, it included a verification question, in order to corroborate the information provided in the last interview. This information was preloaded into the electronic questionnaire system. However, if it is incorrect, it contains a question to record the correct data for the state or country of birth.

Information on the level and maximum grade of education is of interest to public policies because the educational level is correlated with many of the measures of development and quality of life.⁴⁸

In the MHAS, this question is incorporated to know the level of education of the people who enter the study, as well as the other members of the household, 12 years or older. "The educational characteristics of the elderly are another important feature of the sociodemographic analysis, since the educational level they have reached may affect their access to resources in old age, or reveals the generational peculiarities of access to education at certain stages of the cycle of life".⁴⁹

For a better understanding of the question and its options, the definition of the following concepts is presented:

Education level. Degree approved at the highest educational level achieved within the National Educational System (SEN) or equivalent in the case of studies in the open system of education or studies abroad. *Approved grade.* School year successfully concluded.

Education level. Each of the stages that make up an educational type of the National Educational System. Almost all educational levels are preparatory, that is, they prepare to continue with a higher level (such as primary, secondary or high school), and only some are terminal, that is, they do not allow continuance at a higher level (such as terminal technical professional education), others are preparatory and terminal at the same time (such as technological bachelor's degrees or degrees).

Elementary education. Level that corresponds to the education provided to children from 6 to 12 years old (generally) in order to contribute to their harmonious and comprehensive training, so that they obtain, at least, the minimum

⁴⁵ INEGI. Intercensal Survey 2015. Conceptual framework. 2017. Available at: http://internet.contenidos.inegi.org.mx/contenidos/Productos/prod_serv/contenidos/espanol/bvinegi/productos/nueva_estruc/702825098742.pdf. Consultation: September 5, 2019. Pp. 84-86.

⁴⁶ INEGI. National Survey of Demographic Dynamics (ENADID) 2018. Conceptual design. 2019. Available at: https://www.inegi.org.mx/contenidos/programas/enadid/2018/doc/dc_enadid18.pdf. Consultation: August 7, 2019. P. 161-162.

⁴⁷ INEGI. Intercensal Survey 2015. Conceptual framework. 2017. Available at: http://internet.contenidos.inegi.org.mx/contenidos/Productos/prod_serv/contenidos/espanol/bvinegi/productos/nueva_estruc/702825098742.pdf. Consultation: September 5, 2019. P. 85.

⁴⁸ Ibid. Pp. 248-252.

⁴⁹ CEPAL/CELADE. Manual on quality of life indicators in old age. Chile, 2006. P. 35.

knowledge necessary to function in society. It is compulsory and takes six years. In any of its modalities, primary education is prior and essential to continue in secondary education (INEGI, 2014: 78).

Secondary education. Level corresponding to the education provided to the population aged 12 to 16 who have completed primary education. It is mandatory for all Mexicans and lasts three years (Cámara de Diputados, 2017: 2). It is propaedeutic, that is, necessary to start professional middle school or higher education. It is taught in the following services: general, for workers, *telesecundaria*, technical for adults.

Upper secondary education. Upper secondary education is that which is taught after secondary school. It is made up of three subsystems: the general baccalaureate, which also includes the modalities of open high school and distance higher secondary education, the technological baccalaureate, a bivalent modality offered by the career of professional technician, while preparing people for the continuation of studies of the higher type, and technical professional education, which trains qualified professionals in various specialties. Each of them is configured differently in terms of the objectives pursued, the school organization, the curriculum and the general preparation of the students.

Technical career with secondary school completed. It corresponds to the educational options of technical or commercial academies that have secondary school as their entry record and that are not equivalent to high school, although it allows direct entry into the labor market.

Basic normal. Educational level to train teachers in pre-school, primary and physical education, existing until 1984, when normal schools could be entered after finishing secondary school and, until 1969, they could be entered at primary level. Its duration was four years of study.

This option is maintained, because, although it is an educational level that as such is no longer taught in the SEN, there is still a population with this type of studies, and it cannot be made equivalent to any of the existing ones. It is worth mentioning the case of the normal undergraduate degree, an educational modality that, although it is a special type of education, it is not considered necessary to differentiate, since it is equivalent to the undergraduate level, and there is no specific objective to capture it differently.

High School or Baccalaureate. The baccalaureate can be general or technological and technical baccalaureate option. The general bachelors offer an education of a formative and integral nature in which the student is offered a general basic preparation (scientific, technical, humanities and social sciences knowledge, together with some research methodologies and mastery of the language). Its duration is usually three years.

In technological baccalaureates, technicians or middle professionals are trained, with the corresponding degree, with the relevant knowledge and professional skills that facilitate their incorporation into the labor market. The differentiated use of high school or general baccalaureate and technological baccalaureates is intended to avoid confusion between bivalent baccalaureate and technical studies with completed high school, which mainly refer to the *Técnicos Superiores Universitarios* (TSU).

Higher education. The primary functions of higher education refer to the training of people in the different fields of science, technology, teaching, research; also, to the extension of the benefits of education and culture to the whole of society, with the purpose of promoting the integral progress of the nation. In Mexico, higher education is made up of four types of institutions: universities, technological institutes, normal schools and technological universities. It includes the levels of university superior technician or associate professional, bachelor, specialty, master's degree and doctorate.

Technical career with high school completed. It is the educational option after the baccalaureate and prior to the bachelor's degree. It is fundamentally oriented to practice and leads to the obtaining of the corresponding professional title. This level can be accredited as part of a bachelor's degree curriculum.

This option captures the *Técnicos Superiores Universitarios* (TSU) and associate professional, who are the educational option after high school and prior to undergraduate degrees. It has an average duration of three years. It also considers the professional license (also called technical license), which is the intermediate educational level between the university superior technician and the bachelor's degree, has a duration of three semesters and its mandatory antecedent is the TSU title. Its main objective is to train middle managers endowed

with solid technical skills to get directly involved in the productive sector.

Normal degree. As of 1984, when normal education studies were raised to the bachelor's degree, this subsystem was integrated into higher education. The main objective of normal schools is the training of teachers in the levels and modalities of basic education. In Mexico, degrees are offered in preschool, primary, secondary, special education and physical education, and various postgraduate options. The normal schools of the *Secretaría de Educación Pública*, state governments, individuals and the Universidad Pedagógica Nacional participate in the provision of these services.

Degree. This level has as a compulsory background the baccalaureate or its equivalents. Its fundamental objective is the development of knowledge, attitudes, aptitudes, skills and working methods for the exercise of a profession. Its duration can generally be 4 or 5 years, but it can consist of more or less years of study, depending on the plans and modalities.

Specialty. Educational option aimed at training individuals capable of studying and treating specific problems in a particular area of a profession, which may refer to knowledge and skills of a basic discipline or specific activities of a particular profession, and have an academic background the bachelor's degree.

Master's degree. This level requires a bachelor's degree as a precedent or having covered the total credits of the degree, when it is taken as an option for the degree. It is aimed at training individuals capable of studying and treating specific problems in a particular area of a profession, which may refer to knowledge and skills of a basic discipline or to specific activities of a particular profession. Its duration can range from two to four years. Doctors who declare a specialty are included.

Doctorate. Level that has a master's or bachelor's degree as a precedent when it is taken as an option immediately after it; It is aimed at the formation of individuals trained for teaching and research, with mastery of particular topics in an area. Its duration varies between two and six years. Doctors who declare a sub specialty are included.

The options for this variable, with respect to MHAS 2015, did change and it was in order to standardize (and update) with the latest household surveys that the Institute has carried out. Here are the differences.

MHAS 2015	MHAS 2018
What is the last year or grade that (NAME) passed in school?	What is the last year or grade that (THIS PERSON) passed in school?
None	None
Elementary	Elementary
Secondary	Secondary or middle school
Technical or Commercial	Technical degree with middle school completed
Preparatory or high school	Preparatory level of teacher training
Basic teaching school	Preparatory or high school
College	Technical degree with high school completed
Graduate college	Bachelor's or engineering degree
	Graduate school

The variables *Condition of literacy* and *Condition of knowing how to count* are included in the MHAS, only in the Demographic Data Section for a new person, since this information is already available when it is a follow-up person.

The objective of including the variable on *Literacy status* is to find out if the study subject knows how to read and write a message, that is, if there is a basic level of familiarity with letters and words, regardless of whether or not they have attended elementary education. In turn, the objective of the variable *Condition of knowing how to count* is to know if the study person can count from 1 to 10, which establishes that the person can understand numbers, regardless of whether they attended elementary education or not.

The information on both variables is useful, on the one hand, because it gives us an idea of how adults have faced day-to-day situations or how they solve necessary tasks in daily life, since “functional illiteracy” limits their interaction in various circumstances and with different components, including information and communication technologies, which can generate social intimidation, health risks, stress, low wages, and other difficulties related to their disability. On the other hand, it determines in advance if the study subject is going to be able to carry out the cognitive exercises that are part of the survey and that require reading or numerical skills, or not.

CHILDHOOD

This subtopic is only incorporated in the Demographic data section for new people, and it consists of variables that allow us to know the life context of the study subjects during their childhood, a stage that MHAS considers until before reaching 10 years of age. Capturing data from childhood is essential because it has been found that childhood conditions can have an impact on how diseases manifest in later life. This is what researchers call “the long arm of childhood”.

MHAS focuses on understanding the social, economic and health conditions that the person under study had at this stage of their life.

The questions included regarding health conditions in childhood, aimed to find out if before turning 10 years old he/she had a serious health problem, derived from an illness or accident, which did not allow him to do his normal activities (go to the school, playing games, helping his parents) or keeping him in bed or convalescing for more than a month. Also, if he/she had typhoid fever, tuberculosis, rheumatic fever, polio or a blow to the head that caused him/her to pass out, these are diseases that have health effects in old age. In addition, wondering how their health was compared to other children their age, as it is an important determinant of health in adulthood.

In order to know the socioeconomic level or conditions of the study subject, questions were included to investigate whether they ever lived in the same house or neighborhood as their grandparents for more than 6 months, this with the aim of capturing the experience they have had living with or close to grandparents for a long period of time. Also, the type of work that her father or guardian was doing at that time; if his house had a toilet and electricity; if he generally fell asleep hungry; if he wore shoes regularly; if any member of the household had to leave their studies to help his parents; if they slept in the kitchen; if they received financial help from relatives; if any of her parents or guardians smoked or if someone else in her home did. Through all these questions, it is possible to obtain crucial information for their health in childhood and advanced age.

MARITAL STATUS

The *marital situation* or status is a topic of great importance in sociodemographic studies, since it is linked to multiple aspects in the life cycle of the population. For example, it determines the formation of family arrangements, territorial mobility, the formation of labor markets, among other aspects that converge in to social demands.⁵⁰ From a strictly health or population aging perspective, the marital status and unions, together with residence, have a direct impact on the living conditions of the population. The marital history of the elderly is a feature of interest for the analysis of their situation, since living at an old age with a partner is closely linked to intra-domestic kinship relationships, the family support networks to which they can access, and it is also important for the purposes of old-age policies and programs.⁵¹

The marital status is understood as the union or marriage condition of the population 12 years of age or older at the time of the interview, in accordance with the laws or customs of the country. It is classified as: single, married, common law, divorced, separated, widowed.

⁵⁰ INEGI. National Survey of Demographic Dynamics (ENADID) 2018. Conceptual design. 2019. Available at: https://www.inegi.org.mx/contenidos/programas/enadid/2018/doc/dc_enadid18.pdf. Consultation: August 19, 2019. Pp. 109-113.

⁵¹ CEPAL/CELADE. Manual on quality of life indicators in old age. Chile, 2006. P. 33-34.

In the MHAS, variables are included to verify if there was a change in the marital status of the person subject to the follow-up study, after the interview that was carried out in 2015 until before the 2018 visit. If it is a new person, variables are added to know the marital context or unions and separations, among which the year or age at which the last and/or first marriage ended, the current marriage or union began (or recent) and the first union or marriage occurred, the number of unions, type of union, duration of the union and cause of dissolution.

The objective of including these variables is to quantify the time that has been lived in marriage or in union, and the total of years in union regardless of the type. These data are important because life together can affect the state of health and well-being of people in middle and old age. In some research, it has been found that the illness or death of the spouse or partner dramatically affects the conditions of the other.⁵² Although having a new partner can completely change the situation of the elderly adult.

The MHAS, in the classification of marital status, distinguishes those separated from a marriage from those who separate from a civil union. This distinction also comes from a UN recommendation and its objective is to avoid errors in the declaration of those people who can be identified as married, when in reality they are separated from a legal union.⁵³

It is worth mentioning that in the MHAS 2001 and 2003, the variable was called Civil Union; in 2012 and 2015, it was named Marital status. For this 2018 survey, in order to standardize it with other household surveys, the question was modified, so it was asked as follows: "Are you currently ... single? Are you married? Do you live with your partner in a union? Are you divorced? Are you separated? Are you a widower?" However, the options are presented in a different order than other projects.

In the Questionnaire on the deceased person, this variable was included in order to identify the marital status of the deceased's informant, who may or may not be the widower of the SE, and also, if the SE was married or joined at the time of death or widower.

The UN also points out the importance of collecting data on the duration of each type of union (UN, 2017), which is why, in this survey, dates in which the last union and dissolution events occurred are captured, and questions are added to know the number of unions, age at the first union and age at the first dissolution.

The *marital dissolution* establishes profound changes in the lifestyle of the population that experiences this event. It not only modifies their employment and income expectations, but also their family structure and reproductive trajectory.⁵⁴ At MHAS, this issue is captured by two variables, depending on whether they are the subject of a follow-up study or a new person. Both variables are included in both the basic questionnaire and the questionnaire for proxy informant.

If it is a SE of a new person, the variable is *Date of dissolution*, which is captured for people who are divorced, separated or widowed, and by linking it with the *Start Date of the current union* (or first, for those who only have joined once), it allows estimating the time the union lasted. This duration is important for the reproductive patterns of the couple. Whereas, the dissolution of the marriage or the union, can lead to changes of residence, migration, in the work and/or economic condition, even the health of the people.

The objective is to know the date (year or age) of separation of the last (or first) union or marriage of the SE person, whose current marital situation is separated, divorced or widowed.

The concept *Date of last (or first) dissolution*, is defined as the year in which the ex united population ended its last (or first) union or marriage and, in case of not remembering the year, the age of the person when it ended. The variable has been included in the MHAS since the first survey in 2001. The question for the new person study subject is asked as follows: "In what year or at what age did your last marriage end (union)? ", and if you have had more than one union, ask yourself: "In what year or at what age did this marriage (union) end? ", referring to the date

⁵² Saenz J, Wong R. Mortality Following Spousal Loss Among Older Mexicans. Poster presented at the Annual Meeting of the Population Association of America; 2016, Washington, DC.

⁵³ INEGI. National Survey of Demographic Dynamics (ENADID) 2018. Conceptual design. 2019. Available at: https://www.inegi.org.mx/contenidos/programas/enadid/2018/doc/dc_enadid18.pdf. Consultation: August 19, 2019. Pp. 105-106.

⁵⁴ INEGI. National Survey of Demographic Dynamics (ENADID) 2018. Conceptual design. 2019. Available at: https://www.inegi.org.mx/contenidos/programas/enadid/2018/doc/dc_enadid18.pdf. Consultation: August 19, 2019. Pp. 113-114.

of separation from the first union or marriage. To complement the information provided by this variable, another is added to determine the cause of dissolution of the marriage or union (last or first), which may be due to separation, divorce or widowhood.

In the case of study subjects who reported being currently divorced, separated or widowed, the variable was asked as a condition: "Did your last marriage (union) end after the last time we spoke with you?" and the objective was to know if the last marriage or union ended in the years after the last interview in 2015, or even 2012.

Regarding the variable *current or last union*, the *Comisión Económica para América Latina y el Caribe* (CEPAL) argues that in Latin America the average age at first union has remained stable over time and in the different cohorts of women (CEPAL, 2017), so knowing the age at first union is important for the State, in order to respond to a situation of vulnerability in the cases of women who join at an early age.⁵⁵ However, the incorporation of this variable in the MHAS allows us to identify how this situation has occurred in both men and women who are in adulthood. The objective is to know the moment in which the current union of the study subjects, for those that are united and married, began or the beginning of the last union of those whose current marital situation is separated, divorced or widowed.

The inclusion of the variable *Start date* in the new person study subject section was made from the first MHAS in 2001 and it is asked in this way: "In what year or at what age did your marriage (union) begin?" to those who declare to be divorced, separated or widowed, or to those who report living with their partner in common law. And, in the case of having had another union or marriage, the year or age at which your first union or marriage began is also asked, and another question is added to find out the Type of bond.

The *date of beginning of the current or last union* is defined as the year in which the united population married or began to live with their partner in common law; however, in the case of not remembering it, the age of the person is also investigated.

To the study subjects who declared not to continue being married or in a union with the same person that they were with in 2015, the variable was asked as a condition: "Did that marriage (union) begin after the last time we spoke with you?", and its objective is to know if the last union or marriage began in the years that have elapsed since the last interview carried out in 2012 or 2015.

Regarding the variable *Previous unions*, two questions are included: Condition of previous union and Number of previous unions.

To know the trajectory of unions, it is necessary to identify the people who had a union prior to the current or last one (ex joined). For those who did have it, it is investigated what was their previous marital status, the cause of dissolution, the number of previous unions and the dates on which they occurred. With the above, we have the necessary information to focus the capture of the first union or the history of free or matrimonial unions of the SE.

Previous unions is a concept that refers to the condition that identifies, of the people who were once united, if they had a union prior to the current or last one.

The purpose of the question on *Previous union status* is to know if the new person under study had unions prior to the current or last one. The wording of the question has not changed since it was first implemented in MHAS 2001: "Before your (current marriage / last marriage / current union / last union) did you have another union or marriage?" The important thing is to be able to identify if the study subject, as a result of a previous union and dissolution, changed the composition of his household, his economic and employment situation, his residence, obtained any benefit or effect on his health, his income and assets, especially if the cause of the dissolution was due to widowhood.

With the variable *Number of previous unions*, we have the number of times that the person has been together, without including the current or last union in the case of ex joined ones. The number of unions explains the fertility trajectory of women and men, since, if there has been more than one union, the chances of conceiving are increased and, therefore, their job and economic stability, their hours of work, health, and increased demand for health services, medical expenses, and so on. Its objective is to know the number of times the person has joined,

⁵⁵ Ibid. Pp. 114 and 115.

not including the current or last union. The question incorporated in MHAS since 2001 says: "Not counting the current union (last union), how many times were you united or married?". This question captures the new person number of free marriages and unions that the study subject has had, excluding the current marriage.

FERTILITY

Fertility is the main component of demographic dynamics that has influenced the growth and age structure of the population. As the demographic transition advances and there are decreases in mortality, and mainly in fertility, we are witnessing a gradual aging process of the population".⁵⁶

It should be kept in mind that changes in fertility and marriage patterns foreshadow a future—which in some countries is already a present—in which the number of family members (siblings, children, grandchildren) that the older person can count on will decrease.⁵⁷ Thus, to the extent that older people have their family networks active, the risk of a simultaneous decrease in all sources of economic and non-economic resources is reduced and, consequently, the risk derived from fluctuations in their availability dissipates across multiple agents.

The MHAS, in the Basic Questionnaire, includes two questions about the *Fertility* variable that are asked to the study subject, whether male or female: one, with the aim of establishing how many sons and daughters who were born alive they have had, which can be part of their support network; the other is to consider the mortality of a child, which is why it is questioned how many of the sons and daughters who were born alive are still living. For the follow-up study subject, an initial question (which has preloaded information) is added, in order to corroborate the number of biological daughters and sons born alive.

The concept, *daughter and son born alive*, is defined as the product of the pregnancy of the female population of 12 years of age or older who, at birth, shows some sign of life such as breathing, heartbeat, crying or some movement.

MIGRATION

Migration is defined as a demographic phenomenon that consists of the change of residence to a different administrative unit (municipality, entity or country).⁵⁸ The geographical displacement of people or groups has been present throughout the history of humanity, motivated due to various circumstances, such as forced displacement, natural disasters, economic and religious aspects, among others. The country-city displacement causes a decrease in the population in rural areas, since with the urbanization process they are losing population due to emigration to the city. Older people in rural areas are left alone, while younger people emigrate, causing a gap in the age structure. In this way, the emigration of young people and young adults has a direct effect on the relative increase of the older adult population, but also an indirect effect, by altering the birth rates of rural areas.

Migratory processes can alter the age structures in territories, especially in those with small demographic magnitudes, or if the process persists for a long time.⁵⁹ The age selectivity of migration tends to age the areas of origin, since mainly young adults migrate, although it does not necessarily rejuvenate the target population.

Given its relevance and because it is a component of the country's demographic dynamics, migration becomes an issue of national interest in which statistical information must be generated, in order to provide data that strengthen or adjust the set of public and social actions as a national development strategy.⁶⁰

⁵⁶ CEPAL/CELADE. Manual on quality of life indicators in old age. Chile, 2006. Pp. 19-20.

⁵⁷ Ibid. P. 48.

⁵⁸ INEGI. Intercensal Survey 2015. Conceptual framework. 2017. Available at: http://internet.contenidos.inegi.org.mx/contenidos/Productos/prod_serv/contenidos/espanol/bvinegi/productos/nueva_estruc/702825098742.pdf. Consultation: September 10, 2019. P. 83.

⁵⁹ CEPAL/CELADE. Manual on quality of life indicators in old age. Chile, 2006. P. 21.

⁶⁰ INEGI. National Survey of Demographic Dynamics (ENADID) 2018. Conceptual design. 2019. Available at: https://www.inegi.org.mx/contenidos/programas/enadid/2018/doc/dc_enadid18.pdf. Consultation: September 10, 2019. Pp. 157.

Studies of international migration in Mexico (specifically migration to the United States), due to its importance, have required data that offer additional information on the migration of household members, with the intention of obtaining data for certain sociodemographic characteristics such as age when emigrating, sex, educational level, position in the kinship structure, among others; as well as characteristics of the migratory flow of those who leave the country to go to live in the United States in a certain period. It is for this reason that, in the MHAS, a wide battery of questions is included both for the follow-up study subject, with the intention of investigating whether in the period from 2015 to 2018 they went to live or work in this country, as well as to the new person to know their migration history, if it is part of a family tradition for economic or work reasons, if the intention of leaving was to work or accompany another person, etc., and have more information to deepen on specific topics about the phenomenon.

Some of the variables that MHAS incorporates in its questionnaires, with respect to the first, longest and last stay in the United States, either by residence or work, are: *Condition of stay, Year or age of stay and return, Main reason for migration and return, Time of residence or work, Area of residence, Type of work performed, Sending of remittances and their destination*, and others such as: *Deterioration of housing, Help from acquaintances, Perception of health status, Contribution to social security system, Residence permit, Raising children without a spouse and parenting time*.

Among the objectives of these variables is to know, on the one hand, the time that the study subject has been living in the community or locality of the interview; if relevant events occurred since the last interview with the follow-up person, such as change of address or damage to their home, due to hurricane, earthquake, tornado, flood or fire; if they have ever lived in the United States, in what year they lived the first time (or was their first stay) and the main reason why they traveled that time; if they had migratory networks or people who would help them settle down or provide them with guidance or accommodation; the year they returned after the first stay and obtain information about the approximate number of years they lived in that country.

The intention of the variables referring to the longest stay of the person under study in the United States is to; capture the type of environment in which they resided most of the time when they lived in that country; determine the type of work risks to which the study subject could be exposed during their stay and that could impact their current health; know if they sent remittances to their family in Mexico and the destination of said remittances to determine the possible commitments that the study subject could establish with their family or friends network, which could impact the support network and the sources of income or accumulated wealth that the person can count on today.

Regarding the objectives of the variables related to the last stay of the study subject, they are: to know the main reason for which they traveled to the United States; how old they were when they returned; the reasons - and of these the main one - for which they returned to Mexico; and their perception of the state of health they enjoyed upon his return from the United States.

The intention of other important variables is to know if the study person contributed to the social security system (social security) at any time in their working life during their stay in the United States; if the person currently has permission (*has a Green Card*) to reside and work in that country, if he/she is a citizen or not.

Finally, two variables related to the raising of young children during the absence of the spouse due to migration are included, the objective of measuring the possible consequences of migration on the quality of life of the spouse and to investigate the approximate number of years that they did so.

Migration implies actions by international organizations and government institutions that are in charge of migration policy and programs linked to other social phenomena that in turn promote migration, such as: poverty, violence, the search for job opportunities, health, school development and the improvement of living conditions.

LANGUAGE, RELIGION AND VOLUNTEER WORK

Since 2010, the UN, through the document *Principles and recommendations for population and habitation censuses (Revision 2)*, establishes that the determination of the ethnic (indigenous language) and cultural (language and religion) characteristics of the population of the countries are increasingly important in the context of migration, integration and policies that affect minority groups, so the need for data on ethnicity is important, as they provide

information on the diversity of a population and they can serve to identify their subgroups.⁶¹

Regarding the language issue, MHAS included two variables: *English language status* and *Indigenous language status*. The first, with the aim of capturing whether the study subject knows how to speak English, because knowing how to speak that language can be a determining factor, not only in the decision that the study subject makes to migrate to the United States, but also to know how easily it was integrated into their stay in the neighboring country. The second variable refers to whether the person under study speaks an indigenous language or dialect, that is, if he can hold a conversation with a person of that speech.

As for religion and volunteer work, these are issues that acquire fundamental importance in adult life. Psychologists report that religion helps to calm fear and insecurity about one's own mortality, because it offers immortality, and because aging tends to amplify these concerns, religion becomes more important to people as they age⁶², and volunteering is an activity that is undertaken by the free will of the person under study and is carried out to benefit people in society in general, although it also provides personal benefits.⁶³ The objective of including these topics is capture whether the study subject attends religious services, regardless of the type of services or creed, or the frequency of attendance; inquire whether religion in general is very important to the study subject or not; capture if the study subject has done volunteer work; get an approximate number of hours spent on volunteer work in total, at any time in the last two years.

Religiosity and the practice of religious rituals are important in older adults because it can affect their health, as well as their perceived well-being; attendance at religious services and participation in church-organized activities can also indicate the potential support a person can count on in old age. For its part, helping organizations of any kind (church, schools, community, Red Cross, etc.) without payment at some point, no matter how long, is a practice that is significant for people in adulthood and produces an exchange value.

BODY FIGURE

In our country, almost three-quarters of the adult population is overweight and obese.⁶⁴ This issue has been gaining importance due to the high levels it presents and the relationship it has with the health status in adulthood and advanced age. Excess weight is one of the main risk factors for the development of chronic conditions such as diabetes mellitus, high blood pressure and cardiovascular diseases. In turn, weight loss can be an indicator of the presence of any of these diseases or conditions, or of abandonment, depression or isolation. Both, excess weight or weight loss, are related to the quality of diet or the nutritional status of older people, who have different nutrient needs compared to young adults. Additionally, they may face a risk of deficiency in specific nutrients, of which calories, protein, and micro nutrients are the most prevalent.

The MHAS includes the topic of body weight throughout life to identify underweight, normal weight, overweight or obesity at different ages. This topic is complemented by the self-reported weight and height in Section C. Health.

The objectives of the questions included in the questionnaires are to know the perception that each study subject currently has of their own body and how they remember their body figure when they was 50 and 20 years old, respectively.

⁶¹ INEGI. National Survey of Demographic Dynamics (ENADID) 2018. Conceptual design. 2019. Available at: https://www.inegi.org.mx/contenidos/programas/enadid/2018/doc/dc_enadid18.pdf. Consultation: September 10, 2019. Pp. 232.

⁶² Qmayor Magazine, Why are older people more religious? Available at: <https://www.qmayor.com/actualidad/religion-personas-mayores/>. Consultation: September 24, 2019.

⁶³ CEPAL/CELADE. Manual on quality of life indicators in old age. Chile, 2006. P. 141.

⁶⁴ Obesity in Mexico. Institute of Social Security and Services for State Workers. <https://www.gob.mx/issste/articulos/la-obesidad-en-mexico>

MAJOR EVENTS

In some investigations, it has been found that having had a material, economic or close relative loss, or an accident, dramatically affects the living and health conditions of older adults.⁶⁵ These events are relevant because they can be risk factors for health and are easy to remember due to their importance or magnitude; they can also indicate important sociodemographic changes in adult life. For this reason, the MHAS includes questions for the study subjects about this type of event, with the aim of identifying those that occurred in the last three years (if it is a follow-up person) or 10 years (if it is a new person), as well as the year in which any of these events occurred: the death of a child, the care of a sick relative, the damage to their home due to a disaster, the damage to their health or family situation due to an accident or crime, or damage to their financial situation due to a loss of health or employment.

4.2.2 Non-resident children of study subjects

Older adults are affected by the context that surrounds them, in their residence, between their family and their social networks, hence the interest of MHAS in gathering information not only on the conditions of the study subjects, but also of the family and the characteristics of its members, and how older adults interact with people in their context.

The topic of Non-resident children that is captured in Section B., both for the follow-up person and the new person, considers some variables (such as sex, age, marital status, migration to the United States) and questions similar to those included in the Sections A and AA (Sociodemographic data for follow-up person and new person); However, Section B collects sociodemographic information on those children who do not live with the study subject or their spouse, with the purpose of knowing how the study subject can benefit through their relatives (or family network) according to the socioeconomic and family characteristics of each child.

Some research indicates the importance of family members who do not live with the elderly, and especially of non-resident children, since they represent an active or latent resource. Sometimes, the help of any kind that they can receive from relatives who do not share the same home can be equal or greater in importance than that received from the people who live with them. For this reason, the MHAS collects information from both the children who reside in the home and the non-resident children, to understand the dynamics of aging in Mexico.⁶⁶

NUMBER, SEX AND AGE OF NON-RESIDENT CHILDREN

These variables are important in this survey, since knowing how many daughters and sons the study subjects have, who do not currently reside at home, and their age, provides an idea of how much financial and emotional help or support they may have.

Identifying a home in which the elderly has a small number of children (whether residents or non-residents) means that care responsibilities in the event of a deterioration in their health status will have to be distributed among fewer family members, and this may affect the quality of care by having less time available and fewer people willing or able to offer it. At times, this situation can become more difficult when the non-resident children are boys or the daughters also have young children.

Furthermore, in the MHAS, age is asked to capture other sociodemographic characteristics of non-resident children 12 years of age or older, with which it is possible to visualize the ability of these children to provide support to the adult study subjects.

⁶⁵ Saenz J, Wong R. Mortality Following Spousal Loss Among Older Mexicans. Poster presented at the Annual Meeting of the Population Association of America; 2016, Washington, DC.

⁶⁶ MHAS 2018. Introductions to the content of the interviewer's manual, Handling questionnaires.

RELATIONSHIP OF THE NON-RESIDENT CHILD

In this section, the objective of the variable is to identify the kinship relationship of the non-resident children in the household with both the study subject and their spouse.

In the question, the following types of relationship are included: child (when he is a biological child), stepchild, adopted child, foster child and other. Foster child is included because it is understood as a child who was raised by the study subject and does not have any legal relationship as a child, although the case may arise that it is a relative (for example, nephew) who was fostered and there are blood ties. In this case, one can also speak of a foster child, which is defined as the bond that is acquired with non-consanguineous parents who provide maintenance, education and accommodation, and there is no legal adoption process.⁶⁷

This typology is important, since it determines in some way the relationships of help that people of middle and old age receive and grant.

CONDITION OF RESIDENCE

The *condition of residence* is a fundamental variable because it constitutes an operative resource to corroborate the habitual residence situation of the people, in this case, of the children who are not residents of the home of the study subject. As a conceptual basis, the variable takes up the term of habitual residence used in the population and housing censuses, as well as the criteria to determine whether or not it is a habitual resident of the dwelling.⁶⁸

The MHAS includes this variable, as of 2003, for the non-resident children of the follow-up study subject, and its objective is to know what is the current situation of non-resident children in terms of their place of residence, and if each of those listed continues to live in another household. Within the classification of this question, other options are also considered to identify if the non-resident child was omitted in the previous survey; if anyone who was listed has already died; or if they currently reside in the same home as the study subject.

LEVEL AND DEGREE OF EDUCATION

This variable has already been conceptually described in Section 4.2.1 Demographic data of study subjects; however, in this section, its objective is to capture the educational level of all non-resident children of the household aged 12 years or older, even those who have died. Its importance lies in the fact that it is a factor that can provide indications about the economic situation or the time of care or support that these children can provide to their parents who are in adulthood or old age.

CONTACT WITH NON-RESIDENT CHILDREN

The objective of the variable, in this study, is to know how often the non-resident children of the home (or who are permanently absent) have contact with the study subject or their spouse, either in person, by mail (traditional or electronic), computer (through social networks) or telephone.

The need to capture the frequency of contact, between the study subjects and the children who do not reside in the home, is very important, since it is another factor that can contribute or affect the well-being or physical and mental health of the older adults. Contact is measured by period, that is, the times per week, month or year that they have contact or communication. However, in the classification of the question, the answer option "Never" is also considered, since there are cases in which contact is permanently lost with the descendants who do not reside in the home.

⁶⁷ INEGI. Relationship classification. 2012. Available at: https://www.inegi.org.mx/contenidos/programas/mti/2013/doc/clasificacion_paren-tescos.pdf. Consultation: September 25, 2019. P. 6.

⁶⁸ INEGI. National Survey of Demographic Dynamics 2018. Conceptual design. 2019. Available at: https://www.inegi.org.mx/contenidos/programas/enadid/2018/doc/dc_enadid18.pdf. Consultation: August 6, 2019.

MARITAL STATUS

The objective of this variable has already been addressed in the topic *Sociodemographic data of study subjects*, which corresponds to Section A and AA of the MHAS survey instruments. The interest in identifying the marital status of the non-resident children of the home is because it helps to determine the possible family responsibilities of each person, which can modify the possible network of support and responsibilities for the study subject.

Some data from MHAS refer that the proportion of older adults who live with married children is higher in urban areas than in rural areas. Men without a partner are more likely to live alone or with others, whereas women without a partner tend to live with their children, whether they are married or single and those who are disabled are more likely to live with married children. Likewise, it is known that the family network and family life have been changing and can affect family coexistence, due to the fact that the size of the family has reduced, divorce has increased, women have been incorporated to a greater extent in the labor market and as society has advanced, preferences for living alone have changed, all of which has weakened family ties.⁶⁹

NON-RESIDENT CHILDREN'S HEALTH

The importance of the *Health* variable, in this issue of children non-resident in the home, is because it helps to establish the conditions of each child to support the care of the parents. Its objective is to capture the current health of each non-resident children in the home of the study subject, so the question is whether the son or daughter currently has any serious health problem or any physical limitation that affects their activities, those that are normal for age, such as studying, working or playing sports.

It is also interesting to know this information since there is the possibility that older adults who have children with health problems dedicate resources such as time, money and effort in the care or attention of the sick child.

ACTIVITY CONDITION

This variable is extremely important, since it allows us to identify the economic or non-economic activity that the non-resident children of the household aged 12 years or more are carrying out, that is, whether or not they currently have a job, whether or not they are looking for a job, or, if they dedicate themselves to study or to chores around the house.

It is known that the incorporation of women into the labor market has increased, which may affect the possibility of being able to provide long-term care for their parents or, where appropriate, support with financial resources so that someone else can provide care. Although, there is data that workloads are doubled for daughters who work or for the same parents, who contribute to the care of grandchildren or great-grandchildren, as well as in other household activities of the children (as) non-residents, such as food preparation.

With the information in the question, it is possible to visualize the possible economic and family responsibilities of each study subject non-resident children.

CHILDREN

In this survey, it is very useful to capture the number of descendants that each child has, who does not reside in the home of the study subject, or their spouse. On the one hand, if the descendants (grandchildren) are minors, the children may not have enough time or financial resources to help their parents or take care of them in the event of an illness or problem. On the other hand, if the grandchildren are no longer minors, there are more possibilities that they will also contribute with time of care and, even, make financial contributions, which, without a doubt, translates into benefits and well-being of the elderly because your family support network expands.

⁶⁹ MHAS 2018. Introductions to the content of the interviewer's manual, Handling questionnaires. P.6.

MIGRATION OF CHILDREN

The need to reside in different places or cities, and in some cases in different countries, makes it difficult for children to take care of the elderly, therefore, fewer children means that care responsibilities in the event of a deterioration in the state of health will have to be distributed among fewer family members, and this can affect the quality of care by having less time available and fewer people willing or able to offer it.

Since 1 in 4 Mexican adults aged 50 or older has at least one child living in the United States, the MHAS is very interested in studying, in particular, the association between having children in the United States and the health of the elderly. The migration of children can have positive and negative effects on the lives of older adults. For example, in the economic aspect, their income is increased through remittances; however, with regard to mental health, it is negatively affected by stress and loneliness caused by the migration of children.

Rural-urban migration is the main reason for the break in ties of co-residence and proximity, and may not necessarily mean the absence of emotional ties or monetary transfers. What is clear is that the distance between the rural areas and the descendants residing in urban areas makes impossible to provide the instrumental support the oldest might need; the oldest being the most likely to need support in the daily life activities.⁷⁰

To collect data on migration of non-resident children of the household, MHAS considers three variables in the case of a new person, and two if it is a follow-up person. The data obtained is related to the ways in which families support each other and, therefore, affect the health and well-being of middle age and elderly people.

The objective of the variable *Place of migration* is to capture where each non-resident child lives in the household. The classification is: the same home or building, another home in the same location, another location in the same municipality, another municipality in the same state, another state of the Mexican Republic, in the United States, and another country; however, the priority response option is to live in the United States.

The objective of the variable *Condition of migration to the United States* is to capture if the non-resident daughter or son for whom it is being asked, has lived or worked in the United States (including Alaska and Hawaii), either with the intention of working, study or to accompany another person who is working.

Another variable is *Total years of residence or work in the United States*, which allows knowing approximately the number of years that each child has lived in that country. The information on this variable may indicate, on the one hand, the time that the study subject was possibly receiving financial support, or lacked care or quality in the same, due to the absence of that child.

DECEASED CHILDREN

In Section B, in addition to collecting data on the main sociodemographic characteristics of the living non-resident children in the household, it is important to capture the name, sex, relationship, age, education and migration of deceased children of the new person or the study subjects spouse. The information is of interest because it may be related to the economic and health (physical and emotional) situation of the elderly.

4.2.3 Health

MHAS, as a longitudinal study, provides data on the health of the elderly over time. It is known that with advancing age there is generally a deterioration in health, in such a way that with follow-up it is possible to study how the state of health deteriorates over time, at what age the onset of the chronic diseases, and their relationship with the age of exposure to risk factors such as alcohol and tobacco consumption.

⁷⁰ MHAS 2018. Introductions to the content of the interviewer's manual, Handling questionnaires. Pp. 6-7.

The set of sections and questions on different topics from MHAS give us a profile of the population of older adults in Mexico. Through its analysis, it is possible to study the relationship that chronic diseases have with demographic characteristics, social and family support, socioeconomic status and employment, disability, functionality and frailty, depression, mortality, among others.

SELF-REPORTED HEALTH

Self-reported health status (SRH) is one of the most used measures to assess health status, since people's perception of their own health is seen as a good indicator of the burden of the disease. It has been found to be a good predictor of future healthcare use and mortality rates.

Self-reported health status can also reflect aspects of health, such as disease severity and undiagnosed illness, that are not captured in the more objective measures of health status.

It is also related to age, as older people are more likely to report health problems than younger people. As life expectancy increases and the population ages, self-reported health status may worsen if the health system is not also working to improve quality of life.⁷¹

NON-COMMUNICABLE DISEASES

MHAS obtains information on the prevalence of a series of diagnosed diseases, mainly non-communicable diseases, as well as some symptoms in older adults.

In the last two decades there has been an increase in the incidence of Non-communicable Diseases (NCD) in most countries of the world, regardless of their income level, according to the World Health Organization.⁷²

Chronic diseases are long-lasting and generally require permanent monitoring. Chronic diseases such as arthritis, diabetes and cardiovascular diseases negatively affect the quality of life, by reducing functionality and, consequently, affecting the probability of permanence in the community settings themselves. Likewise, due to their characteristics, they can represent a significant health and financial burden for patients, their families and the health system of the countries in which they live.⁷³

The absence of serious diseases is an important part of healthy aging. The absence of chronic conditions can be determined by estimating the prevalences of single or multi-morbid conditions. Surveillance or enforcement of the prevalence of these diseases in people 60 years and older is important for primary and secondary prevention. Multi morbidity is very common in old age, and this can represent a challenge for health systems.

There are common and often preventable risk factors that account for a large fraction of global NCD mortality and morbidity. The main risk factor worldwide is increased blood pressure, followed by tobacco consumption, as well as alcohol consumption, an unhealthy diet, insufficient physical activity, overweight and obesity, increased blood glucose and high cholesterol.

MHAS obtains information on the prevalence of people who have previously been diagnosed with diabetes and high blood pressure.

⁷¹ Peterson Center on Healthcare and the Kaiser Family Foundation. Quality of life. Self-reported health. Available at: <https://www.healthsystemtracker.org/indicator/health-well-being/self-reported-health-8/>

⁷² Secretary of Health, José Ramón Narro Robles, coordinator, Mexico. Noncommunicable Diseases Situation and Proposals for Action: A Perspective from the Mexico Experience, 2018. Available at: https://www.gob.mx/cms/uploads/attachment/file/416454/Enfermedades_No_Transmisibles_ebook.pdf

⁷³ CEPAL/CELADE. Manual on quality of life indicators in old age. Available at: <https://www.cepal.org/es/publicaciones/3539-manual-indicadores-calidad-vida-la-vejez>

Cardiovascular diseases are the leading cause of death in the world. These diseases include: systemic arterial hypertension (SAH), ischemic heart disease, heart failure, degenerative calcium aortic valve stenosis, and congenital heart disease. In the last two decades, SAH has been one of the nine leading causes of death in Mexico, and the mortality rate from this cause has increased. The greatest burden of the disease is from the age of 60 and older.

High blood pressure and hypertension, if left untreated, can cause stroke, myocardial infarction, heart failure, dementia, kidney failure, and blindness, causing human suffering and placing severe financial and service burdens on healthcare systems.

MHAS obtains information on the treatment followed by people diagnosed with hypertension. Early identification and treatment of hypertension is associated with a reduction in the risk of heart attack, heart failure, stroke, and kidney failure.

DIABETES

Diabetes has become one of the main health problems in Mexico. It favors health problems such as myocardial infarction, heart failure, stroke, and arterial failure, as well as other late complications, such as kidney and eye damage. The International Diabetes Federation estimates that, in Mexico, there will be 9 million people with diabetes by 2025.

In addition, it is the most common reason for premature disability, blindness, and non-traumatic limb amputations. It is one of the five diseases with the greatest economic impact on the health system.

MHAS seeks to obtain the prevalence of diabetes diagnosis in the elderly population and the current treatment they receive. This information can help focus diabetes prevention and control efforts by identifying the main risk factors in older adults and finding out if treatments are being followed.

CANCER

The magnitude of the effects of cancer on the country's health is not very different from the world prevalences, as it is the third leading cause of death, after cardiovascular diseases and diabetes. According to estimates by international organizations, breast, prostate, cervical, colorectal and lung cancers are the most recurrent in the general population in both sexes.

The risk of cancer among the elderly increases due to factors such as physiological changes, decreased immune protection, a longer time of exposure to carcinogens or risk factors, hormonal, dietary and metabolic imbalances and the interaction of comorbidities. Likewise, due to the presence of comorbidities, mostly chronic-degenerative such as diabetes, hypertension or kidney problems and their symptoms, detection tends to be late.

The mortality rates for the main causes of death from cancer identified make this population group the most vulnerable to malignant tumors.⁷⁴

LUNG DISEASE

This survey collects information on the diagnosis of respiratory disease such as asthma or emphysema, taking medication or treatment for respiratory disease, and whether the problem limits the activities of the elderly.

Lung diseases like emphysema are a major cause of disability. They usually appear slowly, and symptoms often get worse over time and can limit a person's ability to perform daily activities.

⁷⁴ INEGI. Statistics on World Cancer Day (February 4).

Serious states of lung disease can prevent even elementary activities, such as walking, cooking, or taking care of oneself.⁷⁵

HEART ATTACK

Changes that occur with age can increase a person's risk of heart disease, which is why problems such as arrhythmia or heart failure are much more common in older adults than in younger people.

People 65 and older are much more likely than younger people to have a heart attack, stroke, or develop coronary artery disease (commonly called heart disease) and heart failure. Heart disease is also a major cause of disability, limiting activity and deteriorating the quality of life for millions of older people.⁷⁶

MHAS collects information on heart problems such as heart attack, heart failure or arrhythmia, taking medication for heart disease and whether the heart problem limits the activities of the elderly.

STROKE

The risk of stroke increases with age, especially if an individual or their close relative have previously had a stroke. This risk doubles every 10 years, between 55 and 85 years, and when you have had one or more strokes, the risk of suffering another increases.⁷⁷

Recovery after a stroke varies from person to person: some recover completely, while others develop mild, moderate, or severe disabilities. Some consequences of stroke may include paralysis or weakness in the body, swallowing difficulties, vision problems, problems speaking, understanding, reading or writing, emotional instability or depression.⁷⁸ For this reason, the consequences of these health conditions can impact aspects of the quality of life of older adults.

In MHAS, information is obtained on the incidence of stroke, the consequences of this event, the taking of medication, therapy or rehabilitation and whether this problem limited the activities of the elderly.

OTHER DISEASES AND EVENTS

As part of chronic diseases, MHAS asks about the diagnosis of arthritis, with similar questions about treatment and limitation of activities due to the disease. In addition, it inquires about the incidence of selected infectious diseases (liver infection, kidney infection, tuberculosis, pneumonia, herpes or herpes zoster).

Aging is usually accompanied by many changes. Vision, hearing, muscle strength, coordination, and reflexes no longer work as they used to. Balance can also be affected by diabetes, heart disease, circulatory, thyroid or nervous system problems, or by the use of some medications that can cause dizziness. Because of this, the likelihood of a fall can increase as you age, and with this also the likelihood of a broken bone, which can be the beginning of more serious problems.⁷⁹

For older people, breaking a bone can be the beginning of more serious problems, such as having to go to the hospital, suffering injuries, or even disability. For this reason, MHAS collects information on the occurrence of falls that affect the health of the elderly, and the fracture of a bone, since these events can limit activities and affect people's physical well-being and independence.

⁷⁵ National Heart, Lung, and Blood Institute (NHLBI). EPOC. Available at: <https://www.nhlbi.nih.gov/health-topics/espanol/epoc>

⁷⁶ National Institute of Ageing. Heart Health and Aging. Available at: <https://www.nia.nih.gov/health/heart-health-and-aging#changes>

⁷⁷ National Institute of Ageing. Stroke. Available at: <https://www.nia.nih.gov/health/stroke>

⁷⁸ Family Caregiver Alliance (FCA). Apoplexy or Stroke. Available at: <https://www.caregiver.org/la-apoplejia-o-derra-me-cerebral-stroke>

⁷⁹ National Institute of Ageing. Falls and fractures. Available at: <https://www.nia.nih.gov/health/caidas-fracturas>

In the MHAS, in addition to chronic diseases, they ask about symptoms, because many times older adults may not know that they have certain diseases, but they present symptoms.

VISION AND HEARING

Hearing loss and vision problems such as cataracts and refractive errors are a common problem that can occur in older adults due to aging.

People with hearing loss may find it difficult to have conversations with friends and family. They may also have trouble understanding doctors advice, responding to warnings, and hearing bells and alarms.

Older people who cannot hear well may become depressed or withdrawn from others because they feel frustrated or embarrassed about not understanding what is being said. Sometimes older people are mistakenly thought to be confused, unresponsive, or uncooperative, because they don't listen well.

For this reason, knowing the condition of vision and hearing of older adults is important to detect the limitations that they may present for their independence, self-care and social interaction.

PREVENTATIVE CARE

The performance of screening tests, as preventive care in the elderly, increases the chances of early detection of health problems, which allows adequate care with fewer complications and a higher survival rate, in addition to a better quality of life for patients and a lower cost for health services.

MHAS investigates the actions carried out by the elderly population for the preventive care of their health, such as diagnostic tests for the timely detection of a disease such as cancer, diabetes, hypertension, or tuberculosis and to also ask about vaccination against influenza and pneumonia.

DEPRESSION

Depression is a common problem among older adults, as major life changes that occur as you age can cause feelings of restlessness, stress, and sadness. Even symptoms of depression can occur or be confused with other medical conditions in this population.

The questionnaire to detect depression in MHAS consists of nine items, with “yes” or “no” answers, taking into account whether the participant had felt, in the last week, what each of the questions seeks to know.

Several studies have shown that, although depressive symptoms and syndromes are frequent in older adults, they are under diagnosed and under treated. Hence the relevance of designing and using appropriate instruments for the depression screen to improve its detection.⁸⁰

EXERCISE

Over the years, most older people reduce their levels of physical activity, so that a considerable percentage of them could be considered sedentary, which is associated with a worse self-reported health status.

⁸⁰ Sara Gloria Aguilar-Navarro, MI; Alejandro Fuentes-Cantú, MI; José Alberto Ávila-Funes, MI; Emilio José García-Mayo, MI. Validity and reliability of the screening questionnaire for geriatric depression used in the Mexican Health and Aging Study. Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán. Available at: http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0036-36342007000400005

The frequent practice of physical activity is beneficial for health at any age, therefore including the elderly. It can reduce the risk of chronic diseases, alleviate symptoms of depression, help maintain autonomy, and improve overall quality of life.

Even frail older people and those of more advanced ages can improve their mobility and function through this activity.

This indicator is important not only to measure the relative number of older people who perform some physical activity, but also to know, at the community, local or national level, the number of older people who may have risk factors for a chronic disease for not practicing this habit.⁸¹

ALCOHOL AND TABACCO

Alcohol consumption and tobacco use are lifestyle measures that can cause direct or indirect health risks, and smoking has been shown to have significant adverse health effects, both for the individual smoker and for other people exposed to second-hand smoke or environmental tobacco.

Smoking is a known risk factor for cardiovascular disease; it causes lung cancer and other forms of cancer and contributes to the severity of pneumonia, emphysema, and chronic bronchitis.

Harmful use of alcohol is an important determinant of alcohol use disorders, injuries, epilepsy, and other non-communicable diseases, such as cardiovascular disease, cirrhosis of the liver, and various types of cancer. Harmful use of alcohol is also associated with several infectious diseases such as HIV/AIDS, tuberculosis, and sexually transmitted infections (STIs). Furthermore, alcohol consumption has a negative effect on the adherence of patients to antiretroviral treatment.⁸²

The importance of knowing this indicator is linked to the need to establish the target population for specific health prevention programs in old age. In order to carry out a more specific analysis regarding smoking and the elderly who use tobacco, it is necessary to differentiate smokers according to their consumption pattern (number of cigarettes consumed per day) and according to the time they have been smoking, so that anti-tobacco campaigns can target a more specific population group and be more effective.

MHAS collects data on alcohol consumption and tobacco use among men and women, including the frequency of alcohol use and the frequency and type of tobacco use.

OBESITY AND OVERWEIGHT

Another important topic studied by MHAS is the relationship between weight and diabetes.

The body mass index (BMI) is a simple indicator of the relationship between weight and height that is frequently used to identify overweight and obesity in adults.

It is calculated by dividing a person's weight in kilos by the square of their height in meters (kg / m²).

A high BMI is an important risk factor for noncommunicable diseases, such as the following:

- cardiovascular diseases;
- diabetes;
- musculoskeletal disorders (especially osteoarthritis, a very disabling degenerative joint disease), and
- some cancers (endometrium, breast, ovaries, prostate, liver, gallbladder, kidneys, and colon).

The risk of contracting these non-communicable diseases grows with increasing BMI.

⁸¹ CEPAL/CELADE. Manual on quality of life indicators in old age. 2006. Available at: <https://www.cepal.org/es/publicaciones/3539-manual-indicadores-calidad-vida-la-vejez>

⁸² The DHS Program Demographic and Health survey. Alcohol and Tobacco. Available at: <https://www.dhsprogram.com/topics/Alcohol-and-Tobacco.cfm>

Likewise, it can be used as an assessment of the nutritional status of the elderly as an important part of health programs and policies for this population group, since it is one of the most used indicators to detect the prevalence of malnutrition.⁸³

SLEEP

Along with physical changes, changes in sleep patterns are part of the normal aging process. As people age, they tend to have a harder time falling asleep and more trouble staying asleep. This may be because, although total sleep time tends to remain constant, older people spend more time in the lighter stages of sleep than in deep sleep.⁸⁴

The prevalence of sleep disorders such as insomnia or snoring also tends to increase with age. However, sleep disturbance among the elderly can also be attributed to physical and psychiatric illnesses and the medications used to treat them.

Sleep needs remain constant throughout adulthood. When you do not have adequate rest, it can have outcomes that affect the health of the elderly, such as complicating other conditions or making a person too tired to function normally during the day, causing problems with memory, attention, or coordination, and can affect their quality of life.⁸⁵ Likewise, sleep interruption is especially widespread in neurodegenerative dementias.⁸⁶

For this reason, the MHAS investigates problems falling asleep, frequency of waking up after falling asleep and perception of the quality of rest.

4.2.4 Control and health services

This section addresses two major issues, the access to and use of health services for the elderly and those related to psychosocial aspects, such as perceptions of control, personality, satisfaction with life and activities in which older adults spend their time.

The access and use of health services are determining factors for the well-being and health of the population in advanced ages. MHAS asks about access to benefits, hospitalization and associated expenses, as well as decisions about the health care of the study subject.

HEALTH SERVICES

As a result of the increase in the number of older adults with respect to the population as a whole, concerns have been raised about the burden that aging will bring, especially for health service systems.

It has been documented that the health needs of the population over 60 years of age are reasons of concern and uncertainty among the members of this age group and their families, and therefore also at the societal level. In addition, research results indicate that the elderly population uses health services four times more frequently than the rest of the population, on average they spend more days in hospital, and the services they require are generally more expensive.

⁸³ CEPAL/CELADE. Manual on quality of life indicators in old age. 2006. Available at: <https://www.cepal.org/es/publicaciones/3539-manual-indicadores-calidad-vida-la-vejez>

⁸⁴ National Sleep Foundation. Aging, insomnia, sleep and your lifestyle, sleep topic. Aging and sleep. Available at: <https://www.sleepfoundation.org/articles/aging-and-sleep>

⁸⁵ National Institute of Ageing. A good night's sleep. Available at: <https://www.nia.nih.gov/health/good-nights-sleep>

⁸⁶ Bryce A. Mander, Joseph R. Winer, and Matthew P. Walker. Sleep and Human Aging. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5810920/>

Evaluating the situation of the health status of the population in advanced ages and its determining factors, makes it possible to identify needs, risks, demand for health services and vulnerable groups. That is why it is so important to know details of the access and use of health services.

Article 4° of the Constitution establishes that the entire Mexican population has the right to health protection. In terms of the *Ley General de Salud* (LGS), this constitutional right refers to the right of all Mexicans to be incorporated into the *Sistema de Protección Social en Salud* (article 77 bis1 of the LGS).

Based on these criteria, it is considered that a person is in a situation of deprivation due to access to health services when: They do not have an affiliation or the right to receive medical services from any institution that provides them, including public social security institutions (IMSS, federal or state ISSSTE, Pemex, Army or Navy) or private medical services.⁸⁷

In Mexico, the provision of health services is in charge of public insurance institutions such as social insurance, linked to employment, and *el Sistema de Protección Social en Salud*; insurance companies or private institutions; public or private healthcare services and private market services.

The percentage of older people not covered by health services is an indicator that measures exclusion in health, based on the lack of coverage with guarantees in this area, either by the public or private system.

The use of health services is defined as the use of medical services provided by a doctor or trained personnel in health institutions or private establishments.⁸⁸

The use of health services allows us to know the institutions where the population receives medical attention, and the demand for them. This information is important in the design, monitoring and evaluation of public policies on the matter.

Likewise, MHAS asks questions about decision-making related to the health of the elderly. Biomedical advances have reduced mortality in early life from acute illnesses, and thus more people are living long enough to develop chronic conditions that require ongoing treatment and thus medical decisions.

PSYCHOSOCIAL ASPECTS

In the psychosocial aspects, it is about finding out how you feel, how much control you have over your life, what your personality is like, if you are satisfied with life and how you use your time.

Personality is one of the aspects of behavior that is being used to understand why some people are healthier and live longer than others. In other countries it has been found that people who are more “conscientious”, that is, those who are more organized, responsible, dedicated, meticulous or disciplined, generally have a better state of health, possibly because they have better preventive care and avoid risky life styles. Since MHAS 2015, a battery of questions has been included in Mexico to explore the relationship between personality traits and the health and economic conditions of the study participants.

One of the concepts that has been present in all rounds of MHAS is Locus of control. This battery tries to investigate an individual's perceptions regarding how much he or she can control or influence important events in her life, including health status. In the literature, it has been documented that those who think they have control over important events in their life generally live longer than those who think they have no control.

Satisfaction with life is a characteristic collected within the psychosocial aspects in the MHAS. Various studies have shown that there is a relationship between being satisfied with life and a reduction in the risk of dying, a delay in the onset of disability, and the age at which chronic diseases appear.

⁸⁷ CONEVAL. Measurement of poverty. Available at: <https://www.coneval.org.mx/Medicion/Paginas/Medición/Acceso-a-los-servicios-de-salud.aspx>

⁸⁸ INMUJERES. Health service user population. Available at: <http://estadistica.inmujeres.gob.mx/myhpdf/89.pdf>

Satisfaction with life, locus of control and personality are relatively new lines of research for Mexico using national samples, and that follow individuals over time, as does the MHAS.

Another way of approaching the well-being of older adults is through their daily activities, that is, the use they make of their time. Derived from studies that have been carried out in different parts of the world, it is known that there is a clear relationship between the use of time and age. The time devoted to paid work decreases with age, the time devoted to entertainment and personal activities increases and in some cases more time is devoted to caring for sick people and grandchildren.

4.2.5 Cognitive status

Information on the cognitive status of adults, aged 50 years and older, is extremely important because it allows researchers to determine the level of memory and mental health of this segment of the population.

The MHAS assesses the cognitive abilities or capacities of the study subject, either directly through an instrument that includes cognitive exercises, or through questions that are applied to a substitute informant (proxy) when it is not possible to carry out the interview due to problems health, language or absence, or in the event that the study subject has died. Questions about their cognitive status are made to an adequate informant, who may be a relative or who cared for or accompanied them before death.

The objective of the section (or booklet) of cognitive exercises is to evaluate the memory status, mental health and cognitive ability of the study subject. The questions and exercises that are applied to the study subject and their spouse are aimed at identifying cognitive ability in areas such as attention, memory, visuospatial ability and intelligence. The variables included are: self-assessment of memory, use of glasses, spontaneous memory, verbal learning, fine motor skills, visual-motor ability, semantic verbal fluency, visual ability, time orientation, figure evocation, memory and successive subtractions.

For its part, the objective of the Cognitive Proxy section (contained in the Questionnaire for Proxy Informant) is to obtain information on the cognitive functionality of the study subject, through the perception that the proxy informant has of their abilities or capacities, comparing them in different time periods. The variables included are regarding: memory, judgments and decisions, daily activities, such as conversations, using household appliances, order, learning, comprehension, use of money for purchases, economic matters, daily calculations, reasoning, sense orientation and perception of reality, among others.

In turn, the Cognitive Status section of the Questionnaire on the deceased person aims to obtain information on the memory status, mental health and cognitive ability of the deceased study subject, during the last month of life. The variables included are to evaluate: comprehension, memorization, reasoning and decision making.

Unlike other sections of the MHAS core questionnaire that consist of questions and answer options, in this section the information is obtained through activities that are completed by the study subject. Some of these activities show the cognitive ability of the person, while others require a greater mental ability be answered adequately.

Cognitive processes are the procedures used to incorporate new knowledge and make decisions about it. These processes involve cognitive functions, such as perception, attention, memory, reasoning, to name a few. These cognitive functions work together to integrate knowledge and create an interpretation of the reality that surrounds people.

Perception as a cognitive process allows organizing and understanding the world through stimuli captured by the basic senses (sight, hearing, taste, smell and touch) and proprioception (it is the sense that informs us about the body position, allows us to have a body scheme and know what position it occupies in space) or interception (which is the perception of how the organs of our body are, allows us to know when we are thirsty or hungry).

Attention allows concentration on a stimulus or an activity, to process, later in consciousness. Attention is a fundamental cognitive function for the development of daily life and is used in most of the tasks that are carried

out on a daily basis. It is considered as the mechanism that controls and regulates the rest of the cognitive processes: from perception to learning or complex reasoning.

As for memory, it allows encoding, storing and retrieving information from the past. Memory is a basic process for learning and it is what allows us to create a sense of identity. There are many types and classifications of memory, short-term memory, which is the ability to temporarily hold information in mind (remembering a phone number in mind until we can write it down on paper), and long-term memory, which are all those memories or knowledge that are kept for much longer.

Thought is fundamental in any cognitive process. It allows integrating all the information received and establishing relationships between the data that compose it; so it involves reasoning, synthesis and problem solving.⁸⁹

In short, the mental process by which knowledge is acquired is called cognition. Therefore, cognitive impairment is the loss of these functions. This appears with normal aging and depends on physiological, environmental and social factors. Therefore, cognition is one of the key dimensions of health status that is addressed in MHAS.

Although it cannot be diagnosed with the exercises applied in the survey, the survey data represents a valuable tool for understanding cognitive impairment and dementia in the Mexican population. The increase in life expectancy along with the increase in chronic diseases, including cognitive impairment, generate concerns about the quality of life of the older adult population.

There is also concern that the use of health services will increase and pose challenges to health systems. It is difficult for the family network to provide care at home to an older adult with advanced cognitive impairment, so professional care will be required in severe cases. The MHAS information is intended to provide more elements to expand knowledge about the cognitive state of people, especially the way in which cognitive impairment progresses over time, and to be able to identify the most vulnerable groups that require attention and care.

To identify cognitive decline in the older adult population, one may consider learning about memory loss. This is one of the initial symptoms. It is known as a subjective memory complaint or involuntary forgetting. In mild cognitive impairment there are cognitive losses beyond what is expected given the age and education of an individual, but this impairment does not significantly interfere with the performance of their daily activities. Advanced cognitive impairment is known as senile dementia, the most common of the dementias is Alzheimer's disease, in which there is the loss of basic independence functions, such as eating, going to the bathroom and washing. Such alterations produce a significant reduction in the ability to function in social, family, or work relationships of an older adult.⁹⁰

In population and health studies, there is increasing interest in addressing issues that can be studied through survey data. It has evolved, trying to capture information beyond what a subject can report about himself. For example, in addition to inquiring about whether the study subject reports having memory problems, the MHAS applies cognitive exercises to capture cognitive functionality in a more objective way.

In order to measure metal exposure, a subsample of the study subjects was asked for a hair sample. Likewise, a saliva sample was taken from subjects 60 years of age or older, in order to analyze genetic information to supplement the health profiles.

In addition, the project aims to delve into the inherent risks of older adults with certain chronic diseases of advanced age such as heart disease, diabetes or Alzheimer's, and to be able to compare it between populations with diverse ethnic composition, both in Mexico as in the rest of the world. This is achieved through genetic studies that can be done with saliva samples.

⁸⁹ Current Dictionary. What is cognitive? Available at: <https://diccionarioactual.com/cognoscitivo/>

⁹⁰ MHAS 2018. Introductions to the content of the interviewer's manual, Handling questionnaires.

In the field of health, both at the individual level and in groups of people, the analysis of genetic material (or DNA) offers the possibility of studying the genetic risks for developing certain diseases. The results of these analyzes are of great use to researchers and public health policy makers.

Toxic metals are known to be bad for health. Its presence in the body can trigger different conditions, including neurological problems and chronic diseases. Cadmium has been identified as being linked to anemia and lead has adverse effects on memory. Therefore, it is intended to know if the study subjects present levels of environmental contamination in their body by taking an objective sample of hair, instead of only asking if the study subject works in a certain place, if they cook with a certain fuel or if a person smokes daily inside the home.

Hair is highly reliable in health risk analysis by measuring the minerals that the body is accumulating, particularly in cases of exposure to environmental pollution and toxic metals such as mercury, cadmium, lead and manganese.

Tests that analyze the presence of heavy metals in hair are useful and highly reliable, since the concentration of minerals in hair can be 10 to 50 times higher than in blood.

Given the aforementioned points, it is now of interest for MHAS to study exposure to environmental pollutants, and to be able to analyze its relationship with different chronic physical and mental health conditions.

4.2.6 Parents and help for parents

The objective of Section F. is to address the characteristics of the parents and the help they give to the parents of the study subject, both by the subjects and their siblings. This is in order to know the characteristics and amounts of help given and received among the members of the extended family of the elderly, which provides information to analyze the links between the aging process and family exchanges in Mexico.

Family relationships are of great importance for the lives of older adults, particularly in societies with a great pro-family tradition such as Mexico. The family is a source of company, support, and care, but it can also be a source of responsibilities, commitments, and stress. Knowing the characteristics of parental support gives an idea of the responsibilities that older adults may have towards their older generation.

The section refers to the parents of the study subject. It considers the biological parents but also stepparents and adoptive parents, that is, the spouses of the biological parents in cases of separation from the original couple. In the event that the study subject has been raised by parents other than biological ones, it refers to the guardians that the person recognizes as parents.

SURVIVAL AND SOCIODEMOGRAPHIC CHARACTERISTICS OF THE PARENTS

The first part consists of knowing the demographic, socioeconomic and health characteristics of the study subject's parents, as well as knowing whether or not they live. With these data, hereditary health and longevity factors are explored.

It inquires about the age at which the mother or father died or if they are alive, since registering the age of the study subject's mother and father, if they are still living, determines the possible demands of the study subject's care. Longevity, that is, living for many years, is closely related to genetic and hereditary factors, in such a way that, if the father or mother of the study subject lived to very advanced ages, the probability that the interviewee will reach those ages can be very high.⁹¹

It is also asked about the parents' diagnosis of diabetes, since it is known that genetic factors intervene to a great extent.

⁹¹ MHAS 2018. Introductions to the content of the interviewer's manual, Handling questionnaires.

Likewise, it is interesting to know the education and international migration of parents, since they are important characteristics that influence aspects of the lives of the study subjects. Children of migrants generally have a greater propensity to be migrants, and the parents' education could influence the educational and employment possibilities of the study subjects and, therefore, their economic, family and health conditions when they become older adults.

PARENTAL VULNERABILITY AND FINANCIAL AND NON-FINANCIAL AID

Increasing old age is related to a higher incidence of chronic diseases and disability, which means a greater demand for support.⁹²

The questions in Section F. seek to determine the current functionality of the mother and/or father of the elderly, in order to know their relationship with the need for help and time they require.

Information about the difficulties that the father or the mother of the study subject have to carry out basic activities, such as eating, dressing or bathing, and their economic situation, provide an idea of the dependence of the parents on the study subject and hence the relationship of the study subject's responsibilities to their own health and financial well-being. We ask about the help in basic activities, the hours spent helping the parents and if it was the father, the mother or both who received this help.

In Mexican households, the presence of members of advanced age in families increases the probability of initiating the fight against a long-term illness, the appearance of which leads to an increase in functional limitations and dependence on other members of the household to consume certain activities of daily living (ADL and IADL). The crucial event that the disease represents becomes a process that prompts the reorganization of the internal activities of the family. The data can also provide information on possible reasons for multi-generational cohabitation arrangements, as the decision to live in the same household may be motivated by the care needs of elderly parents. As part of domestic strategies, a large part of people with poor health conditions tend to live in households with 2 or 3 generations.⁹³

The variables on the autonomy of the parents of elderly people and their care needs is useful in studies on labor participation, since the need to provide care or care for elderly parents can affect the availability of time and opportunity to work, especially in women, who culturally in Mexico have been assigned care tasks.⁹⁴

In the economic aspect, information is collected on the monetary and in-kind aid that have been transferred in the extended family, specifically by the study subject, their spouse and siblings, to the parents at any time in the last two years.

Some studies have suggested that children closer to their own old age have a greater sensitivity to understanding the needs of their older parents. However, among siblings, the processes related to their own family life cycle may be a more important condition, since they imply a redistribution of their own resources and a symptom that the sandwich generation, with less than 30 years of age, is overwhelmed to meet the needs of their family (your children and parents).⁹⁵

MHAS data provide information to strengthen research lines on family support in Mexican society and its characteristics. Studies on this subject are very necessary to analyze family coexistence, commitments between generations, the care that older adults need and the care that they provide to other members of their family, children and parents, who they support and who supports them, as well as the economic and non-economic exchanges that occur in the family environment.⁹⁶

⁹² Cristina Gomes. Intergenerational Exchanges in Mexico. Types and Intensity of Support. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5783570/>

⁹³ Verónica Montes de Oca and Mirna Hebrero. Family dynamics, aging, and functional impairment in Mexico. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4548963/>

⁹⁴ Edwin van Gameren, Durfari Velandia Naranjo. Working and Caring: The Simultaneous Decision of Labor Force Participation and Informal Elderly and Child Support Activities in Mexico. Available at: <https://scielo.conicyt.cl/pdf/laje/v52n2/art01.pdf>

⁹⁵ Verónica Montes de Oca et Mirna Hebrero. Mexico and the state of Guanajuato: Intergenerational transfers to the elderly. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5783644/>

⁹⁶ MHAS 2018. Introductions to the content of the interviewer's manual, Handling questionnaires.

4.2.7 Help and children

Due to the reduction in fertility and greater longevity, the old-age support ratio will increase in the future. Taking this into consideration, the aging of the population generates a family dynamic whose repercussions reformulate the conception of social duties, the traditional ways of providing care and the mechanisms for the distribution of responsibilities.

Traditionally, in the study of economic security, three pillars of protection have been identified: the family, the market and the State. It has been documented that in old age the needs increase, especially to address health problems, and resources are generally diminished to address the formal and informal sources of the elderly. The formal sources correspond to the resources institutionalized in laws and public or private organizations, such as pensions, the right to health services, disability subsidies, salaries and remuneration for work, among others.

Informal resources are their own, including the accumulation of goods and capital or those that come from the family, such as direct monetary contributions, help in kind or emotional support.

The complementarity and importance of each of the resources to ensure a dignified old age has been documented. However, as age advances, it is common for earned income to decline. Likewise, a significant part of the elderly population in Mexico is socially unprotected, that is, they do not receive pensions and if they do, they are insufficient. In many cases, children have to support their parents through monetary transfers, so that family support in the elderly becomes more important, especially in groups with lower income perception, since family support is often a means that the older adult population has to ensure its survival.⁹⁷

Health problems, financial needs or loss of functionality gradually affect the autonomy of people in old age, which is why the family represents an institution that contributes to the well-being of the elderly through family support or assistance.⁹⁸ Due to the lack of institutional resources, families have developed complex networks of informal support: economic transfers such as national and international remittances, donations and gifts between family and friends, physical and emotional support or exchanges of services. These networks guarantee status and social relationships, and promote the ability to negotiate and assume an important role in informal exchange.⁹⁹

Section G. focuses on economic and non-economic exchanges or supports between older adults and their children. This information can provide data that allow researchers to delve into living conditions by studying the relationship of the amounts and types of help that older adults receive, in relation to aspects such as income from work, limitation in instrumental activities and basics of daily life, living conditions, health, marital status, and so on.¹⁰⁰

The application of Section G. is carried out only once during the interview, since it is a section that is asked by household, in order to avoid duplication of the data, therefore the answers in this section reflect the economic well-being and transfers provided or received by both spouses.

Economic support is very important in intergenerational exchanges in Mexico. National and international remittances between relatives are the main source of income for some sectors of the elderly. Therefore, it is important to know the characteristics of these transfers and their relationship with the changes in the size and availability of each generation in interaction with the availability of resources and the impact of migration on the contracts between adult parents and their children.¹⁰¹

In order to know if the help received covers the needs of the elderly, the perception that they have about the sufficiency of the support they receive is asked.

⁹⁷ Rebeca Wong and Mónica Espinoza. Income and assets of the middle and elderly population in Mexico. Available at: http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S1405-74252003000300006

⁹⁸ EMHAS 2018. Introductions to the content of the interviewer's manual, Handling questionnaires.

⁹⁹ Cristina Gomes. Intergenerational Exchanges in Mexico. Types and Intensity of Support. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5783570/>

¹⁰⁰ Verónica Montes de Oca and Mirna Hebrero. Family dynamics, aging, and functional impairment in Mexico.

¹⁰¹ Cristina Gomes. Intergenerational Exchanges in Mexico. Types and Intensity of Support. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5783570/>

In addition to the help that older adults receive, MHAS also investigates the economic and non-economic help that older adults provide to their children. For example, taking care of grandchildren, sharing housing and giving monetary support when their children need it. The economic and non-economic support between parents and children becomes evident and increases in the face of difficulties in the different dimensions of life.

The information on the different transfers of older adults with generations of their parents and children, allows us to observe differences in the type of support exchanged by gender and generation. Studies carried out with information from previous MHAS surveys on transfers showed that, while Mexican daughters are the main responsibility for the fragile personal care of elderly parents, Mexican children are significantly more likely to provide monetary assistance to elderly parents than daughters, showing that, in financial transfers from husbands and wives to their elderly mothers, men reproduce their role as provider, while women reproduce their domestic role.¹⁰²

Given that MHAS is a longitudinal study, the amount of support referred to in the questions in Section G. has had variations through the surveys. This is due to the fluctuation of the value of the Mexican peso due to inflation and the economic situation it presents in each country. Therefore, it is necessary to take this factor into account in the case of data analysis between different surveys.

Section G. provides information on relationships or social networks that older adults have, such as friends, neighbors, or other relatives. It is also investigated if there is a perception of having help from them in case of need.

As some members of the elderly experience old age, other younger household members begin their own work, family and professional trajectory. Therefore, older adults, in addition to experiencing the death of friends, neighbors or co-workers, they also experience the estrangement of young relatives.¹⁰³

Losing a sense of connection and community changes a person's perception of the world. Social connection is necessary to thrive, regardless of age, but recent research shows that the negative health consequences of isolation can be especially damaging for older adults.

Social integration in the neighborhood, or a good relationship with neighbors, have been found to be associated with better health and greater survival in studies in the aging population, which indicates the beneficial effect on the health of the elderly of psychosocial networks and mechanisms built by themselves throughout their lives.¹⁰⁴

Knowing if older people have contact with friends or family, allows us to understand the social determinants of health and the role of social and interpersonal processes in healthy aging and longevity.¹⁰⁵

4.2.8 Functionality and help

Functional capacity is defined as the ability in a person to carry out the activities of daily living without the need for supervision, direction or assistance. It is one of the best indicators of people's health, since it is necessary to have adequate physical, mental and social functioning.

Disability is a relevant issue because functional impairments can affect the quality of life of older adults and their families, and because it creates pressure on the economic and health systems of a country. This issue, along with chronic diseases and obesity, is one of the most worrying issues given the aging demographic.

¹⁰² Claire Noël-Miller¹ and Rania Tfaily. Financial Transfers to Husbands' and Wives' Elderly Mothers in Mexico: Do Couples Exhibit Preferential Treatment by Lineage? Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4970745/>

¹⁰³ Verónica Montes de Oca and Mirna Hebrero. Turning points and advanced family cycles: aging effect in Mexican homes. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5783570/>

¹⁰⁴ Ángel Otero Puime, María Victoria Zunzunegui Pastor, François Béland, Ángel Rodríguez Laso, María Jesús García de Yébenes and Prous. Social relationships and healthy aging. Available at: <http://envejecimiento.csic.es/documentos/documentos/otero-relaciones-01.pdf>

¹⁰⁵ National Institute on Ageing. Social isolation, loneliness in older people pose health risks. Available at: <https://www.nia.nih.gov/news/social-isolation-loneliness-older-people-pose-health-risks>

It is known that disability is a gradual process, which begins to manifest itself through the loss of the ability to function in social settings, such as the neighborhood or the locality, and in activities such as shopping for food and managing food or money. A more advanced stage is related to the impairment of the capacity for self-care, particularly in activities carried out at home, including eating, bathing, and getting up or lying down in bed. Loss of the ability to perform daily activities combined with receiving help is one of the most complex stages of disability.

There are different instruments to monitor individual functionality. These include the assessment of physical and instrumental limitations to perform activities of daily living, as well as measures of physical, social, and cognitive functioning.

The MHAS measures the functional capacity of a person through an evaluation that allows identifying the difficulties they have to carry out the activities of daily living, differentiating between the basic activities of daily living (ADL), and the instrumental activities of daily living (IADL).

The basic activities of daily life are activities related to the care of one's own body, such as: clothing, food, hygiene, mobilization. Its independent execution is necessary not only at the individual level but also at the family, social and psychological level.

The IADL's are so called because they require some instruments and require greater capacity of the individual to be carried out. These types of activities extend the aspects covered by the ADL tasks that require a finer level of motor coordination, and are considered actions necessary to have a minimum social life.¹⁰⁶

In addition to the difficulty in the activities, they also ask about the use of special devices or equipment to carry out the activity and if they receive help from someone else. Each of these components adds information on the severity of the disability.

In the MHAS, nine activities are included, five basic (walking, bathing, going to bed, eating and using the toilet) and four instrumental (preparing a meal, taking medicine, managing money and shopping). These activities are measured in the rest of the world in studies similar to MHAS, in order to make comparisons between countries and identify the factors that are related to a healthy, disability-free life, and to the economic, social and family well-being of older adults.

Generating evidence based on scientific knowledge on the factors related to disability, both protective and risk, is essential to understand how we age.

Given that the MHAS is a longitudinal study and that it follows the same individuals over time, in addition to the associated factors, trajectories of disability can be estimated.

Aging with a disability affects the lives of older adults in important ways. Among the most significant consequences is having to stop working, modifying residential arrangements to help the older adult to carry out activities of daily living, modifying the use of time, spending more time in hospital, and so on.

The old age of people with disabilities creates challenges and requires adequate responses to their needs. Start by identifying and documenting them both in a moment in time and in the changes that occur with age, as well as generating knowledge are fundamental steps to improve the quality of life of the elderly.

4.2.9 Employment

In Latin America, studies on employment of the elderly are limited, although in general it can be deduced that after the age of 50, approximately, economic participation decreases due to the decrease in obligations of social reproduction. The presence of social coverage systems allow people to access a retirement or pension after a certain age and the greater probability, as age advances, of the appearance of disabilities that make them unable to work. Sometimes, having a higher educational level has an influence, which favors having shorter work careers; have sufficient income; opt for recreational activities instead of continuing to work, among others.

¹⁰⁶ CEPAL/CELADE. Manual on quality of life indicators in old age. 2006. Available at: <https://www.cepal.org/es/publicaciones/3539-manual-indicadores-calidad-vida-la-vejez>

Other socio-economic and social factors of great importance, which can influence the labor force participation of adults are: restrictions and discrimination in the labor market of adults due to their age or widowhood status.

In research, it has been identified that health status is an important factor in decisions regarding participation in the labor market, particularly in those people who have not yet reached retirement age. Having a poor state of health prevents or hinders participation in the labor market, reduces the optimal retirement age, and carries costs at the individual level; at the social level, productivity decreases and, therefore, income; at the family level, relatives are distracted from paid employment or personal development in order to provide care for people in poor health. If older adults are in good health, changes in economic activity and income are generally due to retirement, retirement, or no need to work.

Also, chronic diseases and disabilities limit the economic participation of adults, whether they have to leave work, reduce the number of hours worked, or change activities. Despite this, if the person is of limited economic resources or does not receive a retirement or pension, they do not have the option of leaving their job or economic activity, but they are obliged to continue in the labor market.

The participation of older adults in the labor market is related to their quality of life, since it is a source of income, although it can also be a source of stress, worries and fatigue. Their work history and the type of activity they carry out can determine how the older adult reaches this stage of his life, physically and mentally.¹⁰⁷

The importance of these data in the MHAS is that it collects the impressions of the elderly about the control they feel over their decisions, their autonomy in the work they perform, their personality characteristics, their cognitive level and physical health, which have been found to be closely associated with work behaviors. This type of information, in particular, is useful for age groups preparing for eventual retirement and also allows estimating the way in which work trajectories throughout their lives affect the well-being of an adult in advanced ages.

The Employment section is made up of variables that allow a deeper understanding of the labor history and current employment of the elderly; their working conditions, time and type of primary occupation; the benefits of work, pension and perception of their economic situation.

WORK HISTORY

To know the work history of the study subjects, the following variables are incorporated: *Condition of paid and unpaid work*, *Year (or age) of the first job* and *Years of paid work*, with the aim of investigating whether or not the study subject worked for a payment in his/her lifetime (in money or in-kind) or a profit, or if he/she did it without receiving any payment; Obtain the approximate age at which he/she started working for the first time, whether or not it was paid, as well as the total number of years he/she worked or received pay or earnings throughout his/her life.

PRIMARY OCCUPATION

In order to characterize the primary occupation of the study subjects in paid work, the MHAS includes the variables: *Main activities performed*, *Position in the occupation*, *Place of work*, *Age of beginning at work*, *Years of work Principal and Work Condition in the United States*. These variables make it possible to know what the primary occupation and position at work have been throughout the life of the people under study and, in some way, the level of control they can or could have over their work. Also, it is possible to determine some health risk factors that derive from the place where they worked most of their life, from the age at which he/she began to work in his/her primary activities, from the accumulated years that they had dedicated to those activities, including whether they were carried out in the United States, in a different environment and were exposed to factors that could affect their health.

¹⁰⁷ MHAS 2018. Introductions to the content of the interviewer's manual, Handling questionnaires, Pp. 41-44.

BENEFITS OF PRIMARY OCCUPATION

A paid worker may or may not receive various benefits during his working life. For the MHAS, it is important to know what type of benefits the people in the study received, which is why the following variables are included: *Labor benefits*, *IMSS benefits (before 1997)*, *ISSSTE benefits (before 2007)*, *Contribution for pension* and *Years of contribution*.

Labor benefits are goods and services, in cash or in kind, in addition to the salary that people receive from the economic unit for which they work, as a complement to their labor income. Said benefits are used to face eventualities or contingencies, such as occupational illnesses or accidents, to acquire a home or improve the living conditions and well-being of society. The objective of this variable is to capture if the study subject received any of the following benefits for their primary job, throughout the time they were working: medical service, retirement savings, afore, home loan, medical insurance, life insurance and other benefits.

The *Oficina Internacional del Trabajo* (OIT) points out that knowing the salaried population that receives labor benefits is an essential requirement to focus public policy on social security, specifically on populations without access.

It is convenient to know if the study subjects affiliated with the IMSS or the ISSSTE benefited from the old social security regime, that is, from those labor laws before they were reformed and affected, above all, the age and years of seniority for retirement and pension. Members of the IMSS are asked if they benefited from the law before August 1997, and those from the ISSSTE, with the tenth transitory law before the new 2007 law.

Among the benefits received by the workers affiliated to the IMSS, are the insurance of risk of work, disability, old age, unemployment in old age and death, and retirement. For retirement, the following were considered: 500 weeks of contributions, average salary for the last 5 years, additional bonus payment equivalent to one month's pension, life pension, widow's pension and annual update of the pension according to inflation. In turn, the workers affiliated with the ISSSTE, who were under the *Décimo Transitorio*, were able to receive pension benefits for: retirement, retirement due to age and time of service, unemployment in advanced age, disability and death. Having received these benefits represents for older adults a certain economic security and less risk of living in poverty.

Also, it is necessary to know if the study subjects, who were not affiliated with the IMSS or ISSSTE, are or were contributing to a pension plan or contributing to their retirement and for how many years they did so, since this action can give them a little economic independence and produce tranquility in their present and for their future, otherwise, if they do not have a pension (for their work or own contribution), they will be forced to depend on something or someone and to live with uncertainty and economic instability, which can reduce their health (physical and emotional).

CURRENT WORK ACTIVITY

It is important to know if the study subject is carrying out an economic activity or not, that is, if he or she currently works, does not work, is looking for work or what is the employment situation. With the purpose of investigating the characteristics of the work activity of the study subjects who were currently working, the following variables are included: Activity condition, Time dedicated to current work and Condition of reducing working hours, through it can capture the current level of activity and the level of control that one has over work, in order to associate these conditions with the health of the study subjects of middle and advanced age.

Regarding the question that is asked to capture the activity status of the study subjects, it allows us to know if they carry out an economic activity. To do this, it must be taken into consideration that a person does work, even if they do not receive remuneration for the activity performed, dedicate a few hours to it, perform it at home, or be it an easy or simple activity or service. Many people of adulthood, especially women, do not consider agricultural activities for household consumption or raising animals for sale as work.

The questions that are related to working hours are aimed at knowing the number of hours per day, and the total hours per week, that the study subject works regularly in their current primary job, as well as to inquire if they could reduce working hours, although the salary was also reduced.

CURRENT OCCUPATION AND BENEFITS OF THE OCCUPATION

The variables and questions about the current occupation are the same that, in at the beginning, are applied to the study subject to capture the occupation or primary job that he has performed throughout his life, only that here they are asked to inquire about the current job. These variables are: *Current activities performed, Position in current occupation, Place of work, Age of beginning in current job, Years with current activity or job, benefits of current main paid job, and time spent in current jobs*. Additionally, at the beginning of this subtopic a variable is included that aims to capture whether the activities carried out by the person, in the current job, are similar or equal to those carried out during most of their life and if they are comparable with these. At the same time, a question on work risks is incorporated, which aims to know if the study subject has direct contact with insecticides or pesticides, by any route (inhalation, skin or eye exposure) during their work activity, which increases the likelihood of developing health problems.

Together, with all the information in this regard, it is possible to examine the health conditions and the level of well-being that predominate in this age group of the population.

WORK INACTIVITY

Some reasons why a large part of the elderly are not immersed in the world of work, were already mentioned at the beginning of this Employment section. However, to identify the reasons for the inactivity of the people in this study, especially those who do not have work experience or who currently no longer work, the MHAS includes the following variables: *Reason for current work inactivity, Condition of working without pay or on your own, Reason for separation from last job and Year or time of separation from last job*.

In the question about the reason or reasons that the person could have for not working, the following are included: *he/she is engaged in household chores, is retired, is of advanced age, is ill or temporarily disabled, unable to work for the rest of his life, has no clients or cannot find work, and for another reason*.

To the follow-up study subjects, who are not currently working, this question is applied to confirm the work history without pay: *Have you ever worked in any company, business, activity on your own or as an unpaid assistant in their life?* With this question, it is determined whether the study subjects, although currently no longer working, have had some work experience.

For their part, those who have just joined the MHAS are asked the reason why they left their last job, as well as in what year or how many years ago did they stop working at the last job they had.

The results show that, in general, the older adult population shows low levels of unemployment, and this is due to the fact that older people who do not find employment generally decide or are forced to withdraw from the labor force (discouragement effect) or receive social security benefits.

This indicator makes it possible to account for the working conditions in which older people are employed. However, it faces the difficulty in defining what "informal work" is, and although there is some agreement on the definitions, often the indicators and cut-off points are not fully comparable.

Evidence shows that older people tend to engage in this type of work more frequently (domestic service) once they reach retirement age, and this is due, on the one hand, to the limited employment opportunities that exist for workers in advanced age, and on the other, the fact that older people tend to supplement their meager income from pensions or retirement by working in the informal sector of the economy.¹⁰⁸

PERCEPTION OF ECONOMIC SITUATION

Knowing the opinion that the elderly population has of both their economic situation and that of their home is essential, since it reflects the level of security or instability that they may be experiencing in this regard and that influences others. These questions of perception of economic well-being are incorporated in the MHAS, precisely, to obtain an answer that describes the economic situation of the study subject and that of their home, since there are times that the people interviewed perceive that their economic situation is bad because they no longer work and don't have the same income as when they worked, but in general they perceive that the situation at home is good, because the children they have or with whom they live work. Also, there may be study subjects with high incomes and, even so, answer that their situation is fair or bad.

The perception questions are subjective, but they do provide elements to measure the level of well-being of people and, if they are complemented with quantitative information from other questions in this and other sections, they allow us to determine the real conditions in which they live and to know what the quality of life of the people in this population group is like.

4.2.10 Housing

A home has the following attributes or functions: environmental protection (materials, durability and quality of walls, ceilings and floors), sanitation and comfort (basic services for hygiene and comfort), housing independence (space available for privacy and independence from the outside), housing stability (time of residence and legal tenure situation) and insertion in the environment (neighborhood accessibility, neighborhood relations, level of equipment and services, environmental quality).¹⁰⁹

The characteristics of the home, such as the type of home, the property, the materials from which it is made, its design and dimensions, the assets it has, the current value and the debts related to this property, are elements that serve to understand the economic and family conditions of the elderly. Similarly, housing and the environment are particularly important, due to factors such as accessibility and security, the financial burden of maintaining it, and the emotional and psychological security it provides. It is recognized that having adequate housing is related to a better state of health and well-being of this population group.¹¹⁰

By relating the characteristics of the home with other components of the older adult's life, for example, disability, or social participation such as interacting with friends, neighbors or relatives, or satisfaction with life, among others, a broad vision on their quality of life is generated. In this such way, the home, in addition to representing economic resources that could be used in the event of an eventuality, is also a space for coexistence and emotional exchange.

For MHAS, collecting data on the dwelling where the study subject resides is essential because its characteristics affect their quality of life and its value constitutes a significant part of the assets they may have at this age. The questions that make up this housing section apply only to one of the members of the couple, considering the one who best knows the information requested.

The following variables are those included in the housing section of the collection instruments of this survey.

¹⁰⁸ CEPAL/CELADE. Manual on quality of life indicators in old age. 2006. Available at: <https://www.cepal.org/es/publicaciones/3539-manual-indicadores-calidad-vida-la-vejez>. Pp 54.

¹⁰⁹ CEPAL/CELADE. Manual on quality of life indicators in old age. 2006. Available at: <https://www.cepal.org/es/publicaciones/3539-manual-indicadores-calidad-vida-la-vejez> Consultation: October 8, 2019. Pp. 145-146.

¹¹⁰ MHAS 2018. Introductions to the content of the interviewer's manual, Handling questionnaires. Pp. 45-47.

TYPE OF DWELLING, ENVIRONMENT AND NUMBER OF FLOORS

The objective of the variable *Type of dwelling* is to describe the dwelling in which the study subjects live, which can be an apartment in a building, a room on the roof, a single house or a horizontal condominium, an apartment in a neighborhood or another type.

For its part, the variable *Housing environment* has to do with the infrastructure that surrounds the home or the urban environment where it is located: on a paved or unpaved street, on a road or a path or sidewalk, next to cultivated fields, or 500 meters from a large avenue. These physical-spatial characteristics give rise to a safe and accessible environment, so that older adults can move autonomously and safely to places of service and health care. This infrastructure or public goods for collective use have important consequences on social development and people's quality of life. It should be noted that this variable and the previous one are captured by the interviewer's own observation.

The variable *Number of stories in the house* is useful because it helps us to know if the conditions of access to the rooms of the house are difficult for people of advanced age or with health problems. Its objective is to capture if the house where the study subject lives has one or more floors.

MATERIAL ON WALLS, CEILINGS AND FLOORS

The information provided by these variables referring to the construction materials in the walls, ceilings and floors of the dwelling where the elderly reside are fundamental indicators of the housing conditions in which they live. Likewise, the information allows estimating the quality of the construction of the house; calculate the durability or life span of the home under normal conditions; estimate their resistance to environmental impacts, and distinguish the prevalence of industrialized, traditional, natural or waste materials. The poor quality of the materials used in the construction of the house is associated with the segmentation of housing production between a formal construction sector (supplied by industrialized and permanent materials) compared to a segment that self-produces its home, resorting to technologies and low-cost materials, available in the immediate geographical environment.¹¹¹

NUMBER OF ROOMS

The variable *Number of rooms* provides an approximation to the size of the space available for carrying out activities and proper functions such as rest, food preparation and intake, and coexistence, among others. Knowing the total number of rooms that the dwelling has allows estimating the housing density and quantifying the space deficit when it is related to the number of occupants. It also allows obtaining indicators on housing overcrowding and underemployment and provides some of the basic inputs for measuring poverty.

HOME SERVICES

The variables related to housing services are relevant to describe the health conditions in which middle and elderly people live, and to know whether or not they have these services that may affect their health. There are three variables included in the MHAS: *Availability of piped water*, *Availability of sanitary service* and *Condition of exclusive sanitary use*. The objective of these variables is to know the type of access or water service available to the home, the quality of the sanitary service to which the study subject has access and if the sanitary service is exclusively for the use of the people who live there in the home, respectively.

FUEL TYPE

Recent research shows a close relationship between cognitive impairment and the use of firewood or charcoal for cooking. This due to the effect of toxic pollutants and smoke inside the home, which is why MHAS enables new research topics in this area, including the variables Cooking Fuel and Additional Fuel.

¹¹¹ CEPAL/CELADE. Manual on quality of life indicators in old age. 2006. Available at: <https://www.cepal.org/es/publicaciones/3539-manual-indicadores-calidad-vida-la-vejez> Consultation: October 8, 2019. Pp. 149.

The first variable, asks about the type of fuel most commonly used when cooking. The classification includes only three types of fuel: gas, firewood or coal, or another (which can be oil or electricity), since what matters is precisely to capture whether they use firewood or coal. With the second variable, apart from the fuel already reported, the goal is to know if they use any other fuel at home; the classification is the same as in the first variable.

EXPOSURE TO LEAD AND INSECTICIDES

Exposure to these pollutants causes harmful effects on people's health, which is why MHAS incorporates the variable *Frequency of food consumption in earthenware* with the aim of knowing if, within the daily habits of the study subjects, there is the use of glazed earthenware, and with what frequency did they consume food or drink in this type of utensil in a specific period of the last three months. Likewise, the variable *Condition of regular use of insecticides* captures if there are usually insects in the home, and if a chemical product is used regularly to combat them.

AVAILABILITY OF SERVICES OR GOODS

This variable provides information on the existence of household electrical appliances that facilitate household chores and provide comfort in carrying out daily activities, since their availability means being able to preserve food or reduce cooking time and lighten laundry loads, among other. The data derived from this variable have been used as complementary indicators to estimate social lag and construct marginalization indices at the local level.

The United Nations organization highlights the importance of identifying Tecnologías de la información y la comunicación (TIC) because "they provide a series of services that are transforming the structure and pattern of major social and economic phenomena." TICs refer to devices and services that allow the reception and reproduction of signals, data processing and human communication at a distance. It includes radio, television, telephone, computer and internet service.

The presence of goods and TIC in households reflects better economic conditions and higher consumption, in such a way that the information is used to obtain indicators of well-being and access to communication media.

Having information in this regard allows us to know the degree of integration of said technological developments in the daily life of the adult population, since at present they are essential to support productive and educational activities, both for access to private services and administration public and for interpersonal relationships in the so-called social networks.

TENURE

A very important asset for the elderly is the ownership of a home, which provides security and stability, since it is an asset that can be inherited, sold or rented. It can constitute an exchange good in case of need, that is, it can be used in the presence of economic and health adversities. Likewise, homeownership is highlighted as one of the main resources of poor groups, either as a source of income through renting, for its use in economic activities, and as a means with which to welcome the new families that form young people and relatives without resources. The irregularity of tenure constitutes a source of extreme social vulnerability.¹¹²

The fact of owning a home is socially important for older adults, since it can be the meeting point for children and relatives, it also raises their self-esteem and is a sign of favorable economic status.

¹¹² Ibid. Pp. 146.

However, half of them do not have a house of their own and, therefore, live with other people or relatives, either in borrowed or rented houses. Despite these circumstances, older adults in Mexico do not change their homes so frequently, and this can be corroborated with previous surveys of the MHAS. For example, almost all of those interviewed in 2001 lived in the same house in 2003 and of these, the survivors in 2012 and 2015, almost all also lived in the same house.

On this issue of tenure, MHAS includes two important variables: *Legal situation of the home* and *Amount of monthly rent*.

The variable *Housing situation* is incorporated in order to know the legal or factual situation, by virtue of which the occupants live in the home, and in the classification it is considered: rented, loaned or transferred without payment, private property or it is being paid and another situation.

In turn, the variable *Monthly rent amount* is applied to the study subjects who live in a rented house, and its objective is to know the amount they spend for this concept. The amount requested is approximate, however, when an amount is not obtained in the first question, another is made that includes categories. The purpose is to obtain data that allows identifying whether they are in a situation of risk of not being able to satisfy other basic needs.

OWNERS

When the home where the study subject resides is not rented, it is sought to know who the owner is and, if it is a relative, to inquire about the relationship. With these data, one has an idea of how the family network helps people of middle and old age, as well as the legal situation of the house.

With the variable *Owners of deeds*, the intention is to find out in whose name the property deeds are located and, if the owners are the study subject or their spouse, to quantify with data from this and other variables, the value of the assets that these people have. Within the classification, other relatives and other non-relatives are also considered as owners.

For its part, with the Property situation variable, it is possible to know if the property is fully paid, if it is being paid and to whom it is owed, if it is irregular, or if it is in the process of regularization. The debt can only be owed with a banking or financial institution, including savings banks, surety companies, etc., or only with family or friends, or with both.

DEBT

It is important to know the amount owed on the property, since with this data it is possible to deduct the amount of the debt from the gross value of the property and establish the net value of the assets of the person under study. Likewise, it is possible to have an idea of the situation of vulnerability in which this population finds itself to satisfy other basic needs.

To inquire about the debt of the property, the following variables are included: *Amount of payment*, *Amount of debt* and *Years to liquidate the home*. The first objective is to know the monthly amount that is paid for the house, by way of a mortgage or loan from a bank, financial institution or family and friends. Like other variables that refer to an amount, the amount requested is approximate and, if it is not provided, an answer is asked using categories or quantities already established. The objective of the second variable is to know the approximate amount of the debt that they have on the property, that is, what you still have to pay for the house. And with the third variable, information is obtained about the time remaining to finish paying the property.

CURRENT VALUE

In order to obtain the estimated value of the property reported by the study subjects, without discounting what is owed from it, the MHAS includes the variable *Present value*. In the question, the interviewee is instructed to consider land and housing to estimate its value, but also the assumption of selling it at that time, such as how much money they would give for it.

As in previous variables, it is required to record an amount, however, if it is not provided, an approximate data is requested through categories. This information is important because housing is one of the most valuable assets and, therefore, it can be made available when there is a strong economic problem.

SECOND RESIDENCE AND CURRENT VALUE

The interest of including these variables in the survey is to capture if there is any other property (house or condominium), including timeshares, that can be counted as assets of the study subject or their spouse, and how much their value amounts to.

The objective of the *Second residence* variable is to inquire about the existence of any other property, apart from the home where they reside, that is not for rent or generates income. In case of having more properties that are in this situation, the interviewee chooses one to respond to the variable Current value, in which is started from a hypothetical situation that if the property is sold at that time and he/she paid what is owed, how much would be left. The value is added to the sum of all reported assets.

INCOME GENERATED BY YOUR HOME

Older adults who obtain income from the rental of home(s) have more economic security and live with greater well-being. Therefore, for the MHAS, it is essential to ask the people under study whether the house in which they reside, or a second residence, generates an income for them. The objective of the variable is to determine if the home(s) of the study subject or the spouse provide them with any income and to know how much the income amounts to per month. In the case of not getting an amount, categories are provided to get an answer.

ENVIRONMENTAL EXPOSURE

The urban environment in which the house is located has important consequences on people's quality of life and health. There are favorable environments that promote dignified and safe aging, but also those that are detrimental to people's lives and health.

As the development and growth of the population have taken place, many of the residential areas of urban and rural localities are being surrounded by workshops, factories, industries, sanitary landfills, among others that emit, produce or dispatch pollutants that seriously affect the health of the inhabitants, especially the most vulnerable.

This variable is included in the survey in order to contextualize the place where the study subjects live, in order to know if there are places less than 500 meters away (or like three blocks) that represent a risk to their health.

4.2.11 Pension, income and assets

MHAS provides data to generate indicators as variables of interest by themselves, but also to feed other models on health in its multiple dimensions, migration, work, and retirement of the Mexican population towards the middle or end of the life cycle. One of the unique features of this study is that it examines the well-being of older adults in both health and financial terms.

The higher the economic level, the better the health. MHAS data show that “good health” is associated with higher income, but, above all, consistently, with greater wealth (that is, assets). Among the population of middle and elderly age, those who have more income or who have accumulated a greater amount of assets in their life, have a better self-perception of their state of health, fewer chronic diseases, better physical and mental functionality, and therefore to a greater extent they are independent.¹¹³

¹¹³ MHAS 2018. Introductions to the content of the Interviewer's Manual, Handling questionnaires.

Information on income and assets is collected through three sections of the MHAS instrument: Section G. Help and children, Section J. Housing and Section K. Income and assets. Therefore, Section K. provides very useful information, since economic well-being is a fundamental component of the quality of life that an older adult can maintain.

Financial security is an important element in the well-being of older adults. The rate of increase in the population of older adults raises the question whether in the economic sphere it can generate social and economic vulnerability that impacts society in general, and if the needs of this population can be covered by the Mexican social system.

In general, to know the economic status of a person usually only work income is measured. However, in the elderly in particular, income from work may be low or non-existent, since there is a tendency not to participate more in the labor market. As age advances and withdrawal from the labor market occurs, the flow of income loses its value as an indicator of economic well-being. For this reason, the various sources of income and the assets that have been accumulated are those that can provide a different image of the economic situation of the population than the one granted from entry, giving an idea of the conditions of economic well-being both current as a future in people of advanced ages. Having assets can be the difference in being able to successfully face the challenges that arise in old age.

Socioeconomic status is one of the most used indicators to establish the socioeconomic well-being of the population, it is generally measured through education, income, or occupation at work. In research, income is generally measured in current terms, it reflects the socioeconomic position and the resources available at the present time, but this indicator can be complemented with accumulated assets, which would give a comprehensive perspective and more exact economic conditions of the aging population. That is why this Section K. is one of the fundamental pieces in the MHAS.

In addition, this section on pension, income and assets is one of the most complex due to its level of detail, but the information collected in this section is essential. The purpose of this section is to know the assets that people have, their value, as well as the sources and amounts of income.

It is a section that is applied per household, so only one of the two members of the couple provides information about the income, pensions and assets of the couple. This in order not to duplicate the information, since non-labor income (from real estate and capital goods) and the value of most of the goods in practice is difficult to assign as property only one of the two members of the couple when it comes to joint assets.

It is made up of questions that ask about businesses, real estate, vehicles and capital assets such as checking accounts, savings, long-term investments, loans to third parties or shares in companies. It also inquires about income from work of the informant and the spouse, current and future pension of the interviewee and the spouse, income from donations and other debts, and future plans.

The aim is to capture information that allows the study of economic well-being, with an emphasis on individual sources of income and accumulation of assets carried out by people of middle and advanced age. Therefore, Section K. includes different components of an individual's or couple's annual income and asset components to calculate total income and net asset value.

To capture income, questions were included about the income from work, pensions, and other public transfers of each spouse.

Questions covering business income, rental property, income from capital goods and family transfers of the individual or, where appropriate, the couple (as joint income) were also included.

Regarding the information on assets, it is asked whether the individual or the couple had assets in the form of properties to live or rent, businesses, vehicles, and the gross value of all of them, as well as the debt on these assets; capital assets, other debts and other assets.

This entails a meticulous work on a variety of income, debts and capital assets to measure economic security in old age, since it is necessary to analyze whether or not older adults have economic resources.

For this, it is asked the value, the regularity of the income, the source or type of patrimony, which allows knowing the availability of these resources at the time that older adults need to use them.

It should be noted that the MHAS was designed with attributes that allow comparisons to be made with the similar study carried out in the United States since 1992, the Health and Retirement Study. MHAS can be used in comparative analysis between both countries. However, it is necessary to highlight that the amount of support referred to in the questions in Section K. has been modified for the different operations, due to the variation in the value of the Mexican peso. Therefore, it is necessary to take this factor into account when performing data analysis between different surveys.

One of the characteristics of this section is that it has questions that allow us to recover the non-response in monetary amounts, this is because the refusal is common in questions that refer to money or economic value. Given that in some cases the population provides information on the existence of assets and income, but they refuse to give the exact amount of these, in the "rescue" questions, ranges are used to try to retrieve information. Later, in process, an imputation is made using the ranges.

BUSINESSES

The section inquires about the businesses that the subject of study and/or his/her spouse have. Up to two businesses can be registered, the most important to the study subject.

Within this category, it is also considered those who work on their own, since the common factor they have is that people work for themselves and are owners of an unregistered company.

The property of businesses is also asked in order to establish access to assets that each spouse has, which can be an important indicator of economic security and position in the home, especially for elderly women.

The outstanding debts and the sale value of each reported business are captured, to later calculate the profits, which is the net income (sales minus expenses) that the business produces. For this it is also asked, expenses, profits and gross income, that is, income before deducting expenses, generated by the business.

REAL ESTATE

Information is captured on other properties such as land, lots, and/or properties for rent, other than those for personal or family use. Only one property is declared; the one the study subject considers the most important. If in the same property, there are different rooms for rent, this is considered as a single property.

The expenses generated by the property are captured, also if they have outstanding debts on the reported property, the approximate value of the property, and if it generates income or income in exchange for making the property or properties available to others, to later deduct the debt of the total value of the good, and obtain what the value of the wealth (net wealth) of the study subject really is. Profits are also calculated, which is the net income (rents minus expenses) that the property produces.

Likewise, as part of the access to property, it is identified in whose name the property is.

CAPITAL GOODS

It seeks to know if people of middle and advanced age accumulate assets in this way, and the corresponding amounts, both to calculate the value of wealth and to compare them with the amounts in other types of assets increase the general knowledge of the level of well-being and economic security of the middle and elderly people.

OTHER GOODS

It inquires about other assets that the study subject and/or their spouse may possess.

Mainly, it asks about vehicles because it is common to have assets in the form of cars, trucks, boats, or other assets that have not been mentioned.

INCOME FROM SALARIED WORK

Section K inquires about the income received from participating in salaried work, that is, when it maintains a relationship or formal or informal agreement with an employer to carry out an economic activity in exchange for remuneration. Remuneration for salaried work is all the cash inflows received regularly by subordinate workers in their main job and, if it is the case, in a secondary job, for each of the spouses.

The information sums the types of remuneration into two groups:

- a) Salaries, wages, commissions and overtime.
- d) Christmas bonus, premiums and profit sharing.

PENSIONS

Due to the decrease in participation in the labor market of the elderly population, pensions constitute an important source of income for this sector of the population. According to an MHAS analysis of longitudinal data, there is a notable change in the composition of income sources between 2001 and 2012 for the cohort born in 1951 or earlier. As it might be expected, as this population aged, eleven years later they were less dependent on business or work income, and more dependent on pensions and family support.

When it comes to Retirement or pension variables, it is referring to those from mixed contribution systems or schemes, that is, when they have been derived from contributions made by employers, workers and the government. The objective is to capture characteristics of the pensions that older adults currently receive, such as amount, institution, year in which they began to receive it and the possibility of transferring the right to the pension to the spouse after death.

Mainly three types of pensions are considered:

- Retirement. This option includes pensions derived from a job:
 - » Retirement or old age. It is a pension to which the worker is entitled for his time worked.
 - » Unemployment in advanced age. It is granted to workers who voluntarily separate themselves from service or are deprived of paid work after 60 years of age.
- Widowhood. Pension granted for the death of the contributing insured working spouse.
- Invalidity or work accident. Due to illness or work accident that has partially or totally limited them to carry out activity(s) or due to mishaps occurred in transit from home to work or vice versa.

In addition, there is a fourth category, *Others*, where information is collected on:

- The ancestry pension that is granted to the parents when the child dies, a contributing insured worker on whom they depended economically.
- Pensions for disability caused by non-occupational diseases or accidents that prevent you from carrying out your activities partially or totally also fall into this question. As long as the institution that gives you the pension is in which the study subject was contributing as a worker at the time the accident occurs or illness.
- Other types of pensions derived from some job, for example, an orphan's pension that is granted for the death of the father, the mother or both if they are insured contributing workers, to those under 16 years of age who are not yet working, up to the age of 25 if they are students in the national system; or for life if they cannot take care of themselves permanently, it is in the latter case that they could be included for the elderly population.

- All pensions received by the study subject that are not due to work; for example, when the person has been run over or violated by a third party and it causes him to receive a pension for life for the damage caused.

Donations from social programs are not considered within pensions, since they are captured under the heading of other transfers from the informant.

OTHER TRANSFERS OF THE INFORMANT

This section includes donations in money or in kind from public institutions such as PROAGRO productivo (formerly PROCAMPO), PROSPERA (formerly Oportunidades), INAPAM (formerly INSEN), and Seguro Popular. These concepts include the Seguro Popular because it also serves people who are not affiliated, such as the vulnerable or low-income population, who can receive free in-kind help such as: discount coupons, medicines, free vaccines, not including free consultations.

It is also asked about the income from the sale of some good such as property, belongings or some gift or inheritance. For any of these, the characteristics of the pensions are investigated, such as amount, institution, year in which they began to receive it and the possibility of receiving it in the future.

It should be noted that the value of the remuneration in kind is established in accordance with the estimate made by the informant himself.

HOUSEHOLD CONSUMPTION

You want to know how much the household spends, what it produces for its consumption, if it has enough money to buy food and if it is enough.

This section also has two questions about food safety, where it is captured if the person has always had enough money to buy the necessary food, continuously, and to know if they have ever run out of food or ate less than they would have liked due to lack of money at home.

The *1948 Declaración Universal de Derechos Humanos* proclaimed that “Every person has the right to an adequate standard of living that assures him, as well as his family, health and well-being, especially food. Food Security at the individual, household, nation and global level is achieved when all people, at all times, have physical and economic access to sufficient food, safe and nutritious, to satisfy their nutritional needs and preferences, in order to to lead an active and healthy life”.¹¹⁴

Older adults represent a vulnerable population in terms of their nutrition; the quality of their diet can be affected by financial, functional and social isolation problems. Because in modern societies most of the food consumed is purchased, financial security plays a crucial role in the food sufficiency of older adults. Food insecurity can also affect aspects of the physical or mental health of older adults.

Data from the ENSANUT 2012 showed that almost one out of every three households (27.7%) where older adults live presented moderate or severe food insecurity. The answer implies that in the three months prior to the date of the interview, at home they had to reduce the amount of food consumed, or they experienced hunger.¹¹⁵

¹¹⁴ Government of Mexico. Food and nutrition security. Available at: <https://www.gob.mx/firco/articulos/seguridad-alimentaria-y-nutricional>

¹¹⁵ Pedro Arroyo Acevedo, Teresa Shamah Levy, Lucía Cuevas Nasu, Leticia Arcelia Cervantes Turrubiates, Gabriela Ríos Cázares. Nutritional status of the elderly in Mexico. Available at: http://www.geriatria.salud.gob.mx/descargas/publicaciones/foro-envejecimiento/FS_ES-TADO_NUTRICION.pdf

FUTURE PLANS

It is also interesting to know if the informant has made plans to transfer assets in the event that he or she dies and who the beneficiaries would be. This information provides an idea of the planning horizon and the level of preparedness in the event of death considered by the middle-aged and elderly. It also gives an idea of the degree of vulnerability that survivors may be, especially future widows since women tend to outlive men in a couple. The questions about the children who could benefit in the future show whether the plans that are made for the future in case of death establish obligations on the part of certain children to provide care or share residence with the parents. Aids, care and residency arrangements are asked in other sections of the questionnaire.

WIDOWHOOD

It is also of interest to obtain information on the changes that occur as a result of widowhood. Therefore, through a series of questions, it is about capturing important changes in the situation of the elderly who became widowed, whether residential, family or economic, such as whether they began to receive some income from pensions, stopped receiving or there was some change in income, in coverage of medical services after the death of the spouse. Likewise, it is interesting to know the expenses associated with this death.

The data in Section K. make it possible to quantify the value of the assets accumulated by the middle and elderly population throughout the country, through a household survey. In addition, the information from the MHAS provides elements to relate the net value of assets, sources of income and the amount of income, according to age, education, urban or rural residence, sex and marital status of the population.

In addition, data are obtained to calculate the net value of assets per person, and the liquidity of assets in the form of their home, businesses, vehicles, and other assets. The value of other goods is captured through a question that captures all other types of goods not mentioned that could be sold in an emergency, such as jewelry, coins, furniture or animals that are not part of a business.

4.2.12 Surviving widower

The aging of the population can be considered a success of public health policies and socio-economic development, but it constitutes a challenge for society, which must adapt to it in order to improve the health and functional capacity of older people as much as possible, as well as their social participation and their security.¹¹⁶

Aging is a natural, gradual, continuous and irreversible process of changes over time. These changes occur at the biological, psychological and social level, and are determined by history, culture and socio-economic conditions of groups and individuals. Each person's way of aging is different, it is determined by physical age, physical and biological changes that occur at different rates, which largely depend on sex, place of residence, economy, culture, diet, type of activities carried out and emotions. In addition, the meaning that old age has for each person comes into play.

An event that occurs more frequently in older adults and that has a great impact on the survivor is "widowhood". This term is the stage in the life of a person who got married and her spouse died.¹¹⁷ It is a stage that is socially considered sad, since it supposes that one of the two people who decided to form a couple is gone. Widowhood is linked to old age or to the stage that older adults live. However, this can happen when either of the two in the couple, loses their life.

The definition of widowhood assumes having been married prior to the death of the spouse. The origin of the word widow comes from the Latin *vidua* which means empty, separated, put aside.¹¹⁸

¹¹⁶ INMUJERES. Situation of the elderly in Mexico. Available at: http://cedoc.inmujeres.gob.mx/documentos_download/101243_1.pdf

¹¹⁷ Concept Definition. Widowhood. Available at: <https://conceptodefinicion.de/viudez/>

¹¹⁸ Verónica Montes de Oca Zavala. Revista Temática Kairós Gerontologia, 14(5), ISSN 2176-901X. São Paulo (SP), Brasil, dezem-bro 2011: 73-107. Widowhood, loneliness and sexuality in old age: coping and overcoming mechanisms.

Widowhood has been a major social problem, particularly in the past. In families where the husband was the sole provider, widowhood could plunge relatives into poverty, and many charities were aimed at helping widows and orphans. This was made worse by the long lifespan of the women, as men generally married women younger than themselves.

The widowhood stage brings with it factors that are suffered in old age, such as: economic vulnerability, loss of identity, experience of grief, feelings of loneliness, consideration of suicide, need for companionship and new marriages.

Within the studies of the well-being of the elderly, the importance of life in the company of others stands out. It is established that men who live married or together live longer than those who are alone.^{119 120} This may be associated with the care they receive from their partner, as well as coexistence and interaction with the family and social network. Or, on the contrary, it is possible that men who live a healthy life can find a partner more easily and that is why they are observed living as a couple and healthier.

However, what is clear is that the partner of an older adult plays a crucial role in his life, both for the support he may receive and for the care he can give his partner. Psychologists say that one of the most difficult events is the loss of a spouse in an older adult, since a partner of many years is usually lost.¹²¹

There is literature that indicates that social networks act with greater force when there is a death in the families than when there is a divorce or separation, since social solidarity tends to unfold in the face of unsolvable events, not when the spouses are still living and break the basic bond of society. Other studies point to the role of social networks in the face of the death of the spouse as a protective factor in the family and religious sphere that allows facing the event.

Economic vulnerability in widowhood. From the economic perspective, old age is a fundamental phenomenon since the marital structure not only consists of a formalization of family life, but is also a fundamental component of the agrarian mode of production. Family units, historically, have also been domestic units of agricultural production. For this reason, at a certain moment, widowhood was a phenomenon that indicated the dismantling of the basic unit of production. Whether it was in the case of women or men, widowhood appealed to the death of one of the spouses, thereby eliminating one of the basic elements of economic, social and biological reproduction. Within this logic, dying and leaving a family represented the beginning of a stage of vulnerability, which had different effects in the case of women and men. This vulnerability can bring weakness, need, destitution and misfortune.

Therefore, it is important to study the transformation in life and the changes that occur in the life of an older adult when their spouse dies.

The purpose of learning about widowhood in MHAS is to capture information about the changes that occurred in the life of the study subject after they became widowed. Such as: change of residence, change in sources and amounts of income, start working or stop working, start or stop receiving health or pension benefits, payments on major expenses such as medical expenses.

It should be noted that this section of the MHAS survey instrument is included in the questionnaire on the deceased person. However, to guarantee a minimum number of variables that account for how the study subject died and in what conditions the surviving widower was left, eleven questions are applied that collect information on the age and cause of death, date and place of death. It also seeks to know who or whom stayed with the deceased's home or who remains residing in the home.

¹¹⁹ Marital status, health and mortality. James Robards, Maria Evandrou, Jane Falkingham and Athina Vlachantoni. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3635122/>

¹²⁰ Marriage and men's health. Harvard Health Publishing. Available at: <https://www.health.harvard.edu/mens-health/marriage-and-mens-health>

¹²¹ MHAS 2018. Introductions to the content of the Interviewer's Manual, Handling questionnaires.

4.2.13 Temporary residence arrangements

In aging studies, it is of utmost importance to investigate mortality. The MHAS, as it is a longitudinal survey, follows the study subject from before death until death to understand the conditions and characteristics around their death. Despite the fact that it is difficult to collect information about the deceased person, it is difficult to find the appropriate informant and answer the questions included in the questionnaire, which can be delicate or sensitive.¹²²

Likewise, in studies of the well-being of an aging population, it is known that the last year of a person's life is the most expensive and in which several changes can occur. Therefore, to understand the consequences of aging for Mexican society, it is interesting to know details of the last year of the deceased's life, both about the resources that were spent, as well as the care arrangements and family adjustments that had to be made.

The *Temporary Residency Arrangements* Section is exclusive to the Questionnaire on the deceased person. The objective of this section is to investigate whether any person temporarily moved to the home of the deceased study subject, with the purpose of caring for him / her before death, or if he / she became ill and was later taken to the home of someone from the family to be cared for.

It has been observed that, due to the aging process, people lose cognitive or motor skills that reduce their autonomy to carry out their basic needs, so their family and friends organize to support older adults, making changes of residence. Sometimes relatives go to the home of the elderly or, sometimes, they are the ones who change residence and go to the home of a relative.¹²³

In this section, variables are incorporated to know how this change of residence was carried out in the last year of the study subject's life, that is, if there were people who moved to their residence or with whom they went to reside.

CHANGE OF RESIDENCE TO THE STUDY SUBJECT'S HOME

This variable has the objective of investigating whether someone (relative or non-relative) made a temporary change of residence to the home of the person under study before dying, in order to help or care for them before they died.

Carrying out this type of change implies, regularly, establishing agreements between those involved, both in the economic aspect and in the distribution of time, in order to provide the attention and care that the person needs. For this reason, many times, agreements are not reached between those who make up their family support network and the elderly person will find themselves in a situation of abandonment, with more disadvantages or health risks and a greater demand for support and external help.

For the MHAS, this variable is of interest precisely because it is a way of knowing what the dynamics of the relationships established by the elderly person with family, friends and community support groups is like, and how much their social networks are supportive or not. And it is of greater importance in our country, due to the demographic aging process, and the absence of public services for the care of this population group.¹²⁴

IDENTIFICATION OF PEOPLE WHO CHANGED THEIR RESIDENCE

Identifying the kinship of the members of the social and family support networks is important, since with this data it is possible to obtain the level of closeness of the people analyzed and to carry out a mapping of the network. Studies show that children are the main providers and recipients of support.

¹²² MHAS 2018. Introductions to the content of the interviewer's manual, Handling questionnaires. Pp. 56-58.

¹²³ Curtis Huffman, Ricardo Regules-García, Delfino Vargas Chanes. Living arrangement dynamics of older adults in Mexico: Latent class analysis in an accelerated longitudinal design.

¹²⁴ INMUJERES. Situation of the elderly in Mexico. Pp. 25-26.

Among the elderly, the distribution of the network tends to be mostly family, although there are differences according to gender or social class, in addition to depending on the type of support that is exchanged.¹²⁵ A social support network can be of high, medium or functional level.¹²⁶

The MHAS includes a question to establish the kinship or relationship of the person(s) who moved to live in the deceased's house, with the purpose of accompanying them or helping them in the last months of life. The options consider: child or grandchild(s), other relatives and another non-relative. Other questions allow identifying the name and registration of the children or grandchildren who moved into the person's home before the person's death and, in the case of more than one child or grandchild, identifying which of them spent the longest time caring for the sick person before they passed away.

CHANGE OF RESIDENCE OF THE STUDY SUBJECT WITH RELATIVES OR FRIENDS

As mentioned above, any change of residence involves a series of family agreements, and even arrangements in the same home to receive the person who is going to provide care or to whom care is going to be provided. Although elderly people prefer to stay in their place of residence when they are experiencing an illness, on occasions, due to various circumstances, family members decide to take them home to give them the necessary care.

This variable is of great relevance, since it allows to establish whether the person before his death, temporarily changed his residence to the home of a relative, in order to receive the care or attention required.

IDENTIFICATION OF THE PERSONS WHERE THEIR RESIDENCE CHANGED

The variables included here are similar to those already described, therefore, it is only convenient to mention that their objective is to identify the relationship of the person(s) with whom the study subject was changed before their death, and if they left with a child or grandchild, identify their name and registration number, as well as with whom they stayed the longest. In this way, the importance of family and support networks that older people have is established.

¹²⁵ CEPAL/CELADE. Manual on quality of life indicators in old age. Available at: <https://www.cepal.org/es/publicaciones/3539-manual-indicadores-calidad-vida-la-vejez> Consulta: October 10, 2019. Pp. 129-130.

¹²⁶ Ibid. Pp. 133.

Appendix

A. Conceptual scheme

The ordering of categories, variables and classifications of the instruments of the MHAS 2018 is presented.

Introductory questions

TOPIC: RESIDENCE AND SITUATION OF STUDY SUBJECTS

Category	Variable	Classification
Subtopic: Identification and location of follow-up study subjects, new person or new spouse		
Household with a single person or new sample household with a spouse	Status of residence of SE1 (selected)	Yes resides at home Does not reside at home
	Residence of SE1 at another address	Resides at another address definitely, Resides at another address temporarily, Passed away
	Residence status of the informant of the deceased SE1	Yes you reside at the address (Name), Does not reside at home
	Condition of providing informant data of the deceased SE1	Yes No
	Informant details of the deceased SE1	Address: street, avenue, alley, highway, road; exterior number, interior number; subdivision, neighborhood, unit; zip code Name, relationship, phone number(s) Name of institution (collective housing), street(s), entity, municipality, locality
	Marital Status of SE1	Single Divorced Separated or widowed Married or union
	Condition of providing SE1 partner or spouse data	Yes (Name) No
	Status of residence of SE3 (new spouse of follow-up SE1)	Yes resides at home Does not reside at home
	Residence of SE3 at another address	Resides at another address permanently, Resides at another address temporarily
	Condition of providing a new address for SE1	Yes No

(Continued)

Category	Variable	Classification
	New address of SE1	Address: street, avenue, alley, highway, road; exterior number, interior number; subdivision, neighborhood, unit; zip code Phones number(s) Name of institution (collective housing), street(s), entity, municipality, locality
	Status of residence of SE1 (selected)	Yes you reside at home, 2. Does not reside at home
	Residence of SE1 at another address	Resides at another address definitively Resides at another address temporarily Deceased
	Residence status of the informant of the deceased SE1	Yes resides at the address (Name) Does not reside at home
	Condition of providing informant data of the deceased SE1	Yes No
	Informant details of the deceased SE1	Address: street, avenue, alley, highway, road; exterior number, interior number; subdivision, neighborhood, unit; zip code Name, relationship, phone number(s) Name of institution (collective housing), street(s), entity, municipality, locality
	SE1 Marital Status Verification	Yes you are married or in a union with SE2 You are not married or in a union with SE2
	Status of residence of SE2 (partner or spouse of SE1)	Yes resides at home Does not reside at home
	Residence of SE2 at another address	Resides at another address definitively Resides at another address temporarily
	Relationship between SE1 and SE2	S1 is separate from SE2 SE1 is the widower of SE2
	Condition of providing new SE2 address	Yes No
	SE2 address	Address: street, avenue, alley, highway, road; exterior number, interior number; subdivision, neighborhood, unit; zip code Phone number(s) Name of institution (collective housing), street(s), entity, municipality, locality
	Condition of residence of the informant of the deceased SE2	Yes you reside at the address (Name), Does not reside at home
	Condition of providing informant data of the deceased SE2	Yes No

(Continued)

Category	Variable	Classification
	Informant details of the deceased SE2	Address: street, avenue, alley, highway, road; exterior number, interior number; subdivision, neighborhood, unit; zip code Name, relationship, phone number(s) Name of institution (collective housing), street(s), entity, municipality, locality
	Status of new partner or spouse of SE1	You are married or in a union with a new partner or spouse You are not married or in a union with a new partner or spouse
	SE3 residence condition	Yes resides at the address, 2. Does not reside at the home
	Residence of SE3 at another address	Resides at another address definitively Resides at another address temporarily
	Condition of providing new SE1 address	Yes No
	New address of SE1	Address: street, avenue, alley, highway, road; exterior number, interior number; subdivision, neighborhood, unit; zip code Phone number(s) Name of institution (collective housing), street(s), entity, municipality, locality
	SE2 residence condition	Yes resides at home Does not reside at home
	Residence of SE2 at another address	Resides at another address definitively, Resides at another address temporarily, Deceased Resides at the same address as SE1
	Relationship between SE2 and SE1	You married or in union with SE1, You are not married to or in union with SE1
	New partner or spouse of SE2	You are married or in a union with a new partner or spouse You are not married or in a union with a new partner or spouse
	Status of residence of SE4 (new spouse of SE2)	Yes resides at home Does not reside at home
	Residence of SE4 at another address	Resides at another address definitively Resides at another address temporarily
	Condition of providing new SE2 address	Yes No
	New address of SE2	Address: street, avenue, alley, highway, road; exterior number, interior number; subdivision, neighborhood, unit; zip code Phone number(s) Name of institution (collective housing), street(s), entity, municipality, locality

BASIC QUESTIONNAIRE

TOPIC: HOME RESIDENT REGISTRATION CARD FOR FOLLOW-UP PERSON

Category	Variable	Classification
Subtopic: Sociodemographic data of members who reside in the household		
Household residents and new residents	Current residence status at home of only follow-up study subjects	Yes, only both SE (SE1 and spouse) reside, No, other people reside with SE
	Verification of household residents and registration of new residents	n Residents Name (without surname) or identification characteristics of the resident
	Condition of residence in the household	Still lives here or temporarily absent Permanently absent Deceased Listed by mistake New resident
New residents	MHAS registration number 2012 or 2015	Registration number Does not appear in lists
	Primary reason for residence in the home	Health of the selected respondent or spouse Health of the informant Economic reasons Other reasons Does not respond Does not know
General characteristics of household residents	Sex	Male Female
	Relationship (with SE and his spouse)	Child Stepchild Adopted child Foster child Mother/Father Parent-in-law Grandparent Grandchild Great grandchild Son/daughter-in-law Brother/sister or step brother/step sister Brother/sister-in-law/cousin Uncle/aunt Nephew/niece Other relative No relative
	Age	n Years Less than 1 year 98 or more Does not know

(Continued)

Category	Variable	Classification
Sociodemographic characteristics of residents 12 years of age or older from the household	Education	n Level: None Elementary Secondary or middle school Technical degree with middle school completed Preparatory level of teacher training Preparatory or high school Technical career with high school completed Bachelor's degree or engineering Graduate school Does not respond Does not know n Grade: Does not respond Does not know
	Marital status	Single Married Civil Union Divorced Separated Widower Does not respond Does not know
	Activity condition	Working Looking for a job Student Dedicated to household chores Does not work Does not respond Does not know
Health and migration of resident children 12 years of age or older	Condition of existence of serious health problem or physical limitation	Yes you have a health problem or physical limitation Has no health problem or physical limitation Does not respond Does not know
	Total children	n Children None Does not respond Does not know
	Migration status to the United States	Yes you have lived or worked in the United States, You have not lived or worked in the United States, Does not respond Does not know

(Continued)

Category	Variable	Classification
Migration and contact with permanently absent children of 12 years or older	Place of residence or migration	Same house or building Another house of the same locality Different locality but the same municipality Another municipality of the same state Other state in Mexico U.S. Another country Does not respond Does not know
	Frequency of contact (in person, by mail, computer or phone)	n Times: Never Does not respond Does not know n Period: Week Month Year 2 years Does not respond Does not know

TOPIC: NON-RESIDENT CHILDREN OF FOLLOW-UP PERSON

Category	Variable	Classification
Subtopic: Sociodemographic data of children who do not reside in the home		
General characteristics of non-resident children of the household	Verification of children who do not reside in the home and registration of other non-resident children	n Children Name (without surname) or identification characteristics of non-resident child
	Condition of existence of children of SE who do not reside in the home	Yes they have non-resident child(ren), They have no non-resident child(ren)
	Sex	Male Female
	Age	n Years Under 1 year 98 or older Does not know
	Condition of residence	Still lives elsewhere Omitted non-resident child Deceased Resides in the residence of selected respondent Listed by mistake

(Continued)

Category	Variable	Classification
Non-resident children 12 years of age or older	MHAS registration number 2012 or 2015	Registration number Does not appear in lists
	Education	n Level: None Elementary Secondary or middle school Technical degree with middle school completed Preparatory level of teacher training Preparatory or high school Technical career with high school completed Bachelor's degree or engineering Graduate school Does not respond Does not know n Grade: Does not respond Does not know
	Frequency of contact (in person, by mail, computer or phone)	n Times: Never Does not respond Does not know n Period: Week Month Year 2 years Does not respond Does not know
	Marital status	Single Married Civil Union Divorced Separated Widower Does not respond Does not know
	Activity condition	Working Looking for a job Student Dedicated to household chores Does not work Does not respond Does not know
	Condition of existence of serious health problem or physical limitation	Yes you have a health problem or physical limitation Has no health problem or physical limitation Does not respond Does not know
	Total children	n Children None Does not respond Does not know

(Continued)

Category	Variable	Classification
Non-resident children 12 years of age or older	Place of residence or migration	Same house or building Another house of the same locality Different locality but the same municipality Another municipality of the same state Other state in Mexico U.S. Another country Does not respond Does not know
	Migration status to the United States	Yes you have worked or lived in the United States, You have not worked or lived in the United States, Does not respond Does not know

TOPIC: FOLLOW-UP PERSON DEMOGRAPHICS

Category	Variable	Classification
Subtopic: General data of follow-up study subject (SES)		
SES data registration and verification	Sex	Male Female
	Verification of date of birth	Yes the date is correct The date is not correct: n Day, n Month, n Year
	Age	n Years Does not respond Does not know
	Verification of place of birth	Yes that's correct That is not correct
	Place (country) of birth	State Country Does not respond Does not know
Subtopic: Marital status		
SES marital status	Current marital status	Single Married Civil Union Divorced Separated Widower
	Condition of permanence with the partner registered in 2012 or 2015	Yes continues with the same person Does not continue with the same person Does not respond Does not know
	Condition of dissolution of the last marriage or union after 2012 or 2015	Yes it ended after the interview It did not end after the interview Does not respond Does not know
	Remarriage or union status after 2012 or 2015	Yes it started after the interview It did not start after the interview Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Fertility		
SES Children born alive	Verification of the number of live births registered in 2012 or 2015	The number of registered children is correct, The number of registered children is not correct
	Number of children born alive	n Sons/Daughters None Does not respond Does not know
	Number of surviving children	n Sons/Daughters All Does not respond Does not know
Subtopic: Migration to the United States		
Place of residence or migration	Time of residence in the locality	n Years Less than 6 months 6 to 12 months Has always lived here Does not respond Does not know
	Change of address after 2012 or 2015	Yes you moved to another address You did not move to another address Does not respond Does not know
	Impact of housing due to disaster occurrence after 2012 or 2015	Yes it affected the home It did not affect the home Does not respond Does not know
Residence or work in the United States	Status of stay for residence or work in the United States after 2012 or 2015	Yes you have worked or lived in the United States, You have not lived or worked in the United States You were born in U.S. Does not respond Does not know
First stay in the United States for work or residence	Condition of first stay for residence or work in United States	Yes it is the first time that you worked or lived in the US It is not the first time that you worked or lived in the US Does not respond Does not know
	Year of first stay in the United States	n Year Does not respond Does not know
	Main reason for migration in first stay	To work Illness Reunite with your family Difficult to remain in Mexico Didn't earn enough money in Mexico Help family in the U.S. Other Does not respond Does not know

(Continued)

Category	Variable	Classification
First stay in the United States for work or residence	Help from acquaintances for your stay at the migration site	Yes I knew someone Did not know anybody, Does not respond Does not know
	Year or age upon return from the first stay	n Year or n Age Does not respond Does not know
Total stay in the United States	Main type of area of residence in stay(s)	Mainly urban Mainly rural About the same in both Does not respond Does not know
	Total time of residence or work in the United States	n Years 12 months or less Does not respond Does not know
Subtopic: Conditions (or circumstances) of Stay in the United States		
Longer stay in the United States	Type of work performed during the longest stay	Agriculture/animal breeding, Construction/Manufacturing/Mining, Gardening/Maintenance/Services to a private residence, Childcare or domestic work for a private residence, Restaurant/hotel/business, Office/professional Other Did not work, Does not respond Does not know
	Condition of sending remittances to relatives in the longest stay	Yes sent money to family, Did not send money to family, Does not respond Does not know
	Purpose (or destination) of remittances in the longest stay	Savings for when you return to Mexico Support your family Improve property in Mexico Buy furniture or other durable goods for the house Other Does not respond Does not know

(Continued)

Category	Variable	Classification
Last stay in the United States	Main reason for the last migration or stay in the US	To work Illness Reunite with your family Difficult to remain in Mexico Did not earn enough money in Mexico Help family in the U.S. Other Does not respond Does not know
	Year or age at return from last stay in the US	n Year or n Age Does not respond Does not know
	Reason for return from last stay in the US	You were ill You missed your family Difficult to remain in the U.S. Too expensive to remain in the U.S. Did not earn enough money Problems regarding migration Family problems in Mexico Other Does not respond Does not know
	Main reason for returning from last stay in the US	Illness Missed your family Difficult to remain in the U.S. Very expensive to remain in the U.S. Did not earn enough money Problems regarding migration Family problems in Mexico Other Does not respond Does not know
	Perception of the state of health upon return from the last stay	Excellent Very good Good Fair Poor Does not respond Does not know
Contribution to SSS and residence permit	Contribution condition to the social security system	Yes contributed Did not contribute Does not respond Does not know
	Mode of contribution to the social security system	With his name With someone else's With mine or someone else's
	Permanent residence permit or US citizenship	Is a residence permit Is a citizen No, neither Does not respond Does not know

TOPIC: OTHER FOLLOW-UP PERSON DATA

Category	Variable	Classification
Subtopic: Religion and volunteer work		
Participation in religious activities	Condition of attendance at religious services	Yes attend Does not attend Does not respond Does not know
	Frequency of participation in religious activities	Never Once in a while Once or more per week Does not respond Does not know
	Degree of importance of religion in your life	Very important Somewhat important No at all important Does not respond Does not know
	Participation in volunteer (or community) work in the last two years	Yes has participated Has not participated Does not respond Does not know
	Hours dedicated to volunteer work	n Hours n Period: Day, Week, Month, Year Does not respond Does not know
	Approximate time spent on volunteer work	Less than 2 hours per week 2 to 4 hours per week More than 4 hours per week Does not respond Does not know
Subtopic: Body figure		
Identification of body figure	Body weight perception	n Figure (Male or Female) Do not see Does not respond Does not know
Subtopic: Major events that occurred between 2015 and 2018		
Health risk events or family situation	Deceased child and year of occurrence	If died: n Year (2015 to 2018) Did not pass away Does not respond Does not know
	Sick relative care and year of occurrence	Yes took over care: n Year (2015 to 2018) Did not take over Does not respond Does not know
	Impact of housing by disaster and year of occurrence	Yes it occurred and affected the home: n Year (2015 to 2018) Did not affect Does not respond Does not know

(Continued)

Category	Variable	Classification
Health risk events or family situation	Victim of accident, crime or other serious event and year of occurrence	Yes was a victim: n Year (2015 to 2018) Was not a victim Does not respond Does not know
	Impact of financial situation due to any loss	Yes there was a loss and it affected financial situation: n Year (2015 to 2018) Did not affect Does not respond Does not know

TOPIC: HOME RESIDENT REGISTRATION CARD FOR NEW PERSON

Category	Variable	Classification
Subtopic: Sociodemographic data of members who reside in the household		
Household residents	Condition of residence in the home of only SE and his spouse	Yes, only SE resides or both (SE and your spouse) No, other people with SE reside
	Name of household residents	n Residents Name (without surname) or identification characteristics of the resident
General characteristics of household residents	Sex	Male Female
	Relationship (with SE and his spouse)	Child Stepchild Adopted child Foster child Mother/Father Parent-in-law Grandparent Grandchild Great grandchild Son/daughter-in-law Brother/sister or step brother/step sister Brother/sister-in-law/cousin Uncle/aunt Nephew/niece Other relative No relative
	Age	n Years Less than 1 year 98 or older Does not know

(Continued)

Category	Variable	Classification
Sociodemographic characteristics of residents 12 years of age or older from the household	Education	n Level: None Elementary Secondary or middle school Technical degree with middle school completed Preparatory level of teacher training Preparatory or high school Technical career with high school completed Bachelor's degree or engineering Graduate school Does not respond Does not know n Grade: Does not respond Does not know
	Marital status	Single Married Civil Union Divorced Separated Widower Does not respond Does not know
	Activity condition	Working Looking for work Student Dedicated to household chores Does not work Does not respond Does not know
Health and migration of resident children 12 years of age or older	Condition of existence of serious health problem or physical limitation	Yes you have a health problem or physical limitation Has no health problem or physical limitation Does not respond Does not know
	Total children	n Children None Does not respond Does not know
	Permanent residence status in the SE's home	Yes you have always lived with SE You have not always lived with SE Does not respond Does not know
	Change of residence of SE and child	He/she moved in Respondent moved in Does not respond Does not know
	Migration status to the United States	Yes you have worked or lived in the United States Has not worked or lived in the United States Does not respond Does not know

(Continued)

Category	Variable	Classification
Health and migration of resident children 12 years of age or older	Total years of residence or residence in the US	n Years 12 months or less Does not respond Does not know

TOPIC: NON-RESIDENT CHILDREN OF NEW PERSON

Category	Variable	Classification
Subtopic: Sociodemographic data of children who do not reside in the home		
General characteristics of non-resident children of the household	Condition of existence of children of the SE and/or their spouse who do not reside in the home	Yes they have a child who does not live in the household They do not have a child who does not live in the household home Does not respond Does not know
	Name of children who do not reside in the home	Name (without surname) or identification characteristics of the non-resident child
	Sex	Male Female
	Relationship (with SE and his spouse)	Child Stepchild Adopted child Foster child Other
	Age	n Years Less than 1 year 98 or older Does not know
Non-resident children 12 years of age or older	Education	n Level: None Elementary Secondary or middle school Technical degree with middle school completed Preparatory level of teacher training Preparatory or high school Technical career with high school completed Bachelor's degree or engineering Graduate school Does not respond Does not know n Grade: Does not respond Does not know
	Frequency of contact (in person, by mail, computer or phone)	n Times: Never, Does not respond, Does not know n Period: Week, Month, Year, Less than once a year, Does not respond, Does not know

(Continued)

Category	Variable	Classification
Non-resident children 12 years of age or older	Marital status	Single Married Civil Union Divorced Separated Widower Does not respond Does not know
	Condition of existence of serious health problem or physical limitation	Yes you have a health problem or physical limitation Has no health problem or physical limitation Does not respond Does not know
	Activity condition	Working Looking for work Student Dedicated to household chores Does not work Does not respond Does not know
	Total children	n Children None Does not respond Does not know
	Place of residence or migration	Same house or building Another house of the same locality Different locality but the same municipality Another municipality of the same state Other state in Mexico U.S. Another country Does not respond Does not know
	Migration status to the United States	Yes you have worked or lived in the United States Has not worked or lived in the United States Does not respond Does not know
	Total years of residence or work in the US	n Years 12 months or less Does not respond Does not know
Subtopic: Sociodemographic data of deceased children		
General characteristics of deceased children	Condition of existence of deceased children of the SE and/or their spouse	They did have a child who died They have no deceased child Does not respond Does not know
	Name of deceased children	Name (without surname) or identifying characteristics of the deceased child

(Continued)

Category	Variable	Classification
General characteristics of deceased children	Sex	Male Female
	Relationship (with SE and his spouse)	Child Stepchild Adopted child Foster child Other
	Age at death	n Years Less than 1 year Does not respond Does not know
	Year of death	n Year Does not respond Does not know
Children deceased at the age of 12 years or older	Education	n Level: None Elementary Secondary or middle school Technical degree with middle school completed Preparatory level of teacher training Preparatory or high school Technical career with high school completed Bachelor's degree or engineering Graduate school Does not respond Does not know n Grade: Does not respond Does not know
	Migration status to the United States	Yes you worked or lived in the United States Did not work or live in the United States Does not respond Does not know

TOPIC: NEW PERSON DEMOGRAPHICS

Category	Variable	Classification
Subtopic: General data of SE of new person		
NP SE data log	Sex	Male Female
	Date of birth	n Day, n Month, n Year Does not know
	Age	n Years Does not respond Does not know
	Place (country) of birth	State Country Does not respond Does not know

(Continued)

Category	Variable	Classification
NP SE data log	Education	n Level: None Elementary Secondary or middle school Technical degree with middle school completed Preparatory level of teacher training Preparatory or high school Technical career with high school completed Bachelor's degree or engineering Graduate school Does not respond Does not know n Grade: Does not respond Does not know
	Literacy status	Yes, can read and write a message Can not read and write a message Does not respond Does not know
	Condition of knowing how to count	Yes knows how to count Does not know how to count Does not respond Does not know
Subtopic: Childhood (before the age of 10)		
Social, economic and health conditions of the SE during his childhood	Condition of residence with grandparents for more than 6 months	Yes you lived in the same house or neighborhood Did not live in the same house or neighborhood Does not respond Does not know
	Health condition that affects normal activities for a month or more	Yes has health problems that affected them He had no health problems that affected them Does not respond Does not know
	Condition of having become ill or suffered from: a) Typhoid fever	Yes had typhoid fever Did not have typhoid fever Does not respond Does not know
	b) Strong blow to the head causing fainting	Yes had fainted from serious blow to the head Did not faint from serious blow to the head Does not respond Does not know
	c) Tuberculosis	Yes had tuberculosis Did not have tuberculosis Does not respond Does not know
	d) Rheumatic fever	Yes had rheumatic fever Did not have rheumatic fever Does not respond Does not know

(Continued)

Category	Variable	Classification
Social, economic and health conditions of the SE during his childhood	e) Polio	Yes had polio Did not have polio Does not respond Does not know
	Parent/Guardian Job Type	Agriculture/animal breeding, Construction/Manufacturing/Mining, Gardening/Maintenance/Services, Childcare or domestic work for a private residence, Restaurant/hotel/business, Office/professional Other Did not work Did not have parent or guardian Does not respond Does not know
	Perception of health status, compared to other infants	Better About the same Worse Does not respond Does not know
	Availability of toilet inside the house	Yes I had a toilet inside I had no toilet inside Does not respond Does not know
	Availability of electricity	Yes I had electricity I had no electricity Does not respond Does not know
	Feeling hungry when sleeping	Yes, generally fell asleep hungry Did not generally fall asleep hungry Does not respond Does not know
	Regular use of footwear	Yes used shoes or other footwear regularly Did not use shoes or other footwear regularly Does not respond Does not know
	A sibling dropped out of school to help parents	Yes had siblings have to quit school Did not have siblings have to quit school Does not respond Does not know
	Use of the kitchen room to sleep a family member	Yes family members slept in the room used for cooking Did not have family members slept in the room used for cooking Does not respond Does not know
	Help from relatives to family members for financial problems	Yes received help from family due to financial problems Did not receive help due to financial problems Does not respond Does not know

(Continued)

Category	Variable	Classification
Social, economic and health conditions of the SE during his childhood	Tobacco use of parents or guardians	Yes parent or guardian smoked Parent or guardian did not smoke Does not respond Does not know
	Tobacco use by other people in the household	Yes someone else smoked Someone else did not smoke Does not respond Does not know
Subtopic: Marital status		
Marital status of SE of NP	Current marital status	Single Married Civil Union Divorced Separated Widower
	Date of dissolution of last marriage or union	n Year or n Age Does not respond Does not know
	Last marriage or union start date	n Year or n Age Does not respond Does not know
	Previous marriage or union status	Yes you had another union or marriage before You had no other union or marriage before Does not respond Does not know
	Marital status prior to current union or marriage	Single Married Civil Union Divorced Separated Widower Does not respond Does not know
	Cause of dissolution of union or previous marriage	Separation Divorced Widowhood Does not respond Does not know
	Number of previous unions	n Unions Does not respond Does not know
	Start date of first union or marriage	n Year or n Age Does not respond Does not know
	Type of bond of first union or marriage	Civil Union Marriage Does not respond Does not know

(Continued)

Category	Variable	Classification
Marital status of SE of NP	Cause of dissolution of first union or marriage	Separation Divorced Widowhood Does not respond Does not know
	End date of first union or marriage	n Year or n Age Does not respond Does not know
Subtopic: Fertility		
Live childrenborn of SE of NP	Number of children born alive	n Sons/Daughters None Does not respond Does not know
	Number of surviving children	n Sons / Daughters All Does not respond Does not know
Subtopic: Migration history		
SE migration from NP	Time of residence in the locality	n Years Less than 6 months 6 to 12 months, Has always lived here Does not respond Does not know
Subtopic: Migration to the United States		
Residence or work in the United States	Condition of stay due to residence in the United States	Yes you have worked or lived in the United States Has not lived or worked in the United States Was born in United States Does not respond Does not know
First stay in the United States for work or residence	Year or Age of first stay in the United States	n Year or n Age Never lived in the U.S. Does not respond Does not know
	Main reason for migration in first stay	To work Illness Reunite with family Difficult to remain in Mexico Did not earn enough money in Mexico Help family in the U.S. Other Does not respond Does not know
	Help from acquaintances for your stay at the migration site	Yes I knew somebody Did not know somebody Went with parents Does not respond Does not know
	Year or age upon return from the first stay	n Year or n Age Does not respond Does not know

(Continued)

Category	Variable	Classification
Total stay in the United States	Total time of residence or work in the United States	n Years 12 months or less Does not respond Does not know
Longer stay in the United States	Type of work performed during the longest stay	Agriculture Construction/Manufacturing Gardening/maintenance/Services Childcare or domestic work for a private residence Restaurant/Business/Hotel Office/Professional Other Did not work Does not respond Does not know
	Condition of sending remittances to relatives in the longest stay	Yes sent money to family Did not send money to family
	Purpose (or destination) of remittances in the longest stay	Savings for when you return to Mexico Support family Improve property in Mexico Buy furniture or other durable goods for the house Other Does not respond Does not know
Last stay in the United States	Main reason for the last migration or stay in the US	To work Illness Reunite with your family Difficult to remain in Mexico Did not earn enough money in Mexico Help family members in the U.S. Other Does not respond Does not know
	Year or age at return from last stay in the US	n Year or n Age Does not respond Does not know
	Reason for return from last stay in the US	You were ill You missed your family Difficult to remain in the U.S. Too expensive to remain in the U.S. Insufficient earnings Problems regarding migration Family problems in Mexico Other Does not respond Does not know

(Continued)

Category	Variable	Classification
Last stay in the United States	Main reason for the last stay at US	You were ill You missed your family Difficult to remain in the U.S. Too expensive to remain in the U.S. Insufficient earnings Problems regarding migration Family problems in Mexico Other Does not respond Does not know
	Perception of the health status on the return of the last stay	Excellent Very good Good Fair Poor Does not respond Does not know
	Contribution status to the Social Security System	Yes contributed Did not contribute Does not respond Does not know
Social Security	Mode of contribution to the Social Security System	With my name With someone else's With mine or someone else's
Migratory situation	Permanent residence permit or US citizenship	Yes is a permanent resident Citizen No, neither Does not respond Does not know
Participation of the spouse in parenting	Parenting children without a spouse	Yes, I raised them without a spouse or partner Yes, but others were with me I do not raise them without my spouse or partner Does not respond Does not know
	Parenting time without a spouse	N years 12 months or less Always Does not respond Does not know
Subtopic: Language and religion		
Language or language spoken by the SE of NP	English speaking condition (proficiency)	Yes, speaks English Yes, speaks some English Does not speak English Does not respond Does not know
	Indigenous language speaking condition	Yes, speaks indigenous language Does not speak indigenous language Does not respond Does not know

(Continued)

Category	Variable	Classification
Participation in religious activities	Condition of attendance at religious services	Yes attends religious services Does not attend religious services Does not respond Does not know
	Frequency of participation in religious activities	Never Occasionally Once or more a week Does not respond Does not know
	Degree of importance of religion in your life	Very important Somewhat important Not at all important Does not respond Does not know
	Participation in volunteer (or community) work in the last two years	Yes has participated in any volunteer work Has not participated in any volunteer work Does not respond Does not know
	Hours dedicated to volunteer work	n Hours n Period: Day, Week, Month, Year Does not respond Does not know
	Approximate time spent on volunteer work	Less than 2 hours per week Between 2 to 4 hours a week More than 4 hours a week Does not respond Does not know
Subtopic: Body figure		
Identification of body figure	Current body weight perception	n Figure (Male or Female) Do not see Does not respond Does not know
	Body weight perception at age 50	n Figure (Male or Female) Do not see Does not respond Does not know
	Body weight perception at age 20	n Figure (Male or Female) Do not see Does not respond Does not know
Subtopic: Major events that occurred between 2008 and 2018		
Health risk events or family situation	Care of a sick relative and year of occurrence	Yes took over care: n Year (2008 to 2018) Did not take over Does not respond Does not know
	Impact of housing by disaster and year of occurrence	Yes it occurred and affected the home: n Year (2008 to 2018) Did not affect Does not respond Does not know

(Continued)

Category	Variable	Classification
Health risk events or family situation	Victim of accident, crime or other serious event and year of occurrence	Yes was a victim: n Year (2008 to 2018) Was not a victim Does not respond Does not know
	Affection of financial situation due to any loss	Yes there was a loss and it affected financial situation: Year (2008-2018) Did not affect Does not respond Does not know

TOPIC: HEALTH

Category	Variable	Classification
Subtopic: General health		
General health of SE	Perception of general health status	Excellent Very good Good Fair Poor Does not respond Does not know
	Perception of health status compared to two years ago	Much better Somewhat better More or less the same Somewhat worse Much worse Does not respond Does not know
	Perception of health status compared to other people their age	Better More or less the same Worse Does not respond Does not know
	Health care condition for the past two years	Yes you have been treated by a doctor Has not been treated by a doctor Does not respond Does not know
Subtopic: Hypertension		
Diagnosis and control of hypertension	Diagnosis of hypertension (or high blood pressure)	Yes, you were diagnosed with hypertension No, you were not diagnosed with hypertension Does not respond Does not know
	Medical treatment for hypertension control	Yes you are taking medication to lower blood pressure You are not taking medication to lower blood pressure Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Diabetes		
Diagnosis and control of diabetes	Diagnosis of diabetes	Yes you were diagnosed with diabetes You were not diagnosed with diabetes Does not respond Does not know
	Oral treatment for diabetes control	Yes you are taking oral medication to control diabetes You are not taking oral medication to control diabetes Does not respond Does not know
	Insulin treatment for diabetes control	Yes you are using insulin You are not using insulin Does not respond Does not know
	Special diet for diabetes control	Yes you follow a special diet Does not follow a special diet Does not respond Does not know
	Diabetes control condition	Yes it is controlled now It is not controlled now Does not respond Does not know
	Frequency of measurement of sugar level in blood or urine	n Times n Period: Week, Month, Year, Never Does not respond Does not know
Subtopic: Cancer		
Cancer diagnosis and treatment	Cancer diagnosis	Yes, you were diagnosed with cancer No, you were not diagnosed with cancer Does not respond Does not know
	Number of cancers suffered	n Cancers Does not respond Does not know
	Types of cancer suffered	Breast Cervical/cervix Endometrial/Uterine Liver Stomach Pancreas Prostate Colorectal Lung Others Does not respond Does not know
	Medical consultation about cancer in the last two years	Yes you have consulted a doctor You have not consulted a doctor Does not respond Does not know

(Continued)

Category	Variable	Classification
Cancer diagnosis and treatment	Type of treatments received	Chemotherapy or medication Surgery or Biopsy Radiation or X-rays Medicines or treatment for symptoms (pain, nausea, rash) None Other Does not respond Does not know
	Current treatment status for cancer	Yes you are receiving treatment You are not receiving treatment Does not respond Does not know
	Year or age of most recent cancer diagnosis	n Year or n Age Does not respond Does not know
Subtopic: Lung disease		
Diagnosis and treatment for respiratory disease	Diagnosis of respiratory disease (asthma or emphysema)	Yes, you were diagnosed You were not diagnosed Does not respond Does not know
	Medical treatment for respiratory disease	Yes you have treatment You have no treatment Does not respond Does not know
	Condition of receiving oxygen	Yes you are receiving oxygen You are not receiving oxygen Does not respond Does not know
	Condition of limitation of normal activities (home or work)	It does limit your normal activities Does not limit your normal activities Does not respond Does not know
Subtopic: Heart attack		
Diagnosis and treatment for infarction/heart attack	Diagnosis of heart attack/infarction	Yes you were diagnosed with an infarction/heart attack You were not diagnosed with an infarction/heart attack Does not respond Does not know
	Year or age of most recent infarction	n Year or n Age Does not respond Does not know
	Medical treatment for heart disease	Yes has treatment Has no treatment Does not respond Does not know
	Condition of limitation of normal activities (home or work)	It does limit your normal activities Does not limit your normal activities Does not respond Does not know

(Continued)

Category	Variable	Classification
Diagnosis of other heart diseases	Diagnosis of other heart diseases (heart failure/congestive heart failure/arrhythmia or angina)	Yes you were diagnosed with another heart disease You were not diagnosed with other heart disease Does not respond Does not know
Subtopic: Cerebral embolism		
Diagnosis and treatment for stroke	Diagnosis of stroke (transient cerebral ischemia)	Yes, you were diagnosed with a stroke You were not diagnosed with a stroke Does not respond Does not know
	Sequelae of embolism: a) Weakness in arms and/or legs or decreased movement or use	Yes you have difficulty moving or using No difficulty to move or use Does not respond Does not know
	b) Difficulty speaking or eating	Yes you have difficulty speaking or eating No difficulty speaking or eating Does not respond Does not know
	c) Difficulty with sight or vision	Yes you have difficulty seeing No difficulty seeing Does not respond Does not know
	d) Difficulty in thinking or expressing oneself	Yes you have difficulty thinking or expressing yourself No difficulty thinking or expressing himself Does not respond Does not know
	Medical treatment for stroke or complications	Yes has treatment Has no treatment Does not respond Does not know
	Condition of receiving therapy or rehabilitation	Yes you receive therapy or rehabilitation Does not receive therapy or rehabilitation Does not respond Does not know
	Year or age of most recent stroke	n Year or n Age Does not respond Does not know
	Condition of limitation of normal activities (home or work)	It does limit your normal activities Does not limit your normal activities Does not respond Does not know
Subtopic: Arthritis		
Diagnosis and treatment for arthritis	Diagnosis of arthritis or rheumatism	Yes you have been diagnosed with arthritis or rheumatism You were not diagnosed with arthritis or rheumatism Does not respond Does not know
	Feeling of pain, stiffness, or swelling of joints or muscles	Yes you feel pain, stiffness, or swelling You do not feel pain, stiffness, or swelling Does not respond Does not know

(Continued)

Category	Variable	Classification
Diagnosis and treatment for arthritis	Medical treatment for arthritis or rheumatism	Yes has treatment No treatment Does not respond Does not know
	Condition of limitation of normal activities (home or work)	It does limit your normal activities Does not limit your normal activities Does not respond Does not know
Subtopic: Other diseases		
Diagnosis and treatment for other diseases	Medical diagnosis of: a) Liver infection	Yes you were diagnosed with a liver infection You were not diagnosed with a liver infection Does not respond Does not know
	b) Kidney infection	Yes you were diagnosed with a kidney infection You were not diagnosed with a kidney infection Does not respond Does not know
	c) Tuberculosis	Yes you were diagnosed with tuberculosis You were not diagnosed with tuberculosis Does not respond Does not know
	d) Pneumonia	Yes you were diagnosed with pneumonia You were not diagnosed with pneumonia Does not respond Does not know
	e) Herpes or herpes zoster	Yes you were diagnosed with herpes You were not diagnosed with herpes Does not respond Does not know
Subtopic: Falls		
Fractures and medical treatment	Falls in the last two years	Yes has fallen Has not fallen Does not respond Does not know
	Number of falls	n Times Does not respond Does not know
	Condition of medical treatment	Yes you needed medical treatment No you do not need medical treatment Does not respond Does not know
	Condition of having a bone fracture in the last two years	Yes it fractured Did not fracture Does not respond Does not know
	Bone fracture(s)	Hip Hip and other bone(s) Other bone(s) Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Sight		
Visual Capability (Operation or Function)	Condition of use of lenses (glasses or contact)	Yes wears glasses Does not wear glasses Does not respond Does not know
	Perception of visual quality (with glasses, if you wear them)	Excellent Very good Good Fair Poor Legally blind Does not respond Does not know
Subtopic: Hearing		
Hearing	Condition of use of hearing aid (hearing aids or hearing aid)	Yes wears glasses Does not wear glasses Does not respond Does not know
	Perception of hearing quality (with device, if used)	Excellent Very good Good Fair Poor Legally deaf Does not respond Does not know
Subtopic: Pain		
Feeling of physical pain	Condition of frequent physical pain	Yes you suffer from physical pain often You don't suffer from physical pain often Does not respond Does not know
	Perception of intensity of physical pain	Mild Moderate Severe Does not respond Does not know
	Condition of limitation of normal activities (home or work)	It does limit your normal activities Does not limit your normal activities Does not respond Does not know
Subtopic: Preventive care		
Detection (prevention) of diseases or health conditions of SE	Medical tests or procedures, in the last two years, for detection (prevention) of: a) Colon cancer (colonoscopy, sigmoidoscopy or other test)	Yes, colon cancer test was done No test for colon cancer Does not respond Does not know
	b) Cholesterol	Yes, cholesterol analysis was performed No analysis was performed for cholesterol Does not respond Does not know

(Continued)

Category	Variable	Classification
Detection (prevention) of diseases or health conditions of SE	c) Tuberculosis	Yes, tuberculosis test was performed Tuberculosis test was not performed Does not respond Does not know
	d) Diabetes	Yes, a diabetes test was performed Diabetes test was not performed Does not respond Does not know
	e) Hypertension or high pressure	Yes, a test for hypertension was performed No test for hypertension Does not respond Does not know
	f) Influenza	Yes you got a flu vaccine Did not get a flu vaccine Does not respond Does not know
	g) Pneumonia	Yes you got a pneumonia vaccine Did not get a pneumonia vaccine Does not respond Does not know
Detection (prevention) of diseases or health conditions of SE (Female)	h) Bumps or lumps in breasts	Yes you examine your breasts every month You do not examine your breasts every month No longer have Does not respond Does not know
	i) Breast cancer (mammogram or x-ray of the breasts)	Yes you have had a mammogram or x-ray You have not had a mammogram or x-ray No longer have Does not respond Does not know
	j) Cancer of the womb (Pap smear)	Yes they have had a Pap smear You have not had a Pap smear No longer have Does not respond Does not know
	Age of menopause (last menstruation)	n Years Still menstruates Does not respond Does not know
	Approximate age of menopause	Less than 45 years About 50 years old More than 55 years old Does not respond Does not know
	Hysterectomy condition	Yes they removed uterus and/or ovaries Did not remove uterus and/or ovaries Does not respond Does not know

(Continued)

Category	Variable	Classification
Prostate Cancer Screening (Male)	Prostate cancer screening within the past two years	Yes you performed a rectal or blood test Did not perform rectal or blood test They already operated it Does not respond Does not know
Subtopic: Depression		
Emotional state during the past week	Condition of experiencing, most of the time: a) Feeling of depression	Yes you felt depressed You did not feel depressed Does not respond Does not know
	b) The feeling of doing everything with effort	Yes you felt that you did everything with effort Did not feel that you did everything with effort Does not respond Does not know
	c) Feeling of restless sleep	Yes you felt restless sleep You did not feel restless sleep Does not respond Does not know
	d) Feeling of happiness	Yes you felt happy You did not feel happy Does not respond Does not know
	e) Feeling of loneliness	Yes you felt lonely You did not feel lonely Does not respond Does not know
	f) Feeling of enjoying life	Yes you felt that you enjoyed life You did not feel like you enjoyed life Does not respond Does not know
	g) Feeling of sadness	Yes you felt sad You did not feel sad Does not respond Does not know
	h) Feeling of tiredness	Yes you felt tired You did not feel tired Does not respond Does not know
	i) Feeling of vitality or a lot of energy	Yes you felt you had a lot of energy You did not feel you had a lot of energy Does not respond Does not know
Emotional state in the last two years	Condition of feeling depressed for two or more continuous weeks	Yes you felt sad, blue, or depressed You did not feel sad, blue, or depressed Does not respond Does not know
Physical exercise in the last two years	Carrying out physical exercise (sports activities, heavy housework, physical work) three or more times a week	Yes you have done physical activity or exercise You have not done physical activity or exercise Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Tobacco		
Tobacco use in the last two years	Condition of having smoked 100 cigarettes in your life	Yes you have smoked You have not smoked Does not respond Does not know
	Age or year of initiation of tobacco use	n Age, or n Year, or n Years Does not respond Does not know
	Condition of having smoked in the last two years	Yes you have smoked You have not smoked Does not respond Does not know
	Current tobacco use status	Yes, you currently smoke cigarettes Does not currently smoke cigarettes Does not respond Does not know
	Frequency of tobacco use	Every day Not every day Does not respond Does not know
	Cigarettes consumed per day	n Cigarettes (or average per day) 87 and more cigarettes Does not respond Does not know
	Maximum consumption of cigarettes per day	n Cigarettes (or average per day) 87 and more cigarettes Does not respond Does not know
Tobacco abstinence	Years (age or year) without using tobacco	n Years, or n Year, or n Age Does not respond Does not know
Subtopic: Alcoholic beverages		
Consumption of alcoholic beverages, frequency and intensity	Condition of current consumption of alcoholic beverages (beer, wine, liquor or pulque)	Yes you currently drink alcoholic beverages Does not currently drink alcoholic beverages Has never used alcohol Does not respond Does not know
	Days per week of consumption, in the last three months.	n Days None Does not respond Does not know
	Maximum consumption per day, in the last three months	n Alcoholic beverages Does not respond Does not know
	Days you had four or more drinks, in the last three months	n Days None 87 and more days Does not respond Does not know

(Continued)

Category	Variable	Classification
	Condition of consumption of alcoholic beverages during the last two years	Yes you have had alcoholic beverages You have not had alcoholic beverages Does not respond Does not know
Subtopic: Weight and height		
Physical characteristics	Comparison of the current weight with that of two years ago	Increased 5 kilos or more Decreased 5 kilos or more Remained more or less the same Does not respond Does not know
	Change of habits (exercise or diet), in the last two years	Yes you did change habits to gain or lose weight Did not change habits to gain or lose weight Does not respond Does not know
	Actual weight	n Kilos Does not respond Does not know
	Current height	n Meters and centimeters Does not respond Does not know
Subtopic: Symptoms		
Symptoms of health condition and functionality	Frequent problems or discomfort, during the last two years: a) Condition of swollen feet or ankles	Yes you had swelling You had no swelling Does not respond Does not know
	b) Condition of respiratory problems	Yes you had trouble breathing, wheezing, coughing, or phlegm You had no shortness of breath, wheezing, coughing, or phlegm Does not respond Does not know
	c) Dizziness or fainting condition	Yes you had dizziness or fainting You had no dizziness or fainting spells Does not respond Does not know
	d) Condition of intense thirst	Yes you were thirsty You were not thirsty Does not respond Does not know
	e) Condition of fatigue or severe exhaustion	Yes you had severe fatigue or serious exhaustion Did not have severe fatigue or serious exhaustion Does not respond Does not know
	f) Gastrointestinal upset condition	Yes you had a stomach ache, indigestion, or diarrhea You had no stomach pain, indigestion, or diarrhea Does not respond Does not know
	g) Condition of stress incontinence (coughing, sneezing, picking up things or exercising)	Yes you had involuntary loss of urine You had no involuntary loss of urine Does not respond Does not know

(Continued)

Category	Variable	Classification
Symptoms of health condition and functionality	h) Condition of functional incontinence (urge to urinate without control)	Yes you had involuntary loss of urine You had no involuntary loss of urine Does not respond Does not know
	i) Condition of discomfort when urinating	Yes you had burning or burning when urinating You had no stinging or burning when urinating Does not respond Does not know
Physical strength	Assessment of manual grip strength (dominant hand)	Very strong Somewhat strong Somewhat weak Very weak Does not respond Does not know
Physical balance	Frequency of difficulty maintaining balance	Often Sometimes Hardly ever Never Does not respond Does not know
Food/nutrition	Frequency of eating problems (poor appetite, digestive problems or difficulty chewing or swallowing), in the last two years	Most of the time Sometimes Hardly ever Does not respond Does not know
	Condition of difficulty eating due to dental problems (teeth or dentures), in the last two years	Yes you have had difficulty eating Has had no difficulty eating Does not respond Does not know
Loss of limbs	Condition of total or partial loss of limbs (legs or arms) due to accident or illness	Yes part or all of a limb is missing Not a part or a whole limb is missing Does not respond Does not know
	Limb loss condition in the past two years	Yes, you lost a limb in this period You did not lose a limb in this period Does not respond Does not know
Occupational illness or work accident	Condition of medical diagnosis of health problem due to work activity	Yes you have a health problem Does not have a health problem I never work Does not respond Does not know
Compulsory rest	Days in bed due to illness or injury, during the last 12 months	n Days None Does not respond Does not know

(Continued)

Category	Variable	Classification
Sleep quality	Initial insomnia frequency (difficulty falling asleep)	Most of the time Sometimes Rarely or never Does not respond Does not know
	Maintenance insomnia frequency (waking up during the night)	Most of the time Sometimes Rarely or never Does not respond Does not know
	Maintenance insomnia frequency (waking up very early)	Most of the time Sometimes Rarely or never Does not respond Does not know
	Frequency of feeling rested upon waking	Most of the time Sometimes Rarely or never Does not respond Does not know
Stress	Perception of stress level in the last 12 months	A lot Moderate Little Almost none Does not respond Does not know
	Perception of impact of stress level on health status	Very much Something Almost nothing Nothing Does not respond Does not know

TOPIC: CONTROL AND HEALTH SERVICES

Category	Variable	Classification
Subtopic: Access and use of health services		
Insurance eligibility	Condition of institution of access to benefits: a) Social Security (IMSS)	You do have the right to IMSS You do not have the right to IMSS Does not respond Does not know
	b) ISSSTE / ISSSTE State	You do have the right to ISSSTE You do not have the right to ISSSTE Does not respond Does not know
	c) Seguro Popular	You are entitled to Seguro Popular You are not entitled to Seguro Popular Does not respond Does not know
	d) Pemex, Defense or Navy	You do have the right to Pemex, Defense or Navy You do not have the right to Pemex, Defense or Navy Does not respond Does not know
	e) Private medical insurance	You are entitled to Private Medical Insurance You are not entitled to Private Medical Insurance Does not respond Does not know
	f) Other	Yes you have the right to another health service You do not have the right to another health service Does not respond Does not know
	Year of discharge from the institution of access to benefits	n Year Does not respond Does not know
	Reason for eligibility	Worker Affiliated on your own Retired Spouse of insured Mother or father of insured Other Does not respond Does not know
No eligibility	Confirmation of non-eligibility	You do have the right to medical service You do not have the right to medical service Does not respond Does not know

(Continued)

Category	Variable	Classification
Hospitalizations	Condition of major surgery, in the last four years	You did have major surgery Did not have major surgery Does not respond Does not know
	Year(s) of major surgery	Year: 2015, 2016, 2017, 2018
	Total hospitalizations in the last year	n Nights None Does not respond Does not know
	Institution(s) of hospitalization	IMSS ISSSTE/ISSSTE Estatal Secretary of Health or state health services IMSS "Oportunidades" PEMEX, Defense or Marine Private clinic or hospital Red Cross, Green Cross Other Does not respond Does not know
	Hospitalization expense(s)	n Weights Nothing Does not respond Does not know
	Expense greater than \$7,500 pesos per hospitalization(s)	Yes it was more than \$7,500 pesos It was not more than \$7,500 pesos Does not know
	Spending greater than \$4,000 pesos per hospitalization(s)	Yes it was more than \$4,000 pesos It was not more than \$4,000 pesos Does not know
	Spending greater than \$30,000 pesos per hospitalization(s)	Yes it was more than \$30,000 pesos It was not more than \$30,000 pesos Does not know

(Continued)

Category	Variable	Classification
Subtopic: Use of health services		
Dental health services used in the last year	Number of dental visits	n Times None Does not respond Does not know
	Payment of dental services	n Pesos Nothing Payment in-kind Does not respond Does not know
	Amount greater than \$2,000 pesos for dental health services	Yes it was more than \$2,000 pesos It was not more than \$2,000 pesos Does not know
	Amount greater than \$400 pesos for dental health services	Yes it was more than \$400 pesos It was not more than \$400 pesos Does not know
	Amount greater than \$15,000 pesos dental health services	Yes it was more than \$15,000 pesos It was not more than \$15,000 pesos Does not know
	Institution(s) or place of dental care	IMSS ISSSTE/ISSSTE Estatal Secretary of Health or state health services IMSS "Oportunidades" PEMEX, Defense or Marine Private clinic or hospital Red Cross Pharmacy office Chiropractor/Homeopath/Healer Other Does not respond Does not know

(Continued)

Category	Variable	Classification
Outpatient surgery services used in the last year	Number of surgical procedures (without hospitalization)	n Times None Does not respond Does not know
	Payment for outpatient surgery services	n Pesos Nothing Payment in-kind Does not respond Does not know
	Amount greater than \$2,000 pesos for outpatient surgery services	Yes it was more than \$2,000 pesos It was not more than \$2,000 pesos Does not know
	Amount greater than \$400 pesos for outpatient surgery services	Yes it was more than \$400 pesos It was not more than \$400 pesos Does not know
	Amount greater than \$15,000 pesos for outpatient surgery services	Yes it was more than \$15,000 pesos It was not more than \$15,000 pesos Does not know
	Institution(s) or place of ambulatory surgery	IMSS ISSSTE/ISSSTE Estatal Secretary of Health or state health services IMSS "Oportunidades" PEMEX, Defense or Marine Private clinic or hospital Red Cross Pharmacy office Chiropractor/Homeopath/Healer Other Does not respond Does not know

(Continued)

Category	Variable	Classification
Medical services used in the last year	Number of medical consultations	n Times None Does not respond Does not know
	Payment of medical consultations	n Pesos Nothing Payment in-kind Does not respond Does not know
	Amount greater than \$2,000 pesos for medical consultations	Yes it was more than \$2,000 pesos It was not more than \$2,000 pesos Does not know
	Amount greater than \$400 pesos for medical consultations	Yes it was more than \$400 pesos It was not more than \$400 pesos Does not know
	Amount greater than \$15,000 pesos for medical consultations	Yes it was more than \$15,000 pesos It was not more than \$15,000 pesos Does not know
	Institution(s) or place of medical consultations	IMSS ISSSTE/ISSSTE Estatal Secretary of Health or state health services IMSS "Oportunidades" PEMEX, Defense or Marine Private clinic or hospital Red Cross Pharmacy office Chiropractor/Homeopath/Healer Other Does not respond Does not know
	Consultation with a pharmacy or apothecary clerk	Yes you consulted a dependent You did not consult a dependent Does not respond Does not know
	Monthly payment for medications used	n Pesos Nothing Payment in-kind Does not respond Does not know
	Amount greater than \$400 pesos for medications used	Yes it was more than \$400 pesos It was not more than \$400 pesos Does not know
	Amount greater than \$200 pesos for medications used	Yes it was more than \$200 pesos It was not more than \$200 pesos Does not know
	Amount greater than \$2,000 pesos for medications used	Yes it was more than \$2,000 pesos It was not more than \$2,000 pesos Does not know
Access to medicines	Suspension of medication for cost	Yes you stopped taking medicine Did not stop taking medicine Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Medical expenses		
Financing medical expenses	Main financier of medical expenses	Child Son/Daughter-in-law Grandchild Father/Mother Other relative Other person Respondent and/or spouse Did not have expenses Does not respond Does not know
Subtopic: Beliefs		
Beliefs about health problems, in the last two years	Condition of avoiding the doctor in the event of a serious health problem	Yes you went to the doctor You did not go to the doctor Does not respond Does not know
	Reason for not seeing your doctor: a) Belief that it would not help you improve your health	Yes you thought it would not help you You did not think that it would help you Does not respond Does not know
	b) Belief that it would take a long time to arrive	Yes you thought it would take a long time to arrive You did not think it would take long to arrive Does not respond Does not know
	c) I did not have money	Yes it was due to lack of money It was not due to lack of money Does not respond Does not know
	d) You did not want to disturb someone for his transfer	Yes you avoided bothering someone Did not avoid bothering someone Does not respond Does not know
	e) Fear of knowing the doctor's diagnosis	Yes you were afraid You were not afraid Does not respond Does not know

(Continued)

Category	Variable	Classification
Selection of health services	Institution or place for attention to minor health problems	IMSS ISSSTE/ISSSTE Estatal Secretary of Health or state health services IMSS "Oportunidades" PEMEX, Defense or Marine Private clinic or hospital Red Cross Pharmacy Chiropractor Homeopath/Folk healer/Bonesetter/Herbalist No one Self medication Other Does not respond Does not know
	Institution or place for care of serious health problem	IMSS ISSSTE/ISSSTE Estatal Secretary of Health or state health services IMSS "Oportunidades" PEMEX, Defense or Marine Private clinic or hospital Red Cross Pharmacy Chiropractor Homeopath/Folk healer/Bonesetter/Herbalist No one Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Personality		
SE personality characteristics	Degree of identification with characteristics of one's own personality: a) Organized: at home, everything has its own place	A lot Some Little Not at all Does not respond Does not know
	b) Responsible: complies with obligations to the best of its ability	A lot Some Little Not at all Does not respond Does not know
	c) Dedicated: strives to do more than expected	A lot Some Little Not at all Does not respond Does not know
	d) Careless: rushes to act without thinking about the consequences	A lot Some Little Not at all Does not respond Does not know
	e) Thorough: tends to do things with attention to detail	A lot Some Little Not at all Does not respond Does not know
	f) Disciplined: strives to do what he believes should be done	A lot Some Little Not at all Does not respond Does not know
Subtopic: Internal and external locus of control		
Level of control over important life events	Level of agreement or disagreement with the following statements: a) There is no point in planning too much for the future	Agree Somewhat agree Somewhat disagree Disagree Does not respond Does not know

(Continued)

Category	Variable	Classification
Level of control over important life events	b) The very good things that happen to you are by good luck	Agree Somewhat agree Somewhat disagree Disagree Does not respond Does not know
	c) You are responsible for your own successes	Agree Somewhat agree Somewhat disagree Disagree Does not respond Does not know
	d) You can do almost anything you set your mind to	Agree Somewhat agree Somewhat disagree Disagree Does not respond Does not know
	e) Most problems are due to bad luck	Agree Somewhat agree Somewhat disagree Disagree Does not respond Does not know
	f) You have little control over the bad things that happen to you	Agree Somewhat agree Somewhat disagree Disagree Does not respond Does not know
	g) The misfortunes that happen to you are the result of your mistakes	Agree Somewhat agree Somewhat disagree Disagree Does not respond Does not know
	h) One is responsible for one's own failures	Agree Somewhat agree Somewhat disagree Disagree Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Family decisions		
Important family decisions (married or in a union)	Person with greater power in family decision-making	Respondent About the same Spouse Does not respond Does not know
	Degree to which spouse has more power in decisions	Much more Somewhat more Does not respond Does not know
Personal health care decisions	Degree of personal decision to see a doctor or perform surgery	A lot A little Not at all Does not respond Does not know
	Preference in final decision-making about medical treatment	Make decision yourself and/or your family Make decision between your doctor, yourself, and/or your family Let the doctor make the decision Does not respond Does not know
Subtopic: Life satisfaction		
Level of satisfaction with aspects of life	Level of agreement or disagreement with the following statements: a) In most things, my life is close to my ideal	Agree Neutral Disagree Does not respond Does not know
	b) The conditions of my life are excellent	Agree Neutral Disagree Does not respond Does not know
	c) I am satisfied with my life	Agree Neutral Disagree Does not respond Does not know
	d) So far, I have achieved the things that are important to me in life	Agree Neutral Disagree Does not respond Does not know
	e) If I were to be born again, I would hardly change anything in my life	Agree Neutral Disagree Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Use of time		
Activities of daily living carried out during the last year	a) Condition of care of a sick or disabled adult Times per period that you have cared for a sick or disabled adult	Yes you have cared for a sick or disabled adult You have not cared for a sick or disabled adult, Does not respond Does not know n Times n Period: Week, Month
	b) Childcare status of children under 12 years of age Times per period that you have cared for children under 12 years of age	Yes you have cared for children under the age of 12 You have not cared for children under the age of 12 Does not respond Does not know n Times n Period: Week, Month
	c) Condition of doing volunteer work or supporting a civil organization without payment or remuneration Times per period that you did volunteer work or supported a civil organization without pay or compensation	Yes you have done volunteer or support work You have not done volunteer or support work Does not respond Does not know n Times n Period: Week, Month
	d) Condition of attending a training course, informative talk or class Times per period attended a training course, informative talk or class	Yes you have attended training, talk or class You have not attended training, talk, or class Does not respond Does not know n Times n Period: Week, Month
	e) Condition of attending a sports or social club Times per period you attended a sports or social club	Yes you have attended sports or social club You have not attended sports or social club Does not respond Does not know n Times n Period: Week, Month
	f) Condition of reading a book, magazine or newspaper Times per period that you have read a book, magazine or newspaper	Yes you have read a book, magazine or newspaper You have not read a book, magazine or newspaper Does not respond Does not know n Times n Period: Week, Month

(Continued)

Category	Variable	Classification
Activities of daily living carried out during the last year	g) Condition of doing crosswords, puzzles, number games (<i>sudoku</i>)	Yes you have done crosswords, puzzles, number games (<i>sudoku</i>), You have not done crosswords, puzzles, number games (<i>sudoku</i>) Does not respond Does not know
	Times per period that you did crosswords, puzzles, number games (<i>sudoku</i>)	n Times n Period: Week, Month
	h) Condition of playing board games (cards, dominoes or chess)	Yes you have played board games (cards, dominoes or chess) You have not played board games (cards, dominoes, or chess) Does not respond Does not know
	Times per period you have played board games (cards, dominoes, or chess)	n Times n Period: Week, Month
	i) Condition of communicating by phone or using a computer to send messages or use the internet	Yes you have communicated by phone or computer You have not communicated by phone or computer Does not respond Does not know
Times per period that you have communicated by phone or used a computer to send messages or use the internet	n Times n Period: Week, Month	
j) Condition of performing home maintenance activities (repairs, gardening)	Yes you have carried out home maintenance activities You have not performed home maintenance activities Does not respond Does not know	
Times per period that you have performed home maintenance activities	n Times n Period: Week, Month	
k) Condition of watching television	Yes you have watched television You have not watched tv Does not respond Does not know	
Times per period you have watched television	n Times n Period: Week, Month	

(Continued)

Category	Variable	Classification
Activities of daily living carried out during the last year	l) Condition of sewing, embroidery, knitting and other crafts Times per period that you have done sewing, embroidery, knitting or other crafts	Yes you have done sewing, embroidery, knitting or other crafts You have not done any sewing, embroidery, knitting or other craft activities Does not respond Does not know n Times n Period: Week, Month
	m) Condition of shopping (market, shops, etc.) Times per period that you have made purchases (market, stores, etc.)	Yes you have made purchases (market, stores, etc.) You have not made purchases (market, stores, etc.) Does not respond Does not know n Times n Period: Week, Month
	n) Condition of visiting the doctor/ pharmacies Times per period you have visited the doctor/pharmacies	Yes you have visited the doctor/pharmacies No you have not visited the doctor/pharmacies Does not respond Does not know n Times n Period: Week, Month
Relationships	How often you feel: a) That you lack company	Almost never Sometimes Frequently Does not respond Does not know
	b) Ignored by others	Almost never Sometimes Frequently Does not respond Does not know
	c) Isolated, apart from others	Almost never Sometimes Frequently Does not respond Does not know

TOPIC: PARENTS AND HELP FOR PARENTS

Category	Variable	Classification
Subtopic: Mother		
Sociodemographic data of the SE's mother	Approximate educational level of the mother	None Some elementary Completed elementary Beyond elementary Does not respond Does not know
	Residence or work condition in the United States	Yes she worked or lived in the US Did not work or live in the US Does not respond Does not know
	Survival condition of the mother	Yes, your mother is currently living Your mother is not currently living Does not respond Does not know
Subtopic: Surviving mother		
Surviving mother autonomy	Mother's age	n Age Does not respond Does not know
	Condition of needing help to perform basic needs due to health problem	Yes she needs help dressing, eating, or bathing She does not need help dressing, eating, or bathing Does not respond Does not know
	Condition of being alone for an hour or more	Yes she can be alone for an hour or more She cannot be alone for an hour or more Does not respond Does not know
Subtopic: Deceased mother		
Health situation of the deceased mother	Mother's age at death	n Age Does not respond Does not know
	Medical diagnosis condition of having diabetes	Yes, she had a diagnosis of diabetes She had no diagnosis of diabetes Does not respond Does not know
Subtopic: Father		
Sociodemographic data of the SE's father	Approximate educational level of the father	None Some elementary Completed elementary Beyond elementary Does not respond Does not know
	Residence or work condition in the United States	Yes he worked or lived in the US Did not work or live in the US Does not respond Does not know
	Survival condition of the father	Yes, your father is currently living Your father is not currently living Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Surviving father		
Surviving parent autonomy	Father's age	n Age Does not respond Does not know
	Condition of needing help to perform basic needs due to health problem	He needs help dressing, eating, or bathing He does not need help dressing, eating, or bathing Does not respond Does not know
	Condition of staying alone for an hour or more	Yes he can be alone for an hour or more He cannot be alone for an hour or more Does not respond Does not know
Subtopic: Deceased father		
Health situation of the deceased father	Father's age at death	n Age Does not respond Does not know
	Medical diagnosis condition of having diabetes	Yes, he had a diagnosis of diabetes He had no diagnosis of diabetes Does not respond Does not know
Subtopic: Siblings		
Sociodemographic data of siblings	Total siblings born alive	n Siblings None Does not respond Does not know
	Number of surviving siblings	n Siblings None All Does not respond Does not know
	Medical diagnosis condition of having diabetes	Yes, had a diabetes diagnosis Had no diabetes diagnosis Does not respond Does not know
	Residence or work condition in the United States	Yes, worked or lived in the U.S. Did not work or live in the U.S. Does not respond Does not know
Subtopic: Help to parents		
Financial aid from the interviewed SE	Condition of providing financial support for expenses (rent; not housing or shared meals), during the last two years	Yes gave (gives) (interviewee and/or spouse) financial support Did not give financial support Does not respond Does not know

(Continued)

Category	Variable	Classification
Non-financial aid from the interviewed SE	Condition of helping parents with basic activities, due to health problems, during the last two years	Yes helped(s) (interviewee and/or spouse) to dress, eat or bathe Did not help (interviewee and/or spouse) to dress, eat or bathe Does not respond Does not know
	Condition of help provided for basic activities (one hour a week or 100 hours in the last two years)	Did help his parents at that time Did not help his parents at that time Does not respond Does not know
	Support recipient parent	Mother Father Both Does not respond Does not know
Financial aid for siblings	Condition of providing financial support for expenses (rent; not housing or shared meals), during the last two years	Yes gave (gives) (siblings and/or their spouses) financial support Did not give financial support Does not respond Does not know
Non-financial aid from siblings	Condition of helping parents with basic activities, due to health problems, during the last two years	Yes helped(s) (siblings and/or their spouses) to dress, eat or bathe Did not help Does not respond Does not know
Agreement with siblings	Condition of agreement to share responsibilities for personal care of parents	Yes has agreed with siblings Has not agreed with siblings Does not respond Does not know
	Condition of agreement to share financial responsibilities of parents	Yes has agreed with siblings Has not agreed with siblings Does not respond Does not know

TOPIC: HELP TO OR FROM CHILDREN

Category	Variable	Classification
Subtopic: Surviving children		
Surviving children	Condition of having (interviewee or their spouse) surviving children (biological, stepchildren, adopted or fostered)	Yes you have surviving children Does not have any surviving children Does not respond Does not know
Subtopic: Financial aid granted		
Amounts of the types of financial aid granted to children (interviewee or their spouse)	Condition of having provided goods or a large sum of money to children and/or grandchildren, in the last 10 years	Yes gave a house, business, property or a large sum of money Did not give house, business, property or large sum of money Does not respond Does not know
	Property assistance or large sum of money was provided in the last two years	Yes provided this help in this period Did not provide this help in this period Does not respond Does not know
	Condition of having provided goods or a large sum of money to children and/or grandchildren, in the last two years	Yes gave a house, business, property or a large sum of money Did not give house, business, property or large sum of money Does not respond Does not know
	Condition of helping children and/or grandchildren with money or in kind (for education), in the last two years	Yes gave help in money or in-kind Did not give help in money or in-kind Does not respond Does not know
Amounts of the types of financial aid granted to children (interviewee or their spouse)	Period and total amount of financial aid	n Period: Week, Month, Year, One time Does not respond Does not know n Quantity: Does not respond Does not know
	Approximate total amount of aid granted: a) More than \$5,000 pesos or \$250 pesos per month	Yes it was more than \$5,000 in total or about \$250 pesos a month It was not more than \$5,000 in total or about \$250 pesos a month Does not respond Does not know
	b) More than \$10,000 pesos or \$500 pesos per month	Yes it was more than \$10,000 in total or about \$500 pesos a month It was not more than \$10,000 in total or like \$500 pesos a month Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Non-financial aid granted		
Help time granted by interviewee or their spouse	Condition of helping children, daughter-in-law/son-in-law, grandchildren, at least one hour a week, in the last two years	Yes helped(s) for at least an hour Did not help for at least an hour Does not respond Does not know
	Total hours and period of the aid granted	n Hours: Does not respond Does not know n Period: Day, Week, Month, Year Does not respond Does not know
	Time per week of aid granted	Less than 2 hours a week 2 to 4 hours a week More than 4 hours a week Does not respond Does not know
Subtopic: Residency		
SE residence	Temporary residence with children	Yes you live with another child Does not live with another child Always live here Does not respond Does not know
Subtopic: Financial aid received		
Amounts of financial aid received (interviewee or their spouse)	Condition of having received goods or a large sum of money, in the last 10 years	Yes you receive(d) a house, business, property or a large sum of money Did not receive house, business, property or large sum of money Does not respond Does not know
	Property assistance was received in the last two years	Yes you receive(d) this help (from home, business, property or large sum of money) Did not receive this help (from home, business, property or large sum of money) Does not respond Does not know
	Condition of having received goods or a large sum of money from children and/or grandchildren, in the last two years	Yes you receive(d) a house, business, property or a large sum of money Did not receive house, business, property or large sum of money Does not respond Does not know
	Condition of receiving help in money or in kind from children and/or grandchildren, in the last two years	Yes receive(d) help in money or in-kind Did not receive help in money or in-kind Does not respond Does not know

(Continued)

Category	Variable	Classification
Amounts of financial aid received (interviewee or their spouse)	Children/grandchildren who gave help	Child's name and registration number All Does not respond Does not know
	Period and total amount of financial aid received	n Period: Week, Month, Year, One time Does not respond Does not know n Quantity Does not respond Does not know
	Approximate total amount of aid received: a) More than \$5,000 pesos or \$250 pesos per month	Yes it was more than \$5,000 in total or about \$250 pesos a month It was not more than \$5,000 in total or about \$250 pesos a month Does not respond Does not know
	b) More than \$10,000 pesos or \$500 pesos per month	Yes it was more than \$10,000 in total or about \$500 pesos a month It was not more than \$10,000 in total or like \$500 pesos a month Does not respond Does not know
	Condition of receiving aid as fixed income in the future	Yes you consider the aid as fixed income in the future Does not consider aid as fixed income in the future Does not respond Does not know
	Condition of reciprocating help received	Yes you think you should reciprocate for the help received Does not believe that you should reciprocate for the help received Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Non-financial aid received		
Time of help received from relatives of the interviewee, or from their spouse, in daily activities	Condition of receiving help at least one hour a week from children, daughter-in-law/son-in-law, grandchildren, in the last two years	Yes they helped you with chores, errands or transportation They did not help you with chores, errands or transportation Does not respond Does not know
	Family member(s) who helped	Child's name and registration number All, Does not respond Does not know
	Total hours and period of aid received	n Hours Does not respond Does not know n Period: Day, Week, Month, Year Does not respond Does not know
	Time per week of aid received	Less than 2 hours per week 2 to 4 hours per week More than 4 hours per week Does not respond Does not know
	Perception of sufficiency of aid in cash or in kind received	More than enough Enough Not enough Does not respond Does not know
	Perception of sufficiency of help in daily activities received	More than enough Enough Not enough Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Neighbours		
Nearby social networks	Condition of having relatives close to your residence	Yes you have relatives in the same locality, <i>barrio</i> , or neighborhood You do not have relatives in the same locality, <i>barrio</i> , or neighborhood Does not respond Does not know
	Condition of having friends close to your residence	Yes you have friends in the same <i>barrio</i> or neighborhood Has no friends in the same <i>barrio</i> or neighborhood Does not respond Does not know
	Frequency of interaction with neighbors (talks or visits) per month	n Times Every day Does not respond Does not know
	Perception of having the help of neighbors or friends for everyday things (bringing food or running errands)	Yes you do have neighbors or friends who can help with everyday things You have no neighbors or friends who can help with everyday things Does not respond Does not know
Subtopic: Future help		
Financial or personal help in the future	Willingness of relatives or friends to help with long-term expenses	Yes you have relatives or friends who would help you with long term expenses You have no relatives or friends who would help you with long term expenses Does not respond Does not know
	Willingness of relatives or friends to help with personal care (dressing or eating) for a long time	Yes you do have relatives or friends who would help you with personal care You have no relatives or friends who would help with personal care Does not respond Does not know

TOPIC: FUNCTIONALITY AND HELP

Category	Variable	Classification
Subtopic: Difficulty with activities		
Difficulty (lasting more than three months) in daily activities, due to health problems	Difficulty walking several blocks	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Difficulty running or jogging one kilometer	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Difficulty walking a block	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Difficulty sitting for two hours	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Difficulty getting up from a chair after sitting for a long time	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Difficulty climbing multiple flights of stairs without resting	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Difficulty climbing a floor of stairs without resting	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know

(Continued)

Category	Variable	Classification
	Difficulty bending over, kneeling, stooping, or squatting	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Difficulty raising or extending the arms higher than the shoulders	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Difficulty pulling or pushing large objects	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Difficulty lifting or carrying objects weighing more than 5 kilos	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Difficulty picking up a coin from the table	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Difficulty dressing, including putting on shoes and socks	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Condition of requiring assistance to dress	Yes someone helps you get dressed Someone does not help you get dressed Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Activities of daily life		
To walk	Difficulty walking from one side of a room to the other	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Condition of use of equipment or devices to walk from one side to another (cane, walker or wheelchair)	Yes you use equipment or devices to walk from one place to another Does not use equipment or devices to walk from one place to another Does not respond Does not know
	Type of equipment you use for walking	Guardrail Walker Staff Crutches Orthopedic shoes Brace Prosthesis Oxygen/respirator Furniture/walls Wheelchair/scooter Other Does not respond Does not know
	Condition of requiring assistance to walk	Yes someone helps Someone does not help Does not respond Does not know
Take a bath	Difficulty bathing in a tub or shower	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Condition of requiring assistance to bathe in a tub or shower	Yes someone helps Someone does not help Does not respond Does not know
Eat	Difficulty eating or cutting your food	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Condition of requiring help to eat or cut your food	Yes someone helps Someone does not help Does not respond Does not know

(Continued)

Category	Variable	Classification
Going to bed	Difficulty getting into and out of bed	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Condition of use of equipment or devices to get into and out of bed	Yes you use equipment or devices to walk from one place to another Does not use equipment or devices to walk from one place to another Does not respond Does not know
	Type of equipment you use to get into and out of bed	Guardrail Walker Staff Crutches Orthopedic shoes Brace Prosthesis Oxygen/respirator Furniture/walls Wheelchair/scooter Other Does not respond Does not know
	Condition of requiring assistance in getting into and out of bed	Yes someone helps Someone does not help Does not respond Does not know
Use the toilet	Difficulty using the toilet, getting on and off, or squatting	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Condition of requiring assistance using the toilet, getting on and off, or squatting	Yes someone helps Someone does not help Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Help with activities of daily living		
People and time of help in activities of daily living	Name and registration number of person(s) who help most often in daily activities	Name Registration number Not included in lists
	Relationship with SE	Spouse Child Son/daughter-in-law Grandchild Father/Mother Other relative Other person Paid person Does not respond Does not know
	Days in the past month that helped(s) with activities of daily living	n Days Every day Does not respond Does not know
	Hours per day of help	n Hours Less than 1 hour Does not respond Does not know
Subtopic: Instrumental activities of daily living		
Food	Difficulty (lasting more than three months) in preparing a hot meal	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Condition of not being able to prepare food due to health problems	Yes, it is due to a health problem It is not due to a health problem Does not respond Does not know
	Condition of requiring help to prepare a hot meal	Yes someone helps Someone does not help Does not respond Does not know
Purchases	Difficulty (greater than three months in duration) in shopping for groceries/errands	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Condition of not being able to make groceries/orders due to health problems	Yes, it is due to a health problem It is not due to a health problem Does not respond Does not know
	Condition of requiring help to shop for groceries/errands	Yes someone helps Someone does not help Does not respond Does not know

(Continued)

Category	Variable	Classification
Medicines	Difficulty (lasting more than three months) taking your medications (if you take or were to take any)	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Condition of not being able to take your medications due to a health problem	Yes, it is due to a health problem It is not due to a health problem Does not respond Does not know
	Condition of requiring help taking your medications	Yes someone helps Someone does not help Does not respond Does not know
Money	Difficulty (lasting more than three months) managing your money	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Condition of not being able to handle your money due to health problems	Yes, it is due to a health problem It is not due to a health problem Does not respond Does not know
	Condition of requiring help to manage your money	Yes someone helps him Someone does not help Does not respond Does not know
Subtopic: Help with instrumental activities of daily living		
People and time of help in instrumental activities of daily life	Name and registration number of person(s) who help most often in instrumental activities of daily living	Name Registration number
	Relationship with SE	Spouse Child Son/daughter-in-law Grandchild Father/Mother Other relative Other person Paid person Does not respond Does not know
	Days in the past month that helped(s) with instrumental activities of daily living	n Days Every day Does not respond Does not know
	Hours per day of help	n Hours Less than 1 hour Does not respond Does not know

TOPIC: EMPLOYMENT

Category	Variable	Classification
Subtopic: Work history		
Paid or unpaid work	Paid work condition (pay or gain) at any time in your life	Yes you have had paid work You have not had paid work Does not respond Does not know
	Unpaid work condition (on business, farm, ranch, or parcel) at any time in your life	Has helped without receiving payment or profit Has not helped without receiving payment or profit Does not respond Does not know
	Year or age of first job	n Year or n Age Does not respond Does not know
	Years of paid work	n Years Never 12 months or less 87 years or more Does not respond Does not know
Subtopic: Main occupation		
Main occupation in paid work	Activities (tasks or functions) performed	Labor Activities
	Position in main occupation	Boss Self-employed worker Employee in a Co-op Employee with fixed salary Employee working on commission Family worker without pay Non-family worker without pay Other Does not respond Does not know
	Condition of paid work in a local	He did (does) his main job in a locale You did not do your main job in a locale Does not respond Does not know

(Continued)

Category	Variable	Classification
Main occupation in paid work	Place where you do (did) your work	<p>Listing of the place or establishment</p> <p>Not in a locale:</p> <ul style="list-style-type: none"> In a cropland, boat, pond, etc. Door to door or on the street In a vehicle: bicycle, tricycle, car, etc. (except transportation service) Small stand on street or market In your own home In your employer's or client's home In a vehicle for transportation of people or merchandise, taxi, truck, etc. (only one unit) Semi-permanent stand on street or market Other Does not respond Does not know <p>In a locale:</p> <ul style="list-style-type: none"> Permanent stand on street Commercial location: liquor store, hardware store, etc. Place of production: tortillería, bakery, carpentry, etc. Repair shop: mechanical, electrical, etc. Local services: restaurant, bar, etc. (which are not part of a chain) Local for professional, technical expertise, personal, educational, welfare services, etc. <p>Establishments for medium and large dimension production, construction and extraction: factories, mines, oil wells, etc.</p> <p>Establishments for medium and large dimension commercial, financial, transportation, health, education and other services: supermarkets, banks, buslines, clinics, schools, hotels, etc.</p> <p>Medium and large farms, and fisheries</p> <p>Federal, state, and municipal administrative offices of government agencies</p> <p>Other</p> <ul style="list-style-type: none"> Does not respond Does not know
Main occupation in paid work	Main job start age	<ul style="list-style-type: none"> n Age Does not respond Does not know
	Years of main activity or job	<ul style="list-style-type: none"> n Years Does not respond Does not know
	Condition of doing the main job in the United States	<ul style="list-style-type: none"> Did that job in the U.S. Did not do that job in the U.S. Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Other benefits of the main occupation		
Employment benefits or benefits from the main paid job	Benefits granted: a) IMSS	Yes they give (gave) IMSS They did not give (gave) IMSS Does not respond Does not know
	b) ISSSTE	Yes they give (gave) ISSSTE They did not give (gave) ISSSTE Does not respond Does not know
	c) SAR (Retirement Savings System)	Yes they give (gave) SAR They did not give (gave) SAR Does not respond Does not know
	d) Afores account	Yes they give (gave) Account in <i>afores</i> They do not give (gave) Account in <i>afores</i> Does not respond Does not know
	e) Housing credit	Yes they give (gave) a housing credit They did not give you (gave) a housing credit Does not respond Does not know
	f) Private medical service or insurance for medical expenses	Yes they give (gave) service or insurance of medical expenses They did not give (they gave) service or insurance of medical expenses Does not respond Does not know
	g) Life insurance	Yes they give (gave) life insurance They did not give (gave) life insurance Does not respond Does not know
	h) Other	Yes they give (gave) other benefits They do not give (gave) other benefits Does not respond Does not know
IMSS benefits	Condition of receiving IMSS benefit before August 1997	Yes received benefit Received no benefit Does not respond Does not know
ISSSTE benefits	Condition of receiving benefit from ISSSTE before 2007	Yes received benefit Received no benefit Does not respond Does not know

(Continued)

Category	Variable	Classification
Retirement, retirement or social security plan	Condition of contributing, sometime, for your retirement	Yes you contributed to receive a pension Did not ever contribute to receive a pension Does not respond Does not know
	Years of contribution	n Years Does not respond Does not know
Subtopic: Current work activity		
Characteristics and conditions of current work activity	Activity condition	Working Looking for work Does not work Does not respond Does not know
	Time spent on current job	n Hours per n Day Does not respond Does not know
	Condition of being able to reduce working hours	Yes I could reduce working hours Could not reduce working hours Does not respond Does not know
Subtopic: Current occupation		
Occupation in current paid job	Similarity between current activity and work done during your life	Yes, the activities carried out are similar or the same The activities carried out are not similar or the same Does not respond Does not know
	Activities (tasks or functions) performed	Labor Activities
	Position in main occupation	Boss Self-employed worker Employee in a Co-op Employee with fixed salary Employee working on commission Family worker without pay Non-family worker without pay Other Does not respond Does not know

(Continued)

Category	Variable	Classification
Occupation in current paid job	Condition of paid work in a local	He did (does) his main job in a locale You did not do (did) your main job in a locale Does not respond Does not know
	Place where you do your work	Listing of the place or establishment Not in a locale: In a cropland, boat, pond, etc. Door to door or on the street In a vehicle: bicycle, tricycle, car, etc. (except transportation service) Small stand on street or market In your own home In your employer's or client's home In a vehicle for transportation of people or merchandise, taxi, truck, etc. (only one unit) Semi-permanent stand on street or market Other Does not respond Does not know In a locale: Permanent stand on street Commercial location: liquor store, hardware store, etc. Place of production: tortillería, bakery, carpentry, etc. Repair shop: mechanical, electrical, etc. Local services: restaurant, bar, etc. (which are not part of a chain) Local for professional, technical expertise, personal, educational, welfare services, etc. Establishments for medium and large dimension production, construction and extraction: factories, mines, oil wells, etc. Establishments for medium and large dimension commercial, financial, transportation, health, education and other services: supermarkets, banks, buslines, clinics, schools, hotels, etc. Medium and large farms, and fisheries Federal, state, and municipal administrative offices of government agencies Other Does not respond Does not know
Occupation in current paid job	Current job start age	n Age Does not respond Does not know
	Years of current activity or job	n Years 12 months or less Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Other benefits of current occupation		
Employment benefits or benefits from the main paid job	Benefits granted: a) IMSS	Yes they give you IMSS They don't give you IMSS Does not respond Does not know
	b) ISSSTE	Yes they give ISSSTE They do not give ISSSTE Does not respond Does not know
	c) SAR (Retirement Savings System)	Yes they give SAR They do not give SAR Does not respond Does not know
	d) Afores account	Yes they give accounts in <i>afores</i> They do not give accounts in <i>afores</i> Does not respond Does not know
	e) Housing credit	Yes they do give you a housing credit They do not give you a housing credit Does not respond Does not know
	f) Private medical service or insurance for medical expenses	Yes they give you service or insurance for medical expenses They do not give you service or insurance for medical expenses Does not respond Does not know
	g) Life insurance	Yes they give you life insurance They do not give you life insurance Does not respond Does not know
	h) Other	Yes they give you other benefits They do not give you other benefits Does not respond Does not know
Total working time	Time spent on all your current jobs	n Hours per n Day Only has one job Does not respond Does not know
Work risk (or health problems due to work activity)	Condition of contact with insecticides or pesticides (or chemicals)	Yes you have direct contact with substances Does not have direct contact with substances Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Current job inactivity		
Current job inactivity condition	Reason for current inactivity	Dedicated to household chores Retired Old age Sick or temporarily disabled Unable to work for the rest of life Does not have customers or cannot find work Other Does not respond Does not know
	Condition of working without pay or on your own	Yes you have worked on your own or without payment No you have not worked on your own or without payment Does not respond Does not know
	Reason for separation from last job	Source of work closed down/cut down on staff/is bankrupt It was temporary and the time period of work ended The business moved Made too little money The work schedule was inconvenient It was not related to your studies or training To care for children or other family member Due to sickness You retired Other Does not respond Does not know
	Year or time of separation from last job	n Year or n Years Does not respond Does not know
General economic situation	Perception of personal economic situation	Excellent Very good Good Fair Poor Does not respond Does not know
	Perception of the economic situation of the household	Excellent Very good Good Fair Poor Does not respond Does not know

TOPIC: HOUSING

Category	Variable	Classification
Subtopic: General data		
Characteristics of the property	Type of dwelling (Interviewer observation)	Apartment in building Attic apartment Detached house House in a condominium Apartment in <i>vecindad</i> (dwelling divided into separate units) Other Does not respond Does not know
	Housing located: a) On paved street	Yes No Does not respond Does not know
	b) On unpaved street	Yes No Does not respond Does not know
	c) On a highway	Yes No Does not respond Does not know
	d) On a road or sidewalk	Yes No Does not respond Does not know
	e) On one side of farm fields	Yes No Does not respond Does not know
	f) Less than 500 meters from a large avenue, with more than two lanes	Yes No Does not respond Does not know
	Number of floors in the house	One story Two stories Three or more stories Does not respond Does not know
	Predominant material in walls	Partition, brick, stone or concrete Wood Adobe Asbestos or metal laminate Cardboard laminate Other Does not respond Does not know

(Continued)

Category	Variable	Classification
Characteristics of the property	Predominant material in ceilings	Concrete, partition, or brick Palm, shingles, or wood Asbestos or metal laminate Cardboard laminate Other Does not respond Does not know
	Predominant material in floors	Wood, mosaic or other coverings Concrete or slabs Dirt Does not respond Does not know
	Number of rooms	n Quantity Does not respond Does not know
Home services	Piped water availability	Piped water inside your house Piped water outside your house Within your lot Other piped water Unpiped water (pipe, well, river, or other) Does not respond Does not know
	Availability of sanitary service (Type of sanitary installation)	Has water connection Is filled with a bucket of water No water is added Do not have Does not respond Does not know
Home services	Condition of exclusive toilet use	Yes, only the people in the house use it It is not only used by the people in the house Does not respond Does not know
Fuel type	Cooking fuel	Gas Wood or coal Other (oil, electricity, etc) Does not respond Does not know
	Extra fuel for cooking, heating or lighting	No other Gas Firewood or coal Other (oil, electricity, etc) Does not respond Does not know
Lead exposure	Frequency of food consumption in earthenware, in the last three months	Never Less than once a month Once a month Twice a month Once a week Two to three times a week Daily or almost every day Does not respond Does not know
Exposure to insecticides	Condition of regular use of insecticides in the home	They do use insecticide regularly They don't use insecticide regularly Does not respond Does not know

(Continued)

Category	Variable	Classification
Services or goods	Durable consumer goods or services availability: a) Radio or radio recorder	They do have a radio or radio recorder They do not have a radio or radio recorder Does not respond Does not know
	b) Television	They do have television They do not have television Does not respond Does not know
	c) Refrigerator	They do have a refrigerator They do not have a refrigerator Does not respond Does not know
	d) Washing machine	They do have a washing machine They do not have a washing machine Does not respond Does not know
	e) Telephone	They do have a telephone They do not have a telephone Does not respond Does not know
Services or goods	f) Water heater	They do have a water heater They do not have a water heater Does not respond Does not know
	g) Internet	They do have internet They do not have internet Does not respond Does not know
	h) Computer	They do have a computer They do not have a computer Does not respond Does not know
Subtopic: Tenure		
Legal situation of the home	Own or rented home	Rented Borrowed or transferred without payment Private property or currently paying it off Other Does not respond Does not know
Rented housing	Monthly rent amount	n Quantity Does not respond Does not know
	Approximate amount of monthly rent: a) More than \$6,000 pesos per month	Yes it is more than \$6,000 a month It is not more than \$6,000 a month Does not know
	b) More than \$2,000 pesos per month	Yes it is more than \$2,000 a month It is not more than \$2,000 a month Does not know
	c) More than \$18,000 pesos per month	Yes it is more than \$18,000 a month It is not more than \$18,000 a month Does not know

(Continued)

Category	Variable	Classification
Subtopic: Owners		
Homeowners or owners	Deed owners	Nobody, since it has no writings (is in an irregular situation) Only you Only your spouse Only you and your spouse You and/or spouse, and other(s) family member(s) Other relative(s) Other non-relative(s) Does not respond Does not know
	Property debt situation (or bank or financial debt)	Completely paid off Being paid to the bank Being paid to relatives or friends Being paid to the bank and to relatives or friends Irregular Being regularized Does not respond Does not know
Subtopic: Debt		
Amount of property debt	Amount of total monthly mortgage and loan payment	n Quantity Nothing Does not respond Does not know
	Approximate amount of the total monthly payment of mortgages and loans: a) More than \$7,500 pesos per month	Yes it is more than \$7,500 a month It is not more than \$7,500 a month Does not know
	b) More than \$2,000 pesos per month	Yes it is more than \$2,000 a month It is not more than \$2,000 a month Does not know
	c) More than \$20,000 pesos per month	Yes it is more than \$20,000 a month It is not more than \$20,000 a month Does not know
	Amount of the total debt of the house	n Quantity Does not respond Does not know
	Approximate amount of the total debt of the house: a) More than \$180,000 pesos per month	Yes, it is more than \$180,000 a month It is not more than \$180,000 a month Does not know
	b) More than \$95,000 pesos per month	Yes, it is more than \$95,000 a month It is not more than \$95,000 a month Does not know
	c) More than \$480,000 pesos per month	Yes it is more than \$480,000 per month It is not more than \$480,000 a month Does not know
	Years to liquidate the home	n Years Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Current value		
Current property value	Estimated property value (land and home)	n Quantity Does not respond Does not know
	Approximate property value: a) More than \$180,000 pesos per month	Yes, it is more than \$180,000 a month It is not more than \$180,000 a month Does not know
	b) More than \$95,000 pesos per month	Yes, it is more than \$95,000 a month It is not more than \$95,000 a month Does not know
	c) More than \$950,000 pesos per month	Yes, it is more than \$950,000 a month It is not more than \$950,000 a month Does not know
Subtopic: Second residence		
Other non-rented property(s) of SE or spouse	Condition of being owner(s) of another residence	Yes you own another house or condominium You do not own another home or condominium Does not respond Does not know
Subtopic: Present value of second residence		
Net present property value	Approximate net worth of property	n Quantity Does not respond Does not know
	Approximate net worth of property: a) More than \$180,000 pesos per month	Yes, it is more than \$180,000 a month It is not more than \$180,000 a month Does not know
	b) More than \$95,000 pesos per month	Yes, it is more than \$95,000 a month It is not more than \$95,000 a month Does not know
	c) More than \$950,000 pesos per month	Yes, it is more than \$950,000 a month It is not more than \$950,000 a month Does not know
Subtopic: Income generated by your home		
Home or second residence rental	Condition of generating income for housing or second residence	Yes it generates income Does not generate income Does not respond Does not know
	Monthly rental income	n Quantity Does not respond Does not know
	Approximate Monthly Rental Income: a) More than \$6,000 pesos per month	Yes it is more than \$6,000 a month It is not more than \$6,000 a month Does not know
	b) More than \$2,000 pesos per month	Yes it is more than \$2,000 a month It is not more than \$2,000 a month Does not know
	c) More than \$18,000 pesos per month	Yes it is more than \$18,000 a month It is not more than \$18,000 a month Does not know

(Continued)

Category	Variable	Classification
Subtopic: Environmental exposure		
Health risk places	Condition of existence within 500 m (or three blocks) of: a) Gold, silver, copper, iron or lead mine, furnace or waste deposit	Yes it exists around you It does not exist around you Does not respond Does not know
	b) Landfill or garbage container (deposit)	Yes it exists around you It does not exist around you Does not respond Does not know
	c) Fuel tanks	Yes it exists around you It does not exist around you Does not respond Does not know
	d) Thermoelectric	Yes it exists around you It does not exist around you Does not respond Does not know
	e) Mechanical workshop	Yes it exists around you It does not exist around you Does not respond Does not know
	f) Incinerator or metal smelter	Yes it exists around you It does not exist around you Does not respond Does not know
	g) Iron or steel factory, or battery factory	Yes it exists around you It does not exist around you Does not respond Does not know
	h) Workshops for the manufacture of pottery, such as clay pots	Yes it exists around you It does not exist around you Does not respond Does not know
	i) Chemical plants, including sodium and chlorine plant	Yes it exists around you It does not exist around you Does not respond Does not know
	j) Paint factories	Yes it exists around you It does not exist around you Does not respond Does not know
Health risk places	k) Production of fertilizers or pesticides	Yes it exists around you It does not exist around you Does not respond Does not know
	l) Pemex refinery	Yes it exists around you It does not exist around you Does not respond Does not know

TOPIC: PENSION, INCOME AND ASSETS

Category	Variable	Classification
Subtopic: Business		
Business of the SE or your spouse	Condition of business ownership (or farmland, animal husbandry), or condition of doing business on your own	Yes you are an owner, self-employed or employer You are not an owner, self-employed or employer Does not respond Does not know
	Identification of the owner of the business(es)	Respondent Spouse Both (together) Does not respond Does not know
	Business situation	Outstanding debts Totally paid Does not respond Does not know
Business(es) with debit	Amount of business debt	n Quantity Does not respond Does not know
	Approximate amount of business debt: a) More than \$150,000 pesos per month	Yes it is more than \$150,000 a month It is not more than \$150,000 a month Does not know
	b) More than \$50,000 pesos per month	Yes it is more than \$50,000 a month It is not more than \$50,000 a month Does not know
	c) More than \$500,000 pesos per month	Yes, it is more than \$500,000 a month It is not more than \$500,000 a month Does not know

(Continued)

Category	Variable	Classification
Business value Business income	Total business value	n Quantity Does not respond Does not know
	Approximate total value of the business: a) More than \$150,000 pesos per month	Yes it is more than \$150,000 a month It is not more than \$150,000 a month Does not know
	b) More than \$50,000 pesos per month	Yes it is more than \$50,000 a month It is not more than \$50,000 a month Does not know
	c) More than \$500,000 pesos per month	Yes, it is more than \$500,000 a month It is not more than \$500,000 a month Does not know
	Condition of generating income from the business during the last 12 months (SE or spouse)	Yes it generated income Did not generate income Does not respond Does not know
	Total income in a normal month	n Quantity Does not respond Does not know
	Approximate Total Business Income: a) More than \$60,000 pesos per month	Yes it was more than \$60,000 a month It was not more than \$60,000 a month Does not know
	b) More than \$20,000 pesos per month	Yes it was more than \$20,000 a month It was not more than \$20,000 a month Does not know
	c) More than \$180,000 pesos per month	Yes it was more than \$180,000 a month It was not more than \$180,000 a month Does not know
Business expenses	Spending in a normal month	n Quantity Nothing Does not respond Does not know
	Approximate business expense: a) More than \$60,000 pesos per month	Yes it was more than \$60,000 a month It was not more than \$60,000 a month Does not know
	b) More than \$20,000 pesos per month	Yes it was more than \$20,000 a month It was not more than \$20,000 a month Does not know
	c) More than \$180,000 pesos per month	Yes it was more than \$180,000 a month It was not more than \$180,000 a month Does not know

(Continued)

Category	Variable	Classification
Business profit	Monthly business profit	n Quantity Nothing Does not respond Does not know
	Approximate monthly profit of the business: a) More than \$20,000 pesos per month	Yes it was more than \$20,000 a month It was not more than \$20,000 a month Does not know
	b) More than \$7,500 pesos per month	Yes it was more than \$7,500 a month It was not more than \$7,500 a month Does not know
	c) More than \$60,000 pesos per month	Yes it was more than \$60,000 a month It was not more than \$60,000 a month Does not know
Subtopic: Real estate		
Real estate owned by SE and/ or spouse (excludes primary residence or second residence)	Property status of real estate (land, lots, or rental housing)	Yes you are a real estate owner You do not own real estate Does not respond Does not know
	Real estate owner identification	Respondent Spouse Both (together) Does not respond Does not know
	Real estate situation	Outstanding debts Totally paid Does not respond Does not know
Real estate with debt	Amount of real estate debt	n Quantity Does not respond Does not know
	Approximate amount of real estate debt: a) More than \$180,000 pesos per month	Yes, it is more than \$180,000 a month It is not more than \$ 180,000 a month Does not know
	b) More than \$95,000 pesos per month	Yes, it's more than \$95,000 a month It is not more than \$95,000 a month Does not know
	c) More than \$500,000 pesos per month	Yes, it is more than \$500,000 a month It is not more than \$500,000 a month Does not know

(Continued)

Category	Variable	Classification
Real estate value	Total value of real estate	n Quantity Does not respond Does not know
	Approximate Total Value of Real Estate: a) More than \$180,000 pesos per month	Yes, it is more than \$180,000 a month It is not more than \$180,000 a month Does not know
	b) More than \$95,000 pesos per month	Yes, it's more than \$95,000 a month It is not more than \$95,000 a month Does not know
	c) More than \$500,000 pesos per month	Yes, it is more than \$500,000 a month It is not more than \$500,000 a month Does not know
Real estate income	Condition of generating income from real estate during the past year (SE or spouse)	Yes it generated income Did not generate income Does not respond Does not know
	Total income in a normal month	n Quantity Does not respond Does not know
	Approximate Total Income From Real Estate: a) More than \$6,000 pesos per month	Yes it was more than \$6,000 a month It was not more than \$6,000 a month Does not know
	b) More than \$2,000 pesos per month	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know
	c) More than \$18,000 pesos per month	Yes it was more than \$18,000 a month It was not more than \$18,000 a month Does not know
Real estate expenses	Spending in a normal month	n Quantity Nothing Does not respond Does not know
	Approximate Real Estate Expense: a) More than \$800 pesos per month	Yes it was more than \$800 a month It was not more than \$800 a month Does not know
	b) More than \$200 pesos per month	Yes it was more than \$200 a month It was not more than \$200 a month Does not know
	c) More than \$2,500 pesos per month	Yes it was more than \$2,500 a month It was not more than \$2,500 a month Does not know

(Continued)

Category	Variable	Classification
Subtopic: Capital goods		
Bank accounts	Condition of having savings or investment accounts	Yes you have checking, savings or investment accounts You do not have checking, savings or investment accounts Does not respond Does not know
	Identification of the owner of savings or investment accounts	Respondent Spouse Both (together) Does not respond Does not know
	Estimated value of savings or investment accounts	n Quantity Does not respond Does not know
	Estimated value of savings or investment accounts: a) More than \$25,000 pesos per month	Yes it is more than \$25,000 a month It is not more than \$25,000 a month Does not know
	b) More than \$12,000 pesos per month	Yes it's more than \$12,000 a month It is not more than \$12,000 a month Does not know
	c) More than \$90,000 pesos per month	Yes it is more than \$90,000 a month It is not more than \$90,000 a month Does not know
	Condition of generating income from bank accounts during the past year (SE or spouse)	Yes it generated income Did not generate income Does not respond Does not know
	Total income in a normal month	n Quantity Does not respond Does not know
	Approximate total income from bank accounts: a) More than \$400 pesos per month	Yes it was more than \$400 a month It was not more than \$400 a month Does not know
	b) More than \$200 pesos per month	Yes it was more than \$200 a month It was not more than \$200 a month Does not know
	c) More than \$2,000 pesos per month	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know

(Continued)

Category	Variable	Classification
Loans	Condition of having loans made to third parties	Yes you have checking, savings or investment accounts You do not have checking, savings or investment accounts Does not respond Does not know
	Identification of the owner of loans made to third parties	Respondent Spouse Both (together) Does not respond Does not know
	Estimated value of loans made to third parties	n Quantity Does not respond Does not know
	Estimated value of loans made to third parties: a) More than \$25,000 pesos per month	Yes it is more than \$25,000 a month It is not more than \$25,000 a month Does not know
	b) More than \$12,000 pesos per month	Yes it's more than \$12,000 a month It is not more than \$12,000 a month Does not know
	c) More than \$90,000 pesos per month	Yes it is more than \$90,000 a month It is not more than \$90,000 a month Does not know
	Condition of generating income from loans made to third parties during the past year (SE or spouse)	Yes it generated income Did not generate income Does not respond Does not know
	Total income in a normal month	n Quantity Does not respond Does not know
	Approximate total income from loans made to third parties: a) More than \$400 pesos per month	Yes it was more than \$400 a month It was not more than \$400 a month Does not know
	b) More than \$200 pesos per month	Yes it was more than \$200 a month It was not more than \$200 a month Does not know
	c) More than \$2,000 pesos per month	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know

(Continued)

Category	Variable	Classification
Stocks, bonds and certificates	Condition of having stocks, bonds or certificates for participation in companies	Yes you have (had) stocks, bonds or certificates You do not have checking, savings or investment accounts Does not respond Does not know
	Identification of the owner of stocks, bonds or certificates	Respondent Spouse Both (together) Does not respond Does not know
	Estimated value of stocks, bonds or certificates	n Quantity Does not respond Does not know
	Estimated value of stocks, bonds or certificates: a) More than \$25,000 pesos per month	Yes it is more than \$25,000 a month It is not more than \$25,000 a month Does not know
	b) More than \$12,000 pesos per month	Yes it's more than \$12,000 a month It is not more than \$12,000 a month Does not know
	c) More than \$90,000 pesos per month	Yes it is more than \$90,000 a month It is not more than \$90,000 a month Does not know
	Condition of generating income from stocks, bonds or certificates during the past year (SE or spouse)	Yes it generated income Did not generate income Does not respond Does not know
	Total income in a normal month	n Quantity Does not respond Does not know
	Approximate total income from stocks, bonds or certificates: a) More than \$400 pesos per month	Yes it was more than \$400 a month It was not more than \$400 a month Does not know
	b) More than \$200 pesos per month	Yes it was more than \$200 a month It was not more than \$200 a month Does not know
	c) More than \$2,000 pesos per month	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know

(Continued)

Category	Variable	Classification
Subtopic: Other goods		
Vehicles owned by the SE and/or your spouse	Condition of being vehicle owner(s)	Yes you are (were) a vehicle owner You are not vehicle owner Does not respond Does not know
	Situation of the vehicle(s)	Outstanding debts Totally paid Does not respond Does not know
Vehicle(s) with debt	Amount of debt of the vehicle(s)	n Quantity Does not respond Does not know
	Approximate amount of the debt of the vehicle(s): a) More than \$180,000 pesos per month	Yes, it is more than \$180,000 a month It is not more than \$180,000 a month Does not know
	b) More than \$95,000 pesos per month	Yes, it's more than \$95,000 a month It is not more than \$95,000 a month Does not know
	c) More than \$500,000 pesos per month	Yes, it is more than \$500,000 a month It is not more than \$500,000 a month Does not know
Value of the vehicle(s)	Total value of the vehicle(s)	n Quantity Does not respond Does not know
	Approximate total value of the vehicle(s): a) More than \$180,000 pesos per month	Yes, it is more than \$180,000 a month It is not more than \$180,000 a month Does not know
	b) More than \$95,000 pesos per month	Yes, it's more than \$95,000 a month It is not more than \$95,000 a month Does not know
	c) More than \$500,000 pesos per month	Yes, it is more than \$500,000 a month It is not more than \$500,000 a month Does not know
Value of other assets	Total value of other assets	n Quantity Does not respond Does not know
	Approximate total value of other assets: a) More than \$180,000 pesos per month	Yes, it is more than \$180,000 a month It is not more than \$180,000 a month Does not know
	b) More than \$95,000 pesos per month	Yes, it's more than \$95,000 a month It is not more than \$95,000 a month Does not know
	c) More than \$500,000 pesos per month	Yes, it is more than \$500,000 a month It is not more than \$500,000 a month Does not know

(Continued)

Category	Variable	Classification
Subtopic: Income from salaried work of the informant or SE (during the past year)		
Main work of the SE	Condition of having a salaried main job	Yes you had a main salaried job Did not have a main salaried job Does not respond Does not know
Earnings from main job	Condition of receiving labor income (salary, wages, commissions, overtime)	Yes received earned income Did not receive earned income Does not respond Does not know
	Period and amount of labor income	Period: Month, Year Income: n Quantity Does not respond Does not know
	Approximate amount of earned income: a) More than \$7,500 pesos per month (or \$90,000 pesos per year)	Yes it was more than \$7,500 a month It was not more than \$7,500 a month Does not know
	b) More than \$2,000 pesos a month (or \$24,000 pesos a year)	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know
	c) More than \$15,000 pesos a month (or \$180,000 pesos a year)	Yes it was more than \$15,000 a month It was not more than \$15,000 a month Does not know
Main job benefits	Condition of receiving employment benefits (Christmas bonus, profit sharing)	Yes you received employment benefits Did not receive employment benefits Does not respond Does not know
	Period and amount of employment benefits	Period: Month, Year Income: n Quantity Does not respond Does not know
	Approximate amount of employment benefits: a) More than \$7,500 pesos per month (or \$90,000 pesos per year)	Yes it was more than \$7,500 a month It was not more than \$7,500 a month Does not know
	b) More than \$2,000 pesos a month (or \$24,000 pesos a year)	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know
	c) More than \$15,000 pesos a month (or \$180,000 pesos a year)	Yes it was more than \$15,000 a month It was not more than \$15,000 a month Does not know
Secondary work of the SE	Condition of having salaried secondary job	Yes you had a salaried secondary job Did not have a salaried secondary job Does not respond Does not know
	Same variables as in Main job	Same classifications as Main Job

(Continued)

Category	Variable	Classification
Subtopic: Informant pension income (SE)		
Retirement	Condition of receiving income from retirement pension, during the past year	Yes you received retirement income Did not receive retirement income Does not respond Does not know
	Institution(s) granting retirement pension	IMSS ISSSTE Other public (PEMEX, DEFENSE, NAVY, CFE, BANXICO) Private U.S. Social Security Other institution A Person Does not respond Does not know
	Year you received a retirement pension	n Year (of each retirement pension) Does not respond Does not know
	Monthly retirement amount	n Quantity Does not respond Does not know
	Approximate amount of retirement: a) More than \$2,000 pesos per month	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know
	b) More than \$950 pesos per month	Yes it was more than \$950 a month It was not more than \$950 a month Does not know
	c) More than \$7,500 pesos per month	Yes it was more than \$7,500 a month It was not more than \$7,500 a month Does not know
	Spouse beneficiary of pension upon death of SE	Yes, I would receive a retirement pension I would not receive a retirement pension Does not respond Does not know

(Continued)

Category	Variable	Classification
Widowhood	Condition of receiving income from widow's pension, during the past year	Yes you received income from a widow's pension Did not receive income from widow's pension Does not respond Does not know
	Institution(s) that grant a widow's pension	IMSS ISSSTE Other public (PEMEX, DEFENSE, NAVY, CFE, BANXICO) Private U.S. Social Security Other institution A Person Does not respond Does not know
	Year in which you received a widow's pension	n Year (of each widow's pension) Does not respond Does not know
	Monthly amount of widow's pension	n Quantity Does not respond Does not know
	Approximate amount of pension for widowhood: a) More than \$2,000 pesos per month	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know
	b) More than \$950 pesos per month	Yes it was more than \$950 a month It was not more than \$950 a month Does not know
	c) More than \$7,500 pesos per month	Yes it was more than \$7,500 a month It was not more than \$7,500 a month Does not know
	Spouse beneficiary of widowhood pension due to death of SE	Yes, I would receive a widow's pension I would not receive a widow's pension Does not respond Does not know
Disability or work accident	Condition of receiving income due to disability or work accident, during the past year	Yes you received income due to disability or work accident Did not receive income due to disability or work accident Does not respond Does not know
	Institution(s) that grant a pension for disability or work accident	IMSS ISSSTE Other public (PEMEX, DEFENSE, NAVY, CFE, BANXICO) Private U.S. Social Security Other institution A Person Does not respond Does not know

(Continued)

Category	Variable	Classification
Disability or work accident	Year in which you received a pension for disability or work accident	n Year (of each disability pension or work accident) Does not respond Does not know
	Monthly amount of widow's pension	n Quantity Does not respond Does not know
	Approximate amount of pension for disability or work accident: a) More than \$2,000 pesos per month	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know
	b) More than \$950 pesos per month	Yes it was more than \$950 a month It was not more than \$950 a month Does not know
	c) More than \$7,500 pesos per month	Yes it was more than \$7,500 a month It was not more than \$7,500 a month Does not know
	Spouse beneficiary of disability pension or work accident due to death of SE	Yes, I would receive a widow's pension I would not receive a widow's pension Does not respond Does not know
Other pensions	Condition of receiving income from other pensions, during the past year	Yes you received income from other pensions Did not receive income from other pensions Does not respond Does not know
	Institution(s) that grant other pensions	IMSS ISSSTE Other public (PEMEX, DEFENSE, NAVY, CFE, BANXICO) Private U.S. Social Security Other institution A Person Does not respond Does not know
	Year you received other pensions	n Year (of each of the other pensions) Does not respond Does not know
	Monthly amount of other pensions	n Quantity Does not respond Does not know
	Approximate amount of other pensions: a) More than \$2,000 pesos per month	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know

(Continued)

Category	Variable	Classification
Other pensions	b) More than \$ 950 pesos per month	Yes it was more than \$950 a month It was not more than \$950 a month Does not know
	c) More than \$ 7,500 pesos per month	Yes it was more than \$7,500 a month It was not more than \$7,500 a month Does not know
	Spouse beneficiary of other pensions due to the death of SE	Yes, I would receive other pensions I would not receive other pensions Does not respond Does not know
Subtopic: Future pension of the informant (SE)		
Future Pension(s) (or Level of Protection)	Condition of receiving a pension in the future	Yes you expect to receive a pension in the future You do not expect to receive a pension in the future Does not respond Does not know
	Institution(s) that would grant pension	IMSS ISSSTE Other public (PEMEX, DEFENSE, NAVY, CFE, BANXICO) Private U.S. Social Security Other institution A Person Federal or State Programs (Programs 65 and more, food pension for older adults, etc) Does not respond Does not know
	Age to receive pension	n Age (from the earliest you would receive) 87 or more years Does not respond Does not know
	Spouse beneficiary of pension upon death of SE	Yes I would receive part of the pension I would not receive part of the pension Does not respond Does not know
Subtopic: Income from other informant transfers (SE)		
Income from donations from public institutions, during the past year	Condition of receiving donations in money or in kind from public institutions	Yes received donation(s) Did not receive donation(s) Does not respond Does not know
	Public institution(s) providing donation	PROAGRO Productivo (before PROCAMPO) PROSPERA INAPAM (formerly INSEN) Other institution Does not respond Does not know
	Total monthly income per donation(s)	n Quantity Does not respond Does not know
	Condition of receiving donation(s) in the future	Yes you consider receiving donation(s) in the future Does not consider receiving donation(s) in the future Does not respond Does not know

(Continued)

Category	Variable	Classification
Income from sale of goods or gifts	Condition of receiving income from the sale of goods or gifts or inheritance	Yes you received income from the sale of goods or gifts Did not receive income from the sale of goods or gifts Does not respond Does not know
	Total monthly income from sale of goods or gifts or inheritance	n Quantity Does not respond Does not know
	Condition of receiving this income in the future	Yes you consider receiving this income in the future You do not consider receiving this income in the future Does not respond Does not know
Subtopic: Spouse's earned employment income		
Spouse's main job	Condition of having a salaried main job	Yes you had a main salaried job Did not have a main salaried job Does not respond Does not know
	Same variables as in SE main and secondary job	Same classifications as in Main and secondary work of the SE
Subtopic: Spouse's pension income		
Retirement	Condition of receiving income from retirement pension, during the past year	Yes you received retirement income Did not receive retirement income Does not respond Does not know
	Same variables as in SE Retirement	Same classifications as SE Retirement
Widowhood	Condition of receiving income from widow's pension, during the past year	Yes you received income from a widow's pension Did not receive income from widow's pension Does not respond Does not know
	Same variables as in SE's widowhood pension	Same classifications as in SE's widowhood pension
Disability or work accident	Condition of receiving income due to disability or work accident, during the past year	Yes you received income due to disability or work accident Did not receive income due to disability or work accident Does not respond Does not know
	Same variables as in disability or occupational accident of SE	Same classifications as in disability or occupational accident of SE
Other pensions	Condition of receiving income from other pensions, during the past year	Yes you received income from other pensions Did not receive income from other pensions Does not respond Does not know
	Same variables as in Other SE pensions	Same classifications as in Other SE pensions

(Continued)

Category	Variable	Classification
Subtopic: Future spouse pension		
Future Pension(s) (or Level of Protection)	Condition of receiving a pension in the future	Yes you expect to receive a pension in the future You do not expect to receive a pension in the future Does not respond Does not know
	Same variables as in Future Pension of the SE	Same classifications as Future Pension of the SE
Subtopic: Income from other spouse transfers		
Income from donations from public institutions, during the past year	Condition of receiving donations in money or in kind from public institutions	Yes received donation(s) Did not receive donation(s) Does not respond Does not know
	Same variables as in Income from other SE transfers	Same classifications as in Income from other SE transfers
Subtopic: Income from donations and transfers (SE and spouse)		
Income from aid in cash or in kind, during the past year	Condition of receiving help from family or friends (not children or residents of the home)	Yes you received help in money or in-kind Did not receive aid in money or in-kind Does not respond Does not know
	Condition of receiving a donation from Prospera (someone from the home)	Yes you received a donation in money or in-kind Did not receive a donation in money or in-kind Does not respond Does not know
Subtopic: Other debts		
Debts of SE or spouse	Condition of having debts (medical or on cards) or loans (on insurance, from relatives)	Yes you have debts or loans You have no debts or loans Does not respond Does not know
	Total amount of debts or loans	n Quantity Does not respond Does not know
	Approximate amount of debts or loans: a) More than \$25,000 pesos per month	Yes it is more than \$25,000 a month It is not more than \$25,000 a month Does not know
	b) More than \$12,000 pesos per month	Yes it's more than \$12,000 a month It is not more than \$12,000 a month Does not know
	c) More than \$90,000 pesos per month	Yes it is more than \$90,000 a month It is not more than \$90,000 a month Does not know

(Continued)

Category	Variable	Classification
Subtopic: Household consumption		
Household consumption expenses	Total monthly household expenditure	n Quantity Does not respond Does not know
	Approximate household expenditure: a) More than \$7,500 pesos per month	Yes it's more than \$7,500 a month It is not more than \$7,500 a month Does not know
	b) More than \$4,000 pesos per month	Yes, it is more than \$4,000 a month It is not more than \$4,000 a month Does not know
	c) More than \$12,000 pesos per month	Yes it's more than \$12,000 a month It is not more than \$12,000 a month Does not know
Household self-consumption	Condition of producing (clothing, animals, food) for self-consumption	Yes, produces for self-consumption Does not produce for self-consumption Does not respond Does not know
Food safety at home, in the last two years	Condition of having enough money for food	Yes you have had enough money to buy food You have not had enough money to buy food Does not respond Does not know
	Condition of omitting or reducing food due to insufficient	Yes you have skipped or cut down on food You have not skipped or cut down on food Does not respond Does not know
Subtopic: Future plans		
Forecast in the event of death	Condition of carrying out actions for the transfer of goods	You have made arrangements to transfer your assets You have not made arrangements to transfer your assets Does not respond Does not know
	Condition of carrying out testamentary succession	Yes, you made a will before a notary Did not make a will before a notary Does not respond Does not know
	Beneficiaries of SE assets (exclude spouse)	Child(ren) and/or grandchild(ren) Other Child and/or grandchild, and other No one else Does not respond Does not know
Subtopic: Widowhood		
Widowhood of SE	Widowhood status (last three years, if new person)	Yes you were widowed Not widowed

(Continued)

Category	Variable	Classification
Subtopic: Changes due to widowhood		
Residential changes	Residential situation of the widowed SE	Yes, changed residence Yes, someone else moved in to live with respondent No, none Does not respond Does not know
	Main reason for residential change	Residence could no longer be paid for To be close to family members Other reason Does not respond Does not know
Economic changes before and after death	Change in pension income due to death of spouse	Yes, started to receive Yes, stopped receiving Yes, quantity changed No, none I never had and do not have pension income Does not respond, 9. Does not know
	Monthly income before death	n Quantity Nothing Does not respond Does not know
	Approximate monthly income before death: a) More than \$2,000 pesos per month	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know
	b) More than \$950 pesos per month	Yes it was more than \$950 a month It was not more than \$950 a month Does not know
Economic changes before and after death	c) More than \$7,500 pesos per month	Yes it was more than \$7,500 a month It was not more than \$7,500 a month Does not know
	Monthly income after death	n Quantity Nothing Does not respond Does not know
	Approximate monthly income after death: a) More than \$2,000 pesos per month	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know
	b) More than \$950 pesos per month	Yes it was more than \$950 a month It was not more than \$950 a month Does not know
	c) More than \$7,500 pesos per month	Yes it was more than \$7,500 a month It was not more than \$7,500 a month Does not know

(Continued)

Category	Variable	Classification
Job changes	Changes in employment status or work hours after death	Yes started working Yes stopped working Yes, changed the number of hours No, none Never worked or had a job Does not respond Does not know
	Hours worked per week before death	n Quantity Nothing Does not respond Does not know
	Hours worked per week after death	n Quantity Nothing Does not respond Does not know
Changes in medical service	Condition of change (type, cost or coverage) of medical service	Yes, the medical service changed No the medical service did not change Never had coverage Does not respond Does not know
	Type of change occurred	Lost coverage Changed system/coverage Have more or better services Have fewer or worse services The cost increased The cost decreased Other Does not respond Does not know
Life insurances	Condition of receiving life insurance benefit	Yes received (will receive) benefit Did not receive (will receive) benefit Does not respond Does not know

(Continued)

Category	Variable	Classification
Expenses associated with death	Funeral and legal expenses (exclude medical expenses)	n Quantity Nothing Does not respond Does not know
	Approximate funeral and legal expenses: a) More than \$7,500 pesos	Yes it was more than \$7,500 It was not more than \$7,500 Does not know
	b) More than \$4,000 pesos	Yes it was more than \$4,000 It was not more than \$4,000 Does not know
	c) More than \$30,000 pesos	Yes it was more than \$30,000 It was not more than \$30,000 Does not know
	Funeral expenses covered by insurance	Yes all Yes, some No Does not respond Does not know
	Actions carried out to cover previous expenses associated with death	Yes, sell belongings Yes, spend savings Yes, get help from family and/or friends Yes, get help from other source No, nothing special Does not respond Does not know
	Family or friends who provided help	Children/Children-in-law/Grandchildren Other relatives Someone else Institution or charity Does not respond Does not know

TOPIC: SURVIVING WIDOWER

Category	Variable	Classification
Characteristics of the deceased spouse and the deceased	Age at death	n Age Does not respond Does not know
	Sex of the deceased	Male Female
	Place of death	Private house Hospital or institution Other Does not respond Does not know
	City where they died	In this community Other community in this state Other state in Mexico United States Other country not in the United States Does not respond Does not know
	Cause of death	Sickness Accident or violence Other cause Does not respond Does not know
	Main disease	Cancer Diabetes Stroke Heart Infection Other Does not respond Does not know
	Date of death	n Month and n Year Does not respond Does not know

(Continued)

Category	Variable	Classification
Disposition of goods or properties	Condition of ownership of real property at death	They did own real estate They did not own real estate Does not respond Does not know
	Destination of the property(s)	Still is totally or partially your property It is property of children/grandchildren Was inherited by someone else Was sold Property is not yet available Does not respond Does not know
	Person with greater decision-making power in the destination of the property(s)	Respondent Spouse Other person Does not respond Does not know
	Resident(s) on the property	Respondent lives there Children/grandchildren or other family members live there Other non-relatives live there Does not respond Does not know

COGNITIVE EXERCISES

TOPIC: COGNITIVE EXERCISES

Category	Variable	Classification
Subtopic: Assessment of skills and abilities		
SE memory operation	Self-assessment of memory in the present	Excellent Very good Good Fair Poor Does not respond Does not know
	Comparison with memory from two years ago	Beter More or less the same Worse Does not respond Does not know
Wearing glasses	Condition of use of glasses to see closely	Yes you need glasses No you do not need glasses
	Evaluation of visual acuity of the SE	Read it perfectly Read it with problems Could not read anything Does not know how to read Could not see the letters Refused to read
Mental capacity	Immediate Memory assessment exercise	n Number of words remembered
Psychomotor ability	Difficulty holding a pen or pencil and making strokes	Yes you have problems Has no problems Does not respond
	Type of problem	Paralysis or does not have fingers Cannot hold the pencil Refuses to hold the pencil Yes you can hold the pen
Visuomotor ability	Exercise: Copy of figure	Yes, they did it No, they did not do it
Verbal fluency	Exercise: Animal names	Yes, they did it No, they did not do it
Visual ability	Identification of equal figures exercise	Yes, they did it No, they did not do it
Orientation in time	Current Date exercise	n Day, a Month and a Year
	Correct answer of current date	Yes you answered correctly No do not know
Mental capacity	Figure Evocation exercise	Yes, they did it No, they did not do it
	Long-term memory recall exercise	Yes, they did it No, they did not do it

(Continued)

Category	Variable	Classification
Numerical ability	Successive subtraction from 7 to 7	n Result Does not respond Does not know
Subtopic: Sampling		
Saliva sample	SE (or informant) aged 60 or over	Yes you are 60 or older No you are not 60 or older
	Saliva sampling agreement	Yes, signed consent Yes, gave oral consent No, refuses
	Sample collection result	Yes, the sample was taken Could not take
	Label Identifier	Record the label identifier
Hair sample	SE selected for hair sampling	Yes selected Not selected
	Agreement for hair sampling	Yes, signed consent Yes, gave oral consent No, refuses Does not have hair
Beard hair sample	Beard	Yes he has a beard No does not have a beard
	Beard sampling agreement	Yes, signed consent Yes, gave oral consent No, refused
	Recent hair or beard dye	Yes it has recent dye No recent dye
	Shot result	Yes, it was taken from the head Yes, he took his beard No could not take
	Label Identifier	Register the label identifier

SUBSTITUTE INFORMANT QUESTIONNAIRE

TOPIC: HOME RESIDENT REGISTRATION FOR FOLLOW-UP PERSON

Category	Variable	Classification
Subtopic: Sociodemographic data of members who reside in the SE household and their spouse		
Household residents and new residents	Current residence status at home of only follow-up study subjects	Yes, only both SE (SE1 and spouse) reside, No, other people with SE reside
	Verification of household residents and registration of new residents	n Residents Name (without surname) or identification characteristics of the resident
	Condition of residence in the home	Still lives here or is temporarily absent Permanently absent Deceased Listed by mistake New resident
New residents	MHAS registration number 2012 or 2015	Registration number Not listed (666)
	Primary reason for residence in the home	Because of the health of selected spouse Because of the health of (NAME) For economic reasons For other reasons Does not respond Does not know
General characteristics of household residents	Sex	Male Female
	Relationship (resident with selected)	Child Stepchild Adopted child Foster child Mother/Father Parent-in-law Grandparent Grandchild Great grandchild Son/daughter-in-law Brother/sister or step brother/step sister Brother/sister-in-law/cousin Uncle/aunt Nephew/niece Other relative No relative
	Age	n Years 00. Less than 1 year old; 98. 98 or more; 99. Don't know

(Continued)

Category	Variable	Classification
Sociodemographic characteristics of residents of the household aged 12 years or over	Education	n Level: None Elementary Secondary or middle school Technical degree with middle school completed Preparatory level of teacher training Preparatory or high school Technical career with high school completed Bachelor's degree or engineering Graduate school Grade: Does not respond Does not know
	Marital status	Single Married Civil Union Divorced Separated Widower Does not respond Does not know
	Activity condition	Working Looking for a job Student Dedicated to household chores Does not work Does not respond Does not know

(Continued)

Category	Variable	Classification
Health and migration of resident children 12 years of age or older	Condition of existence of serious health problem or physical limitation	Yes you have a health problem or physical limitation Has no health problem or physical limitation Does not respond Does not know
	Total children	n Children None Does not respond Does not know
	Migration status to the United States	Yes you have worked or lived in the United States Has not worked or lived in the United States Does not respond Does not know
Migration and contact with permanently absent children of 12 years or more	Place of residence or migration	Same house or building Another house of the same locality Different locality but the same municipality Another municipality of the same state Other state of Mexico U.S. Another country Does not respond Does not know
	Frequency of contact (in person, by mail, computer, or phone)	n Times: Never n Period: Week Month Year Two years Does not respond Does not know

TOPIC: NON-RESIDENT CHILDREN OF FOLLOW-UP PERSON

Category	Variable	Classification
Subtopic: Sociodemographic data of children who do not reside in the SE household and their spouse		
General characteristics of non-resident children of the household	Verification of children who do not reside in the home and registration of other non-resident children	n Children Name (without surname) or identification characteristics of non-resident child
	Condition of existence of children of SE who do not reside in the home	Yes they have non-resident child(ren), They have no non-resident child(ren)
	Sex	Male Female
	Age	n Years Under 1 year 98 or more Does not know
	Condition of residence	Still lives elsewhere Omitted non-resident child Deceased Resides in the residence of (NAME) Listed by mistake

(Continued)

Category	Variable	Classification
Non-resident children 12 years of age or older	MHAS registration number 2012 or 2015	Registration number Not listed (666)
	Education	n Level: None Elementary Secondary or middle school Technical degree with middle school completed Preparatory level of teacher training Preparatory or high school Technical career with high school completed Bachelor's degree or engineering Graduate school Grade: Does not respond Does not know
	Frequency of contact (in person, by mail, computer, or phone)	n Times: Never Does not respond Does not know n Period: Week Month Year Two years Does not respond Does not know
	Marital status	Single Married Civil Union Divorced Separated Widower Does not respond Does not know
	Activity condition	Working Looking for a job Student Dedicated to household chores Does not work Does not respond Does not know
	Condition of existence of serious health problem or physical limitation	Yes you have a health problem or physical limitation Has no health problem or physical limitation Does not respond Does not know

(Continued)

Category	Variable	Classification
Non-resident children 12 years of age or older	Total children	n Children None Does not respond Does not know
	Place of residence or migration	Same house or building Another house of the same locality Different locality but the same municipality Another municipality of the same state Other state of Mexico U.S. Another country Does not respond Does not know
	Migration status to the United States	Yes you have worked or lived in the United States Has not worked or lived in the United States Does not respond Does not know

TOPIC: DEMOGRAPHICS FOR FOLLOW-UP PERSON

Category	Variable	Classification
Subtopic: General data of follow-up study subject (SES)		
SES data registration and verification	Sex	Male Female
	Verification of date of birth	Yes the date is correct Date is not correct (n Day, n Month, n Year)
	Age	n Years Does not respond Does not know
	Verification of place of birth	Yes that is correct Not correct
	Place (country) of birth	State Country Does not respond Does not know
Subtopic: Marital status		
SES marital status	Current marital status	Single Married Civil Union Divorced Separated Widower
	Condition of permanence with the partner registered in 2012 or 2015	Yes continues with the same partner Does not continue with the same partner Does not respond Does not know

(Continued)

Category	Variable	Classification
SES Marital status	Condition of dissolution of the last marriage or union after 2012 or 2015	Yes it ended after the interview Did not end after the interview Does not respond Does not know
	Remarriage or union status after 2012 or 2015	Yes it started after the interview Did not start after the interview Does not respond Does not know
Subtopic: Fertility		
SES children born alive	Verification of the number of children born alive registered in 2012 or 2015	The number of registered children is correct, The number of registered children is not correct
	Number of children born alive	n Sons/Daughters None Does not respond Does not know
	Number of surviving children	n Sons/Daughters All Does not respond Does not know
Subtopic: Migration to the United States		
Place of residence or migration	Time of residence in the locality	n Years Less than 6 months 6 to 12 months Has always lived here Does not respond Does not know
	Change of address after 2012 or 2015	Yes you changed your address You did not change your address Does not respond Does not know
	Impact of housing due to disaster occurrence after 2012 or 2015	Yes it affected the home It did not affect the home Does not respond Does not know
Residence or work in the United States	Condition of stay due to residence in the United States after 2012 or 2015	Yes you have worked or lived in the United States, You have not lived or worked in the United States, Born in the U.S. Does not respond Does not know
First stay in the United States for work or residence	Condition of first stay due to residence or work in the United States	Yes it was the first time of work or residence in the United States It was not the first time of work or residence in the United States Does not respond Does not know
Total stay in the United States	Total time of residence or work in the United States	n Years 12 months or less Does not respond Does not know

(Continued)

Category	Variable	Classification
Contribution to SSS and residence permit	Contribution condition to the social security system	Yes contributed Did not contribute Does not respond Does not know
	Mode of contribution to the social security system	With my name With someone else's name With my name or someone else's name
	Permanent residence permit or US citizenship	Is a permanent resident Is a citizen No, neither Does not respond Does not know
Subtopic: Major events that occurred between 2015 and 2018		
Health risk events or family situation	Deceased child and year of occurrence	Yes died: n Year (2015 to 2018) Did not pass away Does not respond Does not know
	Care of a sick relative and year of occurrence	Yes took care of relative: n Year (2015 to 2018) Did not take care of relative Does not respond Does not know
	Impact of housing by disaster and year of occurrence	Yes, it happened and it affected the home: n Year (2015 to 2018) Did not affect Does not respond Does not know
	Victim of accident, crime or other serious event and year of occurrence	Yes was a victim: n Year (2015 to 2018) Was not a victim Does not respond Does not know
	Impact of financial situation due to any loss	Yes there was a loss and it affected financial situation: n Year (2015 to 2018) Did not affect Does not respond Does not know

TOPIC: HOME RESIDENT REGISTRATION CARD FOR NEW PERSON

Category	Variable	Classification
Subtopic: Sociodemographic data of members who reside in the SE's household and spouse		
Household residents	Condition of residence in the home of only SE and his spouse	Yes, you only reside with SE or both (SE and your spouse), No, other people reside with SE
	Name of household residents	n Residents Name (without surname) or identification characteristics of the resident
General characteristics of household residents	Sex	Male Female
	Relationship (with SE and his spouse)	Child Stepchild Adopted child Foster child Mother/Father Parent-in-law Grandparent Grandchild Great grandchild Son/daughter-in-law Brother/sister or step brother/step sister Brother/sister-in-law/cousin Uncle/aunt Nephew/niece Other relative No relative
	Age	n Years Less than 1 year 98 or more Does not know
Sociodemographic characteristics of residents of the household aged 12 years or over	Education	n Level: None Elementary Secondary or middle school Technical degree with middle school completed Preparatory level of teacher training Preparatory or high school Technical career with high school completed Bachelor's degree or engineering Graduate school Grade: Does not respond Does not know

(Continued)

Category	Variable	Classification
Sociodemographic characteristics of residents of the household aged 12 years or over	Marital status	Single Married Civil Union Divorced Separated Widower Does not respond Does not know
	Activity condition	Working Looking for work Student Dedicated to household chores Does not work Does not respond Does not know
Health and migration of resident children 12 years of age or older	Condition of existence of serious health problem or physical limitation	Yes you have a health problem or physical limitation Has no health problem or physical limitation Does not respond Does not know
	Total children	n Children None Does not respond Does not know
	Permanent residence status in the SE's home	Yes you have always lived with SE Has not always lived with SE Does not respond Does not know
	Change of residence of SE and child	Child came to reside with SE SE changed with child Does not respond Does not know
	Migration status to the United States	Yes you have worked or lived in the United States Has not worked or lived in the United States Does not respond, Does not know
	Total years of residence or work in the US	n Years 12 months or less Does not respond Does not know

TOPIC: NON-RESIDENT CHILDREN OF NEW PERSON

Category	Variable	Classification
Subtopic: Sociodemographic data of children who do not reside in the home		
General characteristics of non-resident children of the household	Condition of existence of children of the SE and/or their spouse who do not reside in the home	Yes they have a child who does not reside in the home They do not have a child who does not reside in the home Does not respond Does not know
	Name of children who do not reside in the home	Name (without surname) or identification characteristics of the non-resident child
	Sex	Male Female
	Relationship (with SE and his spouse)	Child Stepchild Adopted child Foster child Other
	Age	n Years Less than 1 year 98 or more Does not know
Non-resident children 12 years of age or older	Education	n Level: None Elementary Secondary or middle school Technical degree with middle school completed Preparatory level of teacher training Preparatory or high school Technical career with high school completed Bachelor's degree or engineering Graduate school Grade: Does not respond Does not know
	Frequency of contact (in person, by mail, computer, or phone)	n Times: Never Does not respond Does not know n Period: Week Month Year Less than once a year Does not respond Does not know

(Continued)

Category	Variable	Classification
Non-resident children 12 years of age or older	Marital status	Single Married Civil Union Divorced Separated Widower Does not respond Does not know
	Condition of existence of serious health problem or physical limitation	Yes you have a health problem or physical limitation Has no health problem or physical limitation Does not respond Does not know
	Activity condition	Working Looking for work Student Dedicated to household chores Does not work Does not respond Does not know
	Total children	n Children None Does not respond Does not know
	Place of residence or migration	Same house or building Another house of the same locality Different locality but the same municipality Another municipality of the same state Other state of Mexico U.S. Another country Does not respond Does not know
	Migration status to the United States	Yes has worked or lived in the United States Has not worked or lived in the United States Does not respond Does not know
	Total years of residence or work in the US	n Years 12 months or less Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Sociodemographic data of deceased children		
General characteristics of deceased children	Condition of existence of deceased children of the SE and/ or their spouse	Yes has a deceased child Has no deceased child Does not respond Does not know
	Name of deceased children	Name (without surname) or identifying characteristics of the deceased child
	Sex	Male Female
	Relationship (with SE and his spouse)	Child Stepchild Adopted child Foster child Other
	Age at death	n Years Less than 1 year Does not respond Does not know
	Year of death	n Year Does not respond Does not know
Children deceased at the age of 12 years or older	Education	n Level: None Elementary Secondary or middle school Technical degree with middle school completed Preparatory level of teacher training Preparatory or high school Technical career with high school completed Bachelor's degree or engineering Graduate school Grade: Does not respond Does not know
	Migration status to the United States	Yes has worked or lived in the United States Has not worked or lived in the United States Does not respond Does not know

TOPIC: DEMOGRAPHICS FOR NEW PERSON

Category	Variable	Classification
Subtopic: General data of SE of new person		
NP SE data log	Sex	Male Female
	Date of birth	n Day, n Month, n Year Does not know
	Place (country) of birth	State Country Does not respond Does not know
	Education	n Level: None Elementary Secondary or middle school Technical degree with middle school completed Preparatory level of teacher training Preparatory or high school Technical career with high school completed Bachelor's degree or engineering Graduate school Grade: Does not respond Does not know
	Literacy status	Yes, can read and write a message Cannot read and write a message Does not respond Does not know
	Condition of knowing how to count	Yes knows how to count Does not know how to count Does not respond Does not know
Subtopic: Marital status		
Marital status of SE of NP	Current marital status	Single Married Civil Union Divorced Separated Widower
	Year or age of dissolution of last marriage or union	n Year or n Age Does not respond Does not know
	Year or age of beginning of last marriage or union	n Year or n Age Does not respond Does not know
	Marriage or union status prior to the current or last	Yes you had another union or marriage before You had no other union or marriage before Does not respond Does not know

(Continued)

Category	Variable	Classification
Marital status of SE of NP	Marital status before current union or marriage	Single Married Civil Union Divorced Separated Widower Does not respond Does not know
	Cause of dissolution of the union or marriage prior to the current one	Separation Divorce Widowhood Does not respond Does not know
	Number of unions prior to the current or last one	n Unions Does not respond Does not know
Subtopic: Fertility		
Live born children of SE of NP	Number of children born alive	n Sons/Daughters None Does not respond Does not know
	Number of surviving children	n Sons/Daughters All Does not respond Does not know
Subtopic: Migration history		
SE migration from NP	Time of residence in the locality	n Years Less than 6 months 6 to 12 months Has always lived here Does not respond Does not know
Subtopic: Migration to the United States		
Residence or work in the United States	Condition of stay due to residence in the United States	Yes you have worked or lived in the United States Have not lived or worked in the United States Born in the U.S. Does not respond Does not know
Total stay in the United States	Total time of residence or work in the United States	n Years 12 months or less Does not respond Does not know
Social Security	Contribution condition to the social security system	Yes contributed Did not contribute Does not respond Does not know
	Mode of contribution to the social security system	With my name With someone else's name With my name or someone else's name

(Continued)

Category	Variable	Classification
Migratory situation	Permanent residence permit or US citizenship	Permanent resident Citizen No, neither Does not respond Does not know
Spouse participation in raising children	Raising children without a spouse	Yes I raised them without a spouse Yes, but there were others with me Did not raise them without a spouse Does not respond Does not know
	Parenting time without a spouse	n Years 12 months or less Always Does not respond Does not know
Subtopic: Language and religion		
Language or language spoken by the SE of NP	English speaking condition (proficiency)	Yes you speak English Yes speaks some English Does not speak English Does not respond Does not know
Subtopic: Major events that occurred between 2008 and 2018		
Health risk events or family situation	Care of a sick relative and year of occurrence	Yes took care of: n Year (2008 to 2018) Did not take care of Does not respond Does not know
	Impact of housing by disaster and year of occurrence	Yes it occurred and affected the home: n Year (2008 to 2018) Did not affect Does not respond Does not know
	Victim of accident, crime or other serious event and year of occurrence	Yes was a victim: n Year (2008 to 2018) Was not a victim Does not respond Does not know
	Impact of financial situation due to any loss	Yes there was a loss and it affected financial situation: Year (2008-2018) Did not affect Does not respond Does not know

TOPIC: HEALTH

Category	Variable	Classification
Subtopic: Hypertension		
Diagnosis and control of hypertension	Diagnosis of hypertension (or high blood pressure)	Yes, you were diagnosed with hypertension You were not diagnosed with hypertension Does not respond Does not know
	Medical treatment for hypertension control	Yes you are taking medication You are not taking medication Does not respond Does not know
Subtopic: Diabetes		
Diagnosis and control of diabetes	Diagnosis of diabetes	Yes you were diagnosed with diabetes You were not diagnosed with diabetes Does not respond Does not know
	Oral treatment for diabetes control	Yes you are taking oral medication You are not taking oral medication Does not respond Does not know
	Insulin treatment for diabetes control	Yes you are using insulin You are not using insulin Does not respond Does not know
	Frequency of measurement of sugar level in blood or urine	n Times n Period: Week, Month, Year, Never Does not respond Does not know
Subtopic: Cancer		
Cancer diagnosis and treatment	Cancer diagnosis	Yes, you were diagnosed with cancer You were not diagnosed with cancer Does not respond Does not know
	Number of cancers suffered	n Cancers Does not respond Does not know
	Types of cancer suffered	Breast Cervical/cervix Endometrial/Uterine Liver Stomach Pancreas Prostate Colorectal Lung Others Does not respond Does not know

(Continued)

Category	Variable	Classification
Cancer diagnosis and treatment	Medical consultation about cancer in the last two years	Yes you have had a medical consultation You have not had a medical consultation Does not respond Does not know
	Type of treatments received	Chemotherapy or medication Surgery or Biopsy Radiation or X-Rays Medication or Treatment for symptoms (pain, nausea, rash) None Other Does not respond Does not know
	Current treatment status for cancer	Yes you are receiving treatment You are not receiving treatment Does not respond Does not know
	Year or age of most recent cancer diagnosis	n Year or n Age Does not respond Does not know
Subtopic: Lung disease		
Diagnosis and treatment for respiratory disease	Diagnosis of respiratory disease (asthma or emphysema)	Yes, you were diagnosed with respiratory disease You were not diagnosed with respiratory disease Does not respond Does not know
	Medical treatment for respiratory disease	Yes has treatment Has no treatment Does not respond Does not know
	Condition of receiving oxygen	Yes you are receiving oxygen You are not receiving oxygen Does not respond Does not know
Subtopic: Heart attack		
Diagnosis and treatment for heart attack/infarction	Diagnosis of heart attack/infarction	Yes you were diagnosed with a heart attack You were not diagnosed with a heart attack Does not respond Does not know
	Year or age of most recent infarction	n Year or n Age Does not respond Does not know
	Medical treatment for heart disease	Yes has treatment Has no treatment Does not respond Does not know
Diagnosis of other heart diseases	Diagnosis of other heart diseases (heart failure/congestive heart failure/arrhythmia or angina)	Yes you were diagnosed with another heart disease You were not diagnosed with other heart disease Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Cerebral embolism		
Diagnosis and treatment for stroke	Diagnosis of stroke (stroke or transient ischemic attack)	Yes, you were diagnosed with a stroke You were not diagnosed with a stroke Does not respond Does not know
	Long term effects of stroke: a) Weakness in arms and/or legs or decreased movement or use	Yes you have difficulty moving or using Has no difficulty to move or use Does not respond Does not know
	b) Difficulty speaking or eating	Yes you have difficulty speaking or eating Has no difficulty speaking or eating Does not respond Does not know
	c) Difficulty with sight or vision	Yes you have difficulty seeing Has no difficulty seeing Does not respond Does not know
	d) Difficulty thinking or expressing yourself	Yes you have difficulty thinking or expressing yourself Has no difficulty thinking or expressing yourself Does not respond Does not know
	Medical treatment for stroke or complications	Yes has treatment Has no treatment Does not respond Does not know
	Condition of receiving therapy or rehabilitation	Yes you receive therapy or rehabilitation Does not receive therapy or rehabilitation Does not respond Does not know
	Year or age of most recent stroke	n Year or n Age Does not respond Does not know
Subtopic: Arthritis		
Diagnosis and treatment for arthritis	Diagnosis of arthritis or rheumatism	Yes you have been diagnosed with arthritis or rheumatism You were not diagnosed with arthritis or rheumatism Does not respond Does not know
	Feeling of pain, stiffness, or swelling of joints or joints	Yes you feel pain, stiffness, or swelling You do not feel pain, stiffness, or swelling Does not respond Does not know
	Medical treatment for arthritis or rheumatism	Yes has treatment Has no treatment Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Other diseases		
Diagnosis and treatment for other diseases	Medical diagnosis of: a) Kidney infection	Yes you were diagnosed with a kidney infection You were not diagnosed with a kidney infection Does not respond Does not know
	b) Liver infection	Yes you were diagnosed with a liver infection You were not diagnosed with a liver infection Does not respond Does not know
	c) Tuberculosis	Yes, you were diagnosed with tuberculosis You were not diagnosed with tuberculosis Does not respond Does not know
	d) Pneumonia	Yes, you were diagnosed with pneumonia You were not diagnosed with pneumonia Does not respond Does not know
	e) Herpes or Herpes Zoster	Yes, you were diagnosed with herpes You were not diagnosed with herpes Does not respond Does not know
Subtopic: Falls		
Fractures and medical treatment	Falls in the last two years	Yes has fallen Has not fallen Does not respond Does not know
	Number of falls	n Times Does not respond Does not know
	Condition of medical treatment	Yes you needed medical treatment Did not need medical treatment Does not respond Does not know
	Condition of having a bone fracture in the last two years	Yes it fractured Did not fracture Does not respond Does not know
Fractures and medical treatment	Bone fracture(s)	Hip(s) Hip and other bone(s) Other bone(s) Does not respond Does not know
Subtopic: Sight		
Visual capability (or functioning)	Condition of use of lenses (glasses or contact)	Yes wears glasses Does not wear glasses Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Hearing		
Hearing	Condition of use of hearing aid (hearing aids or auditory device)	Yes you wear a hearing aid Does not wear a hearing aid Does not respond Does not know
Subtopic: Preventive care		
Detection (prevention) of diseases or health conditions of SE	Medical tests or procedures, in the last two years, for detection (prevention) of: a) Colon cancer (colonoscopy, sigmoidoscopy or other test)	Yes, colon cancer test was done No test for colon cancer Does not respond, Does not know
	b) Cholesterol	Yes, cholesterol analysis was performed No cholesterol analysis was performed Does not respond Does not know
	c) Tuberculosis	Yes, tuberculosis test was performed Tuberculosis test was not performed Does not respond Does not know
	d) Diabetes	Yes, a diabetes test was performed Diabetes test was not performed Does not respond Does not know
	e) Hypertension or high blood pressure	Yes, a test for hypertension was performed Hypertension test was not performed Does not respond Does not know
	f) Influenza	Yes you got a flu vaccine You did not get a flu vaccine Does not respond Does not know
	g) Pneumonia	Yes you got vaccinated against pneumonia vaccine Not vaccinated against pneumonia vaccine Does not respond Does not know
Subtopic: Tobacco		
Tobacco use in the last two years	Condition of having smoked 100 cigarettes in your life	Yes you have smoked Has not smoked Does not respond Does not know

(Continued)

Category	Variable	Classification
Current tobacco use	Current tobacco use status	Yes, you currently smoke cigarettes Does not currently smoke cigarettes Does not respond Does not know
	Frequency of tobacco use	Every day Not everyday Does not respond Does not know
	Cigarettes consumed per day	n Cigarettes (or average per day) 87 and more cigarettes Does not respond Does not know
Subtopic: Alcoholic drinks		
Consumption of alcoholic beverages, frequency and intensity	Condition of current consumption of alcoholic beverages (beer, wine, liquor or pulque)	Yes you currently drink alcoholic beverages Does not currently drink alcoholic beverages Has never used alcohol Does not respond Does not know
	Days per week of consumption, in the last three months	n Days None Does not respond Does not know
	Consumption per day, in the last three months	n Alcoholic beverages Does not respond Does not know
	Days you had four or more drinks, in the last three months	n Days None 87 and more days Does not respond, 99. Does not know
Subtopic: Weight and height		
Physical characteristics	Comparison of the current weight with that of two years ago	Increased 5 kilos or more Decreased 5 kilos or more Remained more or less the same Does not respond Does not know
	Change of habits (exercise or diet), in the last two years	Yes changed habits to gain or lose weight Did not change habits to gain or lose weight Does not respond Does not know
Physical characteristics	Actual weight	n Kilos Does not respond Does not know
	Current height	n Meters and centimeters Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Symptoms		
Loss of limbs	Condition of total or partial loss of limbs (legs or arms) due to accident or illness	Yes part or all of a limb is missing Not a part or a whole limb is missing Does not respond Does not know
	Limb loss condition in the past two years	Yes, lost a limb in this period Did not lose a limb in this period Does not respond Does not know
Occupational illness or work accident	Condition of medical diagnosis of health problem due to work activity	Yes you have a health problem Does not have a health problem Never worked Does not respond Does not know
Compulsory rest	Days in bed due to illness or injury, during the last 12 months	n Days None Does not respond Does not know

TOPIC: CONTROL AND HEALTH SERVICES

Category	Variable	Classification
Subtopic: Access and use of health services		
Right of residence	Condition of institution of access to benefits: a) Social Security (IMSS)	You do have the right to IMSS You do not have the right to IMSS Does not respond Does not know
	b) ISSSTE/ISSSTE Estatal	You do have the right to ISSSTE You do not have the right to ISSSTE Does not respond Does not know
	c) Seguro Popular	You are entitled to Seguro Popular You are not entitled to Seguro Popular Does not respond Does not know
	d) Pemex, Defense or Navy	You do have the right to Pemex, Defense or Navy You do not have the right to Pemex, Defense or Navy Does not respond Does not know
	e) Private medical insurance	You are entitled to Private Medical Insurance You are not entitled to Private Medical Insurance Does not respond Does not know

(Continued)

Category	Variable	Classification
Right of residence	f) Other	Yes you have the right to other health services You do not have the right to other health services Does not respond Does not know
	Year of discharge from the institution of access to benefits	n Year Does not respond Does not know
	Reason for eligibility	Worker Affiliated on your own Retired Spouse of insured Mother or father of insured Other Does not respond Does not know
No eligibility	Confirmation of non-eligibility	You do have the right to medical services You do not have the right to medical services Does not respond Does not know
Hospitalizations	Condition of major surgery, in the last four years	You did have major surgery Did not have major surgery Does not respond Does not know
	Year(s) of major surgery	Year: 2015, 2016, 2017, 2018
	Total hospitalizations in the last year	n Nights None Does not respond Does not know
	Institution(s) of hospitalization	IMSS ISSSTE/ISSSTE Estatal Secretary of Health or state health services IMSS "Oportunidades" Pemex, Defense or Marine Private clinic or hospital Red Cross Other Does not respond Does not know
	Hospitalization expense(s)	n Pesos Nothing Does not respond Does not know
Hospitalizations	Expense greater than \$7,500 pesos per hospitalization(s)	Yes it was more than \$7,500 pesos It was not more than \$7,500 pesos Does not know
	Spending greater than \$4,000 pesos per hospitalization(s)	Yes it was more than \$4,000 pesos It was not more than \$4,000 pesos Does not know
	Spending greater than \$30,000 pesos per hospitalization(s)	Yes it was more than \$30,000 pesos It was not more than \$30,000 pesos Does not know

(Continued)

Category	Variable	Classification
Subtopic: Use of health services		
Dental health services used in the last year	Number of dental visits	n Times None Does not respond Does not know
	Payment for dental services	n Pesos Nothing Paid in-kind Does not respond Does not know
	Amount greater than \$2,000 pesos for dental health services	Yes it was more than \$2,000 pesos It was not more than \$2,000 pesos Does not know
	Amount greater than \$400 pesos for dental health services	Yes it was more than \$400 pesos It was not more than \$400 pesos Does not know
	Amount greater than \$15,000 pesos dental health services	Yes it was more than \$15,000 pesos It was not more than \$15,000 pesos Does not know
	Institution(s) or place of dental care	IMSS ISSSTE/ISSSTE Estatal Secretary of Health or state health services IMSS "Oportunidades" PEMEX, Defense or Marine Private clinic or hospital Red Cross Pharmacy office Chiropractor/Homeopath/Healer Other Does not respond Does not know

(Continued)

Category	Variable	Classification
Outpatient surgery services used in the last year	Number of surgical procedures (without hospitalization)	n Times None Does not respond Does not know
	Payment for outpatient surgery services	n Pesos Nothing Paid in-kind Does not respond Does not know
	Amount greater than \$2,000 pesos for outpatient surgery services	Yes it was more than \$2,000 pesos It was not more than \$2,000 pesos Does not know
	Amount greater than \$400 pesos for outpatient surgery services	Yes it was more than \$400 pesos It was not more than \$400 pesos Does not know
	Amount greater than \$15,000 pesos for outpatient surgery services	Yes it was more than \$15,000 pesos It was not more than \$15,000 pesos Does not know
	Institution(s) or place of ambulatory surgery	IMSS ISSSTE/ISSSTE Estatal Secretary of Health or state health services IMSS "Oportunidades" PEMEX, Defense or Marine Private clinic or hospital Red Cross Pharmacy office Chiropractor/Homeopath/Healer Other Does not respond Does not know
Medical services used in the last year	Number of medical consultations	n Times None Does not respond Does not know
	Payment for medical consultations	n Pesos Nothing Paid in-kind Does not respond Does not know
	Amount greater than \$2,000 pesos for medical consultations	Yes it was more than \$2,000 pesos It was not more than \$2,000 pesos Does not know
	Amount greater than \$400 pesos for medical consultations	Yes it was more than \$400 pesos It was not more than \$400 pesos Does not know

(Continued)

Category	Variable	Classification
Medical services used in the last year	Amount greater than \$15,000 pesos for medical consultations	Yes it was more than \$15,000 pesos It was not more than \$15,000 pesos Does not know
	Institution(s) or place of medical consultations	IMSS ISSSTE/ISSSTE Estatal Secretary of Health or state health services IMSS "Oportunidades" PEMEX, Defense or Marine Private clinic or hospital Red Cross Pharmacy office Chiropractor/Homeopath/Healer Other Does not respond Does not know
	Consultation with a pharmacy or apothecary clerk	Yes consulted a pharmacist Did not consult a pharmacist Does not respond Does not know
	Monthly payment for medications used	n Pesos Nothing Paid in-kind Does not respond Does not know
	Amount greater than \$400 pesos for medications used	Yes it was more than \$400 pesos It was not more than \$400 pesos Does not know
	Amount greater than \$200 pesos for medications used	Yes it was more than \$200 pesos It was not more than \$200 pesos Does not know
	Amount greater than \$2,000 pesos for medications used	Yes it was more than \$2,000 pesos It was not more than \$2,000 pesos Does not know
Subtopic: Medical expenses		
Financing medical expenses	Main financier of medical expenses	Child Son/Daughter-in-law Grandchild Father/Mother Other relative Other person Respondent and/or spouse Did not have expenses Does not respond Does not know

TOPIC: COGNITIVE PROXY

Category	Variable	Classification
Subtopic: Evaluation of cognitive abilities and skills of the SE		
SE cognitive functionality	Memory evaluation in the present	Excellent Very good Good Fair Poor Does not respond Does not know
	Comparison with memory from two years ago	Better Same Worse Does not respond Does not know
	Assessment of ability to make judgments and make decisions	Excellent Very good Good Fair Poor Does not respond Does not know
	Assessment of ability to organize daily activities	Excellent Very good Good Fair Poor Does not respond Does not know
Cognitive functionality with respect to current memory compared to two years earlier	Memory on family aspects (occupations, birthdays, addresses)	Improved Not much changed Gotten worse Does not respond Does not know
	Degree of improvement (or improvement) in memory	Much improved A bit improved Does not respond Does not know
	Degree of memory impairment	Much worse A bit worse Does not respond Does not know
	Memory on recent events (short term)	Improved Not much changed Gotten worse Does not respond Does not know

(Continued)

Category	Variable	Classification
Cognitive functionality with respect to current memory compared to two years earlier	Degree of improvement (or improvement) in recent memory	Much improved A bit improved Does not respond Does not know
	Degree of recent memory impairment	Much worse A bit worse Does not respond Does not know
	Memory on everyday conversations	Improved Not much changed Gotten worse Does not respond Does not know
	Degree of improvement (or improvement) in memory of everyday conversations	Much improved A bit improved Does not respond Does not know
	Degree of memory impairment about everyday conversations	Much worse A bit worse Does not respond Does not know
	Report on personal aspects (address and telephone number)	Improved Not much changed Gotten worse Does not respond Does not know
	Degree of improvement (or improvement) of memory on personal aspects	Much improved A bit improved Does not respond Does not know
	Degree of memory impairment on personal aspects	Much worse A bit worse Does not respond Does not know
	Memory on orientation in the present time (day and month)	Improved Not much changed Gotten worse Does not respond Does not know
	Degree of improvement (or improvement) of memory on orientation over time	Much improved A bit improved Does not respond Does not know
	Degree of impairment of memory on orientation in time	Much worse A bit worse Does not respond Does not know

(Continued)

Category	Variable	Classification
Cognitive functionality with respect to current memory compared to two years earlier	Memory over usual storage locations	Improved Not much changed Gotten worse Does not respond Does not know
	Degree of improvement (or improvement) of memory over usual storage locations	Much improved A bit improved Does not respond Does not know
	Degree of memory impairment over usual storage locations	Much worse A bit worse Does not respond Does not know
	Memory over unusual storage locations	Improved Not much changed Gotten worse Does not respond Does not know
	Degree of memory enhancement (or improvement) over unusual storage locations	Much improved A bit improved Does not respond Does not know
	Degree of memory impairment over unusual storage locations	Much worse A bit worse Does not respond Does not know
Cognitive functionality regarding daily activities compared to two years earlier	Ability to operate familiar (or commonly used) household appliances	Improved Not much changed Gotten worse Does not respond Does not know
	Degree of improvement (or enhancement) of ability to operate known household appliances	Much improved A bit improved Does not respond Does not know
	Degree of impairment of the ability to operate known household appliances	Much worse A bit worse Does not respond Does not know
	Ability to learn to use new household appliances	Improved Not much changed Gotten worse Does not respond Does not know
	Degree of improvement (or improvement) in the ability to learn to use new household appliances	Much improved A bit improved Does not respond Does not know

(Continued)

Category	Variable	Classification
Cognitive functionality regarding daily activities compared to two years earlier	Degree of impairment in the ability to learn to use new household appliances	Much worse A bit worse Does not respond Does not know
	Ability for new learning in general	Improved Not much changed Gotten worse Does not respond Does not know
	Degree of improvement (or improvement) of the capacity for new learning in general	Much improved A bit improved Does not respond Does not know
	Degree of deterioration of the capacity for new learning in general	Much worse A bit worse Does not respond Does not know
	Ability to understand television events or stories	Improved Not much changed Gotten worse Does not respond Does not know
	Degree of improvement (or improvement) in the ability to understand television events or stories	Much improved A bit improved Does not respond Does not know
	Degree of impairment in the ability to understand television events or stories	Much worse A bit worse Does not respond Does not know
	Ability to decide on daily and personal matters	Improved Not much changed Gotten worse Does not respond Does not know
	Degree of improvement (or improvement) in the ability to decide on daily and personal matters	Much improved A bit improved Does not respond Does not know
	Degree of impairment of the ability to decide on daily and personal matters	Much worse A bit worse Does not respond Does not know
Ability to handle money for purchases	Improved Not much changed Gotten worse Does not respond Does not know	

(Continued)

Category	Variable	Classification
Cognitive functionality regarding daily activities compared to two years earlier	Degree of improvement (or improvement) in the ability to handle money for purchases	Much improved A bit improved Does not respond Does not know
	Degree of impairment of the ability to handle money for purchases	Much worse A bit worse Does not respond Does not know
	Ability to handle financial affairs (pension or bank)	Improved Not much changed Gotten worse Does not respond Does not know
	Degree of improvement (or improvement) in the ability to handle financial affairs	Much improved A bit improved Does not respond Does not know
	Degree of impairment of the ability to handle financial affairs	Much worse A bit worse Does not respond Does not know
	Ability to make calculations on daily and time matters	Improved Not much changed Gotten worse Does not respond Does not know
	Degree of improvement (or improvement) in the ability to make calculations on daily and time matters	Much improved A bit improved Does not respond Does not know
	Degree of impairment of the ability to make calculations on daily and time matters	Much worse A bit worse Does not respond Does not know
	Ability to understand or reason what is happening	Improved Not much changed Gotten worse Does not respond Does not know
	Degree of improvement (or improvement) in the ability to understand or reason what is happening	Much improved A bit improved Does not respond Does not know
	Degree of impairment of the ability to understand or reason what is happening	Much worse A bit worse Does not respond Does not know

(Continued)

Category	Variable	Classification
Mental disorders	Condition of disorientation or confusion in familiar surroundings	Yes has been disoriented Has not been disoriented Does not respond Does not know
	Condition of being lost and requiring help	Yes has been lost Has not been lost Does not respond Does not know
	Condition of being able to leave alone for an hour	Yes can be left alone Cannot be left alone Does not respond Does not know
	Condition of suffering from disorder or delirium	Yes you see or hear things that are not real Does not see or hear things that are not real Does not respond Does not know
Subtopic: Sampling for genetic aspects		
Saliva sample from people 60 years of age or older	SE age verification	Yes you are 60 or older Not 60 or older
	Consent to take a saliva sample	Yes, signed consent Yes, gave oral consent No, refuses
	Shot result	Yes, the sample was taken No could not take
	Label Identifier	Register the label identifier
Hair sample	SE selected for hair sampling	Yes it is selected Not selected
	Agreement for hair sampling	Yes, signed consent Yes, gave oral consent No, refuses Does not have hair
Beard hair sample	Beard	Yes has a beard No beard
	Beard sampling agreement	Yes, signed consent Yes, gave oral consent No, refuses
	Hair or beard dye	Yes has recent dye No recent dye
	Shot result	Yes, taken from the head Yes, taken from the beard No, could not take
	Label Identifier	Register the label identifier

TOPIC: PARENTS AND HELP FOR PARENTS

Category	Variable	Classification
Subtopic: Mother		
Sociodemographic data of the SE's mother	Survival condition of the mother	Yes, your mother is currently alive No your mother is not currently alive Does not respond Does not know
Subtopic: Surviving mother		
Surviving mother autonomy	Mother's age	n Age Does not respond Does not know
	Condition of needing help to perform basic needs due to health problem	Yes you need help dressing, eating, or bathing You do not need help dressing, eating, or bathing Does not respond Does not know
	Condition of being alone for an hour or more	Yes can be alone for an hour or more Cannot be alone for an hour or more Does not respond Does not know
Subtopic: Deceased mother		
Health situation of the deceased mother	Mother's age at death	n Age Does not respond Does not know
	Medical diagnosis condition of having diabetes	Yes, had a diagnosis of diabetes Had no diagnosis of diabetes Does not respond Does not know
Subtopic: Father		
Sociodemographic data of the SE's father	Survival condition of the father	Yes, your father is currently alive Your father is not currently alive Does not respond Does not know
Subtopic: Surviving father		
Surviving parent autonomy	Father's age	n Age Does not respond Does not know
	Condition of needing help to perform basic needs due to health problem	Yes you need help dressing, eating, or bathing You do not need help dressing, eating, or bathing Does not respond Does not know
	Condition of staying alone for an hour or more	Yes can be alone for an hour or more Cannot be alone for an hour or more Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Deceased father		
Health situation of the deceased father	Father's age at death	n Age Does not respond Does not know
	Medical diagnosis condition of having diabetes	Yes, had a diagnosis of diabetes Had no diagnosis of diabetes Does not respond Does not know

TOPIC: FUNCTIONALITY AND HELP

Category	Variable	Classification
Subtopic: Daily life activities		
To walk	Difficulty walking from one side of a room to the other	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Condition of use of equipment or devices to walk from one side to another (cane, walker or wheelchair)	Yes you use equipment or devices to walk from one place to another Does not use equipment or devices to walk from one place to another Does not respond Does not know
	Type of equipment you use for walking	Guardrail Walker Cane Crutches Orthopedic shoes Clamp Prosthesis Oxygen/respirator Furniture/walls Wheelchair/cart Other Does not respond Does not know
	Condition of requiring assistance to walk	Yes someone helps Someone does not help Does not respond Does not know

(Continued)

Category	Variable	Classification
Take a bath	Difficulty bathing in a tub or shower	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Condition of requiring assistance to bathe in a tub or shower	Yes someone helps Someone does not help Does not respond Does not know
Eat	Difficulty eating or cutting your food	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Condition of requiring help to eat or cut your food	Yes someone helps Someone does not help Does not respond Does not know
Going to bed	Difficulty getting into and out of bed	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Condition of use of equipment or appliances for going to bed and getting out of bed	Yes you use equipment or devices to walk from one place to another Does not use equipment or devices to walk from one place to another Does not respond Does not know
	Type of equipment you use to get into and out of bed	Guardrail Walker Cane Crutches Orthopedic shoes Clamp Prosthesis Oxygen/respirator Furniture/walls Wheelchair/cart Other Does not respond Does not know
	Condition of requiring assistance getting into and out of bed	Yes someone helps Someone does not help Does not respond Does not know

(Continued)

Category	Variable	Classification
Use the toilet	Difficulty using the toilet, getting on and off, or squatting	Yes has difficulty Has no difficulty Cannot do it Does not do it Does not respond Does not know
	Condition of requiring assistance to use the toilet, getting on and off, or squatting	Yes someone helps Someone does not help Does not respond Does not know
Subtopic: Help with activities of daily living		
People and time of help in activities of daily living	Name and registration number of person(s) who help most often in daily activities	Name Registration number Not included in lists
	Relationship with SE	Spouse Child Child-in-law Grandchild Father/Mother Other relative Other person Paid person Does not respond Does not know
	Days in the past month that helped with activities of daily living	n Days Everyday Does not respond Does not know
	Hours per day of help	n Hours Less than 1 hour Does not respond Does not know

TOPIC: HELP TO OR FROM CHILDREN

Category	Variable	Classification
Subtopic: Surviving children		
Surviving children	Condition of having (interviewee or spouse) surviving children (biological, stepchildren, adopted or fostered)	Yes you have surviving children Does not have any surviving children Does not respond Does not know
Subtopic: Financial aid granted		
Amounts of the types of financial aid awarded to children (SE or your spouse)	Condition of having provided goods or a large sum of money to children and/or grandchildren, in the last 10 years	Yes gave a house, business, property or a large sum of money Did not give house, business, property or large sum of money Does not respond Does not know
	Help was provided in the last two years	Yes provided the help in this period Did not provide the help in this period Does not respond Does not know
	Condition of having provided goods or a large sum of money to children and/or grandchildren, in the last two years	Yes gave a house, business, property or a large sum of money Did not give house, business, property or large sum of money Does not respond Does not know
	Condition of helping children and/or grandchildren with money or in kind (for education), in the last two years	Yes gave help in money or in-kind Did not give help in money or in-kind Does not respond Does not know
Subtopic: Non-financial aid granted		
Aid time granted by SE or your spouse	Condition of helping children, daughter-in-law/son-in-law, grandchildren at least one hour a week, in the last two years	Yes helped(s) for at least an hour Does not help for at least an hour Does not respond Does not know
Subtopic: Home		
SE residence	Temporary residence with children	Yes with other Does not live with another child Always lives here Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Financial aid received		
Amounts of financial aid received (SE or your spouse)	Condition of having received goods or a large amount of money, in the last 10 years	Yes gave a house, business, property or a large sum of money Did not give house, business, property or large sum of money Does not respond Does not know
	Property assistance was received in the last two years	Yes received this help (from home, business, property or large sum of money) Did not receive this help (from home, business, property or large sum of money) Does not respond Does not know
	Condition of having received assets or a large amount of money from children and/or grandchildren, in the last two years	Yes you received a house, business, property or a large sum of money Did not receive a house, business, property or large sum of money Does not respond Does not know
	Condition of receiving help in money or kind from children and/or grandchildren, in the last two years	Yes he received(s) help in money or in-kind Did not receive(s) help in money or in-kind Does not respond Does not know
	Children/grandchildren who gave help	Child's name and registration number All Does not respond Does not know
Subtopic: Non-financial aid received		
Time of help received from family members of the SE, or from your spouse, in daily activities	Condition of receiving help at least one hour a week from children, daughter-in-law/son-in-law, grandchildren, in the last two years	Yes they helped you with chores, errands or transportation They did not help you with chores, errands or transportation Does not respond Does not know
	Family member(s) who helped	Child's name and Registration number All Does not respond Does not know

(Continued)

Category	Variable	Classification
Time of help received from family members of the SE, or from your spouse, in daily activities	Total hours and Period of aid received	n Hours: Does not respond Does not know n Period: Day Week Month Year Does not respond Does not know
	Time per week of aid received	Less than 2 hours per week 2 to 4 hours per week More than 4 hours per week Does not respond Does not know
Subtopic: Neighbors		
Nearby social networks	Condition of having relatives close to your residence	Yes you have relatives in the same locality, <i>barrio</i> or neighborhood You do not have relatives in the same locality, <i>barrio</i> or neighborhood Does not respond Does not know

TOPIC: EMPLOYMENT

Category	Variable	Classification
Subtopic: Work history		
Paid or unpaid work	Paid work condition (pay or gain) at any time in your life	Yes you have had paid work You have not had paid work Does not respond Does not know
	Unpaid work condition (on business, farm, ranch, or parcel) at any time in your life	Has helped without receiving payment or profit Has not helped without receiving payment or profit Does not respond Does not know
Subtopic: Main occupation		
Main occupation in paid work	Activities (tasks or functions) performed	Labor Activities
	Position in main occupation	Boss Self-employed Employee in a Co-op Employee with fixed wage or salary Employee working on commission Family worker without pay Non-family worker without pay Other Does not respond Does not know

(Continued)

Category	Variable	Classification
Main occupation in paid work	Condition of paid work in a local	You do (did) your main job in a locale You do not do (did) your main job in a locale Does not respond Does not know
	Place where you do (did) your work	Listing of the place or establishment Not in a locale: In a cropland, boat, pond, etc. Door to door or on the street In a vehicle: bicycle, tricycle, car, etc. (except transportation service) Small stand on street or market In your own home In your employer's or client's home In a vehicle for transportation of people or merchandise, taxi, truck, etc. (only one unit) Semi-permanent stand on street or market Other Does not respond Does not know In a locale: Permanent stand on street Commercial location: liquor store, hardware store, etc. Place of production: tortillería, bakery, carpentry, etc. Repair shop: mechanical, electrical, etc. Local services: restaurant, bar, etc. (which are not part of a chain) Local for professional, technical expertise, personal, educational, welfare services, etc. Establishments for medium and large dimension production, construction and extraction: factories, mines, oil wells, etc. Establishments for medium and large dimension commercial, financial, transportation, health, education and other services: supermarkets, banks, buslines, clinics, schools, hotels, etc. Medium and large farms, and fisheries Federal, state, and municipal administrative offices of government agencies Other Does not respond Does not know
Main occupation in paid work	Years of main activity or job	n Years Does not respond Does not know
	Condition of doing the main job in the United States	He did that job in the U.S. He did not do that job in the U.S. Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Other benefits of the main occupation		
Employment benefits or benefits from the main paid job	Benefits granted: a) IMSS	Yes they give (gave) IMSS They did not give (gave) IMSS Does not respond Does not know
	b) ISSSTE	Yes they give (gave) ISSSTE They did not give (gave) ISSSTE Does not respond Does not know
	c) SAR (Retirement Savings System)	Yes they give (gave) SAR They did not give (gave) SAR Does not respond Does not know
	d) Afores account	Yes they give (gave) account in <i>afores</i> They do not give (gave) account in <i>afores</i> Does not respond Does not know
	e) Housing credit	Yes they give (gave) housing credit They did not give (gave) housing credit Does not respond Does not know
	f) Private medical service or insurance for medical expenses	Yes they give (gave) service or insurance of medical expenses They did not give (gave) service or insurance of medical expenses Does not respond Does not know
	g) Life insurance	Yes they give (gave) life insurance They did not give (gave) life insurance Does not respond Does not know
	h) Other	Yes they give (gave) other benefits They do not give (gave) other benefits Does not respond Does not know
Subtopic: Current work activity		
Characteristics and conditions of current work activity	Activity condition	Working Looking for work Not working Does not respond Does not know
	Time spent on current job	n Hours per n Day Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Current occupation		
Occupation in current paid job	Similarity between current activity and work done during your life	Yes, the activities carried out are similar or the same No the activities carried out are not similar or the same Does not respond Does not know
	Activities (tasks or functions) performed	Labor Activities
	Position in main occupation	Boss Self-employed Employee in a Co-op Employee with fixed wage or salary Employee working on commission Family worker without pay Non-family worker without pay Other Does not respond Does not know
	Condition of paid work in a local	Yes you do your main work in a locale You did not do your main job in a locale Does not respond Does not know

(Continued)

Category	Variable	Classification
Occupation in current paid job	Place where you do your work	<p>Listing of the place or establishment</p> <p>Not in a locale:</p> <ul style="list-style-type: none"> In a cropland, boat, pond, etc. Door to door or on the street In a vehicle: bicycle, tricycle, car, etc. (except transportation service) Small stand on street or market In your own home In your employer's or client's home In a vehicle for transportation of people or merchandise, taxi, truck, etc. (only one unit) Semi-permanent stand on street or market Other Does not respond Does not know <p>In a locale:</p> <ul style="list-style-type: none"> Permanent stand on street Commercial location: liquor store, hardware store, etc. Place of production: tortillería, bakery, carpentry, etc. Repair shop: mechanical, electrical, etc. Local services: restaurant, bar, etc. (which are not part of a chain) Local for professional, technical expertise, personal, educational, welfare services, etc. <p>Establishments for medium and large dimension production, construction and extraction: factories, mines, oil wells, etc.</p> <p>Establishments for medium and large dimension commercial, financial, transportation, health, education and other services: supermarkets, banks, buslines, clinics, schools, hotels, etc.</p> <p>Medium and large farms, and fisheries</p> <p>Federal, state, and municipal administrative offices of government agencies</p> <p>Other</p> <ul style="list-style-type: none"> Does not respond Does not know
	Current job start age	<p>n Age</p> <ul style="list-style-type: none"> Does not respond Does not know
	Years of current activity or job	<p>n Years</p> <ul style="list-style-type: none"> 12 months or less Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Other benefits of current occupation		
Employment benefits or benefits from the main paid job	Benefits granted: a) IMSS	Yes they give you IMSS They do not give you IMSS Does not respond Does not know
	b) ISSSTE	Yes they give ISSSTE They do not give ISSSTE Does not respond Does not know
	c) SAR (Retirement Savings System)	Yes they give SAR They do not give SAR Does not respond Does not know
	d) Account in <i>afores</i>	Yes they offer account in <i>afores</i> They do not offer account in <i>afores</i> Does not respond Does not know
	e) Housing credit	They give you housing credit They do not give you housing credit Does not respond Does not know
	f) Private medical service or insurance for medical expenses	Yes they give you service or insurance for medical expenses They do not give you service or insurance for medical expenses Does not respond Does not know
	g) Life insurance	Yes they give you life insurance They do not give you life insurance Does not respond Does not know
	h) Other	Yes they give you other benefits They do not give you other benefits Does not respond Does not know
Total working time	Time spent on all your current jobs	n Hours per n Day Only has one job Does not respond Does not know
Work risk (health problems due to work activity)	Condition of contact with insecticides or pesticides (or chemicals)	Yes you have direct contact with substances Does not have direct contact with substances Does not respond Does not know
Subtopic: Current job inactivity		
Current job inactivity condition	Reason for current inactivity	Dedicated to household chores Retired Old age Sick or temporarily disabled Unable to work for rest of life Did not have customers or could not find work Other Does not respond Does not know

TOPIC: HOUSING

Category	Variable	Classification
Subtopic: General data		
Characteristics of the property	Type of dwelling (Interviewer observation)	Apartment in building Attic apartment Detached house House in condominium Apartment in <i>vecindad</i> (dwelling divided into separate units) Other Does not respond Does not know
	Housing located: a) On paved street	Yes No Does not respond Does not know
	b) On unpaved street	Yes No Does not respond Does not know
	c) On a highway	Yes No Does not respond Does not know
	d) On a road or sidewalk	Yes No Does not respond Does not know
	e) On one side of farm fields	Yes No Does not respond Does not know
	f) Less than 500 meters from a large avenue, with more than two lanes	Yes No Does not respond Does not know

(Continued)

Category	Variable	Classification
Characteristics of the property	Number of floors in the house	One story Two stories Three or more stories Does not respond Does not know
	Predominant material in walls	Partition, brick, stone or concrete Wood Adobe Asbestos or metal laminate Cardboard laminate Other Does not respond Does not know
	Predominant material in ceilings	Concrete, partition, or brick Palm, shingle or wood Asbestos or metal laminate Cardboard laminate Other Does not respond Does not know
	Predominant material in floors	Wood, mosaic or other covering Concrete or slabs Dirt Does not respond Does not know
	Number of rooms	n Quantity Does not respond Does not know
Home services	Piped water availability	Piped water inside the house Piped water outside the house Within the lot Other piped water Unpiped water (pipe, well, river, or other) Does not respond Does not know
	Availability of sanitary service (or Type of sanitary installation)	Water connection Is filled with a bucket of water Not required water Does not have Does not respond Does not know
	Condition of exclusive toilet use	Yes, only the people in the house use it It is not only used by the people in the house Does not respond Does not know

(Continued)

Category	Variable	Classification
Fuel type	Cooking fuel	Gas Wood or coal Other (oil, electricity, other) Does not respond Does not know
	Extra fuel for cooking, heating or lighting	No other Gas Wood or coal Other (oil, electricity, other) Does not respond Does not know
Lead exposure	Frequency of food consumption in earthenware, in the last three months	Never Less than once a month Once a month Twice a month Once a week Two to three times a week Daily or almost everyday Does not respond Does not know
Exposure to insecticides	Condition of regular use of insecticides in the home	They do use insecticide regularly They do not use insecticide regularly Does not respond Does not know
Services or goods	Durable consumer goods or services availability: a) Radio or radio recorder	They do have a radio or radio recorder They do not have a radio or radio recorder Does not respond Does not know
	b) Television	They do have television They do not have television Does not respond Does not know
	c) Refrigerator	They do have a refrigerator They do not have a refrigerator Does not respond Does not know
	d) Washing machine	They do have a washing machine They do not have a washing machine Does not respond Does not know
	e) Telephone	They do have a telephone They do not have a telephone Does not respond Does not know
	f) Water heater	They do have a water heater They do not have a water heater Does not respond Does not know

(Continued)

Category	Variable	Classification
Services or goods	g) Internet	Yes they have internet They do not have internet Does not respond Does not know
	h) Computer	They do have a computer They do not have a computer Does not respond Does not know
Subtopic: Tenure		
Legal situation of the home	Own or rented home	Rented Borrowed or transferred without payment Private property or currently paying it off Other Does not respond Does not know
Rented housing	Monthly rent amount	n Quantity Does not respond Does not know
	Approximate amount of monthly rent: a) More than \$6,000 pesos per month	Yes it is more than \$6,000 a month It is not more than \$6,000 a month Does not know
	b) More than \$2,000 pesos per month	Yes it is more than \$2,000 a month It is not more than \$2,000 a month Does not know
	c) More than \$18,000 pesos per month	Yes it is more than \$18,000 a month It is not more than \$18,000 a month Does not know
Subtopic: Owners		
Homeowners or owners	Deed owners	(NAME) only (NAME)'s spouse only (NAME) and his/her spouse only (NAME) and/or his/her spouse and other relative(s) Other relative(s) Other non-relative(s) Does not respond Does not know
	Property debt situation (or bank or financial debt)	Completely paid off Being paid to the bank Being paid to relatives or friends Being paid to the bank and to relatives or friends Irregular Being regularized Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Debt		
Amount of property debt	Amount of total monthly mortgage and loan payment	n Quantity Nothing Does not respond Does not know
	Approximate amount of the total monthly payment of mortgages and loans: a) More than \$7,500 pesos per month	Yes it's more than \$7,500 a month It is not more than \$7,500 a month Does not know
	b) More than \$2,000 pesos per month	Yes it is more than \$2,000 a month It is not more than \$2,000 a month Does not know
	c) More than \$20,000 pesos per month	Yes it is more than \$20,000 a month It is not more than \$20,000 a month Does not know
Amount of property debt	Amount of the total debt of the house	n Quantity Does not respond Does not know
	Approximate amount of the total debt of the house: a) More than \$180,000 pesos per month	Yes, it is more than \$180,000 a month It is not more than \$180,000 a month Does not know
	b) More than \$95,000 pesos per month	Yes, it's more than \$95,000 a month It is not more than \$95,000 a month Does not know
	c) More than \$480,000 pesos per month	Yes it is more than \$480,000 per month It is not more than \$480,000 a month Does not know
	Years to liquidate the home	n Years Does not respond Does not know
Subtopic: Current value		
Current property value	Estimated property value (land and home)	n Quantity Does not respond Does not know
	Approximate property value: a) More than \$180,000 pesos per month	Yes, it is more than \$180,000 a month It is not more than \$180,000 a month Does not know
	b) More than \$95,000 pesos per month	Yes, it's more than \$95,000 a month It is not more than \$95,000 a month Does not know
	c) More than \$950,000 pesos per month	Yes, it is more than \$950,000 a month It is not more than \$950,000 a month Does not know
Subtopic: Second home		
Other non-rented property(s) of SE or spouse	Condition of being owner(s) of another residence	Yes you own another house or condominium You do not own another home or condominium Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Present value of second residence		
Net present property value	Approximate net worth of property	n Quantity Does not respond Does not know
	Approximate net worth of property: a) More than \$180,000 pesos per month	Yes, it is more than \$180,000 a month It is not more than \$180,000 a month Does not know
Net present property value	b) More than \$95,000 pesos per month	Yes, it's more than \$95,000 a month It is not more than \$95,000 a month Does not know
	c) More than \$950,000 pesos per month	Yes, it is more than \$950,000 a month It is not more than \$950,000 a month Does not know
Subtopic: Income generated by your home		
Home or second residence rental	Condition of generating income for housing or second residence	Yes it generates income Does not generate income Does not respond Does not know
	Monthly rental income	n Quantity Does not respond Does not know
	Approximate monthly rental income: a) More than \$6,000 pesos per month	Yes it is more than \$6,000 a month It is not more than \$6,000 a month Does not know
	b) More than \$2,000 pesos per month	Yes it is more than \$2,000 a month It is not more than \$2,000 a month Does not know
	c) More than \$18,000 pesos per month	Yes it is more than \$18,000 a month It is not more than \$18,000 a month Does not know

(Continued)

Category	Variable	Classification
Subtopic: Environmental exposure		
Health risk places	Condition of existence within 500 m (or three blocks) of: a) Mine, furnace or waste deposit (of gold, silver, copper, iron or lead)	Yes it exists around you It does not exist around you Does not respond Does not know
	b) Garbage dumps	Yes it exists around you It does not exist around you Does not respond Does not know
	c) Fuel tanks	Yes it exists around you It does not exist around you Does not respond Does not know
	d) Thermoelectric	Yes it exists around you It does not exist around you Does not respond Does not know
	e) Mechanical workshop	Yes it exists around you It does not exist around you Does not respond Does not know
Health risk places	f) Incinerator or metal smelter	Yes it exists around you It does not exist around you Does not respond Does not know
	g) Iron or steel factory, or battery factory	Yes it exists around you It does not exist around you Does not respond Does not know
	h) Pottery making workshops, such as clay pots	Yes it exists around you It does not exist around you Does not respond Does not know
	i) Chemical plants, including sodium and chlorine plant	Yes it exists around you It does not exist around you Does not respond Does not know
	j) Paint factories	Yes it exists around you It does not exist around you Does not respond Does not know
Health risk places	k) Production of fertilizers or pesticides	Yes it exists around you It does not exist around you Does not respond Does not know
	l) PEMEX refinery	Yes it exists around you It does not exist around you Does not respond Does not know

TOPIC: PENSION, INCOME AND ASSETS

Category	Variable	Classification
Subtopic: Business		
Business of the SE or your spouse	Condition of business ownership (or farmland, animal husbandry), or condition of doing business on your own	Yes you are an owner, self-employed or employer You are not an owner, self-employed or employer Does not respond Does not know
	Identification of the owner of the business(es)	(NAME) Spouse of (NAME) Both (together) Does not respond Does not know
	Business situation	Outstanding debt Totally paid Does not respond Does not know
Business(es) with debt	Amount of business debt	n Quantity Does not respond Does not know
	Approximate amount of business debt: a) More than \$150,000 pesos per month	Yes it is more than \$150,000 a month It is not more than \$150,000 a month Does not know
	b) More than \$50,000 pesos per month	Yes it is more than \$50,000 a month It is not more than \$50,000 a month Does not know
	c) More than \$500,000 pesos per month	Yes, it is more than \$500,000 a month It is not more than \$500,000 a month Does not know
Business value	Total business value	n Quantity Does not respond Does not know
	Approximate total value of the business: a) More than \$150,000 pesos per month	Yes it is more than \$150,000 a month It is not more than \$150,000 a month Does not know
	b) More than \$50,000 pesos per month	Yes it is more than \$50,000 a month It is not more than \$50,000 a month Does not know
	c) More than \$500,000 pesos per month	Yes, it is more than \$500,000 a month It is not more than \$500,000 a month Does not know

(Continued)

Category	Variable	Classification
Business income	Condition of generating income from the business during the last 12 months (SE or spouse)	Yes it generated income Did not generate income Does not respond Does not know
	Total income in a normal month	n Quantity Does not respond Does not know
	Approximate total business income: a) More than \$60,000 pesos per month	Yes it was more than \$60,000 a month It was not more than \$60,000 a month Does not know
	b) More than \$20,000 pesos per month	Yes it was more than \$20,000 a month It was not more than \$20,000 a month Does not know
	c) More than \$180,000 pesos per month	Yes it was more than \$180,000 a month It was not more than \$180,000 a month Does not know
Business expenses	Spending in a normal month	n Quantity Nothing Does not respond Does not know
	Approximate business expense: a) More than \$60,000 pesos per month	Yes it was more than \$60,000 a month It was not more than \$60,000 a month Does not know
	b) More than \$20,000 pesos per month	Yes it was more than \$20,000 a month It was not more than \$20,000 a month Does not know
	c) More than \$180,000 pesos per month	Yes it was more than \$180,000 a month It was not more than \$180,000 a month Does not know
Business profit	Monthly business profit	n Quantity Nothing Does not respond Does not know
	Approximate monthly profit of the business: a) More than \$20,000 pesos per month	Yes it was more than \$20,000 a month It was not more than \$20,000 a month Does not know
	b) More than \$7,500 pesos per month	Yes it was more than \$7,500 a month It was not more than \$7,500 a month Does not know
	c) More than \$60,000 pesos per month	Yes it was more than \$60,000 a month It was not more than \$60,000 a month Does not know

(Continued)

Category	Variable	Classification
Subtopic: Real estate		
Real estate owned by SE and/ or spouse (excludes primary residence or second residence)	Property status of real estate (land, lots, or rental housing)	Yes you are a real estate owner You do not own real estate Does not respond Does not know
	Real estate owner identification	Respondent Respondent's spouse Both (together) Does not respond Does not know
	Real estate situation	Outstanding debts Totally paid Does not respond Does not know
Real estate with debt	Amount of real estate debt	n Quantity Does not respond Does not know
	Approximate amount of real estate debt: a) More than \$180,000 pesos per month	Yes, it is more than \$180,000 a month It is not more than \$180,000 a month Does not know
	b) More than \$95,000 pesos per month	Yes, it's more than \$95,000 a month It is not more than \$95,000 a month Does not know
	c) More than \$500,000 pesos per month	Yes, it is more than \$500,000 a month It is not more than \$500,000 a month Does not know
Real estate value	Total value of real estate	n Quantity Does not respond Does not know
	Approximate total value of real Estate: a) More than \$180,000 pesos per month	Yes, it is more than \$180,000 a month It is not more than \$180,000 a month Does not know
	b) More than \$95,000 pesos per month	Yes, it's more than \$95,000 a month It is not more than \$95,000 a month Does not know
	c) More than \$500,000 pesos per month	Yes, it is more than \$500,000 a month It is not more than \$500,000 a month Does not know

(Continued)

Category	Variable	Classification
Real estate income	Condition of generating income from real estate during the past year (SE or spouse)	Yes it generated income Did not generate income Does not respond Does not know
	Total income in a normal month	n Quantity Does not respond Does not know
	Approximate total income from real estate: a) More than \$6,000 pesos per month	Yes it was more than \$6,000 a month It was not more than \$6,000 a month Does not know
	b) More than \$2,000 pesos per month	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know
	c) More than \$18,000 pesos per month	Yes it was more than \$18,000 a month It was not more than \$18,000 a month Does not know
Real estate expenses	Spending in a normal month	n Quantity Nothing Does not respond Does not know
	Approximate real estate expense: a) More than \$800 pesos per month	Yes it was more than \$800 a month It was not more than \$800 a month Does not know
	b) More than \$200 pesos per month	Yes it was more than \$200 a month It was not more than \$200 a month Does not know
	c) More than \$2,500 pesos per month	Yes it was more than \$2,500 a month It was not more than \$2,500 a month Does not know

(Continued)

Category	Variable	Classification
Subtopic: Capital goods		
Bank accounts	Condition of having savings or investment accounts	Yes you have checking, savings or investment accounts You do not have checking, savings or investment accounts Does not respond Does not know
	Identification of the owner of savings or investment accounts	Respondent Respondent's spouse Both (together) Does not respond Does not know
	Estimated value of savings or investment accounts	n Quantity Does not respond Does not know
	Estimated value of savings or investment accounts: a) More than \$25,000 pesos per month	Yes it is more than \$25,000 a month It is not more than \$25,000 a month Does not know
	b) More than \$12,000 pesos per month	Yes it's more than \$12,000 a month It is not more than \$12,000 a month Does not know
	c) More than \$90,000 pesos per month	Yes it is more than \$90,000 a month It is not more than \$90,000 a month Does not know
	Condition of generating income from bank accounts during the past year (SE or spouse)	Yes it generated income Did not generate income Does not respond Does not know
	Total income in a normal month	n Quantity Does not respond Does not know
Bank accounts	Approximate total income from bank accounts: a) More than \$400 pesos per month	Yes it was more than \$400 a month It was not more than \$400 a month Does not know
	b) More than \$200 pesos per month	Yes it was more than \$200 a month It was not more than \$200 a month Does not know
	c) More than \$2,000 pesos per month	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know

(Continued)

Category	Variable	Classification
Loans	Condition of having loans made to third parties	Yes you have checking, savings or investment accounts You do not have checking, savings or investment accounts Does not respond Does not know
	Identification of the owner of loans made to third parties	Respondent Respondent's spouse Both (together) Does not respond Does not know
	Estimated value of loans made to third parties	n Quantity Does not respond Does not know
	Estimated value of loans made to third parties: a) More than \$25,000 pesos per month	Yes it is more than \$25,000 a month It is not more than \$25,000 a month Does not know
	b) More than \$12,000 pesos per month	Yes it's more than \$12,000 a month It is not more than \$12,000 a month Does not know
	c) More than \$90,000 pesos per month	Yes it is more than \$90,000 a month It is not more than \$90,000 a month Does not know
	Condition of generating income from loans made to third parties during the past year (SE or spouse)	Yes it generated income Did not generate income Does not respond Does not know
	Total income in a normal month	n Quantity Does not respond Does not know
	Approximate total income from loans made to third parties: a) More than \$400 pesos per month	Yes it was more than \$400 a month It was not more than \$400 a month Does not know
	b) More than \$200 pesos per month	Yes it was more than \$200 a month It was not more than \$200 a month Does not know
c) More than \$2,000 pesos per month	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know	

(Continued)

Category	Variable	Classification
Stocks, bonds and certificates	Condition of having shares, bonds or certificates for participation in companies	Yes you have stocks, bonds or certificates You do not have checking, savings or investment accounts Does not respond Does not know
	Identification of the owner of stocks, bonds or certificates	Respondent Respondent's spouse Both (together) Does not respond Does not know
	Estimated value of stocks, bonds or certificates	n Quantity Does not respond Does not know
	Estimated value of stocks, bonds or certificates a) More than \$25,000 pesos per month	Yes it is more than \$25,000 a month It is not more than \$25,000 a month Does not know
	b) More than \$12,000 pesos per month	Yes it's more than \$12,000 a month It is not more than \$12,000 a month Does not know
	c) More than \$90,000 pesos per month	Yes it is more than \$90,000 a month It is not more than \$90,000 a month Does not know
	Condition of generating income from stocks, bonds or certificates during the past year (SE or spouse)	Yes it generated income Did not generate income Does not respond Does not know
	Total income in a normal month	n Quantity Does not respond Does not know
	Approximate total income from stocks, bonds or certificates: a) More than \$400 pesos per month	Yes it was more than \$400 a month It was not more than \$400 a month Does not know
	b) More than \$200 pesos per month	Yes it was more than \$200 a month It was not more than \$200 a month Does not know
	c) More than \$2,000 pesos per month	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know

(Continued)

Category	Variable	Classification
Subtopic: Other goods		
Vehicles owned by the SE and/or your spouse	Condition of being vehicle owner(s)	Yes you are (was) a vehicle owner You are not a vehicle owner Does not respond Does not know
	Situation of the vehicle(s)	Outstanding debts Totally paid Does not respond Does not know
Vehicle(s) with debt	Amount of debt of the vehicle(s)	n Quantity Does not respond Does not know
	Approximate amount of the debt of the vehicle(s): a) More than \$180,000 pesos per month	Yes, it is more than \$180,000 a month It is not more than \$180,000 a month Does not know
	b) More than \$95,000 pesos per month	Yes, it's more than \$95,000 a month It is not more than \$95,000 a month Does not know
	c) More than \$500,000 pesos per month	Yes, it is more than \$500,000 a month It is not more than \$500,000 a month Does not know
Value of the vehicle(s)	Total value of the vehicle(s)	n Quantity Does not respond Does not know
	Approximate total value of the vehicle(s): a) More than \$180,000 pesos per month	Yes, it is more than \$180,000 a month It is not more than \$180,000 a month Does not know
	b) More than \$95,000 pesos per month	Yes, it is more than \$95,000 a month It is not more than \$95,000 a month Does not know
	c) More than \$500,000 pesos per month	Yes, it is more than \$500,000 a month It is not more than \$500,000 a month Does not know
Value of other assets	Total value of other assets	n Quantity Does not respond Does not know
	Approximate total value of other assets: a) More than \$180,000 pesos per month	Yes, it is more than \$180,000 a month It is not more than \$180,000 a month Does not know
	b) More than \$95,000 pesos per month	Yes, it is more than \$95,000 a month It is not more than \$95,000 a month Does not know
	c) More than \$500,000 pesos per month	Yes, it is more than \$500,000 a month It is not more than \$500,000 a month Does not know
Subtopic: Income from salaried work of the SE (during the past year)		
Main work of the SE	Condition of having a salaried main job	Yes you had a main salaried job Did not have a main salaried job Does not respond Does not know

(Continued)

Category	Variable	Classification
Earnings from main job	Condition of receiving labor income (salary, wages, commissions, overtime)	Yes received earned income Did not receive earned income Does not respond Does not know
	Period and amount of labor income	Period: Month Year Income: n Quantity Does not respond Does not know
	Approximate amount of earned income: a) More than \$7,500 pesos per month (or \$90,000 pesos per year)	Yes it was more than \$7,500 a month It was not more than \$7,500 a month Does not know
	b) More than \$2,000 pesos a month (or \$24,000 pesos a year)	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know
	c) More than \$15,000 pesos a month (or \$180,000 pesos a year)	Yes it was more than \$15,000 a month It was not more than \$15,000 a month Does not know
Main job benefits	Condition of receiving employment benefits (Christmas bonus, profit sharing)	Yes you received employment benefits Did not receive employment benefits Does not respond Does not know
	Period and amount of employment benefits	Period: Month Year Income: n Quantity Does not respond Does not know
	Approximate amount of employment benefits: a) More than \$7,500 pesos per month (or \$90,000 pesos per year)	Yes it was more than \$7,500 a month It was not more than \$7,500 a month Does not know
	b) More than \$2,000 pesos a month (or \$24,000 pesos a year)	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know
	c) More than \$15,000 pesos a month (or \$180,000 pesos a year)	Yes it was more than \$15,000 a month It was not more than \$15,000 a month Does not know
Secondary work of the SE	Condition of having salaried secondary job	Yes you had a salaried secondary job Did not have a salaried secondary job Does not respond Does not know
	Same variables as in Main job	Same classifications as Main Job

(Continued)

Category	Variable	Classification
Subtopic: SE pension income		
Retirement	Condition of receiving income from retirement pension, during the past year	Yes you received retirement income Did not receive retirement income Does not respond Does not know
	Institution(s) granting retirement pension	IMSS ISSSTE Other public (PEMEX, DEFENSA, MARINE, CFE, BANXICO) Private U.S. Social Security Other institution A Person Does not respond Does not know
	Year you received a retirement pension	n Year (of each retirement pension) Does not respond Does not know
	Monthly retirement amount	n Quantity Does not respond Does not know
	Approximate amount of retirement: a) More than \$2,000 pesos per month	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know
	b) More than \$950 pesos per month	Yes it was more than \$950 a month It was not more than \$950 a month Does not know
	c) More than \$7,500 pesos per month	Yes it was more than \$7,500 a month It was not more than \$7,500 a month Does not know
	Spouse beneficiary of pension upon death of SE	Yes, I would receive a retirement pension I would not receive a retirement pension Does not respond Does not know

(Continued)

Category	Variable	Classification
Widowhood	Condition of receiving income from widow's pension, during the past year	Yes you received income from a widow's pension Did not receive income from widow's pension Does not respond Does not know
	Institution(s) that grant a widow's pension	IMSS ISSSTE Other public (PEMEX, DEFENSA, MARINE, CFE, BANXICO) Private U.S. Social Security Other institution A Person Does not respond Does not know
	Year in which you received a widow's pension	n Year (of each widow's pension) Does not respond Does not know
	Monthly amount of widow's pension	n Quantity Does not respond Does not know
	Approximate amount of pension for widowhood: a) More than \$2,000 pesos per month	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know
	b) More than \$950 pesos per month	Yes it was more than \$950 a month It was not more than \$950 a month Does not know
	c) More than \$7,500 pesos per month	Yes it was more than \$7,500 a month It was not more than \$7,500 a month Does not know
	Spouse beneficiary of widowhood pension due to death of SE	Yes, I would receive a widow's pension I would not receive a widow's pension Does not respond Does not know
Disability or work accident	Condition of receiving income due to disability or work accident, during the past year	Yes you received income due to disability or work accident Did not receive income due to disability or work accident Does not respond Does not know
	Institution(s) that grant a pension for disability or work accident	IMSS ISSSTE Other public (PEMEX, DEFENSA, MARINE, CFE, BANXICO) Private U.S. Social Security Other institution A Person Does not respond Does not know

(Continued)

Category	Variable	Classification
Disability or work accident	Year in which you received a pension for disability or work accident	n Year (of each disability pension or work accident) Does not respond Does not know
	Monthly amount of widow's pension	n Quantity Does not respond Does not know
	Approximate amount of pension for disability or work accident: a) More than \$2,000 pesos per month	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know
	b) More than \$950 pesos per month	Yes it was more than \$950 a month It was not more than \$950 a month Does not know
	c) More than \$7,500 pesos per month	Yes it was more than \$7,500 a month It was not more than \$7,500 a month Does not know
	Spouse beneficiary of disability pension or work accident due to death of SE	Yes, I would receive a widow's pension I would not receive a widow's pension Does not respond Does not know
Other pensions	Condition of receiving income from other pensions, during the past year	Yes you received income from other pensions Did not receive income from other pensions Does not respond Does not know
	Institution(s) that grant other pensions	IMSS ISSSTE Other public (PEMEX, DEFENSA, MARINE, CFE, BANXICO) Private U.S. Social Security Other institution A Person Does not respond Does not know
	Year you received other pensions	n Year (of each of the other pensions) Does not respond Does not know
	Monthly amount of other pensions	n Quantity Does not respond Does not know
	Approximate amount of other pensions: a) More than \$2,000 pesos per month	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know

(Continued)

Category	Variable	Classification
Other pensions	b) More than \$950 pesos per month	Yes it was more than \$950 a month It was not more than \$950 a month Does not know
	c) More than \$7,500 pesos per month	Yes it was more than \$7,500 a month It was not more than \$7,500 a month Does not know
	Spouse beneficiary of other pensions due to the death of SE	Yes, I would receive other pensions I would not receive other pensions Does not respond Does not know
Subtopic: Future SE pension		
Future Pension(s) (or Level of Protection)	Condition of receiving a pension in the future	Yes you expect to receive a pension in the future You do not expect to receive a pension in the future Does not respond Does not know
	Institution(s) that would grant pension	IMSS ISSSTE Other public (PEMEX, DEFENSA, MARINE, CFE, BANXICO) Private U.S. Social Security Other institution A Person Federal or State Programs (Programs 65 and more, food pension for older adults, etc) Does not respond Does not know
	Age to receive pension	n Age (from the earliest you would receive) 87 or more years Does not respond Does not know
	Spouse beneficiary of pension upon death of SE	Yes I would receive part of the pension I would not receive part of the pension Does not respond Does not know
Subtopic: Income from other SE transfers		
Income from donations from public institutions, during the past year	Condition of receiving donations in money or in kind from public institutions	Yes received donation(s) Did not receive donation(s) Does not respond Does not know
	Public institution(s) providing donation	PROAGRO Productivo (before PROCAMPO) PROSPERA (before PROGRESA) INAPAM (before INSEN) Other institution Does not respond Does not know
	Total monthly income per donation(s)	n Quantity Does not respond Does not know
	Condition of receiving donation(s) in the future	Yes you consider receiving donation(s) in the future Does not consider receiving donation(s) in the future Does not respond Does not know

(Continued)

Category	Variable	Classification
Income from sale of goods or gifts	Condition of receiving income from the sale of goods, gifts or inheritance	Yes you received income from the sale of goods or gifts Did not receive income from the sale of goods or gifts Does not respond Does not know
	Total monthly income from sale of goods, gifts or inheritance	n Quantity Does not respond Does not know
	Condition of receiving this income in the future	Yes you consider receiving this income in the future You do not consider receiving this income in the future Does not respond Does not know
Subtopic: Income from salaried work of SE spouse		
Spouse's main job	Condition of having a salaried main job	Yes you had a main salaried job Did not have a main salaried job Does not respond Does not know
	Same variables as in SE main and secondary job	Same classifications as in Main and secondary work of the SE
Subtopic: Spouse pension income		
Retirement	Condition of receiving income from retirement pension, during the past year	Yes you received retirement income Did not receive retirement income Does not respond Does not know
	Same variables as in SE Retirement	Same classifications as SE Retirement
Widowhood	Condition of receiving income from widow's pension, during the past year	Yes you received income from a widow's pension Did not receive income from a widow's pension Does not respond Does not know
	Same variables as in SE's widowhood pension	Same classifications as in SE's widowhood pension
Disability or work accident	Condition of receiving income due to disability or work accident, during the past year	Yes you received income due to disability or work accident Did not receive income due to disability or work accident Does not respond Does not know
	Same variables as in disability or occupational accident of SE	Same classifications as in disability or occupational accident of SE
Other pensions	Condition of receiving income from other pensions, during the past year	Yes you received income from other pensions Did not receive income from other pensions Does not respond Does not know
	Same variables as in Other SE pensions	Same classifications as in Other SE pensions

(Continued)

Category	Variable	Classification
Subtopic: Future spouse pension		
Future Pension(s) (or Level of Protection)	Condition of receiving a pension in the future	Yes you expect to receive a pension in the future You do not expect to receive a pension in the future Does not respond Does not know
	Same variables as in Future Pension of the SE	Same classifications as Future Pension of the SE
Subtopic: Income from other spouse transfers		
Income from donations from public institutions, during the past year	Condition of receiving donations in money or in kind from public institutions	Yes received donation(s) Did not receive donation(s) Does not respond Does not know
	Same variables as in Income from other SE transfers	Same classifications as in Income from other SE transfers
Subtopic: Income from donations and transfers (SE and spouse)		
Income from aid in cash or in kind during the past year	Condition of receiving help from family or friends (not children or residents of the home)	Yes you received help in money or in-kind Did not receive help in money or in-kind Does not respond Does not know
	Condition of receiving a donation from Prospera (someone from the home)	Yes you received a donation in money or in-kind Did not receive a donation in money or in-kind Does not respond Does not know
Subtopic: Other debts		
Debts of SE or spouse	Condition of having debts (medical or on cards) or loans (on insurance, from relatives)	Yes you have debts or loans You have no debts or loans Does not respond Does not know
	Total amount of debts or loans	n Quantity Does not respond Does not know
	Approximate amount of debts or loans: a) More than \$25,000 pesos per month	Yes it is more than \$25,000 a month It is not more than \$25,000 a month Does not know
	b) More than \$12,000 pesos per month	Yes it is more than \$12,000 a month It is not more than \$12,000 a month Does not know
	c) More than \$90,000 pesos per month	Yes it is more than \$90,000 a month It is not more than \$90,000 a month Does not know

(Continued)

Category	Variable	Classification
Subtopic: Household consumption		
Household consumption expenses	Total monthly household expenditure	n Quantity Does not respond Does not know
	Approximate household expenditure: a) More than \$7,500 pesos per month	Yes it is more than \$7,500 a month It is not more than \$7,500 a month Does not know
	b) More than \$4,000 pesos per month	Yes, it is more than \$4,000 a month It is not more than \$4,000 a month Does not know
	c) More than \$12,000 pesos per month	Yes it's more than \$12,000 a month It is not more than \$12,000 a month Does not know
Household self-consumption	Condition of producing (clothing, animals, food) for self-consumption	Yes, produces for self-consumption Does not produce for self-consumption Does not respond Does not know
Subtopic: Widowhood		
Widowhood of SE	Widowhood status (last three years, if new person)	Yes widowed Not widowed
Subtopic: Changes due to widowhood		
Residential changes	Residential situation of the widowed SE	Yes, changed residence Yes, someone else moved in to live with respondent No, none Does not respond Does not know
	Main reason for residential change	(NAME) could not pay for the house anymore To be near relatives Other reason Does not respond Does not know

(Continued)

Category	Variable	Classification
Economic changes before and after death	Change in pension income due to death of spouse	Yes, started to receive Yes, stopped receiving Yes, changed the quantity No, none Never had and do not have pension income Does not respond Does not know
	Monthly income before death	n Quantity Nothing Does not respond Does not know
	Approximate monthly income before death: a) More than \$2,000 pesos per month	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know
	b) More than \$950 pesos per month	Yes it was more than \$950 a month It was not more than \$950 a month Does not know
	c) More than \$7,500 pesos per month	Yes it was more than \$7,500 a month It was not more than \$7,500 a month Does not know
	Monthly income after death	n Quantity Nothing Does not respond Does not know
	Approximate monthly income after death: a) More than \$2,000 pesos per month	Yes it was more than \$2,000 a month It was not more than \$2,000 a month Does not know
	b) More than \$950 pesos per month	Yes it was more than \$950 a month It was not more than \$950 a month Does not know
	c) More than \$7,500 pesos per month	Yes it was more than \$7,500 a month It was not more than \$7,500 a month Does not know
	Job changes	Changes in employment status or work hours after death
Hours worked per week before death		n Quantity None Does not respond Does not know
Hours worked per week after death		n Quantity None Does not respond Does not know

(Continued)

Category	Variable	Classification
Changes in medical service	Condition of change (type, cost or coverage) of medical service	Yes, the medical service changed Did not change the medical service Never had coverage Does not respond Does not know
	Type of change occurred	Lost coverage Changed system/coverage Have more or better services Have fewer or worse services Cost increase Cost decreased Other Does not respond Does not know
Life insurances	Condition of receiving life insurance benefit	Yes received (will receive) benefits Did not receive benefits Does not respond Does not know
Expenses associated with death	Funeral and legal expenses (exclude medical expenses)	n Quantity Nothing Does not respond Does not know
	Approximate funeral and legal expenses: a) More than \$7,500 pesos	Yes it was more than \$7,500 It was not more than \$7,500 Does not know
	b) More than \$4,000 pesos	Yes it was more than \$4,000 It was not more than \$4,000 Does not know
	c) More than \$30,000 pesos	Yes it was more than \$30,000 It was not more than \$30,000 Does not know

(Continued)

Category	Variable	Classification
Expenses associated with death	Funeral expenses covered by insurance	Yes all Yes, some No Does not respond Does not know
	Actions carried out to cover previous expenses associated with death	Yes, sell belongings Yes, spend savings Yes, get help from family and/or friends Yes, get help from other source No, nothing special Does not respond Does not know
	Family or friends who provided help	Children/Children-in-law/Grandchildren Other relatives Someone else Institution or charity Does not respond Does not know

QUESTIONNAIRE ON DECEASED PERSON

TOPIC: DEMOGRAPHIC DATA

Category	Variable	Classification
Subtopic: General informant data of the deceased person		
Informant data of deceased person	Widow(er) of deceased person	Yes your a widower Not a widower
	Marital status of the informant	Single Married Civil Union Divorced Separated Widower
Subtopic: General data of the deceased person		
Characteristics and context of the deceased person	Age at death	n Years Does not respond Does not know
	Sex	Male Female
	Place or institution of death	Private house Hospital or institution Other Does not respond Does not know
	Location of death	In this community Other community in this state Other state in Mexico United States Other country not the United States Does not respond Does not know
	Death cause	Sickness Accident or violence Other cause Does not respond Does not know
	Main disease	Cancer Diabetes Stroke Heart Infection Other Does not respond Does not know
	Date of death	n Month and n Year Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Migration		
History of Migration to the United States of a deceased person	Condition of residence in the United States	Yes lived in the United States Did not live in the United States Does not respond Does not know
	Condition of residence or work in the United States, in the last year of life	Yes you worked or lived in the United States Did not work or live in the United States Does not respond Does not know
Subtopic: Marital status		
Marital status of deceased person	Condition of being married or in a union at death	Yes you were married or in a union You were not married or in a union Does not respond Does not know
	Condition of residence with spouse	Yes lived in the same home Did not live in the same home Does not respond Does not know
	Date of separation	n Month and n Year Does not respond Does not know
	Widowhood status at death	Yes was a widower Was not a widower Does not respond Does not know
	Year of death of spouse	n Year 8888. No answer, 9999. Don't know
Subtopic: Major events that occurred between 2015 and the year of death		
Death of a relative	Death of children	Yes someone died: n Year (2015 to 2018) Did not pass away Does not respond Does not know
Major events of risk to health and family or financial situation	Sick relative care	Yes took over care: n Year (2015 to 2018) Did not take over care Does not respond Does not know
	Impact of housing by disaster	Yes it affected the home: n Year (2015 to 2018) Did not affect the home Does not respond Does not know
Major events of risk to health and family or financial situation	Victim of accident, crime or other serious event	Yes was a victim: n Year (2015 to 2018) Was not a victim Does not respond Does not know
	Impact on financial situation due to loss	Yes it affected financial situation: n Year (2015 to 2018) Did not affect financial situation Does not respond Does not know

TOPIC: TEMPORARY RESIDENCE ARRANGEMENTS

Category	Variable	Classification
Subtopic: Changes of residence in the last year of life		
Residence of support persons	Condition of change of temporary residence with deceased person	Yes someone temporarily changed residence to help No, someone did not temporarily change residence Does not respond Does not know
	Relationship of person who changed residence	Child or grandchild of the (NAME) Other relatives of (NAME) Other non-relative Does not respond Does not know
	Children/grandchildren who changed residence	Name and registration number of children All Does not respond Does not know
	Child/grandchild who cared for the longest	Child's name and registration number It was only one All the same Does not respond Does not know
Residence of the deceased	Condition of change of temporary residence of the deceased person	Yes it was changed Did not change Does not respond Does not know
	Relationship of person where you changed your residence	Child or grandchild of (NAME) Other relatives of (NAME) Other non-relative Does not respond Does not know
	Children/grandchildren where you changed residence	Name and registration number of children All Does not respond Does not know
Residence of the deceased	Child/grandchild with whom you stayed the longest	Child's name and registration number It was only one All the same Does not respond Does not know

TOPIC: HEALTH

Category	Variable	Classification
Subtopic: Perception of health status		
Health before the death of the SE	Opinion on general state of health	Excellent Very good Good Fair Poor Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Diabetes		
Diagnosis and control of diabetes	Diagnosis of diabetes before death	Yes you were diagnosed with diabetes You were not diagnosed with diabetes Does not respond Does not know
	Oral treatment for diabetes control	Yes was taking oral medication Was not taking oral medication Does not respond Does not know
	Insulin treatment for diabetes control	Yes was using insulin Was not using insulin Does not respond Does not know
	Diet for diabetes control	Yes, I followed a special diet Did not follow a special diet Does not respond Does not know
	Frequency of measurement of sugar level in blood or urine	n Times and n Period Period: Week, Month, Year, Never Does not respond Does not know
Subtopic: Cancer		
Cancer diagnosis and treatment	Cancer diagnosis before death	Yes, you were diagnosed with cancer You were not diagnosed with cancer Does not respond Does not know
	Types of cancer suffered	Breast Cervical/cervix Endometrial/uterine Liver Stomach Pancreas Prostate Colonrectal Lung Others Does not respond Does not know
Cancer diagnosis and treatment	Type of treatment received during the last year of life	Chemotherapy or medication Surgery or Biopsy Radiation or X-Rays Medication or treatment for symptoms (pain, nausea, rash) None Other Does not respond Does not know
	Year of most recent cancer diagnosis	n Year Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Lung disease		
Diagnosis and treatment for respiratory disease	Diagnosis of respiratory disease (asthma or emphysema) before death	Yes, you were diagnosed with respiratory disease You were not diagnosed with respiratory disease Does not respond Does not know
	Medical treatment for respiratory disease	I did have treatment I did not have treatment Does not respond Does not know
	Condition of receiving oxygen for lung disease	Yes was getting oxygen Was not getting oxygen Does not respond Does not know
Subtopic: Heart disease		
Diagnosis and treatment for heart attack/infarction	Diagnosis of heart attack/infarction during the last year of life	Yes you were diagnosed with a heart attack You were not diagnosed with a heart attack Does not respond Does not know
	Medical treatment for illness before death	I did have treatment I did not have treatment Does not respond Does not know
	Medicine for chest pain before death	Yes carried medicine I did not carry medicine Does not respond Does not know
Diagnosis of other heart diseases in the last year	Diagnosis of other heart diseases (heart failure/congestive heart failure/arrhythmia or angina)	Yes you were diagnosed with another heart disease You were not diagnosed with another heart disease Does not respond Does not know
Subtopic: Cerebral embolism		
Diagnosis and treatment for stroke	Diagnosis of cerebral embolism (stroke or transient cerebral ischemia) during the last of life	Yes, you were diagnosed with a stroke You were not diagnosed with a stroke Does not respond Does not know
	Medical treatment for embolism or complications before death	Yes has treatment Has no treatment Does not respond Does not know
	Most recent stroke year	n Year Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Other diseases		
Diagnosis and treatment for other diseases	Medical diagnosis of: a) Memory-related disease	Yes, was diagnosed with disease Was not diagnosed with disease Does not respond Does not know
	b) Liver infection	Yes you were diagnosed with a liver infection You were not diagnosed with a liver infection Does not respond Does not know
	c) Kidney infection	Yes you were diagnosed with a kidney infection You were not diagnosed with a kidney infection Does not respond Does not know
	d) Herpes or Herpes Zoster	Yes, you were diagnosed with herpes You were not diagnosed with herpes Does not respond Does not know
	e) Tuberculosis	Yes, you were diagnosed with tuberculosis You were not diagnosed with tuberculosis Does not respond Does not know
	f) Pneumonia	Yes, you were diagnosed with pneumonia You were not diagnosed with pneumonia Does not respond Does not know
Subtopic: Falls and pain		
Fractures and medical treatment in the last year	Falls in the last year of life	Yes fell Did not fall Does not respond Does not know
	Number of falls	n Times Does not respond Does not know
	Condition of needing medical treatment for injury	Yes you needed medical treatment Did not need medical treatment Does not respond Does not know
	Condition of having broken bones (or hip)	Yes it fractured Did not fracture Does not respond Does not know

(Continued)

Category	Variable	Classification
Fractures and medical treatment in the last year	Condition of suffering physical pain	Yes suffered from pain often Did not suffer from pain often Does not respond Does not know
	Perception of degree of physical pain	Mild Moderate Severe Does not respond Does not know
Subtopic: Tobacco and alcoholic beverages		
Tobacco use in the last year of life	Smoking status in the last year of life	Yes smoked Did not smoke Does not respond Does not know
	Frequency of tobacco use	Daily Not daily Does not respond Does not know
Frequency of consumption of alcoholic beverages in the last year of life	Days per week of alcoholic beverages consumption	n Days None Does not respond Does not know
Subtopic: Weight		
Body characteristics of the deceased person	Weight comparison one year after death	Increased by 5 or more kilos Decreased by 5 or more kilos More or less the same Does not respond Does not know
	Eating related problems in the last year of life	Most of the time Sometimes Rarely or never Does not respond Does not know
Subtopic: Symptoms		
Symptoms during the last year of life of the deceased person	Condition of having frequent problems or discomfort	Frequent swelling in feet or ankles Difficulty breathing while lying down Severe fatigue or exhaustion Wheezing, cough or phlegm Stomach pain, indigestion, diarrhea Involuntary loss of urine Frequent vomiting Depression Frequent confusion Out of control temper Does not respond Does not know

TOPIC: HEALTH SERVICES

Category	Variable	Classification
Subtopic: Access and use of health services		
Right of the deceased	Institution of eligibility	Social Security (IMSS) ISSSTE/ ISSSTE Estatal Seguro Popular PEMEX, Defense or Marine Private medical insurance Other None Does not respond Does not know
Hospitalizations in the last year of life	Total hospitalizations in the last year	n Nights None Does not respond Does not know
	Institution(s) of care	IMSS ISSSTE/ISSSTE Estatal Department of health and state health services IMSS PROSPERA (before Oportunidades) PEMEX, Defense or Marine Private clinic or hospital Red Cross, Green Cross Other Does not respond Does not know
	Hospitalization expense(s)	n Pesos Nothing Does not respond Does not know
	Expense greater than \$6,000 pesos per hospitalization(s)	Yes it was more than \$6,000 pesos It was not more than \$6,000 pesos Does not know
	Spending greater than \$3,000 pesos per hospitalization(s)	Yes it was more than \$3,000 pesos It was not more than \$3,000 pesos Does not know
	Spending greater than \$24,000 pesos per hospitalization(s)	Yes it was more than \$24,000 pesos It was not more than \$24,000 pesos Does not know

(Continued)

Category	Variable	Classification
Subtopic: Use of services		
Health services used in the last year of life	Number of medical consultations	n Times None Does not respond Does not know
	Payment for medical consultations	n Pesos Nothing Payment in-kind Does not respond Does not know
	Amount greater than \$1,500 pesos for medical consultations	Yes it was more than \$1,500 pesos It was not more than \$1,500 pesos Does not know
	Amount greater than \$300 pesos for medical consultations	Yes it was more than \$300 pesos It was not more than \$300 pesos Does not know
	Amount greater than \$12,000 pesos for medical consultations	Yes it was more than \$12,000 pesos It was not more than \$12,000 pesos Does not know
Subtopic: Medical expenses		
Medical expenses incurred in the last of life	Medication spending per month	n Pesos per month Nothing Payment in-kind Does not respond Does not know
	Spending on medicines greater than \$300 pesos	Yes it was more than \$300 pesos It was not more than \$300 pesos Does not know
	Spending on medicines greater than \$150 pesos	Yes it was more than \$150 pesos It was not more than \$150 pesos Does not know
	Spending on medicines greater than \$1,500 pesos	Yes it was more than \$1,500 pesos It was not more than \$1,500 pesos Does not know
	Main financier of medical expenses	Son/Daughter Son/Daughter-in-law Grandchild Father/Mother Other relative Other person (NAME) and/or spouse Did not have expenses Does not respond Does not know
	Child who spent the most	Child's name, registration number All Does not respond Does not know

(Continued)

Category	Variable	Classification
Total cost of services and medical care in the last year of life	Total amount of medical expenses greater than \$ 6,000 pesos	Yes it was more than \$6,000 pesos It was not more than \$6,000 pesos Does not know
	Total amount of medical expenses greater than \$3,000 pesos	Yes it was more than \$3,000 pesos It was not more than \$3,000 pesos Does not know
	Total amount of medical expenses greater than \$24,000	Yes it was more than \$24,000 pesos It was not more than \$24,000 pesos Does not know
Subtopic: Other non-medical expenses		
Total expenses in hiring support people, housing adaptations, among others	Total amount of non-medical expenses greater than \$6,000 pesos	Yes it was more than \$6,000 pesos It was not more than \$6,000 pesos Does not know
	Total amount of non-medical expenses greater than \$3,000 pesos	Yes it was more than \$3,000 pesos It was not more than \$3,000 pesos Does not know
	Total amount of non-medical expenses greater than \$24,000	Yes it was more than \$24,000 pesos It was not more than \$24,000 pesos Does not know
Important family decisions	Person with greater power in family decision-making	Deceased Spouse Son(s)/daughter(s) Does not respond Does not know

TOPIC: COGNITIVE STATE

Category	Variable	Classification
Subtopic: Evaluation of understanding, memory, reasoning and decision making of the deceased person		
Cognitive functionality of the SE who died in the last month of life	Memory evaluation in the last month of life	Excellent Very good Good Fair Poor Does not respond Does not know
	Assessment of ability to make judgments and make decisions	Excellent Very good Good Fair Poor Does not respond Does not know

(Continued)

Category	Variable	Classification
Cognitive functionality in the last month compared to a year before death	Memory on family aspects (occupations, birthdays, addresses)	Improved Stayed the same Worsened Does not respond Does not know
	Memory on recent events (short term)	Improved Stayed the same Worsened Does not respond Does not know
	Memory on everyday conversations	Improved Stayed the same Worsened Does not respond Does not know
	Ability to handle financial affairs (pension or bank)	Improved Stayed the same Worsened Does not respond Does not know
Mental disorders during the last month of life	Condition of disorientation or confusion in familiar surroundings	Yes has been disoriented Has not been disoriented Does not respond Does not know
	Condition of being able to leave alone for an hour	Yes could be left alone Could not be left alone Does not respond Does not know
Risk behaviors during the last month of life	Frequency in manifestation of hostile behavior	Most of the time Sometimes Rarely or never Does not respond Does not know
	Frequency of dangerous actions	Most of the time Sometimes Rarely or never Does not respond Does not know

TOPIC: HELP TO OR FROM CHILDREN

Category	Variable	Classification
Subtopic: Living children		
Children alive at the time of the death of the SE	Condition of having living children (biological, stepchildren, adopted or fostered)	Yes you had surviving children Did not have any surviving children Does not respond Does not know
	Number of living children	n Children Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Financial aid granted		
Financial aid granted to children of the deceased person or their spouse	Condition of aid in money or in kind to children and/or grandchildren (for education), in the last year of their life	Yes gave (gives) help in money or in-kind Did not give (gave) help in money or in-kind Does not respond Does not know
Subtopic: Non-financial aid granted		
Time of help granted by the deceased SE	Condition of helping children, daughter-in-law/son-in-law, grandchildren, at least one hour a week, in the last year of life	Yes it helped for at least an hour It did not help for at least an hour Does not respond Does not know
Subtopic: Financial aid received		
Financial aid received by the deceased SE	Condition of receiving help in money or kind from children and/or grandchildren, in the last year of life	Yes you received help in money or in-kind Did not receive aid in money or in-kind Does not respond Does not know
	Children or grandchildren who gave help	Child's name and registration number All Does not respond Does not know

TOPIC: FUNCTIONALITY AND HELP

Category	Variable	Classification
Subtopic: Daily life activities		
Difficulty doing daily activities due to health problems	Help with daily activities (walking, bathing, eating, going to bed and getting up, using the toilet) in the past three months	Yes someone helped No one was helped Could not do those activities Did not do those activities Does not respond Does not know
People and time of help in daily activities	Name and registration number of person(s) who helped(s) most often in activities	Name Registration Number Not included in lists
	Relationship with deceased SE	Spouse Child Child-in-law Grandchild Parent Other relative Other person Paid person Does not respond Does not know

(Continued)

Category	Variable	Classification
Subtopic: Instrumental activities of daily living		
Difficulty performing instrumental activities due to health problems	Help with instrumental activities (food, shopping, medicine, money) in the last three months	Yes someone helped No one helped Could not do those activities Did not do those activities Does not respond Does not know
People and time of help in instrumental activities	Name and registration number of person(s) who helped(s) most often in activities	Name, Registration Number Not included in lists
	Relationship with deceased SE	Spouse Child Child-in-law Grandchild Parent Other relative Other person Paid person Does not respond Does not know

TOPIC: EMPLOYMENT

Category	Variable	Classification
Subtopic: Job		
Work activity of the deceased SE	Condition of activity before death	Working Not working Looking for work Does not respond Does not know
Subtopic: Benefits		
Work benefits at work of the deceased SE	Benefits granted: a) IMSS	Yes they gave IMSS They did not give IMSS Does not respond Does not know
	b) ISSSTE	Yes they gave ISSSTE They did not give ISSSTE Does not respond Does not know
	c) SAR (Retirement Savings System)	Yes they gave SAR They did not give SAR Does not respond Does not know
	d) Account in <i>Afores</i>	Yes they gave account of <i>afores</i> They did not give account of <i>afores</i> Does not respond Does not know

(Continued)

Category	Variable	Classification
Work benefits at work of the deceased SE	e) Housing credit	They gave him housing credit They did not give housing credit Does not respond Does not know
	f) Private medical service or insurance for medical expenses	Yes they gave service or insurance for medical expenses They did not give service or insurance for medical expenses Does not respond Does not know
	g) Life insurance	They did give life insurance They did not give life insurance Does not respond Does not know
	h) Other	Yes they gave other benefits They did not give other benefits Does not respond Does not know
Subtopic: Work inactivity		
Condition of inactivity before death	Reason for inactivity before death	Dedicated to household chores Retired Old age Sick or temporarily disabled Unable to work for the rest of life Did not have customers or could not find work Other Does not respond Does not know

TOPIC: HOUSING AND GOODS

Category	Variable	Classification
Subtopic: Real estate owner		
Real estate owners at the time of death	Condition of owning real estate at death	Yes owned real estate Was not a real estate owner Does not respond Does not know
	Intended property(s) after death	It is now property of (NAME)'s relatives Was sold Was inherited by someone else Property still hasn't been dealt with Was rented Does not respond Does not know

Category	Variable	Classification
Subtopic: Funeral expenses		
Expenses associated with death	Total amount of funeral, legal and other expenses	n Quantity Nothing Does not respond Does not know
	Approximate amount of funeral and legal expenses: a) More than \$1,500 pesos	Yes it was more than \$1,500 It was not more than \$1,500 Does not know
	b) More than \$750 pesos	Yes it was more than \$750 It was not more than \$750 Does not know
	c) More than \$6,000 pesos	Yes it was more than \$6,000 It was not more than \$6,000 Does not know
	Funeral expenses covered by insurance	Yes No Does not respond Does not know
Subtopic: Transfer of assets and testament		
Forecast in the event of death	Condition of carrying out actions for the transfer of goods	You did arrange to transfer your assets You did not arrange to transfer your assets Did not have assets Does not respond Does not know
	Condition of carrying out testamentary succession	Yes, made a will before a notary Did not make a will before a notary Does not respond Does not know
Subtopic: Beneficiaries of transfer of assets		
Family members benefited	Beneficiaries of the deceased SE's assets	Children and/or grandchildren Children and/or grandchildren and others Others No one Does not respond Does not know

B. Glossary

A

Actividad económica. Conjunto de acciones que contribuyen a generar la oferta de bienes y servicios, sean o no de carácter legal y que se dan en un marco de transacciones que suponen consentimiento entre las partes. Entre otras se incluye: las actividades del sector primario para el autoconsumo (excepto la recolección de leña). Excluye: actos redistributivos, monetarios o en especie, que no suponen una contribución a la oferta de bienes y servicios. Esto significa que se sitúan fuera de un marco de transacciones y las personas que se benefician de ello no realizan una actividad económica, aunque puedan hacerse de un ingreso, tal y como quienes se dedican al robo, al fraude o a la mendicidad abierta o disfrazada.

Actividad no económica. Conjunto de acciones realizadas para mantener el funcionamiento cotidiano de los hogares e incluso de una comunidad y que implican una serie de tareas necesarias para la reproducción de las condiciones de operación de la sociedad, pero que no se realizan dentro de un marco de transacción entre las partes.

Actividades normales. Se entienden las actividades propias de la edad, como trabajar, caminar, hacer ejercicio o visitar familiares.

Angina de pecho. Es un dolor o molestia en el pecho que se siente cuando el músculo cardíaco no recibe suficiente irrigación sanguínea.

Aparcero. Persona que sola o con otra, explota un terreno agrícola o una instalación ganadera mediante un contrato de aparcería.

Apoyo económico. Toda la ayuda o apoyo en moneda local o extranjera que se hayan dado o transferido a los sujetos de estudio por parte de sus hijos.

Arritmia. Es cualquier trastorno en los latidos o el ritmo del corazón. Significa que el corazón late demasiado rápido o demasiado lento o que tiene un patrón irregular.

Articulación. Es la unión entre dos o más huesos y tiene como función construir los puntos de unión del esqueleto para producir movimientos mecánicos, pro-

porcionándole elasticidad y plasticidad al cuerpo, además de ser lugares de crecimiento.

Artritis. Es la inflamación, dolor o movimiento restringido de articulaciones o del área de la espalda.

Ausencia definitiva del Sujeto de estudio. El Sujeto de estudio reside en otro domicilio y no tiene la intención de regresar o no existe la posibilidad de que lo haga.

Ausencia temporal del Sujeto de estudio. El sujeto de estudio es residente de la vivienda, sin embargo, de manera transitoria, se encuentra en otro lugar y tiene la intención de regresar.

Ausente definitivo. Persona que dejó de ser residente de la vivienda por haberse ausentado por más de tres meses independientemente del motivo.

Ausente temporal. Persona que al momento de la visita no se encuentra en la vivienda, pero tiene la intención de regresar durante el periodo del levantamiento o antes de tres meses, independientemente del motivo de su ausencia.

Ayuda en especie. Toda la ayuda no monetaria que se haya dado a los sujetos de estudio por parte de sus hijos, por ejemplo, tiempo de cuidados, alimentos, medicamentos, etcétera.

B

Bebidas alcohólicas. Son bebidas que contienen etanol (alcohol etílico).

Bienes de capital. Todos aquellos bienes que tengan un valor monetario, pero a diferencia de los bienes reportados anteriormente, estos bienes no son tangibles, sino que se encuentran en forma monetaria. Esta forma no es necesariamente en dinero en efectivo, pueden ser en documentos.

Bienes raíces. Propiedades que no pueden moverse del lugar en el que están, tales como tierras, locales o viviendas.

Bienes. Se entiende como bienes de valor todo aquel bien mueble o inmueble que lleva implícito un valor

económico. Por lo tanto, consideremos aquí la suma total de todas las transferencias, negocios, depósitos, entregas de dinero en efectivo, bienes raíces, etc., que se hicieron en este lapso a los hijos o nietos del sujeto de estudio o su cónyuge, los cuales deben alcanzar un valor total de 95 000 pesos o más.

Bono. Activo de renta fija pagadero al portador.

C

Casa independiente. Construcción fija de cualquier material que generalmente no comparte paredes, techos o pisos con otra vivienda y tiene acceso desde un espacio público: calle, campo o camino. Puede haber varias casas en un mismo terreno o predio. Incluye la vivienda particular con local o accesoria.

Casado(a). Persona que ha contraído matrimonio civil y/o religioso.

Cédulas. Título con un valor nominal pagadero en el futuro, en una fecha determinada, que rinde una tasa de interés periódica y es vendido por quien lo emite.

Cirugía ambulatoria. Se incluyen procedimientos de cirugía ambulatoria como cualquier operación efectuada en consultorio, clínica u hospital en la que el sujeto de estudio no pasó la noche en el hospital.

Cirugía mayor. Hace referencia a los procedimientos quirúrgicos más complejos con más riesgo, frecuentemente realizados bajo anestesia general o regional (anestesia epidural, lumbar o espinal) y asistencia respiratoria. Usualmente estas intervenciones se asocian con algún grado de riesgo para la vida del paciente o para discapacidad. También se asocian con algún tiempo de recuperación.

Consultas en farmacia. Ocasiones en que el sujeto de estudio acudió a una farmacia y pidió al encargado orientación al presentarse con algún problema de salud.

Contacto futuro. Persona que tiene relación con el sujeto de estudio, no habita en la misma vivienda, pero puede ofrecer información en caso de cambio de domicilio en los siguientes años, de preferencia que tenga lazo de parentesco, puede ser hermano(a), hijo(a), tío(a), primo(a), sobrino(a), etcétera.

Contrato de aparcería. Es un convenio o compromiso –generalmente– de palabra de dos o más personas para utilizar y aprovechar la tierra (siendo uno de ellos el propietario y otro el productor que la trabaja) quienes convienen que al final de la cosecha, parte de ella será entregada al propietario de la tierra como beneficio o

ganancia. Se incluyen las tierras tomadas a medias, al tercio o por cualquier otra forma, de acuerdo con la distribución de la producción.

Cosas peligrosas. Aquellas que ponen en riesgo la vida de alguna persona; por ejemplo, encender la estufa y después olvidar apagarla, o el uso de cuchillos o tijeras.

Crimen. Es cuando se comete una infracción en contra del código penal que rige en una sociedad. Los actos criminales no se limitan al hecho de quitarle la vida a otra persona (homicidio), sino que van más allá y abarcan actos como: robo, asalto, violaciones, esclavizar a otras personas, maltratar a la familia o la pareja, no hacerse responsable de los hijos y cualquier otro acto que vaya en contra del código penal.

Cuarto. Se entiende como un espacio cerrado, con cuatro paredes, que puede ser: una habitación o dormitorio, la sala, el comedor y espacios similares.

CUNICAH. Es el código que se asigna a los hogares de la muestra. Es un número consecutivo que consta de cinco dígitos según lo siguiente.

D

Dentista. Se refiere a visitas al dentista, ya sea para examen de chequeo, para reemplazar o sacar dientes, o para otro tipo de cirugía dental. Esto también incluye la endodoncia. Incluye dentistas generales y especialistas, tales como cirujanos dentales, ortodontistas, así como profesionistas de la higiene dental.

Departamento en edificio. Forma parte de un conjunto de viviendas construido con materiales resistentes de varios pisos o niveles, por lo que comparte alguna pared, techo o piso con otra vivienda del mismo edificio. Tiene acceso desde un espacio común: pasillo, escalera o elevador. Cada departamento cuenta con instalaciones de agua y excusado independientes.

Depresión. Es un trastorno del estado de ánimo, ya sea desde el punto de vista psicológico o desde el de la psiquiatría. Según el modelo médico, la psiquiatría la describe como un trastorno del estado de ánimo y su síntoma habitual es un estado de abatimiento e infelicidad que puede ser transitorio o permanente.

Diabetes (mellitus). Es una enfermedad del metabolismo del cuerpo en la cual el nivel de azúcar de la sangre es alto y frecuentemente hay azúcar en la orina. Los tratamientos incluyen inyecciones de insulina (una hormona necesaria), pastillas, dietas especiales y pérdida de peso.

Divorciado(a). Persona separada legalmente de su cónyuge mediante una sentencia de divorcio y, en el momento de la entrevista, no vive con otra pareja o no ha vuelto a contraer matrimonio.

Dolor. Sensación o molestia de una parte del cuerpo manifestada por el sujeto de estudio.

Domicilio geográfico. La norma técnica establece que es el espacio al interior de una localidad o referencia a una vía de comunicación que ocupa un inmueble (edificación o terreno) donde pueden establecerse una o más personas o unidades económicas, a fin de dar cumplimiento a sus obligaciones o derechos.

E

Edad. Periodo transcurrido entre la fecha de nacimiento de la persona y la fecha de la entrevista.

Ejercicio o trabajo físico pesado. Se entienden por deportes, labores caseras pesadas u otro trabajo físico.

Embolia cerebral. También es conocido como derrame cerebral o apoplejía.

Entrevista de seguimiento. Se llama así a la conversación o diálogo que se da entre el Entrevistador de la ENASEM y los informantes que fueron visitados con anterioridad por la encuesta en el 2001, 2003, 2012 o 2015.

Entrevista por informante sustituto. Se llama así a la conversación o diálogo que se da entre el Entrevistador de la ENASEM y el informante que conoce la información del sujeto de estudio que por alguna razón tiene algún impedimento de salud para responder el Cuestionario, esto derivado de un accidente o enfermedad, por edad avanzada, idioma o ausencia temporal.

Estado conyugal. Condición de unión o matrimonio de las personas seleccionadas en el momento de la entrevista, de acuerdo con las leyes o costumbres del país. Se clasifica en: soltero(a), casado(a), unión libre, divorciado(a), separado(a), viudo(a).

Estrés. Se produce por la situación de un individuo vivo, o de alguno de sus órganos o aparatos que, por exigir de ellos un rendimiento muy superior a lo normal, los pone en riesgo de enfermar. Como tal, el estrés es la sensación de una alteración física o mental que produce en el individuo frustración, nervios y furia.

G

Gasto común. Es la parte del ingreso que se destina a la compra de alimentos para la persona o el grupo de personas que forman el hogar y puede ser aportado por una o varias personas.

Gastos no médicos. Son los gastos generados a consecuencia de la enfermedad del sujeto de estudio fallecido como el contratar a alguna persona para que le prepare los alimentos, le dé sus medicinas, realice el quehacer doméstico, etcétera; incluye los gastos por modificar o adecuar la vivienda como es la construcción de una rampa, un pasamano, adaptaciones en el baño, entre otras. Ten en cuenta que en esta pregunta no se trata de personal especializado.

H

Hermano(a). Se entenderá como hermano(a) a todo hermano biológico, hermanastro, hermano adoptado o recogido.

Herpes zóster. Enfermedad producida por una reactivación (del virus latente de la varicela zóster), que afecta a los nervios periféricos y a la piel, en la que se producen pequeñas ampollas dolorosas en forma de anillo agrupadas a lo largo de un dermatoma. Es más conocida como culebrilla, culebrón o “fuego de San Agustín”.

Hijo nacido vivo. Producto del embarazo de la población femenina de 12 o más años de edad que al nacer manifiesta algún signo de vida como respiración, latido del corazón, llanto o algún movimiento.

Hipertensión o presión alta. Se refiere a la persistente presión arterial alta de la sangre. Puede desconocerse la causa o estar asociada con otras enfermedades primarias. Puede o no estar tratándose adecuadamente.

Hogar paterno. Se entiende como el hogar donde la persona se crió, es decir, que puede ser el hogar con solamente uno de los padres o un tutor, si el hijo fue recogido por el entrevistado (o su cónyuge). Es decir, el hogar donde la persona tenía a su padre o tutor.

Hogar. Conjunto formado por una o más personas, unidas o no por lazos de parentesco, que residen habitualmente en la misma vivienda particular y se sostienen de un mismo gasto para la alimentación.

Horas habituales de trabajo. Número de horas que normalmente labora la población ocupada en su trabajo principal (actual).

I

Infarto miocárdico o ataque al corazón. Es la presencia de tejido muerto o moribundo en y/o alrededor del corazón causado por obstrucción de los conductos de sangre. Es un incidente doloroso y a veces fatal causado por el bloqueo de una o más de las arterias coronarias. Un término común es “ataque al corazón”.

Informante adecuado. Es la persona de 18 años o más, residente de la vivienda y que conoce la situación actual (domicilio, estado civil y de salud) del sujeto de estudio.

Informante sobre persona fallecida. Persona de 18 años o más (familiar o responsable) que tenía contacto frecuente con el sujeto de estudio antes de morir, quien puede proporcionar información sobre la situación personal y causa del fallecimiento.

Informante sustituto. Persona de 18 años o más que conoce la información del sujeto de estudio. Se recurre a un informante sustituto en caso de que el sujeto de estudio no esté en posibilidad de contestar el cuestionario por causa de un accidente, enfermedad, edad avanzada, idioma o ausencia temporal.

Ingresos por intereses provenientes de cuentas de ahorro. Entradas en dinero que se recibieron de instituciones, por ser el poseedor o el titular de una cuenta de ahorro en un periodo determinado, sin reducir el total del ahorro de dicha cuenta.

Ingresos por intereses provenientes de inversiones a plazo fijo. Entradas en dinero que recibieron de instituciones financieras, por ser poseedores o titulares de una cuenta de inversión a plazo fijo en un periodo determinado, sin reducir el total de dicha inversión.

Ingresos por intereses provenientes de préstamos a terceros. Entradas en dinero que se recibieron de personas ajenas al hogar, las cuales se comprometieron a pagar, como resultado de préstamos realizados.

Ingresos por rendimiento provenientes de bonos o cédulas. Entradas en dinero que reciben los sujetos de estudio por poseer los bonos o cédulas.

Ingresos por renta de la propiedad. Entradas en dinero recibidas a cambio de poner a disposición de otros (hogares, empresas, etc.) bienes o propiedades. Incluye: el ingreso por el alquiler de alguna casa, local, etc., cuando este se haya recibido en productos, vales o cualquier otra modalidad de pago.

Institución de atención. Institución a la que se encuentra afiliado el sujeto de estudio y la cual le brinda acceso a los servicios médicos.

Insuficiencia cardíaca. Es la dilatación del corazón que no permite que bombee sangre eficientemente a todo el cuerpo.

L

Letrina, hoyo negro, pozo ciego o fosa. Depósito de confinamiento, es decir, se trata de una instalación que no elimina los desechos, sino que los acumula. En general, tiene una vida limitada y se construye fuera de los dormitorios o de la vivienda.

Local no construido para habitación. Construcción fija que se edificó para realizar alguna actividad económica y que al momento del levantamiento está habitada, por ejemplo: tienda, taller, bodega, fábrica, oficina, granero, establo, faro entre otras. Incluye el local con actividad económica, así como el local vacío que se usa para vivir o simplemente para dormir.

Local. Se refiere al sitio donde se desarrollan las actividades propias de un negocio.

M

Memoria. Es una función del cerebro, y a la vez, un fenómeno de la mente que permite al organismo codificar, almacenar y evocar la información del pasado. En términos prácticos, la memoria (o, mejor, los recuerdos) son la expresión de que ha ocurrido un aprendizaje.

Migración. Cambio de lugar de residencia habitual de las personas desde un municipio o delegación, entidad federativa o país de origen, a otro de destino.

Muestra basal. Personas que ingresan a la muestra del estudio por haber sido seleccionados de manera probabilística en los años 2001, 2012 o 2018.

N

Negocio con local. Se refiere a la unidad económica que para realizar sus actividades cuenta con un lugar fijo delimitado, cercado o cubierto, que por lo general se construye de tabique, madera, etc. Estos pueden estar contiguos a una vivienda, pero en forma independiente.

Negocio sin local. Se refiere a la unidad económica que, para realizar sus actividades, no cuenta propiamente con instalación fija. Tal es el caso de los vendedores o prestadores de servicios ambulantes y los que realizan sus actividades en su casa.

Negocio. Unidad económica con fines de producir bienes o servicios para redituar ingreso a una persona o grupo de personas, y que tenga un valor por sí mismo con la intención de producir ganancias. Se puede tratar también de alguna tierra de cultivo o cría de animales para fines comerciales, es decir, que se produce con intención de vender el producto.

Nivel de instrucción. Se define como el año (grado) de estudios más alto alcanzado (terminado o aprobado) por una persona, dentro de alguno de los niveles del Sistema Educativo Nacional -o equivalente).

Número de persona (NP). Es el código que identifica a las personas de la muestra. La clave está conformada por tres dígitos y permite diferenciar a las personas seleccionadas (2001, 2012 y 2018), a los cónyuges o parejas de los individuos seleccionados, y a las parejas posteriores de ambos.

O

Ocupación. Realización de una actividad económica, ya sea de manera independiente o subordinada.

P

Padre biológico. Es el hombre que ha contribuido con la mitad de la estructura genética del niño.

Padre legal o tutor. Es el hombre que la ley reconoce como el padre del niño.

Pagos acumulados. Se refiere a lo que se tuvo que pagar en total, contando todas las veces que el sujeto de estudio usó el respectivo tipo de servicio.

Pareja o cónyuge. Persona reconocida como compañera(o) de vida, independientemente de si reside o no en la misma vivienda y si está legalizada o no su unión.

Parentesco. Es un vínculo o lazo de unión que existe entre los integrantes del hogar con el (la) seleccionado(a), independientemente de que sea por consanguinidad, conyugal, adopción, afinidad o costumbre.

Pensión por jubilación. En esta opción entran las pensiones derivadas de un empleo.

Pensión por retiro o vejez. Es una pensión a la cual tiene derecho el trabajador por su tiempo laborado.

Pensión por cesantía en edad avanzada. Se otorga a los trabajadores que se separan voluntariamente del servicio o que quedan privados de trabajo remunerado después de los 60 años de edad.

Pensión por viudez. Pensión que se otorga por muerte del cónyuge trabajador asegurado cotizante.

Pensión por invalidez o accidente laboral. Por enfermedad o accidente de trabajo que lo haya limitado parcial o totalmente para desempeñar su(su) actividad(es) o bien por percances ocurridos en tránsito del hogar al trabajo o viceversa.

Pensión por orfandad. Es otorgada por la muerte del padre, la madre o ambos si son trabajadores asegurados cotizantes, a los menores de 16 años que aún no trabajan, hasta los 25 años si son estudiantes en el sistema nacional; o bien, de por vida, si no pueden valerse por sí mismos de manera permanente.

Pensión por ascendencia. Es otorgada a los padres cuando muere un hijo trabajador asegurado cotizante de quien dependían económicamente.

Pensión por invalidez. Que es provocada por enfermedades o accidentes no laborales que le impidan realizar sus actividades parcial o totalmente, siempre y cuando la institución que le da la pensión sea en la que el sujeto de estudio cotizaba como trabajador al momento de ocurrir el accidente o la enfermedad.

Pensión de por vida. Se puede recibir por daño causado por un tercero.

Prestaciones laborales. Bienes y servicios diferentes al acceso a las instituciones de salud, en dinero o en especie, adicionales a su sueldo, que reciben los trabajadores subordinados y remunerados de parte de la unidad económica para la que trabajan, como complemento a sus ingresos laborales.

Prestada o cedida sin pago. Se refiere a aquellos casos en que los ocupantes de la vivienda viven ahí porque alguien se las prestó, o no, sin que tengan que pagar por usarla.

Primer informante (contacto). Persona con la que el (la) Entrevistador(a) tiene acercamiento al llegar a la vivienda y que puede informar de la situación del (los) sujeto(s) de estudio o su nuevo domicilio.

Problema serio de salud o limitación. Se refiere a que le impidan realizar actividades normales de la edad, como estudiar, trabajar o practicar deportes.

Problema serio. Se define según la opinión y percepción del sujeto de estudio sobre la gravedad del problema.

Propiedad privada o se está pagando. Se refiere a los casos en que los ocupantes están pagando o ya pagaron por la compra de la vivienda, sin importar a quién le estén pagando o hayan terminado de pagar.

Proteger la privacidad de los sujetos de estudio. Cuidar los intereses y la identidad del sujeto de estudio, buscando en la medida de lo posible que las entrevistas sean en privado. Se debe asegurar que la información no será compartida con nadie más.

R

Red de suministro de agua. Es una instalación de tuberías que se planea y construye para abastecer de agua a las viviendas, edificios y escuelas, entre otros. No necesariamente es una instalación subterránea basada en tubos; puede ser superficial sin importar el tipo de materiales de que esté hecha.

Rehabilitación. Conjunto de métodos que tienen por finalidad, la recuperación de una actividad o función perdida o disminuida por traumatismo o enfermedad.

Religión. Creencia o preferencia espiritual declarada por la población, sin tener en cuenta si está representada o no por un grupo organizado.

Remisión de cáncer. Disminución o desaparición de los signos y síntomas de cáncer. En el caso de la remisión parcial, algunos signos y síntomas de cáncer han desaparecido, pero no todos ellos. En el caso de la remisión completa, todos los signos y síntomas de cáncer han desaparecido, pero el cáncer todavía puede estar en el cuerpo.

Rentada o alquilada. Esto es, cuando los ocupantes pagan alguna cantidad por vivir en la vivienda, sin derecho de propiedad.

Residencia habitual. Es un alojamiento específico (vivienda o morada en donde se duerme y/o come habitualmente) que tiene la persona y al que puede volver en el momento en que lo desee, es decir, el lugar que la persona daría como respuesta a la pregunta ¿en dónde vive usted?

Residente habitual. Persona que viven normalmente en la vivienda, duerme, prepara sus alimentos, come y se protege del medio ambiente y por ello la reconoce como su lugar de residencia.

Reumatismo. Enfermedad que se manifiesta generalmente por inflamación de las articulaciones en las extremidades (actualmente este término es utilizado de manera coloquial, pero no en el ámbito médico ya que en él es utilizado el término artritis).

Rigidez. Parte del cuerpo que no se puede doblar.

S

Sujeto de estudio (SE). Persona de 50 años o más seleccionada en 2001, 2012 o 2018, su cónyuge o pareja, sin importar su edad, así como las personas que se van uniendo a ellos y se detectan en cualquiera de los levantamientos (de 2001, 2003, 2012, 2015 o 2018).

Sujeto de estudio de seguimiento. Sujeto de estudio que se entrevistó en el operativo 2012 y/o 2015.

Sujeto de estudio de nueva persona. Persona de 50 a 55 años seleccionada en el 2018, así como su cónyuge o pareja, sin importar su edad.

Sujeto de estudio Nueva pareja. Cualquier persona unida a un sujeto de estudio de seguimiento, cuya unión es detectada durante el recorrido previo u operativo del 2018.

Sujeto de estudio fallecido. Persona que forma parte del estudio por ser seleccionado o pareja en 2001, 2003, 2012 y 2015, y que, al momento de aplicar preguntas introductorias en el 2018, se detecta que murió.

T

Trabajador no remunerado. Persona ocupada que no recibe ningún tipo de pago (monetario o en especie) por su ocupación, aunque es susceptible de recibir algún tipo de prestaciones.

Tratamiento médico. Es alguna terapia, rehabilitación o cirugía realizada por un médico.

U

Unido(a). Vive con su pareja en unión libre. Persona que vive en pareja sin legalizar o formalizar ni civil ni religiosamente su unión.

V

Vecino. Se entiende por vecino a la persona que vive en la misma área inmediata, cercana a donde vive el sujeto de estudio.

Víctima. Persona que ha sufrido daños -incluidos los físicos y los mentales- por la realización de actos u omisiones que violan las leyes penales vigentes.

Visitas médicas. Incluye visitas a un médico o algún otro personal médico y de la salud, contemplando enfermeros(as) de las clínicas y hospitales. También incluye especialistas como dermatólogos, psiquiatras, oftalmólogos; así como practicantes médicos, osteópatas, ayudantes de médico, y médicos generales. Para esta pregunta, no cuentes visitas a homeópatas, curanderos, hueseros, yerberos, puesto que ya se preguntó por ellos de manera separada.

Viudo(a). Persona cuya pareja o cónyuge ha fallecido y no ha contraído nuevo matrimonio, ni vive en unión libre.

Vivienda de uso temporal. Es la que en el momento de la visita puede o no estar ocupada por personas, pero ninguna de ellas declara vivir normalmente ahí, pues está destinada para ser usada en determinadas épocas del año, ya sea con fines de esparcimiento, trabajo u otros. Son aquellas que están listas para habitarse con o sin muebles, y no se encuentra disponible para renta o venta, ni se ocupa como local para alguna actividad económica.

Vivienda deshabitada. Es la vivienda que está destinada para uso habitacional con muebles o sin ellos, en

la que al momento de la visita no vive persona alguna, pudiendo ser habitada en cualquier momento.

Vivienda en cuarto de azotea. Construcción fija que se ubica en la azotea de un edificio de departamentos y que al momento del levantamiento está habitado por personas en forma independiente de las que residen en el departamento al que pertenece el cuarto y tampoco comparten el gasto para los alimentos con ellas. Tiene acceso desde un espacio común: escalera, elevador o pasillo.

Vivienda en vecindad. Construcción fija que forma parte de un conjunto de viviendas agrupadas en un mismo terreno; que comparten alguna pared, techo o piso con otra vivienda. Tiene acceso desde un espacio común: patio o pasillo. Generalmente comparten las instalaciones de agua y/o excusado. Al conjunto de viviendas se le reconoce como vecindad o cuartería.

Vivienda habitada. Es la vivienda que en el momento de la visita se encuentra ocupada por una o más personas que declaran vivir normalmente en ella.

Vivienda particular. Vivienda destinada, construida o adaptada para el alojamiento de personas que forman hogares, y que, en el momento del levantamiento, puede estar habitada por uno o más hogares, o bien, deshabitada.

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