Centro UC
Encuestas y Estudios Longitudinales

Health and Cognition among Older Adults 2019: Chile-Cog

Methodological Document

August 2022

Facultad de Ciencias Sociales, Pontificia Universidad Católica de Chile
Av. Vicuña Mackenna 4860, Edificio Centro de Innovación, piso 4, Macul, Santiago, Chile
Teléfono (56-2) 2354 1792 | encuestasyestudios@uc.cl | @EncuestasUC

www.
encuestas.
uc.cl

Contents

1. Introduction[1]

The 2019 Health and Cognition Study (Chile-Cog) collects information on cognitive function from a representative sample of the Chilean population aged 60 years and above. The study is modeled after the Harmonized Cognitive Assessment Protocol (HCAP) originally developed by the Health and Retirement Study (HRS) research team in the United States for implementation in the HRS. The HCAP has been subsequently adapted to other longitudinal surveys, similar to the HRS, in several other countries.[2]

The main objective of this study is to measure the prevalence of dementia and cognitive ability among the population ages 60 years and above in Chile. To achieve this goal, *Centro UC de Encuestas y Estudios Longitudinales* and University of Pennsylvania adapted the HCAP instrument to the Chilean context taking as a starting point the HCAP instrument – Mex-Cog – fielded within the Mexican Health and Aging Study (MHAS)[3].

The Chile-Cog was fielded[4] in a random subsample of 60+ year old participants of the Chilean Social Protection Survey (SPS),[5] including a subsample that participated in the Quality of Life Survey among the Elderly[6] (ENCAVIDAM) carried out in 2017. The SPS is a longitudinal study that has been carried out in Chile since 2002 and has surveyed over 25,000 people over the age of 18.

To facilitate the inclusion of Chile-Cog within the SPS, the *Subsecretaría de Prevision Social*, the public institution that funds the SPS, and *Centro UC de Encuestas y Estudios Longitudinales* signed a collaboration agreement in July 2019. The long-standing collaboration between the Catholic University of Chile and the University of Pennsylvania around the SPS further facilitated the inclusion of Chile-Cog within the SPS with funding from the National Institute of Aging (NIA) and the University of Pennsylvania.

This document describes the sample and instruments used in the Chile-Cog.

[1] The leading investigators of the study are David Bravo (Catholic University of Chile), Irma Elo and Jere Behrman (University of Pennsylvania), Cecilia Albala (Universidad of Chile); and Úrsula Schwarzhaupt (Subsecretaría de Previsión Social). IRB Approval: Comité de Ética INTA, December, 2018.
[2] England, Mexico, Ireland, India, South Africa, and the Survey of Health, Ageing, and Retirement in Europe (SHARE).
[3] Rebeca Wong, the PI of MHAS, and Silvia Mejía Arango collaborated with the Chilean study team in the design of the Chile-Cog and in the training of the Chilean interviewers. The methodological document about Mex-Cog can be found at http://mhasweb.org/DocumentationQuestionnaire.aspx
[4] At the Centro UC de Encuestas y Estudios Longitudinales the teamwork included Eileen Hughes (questionnaire and training); Mayerling Peña (fieldwork); Ernesto Castillo (sampling and weights); Magdalena Delaporte and Miguel Brante (Databases, Analysis and Reports).
[5] Encuesta de Protección Social (EPS) in Spanish.
[6] Encuesta de Calidad de Vida del Adulto Mayor e Impacto del Pilar Solidario (ENCAVIDAM) in Spanish.

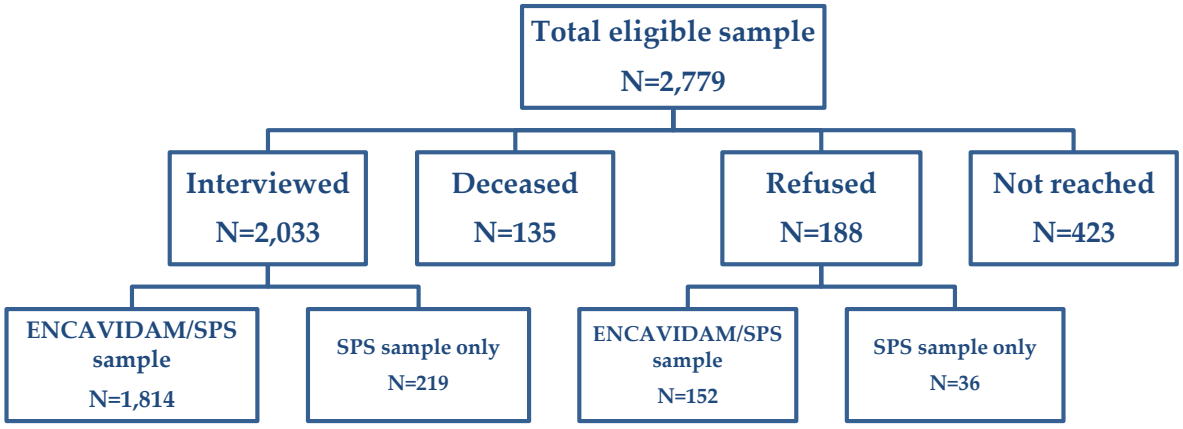
2. Study Protocol

a. Sample selection

The SPS subsample for this study consists of individuals 60 years and older from all sixteen regions of Chile, who were surveyed in one or more rounds of the Social Protection Survey (SPS) in 2002, 2004, 2006, 2009 and 2016. Most of the participants were also interviewed in 2017 in the Survey of Quality of Life among the Elderly.

The sample of eligible individuals consisted of 2,779 individuals who had either participated in the Quality of Life Survey in 2017 (2,523 respondents) and those who had reached age 60 between the 2017 survey and the time of the fielding of the Chile-Cog (256 SPS respondents). The study first targeted those who had participated in the Quality of Life Survey in 2017, of whom we interviewed 1,814 or 72%. In addition, we interviewed 219 individuals who had reached age 60 by the fall of 2019, but who were not interviewed in 2017 (Figure 1). Among the individuals contacted, 4.9% of the sample was deceased and 6.8% refused the interview. Finally, 423 individuals of the original Quality of Life Survey in 2017 were not able to be interviewed for other reasons (such as inability to locate the selected individual because of address changes; inability to schedule the interview or not found at the residence after several attempts; temporary sickness; and a survey not completed).

Figure 1. Health and Cognition 2019 Study (Chile-Cog) sample



The study protocol consists of two parts:

i. Cognitive evaluation of the respondent.
ii. Interview with a knowledgeable informant.

Figure 2 shows the number of interviews completed for respondents and informants. Informant interviews were conducted for 87.5% of the respondents, mostly by telephone. The interview was done face-to-face when the informant was present at the time of the cognitive evaluation of the subject (15.5%). In all other cases, the informant interview was conducted by telephone (84.5%). An attempt was made to obtain informant interview for all respondents as follows. If the respondent received a MMSE score < 12, the informant interview was done in-person. If the respondent received a MMSE score between 12 and 21, the informant interview was done in-person if the informant was present, otherwise it was subsequently obtained via telephone. If the respondent received a MMSE score over 21, the informant interview was always conducted by telephone. The cases missing informant interview (225) were due to inability to locate the informant by telephone.[7]

Figure 2. Number of interviews by type

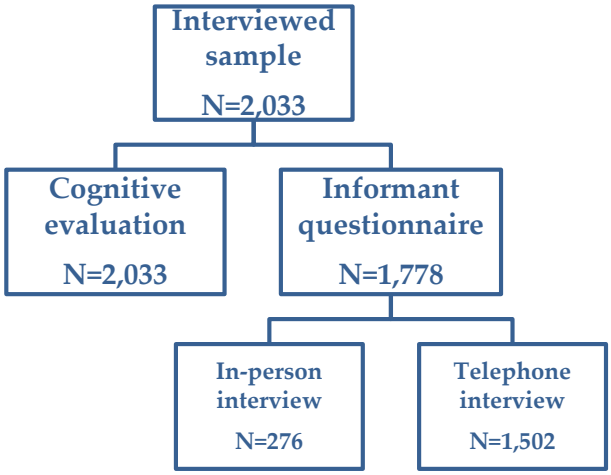


Table 1 provides reasons for a lack of an informant interview. These include: no answer to phone call, refusing to do the interview, no or wrong phone number. As shown below, the most common reason for non-response is that the informant did not answer the phone call.

Table 1. Reason for non-response by informants (N=255)

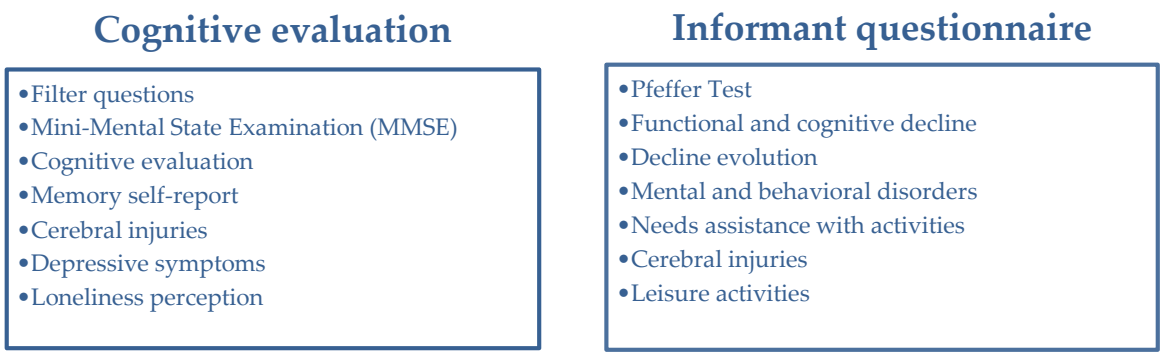
Reason	%
No answer	43.9%
Refused	17.7%
No or wrong phone number	17.7%
Other reasons	20.7%

[7] High cognitive impairment according to the Mini-Mental State Examination (MMSE).

b. Study Design and Content

As noted above, the study has two components – the cognitive evaluation of the subject and the informant interview. The content of each instrument is shown in Figure 3:

Figure 3. Study components



i. Cognitive evaluation of the respondent

This section of the questionnaire includes a series of tasks that seek to evaluate the cognitive state of the subject, measuring various domains of cognitive function. In addition, the instrument includes questions about self-reported memory, brain injuries and their history; questions regarding depressive symptoms and questions about perceived loneliness by the respondent.

The cognitive evaluation begins with three filter questions that assess if the respondent has any impairments. These tasks indicate an existence of visual impairment, hearing impairment and/or physical or motor impairment.

The interview continues with the Mini-Mental State Examination (MMSE). This section includes a series of questions, with a total score ranging from 0 to 30 points. Subsequently, an additional 25 questions can be included (long evaluation) or only partially administered (short evaluation). The sequence of questions answered by the respondent depends on his/her cognitive status, which is evaluated using the MMSE score. If the subject obtains less than 12 points in the MMSE, he/she takes the short evaluation which includes only 13 questions. Those whose MMSE score is 12 or above answer all additional 25 questions. Figure 4 summarizes this sequence. Respondents who answered the long evaluation continue to respond to questions related to memory, injuries, depression and loneliness. Figure 4 below summarizes the interview protocol. As mentioned above, the MMSE score is used as a filter that affects the flow of the interview. Figure 5 summarizes the content of

the survey instrument.

Figure 4. Respondent's interview protocol

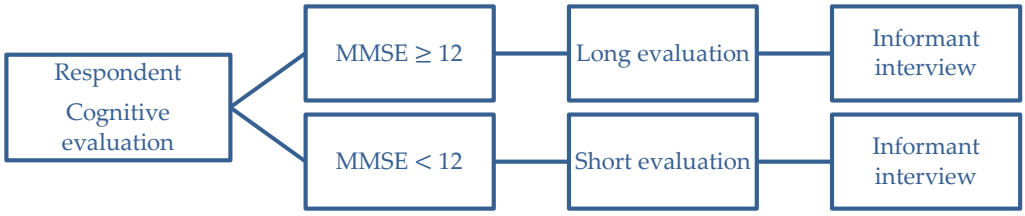
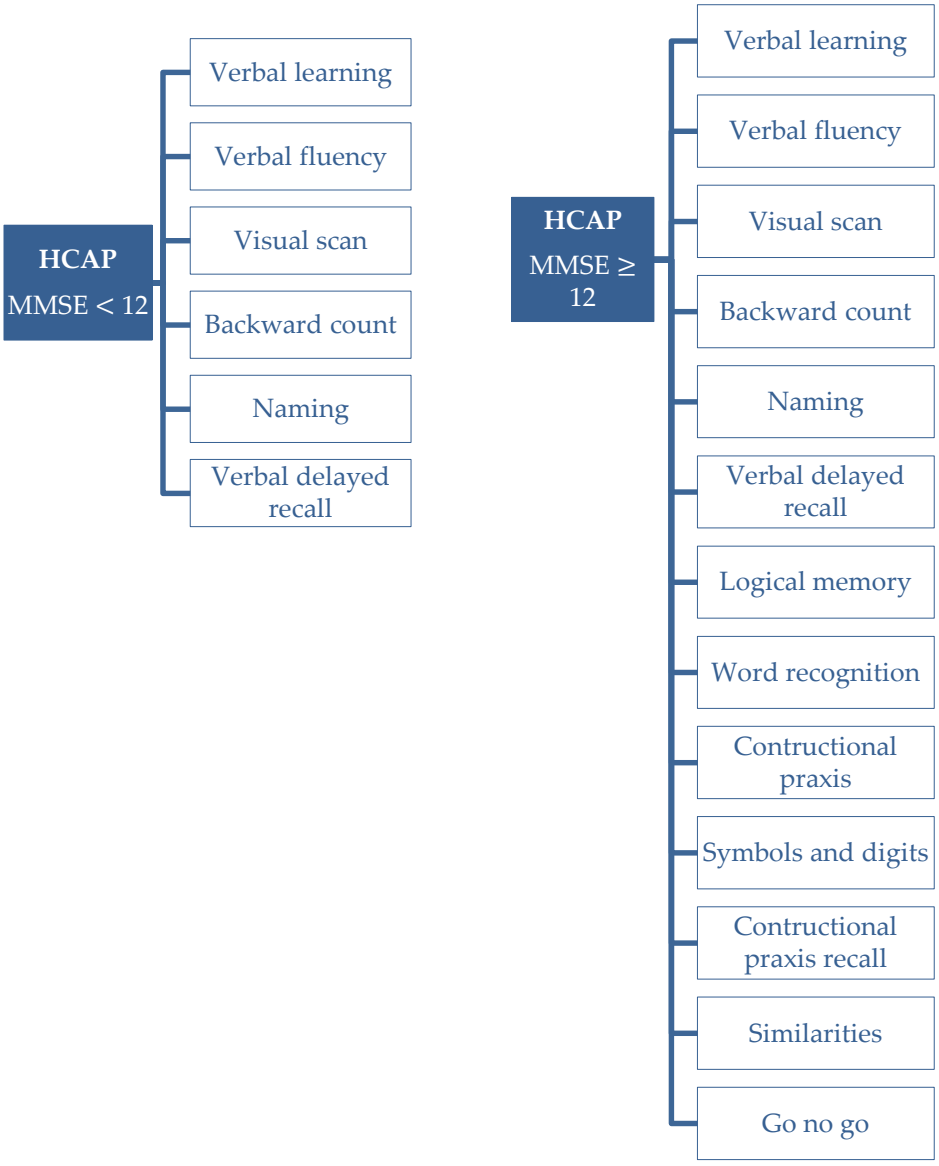


Figure 5. Cognitive evaluation for the respondent



ii. Informant questionnaire

Eligible informants were people who were familiar with the respondent's health, behaviors and activities, such as the spouse, child or caregiver. When the informant was not present at the time of the respondent's interview, contact detail was requested. For those cases, the informant questionnaire was applied later, by telephone.

The informant interview begins with the Pfeffer Test that has a score between 0 and 33. This test was only applied when the respondent obtained a low score in MMSE and the informant was present at the time of the cognitive evaluation of the respondent. In these cases, in addition to the Pfeffer Test, the complete instrument was asked of the informant. When the informant was not present, the informant interview skipped the Pfeffer Test.

After the Pfeffer Test and for informants interviewed on the telephone, the questionnaire continues with either a short or a long version of the questionnaire assessing the cognitive state of the respondent. If the informant responds "Yes" to 2 or more questions, which assess whether the respondent has experienced cognitive decline, the long interview is applied, because affirmative responses suggest a presence of cognitive decline. In this case, the informant answers questions related to the origin and history of the respondent's cognitive decline, and then continues with the remainder of the questions. If the informant responds "No" to questions assessing the respondent's cognitive decline, then the informant responds to the short questionnaire. Figure 6 shows the flow of the informant questionnaire.

Figure 6. Informant's interview protocol

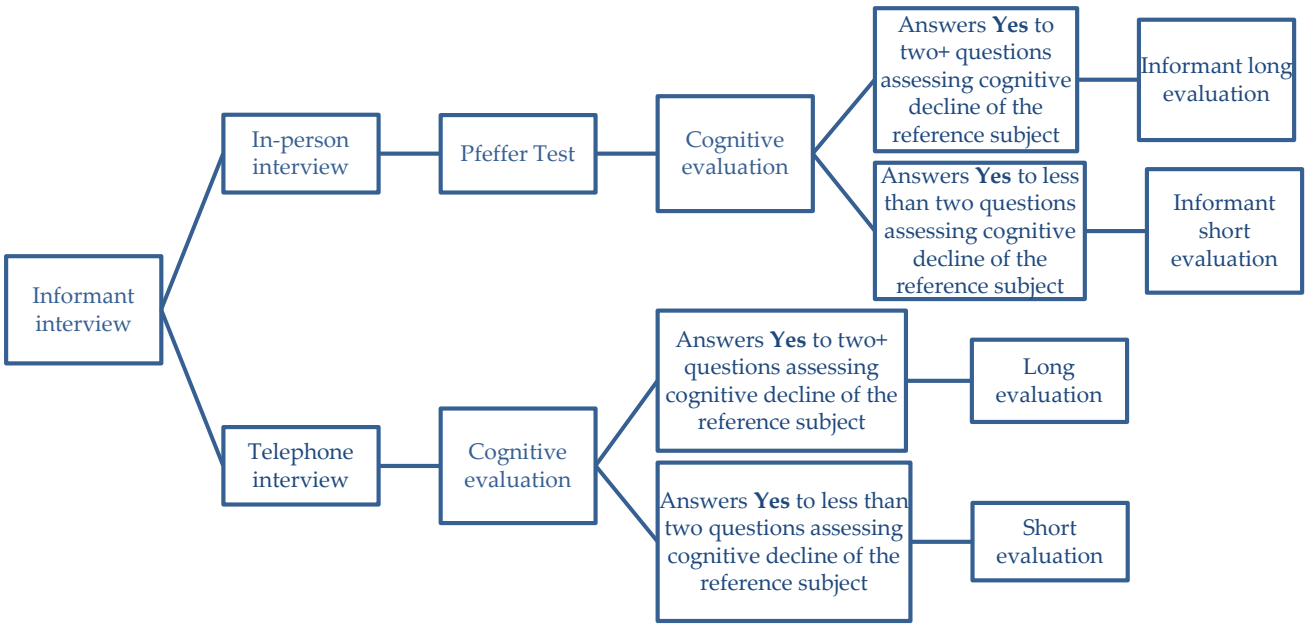
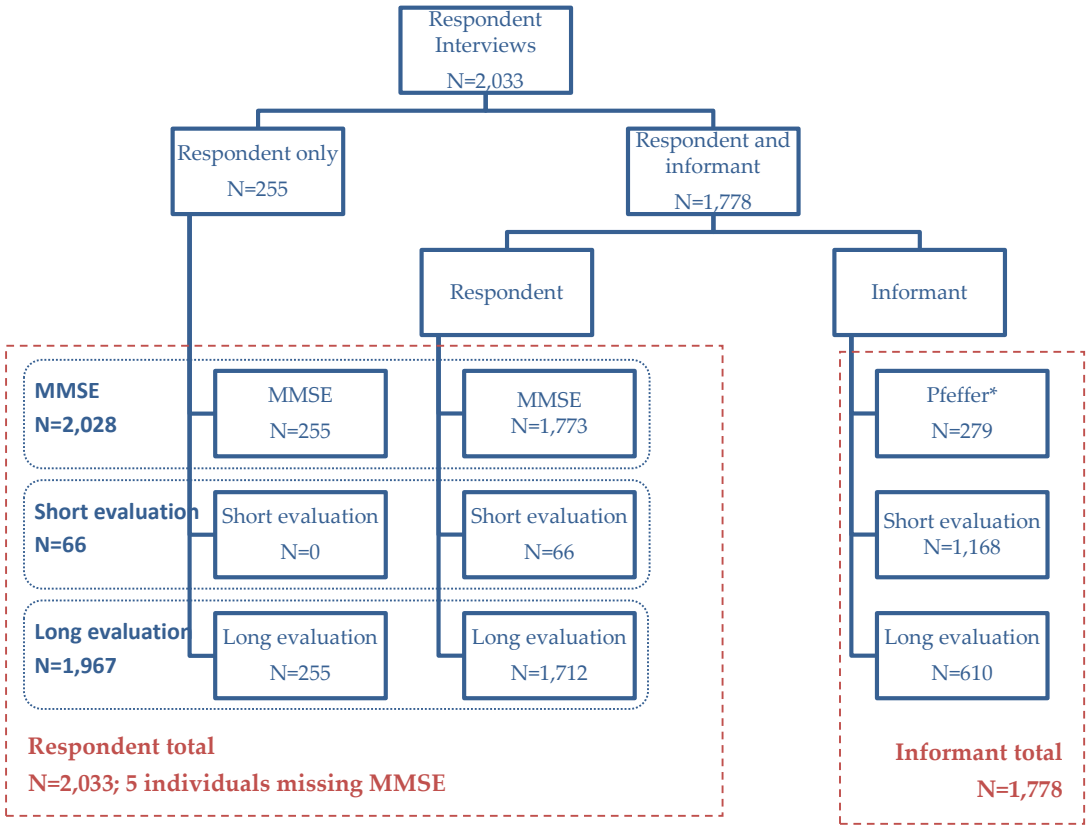


Figure 7 shows the number of cases in which the short and long evaluations were applied, for both the respondents and the informants.

As noted above, the sample consists of 2,033 respondents, and 1,778 informants. Note that five respondents with hearing impairment did not respond to the MMSE. In addition, 13 respondents were administered the short evaluation, even though, the long evaluation was called-for based on their MMSE score.

Figure 7. Distribution of cases



*Pfeffer Test included only for in-person informant interview.

c. Data Collection

The data collection was carried out in August-November 2019 using Computer Assisted Personal Interview (CAPI) on a mobile phone, except for the tasks that required paper and pencil to complete. The respondent and the informant questionnaires, including some score calculations, filters and jumps were programmed in advance in the CAPI. The interviews were conducted by experienced interviewers, who were trained in Santiago and other regions of Chile between July and August 2019. The interviewers took pictures of the paper and pencil portions of the interview. All respondents were interviewed in person. As noted above, informants were interviewed either in-person or by telephone.

Instruments

In this section, we summarize the instruments used for the cognitive evaluation of the respondent and the informant interview.

i. Cognitive evaluation for the respondent

Table 2 presents the list of items included in the respondents' interview and Table 3 provides information regarding how the items using paper and pencil are scored.

Table 2. Tasks and scores by cognitive domains

Domain	Task		Number of total possible elements	Maximum score possible
Orientation	1. Day of the month		1	1
	2. Month		1	1
	3. Year		1	1
	4. Day of the week		1	1
	5. Season of the year		1	1
	6. Place		1	1
	7. Country		1	1
	8. Region or community		1	1
	9. Street		1	1
	10. Floor		1	1
	11. Street address		1	1
		Subtotal	**11**	**11**
Immediate memory	1. Immediate recall of 3 words		3	3
	2. Immediate recall of 10 words (3 attempts)		30	30
	3. Immediate recall of short story		6	12
	4. Immediate recall of long story		25	50
		Subtotal	**64**	**95**
Delayed memory	1. Delayed memory of 3 words		3	3
	2. Delayed memory of 10 words		10	10
	3. Delayed memory of short story		6	12
	4. Delayed memory of long story		25	50
	5. Recall by recognition of 10 words		20	20
	6. Delayed memory of 4 figures		4	11
		Subtotal	**68**	**106**
Attention	1. Visual scan		1	60
	2. Backward count		1	100
		Subtotal	**2**	**160**

Domain	Task		Number of total possible elements	Maximum score possible
Language	1. Following instructions in 3 steps		3	3
	2. Following instructions in 2 steps		2	2
	3. Naming Watch		1	1
	4. Naming Pencil		1	1
	5. Naming Elbows		1	1
	6. Defining Bridge		1	1
	7. Hammer use		1	1
	8. Scissors use		1	1
	9. Repetition		1	1
	10. Reading		1	1
	11. Writing		1	1
		Subtotal	**14**	**14**
Constructional praxis	1. Copy of 2 figures		1	1
	2. Copy of 4 figures		4	11
		Subtotal	**5**	**12**
Executive function	1. Numeric ability		5	5
	2. Verbal fluency		1	4
	3. Symbols and digits		1	56
	4. Similarities		3	3
	5. Go no go		10	10
		Subtotal	**20**	**78**
Total			**184**	**476**

Mini-Mental State Examination (MMSE)

The MMSE consist of the following questions with a maximum score of 30 points.

- *Orientation (questions 1 – 10*): All questions, except street address with maximum 10 possible points.
- *Immediate memory (question 1)*: A list with three words (tree, table, airplane) that the respondent has to repeat. The task is graded with one point for each word, hence the maximum score of 3 points.
- *Executive function (question 1):* Numeric ability: Consists of two questions, from which the best score is selected. The first question consists of repeating backwards the following numbers: 1 – 3 – 5 – 7 – 9. The second question consists on successive subtraction of 7 from 100 five times. The maximum possible score is 5 points.
- *Language (question 1):* Following instructions. The respondent has to follow an instruction composed of three actions. One point is given for each action correctly performed with a score from 0 to 3 points.

- *Delayed memory (question 1)*: The respondent has to remember the three words previously repeated (tree, table and airplane). In total, the task is evaluated with maximum 3 points, 1 for each word repeated.
- *Language (questions 3-4)*: The respondent has to say the name of two objects (watch and pencil). One point is assigned for each object correctly named, so the maximum score is 2 points.
- *Language (question 9):* The respondent has to repeat a short sentence (Three dogs in a wheat field). The task is graded with one point if the phrase is exactly repeated.
- *Language (question 10):* Two pictures are shown to the respondent, who has to read and carry out the instruction in the picture. The best score between the two pictures is considered, so the maximum score of the task is 1 point.
- *Language (question 1):* The respondent has to write a short sentence that makes sense and includes a verb. One point is assigned if the sentence is correctly written.
- *Constructional praxis (question 1)*: Copy two figures. The first exercise consists in copying two superposed circles, and the second exercise consists in copying two superposed pentagons. The maximum score possible is 1 point.

Additional questions

Verbal learning (list of words)

This task includes three questions that consist in reading a list of ten words. The respondent has to repeat the words that she/he remembers. Each question is scored with 1 point for each word repeated correctly, hence the maximum score for each question is 10 points.

Verbal fluency

The respondent has to name all the animals that come to his mind for one minute, and the interviewer has to write them down. The total number of animals and the number of repeated animals are also registered. The score is calculated with the following scale: (i) between 0 and 8 animals, 1 point; (ii) between 9 and 18 animals, 2 points; (iii) between 19 and 24 animals, 3 points; and (iv) between 25 and 36 animals, 4 points.

Visual scan

In this exercise, the interviewer shows the respondent a sheet of paper with 369 figures and a card with a drawing of one of the figures. The respondent is asked to circle all the figures that are the same as the drawing in the card for one minute. The task is graded by counting the number of correct figures marked, with a maximum of 60. Even though the score only considers the correct marks, the number of incorrect figures marked is also included as a variable in the database.

Backward count

In this task, the respondent has to count backwards from 100 to 0, in 90 seconds. In case the respondent makes a mistake, or in case he wishes, a second opportunity to do the exercise is offered. The database incorporates the last number the respondent said and the number of mistakes made. The score is calculated with the following formula:

$$score = 100 - (final\ number + number\ of\ errors)$$

Language

In addition to the MMSE, this domain includes six additional questions that are scored with one point each with a maximum score of 5 points. The exercises are:

- Name elbows
- Define bridge
- Hammer use
- Scissors use
- Follow instructions in two steps

Directions

Give directions how to go to a store with a score of 1 point.

- Give directions

Delayed recall of list of words

The study subject has to name all the words that s/he remembers from the list of ten words read to him/her in Verbal learning. Each remembered word is scored with one point, so the maximum score of this exercise is 10 points.

Immediate recall short story

The interviewer reads a story consisting of six basic ideas about a fire. The respondent has to repeat each idea as completely as possible. The task score depends on the subject's narration. Two points are given for each idea the respondent exactly repeated, and one point given for each idea approximately repeated. The ideas that were not repeated are not scored. The maximum score is 12 points.

Immediate recall long story

The interviewer reads a story consisting of twenty-five basic ideas about an assault. The respondent has to repeat each idea as completely as possible. The task score depends on the subject's narration. Two points are given for each idea the respondent exactly repeated, and one point given for each idea approximately repeated. The ideas that were not repeated are not scored. The maximum score is 50 points.

Recognition of list of words

In this task, the interviewer reads a list of twenty words that includes the ten words listed

in Verbal learning. The respondent has to identify if the words belong or not belong to the list of ten words. One point is assigned for each correct answer (maximum 20 points).

Copy four figures

In this exercise, four sheets are presented. Each sheet has a different shape: a circle, a rhombus, two rectangles and a cube. The respondent has to copy, in the same page, the corresponding figure. The maximum score for this task is 11 points.

Symbols and digits

The respondent is presented with a sheet that has nine digits and a symbol associated with each digit and has 56 boxes that have a digit but no symbol. The respondent has to fill in the blank boxes with the symbol that correspond to each digit, according to the example given. The score depends on the correct number of boxes correctly filled (maximum 56 points). Even though the score only considers the correct cases, the number of incorrect boxes filled is also included as a variable in the database.

Delayed recall of four figures

The respondent is asked to draw from memory the four figures presented previously (circle, rhombus, rectangles and cube). The maximum score is 11 points.

Delayed recall short story

The respondent has to remember the six basic ideas about a fire. The task is punctuated as before: two points are given for each idea the respondent exactly repeated, and one point given for each idea approximately repeated. The ideas that were not repeated are not scored. The maximum score is 12 points.

Delayed recall long story

The respondent has to remember the twenty-five basic ideas about an assault. The task is punctuated as before: two points are given for each idea the respondent exactly repeated, and one point given for each idea approximately repeated. The ideas that were not repeated are not scored. The maximum score is 50 points.

Similarities

The respondent is asked in what way are three pair of words alike (banana and orange, table and chair, and rose and daisy). One point is assigned for each correct answer, so the task has a maximum of 3 points.

Go no go

In this exercise, the respondent is given the instruction to knock once when the interviewer knocks one time and to not knock when the interviewer knocks two times. The interviewer makes ten exercises of one or two knocks, and the respondent is expected to follow the instructions. Each right guess is scored with one point, and the task has a maximum of 10

points.

After the cognitive evaluation, the respondents who complete the long evaluation answers the following questions.

Self-reported memory
The respondent has to evaluate, in two questions, the current state of his/her memory and in comparison, with his/her situation two years ago.

Depressive symptoms
The respondent answers fifteen questions about depressive symptoms.

Injuries
The respondent is asked if he/she has suffered head or neck trauma in the past. If yes, he/she is asked if he/she lost consciousness when the injury happened.

Loneliness
Eleven questions are asked to assess how often the subject feels lonely.

Tabla 3. Scoring criteria for tasks performed on paper and pencil

Task	Evaluation criteria	Values
Writing	Complete idea (sentence) that conveys a message (spelling mistakes are not considered).	(0-1)
Praxis	**Circles** (correct (1) if meets the condition): 1. Overlapping between both figures is less than half 	(0-1)*
	Pentagons (correct (1) if meets both conditions): 1. Two figures with five sides 2. Overlapping creates a four-sided shape 	
Animals	Total words registered	(0-36)
	Correct answers (repeated animals are counted once)	(0-36)
	Number of repeated animals	(0-36)
Visual scan 	Correctly marked number of figures	(0-60)
	Incorrectly marked number of figures	(0-60)
Numeric ability	Last number registered	(1-100)
	Number of errors	(0-100)
Immediate recall of long story	Number of ideas exactly remembered	(0-25)
	Number of ideas approximately remembered	(0-25)
	Number of ideas not remembered	(0-25)
Constructional praxis	**Circle** (each condition is worth one point): 1. Circular shape 2. Closed figure (3mm) 	(0-2)
	Rhombus (each condition is worth one point): 1. Figure with four sides 2. Four closed angles (3mm) 3. Four sides have the same length 	(0-3)
	Rectangles (each condition is worth one point): 1. Two rectangles are present 2. Rectangles overlap as the model 	(0-2)
	Cube (each condition is worth one point): 1. Tridimensional figure 2. Frontal face points to the right or left 3. Interior lines are correct 4. Opposite sides are parallel 	(0-4)
Symbols and digits	Total attempts (including boxes left blank)	(0-56)
	Correct answers	(0-56)
Constructional praxis recall	**Circle** (each condition is worth one point): 1. Circular shape 2. Closed figure (3mm) 	(0-2)
	Rhombus (each condition is worth one point): 1. Figure with four sides 2. Four closed angles (3mm) 3. Four sides have the same length 	(0-3)
	Rectangles (each condition is worth one point): 1. Two rectangles are present 2. Rectangles overlap as the model 	(0-2)
	Cube (each condition is worth one point): 1. Tridimensional figure 2. Frontal face points to the right or left 3. Interior lines are correct 4. Opposite sides are parallel 	(0-4)
Delayed recall of long story	Number of ideas exactly remembered	(0-25)
	Number of ideas approximately remembered	(0-25)
	Number of ideas not remembered	(0-25)

* The best score between both exercises is chosen.

ii. **Informant questionnaire**

The informant questionnaire has four sections. First, the informant responds the Pfeffer Test, if the interview is conducted in person, which consists of 11 questions that help determine the dependency level of the respondent.

Second, some questions are asked regarding the respondent's cognitive and functional decline. These questions can be answered in two ways: (i) the subject presents certain behavior (yes or no); or (ii) how often the subject presents the behavior (scale from 0 to 2).

Third, the informant is asked questions about the history and etiology of the cognitive decline. This section has no score, because it is intended to describe the evolution of the respondents' cognitive decline.

Finally, the informant has to answer 17 questions related to care needs, attendance at senior centers and indoor and outdoor activities. The answers are given in two ways: (i) the respondent presents the feature/does the activity (yes or no); or (ii) how often the subject does the activity/how much time the subject dedicates to the activity (scale from 1 to 5).

Table 4. Items and scores in the informant questionnaire

	Item		Number of total possible elements/Maximum score possible
Pfeffer Test	1. Capability to perform daily activities		11
		Subtotal	**11**
Cognitive decline	1. Change in daily activities		3
	2. Decline in mental ability		1
	3. Serious problems to remember		1
	4. Forgets where he/she puts things		2
	5. Forgets where things are kept		2
	6. Forgets friends' names		2
	7. Forgets family members' names		2
	8. Forgets what was about to say in a conversation		2
	9. Forgets words while speaking		2
	10. Uses wrong/incorrect words		2
	11. Talks about things that happened in the past		2
	12. Forgets when the last time was he/she saw you		2
	13. Forgets what he/she did the day before		2
	14. Forgets where he/she is		2
	15. Gets lost in the neighborhood		2
	16. Gets lost at home		2
	17. Difficulties adjusting to changes in daily routine		2
	18. Changes in the ability to think/reason		1
	19. Confuses friends or relatives with other people		1
	20. Difficulties making everyday decisions		1
	21. Confusing or illogical thinking		1
		Subtotal	**37**
Functional decline	1. Stopped doing usual activities or hobbies		1
	2. Ability to eat		2
	3. Ability to get dressed		2
	4. Difficulties controlling urine		2
	5. Difficulties controlling bowel movement		2
		Subtotal	**11**
Total			**48**

3. Data Processing

a. Databases

The Health and Cognition Study has a database[8] that includes both the cognitive evaluation for the respondent and the informant questionnaire. Each variable and their values have their respective labels. The database includes some information on the respondent and the interview itself, as detailed below:

Table 5. Description of variables

Variables	Name
Respondent's unique ID	folio
Public ID	folio_n
Sample type – SPS only/ SPS&ENCAVIDAM	tipo
Interviewed in SPS 2016	EPS2016
Interviewed in SPS 2009	EPS2009
Interviewed in SPS 2006	EPS2006
Interviewed in SPS 2004	EPS2004
Interviewed in SPS 2002	EPS2002
Region	region
Commune	comuna
Respondent's gender	sexo
Respondent's age	edad
Respondent's years of education*	esc
Evaluation type – long/short	evaluacion
Sample weight	exp

* Grades of schooling attainment

The respondent's identifier *folio_n* allows to merge this database with the databases in the Social Protection Survey and with the information in the Quality of Life Survey. In addition, the database includes a variable that indicates if the respondent was interviewed in the ENCAVIDAM and five variables that detail the years in which the respondent participated in the SPS.

Finally, a sampling weight is incorporated, in order to expand the sample to a population level.

[8] There are two versions of the database: one in English and other in Spanish. The structure of both files is identical.

Regarding the contents of the cognitive evaluation, the file has the following structure:

Table 6. Database structure

	Section	Prefix
Respondent	Filter	d
	MMSE	mmse
	MMSE score	ptjemmse
	Cognitive evaluation	cog
	Cognitive evaluation scores	ptjecog
	Score by domains	ptje_D
	Memory self-report	mem
	Head trauma	les
	Depressive symptoms	dep
	Loneliness perception	sol
Informant	Informant's information	infper
	Pfeffer Test (Yes=1)	infpfeffer
	Pfeffer Test score	ptjepfeffer
	Cognitive and functional decline	infcog
	Evolution of the cognitive decline	infcog
	Mental and behavior disorders	infcog
	Cares	infcog
	Head trauma	infcog
	Leisure activities	infcog
	Cognitive and functional decline score	ptjeinf_D

b. Codebooks

The database structure is detailed in the codebook. This document describes all the variables and the answers of each question in the respondent and informant questionnaires. All variables and answers are labeled.

In addition, the database contains the score of each task and the MMSE score. It also includes the score obtained by the respondent for each domain[9]:

1. Orientation
2. Immediate memory
3. Delayed memory
4. Attention
5. Language
6. Constructional praxis
7. Executive function

Moreover, the maximum score possible for each domain is incorporated as a variable. For instance, if the respondent performed 5 out of 10 tasks in a domain, this variable will indicate the total score possible that this subject can obtain, considering that she/he did not perform all the exercises in the domain. This allows adjusting the scores according to what each person did.

Finally, the Pfeffer Test score is included.

In case the database user needs more detail on the variables and on its possible answers values, consulting the codebook is recommended.

[9] Please consult Table 2 for more detail regarding the tasks associated with each domain.