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Mexican Health & Aging Study

Harmonized Mex-Cog Documentation

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Preface

The Cognitive Aging Ancillary Study in Mexico (Mex-Cog) is an in-depth study of dementia and cognitive deterioration in a sub-sample of over 2,000 older adults from the ongoing Mexican Health and Aging Study (MHAS). The MHAS is a longitudinal household survey, representative of people aged 50 years and over, and their partners regardless of age, in both urban and rural areas in Mexico. The Mex-Cog is designed to measure cognition and dementia risk, using the Harmonized Cognitive Assessment Protocol (HCAP).

The HCAP is part of an international research collaboration, funded by the National Institute of Aging (NIA), to better measure cognitive impairment and dementia in representative population-based samples of older adults. In addition to the Mex-Cog in Mexico, the HCAP has been used internationally in the United States, England, India, Chile, Korea, China, South Africa, Europe, and Ireland.

The HCAP consists of a pair of in-person interviews, one with a target respondent and one with an informant nominated by the respondent. The respondent interview includes a neuropsychological test battery designed to measure a range of key cognitive domains affected by cognitive aging, such as memory, language, attention, executive function, and visuospatial skills. All HCAP studies share core elements, such as the aforementioned domains, specific cognitive tests, questions for informants, and methods of data collection. However, due to cross-country differences in literacy and local contexts, country-specific modifications have been made. Hence, when analyzing HCAP data across multiple countries, such cross-survey differences need to be considered when constructing an analysis plan. The details of these cross-survey differences are discussed in this codebook.

In addition to the cognitive and informant evaluations, the Mex-Cog also includes an anthropometric evaluation and performance assessment. Data on the health of the respondents, such as blood pressure and walking speed, are collected and made available for research purposes. All data files and additional documentation on the Mex-Cog are available on the MHAS study website www.MHASweb.org.

The University of Southern California Gateway to Global Aging Data team and the MHAS Team have created this codebook along with the Harmonized Mex-Cog data files to facilitate cross-country comparisons across the international family of HCAP studies.

The Harmonized Mex-Cog initiative is part of a larger set of projects that aim to facilitate cross-country comparisons using data from the HRS-family of HCAP studies. With funding and support from the National Institute of Aging, we have also created the Harmonized HRS-HCAP (USA), Harmonized ELSA-HCAP (England), and Harmonized LASI-DAD (India), with the Harmonized CHARLS-HCAP (China), Harmonized Chile-Cog (Chile), Harmonized SHARE-HCAP (Europe + Israel), and Harmonized TILDA-HCAP (Ireland) planned for future release. Further information

about these Harmonized data files with questionnaires and other metadata is available on our searchable website, https://g2aging.org/.

We are grateful for the continuing support of and funding from the National Institute of Aging (R01 AG030153).

Requested Acknowledgment

We ask all users of the Harmonized Mex-Cog to please inform our team of any written analysis using data from the Harmonized Mex-Cog or information from the Harmonized Mex-Cog Codebook by sending an email to **papers@g2aging.org**. We also ask users to include the following acknowledgement in their written work: "This analysis uses data or information from the Harmonized Mex-Cog programming codes and Codebook, Version A.2 as of November 2023, developed by the Gateway to Global Aging Data in collaboration with the MHAS research team. The development of the Harmonized Mex-Cog was funded by the National Institute on Aging R01 AG030153. The Mex-Cog data collection was funded by R01 AG051158. The Harmonized Mex-Cog data files and documentation are for public use and available at www.MHASweb.org. For more information about the Harmonization project, please refer to https://g2aging.org/."

Mex-Cog Version and Acknowledgment

This document uses Wave 1 of Mex-Cog conducted in 2016 by the MHAS team. The Study on Cognitive Aging Linked to MHAS (Mex-Cog) is funded by the National Institutes of Health / National Institutes on Aging (NIA/NIH R01 AG051158). The MHAS (Mexican Health and Aging Study) is sponsored by the National Institutes of Health / National Institutes on Aging (grant number NIH R01 AG018016) and the Mexican National Institute of Statistics and Geography (*Instituto Nacional de Estadística y Geografía, INEGI*). The data files and documentation are for public use and are available at www.MHASweb.org.

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What's New in Version A.2 of the Harmonized Mex-Cog?

Version A.2 contains 2,042 observations or rows. It is a Respondent-level file so each row represents a unique Respondent. It adds several new variables and makes some variable name adjustments.

We have added the following variables to the file:

Demographics:

- We added **ISOA3**, a country indicator.
- We added **INHCAP1**, an indicator for participation in the first wave of MHAS Mex-Cog.
- We added **RwHIWSTAT**, a variable indicating whether the cognitive assessment and/or informant interview was completed.
- We added **RAEDISCED** and **RAEDUCL** from the Harmonized MHAS as additional education variables.
- We added the respondent's marital status at the core interview in Wave 4 (2015) as **RwHMSTATC** and **RwHMSTATHC**.
- We added **RwHRURALC**, an indicator of living in an urban or rural area from the core interview in Wave 4 (2015).

We have made the following adjustments to the data and documentation:

All Sections:

- We updated several variable names in order to avoid using the same variable name in the Harmonized core data and Harmonized HCAP data and, therefore, the possibility of overwriting any data inadvertently while merging the two datasets. In most cases, the variable names were adjusted by adding an "H" for "HCAP" as a prefix.

Demographics:

- We renamed the following variables:
  - RwIWY_M to **RwHIWY**
  - RwAGEY to **RwHAGEY**

Cognition:

- We renamed the following variables:
  - RwMO to **RwHMO** and RwFMO to **RwFHMO**
  - RwYR to **RwHYR** and RwFYR to **RwFHYR**
  - RwDW to **RwHDW** and RwFDW to **RwFHDW**
  - RwDATE to **RwHDATE** and RwFDATE to **RwFHDATE**
  - RwTIME to **RwHTIME** and RwFTIME to **RwFHTIME**
  - RwSTATE to **RwHSTATE** and RwFSTATE to **RwFHSTATE**
  - RwCOUNTRY to **RwHCOUNTRY** and RwFCOUNTRY to **RwFHCOUNTRY**
  - RwADDRESS to **RwHADDRESS** and RwFADDRESS to **RwFHADDRESS**
  - RwIMRC3 to **RwHIMRC3** and RwFIMRC3 to **RwFHIMRC3**
  - RwDLRC3 to **RwHDLRC3** and RwFDLRC3 to **RwFHDLRC3**

- RwSER3 to **RwHSER3** and RwFSER3 to **RwFHSER3**
- RwSER7 to **RwHSER7** and RwFSER7 to **RwFHSER7**
- RwOBJECT1 to **RwHOBJECT1** and RwFOBJECT1 to **RwFHOBJECT1**
- RwOBJECT2 to **RwHOBJECT2** and RwFOBJECT2 to **RwFHOBJECT2**
- RwOBJECT to **RwHOBJECT**
- RwEXECU to **RwHEXECU** and RwFEXECU to **RwFHEXECU**
- RwSENTEN to **RwHSENTEN** and RwFSENTEN to **RwFHSENTEN**
- RwDRAW to **RwHDRAW** and RwFDRAW to **RwFHDRAW**
- RwSCIS to **RwHSCIS** and RwFSCIS to **RwFHSCIS**

Health and Physical Measures:

- In addition to the information provided under "All Sections" above, we also removed the "_D" suffix in order to distinguish these CESD variables using a binary answer scale from the CESD variables using a likert scale. We renamed the following variables:
  - RwDEPRES_D to **RwHDEPRES**
  - RwEFFORT_D to **RwHEFFORT**
  - RwSLEEP_D to **RwHSLEEPR** (also adjusted to be more consistent with the variable in the Harmonized MHAS)
  - RwWHAPPY_D to **RwHWHAPPY**
  - RwFLONE_D to **RwHFLONE**
  - RwENLIFE_D to **RwHENLIFE**
  - RwFSAD_D to **RwHFSAD**
  - RwFTIRED_D to **RwHFTIRED**
  - RwFENG_D to **RwHENERG** (also adjusted to be more consistent with the variable in the Harmonized MHAS)
  - RwCESD9 to **RwHCESD9**

1. Introduction and Overview

This codebook documents the Harmonized MHAS Mex-Cog data files, a streamlined collection of variables derived from the Cognitive Aging Ancillary Study in Mexico (Mex-Cog). The Mex-Cog is a sub-study of the ongoing, nationally representative survey Mexican Health and Aging Study (MHAS). Starting in 2001, the MHAS has surveyed respondents on a variety of topics, such as health, economic position, and quality of life, with follow ups conducted in 2003, 2012, 2015, and 2018 (Wong et al. 2017; Wong et al. 2015).

The Mex-Cog is part of a multi-study effort to understand and measure cognition and dementia risk in aging populations through the use of a common set of assessments, known as the Harmonized Cognitive Assessment Protocol (HCAP). Similar to the other HCAP studies, the Mex-Cog administers cognitive assessments and informant interviews. Appropriate informants are persons familiar with the behavior and health of the respondent, and are nominated by the target respondent. In addition, the Mex-Cog also includes additional content that assesses the respondents' self-reported depressive symptoms, exposure to lead, history of skull trauma, and anthropometric and performance measures, such as blood pressure, height, and balance.

Mex-Cog derived variables include measures on the respondents' cognitive performance and self-reported questions, as well as informant report variables. The Harmonized Mex-Cog data file also incorporates selected demographic variables from the Harmonized MHAS. The Harmonized Mex-Cog includes only data that is publicly released.

The Mex-Cog's target sample included respondents who met the following eligibility: 1) aged 55 years and older during the MHAS 2015 survey and 2) had completed a direct interview or a proxy interview for health reasons in the MHAS 2015 survey. To minimize costs and maximize quality control, 8 states out of the 32 states in the MHAS sample were first selected based on the following criteria: 1) proportion of urban population, 2) proportion of rural population, 3) the number of residents who are former migrants to the United States, 4) prevalence of obesity, 5) prevalence of diabetes, 6) proportion of residents working in the mine industry, and 7) proportion of those working in the pottery industry. After the 8 states were selected, all the MHAS 2015 respondents who had met the earlier criteria were included in the Mex-Cog total sample (Mex-Cog 2020).

As in the MHAS study, both partners were included in a household if they had participated in the MHAS study and were eligible for the Mex-Cog survey. If a selected respondent participated as both the respondent and informant, interviewers gave the informant questionnaire first and conducted the cognitive assessment second. Similarly to the MHAS study, for couples in a household, two different word lists were used during the immediate and delayed memory tasks to avoid the possibility of the learning effect.

The study data was collected in two phases during 2016: phase 1 in the spring (March – April) and phase 2 in the fall (October – November). The Harmonized Mex-Cog includes only 2,042

subjects, that correspond to those that completed a cognitive assessment during Mex-Cog 2016. It includes information from both instruments (cognitive assessment and informant interview) when available. In the MHAS Mex-Cog Wave 1, there are also cases where an informant report was completed but a cognitive assessment was not. While these cases have not been included in the Harmonized Mex-Cog for Wave 1 (Version A.2), this data, which incorporates imputed values using an alternative imputation method than the one employed in the Harmonized Mex-Cog, will be available through the MHAS website. This supplementary data will provide information on 193 subjects, that correspond to those that completed only an informant interview, and the imputation of the variables when needed.

The Mex-Cog survey was designed by a group of experts from different institutions in Mexico and the United States under the direction of the principal investigator of MHAS, Dr. Rebeca Wong of the University of Texas Medical Branch (UTMB). Other collaborators include Dr. Silvia Mejía of the Colegio de la Frontera Norte, researchers from the National Institute of Geriatrics (Dr. Luis Miguel Gutiérrez, Dr. Carmen Garcia Peña, and Dr. Oscar Rosas), Dr. Adrián Martínez, National Institute of Public Health (Dr. Belem Trejo and Ms. Laura Rosario Mendoza), and National Institute of Neurology (Dr. Ana Luisa Sosa). For all stages of the study, important input was received from the HRS/HRS-HCAP study, specifically from the principal investigator Dr. David Weir, as well as Dr. Kenneth Langa.

The project team carefully evaluated the HCAP cognitive protocol and modified it to suit the local context and target population. Table 1 presents the cognitive tests selected for Mex-Cog, indicating those in common with HCAP and the tests unique to Mex-Cog. A modified informant interview protocol from the HRS-HCAP was used. The Mex-Cog Informant instrument only included items adapted from the Community Screening Instrument for Dementia (CSI-D) (Hall et al., 1993). Additional questions were included that asked about the study subject's origin and history of cognitive decline, care needs, attendance at centers, and activities performed inside and outside of the household. For detailed information on test item similarities, differences, and comparability across HCAP studies, please refer to the HCAP comparison table on https://g2aging.org/app/cms/download/user-guide/HCAP_comparison_v17.xlsx.

The data files and documentation for the Mex-Cog are available free of charge at the study website www.MHASweb.org. For more information and details of the Mex-Cog study, including sample selection, reasons for non-response, and comparisons between respondents and non-respondents, please see the Mex-Cog Methodological Document available for download at the study website http://mhasweb.org//resources/DOCUMENTS/2015/Mex-Cog/Methodological_Document_Mex_Cog_2016.pdf. For more details on the study background and design for the MHAS study, please see Wong et al. 2017 and Mex-Cog 2020.

Table 1. Cognitive tests selected for MHAS Mex-Cog

Test Name	Description
MMSE (Reyes de Beaman et al, 2004)#	This section uses a modified version of the MMSE in Spanish. The MMSE assesses general cognitive status with measures of cognitive orientation, language, memory, attention, and constructional praxis. This test is often used in clinical and research settings to identify individuals with likely cognitive impairment or dementia.
Word learning recall, and recognition (CERAD 1987)#	In the word learning recall test, 10 high-imagery words are read to the respondent for 2 seconds each (compared to being presented visually in the HRS-HCAP). The respondent hears each word and repeats it aloud as it is presented and is then tested on immediate recall ability. The same list of words is presented to the respondent three times; after each presentation, the respondent is asked to recall as many words as possible. The delayed recall of the 10 words is done shortly after several other survey questions are asked. For the word recognition task, after other survey questions are asked, a list of 20 words is read to the respondent (compared to being presented visually in the HRS-HCAP). The respondent is asked to recall if each word was in the list presented earlier.
Letter/Symbol cancellation (Mesulam, 1985)#	This test assesses attention and speed, specifically in the illiterate population. Subjects are given a sheet of paper directly in front of the subject, which shows random arrays of nonverbal stimuli, containing 60 targets, with 15 targets in each quadrant of the sheet. They are asked to scan the sheet as quickly as possible (in a minute) and circle the symbol shown to them. The score includes the number of correctly circled symbols. The HRS-HCAP uses letters instead of symbols.
Logical memory (Wechsler, 2009; Prince et al., 2007)*	This section involves the reading of stories to the respondent and is scored based on the number of story points the respondent can immediately recall after hearing each story. The first story read to the respondent is the Brave Man story, included in the 10/66 study of dementia and many other dementia studies around the world. The second story read to the respondent is one of two from the Wechsler Memory Scale (WMS-IV). The delayed recall of the stories is done after several other survey questions are asked.
Constructional praxis (with delayed recall) (Rosen, Mohs,	The constructional praxis tests the subject's ability to copy four geometric forms of varying difficulty shown on a sheet of paper (circle, overlapping rectangles, diamond, and cube). In the delayed recall test, the subjects are asked to recall these shapes and draw them from memory after some

and Davis, 1984)*	time.
Retrieval fluency (Woodcock, McGrew, and Mather, 2001)*	To assess verbal reasoning and processing speed, respondents are asked to name as many animals as possible in a minute. This test was adapted by McArdle and Woodcock from the Woodcock Johnson Test III Tests of Achievement.
Serial 3s (Folstein, Folstein & McHugh, 1975)+	In this test, the respondent is asked to subtract three from 20 in the first step and then asked to continue subtracting three from the previous result in each subsequent step to a total of 5 subtractions. Each subtraction is scored separately. This test is included in the MMSE but is not considered in the total MMSE score.
Serial 7s (Folstein, Folstein & McHugh, 1975)*	In this test, the respondent is asked to subtract seven from 100 in the first step and then asked to continue subtracting seven from the previous result in each subsequent step to a total of 5 subtractions. Each subtraction is scored separately. This test is also part of the MMSE.
CSI-D (Hall, Hendrie, and Brittain, 1993)* **Brief CSI-D** (Prince et al., 2010)*	This section includes six questions from the Community Screening Instrument for Dementia (CSI-D) surveys, one question from the long version and five questions from the brief version used in the 10/66 studies. These questions evaluate language and orientation.
Go-No-Go (Luria, 1980; Dubois et al., 2000)+	In this test, the respondent has to clap once in response to a single clap, and to withhold a response for two claps. It includes a series of 10 instructions. This test assesses attention and executive function (inhibitory control).
Similarities (Wechsler, 2009; Dubois et al., 2000)+	In this test, the respondent is presented with three pairs of words and asked to identify the qualitative relationship between each pair. Correct answers represent the highest level of abstraction. This test assesses abstract thinking and concept formation.
Backward Count (Wechsler, 1987)#	This test is a modified version of the Backward Count measure in the Wechsler Memory Scale. In this test, the respondent is asked to count backwards as fast as possible starting from 20. When the respondent reaches the number 11, time is registered. If the respondent fails and wants to start again, a second trial is allowed. Scores include correct (if no mistakes were made) and time in seconds. This test assesses speed and attention.
Symbol Digit Test (Smith, 1982)#	In this test, the respondent has to substitute a symbol for Arabic numbers 1-9. A printed key is provided, which pairs the numbers 1-9 with a specific symbol so that each number has its own unique symbol. The respondent completes as many pairings as possible in 90 seconds. The score includes the number of correct and incorrect pairings.

CES-D Depressive Symptoms (Aguilar-Navarro, et al., 2007)*	This section uses an abbreviated version of the CES-D test, and utilizes a Yes/No response system. Respondents are asked about the current presence of depressive symptoms. The version in MHAS Mex-Cog is a 9-item list.

*indicates HCAP protocol; + indicates unique in MHAS Mex-Cog; # indicates same tests but with differences in Mex-Cog

1.1. Gateway to Global Aging Data

The Health and Retirement Study (HRS) has achieved remarkable scientific success, as demonstrated by an impressive number of users, research studies, and publications using it. Its success has generated substantial interest in collecting similar data as population aging has progressed in every region of the world.

The result has been a number of surveys designed to be comparable with the HRS: the Mexican Health & Aging Survey (MHAS), the English Longitudinal Study of Ageing (ELSA), the Survey of Health, Ageing and Retirement in Europe (SHARE), the Costa Rican Longevity and Healthy Aging Study (CRELES), the Korean Longitudinal Study of Aging (KLoSA), the Japanese Study on Aging and Retirement (JSTAR), the Irish Longitudinal Study on Ageing (TILDA), the China Health and Retirement Longitudinal Study (CHARLS), the Brazilian Longitudinal Study of Ageing (ELSI), the Northern Ireland Cohort Longitudinal Study of Ageing (NICOLA), the Chilean Social Protection Survey (SPS), the Malaysia Ageing and Retirement Survey (MARS), and the Longitudinal Aging Study in India (LASI). The overview of this family of surveys, including their research designs, samples, and key domains can be found in Lee et al. (2021).

As these surveys were designed with harmonization as a goal, they provide remarkable opportunities for cross-country studies. The value of comparative analyses, especially the opportunities they offer for learning from the results of policies adopted elsewhere, is widely recognized. Yet, there are only a limited number of empirical studies exploiting such opportunities. This is partly due to the difficulty associated with learning multiple surveys and the policies and institutions of each country.

Identifying comparable questions across surveys is the first step toward cross-country analyses. The Gateway to Global Aging Data (Gateway) helps users understand and use these large-scale population surveys on health and retirement. The Gateway includes several tools to facilitate cross-national health and retirement research. It includes a digital library of survey questions for all participating surveys. Its search engine enables users to find relevant survey questions. The Gateway also includes a concordance with information comparing measures within and across surveys over time. Using these tools, researchers can identify all questions related to particular key words or within a domain. The Gateway also includes population and sub-population estimates for key harmonized variables and presents them in graphs and tables that can be downloaded. Further details about the Gateway to Global Aging Data can be found in Lee, Phillips, and Wilkens (2019).

In addition to the HRS family of studies, the HRS has led an initiative that provides an in-depth study of dementia risk and cognitive function in aging populations through the use of a common set of assessments, known as the Harmonized Cognitive Assessment Protocol (HCAP). This resulting study is the HRS-HCAP in the United States. The HCAP, with adaptations according to each country's context, has since been used internationally in England, India, Chile, Korea, China, South Africa, Europe, and Ireland. The Harmonized HCAP initiative is part of a larger set of projects that aim to facilitate cross-country comparisons using data across the HRS-family of HCAP studies. The Gateway helps users understand and use these surveys for cross-national analysis. The Gateway also includes a concordance table that compares the measures across the HRS-family of HCAP studies.

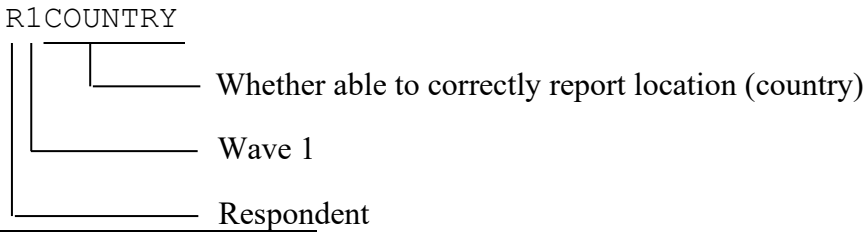
The Gateway can be accessed at https://g2aging.org/. For more information about using the Gateway, please visit the Help page on the Gateway's website.

1.2. Data File Structure

The Harmonized Mex-Cog data are contained in a single file. The data are stored in a "fat format" where each observation represents one respondent. The unit of observation is the individual. The same identifiers used in MHAS 2015 are used in the Harmonized Mex-Cog. Households are identified by the unique identifier CUNICAH (also known as UNHHID). Each individual is uniquely identified by the identifier NP. By using the CUNICAH and NP identifiers, MHAS files can easily be merged. More information about the identifiers used in both the MHAS and Mex-Cog can be found on www.MHASweb.org.

1.3. Variable Naming Convention

With a few exceptions, variable names in the Harmonized Mex-Cog Data follow a consistent pattern. The first character indicates whether the variable refers to the reference person ("R").[1] The second character indicates the wave to which the variable pertains: "1" or "A". The "A" indicates "all," i.e., the variable is not specific to any single wave. An example is RABYEAR, the birth year of the respondent. The remaining characters describe the concept that the variable captures. For example:



[1] The reference person need not be the person who responded to the question. It is the person whose information is central to the data file observation.

Variable R1COUNTRY captures whether the respondent was able to report the country they were in when interviewed.

In the text below, we may refer to variables by substituting a "w" in for the specific wave number. For example, consider RwCOUNTRY; this reference points at the group of variables that follow the same pattern as R1COUNTRY.

Variable labels also follow a consistent pattern. The first characters denote the name of the variable, followed by a colon. Then the wave to which the variable pertains follows (for example, "w1" refers to wave 1). The remainder of the label describes the concept that the variable captures. For example, the variable label of R1COUNTRY is:

r1country:w1 R cognition place naming-country(0-1)

It may seem duplicative to include the name of the variable and the wave in the variable label. However, statistical packages often suppress the variable name and instead use its label in the presentation of results.

Variable names in the Harmonized Mex-Cog are generally based on the variable name used in the Harmonized HRS-HCAP, Harmonized ELSA-HCAP, or the Harmonized LASI-DAD for the same measure. Measures that are exactly or near-exactly comparable between the Harmonized Mex-Cog, the Harmonized HRS-HCAP, Harmonized ELSA-HCAP, or the Harmonized LASI-DAD use the exact same name. For instance, RABYEAR is the variable name for the respondent's birth year in the Harmonized Mex-Cog, as well as in the Harmonized HRS-HCAP, the Harmonized ELSA-HCAP, and the Harmonized LASI-DAD. If the Harmonized Mex-Cog measure is deemed only somewhat comparable with the Harmonized HRS-HCAP, Harmonized ELSA-HCAP, or the Harmonized LASI-DAD version of that measure, the variable name in the Harmonized Mex-Cog will often end in "_M." This variable name suffix indicates some Mex-Cog-specific difference with the Harmonized HRS-HCAP, Harmonized ELSA-HCAP, or the Harmonized LASI-DAD version of this measure. Reasons for the Harmonized Mex-Cog-specific variable names include: differences in survey questions, differences in survey routing, and whether both sets of variables use imputed values. Harmonized Mex-Cog-specific variable names are used to notify the user that (i) there are substantial differences between the Harmonized Mex-Cog measure and the Harmonized HRS-HCAP, Harmonized ELSA-HCAP, or the Harmonized LASI-DAD measures and (ii) clean harmonization between these measures is not possible.

Users should always check the "Differences with other HCAP studies" section of each measure before comparing any Harmonized Mex-Cog measure to the Harmonized HRS-HCAP or the Harmonized LASI-DAD version of the same measures or any other Harmonized HCAP Dataset version of the same measure.

1.4. Missing Values, and Nonresponse

Variables may contain missing values for several reasons. Stata, SAS, and SPSS offer the capability to distinguish between multiple types of missing values, and we have attempted to record as much information as possible. Generally, the codes adhere to the classification in Table 2.

Table 2. Missing codes

Code	Reason for missing
.	Reference person did not respond to this wave
.d	Don't know
.r	Refused
.m	Other missing
.h	No informant interview completed
.l	Cannot read
.s	Skipped
.c	Cannot do due to physical impairment
.q	Skipped because short interview

The coding scheme varies across variables. Consult the Data Codebook for details on individual variables.

Users may want to consult the Mex-Cog Methodological Document, which includes a detailed flowchart for scoring and coding each item in the survey. The flowchart contains important information that convey the values assigned to skipped questions, according to the reasons for skipping, such as the inability to read or write, the inability to hear or speak, the inability to hold a pencil, and others. The details on how "short interviews" were coded are provided as well.

2. Imputation

When test items or informant report items are missing, this poses a problem. A single missing item makes all summary scores that depend on it also missing, so even a small fraction of missings in each item can lead to a large fraction of observations that are missing summary scores, which would arguably be of primary interest to most researchers. Therefore, as is common in survey data, we *impute* most missing observations. The goal of imputation is to replace the missing values with random draws from a conditional distribution such that the estimated joint distribution from the completed (imputed) data is an unbiased estimator of the true joint distribution of these variables (e.g., Little & Rubin, 2002, sec. 10.2.1; Lee et al., 2015, sec. 2).

We imputed the cognitive test variables and the informant reports about the individuals' cognitive decline. For the cognitive test items, we have recoded “don't know” (.d) as incorrect (0). The imputation method we have implemented was inspired by the imputations of cognition variables in the HRS (Fisher et al., 2017). It is also similar to the method used in SHARE (De Luca et al., 2015, although they use a simpler method for variables with few missing values). We also use this imputation method in other HCAP studies (LASI-DAD, ELSA-HCAP). We specified a regression model for each cognition variable as a function of the other cognition variables and a rich set of background variables: health, demographics, and socio-economic characteristics. The regression model specifies the conditional distribution of the variable that must be imputed as a function of the regressors, and the imputations are pseudo-random draws from this conditional distribution. Take, for example, a binary variable such as whether the respondent correctly answered the question about what year it is. Let this variable be y and the regressors be collected in the vector **x**. We specified a logistic regression model for y as a function of **x**:

$$\Pr(y_i = 1 \mid \mathbf{x}_i) = p_i = \frac{e^{\mathbf{x}_i'\boldsymbol{\beta}}}{1 + e^{\mathbf{x}_i'\boldsymbol{\beta}}}.$$

This was estimated on the sample where y_i is observed. Then we generated a pseudo-random draw u_i from a uniform distribution on the interval (0,1) and for the sample where y_i was missing, we computed p_i and imputed $y_i = 1$ if $u_i \leq p_i$ and $y_i = 0$ otherwise. For binary variables, we used (binary) logistic regression (i.e., logit) models; for ordinal variables, we used ordered logit; for count variables, we used negative binomial regression; and for unordered categorical variables, we used multinomial logit. For some (continuous) variables, we used predictive mean matching (PMM; Little, 1988), a form of nearest neighbor imputation. This estimates a linear regression model, but instead of generating a draw from this parametric model, a donor is found among those who had a non-missing value. The donor is the observation whose predicted value from the model is closest to the predicted value of the recipient (the observation that needs to be imputed). The imputed value for the recipient is the observed value for this donor. The advantage of this semiparametric method is that it is more robust to model misspecifications, such as heteroskedasticity or nonlinearity, than parametric imputations.

2.1. Regressors

The vector x consists of (1) demographics, socio-economic variables, health, and cognition variables from the MHAS core data from Wave 4 of the survey completed in 2015; (2) demographic variables from Mex-Cog Wave 1; (3) socio-economic variables from Mex-Cog; and (4) cognitive measures (tests and informant reports) from Mex-Cog. The regressors from categories 1-3 are listed in Table 3.

Table 3. Regressors from the MHAS core wave 4 data and from Mex-Cog wave 1 data

Core demographics	Core socio-economic	Core health	Core cognition
Whether literate	Mother's education	Self-rated health	Self-rated memory[b]
Whether numerate	Father's education	Vision	Orientation to time[b]
Speaks indigenous language	Wealth quintile	Hearing	Verbal fluency[b]
Couple status	Income quintile	#Chronic conditions[a]	Word recall[b]
		#Mobility limitations	Serial 7s[b]
		#ADLs	Backward counting[b]
		#IADLs	Picture drawing[b]
		Depressive symptoms (CESD)	Visual scan[b]
			Jorm IQCODE[c]
			Informant-rated memory[c]
			Proxy interview[c]

Mex-Cog demographics	Mex-Cog socio-economic
Gender	Education (years)
Age category	

[a]Among high blood pressure, heart disease, stroke, diabetes
[b]Only in imputations for participants with a core self-interview (direct interview)
[c]Only in imputations for participants with a core proxy interview

2.2. Block-sequential and chained imputation

One or more of the regressors in x could themselves be missing and thus, these needed to be imputed as well. Following the HRS (Fisher et al., 2017), we imputed variables in a sequence of blocks: (1) MHAS core variables (first demographics, then health, then cognition variables that had not already been imputed by MHAS themselves); (2) Mex-Cog demographics variables; (3) Mex-Cog health variables; (4) Mex-Cog cognitive tests and informant reports. The imputation of the MHAS core variables uses a similar imputation approach as the one for the Mex-Cog variables.

Like Fisher et al (2017) and also other related surveys such as LASI-DAD and SHARE, we used chained imputation (also known as fully conditional specification; Raghunathan et al., 2001; Van Buuren et al., 2006). This cycles over the cognition variables, in which each of them is imputed in turn, with the other cognition variables and background variables as regressors, and then repeats this cycle multiple times. We used one cycle to initialize the chain and up to 10 cycles (iterations) to update the imputations, although imputations sometimes converged with fewer iterations.

2.3. Long and short interviews and intentionally missing regressors

In Mex-Cog, both the respondent survey and the informant survey contain long and short interviews, which has implications for the imputations. In the respondent survey, the cognition module administers a number of tests to all respondents, including the modified Mini-Mental State Examination (MMSE). The modified MMSE score was then computed as the sum of most of these items, resulting in a score on a scale from 0-28. When the individual had a score of 10 or less on the modified MMSE, the short interview was administered, otherwise the long interview was administered. The long interview includes all the cognitive tests of the short interview, but also includes a large number of additional tests. See page 4 and pages 7 - 13 of the Mex-Cog methodological document for details (Mex-Cog 2020).

In the informant interview, most of the interview is the short part, including the Community Screening for Dementia (CSI-D) questions. If the informant provides an affirmative answer to two or more of six questions early in the interview, then a small number of questions about the origin and history of the apparent cognitive decline of the target individual were also administered to the informant. See page 5 and pages 13 - 15 of the Mex-Cog methodological document for details (Mex-Cog 2020).

The vast majority of participants were administered the long interview in the respondent survey, whereas most informants were administered the short interview (although this was more evenly distributed). While the respondent survey is completed in a short form indicating apparent cognitive decline, the informant interview is completed in a short form if the screening questions indicated that the target individual does not have apparent cognitive decline.

Because the reason for assignment to short or long interview is the presence of apparent cognitive decline from the respondent survey and the presence of cognitive deterioration in the respondent as seen from the informant survey, the individuals whose records have a short interview are very different from those whose records have a long interview. Therefore, imputing the long interview questions for those who were administered the short interview would not be appropriate. This complicates the imputations, however, because we used a chained imputation method (see section 3.3 below), in which all variables are used as covariates for all other variables. If we do not impute certain variables, then they stay systematically missing as covariates for the other variables.

This is a situation with intentionally missing covariates that have not been imputed. Such a situation does not only occur because of the long and short interviews, but also because the self and proxy interviews in the MHAS core data include partially different variables, and occasionally because of other kinds of skip patterns in the questionnaire. We use one of three methods of dealing with this situation:

1. Drop the variables with intentional missings from the list of covariates. This method is sensible if the number of variables that are dropped in this way is small and they are not expected to add substantial predictive power for the variables that are imputed.
2. Keep the variables that have intentional missings, but drop the observations that have the intentional missings. This method is sensible if the number of observations dropped is relatively small (or at least the retained sample is large enough) and they do not have missings on the variable that needs to be imputed. If they do, then a possibility is to use this method for the bulk of the sample and follow it up with method 1 or 3 for the observations with the intentional missings.
3. Keep both the variables and the observations, but use modified versions of the variables in which the intentional missings have been replaced by zeros, so these variables are essentially ignored for the observations with the intentional missings. The average effect of these variables is captured by including one or more dummy variables indicating the intentional missingness patterns, for example, a dummy indicating a long (or short) interview. This method is most practical when the variables with intentional missings are expected to have substantial predictive power but they are missing in a moderate to large number of observations.

For the informant interview, the number of questions that the long interview added was fairly small, and we expected these to add little predictive power to the already large set of predictors. Therefore, we decided to remove the long-interview-only variables in the informant interview from the chain and impute them afterward. Moreover, a number of these long interview items were follow-up questions with very small sample sizes (e.g., about 20), and we have not imputed them, only imputing the long interview items that were administered without skip patterns (aside from the assignment to the long interview itself).

For the respondent interview, the situation was very different. The long interview was administered to most respondents, it added many more cognitive tests, and we expected these to add considerable predictive power. Therefore, we decided to keep these inside the chain. For participants who were administered the short interview, we set the long interview items to zero and added a dummy for long interview status. This dummy picks up the average effect of the long interview items for the participants who were administered the short interview. A further complication is that some of the MMSE items were missing for some participants, and that the long-short assignment dummy for those depends on the imputations themselves. In the chained imputation, this may cause data inconsistencies in which the current imputation suggests the individual should have gotten the long interview, whereas in the previous iteration, this was not the case and thus the long interview items were not imputed. We dealt with this by using the *previous* iteration's value of the long-short dummy during the imputation of the cognitive tests.

2.4. Cognitive test items and informant reports

The variables that we imputed are listed in Tables 4 (cognitive test items) and 5 (informant reports). For the imputation of a variable from these lists, the other variables in these lists are also included among the regressors. However, because the large number of variables (more than 150) would create numerical problems, we primarily used aggregate scores instead of individual items as the regressors. This also likely filters out measurement error and guards against capitalizing on chance. The aggregate scores followed a nested structure based on the model from Gross et al. (2020) for the cognitive test items, theoretical considerations from Gross (2020) for some of the informant reports, and empirical analyses of correlations (principal components analysis).

Figure 1 illustrates the nested structure, and how items are combined into summary scores to be used as regressors, illustrated for the imputation of r1country (whether the respondent correctly reports the country they are currently in, i.e., Mexico). This item is part of a short battery for orientation to place. The other two items in this battery are included as regressors. The five items of orientation to time are not included separately. Instead, their sum (0-5) is included as a regressor. This is an example of a level-1 sum score. There are about 20 such level-1 sum scores, which are all simple sums, with one exception, every day activities. Empirical analysis showed that these items could not be satisfactorily summarized by one simple sum score, but that three principal components would represent these items well, so we used those. The level-1 sum scores are further grouped into narrow domains of cognitive functioning (e.g., Orientation), and some of these are further grouped into broad domains (Memory, Executive Function). Note that the hierarchy is not complete: sometimes, levels are skipped (absent). The narrow domain scores are sums of the level-1 scores (and sometimes single items) that are nested below them. However, because the level-1 scores have different scales, we first standardized them before aggregating them into narrow domain scores. We found that the resulting sums of standardized scores correlated very highly (typically 0.98 or higher) with the first principal component of these level-1 scores. Because this imputation procedure was very computationally demanding, we preferred using these narrow domain scores as it is much faster than computing the principal components. Analogously, the broad domain scores were computed as sums of the related standardized narrow domain scores and other components where applicable. The rules for including items, level-1 sum scores, narrow domain scores, and broad domain scores were as follows:

1. A broad domain score was used (and none of the scores and items nested below it) if the item to be imputed was not a component of the broad domain score. In Figure 1, this means all three broad domain scores were included in the model for r1country, because r1country is not a Memory or Executive Function item.
2. A narrow domain score was used (and none of the scores and items nested below it) if (i) the narrow domain score was not a component of a broad domain score included, and (ii) the item to be imputed was not a component of the narrow domain score. For example, the two Language Fluency scores were included, because they were not components of Memory or Executive Function and r1country was not a component of

Language Fluency. But Orientation was not included, because r1country is an Orientation item.

3. A level-1 sum score was used (and none of the items nested below it) if (i) the level-1 score was not a component of a broad or narrow domain score that was already included, and (ii) the item to be imputed was not a component of the level-1 score. For example, because the Orientation narrow domain was not included and Orientation to Time does not contain r1country, Orientation to Time was included in the model for r1country.
4. A single item was used if (i) it was not a component of any higher-level score already included, and (ii) it was not the variable y_i itself. For r1country, these were the other two Orientation to Place items, plus several items that were not part of any higher-level score.

Figure 1 illustrates these rules: the items and scores shaded blue are used as regressors in the imputation model for r1country (which is shaded yellow). Tables 4 and 5 give more details about the nesting structure.

As the figure also illustrates, we created separate summary scores for short interview items and long interview items, even if they measured the same domain. As mentioned in the previous section, for the respondent long interview items, we used method 3 of dealing with the intentional missings (setting them to zero for short interview respondents and adding a long interview dummy). The informant long interview items were not part of the main chain. Instead, they were imputed after the other items. Consequently, they were also not used as regressors in the models for the respondent items and interviewer short interview items.

In some cases, the items that were used as covariates were transformed versions of the raw items; for example, animal naming was censored at a maximum of 35 when used as a covariate. Also, because of (partial) mechanical dependencies, some variables were excluded from some models. Note that the imputations themselves also respect such dependencies, for example, if r1mo (whether individual knows the current month) was imputed as 0, r1hdate (day of the month) was also set to 0, which respects the pattern in the nonmissing data.

Table 4. Mex-Cog cognitive test items and the level-1 sum scores and narrow and broad domain scores they are part of

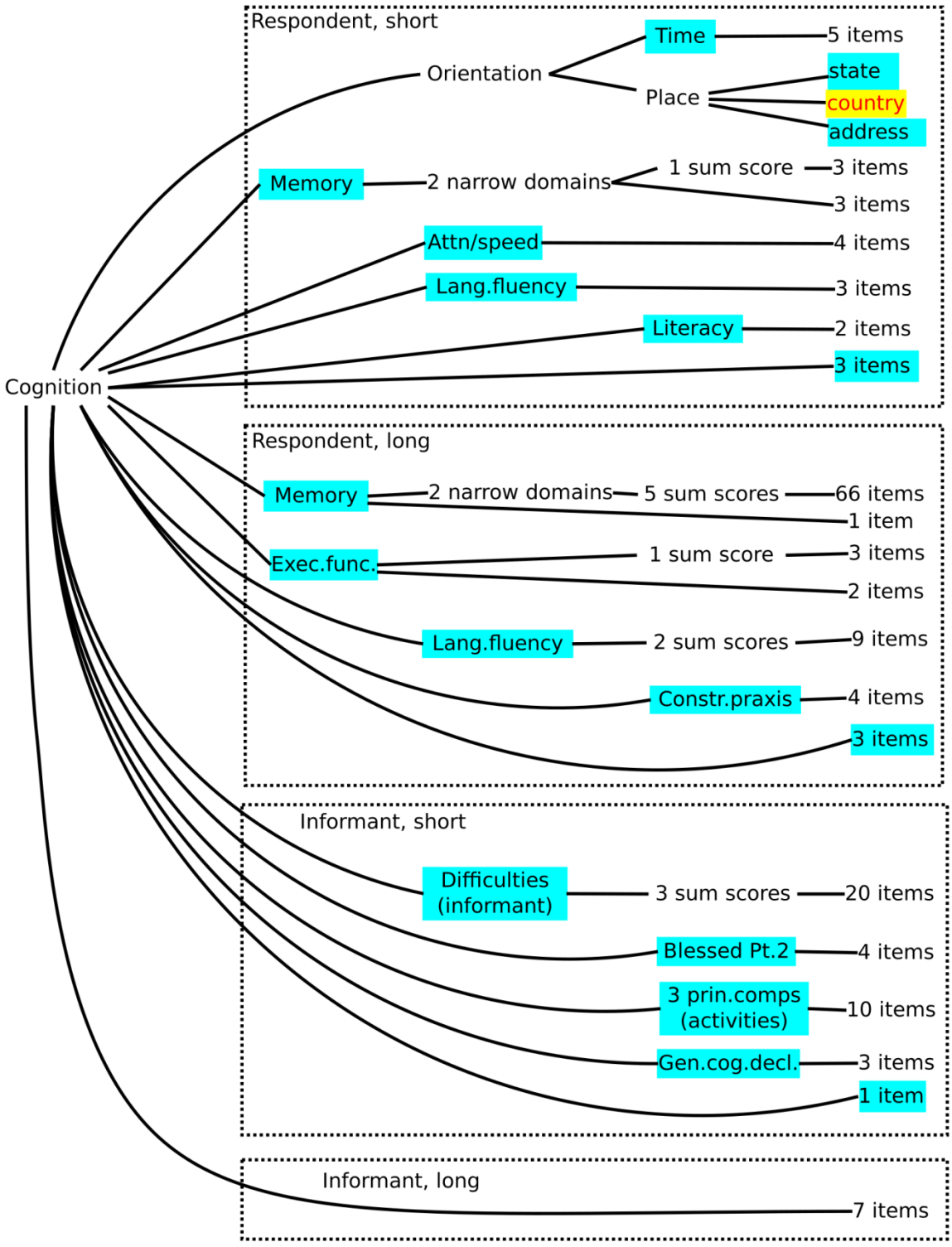
Items	#items	Description	Level-1	Narrow	Broad
Short interview					
r1hdate, r1hdw, r1hmo, r1htime, r1hyr	5	Time orientation	r1orient5t	Orientation	
r1haddress, r1hcountry, r1hstate	3	Place orientation	r1orient3p	Orientation	
r1himrc3	1	3-Word recall (imm)		Memory (imm) short	Memory short
r1word1-r1word3	3	10-Word recall (imm)	r1recall10	Memory (imm) short	Memory short
r1hdlrc3, r1word_d	2	Word recall (del)		Memory (del) short	Memory short
r1bc_cat, r1ser3, r1ser7, r1sc_score	4	Attn/speed (short)		Attn/speed short	
r1hexecu, r1repeat, r1verbal	3	Language fluency		Language fluency short	
r1hdraw	1	Draw overl. rectangles			
r1combfol, r1hsenten	2	Read-follow; write sentence	r1lit		
r1verbal_inc, r1sc_wr	2	Incorrect answers			
Long interview					
r1bm_s1-r1bm_s6	6	Brave man (imm)	r1braveman	Memory (imm) long	Memory long
r1lmb_s1-r1lmb_s25	25	Robbery (imm)	r1robbery	Memory (imm) long	Memory long
r1bm_rs1-r1bm_rs6	6	Brave man (del)	r1bravemanr	Memory (del) long	Memory long
r1lmb_rs1-r1lmb_rs25	25	Robbery (del)	r1robberyr	Memory (del) long	Memory long
r1cpr_circle, r1cpr_rectan, r1cpr_cube, r1cpr_diamon	4	Constr praxis (del)	r1conpraxdel	Memory (del) long	Memory long
r1wre_org	1	Word recognition			Memory long
r1go_score, r1dig_score	2	Attn/speed (long)			Exec.function long
r1jp_frt, r1jp_furn, r1jp_flwr	3	Similarities-differences	r1similar		Exec.function long
r1hobject1, r1hobject2	2	Object naming	r1object	Language fluency long	
r1elbow, r1bridge, r1hammer, r1hscis, r1store, r1point1, r1point2	7	CSID	r1csid	Language fluency long	
r1cp_circle, r1cp_rectan, r1cp_cube, r1cp_diamon	4	Constr praxis (imm)	r1conpraximm		
r1wre_foil	1	Incorrect answers			
r1i_memory[a], r1i_compmem[a]	2	Self-rated memory			

[a]These are not cognitive tests, but they are part of the long interview.

Table 5. Informant items and the level-1 scores and narrow domain scores they are part of

Items	#items	Description	Level-1	Narrow
Short interview				
r1csi* (2-6, 11-13)	8	CSI (memory)	r1csi_mem	Difficulties (informant)
r1csi* (1, 7-10, 14-15)	7	CSI (non-memory)	r1csi_nonmem	Difficulties (informant)
r1ten1-r1ten5	5	10/66	r1ten	Difficulties (informant)
r1bl2_2r_m, r1bl2_3ar, r1bl2_3br, r1bl2_4r_m	4	Blessed Pt. 2	r1bl2	
r1act_chor, r1act_meal, r1act_work, r1act_stor, r1act_dail, r1act_seni, r1act_puzl, r1act_conv, r1act_visi, r1act_evnt	10	Activities	r1act_pc1-r1act_pc3	
r1inf_conf, r1inf_deci, r1inf_reasn	3	General cognitive decline	r1gcd	
r1inf_acci	1	Accident/illness to head/brain		
Long interview				
r1inf_doubt, r1inf_behav, r1inf_hallu	3	Mental and behavioral disturbances		
r1inf_began, r1inf_cond, r1inf_slow	3	Evolution of deterioration		
r1inf_alone	1	Can be alone for 1hr		

Figure 1. Structure of summary scores used as covariates for imputing r1hcountry



2.5. Exceptions, special cases, and other details

Because of the differential availability of regressors, we imputed the cognition variables in two stages, with each stage consisting of a chain as described in the previous section. The first stage was for individuals who delivered a self-interview (direct interview) in the core data, whereas the second stage was for individuals for whom we only have a proxy interview in the core data. The reason for treating proxy interviews differently was that the cognitive tests were not administered for them in the core data, and these are likely key predictors when available, so we wanted to use them when available (see Table 3). Conversely, the Jorm IQCODE variables and the four informant variables from the core data were only available for the proxy interviews. Thus, we used method 2 from section 3.3 for those that completed the self-interviews (direct interviews) as part of the MHAS core data (without the proxy-only variables) and then method 1 for those that completed proxy interviews.

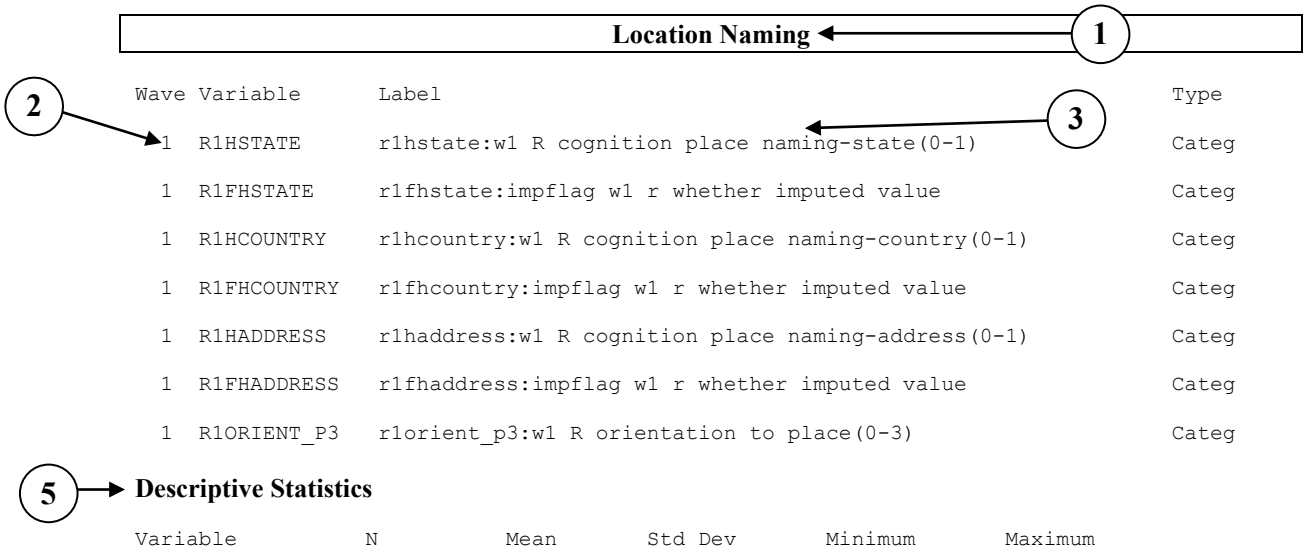
The imputation models did not always converge, due to a high degree of collinearity among some of the regressors. Hence, we defined more parsimonious fallback options that were used to impute the variables in cases where such problems occurred. This usually meant dropping one problematic regressor.

With each imputed variable, the dataset also includes an imputation flag, which has the same codes as the nonimputed variable if the latter was missing, and 0 if the variable was not missing. Hence, users who do not want to use our imputations, or who wish to perform nonresponse analyses, can reconstruct the nonimputed variables from these.

There are more implementation details that are not discussed here. We will provide these upon request. The Stata code used is included with the distributed data.

3. Structure of Codebook

The Data Codebook contains the codebook documenting all variables in the Harmonized MHAS Mex-Cog Data. This section explains how to interpret the codebook entries. The figure below shows a typical codebook page; the numbers in circles correspond to comments below.



5 → **Descriptive Statistics**

Variable	N	Mean	Std Dev	Minimum	Maximum
R1HSTATE	2042	0.82	0.38	0.00	1.00
R1FHSTATE	2042	0.06	0.35	0.00	4.00
R1HCOUNTRY	2042	0.67	0.47	0.00	1.00
R1FHCOUNTRY	2042	0.05	0.29	0.00	4.00
R1HADDRESS	2042	0.85	0.36	0.00	1.00
R1FHADDRESS	2042	0.03	0.29	0.00	4.00
R1ORIENT_P3	2042	2.34	0.83	0.00	3.00

6 → **Categorical Variable Code**

Value	R1HSTATE
0.incorrect	363
1.correct	1679

Value	R1FHSTATE
0.Not imputed	1947
1.Dont know	84
4.Refused	11

Value	R1HCOUNTRY
0.incorrect	679
1.correct	1363

Value	R1FHCOUNTRY
0.Not imputed	1968
1.Dont know	67
4.Refused	7

Value	R1HADDRESS
0.incorrect	312
1.correct	1730

```
Value-------------------------------------| R1FHADDRESS
0.Not imputed                             |        2015
1.Dont know                               |          17
4.Refused                                 |          10

Value-------------------------------------| R1ORIENT_P3
0                                         |          58
1                                         |         295
2                                         |         590
3                                         |        1099
```

7 → **How Constructed**

The following variables indicate whether the respondent was able to correctly report their current location.

RwHSTATE, RwHCOUNTRY, and RwHADDRESS indicate whether the respondent was able to report the state, country, and address of the interview, respectively. They are coded as 1 if the respondent answered correctly and 0 if the respondent answered incorrectly.

RwORIENT_P3 is the summary measure for RwHSTATE, RwHCOUNTRY, and RwHADDRESS, ranging from 0 to 3. A value of 3 indicates that all answers were correct, while a value of 0 indicates that none of the answers were correct. RwORIENT_P3 is summed when no components are missing.

RwFHSTATE, RwFHCOUNTRY, and RwFHADDRESS are flag variables that indicate whether responses to RwHSTATE, RwHCOUNTRY, and RwHADDRESS are imputed. They are coded as follows: 0.Not imputed, 1.Don't know, and 4.Refused. The original missing value is otherwise included.

8 → **Cross-Wave Differences in Mex-Cog**

No differences known.

9 → **Differences with other HCAP studies**

The MHAS Mex-Cog only asks three questions in this section. The HRS-HCAP, ELSA-HCAP, and LASI-DAD all ask five questions, though each study asks about different aspects of the interview location.

Due to copyright, the harmonized variable names for the individual items in the Harmonized HRS-HCAP are named differently from the naming convention used in the Harmonized ELSA-HCAP, Harmonized LASI-DAD, and Harmonized Mex-Cog. As a result, the individual components in the Harmonized HRS-HCAP cannot be identified, but the variables are theoretically comparable across studies.

The Harmonized ELSA-HCAP, Harmonized LASI-DAD, and Harmonized Mex-Cog include imputations for each item with accompanying imputation flags, while the Harmonized HRS-HCAP does not. As such, RwORIENT_P5 in the Harmonized HRS-HCAP includes missing values.

10 → **Mex-Cog Variables Used**

```
Wave 1 Cog:
       MC_Q4_16              4: where are we right now? en donde estamos a
       MC_Q5_16              5: what country are we in? en que pais estamo
       MC_Q6_16              6: what state are we in? en que estado estamo
```

---

1 *Title*: The variables are documented in groups according to the concept that they measure. For example, there are four variables related to whether the respondent was able to correctly report the current location, corresponding to one wave and to the respondent. The title is often followed by a short description of the concept that is captured.

(2) *Variable Names*: This entry shows the waves of variables in the group. Not all waves are present for all variables.

(3) *Variable Labels*: This entry shows the Stata variable labels. As discussed above, the labels typically include the name of the variable, the file on which it is present, and a description of its contents.

(4) *Variable Type*: This entry indicates the type of variable. It may be continuous (Cont), categorical (Categ), or character (Char).

(5) *Descriptive Statistics*: This entry shows descriptive statistics on each variable. They include the number of non-missing values, the mean, standard deviation, minimum value, and maximum value.

(6) *Categorical Value Codes*: This entry shows the value label codes. These are only relevant for categorical variables. The first character(s) of the value labels indicate the value to which each label has been assigned. For example, value "1" is mapped into "1. Correct" (not just "Correct"). The entry also indicates which labels are assigned to which variables, and shows frequency tabulations for all categorical variables.

(7) *How Constructed*: This entry provides background on the manner in which variables were constructed.

(8) *Cross-Wave Differences in Mex-Cog*: This entry briefly describes differences in question wording or contents between interview waves.

(9) *Differences with other HCAP studies*: This entry describes any differences between the Harmonized Mex-Cog version of the variable and other Harmonized HCAP (HRS-HCAP, ELSA-HCAP, and LASI-DAD) versions of the variable. It is imperative these differences are understood when using harmonized measures.

(10) *Mex-Cog Variables Used*: This entry provides the names and labels of raw MHAS Mex-Cog variables that were used to construct the new variables.

4. Distribution and Technical Notes

The Harmonized Mex-Cog Data file is distributed by the Mexican Health and Aging Study. The Harmonized Mex-Cog Data file is made available free of charge but only to users who register with MHAS and agree to the standard conditions. For more information on obtaining access to the MHAS data, visit: http://www.MHASweb.org/DataDocumentationNew.aspx and select Data on the right side of the page.

This is Release Version ***A.2*** of the Harmonized MHAS Mex-Cog Data.

A copy of the Stata programs used to create the Harmonized Mex-Cog and a copy of this Harmonized Mex-Cog Codebook can be obtained on the Gateway to Global Aging Data (https://g2aging.org/app/hrd/get-data) or from the MHAS website (http://www.MHASweb.org).

5. Data Codebook

Section A: Demographics and Identifiers

Person Specific Identifier

Wave	Variable	Label	Type
1	CUNICAH	Unique Household ID/Clave Unica del Hogar (=UNNHID)	Cont
1	NP	Person Number/Numero de Persona	Cont
1	UNHHIDNP	UNHHIDNP: Unique Person Identifier (HH ID + Person Number)/	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
CUNICAH	2042	9711.40	3727.51	397.00	15127.00
NP	2042	13.71	4.82	10.00	21.00
UNHHIDNP	2042	971153.57	372750.24	39710.00	1512710.00

How Constructed

Starting in 2012, NP was created to uniquely identify each person. Together, CUNICAH (also equal UNHHID) and NP uniquely identify each individual in the MHAS data. UNHHIDNP is the numeric value of the combination of CUNICAH and NP, and uniquely identifies each respondent. The variable is set to CUNICAH*100+NP.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with the other HCAP studies

No differences known.

Mex-Cog Variables Used

Harmonized MHAS:

CUNICAH	Clave Unica del Hogar (=unhhid)
NP	Person Number/ Numero de Persona
UNHHIDNP	UNHHIDNP: Unique Person Identifier (HH ID + P

Country Indicator

Wave	Variable	Label	Type
1	ISOA3	isoa3: Country indicator	Char

How Constructed

ISOA3 is the country indicator for Mex-Cog. ISOA3 is a 3-character code and is assigned "MEX" to represent the country in which the respondent and their nominated informant were surveyed.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

No differences known.

HCAP Wave Status: Response Indicator

Wave	Variable	Label	Type
1	INHCAP1	inhcap1: In HCAP Wave 1	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
INHCAP1	2042	1.00	0.00	1.00	1.00

Categorical Variable Codes

Value	INHCAP1
1.Yes	2042

How Constructed

INHCAPw indicates whether the respondent and/or their nominated informant participated in the current HCAP wave. INHCAPw is coded as 0 if the respondent and their nominated informant did not participate in the wave. INHCAPw is coded as 1 if the respondent and/or their nominated informant participated in the wave. INHCAPw is derived from the variable indicating which phase the respondent's interview took place in.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

No differences known.

Mex-Cog Variables Used

Master File:

PHASE_MXCOG_16	mex-cog 2016 phase

Phase I and II

Wave	Variable	Label	Type
1	R1PHASE	r1phase:Mex-Cog 2016 phase	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1PHASE	2042	0.43	0.49	0.00	1.00

Categorical Variable Codes

Value	R1PHASE
0.Phase 1 (Mar/Apr)	1173
1.Phase 2 (Oct/Nov)	869

How Constructed

RwPHASE indicates whether the respondent is in phase I or phase II of that wave’s data collection. Phase 1 took place in the months of March and April, and phase 2 took place in October and November. It is coded as 0.Phase I and 1.Phase II.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

RwPHASE in LASI-DAD indicates whether the respondent's interview took place in phases I, II or III of data collection. The HRS-HCAP and ELSA-HCAP do not indicate interview phases.

Mex-Cog Variables Used

Master File:

PHASE_MXCOG_16	mex-cog 2016 phase

Interview Status

Wave	Variable	Label	Type
1	R1HIWSTAT	r1hiwstat: R interview status	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1HIWSTAT	2042	1.09	0.29	1.00	2.00

Categorical Variable Codes

Value	R1HIWSTAT
1.Both cog and inf	1849
2.Cognitive assessment only	193

How Constructed

RwHIWSTAT indicates the interview status for the types of tests conducted in the current wave of the HCAP interview. A value of 1 indicates that both the cognitive assessment and informant report were completed. A value of 2 indicates that only the cognitive assessment was completed as the respondent did not nominate an informant and did not have an accompanying informant interview.

In the MHAS Mex-Cog Wave 1, there are also cases where an informant report was completed but a cognitive assessment was not. While these cases have not been included in the Harmonized Mex-Cog for Wave 1, this data, which incorporates imputed values using an alternative imputation method than the one employed in the Harmonized Mex-Cog, will be available through the MHAS website.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

In the Harmonized HRS-HCAP, the equivalent variable RwHIWSTAT is assigned a value of 3 when only the informant report was completed as the respondent was not well-enough to be interviewed. Cases in the Mex-Cog in which an informant report was completed but the respondent's cognitive tests were not completed will be incorporated for HCAP Wave 1 as part of the secondary imputation of the Harmonized Mex-Cog. The ELSA-HCAP and LASI-DAD have instances in which only a respondent interview was completed, but none in which only an informant interview was completed.

Mex-Cog Variables Used

Wave 1 Informant Interview:
MI_TIPENT_INFORMANT_16 Type of Informant Interview Tipo de entrevista del

Interview Date

Wave	Variable	Label	Type
1	R1HIWY	r1hiwy: R year of Mex-Cog interview	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1HIWY	2042	2016.00	0.00	2016.00	2016.00

How Constructed

RwHIWY indicates the respondent's Mex-Cog interview year. RwHIWY is assigned plain missing (.) if the respondent did not participate in the current wave.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

The Harmonized HRS-HCAP and Harmonized LASI-DAD have two variables indicating the month (RwHIWM) and year (RwHIWY) of the interview. Only the year of the interview is available for Harmonized Mex-Cog, and no interview date information is available for ELSA-HCAP.

Birth Date: Year and Month

Wave	Variable	Label	Type
1	RABYEAR	rabyear: R Birth Year	Cont
1	RABMONTH	rabmonth: R Birth Month	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RABYEAR	2041	1946.78	8.94	1911.00	1961.00
RABMONTH	2036	6.55	3.42	1.00	12.00

How Constructed

RABYEAR is the respondent’s reported birth year. RABMONTH is the respondent’s reported birth month. RABYEAR and RABMONTH are taken from the Harmonized MHAS.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

The respondent's reported birth month is not available for the Harmonized ELSA-HCAP.

Mex-Cog Variables Used

Harmonized MHAS:

RABMONTH	rabmonth: R Birth Month
RABYEAR	rabyear: R Birth Year

Age at Interview

Wave	Variable	Label	Type
1	R1HAGEY	r1hagey: R age (years) at ivw	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1HAGEY	2041	69.10	8.95	55.00	105.00

How Constructed

RwHAGEY indicates the respondent's age in years at the time of the interview. It is created by adding 1 to their age in 2015 based on the Mex-Cog 2016 Master Follow-Up file. Refused responses are coded as special missing value, (.r).

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

Age at the time of the HCAP interview is provided for the HRS-HCAP, MHAS Mex-Cog, and LASI-DAD. The Harmonized ELSA-HCAP also includes an age variable at the time of the last core interview, referencing the Harmonized age variables for Waves 7 and 8 (RwAGEY_E), a variable indicating whether age was top coded (RwF1AGEY_E) and which wave was used to construct RwAGEY_E (RwF2AGEY_E).

Mex-Cog Variables Used

Master File:

AGE_15	age/edad 2015

Gender

Wave	Variable	Label	Type
1	RAGENDER	ragender: R Gender	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAGENDER	2042	1.59	0.49	1.00	2.00

Categorical Variable Codes

Value	RAGENDER
1.Man	839
2.Woman	1203

How Constructed

RAGENDER indicates the respondent’s gender. Men are coded as 1, and women are coded as 2. RAGENDER is created based on the Mex-Cog 2016 Master Follow-Up file.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

No differences known.

Mex-Cog Variables Used

Master File:

SEX_15	sex/sexo 2015 (male/hombre=1)

Education

Wave	Variable	Label	Type
1	RAEDYRS	raedyrs: R years of education	Cont
1	RAEDISCED	raedisced: R Education by ISCED Code	Categ
1	RAEDUCL	raeducl: R Harmonized Education	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAEDYRS	2024	5.34	4.45	0.00	19.00
RAEDISCED	2024	1.39	1.31	0.00	6.00
RAEDUCL	2024	1.20	0.57	1.00	3.00

Categorical Variable Codes

Value	RAEDISCED
.d:DK	13
.m:Missing	5
0.Less than primary education	350
1.Primary education	1125
2.Lower secondary education	317
3.Upper secondary education	60
5.First stage of tertiary education	156
6.Second stage of tertiary education	16

Value	RAEDUCL
.d:DK	13
.m:Missing	5
1.Less than upper secondary	1792
2.Upper secondary and vocational	60
3.Tertiary	172

How Constructed

RAEDYRS indicates the respondent’s years of education and ranges from 0 to 19 years. RAEDYRS is created based on the Mex-Cog 2016 Master Follow-Up file.

RAEDISCED indicates the respondent's highest level of education using the 1997 International Standard Classification of Education (ISCED-97) Codes. For more information on ISCED codes, see www.uis.unesco.org. RAEDISCED is coded as 0.Less than primary education, 1.Primary education, 2.Lower secondary education, 3.Upper secondary education, 4.Post-secondary non tertiary education, 5.First stage of tertiary education, and 6.Second stage of tertiary education. RAEDISCED is taken from the Harmonized MHAS, using the level of education reported in the first core interview.

RAEDUCL identifies the level of education completed according to a three-tier harmonized scale which we developed to compare education levels across countries. This Harmonized education scale is a simplified version of the ISCED-97 codes, and is taken from the Harmonized HRS Version D (1992-2021). For more more information on ISCED codes, see www.uis.unesco.org and the OECD document entitled "Classifying Educational Programmes: Manual for ISCED-97 Implementation in OECD Countries, 1999 Edition". RAEDUCL is coded as 1.Less than upper secondary, 2.Upper secondary and vocational, and 3.Tertiary. RAEDUCL is taken from the Harmonized MHAS, using the level of education reported in the first core interview.

Don’t know or other missing responses are coded as special missing (.d) or (.m), respectively.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

The Harmonized HRS-HCAP, Harmonized ELSA-HCAP, and Harmonized LASI-DAD include RAEDUC_H, RAEDUC_E, and RAEDUC_L respectively, which denote the respondent's highest educational degree or qualification. Instead, the Harmonized Mex-Cog uses RAEDISCED to indicate the level of education the respondent has completed using the International Standard Classification of Education (ISCED) codes. LASI-DAD includes RwILLITERATE, which indicates whether the respondent cannot read or write.

Mex-Cog Variables Used

```
Harmonized MHAS:
    RAEDISCED                raedisced: R Education by ISCED Code
    RAEDUCL                  raeducl: R Harmonized Education
Master File:
    YRSCHOOL_15              years of education/aã±os de educacion
```

Marital Status

Wave	Variable	Label	Type
1	R1HMSTATC	r1hmstatc:w4 R marital status at core ivw with partnership	Categ
1	R1HMSTATHC	r1hmstathc:w4 R marital status at core ivw w/o partnership	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1HMSTATC	2042	3.01	2.64	1.00	8.00
R1HMSTATHC	2042	3.01	2.64	1.00	8.00

Categorical Variable Codes

Value	R1HMSTATC
1.Married	1190
3.Partnered	129
4.Separated	169
5.Divorced	37
7.Widowed	421
8.Never married	96

Value	R1HMSTATHC
1.Married	1190
3.Partnered	128
4.Separated	169
5.Divorced	38
7.Widowed	421
8.Never married	96

How Constructed

RwHMSTATC and RwHMSTATHC are both measures of the respondent's marital status at Wave 4's interview taken from RwMSTAT and RwMSTATH, respectively, in the Harmonized MHAS. The key difference between the two variables is that RwMSTAT includes a separate category for partnership based off RwCPL in the Harmonized MHAS, while RwMSTATH does not include partnership. The categories are as follows: 1.Married, 3.Partnered (either through self-reported or implied partnership), 4.Separated, 5.Divorced, 7.Widowed, 8.Never married.

Don't know, refused and other missing responses are assigned special missing values (.d), (.r), and (.m) respectively.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

The Harmonized HRS-HCAP, Harmonized ELSA-HCAP, and Harmonized LASI-DAD have correspondent variables also taken from the previous core interview. In the Harmonized HRS-HCAP, separated and divorced are collapsed into one category and coded as a 6 while the Harmonized ELSA-HCAP uses 1.Married or civil partner in RwHMSTATHC. The Harmonized ELSA-HCAP includes a flag variable referencing which wave of ELSA was used to construct the variable, RwFHMSTATC.

Mex-Cog Variables Used

```
Harmonized MHAS:
    R4MSTAT                  r4mstat: w4 R Marital Status
    R4MSTATH                 r4mstath: w4 R Marital Status w/o Partnership
```

Living Situation: Whether Lives in Urban or Rural Area

Wave	Variable	Label	Type
1	R1HRURALC	r1hruralc:w4 R lives in rural or urban at core ivw	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1HRURALC	2042	0.28	0.45	0.00	1.00

Categorical Variable Codes

Value	R1HRURALC
0.Urban	1467
1.Rural	575

How Constructed

RwHRURALC indicates whether the respondent's household resides in an urban or rural location. RwHRURALC is set to 0 if the respondent's household resides in an urban location, and is set to 1 if the respondent's household resides in a rural location. RwHRURALC is taken from HwRURAL in the Harmonized MHAS. Missing responses are assigned special missing .m, while RwHRURALC is set to plain missing (.) for respondents who did not respond to the current wave.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

The Harmonized HRS-HCAP and Harmonized LASI-DAD have equivalent variables taken from the previous core interview. Urban/rural residence is not available for the ELSA-HCAP.

Mex-Cog Variables Used

Harmonized MHAS:
    R4RURAL

Section B: Cognition

Date Naming

Wave	Variable	Label	Type
1	R1HMO	r1hmo:w1 R cognition date naming-month(0-1)	Categ
1	R1FHMO	r1fhmo:impflag w1 R whether imputed value	Categ
1	R1HYR	r1hyr:w1 R cognition date naming-year(0-1)	Categ
1	R1FHYR	r1fhyr:impflag w1 R whether imputed value	Categ
1	R1HDW	r1hdw:w1 R cognition date naming-day of week(0-1)	Categ
1	R1FHDW	r1fhdw:impflag w1 R whether imputed value	Categ
1	R1HDATE	r1hdate:w1 R cognition date naming-day of month(0-1)	Categ
1	R1FHDATE	r1fhdate:impflag w1 R whether imputed value	Categ
1	R1HTIME	r1htime:w1 R cognition date naming-time(0-1)	Categ
1	R1FHTIME	r1fhtime:impflag w1 R whether imputed value	Categ
1	R1ORIENT_T5	r1orient_t5:w1 R orientation to time(0-5)	Categ
1	R1ORIENT_T4	r1orient_t4:w1 R orientation to time(0-4)	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1HMO	2042	0.89	0.31	0.00	1.00
R1FHMO	2042	0.07	0.51	0.00	4.00
R1HYR	2042	0.73	0.44	0.00	1.00
R1FHYR	2042	0.09	0.61	0.00	4.00
R1HDW	2042	0.94	0.23	0.00	1.00
R1FHDW	2042	0.07	0.53	0.00	4.00
R1HDATE	2042	0.65	0.48	0.00	1.00
R1FHDATE	2042	0.05	0.42	0.00	4.00
R1HTIME	2042	0.69	0.46	0.00	1.00
R1FHTIME	2042	0.03	0.27	0.00	4.00
R1ORIENT_T5	2042	3.91	1.20	0.00	5.00
R1ORIENT_T4	2042	3.22	1.00	0.00	4.00

Categorical Variable Codes

Value	R1HMO
0.incorrect	216

```
1.correct                           |        1826

Value-------------------------------|      R1FHMO
0.Not imputed                       |        2008
4.Refused                           |          34

Value-------------------------------|       R1HYR
0.incorrect                         |         545
1.correct                           |        1497

Value-------------------------------|      R1FHYR
0.Not imputed                       |        1994
4.Refused                           |          48

Value-------------------------------|       R1HDW
0.incorrect                         |         114
1.correct                           |        1928

Value-------------------------------|      R1FHDW
0.Not imputed                       |        1998
1.Dont know                         |           8
4.Refused                           |          36

Value-------------------------------|     R1HDATE
0.incorrect                         |         716
1.correct                           |        1326

Value-------------------------------|    R1FHDATE
0.Not imputed                       |        2019
4.Refused                           |          23

Value-------------------------------|     R1HTIME
0.incorrect                         |         639
1.correct                           |        1403

Value-------------------------------|    R1FHTIME
0.Not imputed                       |        1995
1.Dont know                         |          40
4.Refused                           |           7

Value-------------------------------| R1ORIENT_T5
0                                   |          30
1                                   |          78
2                                   |         168
3                                   |         292
4                                   |         680
5                                   |         794

Value-------------------------------| R1ORIENT_T4
0                                   |          42
1                                   |         123
2                                   |         229
3                                   |         596
4                                   |        1052
```

How Constructed

The following variables indicate whether the respondent was able to report today's date correctly.

RwHMO, RwHYR, RwHDW, RwHDATE, and RwHTIME indicate whether the respondent was able to report the current month, year, day of the week, date, and time, respectively. They are coded as 1 if the respondent correctly reports the value and 0 if the respondent incorrectly reports the value.

RwORIENT_T5 is the summary measure for RwHYR, RwHDATE, RwHDW, RwHMO, and RwHTIME, with values ranging from 0 to 5. A value of 5 indicates all correct answers, while a value of 0 indicates all incorrect answers. RwORIENT_T5 is summed when no components are missing. This measure is comparable with the measures from the HRS-HCAP and the other HCAP sister studies.

RwORIENT_T4 is the summary measure for RwHYR, RwHDATE, RwHDW, and RwHMO, with values ranging from 0 to 4. A value of 4 indicates all correct answers, while a value of 0 indicates all incorrect answers. RwORIENT_T4 is summed when no components are missing.

RwFHMO, RwFHYR, RwFHDW, RwFHDATE, and RwFHTIME are flag variables that indicate whether responses to RwMO, RwYR, RwDW, RwDATE, and RwTIME are imputed. They are coded as follows: 0.Not imputed, 1.Don't know, and 4.Refused. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

The HRS-HCAP, ELSA-HCAP, and LASI-DAD all ask the same 5 questions. The MHAS Mex-Cog does not ask the same fifth item and instead asks a question about time.

Due to copyright, the harmonized variable names for the individual items in the Harmonized HRS-HCAP are named differently from the naming convention used in the Harmonized ELSA-HCAP, Harmonized LASI-DAD, and Harmonized Mex-Cog. As a result, the individual components in the Harmonized HRS-HCAP cannot be identified, but the variables are theoretically comparable across studies.

The Harmonized ELSA-HCAP, Harmonized LASI-DAD, and Harmonized Mex-Cog include imputations for each item with accompanying imputation flags, while the Harmonized HRS-HCAP does not. As such, RwORIENT_T5 in the Harmonized HRS-HCAP includes missing values.

Mex-Cog Variables Used

Wave 1 Cognitive Assessment:

D1_T1	d1_t1: day of the month dia del mes
D1_T2	d1_t2: month mes
D1_T3	d1_t3: year anio
MC_Q2_C2C_16	2: correct day of the week. dia de la semana
MC_Q2_C2_16	2: what day of the week is it? que dia de la
MC_Q3_1C_16	3: correct hour. hora correcta
MC_Q3_1_16	3: what time is it? hour que hora es aproxima
MC_Q3_2C_16	3: correct minutes. minutos correcto
MC_Q3_2_16	3: what time is it? minutes que hora es aprox

Location Naming

Wave	Variable	Label	Type
1	R1HSTATE	r1hstate:w1 R cognition place naming-state(0-1)	Categ
1	R1FHSTATE	r1fhstate:impflag w1 R whether imputed value	Categ
1	R1HCOUNTRY	r1hcountry:w1 R cognition place naming-country(0-1)	Categ
1	R1FHCOUNTRY	r1fhcountry:impflag w1 R whether imputed value	Categ
1	R1HADDRESS	r1haddress:w1 R cognition place naming-address(0-1)	Categ
1	R1FHADDRESS	r1fhaddress:impflag w1 R whether imputed value	Categ
1	R1ORIENT_P3	r1orient_p3:w1 R orientation to place(0-3)	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1HSTATE	2042	0.82	0.38	0.00	1.00
R1FHSTATE	2042	0.06	0.35	0.00	4.00
R1HCOUNTRY	2042	0.67	0.47	0.00	1.00
R1FHCOUNTRY	2042	0.05	0.29	0.00	4.00
R1HADDRESS	2042	0.85	0.36	0.00	1.00
R1FHADDRESS	2042	0.03	0.29	0.00	4.00
R1ORIENT_P3	2042	2.34	0.83	0.00	3.00

Categorical Variable Codes

Value	R1HSTATE
0.incorrect	363
1.correct	1679

Value	R1FHSTATE
0.Not imputed	1947
1.Dont know	84
4.Refused	11

Value	R1HCOUNTRY
0.incorrect	679
1.correct	1363

Value	R1FHCOUNTRY
0.Not imputed	1968
1.Dont know	67
4.Refused	7

Value	R1HADDRESS
0.incorrect	312
1.correct	1730

Value	R1FHADDRESS
0.Not imputed	2015
1.Dont know	17

```
4.Refused                           |          10

Value-------------------------------| R1ORIENT_P3
0                                   |          58
1                                   |         295
2                                   |         590
3                                   |        1099
```

How Constructed

The following variables indicate whether the respondent was able to correctly report their current location.

RwHSTATE, RwHCOUNTRY, and RwHADDRESS indicate whether the respondent was able to report the state, country, and address of the interview, respectively. They are coded as 1 if the respondent answered correctly and 0 if the respondent answered incorrectly.

RwORIENT_P3 is the summary measure for RwHSTATE, RwHCOUNTRY, and RwHADDRESS, ranging from 0 to 3. A value of 3 indicates that all answers were correct, while a value of 0 indicated that none of the answers were correct. RwORIENT_P3 is summed when no components are missing.

RwFHSTATE, RwFHCOUNTRY, and RwFHADDRESS are flag variables that indicate whether responses to RwHSTATE, RwHCOUNTRY, and RwHADDRESS are imputed. They are coded as follows: 0.Not imputed, 1.Don't know, and 4.Refused. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

The MHAS Mex-Cog only asks three questions in this section. The HRS-HCAP, ELSA-HCAP, and LASI-DAD all ask five questions, though each study asks about different aspects of the interview location.

Due to copyright, the harmonized variable names for the individual items in the Harmonized HRS-HCAP are named differently from the naming convention used in the Harmonized ELSA-HCAP, Harmonized LASI-DAD, and Harmonized Mex-Cog. As a result, the individual components in the Harmonized HRS-HCAP cannot be identified, but the variables are theoretically comparable across studies.

The Harmonized ELSA-HCAP, Harmonized LASI-DAD, and Harmonized Mex-Cog include imputations for each item with accompanying imputation flags, while the Harmonized HRS-HCAP does not. As such, RwORIENT_P5 in the Harmonized HRS-HCAP includes missing values.

Mex-Cog Variables Used

```
Wave 1 Cognitive Assessment:
    MC_Q4_16                  4: where are we right now? en donde estamos a
    MC_Q5_16                  5: what country are we in? en que pais estamo
    MC_Q6_16                  6: what state are we in? en que estado estamo
```

3-Word Recall

Wave	Variable	Label	Type
1	R1HIMRC3	r1himrc3:w1 R immediate word recall(0-3)	Categ
1	R1FHIMRC3	r1fhimrc3:impflag w1 R whether imputed value	Categ
1	R1HDLRC3	r1hdlrc3:w1 R delayed word recall(0-3)	Categ
1	R1FHDLRC3	r1fhdlrc3:impflag w1 R whether imputed value	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1HIMRC3	2042	2.90	0.38	0.00	3.00
R1FHIMRC3	2042	0.03	0.34	0.00	4.00
R1HDLRC3	2042	2.05	0.99	0.00	3.00
R1FHDLRC3	2042	0.11	0.52	0.00	4.00

Categorical Variable Codes

Value	R1HIMRC3
0	7
1	29
2	134
3	1872

Value	R1FHIMRC3
0.Not imputed	2024
1.Dont know	3
2.Missing	1
4.Refused	14

Value	R1HDLRC3
0	210
1	313
2	681
3	838

Value	R1FHDLRC3
0.Not imputed	1898
1.Dont know	114
2.Missing	1
4.Refused	29

How Constructed

MHAS Mex-Cog only has one trial for the 3-word immediate recall task. This exercise asks the respondent to repeat back three objects named by the interviewer.

RwHIMRC3 is a measure of the respondent's immediate word recall ability. It is the number of objects from the set of three words that the respondent recalled and named immediately after the interviewer said them. Values range from 0-3 for the number of correct words recalled.

RwHDLRC3 provides a measure of the respondent's delayed word recall ability. It is the number of words from the set of three words that were correctly recalled after other unrelated survey questions had been answered. Values range from 0-3 for the number of words recalled after the delay.

RwFHIMRC3 and RwFHDLRC3 are flag variables that indicate whether responses to RwHIMRC3 and RwHDLRC3 are imputed. They are coded as follows: 0.Not imputed, 1.Don't know, 2.Missing, and 4.Refused. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

Unlike the HRS-HCAP and LASI-DAD, the MHAS Mex-Cog and ELSA-HCAP do not have three trials for the immediate recall of the three words. The Mex-Cog and ELSA-HCAP only have one trial for this exercise. Additionally, the HRS-HCAP and ELSA-HCAP utilize the same word list while the Mex-Cog and LASI-DAD utilize different word lists that are better recognized by their respective study populations.

The Harmonized ELSA-HCAP, Harmonized LASI-DAD, and Harmonized Mex-Cog include imputations for each item with accompanying imputation flags, while the Harmonized HRS-HCAP does not.

Mex-Cog Variables Used

Wave 1 Cognitive Assessment:

MC_Q10_1_16	10: remember three objects. paper recuerda tr
MC_Q10_2_16	10: remember three objects. bicycle recuerda
MC_Q10_3_16	10: remember three objects. spoon recuerda tr
MC_Q7_1_16	7: repeat three objects. paper repite tres ob
MC_Q7_2_16	7: repeat three objects. bicycle repite tres
MC_Q7_3_16	7: repeat three objects. spoon repite tres ob

Serial 3's and Serial 7's

Wave	Variable	Label	Type
1	R1HSER3	r1hser3:w1 R serial 3s(0-5)	Categ
1	R1FHSER3	r1fhser3:impflag w1 R whether imputed value	Categ
1	R1HSER7	r1hser7:w1 R serial 7s(0-5)	Categ
1	R1FHSER7	r1fhser7:impflag w1 R whether imputed value	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1HSER3	2042	3.40	1.62	0.00	5.00
R1FHSER3	2042	0.56	1.38	0.00	4.00
R1HSER7	2042	1.80	1.68	0.00	5.00
R1FHSER7	2042	0.39	1.18	0.00	4.00

Categorical Variable Codes

Value	R1HSER3
0	154
1	223
2	163
3	271
4	570
5	661

Value	R1FHSER3
0.Not imputed	1757
2.Missing	1
4.Refused	284

Value	R1HSER7
0	622
1	467
2	262
3	259
4	248
5	184

Value	R1FHSER7
0.Not imputed	1844
2.Missing	1
4.Refused	197

How Constructed

RwHSER3 provides the number of correct subtractions in the Serial 3's test. This test asks the individual to subtract 3 from the prior result for five trials. Correct subtractions are based on the prior number given, so that even if one subtraction is incorrect, subsequent trials are evaluated on the given (perhaps wrong) answer. Valid scores for RwHSER3 are 0-5.

RwHSER7 provides the number of correct subtractions in the Serial 7's test. This test asks the individual to subtract 7 from the prior result for five trials. Correct subtractions are based on the prior number given, so that even if one subtraction is incorrect, subsequent trials are evaluated on the given

(perhaps wrong) answer. Valid scores for RwHSER7 are 0-5. RwHSER7 is assigned 0 points if respondents refused to answer the 5 trials of the Serial 3's task, and if respondents answered the 5 trials in Serial 3 incorrectly and refused to answer the 5 trials in the Serial 7's task.

RwFHSER3 and RwFHSER7 are flag variables that indicate whether responses to RwHSER3 and RwHSER7 are imputed. They are coded as follows: 0.Not imputed, 2.Missing, and 4.Refused. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

The Serial 3's test was not conducted in the HRS-HCAP, ELSA-HCAP, and LASI-DAD. The Serial 7's test was not conducted in the HRS-HCAP.

In the MHAS Mex-Cog, two correct answers for the first trial of the Serial 7's test were allowed. The LASI-DAD allowed only one correct answer for the first trial. In the ELSA-HCAP, answers were incorrect if they fell outside of the correct subtraction sequence. Additionally, in the MHAS Mex-Cog, the Serial 7's task was skipped if respondents refused to answer the Serial 3's tasks.

Mex-Cog Variables Used

Wave 1 Cognitive Assessment:

MC_Q8_1_16	8: subtract three from 20. round 1 resta de t
MC_Q8_2_16	8: subtract three from 20. round 2 resta de t
MC_Q8_3_16	8: subtract three from 20. round 3 resta de t
MC_Q8_4_16	8: subtract three from 20. round 4 resta de t
MC_Q8_5_16	8: subtract three from 20. round 5 resta de t
MC_Q9_1_16	9: subtract seven from 100. round 1 resta de
MC_Q9_2_16	9: subtract seven from 100. round 2 resta de
MC_Q9_3_16	9: subtract seven from 100. round 3 resta de
MC_Q9_4_16	9: subtract seven from 100. round 4 resta de
MC_Q9_5_16	9: subtract seven from 100. round 5 resta de

Object Naming

Wave	Variable	Label	Type
1	R1HOBJECT1	r1hobject1:w1 R naming 1st object correct-shoe(0-1)	Categ
1	R1FHOBJECT1	r1fhobject1:impflag w1 R whether imputed value	Categ
1	R1HOBJECT2	r1hobject2:w1 R naming 2nd object correct-pencil(0-1)	Categ
1	R1FHOBJECT2	r1fhobject2:impflag w1 R whether imputed value	Categ
1	R1HOBJECT	r1hobject:w1 R total object naming(0-2)	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1HOBJECT1	2042	0.98	0.13	0.00	1.00
R1FHOBJECT1	2042	0.40	2.41	0.00	15.00
R1HOBJECT2	2042	0.97	0.18	0.00	1.00
R1FHOBJECT2	2042	0.40	2.41	0.00	15.00
R1HOBJECT	2042	1.95	0.25	0.00	2.00

Categorical Variable Codes

Value	R1HOBJECT1
0.incorrect	33
1.correct	2009

Value	R1FHOBJECT1
0.Not imputed	1982
1.Dont know	3
2.Missing	2
4.Refused	1
15.Cannot do due to physical impairment	54

Value	R1HOBJECT2
0.incorrect	68
1.correct	1974

Value	R1FHOBJECT2
0.Not imputed	1976
1.Dont know	9
2.Missing	2
4.Refused	1
15.Cannot do due to physical impairment	54

Value	R1HOBJECT
0	14
1	73
2	1955

How Constructed

RwHOBJECT1 and RwHOBJECT2 indicate whether the respondent properly identified two commonly used objects that the interviewer pointed to. Correct responses are coded as 1 and incorrect responses are coded as 0.

RwHOBJECT indicates the number of correct responses between RwHOBJECT1 and RwHOBJECT2. RwHOBJECT ranges from 0-2.

RwFHOBJECT1 and RwFHOBJECT2 are flag variables that indicate whether responses to RwHOBJECT1 and RwHOBJECT2 are imputed. They are coded as follows: 0.Not imputed, 1.Don't know, 2.Missing, 4.Refused, and 15.Cannot do due to physical impairment. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

All studies ask respondents to identify two specific objects, though the objects may differ in each study. The HRS-HCAP and LASI-DAD asked the same commonly used objects. The MHAS Mex-Cog asked respondents to identify a different object in RwHOBJECT1 and in the ELSA-HCAP, interviewers were allowed to provide an alternative for RwOBJECT2.

The Harmonized ELSA-HCAP, Harmonized LASI-DAD, and Harmonized Mex-Cog include imputations for each item with accompanying imputation flags, while the Harmonized HRS-HCAP does not. As such, RwHOBJECT in the Harmonized HRS-HCAP includes missing values.

Mex-Cog Variables Used

Wave 1 Cognitive Assessment:

MC_Q12_16	12: what is this? shoe que es esto? zapato
MC_Q13_16	13: what is this? pencil que es esto? lapiz

Whether Able to Repeat a Phrase

Wave	Variable	Label	Type
1	R1REPEAT	r1repeat:w1 R able to repeat a phrase(0-1)	Categ
1	R1FREPEAT	r1frepeat:impflag w1 R whether imputed value	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1REPEAT	2042	0.90	0.30	0.00	1.00
R1FREPEAT	2042	0.06	0.46	0.00	4.00

Categorical Variable Codes

Value	R1REPEAT
0.incorrect	211
1.correct	1831

Value	R1FREPEAT
0.Not imputed	2005
1.Dont know	8
2.Missing	2
4.Refused	27

How Constructed

RwREPEAT indicates whether the respondent is able to repeat a short, 4-word phrase back to the interviewer. The interviewer cannot repeat the phrase, and the respondent is allowed only one attempt to answer. RwREPEAT is coded as 1 if the respondent was able to repeat the phrase and is coded as 0 if the respondent was not able to repeat the phrase.

RwFREPEAT is a flag variable that indicates whether responses to RwREPEAT are imputed. It is coded as follows: 0.Not imputed, 1.Don't know, 2.Missing, and 4.Refused. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

All HCAP studies ask respondents to repeat a phrase, but each study uses a different phrase. The HRS-HCAP, ELSA-HCAP, and LASI-DAD allowed the interviewer to repeat the phrase if the respondents ask, but the MHAS Mex-Cog does not allow the interviewer to repeat.

The Harmonized ELSA-HCAP, Harmonized LASI-DAD, and Harmonized Mex-Cog include imputations for each item with accompanying imputation flags, while the Harmonized HRS-HCAP does not.

Mex-Cog Variables Used

Wave 1 Cognitive Assessment:

MC_Q14_16	14: repeats phrase. better late than never re

Whether Able to Follow Command

Wave	Variable	Label	Type
1	R1COMBFOL	r1combfol:w1 R able to read command and close eyes(0-1)	Categ
1	R1FCOMBFOL	r1fcombfol:impflag w1 R whether imputed value	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1COMBFOL	1767	0.87	0.34	0.00	1.00
R1FCOMBFOL	2042	2.28	5.20	0.00	15.00

Categorical Variable Codes

Value	R1COMBFOL
.l:Cannot read	275
0.incorrect	237
1.correct	1530

Value	R1FCOMBFOL
0.Not imputed	1707
1.Dont know	4
2.Missing	2
4.Refused	2
14.Cannot read/write	273
15.Cannot do due to physical impairment	54

How Constructed

RwCOMBFOL indicates whether the respondent is able to perform a task that is given to them through text. This task is only given to respondents who report that they do not have a visual limitation and can read. If respondents can read and write, they are asked to read the words on a piece of paper and then do what the words say. If the respondent did not follow directions, a 0 is coded for incorrect. If the respondent followed the given directions, a 1 is coded for correct. Respondents who cannot read are assigned special missing code (.l).

RwFCOMBFOL is a flag variable that indicates whether responses to RwCOMBFOL are imputed. It is coded as follows: 0.Not imputed, 1.Don't know, 2.Missing, 4.Refused, 14.Cannot read/write, and 15.Cannot do due to a physical impairment. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

The MHAS Mex-Cog, HRS-HCAP, and ELSA-HCAP asked respondents to read and follow the instructions. The LASI-DAD first asked the respondents if they could read and write, and had an alternate test for illiterate respondents that asked them to watch the interviewer and copy the action the interviewer performed. Another difference is that the HRS-HCAP allowed the interviewer to read the instructions aloud if the respondent could not read them; the ELSA-HCAP and the MHAS Mex-Cog did not have that as an option.

The Harmonized ELSA-HCAP, Harmonized LASI-DAD, and Harmonized Mex-Cog include imputations for each item with accompanying imputation flags, while the Harmonized HRS-HCAP does not.

Mex-Cog Variables Used

```
Wave 1 Cognitive Assessment:
    MC_Q15_16                15: do as it says here. close your eyes. haga
```

Executive Functioning

Wave	Variable	Label	Type
1	R1HEXECU	r1hexecu:w1 R cognition able to do 3-stage task(0-3)	Categ
1	R1FHEXECU	r1fhexecu:impflag w1 R whether imputed value	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1HEXECU	2042	2.47	0.79	0.00	3.00
R1FHEXECU	2042	0.28	1.99	0.00	15.00

Categorical Variable Codes

Value	R1HEXECU
0.none	66
1.one of the tasks	183
2.two of the tasks	528
3.all of the tasks	1265

Value	R1FHEXECU
0.Not imputed	1992
1.Dont know	6
2.Missing	2
4.Refused	6
15.Cannot do due to physical impairment	36

How Constructed

RwHEXECU counts the number of completed steps in a 3-step, paper-folding task. The interviewer only reads the instructions once. If the respondent has some sort of mobility issues in the right arm or hand, the instructions can be given for the left hand. RwHEXECU ranges from 0-3, with 3 indicating that all 3 tasks were completed and 0 indicating that none of the tasks were completed. RwHEXECU is summed when no components are missing.

RwFHEXECU is a flag variable that indicates whether responses to RwHEXECU are imputed. It is coded as follows: 0.Not imputed, 1.Don't know, 2.Missing, 4.Refused, and 15.Cannot do due to a physical impairment. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

All HCAP studies ask this question, though with some slight variation in the three steps.

The Harmonized ELSA-HCAP, Harmonized LASI-DAD, and Harmonized Mex-Cog include imputations for each item with accompanying imputation flags, while the Harmonized HRS-HCAP does not.

Mex-Cog Variables Used

Wave 1 Cognitive Assessment:

MC_Q11_1_16	11: instructions. take this paper. instruccio
MC_Q11_2_16	11: instructions. fold it in half. instruccio
MC_Q11_3_16	11: instructions. place on the floor. instruc

Writing a Sentence

Wave	Variable	Label	Type
1	R1HSENTEN	r1hsenten:w1 R able to write a sentence(0-1)	Categ
1	R1FHSENTEN	r1fhsenten:impflag w1 R whether imputed value	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1HSENTEN	1686	0.85	0.35	0.00	1.00
R1FHSENTEN	2042	3.00	5.75	0.00	15.00

Categorical Variable Codes

Value	R1HSENTEN
.l:Cannot read	356
0.incorrect	245
1.correct	1441

Value	R1FHSENTEN
0.Not imputed	1579
1.Dont know	11
2.Missing	3
4.Refused	26
14.Cannot read/write	340
15.Cannot do due to physical impairment	83

How Constructed

RwHSENTEN indicates whether a respondent is able to write a complete sentence that says a message on a piece of paper. This is only asked if the respondent reports that they can read and write. A coded value of 1 indicates that the respondent was able to write a complete sentence. A coded value of 0 indicates that the respondent could not write a sentence. Respondents who cannot read and write skip this task and are assigned special missing (.l).

RwFHSENTEN is a flag variable that indicates whether responses to RwHSENTEN are imputed. It is coded as follows: 0.Not imputed, 1.Don't know, 2.Missing, 4.Refused, 14.Cannot read/write, and 15.Cannot do due to a physical impairment. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

The MHAS Mex-Cog, HRS-HCAP, ELSA-HCAP, and the LASI-DAD differed slightly in how respondents' answers were scored. In the MHAS Mex-Cog and ELSA-HCAP, only complete sentences were considered correct; in the HRS-HCAP and LASI-DAD, responses were considered correct if the respondent wrote a complete sentence or their full name. For illiterate respondents in the LASI-DAD, those who said a full sentence about their house were marked as having given a correct answer.

Additionally, the ELSA-HCAP added an extra prompt if the respondent didn't respond to the interviewer's request to write a sentence. The LASI-DAD incorporated an alternate test for those who were illiterate.

The Harmonized ELSA-HCAP, Harmonized LASI-DAD, and Harmonized Mex-Cog include imputations for each item with accompanying imputation flags, while the Harmonized HRS-HCAP does not.

Mex-Cog Variables Used

```
Wave 1 Cognitive Assessment:
    MC_Q16_16                pt16: paper test score. sentence cuadernillo.
```

Drawing Geometric Shape

Wave	Variable	Label	Type
1	R1HDRAW	r1hdraw:w1 R cognition able to draw assigned picture(0-1)	Categ
1	R1FHDRAW	r1fhdraw:impflag w1 R whether imputed value	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1HDRAW	2042	0.51	0.50	0.00	1.00
R1FHDRAW	2042	0.57	2.84	0.00	15.00

Categorical Variable Codes

Value	R1HDRAW
0.incorrect	991
1.correct	1051

Value	R1FHDRAW
0.Not imputed	1958
1.Dont know	1
2.Missing	3
4.Refused	4
15.Cannot do due to physical impairment	76

How Constructed

RwHDRAW indicates whether the respondent was able to draw an assigned picture of two overlapping geometric shapes. Scoring is based on two criteria: 1) the drawing must show the same number of sides for each shape, including the resulting shape where they intersect; and 2) when superimposing the two figures, they must maintain the same number of sides as was shown. A score of 1 is assigned as correct if the drawing met the two requirements. If the respondent's drawing didn't meet both requirements, a score of 0 is assigned.

RwFHDRAW is a flag variable that indicates whether responses to RwHDRAW are imputed. It is coded as follows: 0.Not imputed, 1.Don't know, 2.Missing, 4.Refused, and 15.Cannot do due to a physical impairment. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

The MHAS Mex-Cog, HRS-HCAP, and ELSA-HCAP only provide a 1-point score while the LASI-DAD provides both a MMSE-comparable 1-point score and a more detailed, 2-point score.

The Harmonized ELSA-HCAP, Harmonized LASI-DAD, and Harmonized Mex-Cog include imputations for each item with accompanying imputation flags, while the Harmonized HRS-HCAP does not.

Mex-Cog Variables Used

Wave 1 Cognitive Assessment:

MC_Q17_16	pt17: paper test score. consrtuctional praxis

MMSE Summary Score

Wave	Variable	Label	Type
1	R1MMSE_SCR_M	r1mmse_scr_m:w1 R Modified MMSE total score w/missing(0-28)	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1MMSE_SCR_M	1684	21.47	4.00	3.00	28.00

How Constructed

RwMMSE_SCR_M sums the total value between RwORIENT_T5, RwORIENT_P3, RwHIMRC3, RwHDLRC3, RwHEXECU, RwHOBJECT, RwREPEAT, RwCOMBFOL, RwHSENTEN, RwHDRAW, and RwHSER7, with missing values. If any of the variables contain a missing value, RwMMSE_SCR_M is missing. Respondents who cannot read or write are assigned special missing (.l).

For further information on the component variables mentioned in this section, please refer to their respective sections above.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

The MHAS Mex-Cog, HRS-HCAP, and ELSA-HCAP use the Mini-Mental State Examination (MMSE), while the LASI-DAD uses the Hindi Mental State Examination (HMSE).

While the summary measure is largely similar across studies, there are two exceptions: both the MHAS Mex-Cog and ELSA-HCAP used the Serial 7's task while the HRS-HCAP used the Backward Spelling task and the LASI-DAD used the Backward Day Naming exercise. Additionally, MMSE in the HRS-HCAP and ELSA-HCAP and the HMSE in the LASI-DAD are scored 0 to 30. The MMSE in MHAS Mex-Cog is scored 0 to 28 as the MHAS Mex-Cog only asks 3 items for orientation to place compared to the 5 items asked in the other HCAP studies. Due to these differences, an "_M" has been added to the end of the variable's name to indicate that this variable is not strictly comparable across studies.

The Harmonized ELSA-HCAP, Harmonized LASI-DAD, and Harmonized Mex-Cog include imputations for each item with accompanying imputation flags, while the Harmonized HRS-HCAP does not. As such, RwMMSE_SCORE in the Harmonized HRS-HCAP includes comparatively more missing values.

Mex-Cog Variables Used

Wave 1 Cognitive Assessment:

D1_T1	d1_t1: day of the month dia del mes
D1_T2	d1_t2: month mes
D1_T3	d1_t3: year anio
MC_Q10_1_16	10: remember three objects. paper recuerda tr
MC_Q10_2_16	10: remember three objects. bicycle recuerda
MC_Q10_3_16	10: remember three objects. spoon recuerda tr
MC_Q11_1_16	11: instructions. take this paper. instruccio
MC_Q11_2_16	11: instructions. fold it in half. instruccio
MC_Q11_3_16	11: instructions. place on the floor. instruc
MC_Q12_16	12: what is this? shoe que es esto? zapato
MC_Q13_16	13: what is this? pencil que es esto? lapiz
MC_Q14_16	14: repeats phrase. better late than never re
MC_Q15_16	15: do as it says here. close your eyes. haga
MC_Q16_16	pt16: paper test score. sentence cuadernillo.

MC_Q17_16	pt17: paper test score. consrtuctional praxis
MC_Q3_1C_16	3: correct hour. hora correcta
MC_Q3_1_16	3: what time is it? hour que hora es aproxima
MC_Q3_2C_16	3: correct minutes. minutos correcto
MC_Q3_2_16	3: what time is it? minutes que hora es aprox
MC_Q4_16	4: where are we right now? en donde estamos a
MC_Q5_16	5: what country are we in? en que pais estamo
MC_Q6_16	6: what state are we in? en que estado estamo
MC_Q7_1_16	7: repeat three objects. paper repite tres ob
MC_Q7_2_16	7: repeat three objects. bicycle repite tres
MC_Q7_3_16	7: repeat three objects. spoon repite tres ob
MC_Q9_1_16	9: subtract seven from 100. round 1 resta de
MC_Q9_2_16	9: subtract seven from 100. round 2 resta de
MC_Q9_3_16	9: subtract seven from 100. round 3 resta de
MC_Q9_4_16	9: subtract seven from 100. round 4 resta de
MC_Q9_5_16	9: subtract seven from 100. round 5 resta de

10-Word List Learning

Wave	Variable	Label	Type
1	R1WORD1	r1word1:w1 R word list learning trial 1(0-10)	Categ
1	R1FWORD1	r1fword1:impflag w1 R whether imputed value	Categ
1	R1WORD2	r1word2:w1 R word list learning trial 2(0-10)	Categ
1	R1FWORD2	r1fword2:impflag w1 R whether imputed value	Categ
1	R1WORD3	r1word3:w1 R word list learning trial 3(0-10)	Categ
1	R1FWORD3	r1fword3:impflag w1 R whether imputed value	Categ
1	R1WORD_TOTAL	r1word_total:w1 R word list learning total(0-30)	Cont
1	R1WORD_D	r1word_d: w1 R word list learning recall(0-10)	Categ
1	R1FWORD_D	r1fword_d:impflag w1 R whether imputed value	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1WORD1	2042	2.90	1.39	0.00	8.00
R1FWORD1	2042	0.00	0.08	0.00	2.00
R1WORD2	2042	4.41	1.78	0.00	10.00
R1FWORD2	2042	0.00	0.08	0.00	2.00
R1WORD3	2042	5.30	2.06	0.00	10.00
R1FWORD3	2042	0.00	0.08	0.00	2.00
R1WORD_TOTAL	2042	12.61	4.65	0.00	26.00
R1WORD_D	2042	3.17	2.38	0.00	10.00
R1FWORD_D	2042	0.00	0.08	0.00	2.00

Categorical Variable Codes

Value	R1WORD1
0	106
1	210
2	448
3	600
4	453
5	169
6	45
7	8
8	3

Value	R1FWORD1
0.Not imputed	2039
2.Missing	3

Value	R1WORD2

0	49
1	48
2	169
3	337
4	466
5	445
6	294
7	148
8	61
9	24
10	1

Value	R1FWORD2
0.Not imputed	2039
2.Missing	3

Value	R1WORD3
0	51
1	28
2	85
3	219
4	306
5	373
6	412
7	273
8	182
9	86
10	27

Value	R1FWORD3
0.Not imputed	2039
2.Missing	3

Value	R1WORD_D
0	428
1	168
2	233
3	282
4	310
5	254
6	187
7	103
8	54
9	20
10	3

Value	R1FWORD_D
0.Not imputed	2039
2.Missing	3

How Constructed

RwWORD1, RwWORD2, and RwWORD3 are the outcomes of three consecutive tasks, each of which asked respondents to repeat a set of 10 words back to the interviewer. The interviewer first reads a set of 10 words and asks the respondent to recall as many as they can, and the interviewer cannot repeat the words. Each task consists of the same words in the same order. RwWORD1, RwWORD2, RwWORD3 indicate the total number of words immediately recalled from the first, second, and third tasks, respectively.

RwWORD_TOTAL counts the total number of correct words between RwWORD1, RwWORD2, and RwWORD3. RwWORD_TOTAL is summed when no components are missing.

RwWORD_D indicates the total number of correct words recalled from a 10-word list after a delay where other survey questions were asked and answered. Respondents were asked to recall as many of the 10 words they could remember. Scores range from 0 to 10.

RwFWORD1, RwFWORD2, RwFWORD3, and RwFWORD_D are flag variables that indicate whether responses to RwWORD1, RwWORD2, RwWORD3, and RwWORD_D, respectively, are imputed. They are coded as follows: 0.Not imputed and 2.Missing. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

In the MHAS Mex-Cog and the LASI-DAD, the interviewer read respondents a list of words while in the HRS-HCAP and ELSA-HCAP, the interviewer showed respondents a set of words printed on cards.

The HRS-HCAP and ELSA-HCAP use the same set of words. In the MHAS Mex-Cog and LASI-DAD, some words were changed to be more culturally relevant for their respective study population.

All HCAP studies ask respondents to repeat the word list 3 times. In the HRS-HCAP, ELSA-HCAP, and LASI-DAD, respondents repeat each word after the interviewer and each trial consists of the same words but in a different order. In the MHAS Mex-Cog, the interviewer repeats the word list in the same order for each trial.

Mex-Cog Variables Used

Wave 1 Cognitive Assessment:

MC_Q18_1_10_16	18: word recall 1. cane repite lista de palab
MC_Q18_1_1_16	18: word recall 1. butter repite lista de pal
MC_Q18_1_2_16	18: word recall 1. arm repite lista de palabr
MC_Q18_1_3_16	18: word recall 1. letter repite lista de pal
MC_Q18_1_4_16	18: word recall 1. queen repite lista de pala
MC_Q18_1_5_16	18: word recall 1. ticket repite lista de pal
MC_Q18_1_6_16	18: word recall 1. grass repite lista de pala
MC_Q18_1_7_16	18: word recall 1. corner repite lista de pal
MC_Q18_1_8_16	18: word recall 1. stone repite lista de pala
MC_Q18_1_9_16	18: word recall 1. book repite lista de palab
MC_Q19_2_10_16	19: word recall 2. cane repite lista de palab
MC_Q19_2_1_16	19: word recall 2. butter repite lista de pal
MC_Q19_2_2_16	19: word recall 2. arm repite lista de palabr
MC_Q19_2_3_16	19: word recall 2. letter repite lista de pal
MC_Q19_2_4_16	19: word recall 2. queen repite lista de pala
MC_Q19_2_5_16	19: word recall 2. ticket repite lista de pal
MC_Q19_2_6_16	19: word recall 2. grass repite lista de pala
MC_Q19_2_7_16	19: word recall 2. corner repite lista de pal
MC_Q19_2_8_16	19: word recall 2. stone repite lista de pala
MC_Q19_2_9_16	19: word recall 2. book repite lista de palab
MC_Q20_3_10_16	20: word recall 3. cane repite lista de palab
MC_Q20_3_1_16	20: word recall 3. butter repite lista de pal
MC_Q20_3_2_16	20: word recall 3. arm repite lista de palabr
MC_Q20_3_3_16	20: word recall 3. letter repite lista de pal
MC_Q20_3_4_16	20: word recall 3. queen repite lista de pala
MC_Q20_3_5_16	20: word recall 3. ticket repite lista de pal
MC_Q20_3_6_16	20: word recall 3. grass repite lista de pala
MC_Q20_3_7_16	20: word recall 3. corner repite lista de pal
MC_Q20_3_8_16	20: word recall 3. stone repite lista de pala
MC_Q20_3_9_16	20: word recall 3. book repite lista de palab
MC_Q31_1_10_16	31: remembers list of words. cane recuerda li
MC_Q31_1_1_16	31: remembers list of words. butter recuerda
MC_Q31_1_2_16	31: remembers list of words. arm recuerda lis
MC_Q31_1_3_16	31: remembers list of words. letter recuerda
MC_Q31_1_4_16	31: remembers list of words. queen recuerda l
MC_Q31_1_5_16	31: remembers list of words. ticket recuerda
MC_Q31_1_6_16	31: remembers list of words. grass recuerda l
MC_Q31_1_7_16	31: remembers list of words. corner recuerda
MC_Q31_1_8_16	31: remembers list of words. stone recuerda l
MC_Q31_1_9_16	31: remembers list of words. book recuerda li

Verbal Fluency

Wave	Variable	Label	Type
1	R1VERBAL	r1verbal:w1 R verbal fluency:animal naming-correct	Cont
1	R1FVERBAL	r1fverbal:impflag w1 R whether imputed value	Categ
1	R1VERBAL_CAT	r1verbal_cat:w1 R verbal fluency:animal naming(corr),grpd	Categ
1	R1VERBAL_INC	r1verbal_inc:w1 R verbal fluency:animal naming-incorrect	Cont
1	R1FVERBAL_IN	r1fverbal_inc:impflag w1 R whether imputed value	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1VERBAL	2042	15.04	5.48	1.00	36.00
R1FVERBAL	2042	0.19	0.79	0.00	4.00
R1VERBAL_CAT	2042	2.19	0.70	1.00	4.00
R1VERBAL_INC	2042	0.61	1.02	0.00	9.00
R1FVERBAL_IN	2042	0.16	0.58	0.00	4.00

Categorical Variable Codes

Value	R1FVERBAL
0.Not imputed	1887
1.Dont know	72
2.Missing	3
4.Refused	80

Value	R1VERBAL_CAT
1.1-8	238
2.9-18	1283
3.19-24	421
4.25-36	100

Value	R1FVERBAL_IN
0.Not imputed	1887
2.Missing	146
4.Refused	9

How Constructed

RwVERBAL indicates the number of animals that the respondent correctly named within 60 seconds. They were asked to name as many animal names as fast as they could.

RwVERBAL_CAT is a categorical variable that groups the number of animals the respondent correctly named within 60 seconds. RwVERBAL_CAT is coded as follows: 1. 1-8, 2. 9-18, 3. 19-24, and 4. 25-36.

RwVERBAL_INC indicates the number of incorrect animals the respondent named in the 60 second window.

RwFVERBAL and RwFVERBAL_IN are flag variables that indicate whether responses to RwVERBAL and RwVERBAL_INC are imputed. They are coded as follows: 0.Not imputed, 1.Don't know, 2.Missing, and 4.Refused. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

In the MHAS Mex-Cog, interviewers wrote down all animal names that the respondents named, including repeated items, and counted the number of correct and repeated animal items after the task was completed or 60 seconds had passed. In the HRS-HCAP and ELSA-HCAP, interviewers were asked to keep a mental count of incorrect (non-animal) and repeated animal responses during the exercise and to record the best estimate of all incorrect responses once the task was completed or 60 seconds had passed. In the LASI-DAD, all responses were recorded and once the task was completed or 60 seconds had passed, interviewers were asked to count incorrect (non-animal responses) and repeated items as incorrect.

The MHAS Mex-Cog and HRS-HCAP do not record whether any problems occurred, which the ELSA-HCAP and LASI-DAD document. Additionally, RwVERBAL_CAT is a MHAS Mex-Cog-specific variable and was created based on the Mex-Cog Flowcharts for Scoring and Constructed Variables by Domain (see Mex-Cog 2020).

Mex-Cog Variables Used

Wave 1 Cognitive Assessment:

MC_Q21_1_16	pt21: paper test. total animal list cuadernil
MC_Q21_2_16	pt21: paper test. correct animal list cuadern

Symbol Cancellation

Wave	Variable	Label	Type
1	R1SC_SCORE	r1sc_score:w1 R symbol cancellation score	Cont
1	R1FSC_SCORE	r1fsc_score:impflag w1 R whether imputed value	Categ
1	R1SC_WR	r1sc_wr:w1 R symbol cancellation wrong	Cont
1	R1FSC_WR	r1fsc_wr:impflag w1 R whether imputed value	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1SC_SCORE	2042	26.02	16.11	0.00	60.00
R1FSC_SCORE	2042	0.72	3.01	0.00	15.00
R1SC_WR	2042	1.12	3.31	0.00	60.00
R1FSC_WR	2042	0.72	3.01	0.00	15.00

Categorical Variable Codes

Value	R1FSC_SCORE
0.Not imputed	1900
2.Missing	3
4.Refused	56
15.Cannot do due to physical impairment	83

Value	R1FSC_WR
0.Not imputed	1900
2.Missing	3
4.Refused	56
15.Cannot do due to physical impairment	83

How Constructed

RwSC_SCORE and RwSC_WR pertain to a task in which respondents are asked to find figures that match a given figure that is shown to them. They are asked to find and circle as many matching figures as they can. The interviewer will demonstrate the exercise by finding and circling a matching figure in the middle of the page. Respondents are asked to work as fast as they can until the interviewer instructs them to stop. The interviewer starts counting the time when the respondent circles the first matching figure and stops the respondent after 60 seconds.

RwSC_SCORE provides the summary score for circling the correct symbol for the exercise. RwSC_WR indicates the number of incorrect symbol cancellations and is coded so that it is never less than 0.

RwFSC_SCORE and RwFSC_WR are flag variables that indicate whether responses to RwSC_SCORE and RwSC_WR are imputed. They are coded as follows: 0.Not imputed, 2.Missing, 4.Refused, and 15.Cannot do due to physical impairment. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

Both the MHAS Mex-Cog and LASI-DAD administer the Symbol Cancellation test, where respondents were asked to circle specific symbols. The HRS-HCAP and ELSA-HCAP asked respondents to complete the Letter Cancellation test, where respondents crossed out specific letters of the alphabet.

The Harmonized HRS-HCAP includes a flag variable for the total number of selected letters contained in the letter cancellation test, which is not provided in the other Harmonized HCAP datasets.

Mex-Cog Variables Used

Wave 1 Cognitive Assessment:

MC_Q22_1_16	pt22: paper test. visual route correct cuader
MC_Q22_2_16	pt22: paper test. visual route incorrect cuad

Backward Counting

Wave	Variable	Label	Type
1	R1BC_CAT	r1bc_cat:w1 R backward counting 20 (0-1)	Categ
1	R1FBC_CAT	r1fbc_cat:impflag w1 R whether imputed value	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1BC_CAT	2042	0.83	0.38	0.00	1.00
R1FBC_CAT	2042	0.13	0.71	0.00	4.00

Categorical Variable Codes

Value	R1BC_CAT
0.incorrect	352
1.correct	1690

Value	R1FBC_CAT
0.Not imputed	1974
2.Missing	3
4.Refused	65

How Constructed

RwBC_CAT indicates whether the respondent answered correctly or incorrectly for the backward counting task. Respondents are asked to count backwards starting from 20. If they are able to count from 20 until 11 or from 19 until 10 without making any mistakes, their responses are considered as correct and are coded as 1. If they make a mistake, their responses are considered as incorrect and are coded as 0.

RwFBC_CAT is a flag variable that indicates whether responses to RwBC_CAT are imputed. They are coded as follows: 0.Not imputed, 2.Missing, and 4.Refused. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

The MHAS Mex-Cog asks respondents to count backwards starting from 20 and scored them on a "0.No" and "1.Yes" scale. Both the HRS-HCAP and ELSA-HCAP asked respondents to count backwards from 100 and provide the respondent's score on the task, the last number reached in the counting period, and the number of counting errors made. In LASI-DAD, the Backwards Counting task was not administered to the entire sample as it was dropped after phase 1. The test was difficult to administer and score as many respondents in the LASI-DAD sample were innumerate.

The Harmonized ELSA-HCAP includes imputations and a flag variable for the number of counting errors, while the Harmonized Mex-Cog does not include a count of counting errors.

Mex-Cog Variables Used

Wave 1 Cognitive Assessment:

MC_Q23_1_16	23.1: countdown from 20. cuenta regresiva de
MC_Q23_2_16	23.2: repeat countdown from 20. inicio de nue

CSID

Wave	Variable	Label	Type
1	R1ELBOW	r1elbow:w1 R cognition elbow(0-1)	Categ
1	R1FELBOW	r1felbow:impflag w1 R whether imputed value	Categ
1	R1BRIDGE	r1bridge:w1 R cognition bridge(0-1)	Categ
1	R1FBRIDGE	r1fbridge:impflag w1 R whether imputed value	Categ
1	R1HAMMER	r1hammer:w1 R cognition hammer(0-1)	Categ
1	R1FHAMMER	r1fhammer:impflag w1 R whether imputed value	Categ
1	R1STORE	r1store:w1 R cognition store(0-1)	Categ
1	R1FSTORE	r1fstore:impflag w1 R whether imputed value	Categ
1	R1POINT1	r1point1:w1 R cognition point to sky(0-1)	Categ
1	R1FPOINT1	r1fpoint1:impflag w1 R whether imputed value	Categ
1	R1POINT2	r1point2:w1 R cognition point to floor(0-1)	Categ
1	R1FPOINT2	r1fpoint2:impflag w1 R whether imputed value	Categ
1	R1POINT	r1point:w1 R cognition point to sky & floor(0-1)	Categ
1	R1POINT_M	r1point_m:w1 R cognition point to sky & floor(0-2)	Categ
1	R1HSCIS	r1hscis:w1 R cognition scissors-0-1	Categ
1	R1FHSCIS	r1fhscis:impflag w1 R whether imputed value	Categ
1	R1CSID_SCORE	r1csid_score:w1 R CSID 4-item score(0-4)	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1ELBOW	2042	0.97	0.18	0.00	1.00
R1FELBOW	2042	0.42	2.40	0.00	15.00
R1BRIDGE	2042	0.78	0.41	0.00	1.00
R1FBRIDGE	2042	0.09	0.44	0.00	4.00
R1HAMMER	2042	0.97	0.18	0.00	1.00
R1FHAMMER	2042	0.03	0.30	0.00	4.00
R1STORE	2042	0.49	0.50	0.00	1.00
R1FSTORE	2042	0.04	0.34	0.00	4.00
R1POINT1	2042	0.97	0.17	0.00	1.00
R1FPOINT1	2042	0.05	0.40	0.00	4.00

R1POINT2	2042	0.94	0.23	0.00	1.00
R1FPOINT2	2042	0.06	0.43	0.00	4.00
R1POINT	2042	0.94	0.23	0.00	1.00
R1POINT_M	2042	1.91	0.37	0.00	2.00
R1HSCIS	2042	0.99	0.12	0.00	1.00
R1FHSCIS	2042	0.02	0.27	0.00	4.00
R1CSID_SCORE	2042	3.37	0.70	0.00	4.00

Categorical Variable Codes

Value	R1ELBOW
0.incorrect	65
1.correct	1977

Value	R1FELBOW
0.Not imputed	1954
1.Dont know	14
2.Missing	15
4.Refused	6
15.Cannot do due to physical impairment	53

Value	R1BRIDGE
0.incorrect	440
1.correct	1602

Value	R1FBRIDGE
0.Not imputed	1914
1.Dont know	107
2.Missing	3
4.Refused	18

Value	R1HAMMER
0.incorrect	68
1.correct	1974

Value	R1FHAMMER
0.Not imputed	2021
1.Dont know	8
2.Missing	3
4.Refused	10

Value	R1STORE
0.incorrect	1042
1.correct	1000

Value	R1FSTORE
0.Not imputed	2005
1.Dont know	21
2.Missing	3
4.Refused	13

Value	R1POINT1
0.incorrect	63
1.correct	1979

Value	R1FPOINT1
0.Not imputed	1998
1.Dont know	22
2.Missing	3
4.Refused	19

Value	R1POINT2
0.incorrect	113
1.correct	1929

Value	R1FPOINT2
0.Not imputed	1993
1.Dont know	24
2.Missing	3
4.Refused	22

Value	R1POINT
0.incorrect	115
1.correct	1927

Value	R1POINT_M
0.incorrect	61
1.one correct	54
2.both correct	1927

Value	R1HSCIS
0.incorrect	28
1.correct	2014

Value	R1FHSCIS
0.Not imputed	2020
1.Dont know	11
2.Missing	3
4.Refused	8

Value	R1CSID_SCORE
0	9
1	27
2	132
3	909
4	965

How Constructed

RwELBOW indicates whether the respondent correctly identified an elbow when pointed at by the interviewer. If the respondent correctly identified the elbow, a 1 is coded. If the respondent incorrectly identified the elbow, a 0 is coded.

RwBRIDGE indicates whether the respondent correctly described what a bridge is. Correct answers are coded as 1 and incorrect answers are coded as 0.

RwHAMMER indicates whether the respondent correctly described what one does with a hammer. Correct answers are coded as 1 and incorrect answers are coded as 0.

RwSTORE indicates whether the respondent correctly described where to go to buy a drink nearby. Correct answers are coded as 1 and can be a specific address or a clear description of how to get to the market/store. Answers are incorrect and coded as 0 if respondents did not give any instructions or directions to a nearby store.

RwPOINT1 indicates whether the respondent correctly points to the sky after being instructed to do so. Correct answers are coded as 1 and incorrect answers are coded as 0.

RwPOINT2 indicates whether the respondent correctly points to the ground after being instructed to do so. Correct answers are coded as 1 and incorrect answers are coded as 0.

RwPOINT is a summary score that combines the two point questions and has a scoring range of 0-1. If the respondent was able to correctly point to the sky and to the ground, a 1 is coded for correct. If the respondent was incorrect in either point question, a 0 is coded for incorrect.

RwPOINT_M is a summary score that combines the two point questions and has a scoring range of 0-2. If the respondent was able to correctly point to either object, then a score of 1 is assigned. If the respondent was able to correctly point at both objects, then a score of 2 is assigned. If the respondent was unable

to point to either objects, then a 0 is assigned for incorrect. RwPOINT_M is summed when no components are missing.

RwHSCIS indicates whether a respondent can name the item that people usually use to cut paper. Correct responses are coded as 1 for correct. Incorrect answers are coded as 0.

RwCSID_SCORE provides a score indicating the total number of correct responses between RwELBOW, RwHAMMER, RwSTORE, and RwPOINT. Scores range from 0 to 4. RwCSID_SCORE is summed when no components are missing. RwBRIDGE, RwPOINT_M, and RwSCIS were not used to create this summary score in order for RwCSID_SCORE to be comparable across the HRS-HCAP, ELSA-HCAP, and LASI-DAD studies.

RwFELBOW, RwFBRIDGE, RwFHAMMER, RwFSTORE, RwFPOINT1, RwFPOINT2, and RwFHSCIS are flag variables that indicate whether responses to RwELBOW, RwBRIDGE, RwHAMMER, RwSTORE, RwPOINT1, RwPOINT2, and RwHSCIS, respectively, are imputed. They are coded as follows: 0.Not imputed, 1.Don't know, 2.Missing, 4.Refused, and 15.Cannot do due to physical impairment. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

The MHAS Mex-Cog, HRS-HCAP, ELSA-HCAP, and LASI-DAD differ in how each study handled the pointing task. The MHAS Mex-Cog asked two separate point questions: "Point to the sky" and "Point to the ground". The HRS-HCAP and ELSA-HCAP asked respondents to point first to a window and then at the door. If only a window or door was available (not both), then the HRS-HCAP and ELSA-HCAP asked respondents to point at whichever object was present. The LASI-DAD allowed interviewers to sub in the ceiling for whichever object was missing.

Additionally, the wording for the shop location question varied between the studies. In the HRS-HCAP and the LASI-DAD, respondents were asked: "Where is the local market/local store?". In the ELSA-HCAP, respondents were instead asked: "Where is the nearest local shop?". In the MHAS Mex-Cog, respondents were asked to give directions to the nearest store.

The MHAS Mex-Cog also asked respondents to describe what a bridge is, which is not asked in the other HCAP studies.

Unlike the HRS-HCAP, ELSA-HCAP, and LASI-DAD, the MHAS Mex-Cog includes the question about scissors as part of the CSID. In the HRS-HCAP, ELSA-HCAP, and LASI-DAD, the question about scissors is asked as part of the TICS section.

The Harmonized ELSA-HCAP, Harmonized LASI-DAD, and Harmonized Mex-Cog include imputations for each item with accompanying imputation flags, while the Harmonized HRS-HCAP does not. As such, RwCSID_SCORE in the Harmonized HRS-HCAP includes missing values.

Mex-Cog Variables Used

Wave 1 Cognitive Assessment:

MC_Q25_16	25: what are these called? elbows como se lla
MC_Q26_16	26: what is a bridge? que es un puente?
MC_Q27_16	27: what can you do with a hammer? que se hac
MC_Q29_16	29: can you tell me where i can buy a drink n
MC_Q30_1_16	30: point to the sky. seniala al cielo
MC_Q30_2_16	30: point to the ground. seniale al suelo

Logical Memory: Brave Man Story

Wave	Variable	Label	Type
1	R1BM_S1	r1bm_s1:w1 R Brave man immediate: story point 1(0-2)	Categ
1	R1FBM_S1	r1fbm_s1:impflag w1 R whether imputed value	Categ
1	R1BM_S2	r1bm_s2:w1 R Brave man immediate: story point 2(0-2)	Categ
1	R1FBM_S2	r1fbm_s2:impflag w1 R whether imputed value	Categ
1	R1BM_S3	r1bm_s3:w1 R Brave man immediate: story point 3(0-2)	Categ
1	R1FBM_S3	r1fbm_s3:impflag w1 R whether imputed value	Categ
1	R1BM_S4	r1bm_s4:w1 R Brave man immediate: story point 4(0-2)	Categ
1	R1FBM_S4	r1fbm_s4:impflag w1 R whether imputed value	Categ
1	R1BM_S5	r1bm_s5:w1 R Brave man immediate: story point 5(0-2)	Categ
1	R1FBM_S5	r1fbm_s5:impflag w1 R whether imputed value	Categ
1	R1BM_S6	r1bm_s6:w1 R Brave man immediate: story point 6(0-2)	Categ
1	R1FBM_S6	r1fbm_s6:impflag w1 R whether imputed value	Categ
1	R1BM_IMM	r1bm_imm:w1 R Brave man immediate: summary score 2pts-exact,	Cont
1	R1BMEX_S1	r1bmex_s1:w1 R Brave man immediate: story point 1(0-1) exact	Categ
1	R1BMEX_S2	r1bmex_s2:w1 R Brave man immediate: story point 2(0-1) exact	Categ
1	R1BMEX_S3	r1bmex_s3:w1 R Brave man immediate: story point 3(0-1) exact	Categ
1	R1BMEX_S4	r1bmex_s4:w1 R Brave man immediate: story point 4(0-1) exact	Categ
1	R1BMEX_S5	r1bmex_s5:w1 R Brave man immediate: story point 5(0-1) exact	Categ
1	R1BMEX_S6	r1bmex_s6:w1 R Brave man immediate: story point 6(0-1) exact	Categ
1	R1BM_IMMEX	r1bm_immex:w1 R Brave man immediate: summary score(0-6), exa	Cont
1	R1BM_RS1	r1bm_rs1:w1 R Brave man recall: story point 1(0-2)	Categ
1	R1FBM_RS1	r1fbm_rs1:impflag w1 R whether imputed value	Categ
1	R1BM_RS2	r1bm_rs2:w1 R Brave man recall: story point 2(0-2)	Categ
1	R1FBM_RS2	r1fbm_rs2:impflag w1 R whether imputed value	Categ
1	R1BM_RS3	r1bm_rs3:w1 R Brave man recall: story point 3(0-2)	Categ
1	R1FBM_RS3	r1fbm_rs3:impflag w1 R whether imputed value	Categ
1	R1BM_RS4	r1bm_rs4:w1 R Brave man recall: story point 4(0-2)	Categ
1	R1FBM_RS4	r1fbm_rs4:impflag w1 R whether imputed value	Categ
1	R1BM_RS5	r1bm_rs5:w1 R Brave man recall: story point 5(0-2)	Categ

1	R1FBM_RS5	r1fbm_rs5:impflag w1 R whether imputed value	Categ
1	R1BM_RS6	r1bm_rs6:w1 R Brave man recall: story point 6(0-2)	Categ
1	R1FBM_RS6	r1fbm_rs6:impflag w1 R whether imputed value	Categ
1	R1BM_RECL	r1bm_recl:w1 R Brave man recall: summary score 2pts-exact,1p	Cont
1	R1BMEX_RS1	r1bmex_rs1:w1 R Brave man recall: story point 1(0-1) exact	Categ
1	R1BMEX_RS2	r1bmex_rs2:w1 R Brave man recall: story point 2(0-1) exact	Categ
1	R1BMEX_RS3	r1bmex_rs3:w1 R Brave man recall: story point 3(0-1) exact	Categ
1	R1BMEX_RS4	r1bmex_rs4:w1 R Brave man recall: story point 4(0-1) exact	Categ
1	R1BMEX_RS5	r1bmex_rs5:w1 R Brave man recall: story point 5(0-1) exact	Categ
1	R1BMEX_RS6	r1bmex_rs6:w1 R Brave man recall: story point 6(0-1) exact	Categ
1	R1BM_RECLEX	r1bm_reclex:w1 R Brave man recall: summary score(0-6), exact	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1BM_S1	1960	1.54	0.69	0.00	2.00
R1FBM_S1	2042	0.90	3.69	0.00	16.00
R1BM_S2	1960	1.34	0.73	0.00	2.00
R1FBM_S2	2042	0.90	3.69	0.00	16.00
R1BM_S3	1960	1.05	0.70	0.00	2.00
R1FBM_S3	2042	0.90	3.69	0.00	16.00
R1BM_S4	1960	1.01	0.73	0.00	2.00
R1FBM_S4	2042	0.90	3.69	0.00	16.00
R1BM_S5	1960	0.63	0.74	0.00	2.00
R1FBM_S5	2042	0.90	3.69	0.00	16.00
R1BM_S6	1960	0.51	0.76	0.00	2.00
R1FBM_S6	2042	0.90	3.69	0.00	16.00
R1BM_IMM	1960	6.07	2.82	0.00	12.00
R1BMEX_S1	1960	0.65	0.48	0.00	1.00
R1BMEX_S2	1960	0.49	0.50	0.00	1.00
R1BMEX_S3	1960	0.27	0.45	0.00	1.00
R1BMEX_S4	1960	0.27	0.44	0.00	1.00
R1BMEX_S5	1960	0.16	0.36	0.00	1.00

R1BMEX_S6	1960	0.17	0.37	0.00	1.00
R1BM_IMMEX	1960	2.00	1.63	0.00	6.00
R1BM_RS1	1960	1.16	0.82	0.00	2.00
R1FBM_RS1	2042	0.91	3.69	0.00	16.00
R1BM_RS2	1960	1.07	0.81	0.00	2.00
R1FBM_RS2	2042	0.91	3.69	0.00	16.00
R1BM_RS3	1960	0.81	0.73	0.00	2.00
R1FBM_RS3	2042	0.91	3.69	0.00	16.00
R1BM_RS4	1960	0.88	0.76	0.00	2.00
R1FBM_RS4	2042	0.91	3.69	0.00	16.00
R1BM_RS5	1960	0.47	0.68	0.00	2.00
R1FBM_RS5	2042	0.91	3.69	0.00	16.00
R1BM_RS6	1960	0.34	0.65	0.00	2.00
R1FBM_RS6	2042	0.91	3.69	0.00	16.00
R1BM_RECL	1960	4.74	3.13	0.00	12.00
R1BMEX_RS1	1960	0.43	0.50	0.00	1.00
R1BMEX_RS2	1960	0.37	0.48	0.00	1.00
R1BMEX_RS3	1960	0.19	0.39	0.00	1.00
R1BMEX_RS4	1960	0.24	0.42	0.00	1.00
R1BMEX_RS5	1960	0.11	0.31	0.00	1.00
R1BMEX_RS6	1960	0.10	0.30	0.00	1.00
R1BM_RECLEX	1960	1.43	1.54	0.00	6.00

Categorical Variable Codes

Value	R1BM_S1
.q:Skipped because short interview	82
0.No	217
1.Approximate answer	477
2.Exact answer	1266

Value	R1FBM_S1
0.Not imputed	1924
2.Missing	3
16.Skipped because short interview	115

Value	R1BM_S2
.q:Skipped because short interview	82
0.No	302
1.Approximate answer	688
2.Exact answer	970

Value	R1FBM_S2

```
0.Not imputed                          |        1924
2.Missing                              |           3
16.Skipped because short interview     |         115

Value----------------------------------|     R1BM_S3
.q:Skipped because short interview     |          82
0.No                                   |         430
1.Approximate answer                   |         996
2.Exact answer                         |         534

Value----------------------------------|    R1FBM_S3
0.Not imputed                          |        1924
2.Missing                              |           3
16.Skipped because short interview     |         115

Value----------------------------------|     R1BM_S4
.q:Skipped because short interview     |          82
0.No                                   |         512
1.Approximate answer                   |         926
2.Exact answer                         |         522

Value----------------------------------|    R1FBM_S4
0.Not imputed                          |        1924
2.Missing                              |           3
16.Skipped because short interview     |         115

Value----------------------------------|     R1BM_S5
.q:Skipped because short interview     |          82
0.No                                   |        1035
1.Approximate answer                   |         617
2.Exact answer                         |         308

Value----------------------------------|    R1FBM_S5
0.Not imputed                          |        1924
2.Missing                              |           3
16.Skipped because short interview     |         115

Value----------------------------------|     R1BM_S6
.q:Skipped because short interview     |          82
0.No                                   |        1293
1.Approximate answer                   |         342
2.Exact answer                         |         325

Value----------------------------------|    R1FBM_S6
0.Not imputed                          |        1924
2.Missing                              |           3
16.Skipped because short interview     |         115

Value----------------------------------|   R1BMEX_S1
.q:Skipped because short interview     |          82
0.Not correct/Not exact answers        |         694
1.Exact answer                         |        1266

Value----------------------------------|   R1BMEX_S2
.q:Skipped because short interview     |          82
0.Not correct/Not exact answers        |         990
1.Exact answer                         |         970

Value----------------------------------|   R1BMEX_S3
.q:Skipped because short interview     |          82
0.Not correct/Not exact answers        |        1426
1.Exact answer                         |         534

Value----------------------------------|   R1BMEX_S4
.q:Skipped because short interview     |          82
0.Not correct/Not exact answers        |        1438
1.Exact answer                         |         522

Value----------------------------------|   R1BMEX_S5
.q:Skipped because short interview     |          82
0.Not correct/Not exact answers        |        1652
```

1.Exact answer	308

Value	R1BMEX_S6
.q:Skipped because short interview	82
0.Not correct/Not exact answers	1635
1.Exact answer	325

Value	R1BM_RS1
.q:Skipped because short interview	82
0.No	523
1.Approximate answer	595
2.Exact answer	842

Value	R1FBM_RS1
0.Not imputed	1922
2.Missing	5
16.Skipped because short interview	115

Value	R1BM_RS2
.q:Skipped because short interview	82
0.No	586
1.Approximate answer	650
2.Exact answer	724

Value	R1FBM_RS2
0.Not imputed	1922
2.Missing	5
16.Skipped because short interview	115

Value	R1BM_RS3
.q:Skipped because short interview	82
0.No	739
1.Approximate answer	846
2.Exact answer	375

Value	R1FBM_RS3
0.Not imputed	1922
2.Missing	5
16.Skipped because short interview	115

Value	R1BM_RS4
.q:Skipped because short interview	82
0.No	707
1.Approximate answer	790
2.Exact answer	463

Value	R1FBM_RS4
0.Not imputed	1922
2.Missing	5
16.Skipped because short interview	115

Value	R1BM_RS5
.q:Skipped because short interview	82
0.No	1241
1.Approximate answer	508
2.Exact answer	211

Value	R1FBM_RS5
0.Not imputed	1922
2.Missing	5
16.Skipped because short interview	115

Value	R1BM_RS6
.q:Skipped because short interview	82
0.No	1485
1.Approximate answer	279
2.Exact answer	196

Value	R1FBM_RS6
0.Not imputed	1922
2.Missing	5

```
16.Skipped because short interview      |         115

Value-----------------------------------|  R1BMEX_RS1
.q:Skipped because short interview      |          82
0.Not correct/Not exact answers         |        1118
1.Exact answer                          |         842

Value-----------------------------------|  R1BMEX_RS2
.q:Skipped because short interview      |          82
0.Not correct/Not exact answers         |        1236
1.Exact answer                          |         724

Value-----------------------------------|  R1BMEX_RS3
.q:Skipped because short interview      |          82
0.Not correct/Not exact answers         |        1585
1.Exact answer                          |         375

Value-----------------------------------|  R1BMEX_RS4
.q:Skipped because short interview      |          82
0.Not correct/Not exact answers         |        1497
1.Exact answer                          |         463

Value-----------------------------------|  R1BMEX_RS5
.q:Skipped because short interview      |          82
0.Not correct/Not exact answers         |        1749
1.Exact answer                          |         211

Value-----------------------------------|  R1BMEX_RS6
.q:Skipped because short interview      |          82
0.Not correct/Not exact answers         |        1764
1.Exact answer                          |         196
```

How Constructed

In this section, respondents were tested on their immediate and delayed recollection of a story that was read aloud to them. In the story, a brave man rescued three children from a burning house. After it was read aloud, respondents were asked to repeat as much of the story as they could remember. Later on in the interview, respondents were asked to recall and retell the story once again.

RwBM_S1 - RwBM_S6 denote the score that respondents received for immediately recalling each individual story point, with scores ranging from 0 to 2. Two points were awarded for each story point that was precisely recalled, one point was awarded if the general gist or an approximate answer of the story point was recalled, and zero points were awarded if the story point was not correctly recalled. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwBM_IMM is a summary score that measures how well respondents remembered the story's plotline immediately after it was read to them. As there were 6 story points, the maximum score that respondents could receive for their retelling was 12 points. RwBM_IMM is summed when no components are missing. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwBMEX_S1 - RwBMEX_S6 denote the score that respondents received for immediately recalling each individual story point, with scores ranging from 0 to 1. One point was given if respondents recalled the exact story point and no points were given if respondents either did not remember the story point or could only recall the general gist of the story point. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwBM_IMMEX is a summary score that measures how well respondents remembered the story's exact plotline immediately after it was read to them. As there were 6 story points, the maximum score that respondents could receive for their retelling was 6 points. RwBM_IMMEX is summed when no components are missing. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwBM_RS1 - RwBM_RS6 denote the score that respondents received for the delayed recall of each individual story point, with scores ranging from 0 to 2. Two points were awarded for each story that was exactly

recalled, and one point was awarded if the general gist or an approximate answer of the story point was recalled. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwBM_RECL is a summary score that measures how well respondents remembered the story's plotline after some time had passed and they had answered some unrelated interview questions. As there were 6 story points, the maximum score that respondents could receive for their delayed retelling was 12 points. RwBM_RECL is summed when no components are missing. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwBMEX_RS1 - RwBMEX_RS6 denote the score that respondents received for the delayed recall of each individual story point, with scores ranging from 0 to 1. One point was awarded for each story point that was exactly recalled, and no points were awarded if respondents either did not remember the story point or could only recall the general gist of the story point. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwBM_RECLEX is a summary score that measures how well respondents remembered the story's exact plotline after some time had passed and they had answered some unrelated interview questions. As there were 6 story points, the maximum score that respondents could receive for their delayed retelling was 6 points. RwBM_RECLEX is summed when no components are missing. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwFBM_S1 - RwFBM_S6 and RwFBM_RS1 - RwFBM_RS6 are flag variables that indicate whether responses to RwBM_S1 - RwBM_S6 and RwBM_RS1 - RwBM_RS6 are imputed. They are coded as follows: 0.Not imputed, 2.Missing, and 16.Skipped because short interview. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

The MHAS Mex-Cog, HRS-HCAP, and ELSA-HCAP score respondents' retellings based on 6 story points while the LASI-DAD scores them based on 10 story points. To facilitate comparison across studies, the Harmonized LASI-DAD also provides 6-point scores that match the scoring system used in the other HCAP studies. Because the LASI-DAD recognized additional dimensions of the story and used more detailed answers in the scoring, four detailed story points were combined to create two comparable story points that match what the other HCAP studies used. Additionally, the MHAS Mex-Cog, HRS-HCAP, and LASI-DAD distinguish between story points that were exactly recalled and those that were approximately correct. The ELSA-HCAP does not provide that level of distinction.

The MHAS Mex-Cog has a different skip pattern, which is determined by the respondent's cognitive performance on the MMSE. If the participant obtains a score higher than 10 points on the MMSE, they are given the total (long) version of the cognitive assessment. If they obtain a score of 10 points or less on the MMSE, they are asked to complete the partial (short) version of the assessment. Thus, the MHAS Mex-Cog includes a special missing value .q to capture respondents who skipped certain cognitive tasks due to only completing the short version of the cognitive assessment.

The Harmonized ELSA-HCAP, Harmonized LASI-DAD, and Harmonized Mex-Cog include imputations for each item with accompanying imputation flags, while the Harmonized HRS-HCAP does not. As such these items in the Harmonized HRS-HCAP include missing values. The HRS imputed values for the immediate recall summary scores if all items are refused or missing, and for the delayed recall summary score if all items are missing.

Mex-Cog Variables Used

Wave 1 Cognitive Assessment:

MC_Q32_1_16	32: repeats story. three children repite hist
MC_Q32_2_16	32: repeats story. house caught on fire repit
MC_Q32_3_16	32: repeats story. brave man climbed repite h
MC_Q32_4_16	32: repeats story. children rescued repite hi
MC_Q32_5_16	32: repeats story. minor injuries repite hist

MC_Q32_6_16	32: repeats story. everybody is fine repite h
MC_Q38_1_16	38: recalls story. three children recuerda hi
MC_Q38_2_16	38: recalls story. house caught on fire recue
MC_Q38_3_16	38: recalls story. brave man climbed recuerda
MC_Q38_4_16	38: recalls story. children rescued recuerda
MC_Q38_5_16	38: recalls story. minor injuries recuerda hi
MC_Q38_6_16	38: recalls story. everybody is fine recuerda

Logical Memory: Robbery Story

Wave	Variable	Label	Type
1	R1LMB_S1	r1lmb_s1:w1 R long story immediate: story point 1(0-2)	Categ
1	R1FLMB_S1	r1flmb_s1:impflag w1 R whether imputed value	Categ
1	R1LMB_S2	r1lmb_s2:w1 R long story immediate: story point 2(0-2)	Categ
1	R1FLMB_S2	r1flmb_s2:impflag w1 R whether imputed value	Categ
1	R1LMB_S3	r1lmb_s3:w1 R long story immediate: story point 3(0-2)	Categ
1	R1FLMB_S3	r1flmb_s3:impflag w1 R whether imputed value	Categ
1	R1LMB_S4	r1lmb_s4:w1 R long story immediate: story point 4(0-2)	Categ
1	R1FLMB_S4	r1flmb_s4:impflag w1 R whether imputed value	Categ
1	R1LMB_S5	r1lmb_s5:w1 R long story immediate: story point 5(0-2)	Categ
1	R1FLMB_S5	r1flmb_s5:impflag w1 R whether imputed value	Categ
1	R1LMB_S6	r1lmb_s6:w1 R long story immediate: story point 6(0-2)	Categ
1	R1FLMB_S6	r1flmb_s6:impflag w1 R whether imputed value	Categ
1	R1LMB_S7	r1lmb_s7:w1 R long story immediate: story point 7(0-2)	Categ
1	R1FLMB_S7	r1flmb_s7:impflag w1 R whether imputed value	Categ
1	R1LMB_S8	r1lmb_s8:w1 R long story immediate: story point 8(0-2)	Categ
1	R1FLMB_S8	r1flmb_s8:impflag w1 R whether imputed value	Categ
1	R1LMB_S9	r1lmb_s9:w1 R long story immediate: story point 9(0-2)	Categ
1	R1FLMB_S9	r1flmb_s9:impflag w1 R whether imputed value	Categ
1	R1LMB_S10	r1lmb_s10:w1 R long man immediate: story point 10(0-2)	Categ
1	R1FLMB_S10	r1flmb_s10:impflag w1 R whether imputed value	Categ
1	R1LMB_S11	r1lmb_s11:w1 R long man immediate: story point 11(0-2)	Categ
1	R1FLMB_S11	r1flmb_s11:impflag w1 R whether imputed value	Categ
1	R1LMB_S12	r1lmb_s12:w1 R long man immediate: story point 12(0-2)	Categ
1	R1FLMB_S12	r1flmb_s12:impflag w1 R whether imputed value	Categ
1	R1LMB_S13	r1lmb_s13:w1 R long man immediate: story point 13(0-2)	Categ
1	R1FLMB_S13	r1flmb_s13:impflag w1 R whether imputed value	Categ
1	R1LMB_S14	r1lmb_s14:w1 R long man immediate: story point 14(0-2)	Categ
1	R1FLMB_S14	r1flmb_s14:impflag w1 R whether imputed value	Categ
1	R1LMB_S15	r1lmb_s15:w1 R long man immediate: story point 15(0-2)	Categ

1	R1FLMB_S15	r1flmb_s15:impflag w1 R whether imputed value	Categ
1	R1LMB_S16	r1lmb_s16:w1 R long man immediate: story point 16(0-2)	Categ
1	R1FLMB_S16	r1flmb_s16:impflag w1 R whether imputed value	Categ
1	R1LMB_S17	r1lmb_s17:w1 R long man immediate: story point 17(0-2)	Categ
1	R1FLMB_S17	r1flmb_s17:impflag w1 R whether imputed value	Categ
1	R1LMB_S18	r1lmb_s18:w1 R long man immediate: story point 18(0-2)	Categ
1	R1FLMB_S18	r1flmb_s18:impflag w1 R whether imputed value	Categ
1	R1LMB_S19	r1lmb_s19:w1 R long man immediate: story point 19(0-2)	Categ
1	R1FLMB_S19	r1flmb_s19:impflag w1 R whether imputed value	Categ
1	R1LMB_S20	r1lmb_s20:w1 R long man immediate: story point 20(0-2)	Categ
1	R1FLMB_S20	r1flmb_s20:impflag w1 R whether imputed value	Categ
1	R1LMB_S21	r1lmb_s21:w1 R long man immediate: story point 21(0-2)	Categ
1	R1FLMB_S21	r1flmb_s21:impflag w1 R whether imputed value	Categ
1	R1LMB_S22	r1lmb_s22:w1 R long man immediate: story point 22(0-2)	Categ
1	R1FLMB_S22	r1flmb_s22:impflag w1 R whether imputed value	Categ
1	R1LMB_S23	r1lmb_s23:w1 R long man immediate: story point 23(0-2)	Categ
1	R1FLMB_S23	r1flmb_s23:impflag w1 R whether imputed value	Categ
1	R1LMB_S24	r1lmb_s24:w1 R long man immediate: story point 24(0-2)	Categ
1	R1FLMB_S24	r1flmb_s24:impflag w1 R whether imputed value	Categ
1	R1LMB_S25	r1lmb_s25:w1 R long man immediate: story point 25(0-2)	Categ
1	R1FLMB_S25	r1flmb_s25:impflag w1 R whether imputed value	Categ
1	R1LMB_RS1	r1lmb_rs1:w1 R long story recall: story point 1(0-2)	Categ
1	R1FLMB_RS1	r1flmb_rs1:impflag w1 R whether imputed value	Categ
1	R1LMB_RS2	r1lmb_rs2:w1 R long story recall: story point 2(0-2)	Categ
1	R1FLMB_RS2	r1flmb_rs2:impflag w1 R whether imputed value	Categ
1	R1LMB_RS3	r1lmb_rs3:w1 R long story recall: story point 3(0-2)	Categ
1	R1FLMB_RS3	r1flmb_rs3:impflag w1 R whether imputed value	Categ
1	R1LMB_RS4	r1lmb_rs4:w1 R long story recall: story point 4(0-2)	Categ
1	R1FLMB_RS4	r1flmb_rs4:impflag w1 R whether imputed value	Categ
1	R1LMB_RS5	r1lmb_rs5:w1 R long story recall: story point 5(0-2)	Categ
1	R1FLMB_RS5	r1flmb_rs5:impflag w1 R whether imputed value	Categ

1	R1LMB_RS6	r1lmb_rs6:w1 R long story recall: story point 6(0-2)	Categ
1	R1FLMB_RS6	r1flmb_rs6:impflag w1 R whether imputed value	Categ
1	R1LMB_RS7	r1lmb_rs7:w1 R long story recall: story point 7(0-2)	Categ
1	R1FLMB_RS7	r1flmb_rs7:impflag w1 R whether imputed value	Categ
1	R1LMB_RS8	r1lmb_rs8:w1 R long story recall: story point 8(0-2)	Categ
1	R1FLMB_RS8	r1flmb_rs8:impflag w1 R whether imputed value	Categ
1	R1LMB_RS9	r1lmb_rs9:w1 R long story recall: story point 9(0-2)	Categ
1	R1FLMB_RS9	r1flmb_rs9:impflag w1 R whether imputed value	Categ
1	R1LMB_RS10	r1lmb_rs10:w1 R long man recall: story point 10(0-2)	Categ
1	R1FLMB_RS10	r1flmb_rs10:impflag w1 R whether imputed value	Categ
1	R1LMB_RS11	r1lmb_rs11:w1 R long man recall: story point 11(0-2)	Categ
1	R1FLMB_RS11	r1flmb_rs11:impflag w1 R whether imputed value	Categ
1	R1LMB_RS12	r1lmb_rs12:w1 R long man recall: story point 12(0-2)	Categ
1	R1FLMB_RS12	r1flmb_rs12:impflag w1 R whether imputed value	Categ
1	R1LMB_RS13	r1lmb_rs13:w1 R long man recall: story point 13(0-2)	Categ
1	R1FLMB_RS13	r1flmb_rs13:impflag w1 R whether imputed value	Categ
1	R1LMB_RS14	r1lmb_rs14:w1 R long man recall: story point 14(0-2)	Categ
1	R1FLMB_RS14	r1flmb_rs14:impflag w1 R whether imputed value	Categ
1	R1LMB_RS15	r1lmb_rs15:w1 R long man recall: story point 15(0-2)	Categ
1	R1FLMB_RS15	r1flmb_rs15:impflag w1 R whether imputed value	Categ
1	R1LMB_RS16	r1lmb_rs16:w1 R long man recall: story point 16(0-2)	Categ
1	R1FLMB_RS16	r1flmb_rs16:impflag w1 R whether imputed value	Categ
1	R1LMB_RS17	r1lmb_rs17:w1 R long man recall: story point 17(0-2)	Categ
1	R1FLMB_RS17	r1flmb_rs17:impflag w1 R whether imputed value	Categ
1	R1LMB_RS18	r1lmb_rs18:w1 R long man recall: story point 18(0-2)	Categ
1	R1FLMB_RS18	r1flmb_rs18:impflag w1 R whether imputed value	Categ
1	R1LMB_RS19	r1lmb_rs19:w1 R long man recall: story point 19(0-2)	Categ
1	R1FLMB_RS19	r1flmb_rs19:impflag w1 R whether imputed value	Categ
1	R1LMB_RS20	r1lmb_rs20:w1 R long man recall: story point 20(0-2)	Categ
1	R1FLMB_RS20	r1flmb_rs20:impflag w1 R whether imputed value	Categ
1	R1LMB_RS21	r1lmb_rs21:w1 R long man recall: story point 21(0-2)	Categ
1	R1FLMB_RS21	r1flmb_rs21:impflag w1 R whether imputed value	Categ

1	R1LMB_RS22	r1lmb_rs22:w1 R long man recall: story point 22(0-2)	Categ
1	R1FLMB_RS22	r1flmb_rs22:impflag w1 R whether imputed value	Categ
1	R1LMB_RS23	r1lmb_rs23:w1 R long man recall: story point 23(0-2)	Categ
1	R1FLMB_RS23	r1flmb_rs23:impflag w1 R whether imputed value	Categ
1	R1LMB_RS24	r1lmb_rs24:w1 R long man recall: story point 24(0-2)	Categ
1	R1FLMB_RS24	r1flmb_rs24:impflag w1 R whether imputed value	Categ
1	R1LMB_RS25	r1lmb_rs25:w1 R long man recall: story point 25(0-2)	Categ
1	R1FLMB_RS25	r1flmb_rs25:impflag w1 R whether imputed value	Categ
1	R1LMB_IMM	r1lmb_imm:w1 R long story immediate:summary score,exact word	Cont
1	R1LMB_IMM_M	r1lmb_imm_m:w1 R long story immediate:summary score,with gis	Cont
1	R1LMB_IM_M2	r1lmb_imm_m2:w1 R long story immediate:summary score,with gi	Cont
1	R1LMB_RECL	r1lmb_recl:w1 R long story recall:summary score,exact words(	Cont
1	R1LMB_RECL_M	r1lmb_recl_m:w1 R long story recall:summary score,with gist(	Cont
1	R1LMB_RCL_M2	r1lmb_recl_m2:w1 R long story recall:summary score,with gist	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1LMB_S1	1960	1.44	0.86	0.00	2.00
R1FLMB_S1	2042	0.90	3.69	0.00	16.00
R1LMB_S2	1960	0.94	0.98	0.00	2.00
R1FLMB_S2	2042	0.90	3.69	0.00	16.00
R1LMB_S3	1977	0.14	0.51	0.00	2.00
R1FLMB_S3	2042	0.90	3.69	0.00	16.00
R1LMB_S4	1960	0.48	0.85	0.00	2.00
R1FLMB_S4	2042	0.90	3.69	0.00	16.00
R1LMB_S5	1960	0.87	0.96	0.00	2.00
R1FLMB_S5	2042	0.90	3.69	0.00	16.00
R1LMB_S6	1960	0.27	0.66	0.00	2.00
R1FLMB_S6	2042	0.90	3.69	0.00	16.00
R1LMB_S7	1960	0.47	0.81	0.00	2.00
R1FLMB_S7	2042	0.90	3.69	0.00	16.00
R1LMB_S8	1977	0.17	0.56	0.00	2.00

R1FLMB_S8	2042	0.90	3.69	0.00	16.00
R1LMB_S9	1960	0.34	0.70	0.00	2.00
R1FLMB_S9	2042	0.90	3.69	0.00	16.00
R1LMB_S10	1960	0.05	0.30	0.00	2.00
R1FLMB_S10	2042	0.90	3.69	0.00	16.00
R1LMB_S11	1977	0.50	0.86	0.00	2.00
R1FLMB_S11	2042	0.90	3.69	0.00	16.00
R1LMB_S12	1960	0.64	0.82	0.00	2.00
R1FLMB_S12	2042	0.90	3.69	0.00	16.00
R1LMB_S13	1960	0.14	0.49	0.00	2.00
R1FLMB_S13	2042	0.90	3.69	0.00	16.00
R1LMB_S14	1960	0.07	0.34	0.00	2.00
R1FLMB_S14	2042	0.90	3.69	0.00	16.00
R1LMB_S15	1960	0.77	0.92	0.00	2.00
R1FLMB_S15	2042	0.90	3.69	0.00	16.00
R1LMB_S16	1960	0.64	0.84	0.00	2.00
R1FLMB_S16	2042	0.90	3.69	0.00	16.00
R1LMB_S17	1960	0.45	0.73	0.00	2.00
R1FLMB_S17	2042	0.90	3.69	0.00	16.00
R1LMB_S18	1960	0.41	0.62	0.00	2.00
R1FLMB_S18	2042	0.90	3.69	0.00	16.00
R1LMB_S19	1960	0.33	0.67	0.00	2.00
R1FLMB_S19	2042	0.90	3.69	0.00	16.00
R1LMB_S20	1960	0.50	0.77	0.00	2.00
R1FLMB_S20	2042	0.90	3.69	0.00	16.00
R1LMB_S21	1960	0.22	0.60	0.00	2.00
R1FLMB_S21	2042	0.90	3.69	0.00	16.00
R1LMB_S22	1960	0.76	0.95	0.00	2.00
R1FLMB_S22	2042	0.90	3.69	0.00	16.00
R1LMB_S23	1960	0.24	0.59	0.00	2.00
R1FLMB_S23	2042	0.90	3.69	0.00	16.00
R1LMB_S24	1960	0.59	0.78	0.00	2.00

R1FLMB_S24	2042	0.90	3.69	0.00	16.00
R1LMB_S25	1960	0.29	0.63	0.00	2.00
R1FLMB_S25	2042	0.90	3.69	0.00	16.00
R1LMB_RS1	1960	0.77	0.91	0.00	2.00
R1FLMB_RS1	2042	0.91	3.69	0.00	16.00
R1LMB_RS2	1960	0.35	0.75	0.00	2.00
R1FLMB_RS2	2042	0.91	3.69	0.00	16.00
R1LMB_RS3	1977	0.09	0.42	0.00	2.00
R1FLMB_RS3	2042	0.91	3.69	0.00	16.00
R1LMB_RS4	1977	0.32	0.73	0.00	2.00
R1FLMB_RS4	2042	0.91	3.69	0.00	16.00
R1LMB_RS5	1960	0.55	0.88	0.00	2.00
R1FLMB_RS5	2042	0.91	3.69	0.00	16.00
R1LMB_RS6	1960	0.15	0.51	0.00	2.00
R1FLMB_RS6	2042	0.91	3.69	0.00	16.00
R1LMB_RS7	1960	0.34	0.71	0.00	2.00
R1FLMB_RS7	2042	0.91	3.69	0.00	16.00
R1LMB_RS8	1960	0.12	0.47	0.00	2.00
R1FLMB_RS8	2042	0.91	3.69	0.00	16.00
R1LMB_RS9	1960	0.18	0.51	0.00	2.00
R1FLMB_RS9	2042	0.91	3.69	0.00	16.00
R1LMB_RS10	1960	0.02	0.19	0.00	2.00
R1FLMB_RS10	2042	0.91	3.69	0.00	16.00
R1LMB_RS11	1960	0.36	0.76	0.00	2.00
R1FLMB_RS11	2042	0.91	3.69	0.00	16.00
R1LMB_RS12	1960	0.64	0.81	0.00	2.00
R1FLMB_RS12	2042	0.91	3.69	0.00	16.00
R1LMB_RS13	1977	0.11	0.43	0.00	2.00
R1FLMB_RS13	2042	0.91	3.69	0.00	16.00
R1LMB_RS14	1960	0.03	0.22	0.00	2.00
R1FLMB_RS14	2042	0.91	3.69	0.00	16.00

R1LMB_RS15	1960	0.61	0.87	0.00	2.00
R1FLMB_RS15	2042	0.91	3.69	0.00	16.00
R1LMB_RS16	1960	0.60	0.82	0.00	2.00
R1FLMB_RS16	2042	0.91	3.69	0.00	16.00
R1LMB_RS17	1960	0.25	0.60	0.00	2.00
R1FLMB_RS17	2042	0.91	3.69	0.00	16.00
R1LMB_RS18	1960	0.26	0.54	0.00	2.00
R1FLMB_RS18	2042	0.91	3.69	0.00	16.00
R1LMB_RS19	1960	0.25	0.58	0.00	2.00
R1FLMB_RS19	2042	0.91	3.69	0.00	16.00
R1LMB_RS20	1960	0.35	0.69	0.00	2.00
R1FLMB_RS20	2042	0.91	3.69	0.00	16.00
R1LMB_RS21	1960	0.17	0.53	0.00	2.00
R1FLMB_RS21	2042	0.91	3.69	0.00	16.00
R1LMB_RS22	1960	0.62	0.91	0.00	2.00
R1FLMB_RS22	2042	0.91	3.69	0.00	16.00
R1LMB_RS23	1960	0.20	0.54	0.00	2.00
R1FLMB_RS23	2042	0.91	3.69	0.00	16.00
R1LMB_RS24	1960	0.48	0.73	0.00	2.00
R1FLMB_RS24	2042	0.91	3.69	0.00	16.00
R1LMB_RS25	1960	0.24	0.57	0.00	2.00
R1FLMB_RS25	2042	0.91	3.69	0.00	16.00
R1LMB_IMM	1960	4.83	3.70	0.00	20.00
R1LMB_IMM_M	1960	6.06	4.06	0.00	21.00
R1LMB_IM_M2	1960	11.73	8.01	0.00	41.00
R1LMB_RECL	1960	3.17	3.44	0.00	19.00
R1LMB_RECL_M	1960	4.21	3.92	0.00	20.00
R1LMB_RCL_M2	1960	8.06	7.68	0.00	39.00

Categorical Variable Codes

Value	R1LMB_S1
.q:Skipped because short interview	82
0.No	486
1.Approximate answer	134

```
2.Exact answer                          |        1340

Value-----------------------------------|   R1FLMB_S1
0.Not imputed                           |        1923
2.Missing                               |           4
16.Skipped because short interview      |         115

Value-----------------------------------|    R1LMB_S2
.q:Skipped because short interview      |          82
0.No                                    |        1008
1.Approximate answer                    |          56
2.Exact answer                          |         896

Value-----------------------------------|   R1FLMB_S2
0.Not imputed                           |        1923
2.Missing                               |           4
16.Skipped because short interview      |         115

Value-----------------------------------|    R1LMB_S3
.q:Skipped because short interview      |          65
0.No                                    |        1829
1.Approximate answer                    |          10
2.Exact answer                          |         138

Value-----------------------------------|   R1FLMB_S3
0.Not imputed                           |        1923
2.Missing                               |           4
16.Skipped because short interview      |         115

Value-----------------------------------|    R1LMB_S4
.q:Skipped because short interview      |          82
0.No                                    |        1482
1.Approximate answer                    |           9
2.Exact answer                          |         469

Value-----------------------------------|   R1FLMB_S4
0.Not imputed                           |        1923
2.Missing                               |           4
16.Skipped because short interview      |         115

Value-----------------------------------|    R1LMB_S5
.q:Skipped because short interview      |          82
0.No                                    |        1050
1.Approximate answer                    |         123
2.Exact answer                          |         787

Value-----------------------------------|   R1FLMB_S5
0.Not imputed                           |        1923
2.Missing                               |           4
16.Skipped because short interview      |         115

Value-----------------------------------|    R1LMB_S6
.q:Skipped because short interview      |          82
0.No                                    |        1666
1.Approximate answer                    |          62
2.Exact answer                          |         232

Value-----------------------------------|   R1FLMB_S6
0.Not imputed                           |        1923
2.Missing                               |           4
16.Skipped because short interview      |         115

Value-----------------------------------|    R1LMB_S7
.q:Skipped because short interview      |          82
0.No                                    |        1433
1.Approximate answer                    |         127
2.Exact answer                          |         400

Value-----------------------------------|   R1FLMB_S7
0.Not imputed                           |        1923
2.Missing                               |           4
```

```
16.Skipped because short interview      |         115

Value-----------------------------------|    R1LMB_S8
.q:Skipped because short interview      |          65
0.No                                    |        1808
1.Approximate answer                    |           3
2.Exact answer                          |         166

Value-----------------------------------|   R1FLMB_S8
0.Not imputed                           |        1923
2.Missing                               |           4
16.Skipped because short interview      |         115

Value-----------------------------------|    R1LMB_S9
.q:Skipped because short interview      |          82
0.No                                    |        1555
1.Approximate answer                    |         148
2.Exact answer                          |         257

Value-----------------------------------|   R1FLMB_S9
0.Not imputed                           |        1923
2.Missing                               |           4
16.Skipped because short interview      |         115

Value-----------------------------------|   R1LMB_S10
.q:Skipped because short interview      |          82
0.No                                    |        1898
1.Approximate answer                    |          22
2.Exact answer                          |          40

Value-----------------------------------|  R1FLMB_S10
0.Not imputed                           |        1923
2.Missing                               |           4
16.Skipped because short interview      |         115

Value-----------------------------------|   R1LMB_S11
.q:Skipped because short interview      |          65
0.No                                    |        1471
1.Approximate answer                    |          26
2.Exact answer                          |         480

Value-----------------------------------|  R1FLMB_S11
0.Not imputed                           |        1923
2.Missing                               |           4
16.Skipped because short interview      |         115

Value-----------------------------------|   R1LMB_S12
.q:Skipped because short interview      |          82
0.No                                    |        1144
1.Approximate answer                    |         385
2.Exact answer                          |         431

Value-----------------------------------|  R1FLMB_S12
0.Not imputed                           |        1923
2.Missing                               |           4
16.Skipped because short interview      |         115

Value-----------------------------------|   R1LMB_S13
.q:Skipped because short interview      |          82
0.No                                    |        1799
1.Approximate answer                    |          46
2.Exact answer                          |         115

Value-----------------------------------|  R1FLMB_S13
0.Not imputed                           |        1923
2.Missing                               |           4
16.Skipped because short interview      |         115

Value-----------------------------------|   R1LMB_S14
.q:Skipped because short interview      |          82
0.No                                    |        1884
```

```
1.Approximate answer                    |          21
2.Exact answer                          |          55

Value-----------------------------------|  R1FLMB_S14
0.Not imputed                           |        1923
2.Missing                               |           4
16.Skipped because short interview      |         115

Value-----------------------------------|   R1LMB_S15
.q:Skipped because short interview      |          82
0.No                                    |        1105
1.Approximate answer                    |         199
2.Exact answer                          |         656

Value-----------------------------------|  R1FLMB_S15
0.Not imputed                           |        1923
2.Missing                               |           4
16.Skipped because short interview      |         115

Value-----------------------------------|   R1LMB_S16
.q:Skipped because short interview      |          82
0.No                                    |        1171
1.Approximate answer                    |         332
2.Exact answer                          |         457

Value-----------------------------------|  R1FLMB_S16
0.Not imputed                           |        1923
2.Missing                               |           4
16.Skipped because short interview      |         115

Value-----------------------------------|   R1LMB_S17
.q:Skipped because short interview      |          82
0.No                                    |        1357
1.Approximate answer                    |         324
2.Exact answer                          |         279

Value-----------------------------------|  R1FLMB_S17
0.Not imputed                           |        1923
2.Missing                               |           4
16.Skipped because short interview      |         115

Value-----------------------------------|   R1LMB_S18
.q:Skipped because short interview      |          82
0.No                                    |        1289
1.Approximate answer                    |         535
2.Exact answer                          |         136

Value-----------------------------------|  R1FLMB_S18
0.Not imputed                           |        1923
2.Missing                               |           4
16.Skipped because short interview      |         115

Value-----------------------------------|   R1LMB_S19
.q:Skipped because short interview      |          82
0.No                                    |        1520
1.Approximate answer                    |         224
2.Exact answer                          |         216

Value-----------------------------------|  R1FLMB_S19
0.Not imputed                           |        1923
2.Missing                               |           4
16.Skipped because short interview      |         115

Value-----------------------------------|   R1LMB_S20
.q:Skipped because short interview      |          82
0.No                                    |        1317
1.Approximate answer                    |         303
2.Exact answer                          |         340

Value-----------------------------------|  R1FLMB_S20
0.Not imputed                           |        1923
```

```
2.Missing                              |           4
16.Skipped because short interview     |         115

Value----------------------------------|   R1LMB_S21
.q:Skipped because short interview     |          82
0.No                                   |        1701
1.Approximate answer                   |          78
2.Exact answer                         |         181

Value----------------------------------|  R1FLMB_S21
0.Not imputed                          |        1923
2.Missing                              |           4
16.Skipped because short interview     |         115

Value----------------------------------|   R1LMB_S22
.q:Skipped because short interview     |          82
0.No                                   |        1182
1.Approximate answer                   |          68
2.Exact answer                         |         710

Value----------------------------------|  R1FLMB_S22
0.Not imputed                          |        1923
2.Missing                              |           4
16.Skipped because short interview     |         115

Value----------------------------------|   R1LMB_S23
.q:Skipped because short interview     |          82
0.No                                   |        1649
1.Approximate answer                   |         153
2.Exact answer                         |         158

Value----------------------------------|  R1FLMB_S23
0.Not imputed                          |        1923
2.Missing                              |           4
16.Skipped because short interview     |         115

Value----------------------------------|   R1LMB_S24
.q:Skipped because short interview     |          82
0.No                                   |        1161
1.Approximate answer                   |         446
2.Exact answer                         |         353

Value----------------------------------|  R1FLMB_S24
0.Not imputed                          |        1923
2.Missing                              |           4
16.Skipped because short interview     |         115

Value----------------------------------|   R1LMB_S25
.q:Skipped because short interview     |          82
0.No                                   |        1575
1.Approximate answer                   |         202
2.Exact answer                         |         183

Value----------------------------------|  R1FLMB_S25
0.Not imputed                          |        1923
2.Missing                              |           4
16.Skipped because short interview     |         115

Value----------------------------------|   R1LMB_RS1
.q:Skipped because short interview     |          82
0.No                                   |        1102
1.Approximate answer                   |         214
2.Exact answer                         |         644

Value----------------------------------|  R1FLMB_RS1
0.Not imputed                          |        1922
2.Missing                              |           5
16.Skipped because short interview     |         115

Value----------------------------------|   R1LMB_RS2
.q:Skipped because short interview     |          82
```

```
0.No                                  |        1595
1.Approximate answer                  |          35
2.Exact answer                        |         330

Value---------------------------------|  R1FLMB_RS2
0.Not imputed                         |        1922
2.Missing                             |           5
16.Skipped because short interview    |         115

Value---------------------------------|   R1LMB_RS3
.q:Skipped because short interview    |          65
0.No                                  |        1880
1.Approximate answer                  |           9
2.Exact answer                        |          88

Value---------------------------------|  R1FLMB_RS3
0.Not imputed                         |        1922
2.Missing                             |           5
16.Skipped because short interview    |         115

Value---------------------------------|   R1LMB_RS4
.q:Skipped because short interview    |          65
0.No                                  |        1661
1.Approximate answer                  |           8
2.Exact answer                        |         308

Value---------------------------------|  R1FLMB_RS4
0.Not imputed                         |        1922
2.Missing                             |           5
16.Skipped because short interview    |         115

Value---------------------------------|   R1LMB_RS5
.q:Skipped because short interview    |          82
0.No                                  |        1390
1.Approximate answer                  |          61
2.Exact answer                        |         509

Value---------------------------------|  R1FLMB_RS5
0.Not imputed                         |        1922
2.Missing                             |           5
16.Skipped because short interview    |         115

Value---------------------------------|   R1LMB_RS6
.q:Skipped because short interview    |          82
0.No                                  |        1784
1.Approximate answer                  |          50
2.Exact answer                        |         126

Value---------------------------------|  R1FLMB_RS6
0.Not imputed                         |        1922
2.Missing                             |           5
16.Skipped because short interview    |         115

Value---------------------------------|   R1LMB_RS7
.q:Skipped because short interview    |          82
0.No                                  |        1579
1.Approximate answer                  |         104
2.Exact answer                        |         277

Value---------------------------------|  R1FLMB_RS7
0.Not imputed                         |        1922
2.Missing                             |           5
16.Skipped because short interview    |         115

Value---------------------------------|   R1LMB_RS8
.q:Skipped because short interview    |          82
0.No                                  |        1844
2.Exact answer                        |         116

Value---------------------------------|  R1FLMB_RS8
0.Not imputed                         |        1922
```

```
2.Missing                              |           5
16.Skipped because short interview     |         115

Value----------------------------------|   R1LMB_RS9
.q:Skipped because short interview     |          82
0.No                                   |        1717
1.Approximate answer                   |         133
2.Exact answer                         |         110

Value----------------------------------|  R1FLMB_RS9
0.Not imputed                          |        1922
2.Missing                              |           5
16.Skipped because short interview     |         115

Value----------------------------------|  R1LMB_RS10
.q:Skipped because short interview     |          82
0.No                                   |        1926
1.Approximate answer                   |          21
2.Exact answer                         |          13

Value----------------------------------| R1FLMB_RS10
0.Not imputed                          |        1922
2.Missing                              |           5
16.Skipped because short interview     |         115

Value----------------------------------|  R1LMB_RS11
.q:Skipped because short interview     |          82
0.No                                   |        1591
1.Approximate answer                   |          33
2.Exact answer                         |         336

Value----------------------------------| R1FLMB_RS11
0.Not imputed                          |        1922
2.Missing                              |           5
16.Skipped because short interview     |         115

Value----------------------------------|  R1LMB_RS12
.q:Skipped because short interview     |          82
0.No                                   |        1129
1.Approximate answer                   |         416
2.Exact answer                         |         415

Value----------------------------------| R1FLMB_RS12
0.Not imputed                          |        1922
2.Missing                              |           5
16.Skipped because short interview     |         115

Value----------------------------------|  R1LMB_RS13
.q:Skipped because short interview     |          65
0.No                                   |        1852
1.Approximate answer                   |          35
2.Exact answer                         |          90

Value----------------------------------| R1FLMB_RS13
0.Not imputed                          |        1922
2.Missing                              |           5
16.Skipped because short interview     |         115

Value----------------------------------|  R1LMB_RS14
.q:Skipped because short interview     |          82
0.No                                   |        1926
1.Approximate answer                   |          13
2.Exact answer                         |          21

Value----------------------------------| R1FLMB_RS14
0.Not imputed                          |        1922
2.Missing                              |           5
16.Skipped because short interview     |         115

Value----------------------------------|  R1LMB_RS15
.q:Skipped because short interview     |          82
```

```
0.No                                |        1263
1.Approximate answer                |         191
2.Exact answer                      |         506

Value-------------------------------| R1FLMB_RS15
0.Not imputed                       |        1922
2.Missing                           |           5
16.Skipped because short interview  |         115

Value-------------------------------|  R1LMB_RS16
.q:Skipped because short interview  |          82
0.No                                |        1205
1.Approximate answer                |         332
2.Exact answer                      |         423

Value-------------------------------| R1FLMB_RS16
0.Not imputed                       |        1922
2.Missing                           |           5
16.Skipped because short interview  |         115

Value-------------------------------|  R1LMB_RS17
.q:Skipped because short interview  |          82
0.No                                |        1631
1.Approximate answer                |         163
2.Exact answer                      |         166

Value-------------------------------| R1FLMB_RS17
0.Not imputed                       |        1922
2.Missing                           |           5
16.Skipped because short interview  |         115

Value-------------------------------|  R1LMB_RS18
.q:Skipped because short interview  |          82
0.No                                |        1541
1.Approximate answer                |         326
2.Exact answer                      |          93

Value-------------------------------| R1FLMB_RS18
0.Not imputed                       |        1922
2.Missing                           |           5
16.Skipped because short interview  |         115

Value-------------------------------|  R1LMB_RS19
.q:Skipped because short interview  |          82
0.No                                |        1620
1.Approximate answer                |         195
2.Exact answer                      |         145

Value-------------------------------| R1FLMB_RS19
0.Not imputed                       |        1922
2.Missing                           |           5
16.Skipped because short interview  |         115

Value-------------------------------|  R1LMB_RS20
.q:Skipped because short interview  |          82
0.No                                |        1507
1.Approximate answer                |         212
2.Exact answer                      |         241

Value-------------------------------| R1FLMB_RS20
0.Not imputed                       |        1922
2.Missing                           |           5
16.Skipped because short interview  |         115

Value-------------------------------|  R1LMB_RS21
.q:Skipped because short interview  |          82
0.No                                |        1771
1.Approximate answer                |          51
2.Exact answer                      |         138

Value-------------------------------| R1FLMB_RS21
```

```
0.Not imputed                          |        1922
2.Missing                              |           5
16.Skipped because short interview      |         115

Value----------------------------------|  R1LMB_RS22
.q:Skipped because short interview      |          82
0.No                                   |        1327
1.Approximate answer                   |          58
2.Exact answer                         |         575

Value----------------------------------| R1FLMB_RS22
0.Not imputed                          |        1922
2.Missing                              |           5
16.Skipped because short interview      |         115

Value----------------------------------|  R1LMB_RS23
.q:Skipped because short interview      |          82
0.No                                   |        1709
1.Approximate answer                   |         119
2.Exact answer                         |         132

Value----------------------------------| R1FLMB_RS23
0.Not imputed                          |        1922
2.Missing                              |           5
16.Skipped because short interview      |         115

Value----------------------------------|  R1LMB_RS24
.q:Skipped because short interview      |          82
0.No                                   |        1284
1.Approximate answer                   |         403
2.Exact answer                         |         273

Value----------------------------------| R1FLMB_RS24
0.Not imputed                          |        1922
2.Missing                              |           5
16.Skipped because short interview      |         115

Value----------------------------------|  R1LMB_RS25
.q:Skipped because short interview      |          82
0.No                                   |        1640
1.Approximate answer                   |         179
2.Exact answer                         |         141

Value----------------------------------| R1FLMB_RS25
0.Not imputed                          |        1922
2.Missing                              |           5
16.Skipped because short interview      |         115
```

How Constructed

The following variables are based on respondents' immediate and delayed recollection of a robbery story that was read aloud to them. The interviewer stated that the respondent should listen very carefully as after the story was read, the respondent will be asked to repeat as much of the story with as many details as possible that they could remember. After it was read aloud, respondents were asked to repeat as much of the story as they could remember. Later on in the interview, respondents were asked to recall and retell the story once again.

RwLMB_S1 - RwLMB_S25 indicate how well the respondent remembered the robber story’s points immediately after hearing it. They are coded as follows: 0.No, 1.Approximate answer, and 2.Exact answer. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwLMB_IMM, RwLMB_IMM_M, and RwLMB_IM_M2 are summary scores based on the robbery story that was read aloud to the respondent.

RwLMB_IMM indicates the number of exact story points the respondent was able to recall when retelling a story immediately after it was read aloud to them. An exact answer is assigned a score of 1 and an approximate or incorrect answer is assigned a score of 0. Scores range from 0-25. RwLMB_IMM is summed

when no components are missing. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwLMB_IMM_M indicates the total score of exact story points and approximate answers of RwLMB_S1 - RwLMB_S25. An exact answer is assigned a score of 1 and an approximate answer is assigned a score of 0.5. Scores range from 0-25. RwLMB_IMM_M is summed when no components are missing. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwLMB_IM_M2 indicates the total score of exact story points and approximate answers of RwLMB_S1 – RwLMB_S25. An exact answer is assigned a score of 2 and an approximate answer is assigned a score of 1. Scores range from 0-50. RwLMB_IM_M2 is summed when no components are missing. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwLMB_RS1 - RwLMB_RS10 indicate how well the respondent remembered the story points after a delay between the story and interview questions. They are coded as follows: 0.No, 1.Approximate answer, and 2.Exact answer. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwLMB_RECL, RwLMB_RECL_M, and RwLMB_RCL_M2 provide aggregate measures of how well respondents remembered the robbery story's plot after some time has elapsed. As a prompt for respondents to start recalling the story, the interviewer reminded the respondents that they had been read aloud 2 different stories earlier in the survey, and at that time, they had been asked to retell the stories. The interviewer then asked if the respondents remembered anything from the stories at this later point in time. Respondents are first asked to think back to the first story and then the second story to recall as much as possible.

RwLMB_RECL indicates the number of exact story points the respondent was able to recall about the robbery story when there was a delay between hearing the story and having to recall it. An exact answer is assigned a score of 1 and an approximate or incorrect answer is assigned a score of 0. Scores range from 0-25. RwLMB_RECL is summed when no components are missing. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwLMB_RECL_M indicates the total score of the exact story points and approximate answers given in RwLMB_RS1 - RwLMB_RS25. An exact answer is assigned a score of 1 and an approximate answer is assigned a score of 0.5. Scores range from 0-25. RwLMB_RECL_M is summed when no components are missing. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwLMB_RCL_M2 indicates the total score of the exact story points and approximate answers given in RwLMB_RS1 – RwLMB_RS25. An exact answer is assigned a score of 2 and an approximate answer is assigned a score of 1. Scores range from 0-50. RwLMB_RCL_M2 is summed when no components are missing. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwFLMB_S1 - RwFLMB_S25 and RwFLMB_RS1 - RwFLMB_RS25 are flag variables that indicate whether responses to RwLMB_S1 - RwLMB_S25 and RwLMB_RS1 - RwLMB_RS25, respectively, are imputed. They are coded as follows: 0.Not imputed, 2.Missing, and 16.Skipped because short interview. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

The HCAP studies all used a similar robbery story, but changed some details, such as the type of currency that was robbed, the protagonist's name, and some locations, so that the respective study population could better relate to it. Additionally, while the HRS-HCAP and ELSA-HCAP categorize each story point as correct or incorrect, both the LASI-DAD and MHAS Mex-Cog allow for more nuanced scoring - identifying answers that were exactly correct, as well as those that were approximately correct (i.e., the general gist of a story point was communicated).

The MHAS Mex-Cog has a different skip pattern, which is determined by the respondent's cognitive performance on the MMSE. If the participant obtains a score higher than 10 points on the MMSE, they are given the total (long) version of the cognitive assessment. If they obtain a score of 10 points or less on the MMSE, they are asked to complete the partial (short) version of the assessment. Thus, the MHAS Mex-Cog includes a special missing value .q to capture respondents who skipped certain cognitive tasks due to only completing the short version of the cognitive assessment.

The Harmonized ELSA-HCAP, Harmonized LASI-DAD, and Harmonized Mex-Cog include imputations for each item with accompanying imputation flags, while the Harmonized HRS-HCAP include imputations and accompanying imputation flags only for the summary variable.

Mex-Cog Variables Used

Wave 1 Cognitive Assessment:

MC_Q33_10_16	33: repeats story 2. station repite historia
MC_Q33_11_16	33: repeats story 2. police repite historia 2
MC_Q33_12_16	33: repeats story 2. had been attacked repite
MC_Q33_13_16	33: repeats story 2. madero street repite his
MC_Q33_14_16	33: repeats story 2. the previous night repit
MC_Q33_15_16	33: repeats story 2. was robbed repite histor
MC_Q33_16_16	33: repeats story 2. 520 pesos repite histori
MC_Q33_17_16	33: repeats story 2. has 4 repite historia 2.
MC_Q33_18_16	33: repeats story 2. small children repite hi
MC_Q33_19_16	33: repeats story 2. the rent overdue repite
MC_Q33_1_16	33: repeats story 2. maria repite historia 2.
MC_Q33_20_16	33: repeats story 2. have not eaten repite hi
MC_Q33_21_16	33: repeats story 2. in 2 days repite histori
MC_Q33_22_16	33: repeats story 2. the police repite histor
MC_Q33_23_16	33: repeats story 2. moved by the story repit
MC_Q33_24_16	33: repeats story 2. organized a collection r
MC_Q33_25_16	33: repeats story 2. for her repite historia
MC_Q33_2_16	33: repeats story 2. moreno repite historia 2
MC_Q33_3_16	33: repeats story 2. of northern repite histo
MC_Q33_4_16	33: repeats story 2. guadalajara repite histo
MC_Q33_5_16	33: repeats story 2. worked repite historia 2
MC_Q33_6_16	33: repeats story 2. cook repite historia 2.
MC_Q33_7_16	33: repeats story 2. cafeteria repite histori
MC_Q33_8_16	33: repeats story 2. corner repite historia 2
MC_Q33_9_16	33: repeats story 2. reported repite historia
MC_Q39_10_16	39: recalls story 2. station recuerda histori
MC_Q39_11_16	39: recalls story 2. police recuerda historia
MC_Q39_12_16	39: recalls story 2. had been attacked recuer
MC_Q39_13_16	39: recalls story 2. madero street recuerda h
MC_Q39_14_16	39: recalls story 2. the previous night recue
MC_Q39_15_16	39: recalls story 2. was robed recuerda histo
MC_Q39_16_16	39: recalls story 2. 520 pesos recuerda histo
MC_Q39_17_16	39: recalls story 2. has 4 recuerda historia
MC_Q39_18_16	39: recalls story 2. small children recuerda
MC_Q39_19_16	39: recalls story 2. the rent overdue recuerd
MC_Q39_1_16	39: recalls story 2. maria recuerda historia
MC_Q39_20_16	39: recalls story 2. have not eaten recuerda
MC_Q39_21_16	39: recalls story 2. in 2 days recuerda histo
MC_Q39_22_16	39: recalls story 2. the police recuerda hist
MC_Q39_23_16	39: recalls story 2. moved by the story recue
MC_Q39_24_16	39: recalls story 2. organized a collection r
MC_Q39_25_16	39: recalls story 2. for her recuerda histori
MC_Q39_2_16	39: recalls story 2. moreno recuerda historia
MC_Q39_3_16	39: recalls story 2. of northern recuerda his
MC_Q39_4_16	39: recalls story 2. guadalajara recuerda his
MC_Q39_5_16	39: recalls story 2. worked recuerda historia
MC_Q39_6_16	39: recalls story 2. cook recuerda historia 2
MC_Q39_7_16	39: recalls story 2. cafeteria recuerda histo
MC_Q39_8_16	39: recalls story 2. corner recuerda historia

MC_Q39_9_16 39: recalls story 2. reported recuerda histor

Word List Recognition

Wave	Variable	Label	Type
1	R1WRE_ORG	r1wre_org:w1 R word list recognition: original(0-10)	Categ
1	R1FWRE_ORG	r1fwre_org:impflag w1 R whether imputed value	Categ
1	R1WRE_FOIL	r1wre_foil:w1 R word list recognition: foil(0-10)	Categ
1	R1FWRE_FOIL	r1fwre_foil:impflag w1 R whether imputed value	Categ
1	R1WRE_SCORE	r1wre_score:w1 R word List Recognition(0-20)	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1WRE_ORG	1960	7.75	2.23	0.00	10.00
R1FWRE_ORG	2042	0.94	3.70	0.00	16.00
R1WRE_FOIL	1960	8.87	1.98	0.00	10.00
R1FWRE_FOIL	2042	0.94	3.70	0.00	16.00
R1WRE_SCORE	1960	16.63	2.93	0.00	20.00

Categorical Variable Codes

Value	R1WRE_ORG
.q:Skipped because short interview	82
0	25
1	16
2	26
3	41
4	75
5	104
6	185
7	246
8	322
9	421
10	499

Value	R1FWRE_ORG
0.Not imputed	1892
1.Dont know	15
2.Missing	5
4.Refused	15
16.Skipped because short interview	115

Value	R1WRE_FOIL
.q:Skipped because short interview	82
0	30
1	12
2	22
3	12
4	21
5	27
6	51
7	87
8	175
9	467
10	1056

Value	R1FWRE_FOIL
0.Not imputed	1893
1.Dont know	15
2.Missing	5
4.Refused	14
16.Skipped because short interview	115

How Constructed

Respondents are presented with a list of 20 words and are asked whether they have seen any of the words earlier in the interview. Half of the words were previously presented to the respondent in an earlier part of the interview and the other half were new words.

RwWRE_ORG counts the number of words that are correctly identified as repeated words (words that respondents have heard from an earlier part of the interview). Scores range from 0 to 10. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwWRE_FOIL counts the number of words correctly identified as new words, ones that were not previously seen in an earlier section of the questionnaire. Scores range from 0 to 10. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwWRE_SCORE is the sum of RwWRE_ORG and RwWRE_FOIL, indicating the total number of correct responses given by the respondent. Scores range from 0 to 20. RwWRE_SCORE is summed when no components are missing. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwFWRE_ORG and RwFWRE_FOIL are flag variables that indicate whether responses to RwWRE_ORG and RwWRE_FOIL, respectively, are imputed. They are coded as follows: 0.Not imputed, 1.Don't know, 2.Missing, 4.Refused, and 16.Skipped because short interview. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

In the MHAS Mex-Cog and LASI-DAD, the interviewer read respondents a list of words while interviewers in the HRS-HCAP and ELSA-HCAP showed respondents a set of words printed on cards. Additionally, both the MHAS Mex-Cog and LASI-DAD used different lists of words while the HRS-HCAP and ELSA-HCAP used the same list of 20 words.

The MHAS Mex-Cog has a different skip pattern, which is determined by the respondent's cognitive performance on the MMSE. If the participant obtains a score higher than 10 points on the MMSE, they are given the total (long) version of the cognitive assessment. If they obtain a score of 10 points or less on the MMSE, they are asked to complete the partial (short) version of the assessment. Thus, the MHAS Mex-Cog includes a special missing value .q to capture respondents who skipped certain cognitive tasks due to only completing the short version of the cognitive assessment.

The Harmonized ELSA-HCAP, Harmonized LASI-DAD, and Harmonized Mex-Cog include imputations for each item with accompanying imputation flags, while the Harmonized HRS-HCAP includes imputations and accompanying imputation flags only for the summary variable.

Mex-Cog Variables Used

Wave 1 Cognitive Assessment:

MC_Q34_10_16	34: word recognition. town recuerda palabras.
MC_Q34_11_16	34: word recognition. book recuerda palabras.
MC_Q34_12_16	34: word recognition. rope recuerda palabras.
MC_Q34_13_16	34: word recognition. five recuerda palabras.
MC_Q34_14_16	34: word recognition. ticket recuerda palabra
MC_Q34_15_16	34: word recognition. letter recuerda palabra

MC_Q34_16_16	34: word recognition. troops recuerda palabra
MC_Q34_17_16	34: word recognition. hotel recuerda palabras
MC_Q34_18_16	34: word recognition. grass recuerda palabras
MC_Q34_19_16	34: word recognition. mountain recuerda palab
MC_Q34_1_16	34: word recognition. church recuerda palabra
MC_Q34_20_16	34: word recognition. stone recuerda palabras
MC_Q34_2_16	34: word recognition. queen recuerda palabras
MC_Q34_3_16	34: word recognition. coffee recuerda palabra
MC_Q34_4_16	34: word recognition. corner recuerda palabra
MC_Q34_5_16	34: word recognition. butter recuerda palabra
MC_Q34_6_16	34: word recognition. shoe recuerda palabras.
MC_Q34_7_16	34: word recognition. weight recuerda palabra
MC_Q34_8_16	34: word recognition. cane recuerda palabras.
MC_Q34_9_16	34: word recognition. arm recuerda palabras.

Constructional Praxis

Wave	Variable	Label	Type
1	R1CP_CIRCLE	r1cp_circle:w1 R circle drawing score(0-2)	Categ
1	R1FCP_CIRCLE	r1fcp_circle:impflag w1 R whether imputed value	Categ
1	R1CP_RECTAN	r1cp_rectan:w1 R drew a rectangle(0-2)	Categ
1	R1FCP_RECTAN	r1fcp_rectan:impflag w1 R whether imputed value	Categ
1	R1CP_DIAMON	r1cp_diamon:w R drew a rhombus(0-3)	Categ
1	R1FCP_DIAMON	r1fcp_diamon:impflag w1 R whether imputed value	Categ
1	R1CP_CUBE	r1cp_cube:w1 R drew a cube(0-4)	Categ
1	R1FCP_CUBE	r1fcp_cube:impflag w1 R whether imputed value	Categ
1	R1CP_SCORE	r1cp_score:w1 R Constructional Praxis score(0-11)	Categ
1	R1CPR_CIRCLE	r1cpr_circle:w1 R drew a circle-recall(0-2)	Categ
1	R1FCPR_CIRCL	r1fcpr_circle:impflag w1 R whether imputed value	Categ
1	R1CPR_RECTAN	r1cpr_rectan:w1 R drew a rectangle-recall(0-2)	Categ
1	R1FCPR_RECTA	r1fcpr_rectan:impflag w1 R whether imputed value	Categ
1	R1CPR_DIAMON	r1cpr_diamon:w R drew a rhombus-recall(0-3)	Categ
1	R1FCPR_DIAMO	r1fcpr_diamon:impflag w1 R whether imputed value	Categ
1	R1CPR_CUBE	r1cpr_cube:w1 R drew a cube-recall(0-4)	Categ
1	R1FCPR_CUBE	r1fcpr_cube:impflag w1 R whether imputed value	Categ
1	R1CPR_SCORE	r1cpr_score:w1 R Constructional Praxis score-recall(0-11)	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1CP_CIRCLE	1960	1.83	0.41	0.00	2.00
R1FCP_CIRCLE	2042	1.26	4.23	0.00	16.00
R1CP_RECTAN	1960	1.83	0.47	0.00	2.00
R1FCP_RECTAN	2042	1.26	4.23	0.00	16.00
R1CP_DIAMON	1960	2.32	0.83	0.00	3.00
R1FCP_DIAMON	2042	1.27	4.23	0.00	16.00
R1CP_CUBE	1960	2.05	1.66	0.00	4.00
R1FCP_CUBE	2042	1.29	4.25	0.00	16.00
R1CP_SCORE	1960	8.04	2.51	0.00	11.00

R1CPR_CIRCLE	1960	1.61	0.78	0.00	2.00
R1FCPR_CIRCL	2042	1.85	4.25	0.00	16.00
R1CPR_RECTAN	1960	1.39	0.88	0.00	2.00
R1FCPR_RECTA	2042	1.98	4.25	0.00	16.00
R1CPR_DIAMON	1960	1.62	1.30	0.00	3.00
R1FCPR_DIAMO	2042	2.19	4.24	0.00	16.00
R1CPR_CUBE	1960	1.66	1.71	0.00	4.00
R1FCPR_CUBE	2042	1.92	4.25	0.00	16.00
R1CPR_SCORE	1960	6.27	3.44	0.00	11.00

Categorical Variable Codes

Value	R1CP_CIRCLE
.q:Skipped because short interview	82
0	28
1	274
2	1658

Value	R1FCP_CIRCLE
0.Not imputed	1863
2.Missing	5
4.Refused	14
15.Cannot do due to physical impairment	45
16.Skipped because short interview	115

Value	R1CP_RECTAN
.q:Skipped because short interview	82
0	77
1	181
2	1702

Value	R1FCP_RECTAN
0.Not imputed	1863
2.Missing	5
4.Refused	14
15.Cannot do due to physical impairment	45
16.Skipped because short interview	115

Value	R1CP_DIAMON
.q:Skipped because short interview	82
0	120
1	99
2	767
3	974

Value	R1FCP_DIAMON
0.Not imputed	1859
2.Missing	5
4.Refused	18
15.Cannot do due to physical impairment	45
16.Skipped because short interview	115

Value	R1CP_CUBE
.q:Skipped because short interview	82
0	604
1	229
2	209
3	294

4	624

Value	R1FCP_CUBE
0.Not imputed	1851
2.Missing	5
4.Refused	25
15.Cannot do due to physical impairment	46
16.Skipped because short interview	115

Value	R1CP_SCORE
.q:Skipped because short interview	82
0	9
1	14
2	33
3	49
4	79
5	106
6	262
7	250
8	190
9	229
10	350
11	389

Value	R1CPR_CIRCLE
.q:Skipped because short interview	82
0	364
1	46
2	1550

Value	R1FCPR_CIRCL
0.Not imputed	1550
2.Missing	5
4.Refused	332
15.Cannot do due to physical impairment	40
16.Skipped because short interview	115

Value	R1CPR_RECTAN
.q:Skipped because short interview	82
0	518
1	153
2	1289

Value	R1FCPR_RECTA
0.Not imputed	1484
2.Missing	5
4.Refused	398
15.Cannot do due to physical impairment	40
16.Skipped because short interview	115

Value	R1CPR_DIAMON
.q:Skipped because short interview	82
0	705
1	65
2	469
3	721

Value	R1FCPR_DIAMO
0.Not imputed	1376
2.Missing	5
4.Refused	506
15.Cannot do due to physical impairment	40
16.Skipped because short interview	115

Value	R1CPR_CUBE
.q:Skipped because short interview	82
0	843
1	245
2	148
3	190
4	534

Value	R1FCPR_CUBE
0.Not imputed	1516
2.Missing	5
4.Refused	366
15.Cannot do due to physical impairment	40
16.Skipped because short interview	115

Value	R1CPR_SCORE
.q:Skipped because short interview	82
0	181
1	35
2	156
3	76
4	192
5	112
6	177
7	224
8	203
9	146
10	219
11	239

How Constructed

The following variables pertain to a series of questions that asked the respondent to draw a variety of shapes. Respondents were shown each shape and were given one or two minutes to draw the figures. Only respondents with no visual or physical disability in their hands are allowed to answer this series of questions.

RwCP_CIRCLE indicates whether a respondent successfully drew a circle that met two required attributes. Drawings were awarded one point for meeting each attribute, so RwCP_CIRCLE ranges from 0-2. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwCP_RECTAN indicates whether a respondent successfully drew two overlapping rectangles that met two attributes. Drawings were awarded one point for meeting each attribute, so RwCP_RECTAN ranges from 0-2. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwCP_DIAMON indicates whether a respondent successfully drew a rhombus that met three attributes. One point was awarded for each feature that was present in a drawing. Thus, RwCP_DIAMON ranges from 0-3. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwCP_CUBE indicates whether a respondent successfully drew a cube that met four attributes. One point was awarded for each feature that was present in a drawing. Thus, RwCP_CUBE ranges from 0-4. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwCP_SCORE provides the total score between RwCP_CIRCLE, RwCP_DIAMON, RwCP_RECTAN, and RwCP_CUBE. Scores range from 0 to 11. RwCP_SCORE is summed when no components are missing. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

The following variables pertain to a series of questions that asked the respondent to draw from memory the same shapes that they previously drew. The respondent is given a sheet of paper to draw the shapes and allowed up to 8 minutes to draw all 4 shapes.

The results of this second batch of drawings are stored in the variables RwCPR_CIRCLE, RwCPR_RECTAN, RwCPR_CUBE, and RwCPR_DIAMON, with the same scoring criteria applied as in the first set of drawings. RwCPR_SCORE provides the total score between RwCPR_CIRCLE, RwCPR_RECTAN, RwCPR_CUBE, and RwCPR_DIAMON, and is summed when no components are missing. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwFCP_CIRCLE, RwFCP_DIAMON, RwFCP_RECTAN, and RwFCP_CUBE, RwFCPR_CIRCL, RwFCPR_DIAMO, RwFCPR_RECTA, and RwFCPR_CUBE are flag variables that indicate whether responses to RwCP_CIRCLE, RwCP_DIAMON, RwCP_RECTAN, RwCP_CUBE, RwCPR_CIRCLE, RwCPR_DIAMON, RwCPR_RECTAN, and RwCPR_CUBE are imputed. They are coded as follows: 0.Not imputed, 2.Missing, 4.Refused, 15.Cannot do due to physical impairment, and 16.Skipped because short interview. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

The MHAS Mex-Cog asked respondents to draw a rhombus, but the HRS-HCAP, ELSA-HCAP, and LASI-DAD asked respondents to draw a diamond. Additionally, the MHAS Mex-Cog and LASI-DAD have more detailed scores for overlapping rectangles and cube.

The MHAS Mex-Cog has a different skip pattern, which is determined by the respondent's cognitive performance on the MMSE. If the participant obtains a score higher than 10 points on the MMSE, they are given the total (long) version of the cognitive assessment. If they obtain a score of 10 points or less on the MMSE, they are asked to complete the partial (short) version of the assessment. Thus, the MHAS Mex-Cog includes a special missing value .q to capture respondents who skipped certain cognitive tasks due to only completing the short version of the cognitive assessment.

The Harmonized ELSA-HCAP, Harmonized LASI-DAD, and Harmonized Mex-Cog include imputations for each item with accompanying imputation flags, while the Harmonized HRS-HCAP includes imputations and accompanying imputation flags only for one version of the summary variable.

Mex-Cog Variables Used

Wave 1 Cognitive Assessment:

MC_Q35_1_16	35: paper test score: circle cuadernillo: cir
MC_Q35_2_16	35: paper test score: rhombus cuadernillo: ro
MC_Q35_3_16	35: paper test score: rectangles cuadernillo:
MC_Q35_4_16	35: paper test score: cube cuadernillo: cubo
MC_Q37_1_16	37: paper test score: recalls circle cuaderni
MC_Q37_2_16	37: paper test score: recalls rhombus cuadern
MC_Q37_3_16	37: paper test score: recalls rectangles cuad
MC_Q37_4_16	37: paper test score: recalls cube cuadernill

Symbol Digit

Wave	Variable	Label	Type
1	R1DIG_SCORE	r1dig_score:w1 R symbol digit score(0-56)	Cont
1	R1FDIG_SCORE	r1fdig_score:impflag w1 R whether imputed value	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1DIG_SCORE	1960	20.20	13.39	0.00	56.00
R1FDIG_SCORE	2042	1.34	4.21	0.00	16.00

Categorical Variable Codes

Value	R1FDIG_SCORE
0.Not imputed	1812
2.Missing	5
4.Refused	69
15.Cannot do due to physical impairment	41
16.Skipped because short interview	115

How Constructed

RwDIG_SCORE indicates the outcome of a symbol-digit matching test. It indicates the number of symbols the respondents correctly drew that correspond to the digits. Scores range from 0 to 56. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwFDIG_SCORE is a flag variable that indicates whether responses to RwDIG_SCORE are imputed. It is coded as follows: 0.Not imputed, 2.Missing, 4.Refused, 15.Cannot do due to physical impairment, and 16.Skipped because short interview. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

This section was not included in the LASI-DAD. The MHAS Mex-Cog asked respondents to fill in the boxes with the missing symbols that correspond to the digits based on a key while the HRS-HCAP and ELSA-HCAP asked respondents to fill the boxes with the missing numeric digit that corresponds to the symbols based on a key.

The Harmonized HRS-HCAP and Harmonized ELSA-HCAP also include variables indicating the number of symbol-number pairings that were attempted, and the number of incorrect symbol-pairings, which are not included in the Harmonized Mex-Cog. Each of these Harmonized HCAP datasets includes imputed values for the symbol digit score, and the Harmonized ELSA-HCAP also includes imputed values for the number of incorrect responses.

The MHAS Mex-Cog has a different skip pattern, which is determined by the respondent's cognitive performance on the MMSE. If the participant obtains a score higher than 10 points on the MMSE, they are given the total (long) version of the cognitive assessment. If they obtain a score of 10 points or less on the MMSE, they are asked to complete the partial (short) version of the assessment. Thus, the MHAS Mex-Cog includes a special missing value .q to capture respondents who skipped certain cognitive tasks due to only completing the short version of the cognitive assessment.

Mex-Cog Variables Used

```
Wave 1 Cognitive Assessment:
    MC_Q36_2_16              36: paper test: symbols and digits correct cu
```

Similarities

Wave	Variable	Label	Type
1	R1JP_FRT	r1jp_frt:w1 similarities: R orange and banana	Categ
1	R1FJP_FRT	r1fjp_frt:impflag w1 R whether imputed value	Categ
1	R1JP_FURN	r1jp_furn:w1 similarities: R table and chair	Categ
1	R1FJP_FURN	r1fjp_furn:impflag w1 R whether imputed value	Categ
1	R1JP_FLWR	r1jp_flwr:w1 similarities: R rose and margarita	Categ
1	R1FJP_FLWR	r1fjp_flwr:impflag w1 R whether imputed value	Categ
1	R1SIM_SCORE	r1sim_score:w1 R similarity summary score (0-3)	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1JP_FRT	1960	0.25	0.43	0.00	1.00
R1FJP_FRT	2042	0.99	3.68	0.00	16.00
R1JP_FURN	1960	0.07	0.25	0.00	1.00
R1FJP_FURN	2042	0.97	3.69	0.00	16.00
R1JP_FLWR	1960	0.65	0.48	0.00	1.00
R1FJP_FLWR	2042	0.96	3.69	0.00	16.00
R1SIM_SCORE	1960	0.97	0.80	0.00	3.00

Categorical Variable Codes

Value	R1JP_FRT
.q:Skipped because short interview	82
0.incorrect	1467
1.correct	493

Value	R1FJP_FRT
0.Not imputed	1757
1.Dont know	160
2.Missing	5
4.Refused	5
16.Skipped because short interview	115

Value	R1JP_FURN
.q:Skipped because short interview	82
0.incorrect	1826
1.correct	134

Value	R1FJP_FURN
0.Not imputed	1819
1.Dont know	91
2.Missing	5
4.Refused	12
16.Skipped because short interview	115

Value	R1JP_FLWR

```
.q:Skipped because short interview      |          82
0.incorrect                             |         695
1.correct                               |        1265

Value-----------------------------------|  R1FJP_FLWR
0.Not imputed                           |        1835
1.Dont know                             |          81
2.Missing                               |           5
4.Refused                               |           6
16.Skipped because short interview      |         115

Value-----------------------------------| R1SIM_SCORE
.q:Skipped because short interview      |          82
0                                       |         610
1                                       |         864
2                                       |         430
3                                       |          56
```

How Constructed

Respondents are asked to identify similarities between different things.

RwJP_FRT indicates whether the respondent correctly associated oranges and bananas. A value of 1 is coded for correct and 0 is coded for incorrect. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwJP_FURN indicates whether the respondent correctly associated tables and chairs. A value of 1 is coded for correct and 0 is coded for incorrect. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwJP_FLWR indicates whether the respondent correctly associated roses and margaritas. A value of 1 is coded for correct and 0 is coded for incorrect. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwSIM_SCORE is a similarities summary score that references RwJP_FRT, RwJP_FURN, and RwJP_FLWR. Scores range from 0 to 3. RwSIM_SCORE is summed when no components are missing. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwFJP_FRT, RwFJP_FURN, and RwFJP_FLWR are flag variables that indicate whether responses to RwJP_FRT, RwJP_FURN, and RwJP_FLWR, respectively, are imputed. They are coded as follows: 0.Not imputed, 1.Don't know, 2.Missing, 4.Refused, and 16.Skipped because short interview. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

This section was not asked in the HRS-HCAP and ELSA-HCAP. The MHAS Mex-Cog does not have any questions pertaining to differences and problem-solving and has three questions on similarities. The LASI-DAD has two questions on similarities, two questions on differences, and three questions on problem-solving starting in Phase 2 of the data collection. The LASI-DAD also provides a summary score for problem-solving.

The MHAS Mex-Cog has a different skip pattern, which is determined by the respondent's cognitive performance on the MMSE. If the participant obtains a score higher than 10 points on the MMSE, they are given the total (long) version of the cognitive assessment. If they obtain a score of 10 points or less on the MMSE, they are asked to complete the partial (short) version of the assessment. Thus, the MHAS Mex-Cog includes a special missing value .q to capture respondents who skipped certain cognitive tasks due to only completing the short version of the cognitive assessment.

Mex-Cog Variables Used

```
Wave 1 Cognitive Assessment:
    MC_Q40_1_16               40.1: way an orange and a banana are alike? q
    MC_Q41_16                 41: way are table and a chair alike? que se p
    MC_Q42_16                 42: way a rose and a margarita alike? que se
```

Go-No-Go Score

Wave	Variable	Label	Type
1	R1GO_SCORE	r1go_score:w1 R Go-no-go total score(0-10)	Categ
1	R1FGO_SCORE	r1fgo_score:impflag w1 R whether imputed value	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1GO_SCORE	1960	8.06	2.23	0.00	10.00
R1FGO_SCORE	2042	1.10	3.93	0.00	16.00

Categorical Variable Codes

Value	R1GO_SCORE
.q:Skipped because short interview	82
0	2
1	2
2	4
3	38
4	64
5	366
6	86
7	102
8	150
9	307
10	839

Value	R1FGO_SCORE
0.Not imputed	1874
2.Missing	6
4.Refused	29
15.Cannot do due to physical impairment	18
16.Skipped because short interview	115

How Constructed

In the Go-no-go task, respondents are presented with two sets of instructions. The first set states "You clap once when I clap one time" ("Aplauda una vez cuando yo aplauda una vez"). To make sure that respondents understand the instructions, they are allowed to practice up to three times. The second set of instructions is "Do not clap when I clap two times" ("No aplauda cuando yo aplauda dos veces"). Again, the respondents are allowed to practice this new set of instructions up to three times.

The exercise consists of 10 different trials, where a correct response is scored with a value of 1 and an incorrect response is scored with a value of 0.

RwGO_SCORE is a summary score of the 10 trials, with scores ranging from 0 to 10. Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q).

RwFGO_SCORE is a flag variable that indicates whether responses to RwGO_SCORE are imputed. It is coded as follows: 0.Not imputed, 2.Missing, 4.Refused, 15.Cannot do due to physical impairment, and 16.Skipped because short interview. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

This test is not included in the HRS-HCAP and ELSA-HCAP. The MHAS Mex-Cog only has one trial, consisting of 10 attempts. Respondents are to remember two sets of instructions: "Clap once when I clap once" and "Don't clap when I clap two times" and are given three practice runs for each set of instructions. The LASI-DAD has two separate trials. In Trial 1, respondents are told "When I tap the table once, like this (tap), I want you to tap twice. And when I tap twice (tap tap) I want you to tap once". Instructions can be repeated up to a maximum of three times. Trial 1 ends if the respondent had five consecutive incorrect responses. In Trial 2, respondents are told "When I tap once, you tap twice just like before. But now, when I tap twice, you do nothing". Trial 2 ends if the respondent made five consecutive incorrect responses.

The MHAS Mex-Cog has a different skip pattern, which is determined by the respondent's cognitive performance on the MMSE. If the participant obtains a score higher than 10 points on the MMSE, they are given the total (long) version of the cognitive assessment. If they obtain a score of 10 points or less on the MMSE, they are asked to complete the partial (short) version of the assessment. Thus, the MHAS Mex-Cog includes a special missing value .q to capture respondents who skipped certain cognitive tasks due to only completing the short version of the cognitive assessment.

Mex-Cog Variables Used

Wave 1 Cognitive Assessment:

MC_Q43_10_16	43: go/no-go. 2 claps ejercicio de aplausos.
MC_Q43_1_16	43: go/no-go. 1 clap ejercicio de aplausos. u
MC_Q43_2_16	43: go/no-go. 1 clap ejercicio de aplausos. u
MC_Q43_3_16	43: go/no-go. 2 claps ejercicio de aplausos.
MC_Q43_4_16	43: go/no-go. 1 clap ejercicio de aplausos. u
MC_Q43_5_16	43: go/no-go. 2 claps ejercicio de aplausos.
MC_Q43_6_16	43: go/no-go. 2 claps ejercicio de aplausos.
MC_Q43_7_16	43: go/no-go. 2 claps ejercicio de aplausos.
MC_Q43_8_16	43: go/no-go. 1 clap ejercicio de aplausos. u
MC_Q43_9_16	43: go/no-go. 1 clap ejercicio de aplausos. u

Standardized Summary Scores

Wave	Variable	Label	Type
1	R1MMSE_SCZ_M	r1mmse_scz_m:w1 R Modified MMSE total score w/missing(0-28)	Cont
1	R1WORD_TOTAZ	r1word_totaz:w1 R word list learning total(0-30) (stdized)	Cont
1	R1WORD_DZ	r1word_dz:w1 R word list learning recall(0-10) (stdized)	Cont
1	R1WRE_SCOREZ	r1wre_scorez:w1 R word list Recognition(0-20) (stdized)	Cont
1	R1BM_IMMEXZ	r1bm_immexz:w1 R Brave man immediate: summary score(0-6), ex	Cont
1	R1BM_RECLEXZ	r1bm_reclexz:w1 R Brave man recall: summary score(0-6), exac	Cont
1	R1VERBALZ	r1verbalz:w1 R verbal fluency:animal naming-correct (stdized	Cont
1	R1CSID_SCORZ	r1csid_scorz:w1 R CSID 4-item score(0-4) (stdized)	Cont
1	R1COG_TOTAZ2	r1cog_totaz2:w1 total cognition score (stdized)	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1MMSE_SCZ_M	1684	-0.00	1.00	-4.61	1.63
R1WORD_TOTAZ	2042	-0.00	1.00	-2.71	2.88
R1WORD_DZ	2042	-0.00	1.00	-1.33	2.87
R1WRE_SCOREZ	1960	0.00	1.00	-5.67	1.15
R1BM_IMMEXZ	1960	0.00	1.00	-1.23	2.45
R1BM_RECLEXZ	1960	0.00	1.00	-0.93	2.96
R1VERBALZ	2042	-0.00	1.00	-2.56	3.83
R1CSID_SCORZ	2042	0.00	1.00	-4.79	0.90
R1COG_TOTAZ2	1658	0.99	4.91	-15.37	15.83

How Constructed

The following variables are the standardized cognition summary scores, for the common tests also administered in other HCAP studies. The standardized scores can be used to make comparisons of raw scores that come from difference sources. For example, scores can be used for cross-country comparisons.

The Stata command to calculate the standardized score:

```
egen standardized_newvar = std(old_var)
```

RwMMSE_SCZ_M is the standardized summary score of RwMMSE_SCR_M, which is the sum total value of RwORIENT_T5, RwORIENT_P3, RwHIMRC3, RwHDLRC3, RwHOBJECT, RwREPEAT, RwCOMBFOL, RwHEXECU, RwHSENTEN, RwHDRAW, and RwHSER7.

RwWORD_TOTAZ is the standardized summary score of RwWORD_TOTAL, the total number of correct words between RwWORD1, RwWORD2, and RwWORD3.

RwWORD_DZ is the standardized summary score of RwWORD_D, the total number of words recalled from the 10-word list after a delay.

RwWRE_SCOREZ is the standardized summary score of RwWRE_SCORE, the total number of correct responses given by the respondent for RwWRE_ORG and RwWRE_FOIL.

RwBM_IMMEXZ is the standardized summary score of RwBM_IMMEX, which measures how well respondents remembered the exact story points of the brave man story.

RwBM_RECLEXZ is the standardized summary score of RwBM_RECLEX, which measures how well respondents remembered the exact story points of the brave man story after a delay.

RwVERBALZ is the standardized summary score of RwVERBAL, the respondents' total number of animal responses.

RwCSID_SCORZ is the standardized summary score of RwCSID_SCORE, the total number of correct responses between RwELBOW, RwHAMMER, RwSTORE, and RwPOINT.

RwCOG_TOTAZ2 is the standardized total cognition score, and is calculated by adding RwMMSE_SCZ_M, RwWORD_TOTAZ, RwWORD_DZ, RwWRE_SCOREZ, RwBM_IMMEXZ, RwBM_RECLEXZ, RwVERBALZ, and RwCSID_SCORZ together. RwCOG_TOTAZ2 is summed when no components are missing.

Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q). Respondents who cannot read or write are assigned special missing (.l).

For further information on the variables mentioned in this section (RwMMSE_SCR_M, RwWORD_TOTAL, RwWORD_D, RwWRE_SCORE, RwBM_IMMEX, RwBM_RECLEX, RwVERBAL, and RwCSID_SCORE), please reference their respective sections above.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP Studies

The Harmonized Mex-Cog does not have a standardized summary score for RwLOG_RECO and RwRV_SCOREZ, which are available in the Harmonized HRS-HCAP, Harmonized ELSA-HCAP, and Harmonized LASI-DAD. The total MMSE score in the Harmonized Mex-Cog (RwMMSE_SCZ_M) also differs from the total MMSE score (RwMMSE_SCORE) in the Harmonized HRS-HCAP, Harmonized ELSA-HCAP, and Harmonized LASI-DAD, which also results in a different total cognition score: please refer to the respective section above for an explanation of these differences.

The MHAS Mex-Cog has a different skip pattern, which is determined by the respondent's cognitive performance on the MMSE. If the participant obtains a score higher than 10 points on the MMSE, they are given the total (long) version of the cognitive assessment. If they obtain a score of 10 points or less on the MMSE, they are asked to complete the partial (short) version of the assessment. Thus, the MHAS Mex-Cog includes a special missing value .q to capture respondents who skipped certain cognitive tasks due to only completing the short version of the cognitive assessment.

Section C: Informant Report

Informant Demographics

Wave	Variable	Label	Type
1	R1INF_EDUC_M	r1inf_educ_m:w1 Informant: education	Categ
1	R1INF_REL	r1inf_rel:w1 Informant: relation with R	Categ
1	R1INF_LIVE	r1inf_live:w1 Informant: lives with R	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1INF_EDUC_M	1842	2.44	1.88	0.00	7.00
R1INF_REL	1846	2.12	1.44	1.00	6.00
R1INF_LIVE	1846	0.79	0.41	0.00	1.00

Categorical Variable Codes

Value	R1INF_EDUC_M
.d:DK	1
.h:No informant interview completed	193
.m:Missing	3
.r:Refuse	3
0.None	146
1.Elementary	641
2.Secondary	396
3.Technical or commercial	150
4.Preparatory or high school	220
5.Basic teaching school	29
6.College	236
7.Graduate School	24

Value	R1INF_REL
.h:No informant interview completed	193
.m:Missing	3
1.Spouse	785
2.Son/daughter	664
3.Son/daughter in law	109
4.Grandchild	85
5.Other relative	93
6.Other	110

Value	R1INF_LIVE
.h:No informant interview completed	193
.m:Missing	3
0.no	387
1.yes	1459

How Constructed

The following variables pertain to a series of questions that ask the informant to describe their background.

RwINF_EDUC_M is a MHAS Mex-Cog specific variable that indicates the highest level of education the informant completed. Education levels are assigned as follows: 0.None, 1.Elementary, 2.Secondary, 3.Technical or commercial, 4.Preparatory or high school, 5.Basic teaching school, 6.College, and 7.Graduate school. Don't know responses are coded as special missing (.d). Special missing (.r) is assigned for refused responses. Special missing code (.h) is assigned if no informant interview was completed. Other missing is assigned special missing code (.m).

RwINF_REL indicates the informant’s relationship with the respondent. RwINF_REL is coded as follows: 1.Spouse, 2.Son/Daughter, 3.Son/daughter-in-law, 4.Grandchild, 5.Other relative, and 6.Other. Special missing code (.h) is assigned if no informant interview was completed. Other missing is assigned special missing code (.m).

RwINF_LIVE indicates whether the informant lives in the same household as the respondent. Yes is coded as 1 and no is coded as 0. Special missing code (.h) is assigned if no informant interview was completed. Other missing is assigned as special missing code (.m).

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

The HRS-HCAP, ELSA-HCAP, and LASI-DAD ask about the same topics in this section: informant's age, gender, education, relationship with the respondent, frequency of contact with the respondent, whether the informant is a caregiver for the respondent, and the number of years the informant has known the respondent. The MHAS Mex-Cog only asks for the informant's highest level of education completed, the informant's relationship with the respondent, and whether the informant lives in the same household as the respondent.

Additionally, all studies collect slightly different information about the informant's education. The HRS-HCAP and LASI-DAD ask about the highest grade of school/college completed while the ELSA-HCAP asks about the informant's highest qualification level from school or work-based training. The MHAS Mex-Cog does not incorporate grades into the education levels and only has "1.Elementary" and "2. Secondary"; thus, RwINF_EDUC_M is a MHAS Mex-Cog specific variable that was created to indicate this slight difference.

Mex-Cog Variables Used

Wave 1 Informant Interview:

MI_Q56_16	56: what relationship do you have with (name)
MI_Q57_16	57: lives in same household. vive usted en mi
MI_Q58_1C_16	58.1: last grade you completed? nivel cod ult

Functional Decline

Wave	Variable	Label	Type
1	R1INF_EAT	r1inf_eat:w1 R Functional Decline - eating	Categ
1	R1FINF_EAT	r1finf_eat:impflag w1 R whether imputed value	Categ
1	R1INF_URNE	r1inf_urne:w1 R Functional Decline - toilet, urine	Categ
1	R1FINF_URNE	r1finf_urne:impflag w1 R whether imputed value	Categ
1	R1INF_BWL	r1inf_bwl:w1 R Functional Decline - toilet, bowel	Categ
1	R1FINF_BWL	r1finf_bwl:impflag w1 R whether imputed value	Categ
1	R1INF_DRESS	r1inf_dress:w1 R Functional Decline - dressing	Categ
1	R1FINF_DRESS	r1finf_dress:impflag w1 R whether imputed value	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1INF_EAT	2042	0.07	0.33	0.00	3.00
R1FINF_EAT	2042	1.16	3.52	0.00	12.00
R1INF_URNE	2042	0.18	0.49	0.00	2.00
R1FINF_URNE	2042	1.30	3.55	0.00	12.00
R1INF_BWL	2042	0.07	0.31	0.00	2.00
R1FINF_BWL	2042	1.30	3.55	0.00	12.00
R1INF_DRESS	2042	0.06	0.24	0.00	1.00
R1FINF_DRESS	2042	1.14	3.51	0.00	12.00

Categorical Variable Codes

Value	R1INF_EAT
0.feeds self cleanly with proper silverw	1933
1.feeds self disorderly with a spoon	93
2.only eats simple solids	2
3.has to fed	14

Value	R1FINF_EAT
0.Not imputed	1837
2.Missing	2
4.Refused	10
12.No informant interview completed	193

Value	R1INF_URNE
0.No problems	1759
1.Occasionally	192
2.Frequently	91

Value	R1FINF_URNE
0.Not imputed	1762
2.Missing	2

4.Refused	85
12.No informant interview completed	193

Value	R1INF_BWL
0.No problems	1928
1.Occasionally	83
2.Frequently	31

Value	R1FINF_BWL
0.Not imputed	1762
2.Missing	2
4.Refused	85
12.No informant interview completed	193

Value	R1INF_DRESS
0.Dresses unaided	1916
1.Occasionally misplaces buttons	126

Value	R1FINF_DRESS
0.Not imputed	1844
2.Missing	2
4.Refused	3
12.No informant interview completed	193

How Constructed

The following variables pertain to a series of questions that ask the informant to describe how well the respondent does with different activities.

RwINF_EAT asks the informant to describe how well the respondent feeds themselves. A 0 is coded if the respondent is able to feed themselves with proper silverware. A 1 is coded if the respondent feeds themselves disorderly with a spoon. A 2 is coded if the respondent only eats simple solids. A 3 is coded if the respondent needs to be fed.

RwINF_URNE asks the informant whether the respondent has any difficulty holding or controlling urine. The responses are coded as follows: 0.No problems, 1.Occasionally, and 2.Frequently.

RwINF_BWL asks the informant whether the respondent has any difficulty controlling bowel movements. The responses are coded as follows: 0.No problems, 1.Occasionally, and 2.Frequently.

RwINF_DRESS asks the informant to describe how well the respondent is able to get dressed unaided. A 0 indicates that the respondent can dress unaided. A 1 indicates that the respondent occasionally misplaces buttons.

RwFINF_EAT, RwFINF_URNE, RwFINF_BWL, and RwFINF_DRESS are flag variables that indicate whether responses to RwINF_EAT, RwINF_URNE, RwINF_BWL, and RwINF_DRESS respectively, are imputed. They are coded as follows: 0.Not imputed, 2.Missing, 4.Refused, and 12.No informant interview completed. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

The HRS-HCAP, ELSA-HCAP, and LASI-DAD field the Blessed 2 test, which asks three questions on eating, using the toilet, and dressing. The Harmonized HRS-HCAP, ELSA-HCAP, and LASI-DAD also create an average summary score for this section. However, the MHAS Mex-Cog does not field the Blessed 2 test. It asks 4 questions, two of which are on using the toilet, and the Harmonized MHAS Mex-Cog does not create an average summary score. As such, while these questions in the MHAS Mex-Cog are similar to the questions asked in the HRS-HCAP, ELSA-HCAP, and LASI-DAD, please note that these harmonized variables in the Harmonized Mex-Cog may not be strictly comparable to the variables in the other Harmonized HCAP studies as the MHAS Mex-Cog did not field the Blessed 2 test.

Mex-Cog Variables Used

```
Wave 1 Informant Interview:
    MI_Q22_16                22: regarding eating, would you say: sobre la
    MI_Q23_16                23: regarding dressing, would you say: para v
    MI_Q24_1_16              24.1: difficulty holding or controlling urine
    MI_Q24_2_16              24.2: difficulty controlling bowel movements?
```

Everyday Activities

Wave	Variable	Label	Type
1	R1ACT_CHOR_M	r1act_chor_m:w1 Activities- R doing chores, maintenance, or	Categ
1	R1FACT_CHR_M	r1fact_chr_m:impflag w1 R whether imputed value	Categ
1	R1ACT_MEAL	r1act_meal:w1 Activities- R preparing hot meals	Categ
1	R1FACT_MEAL	r1fact_meal:impflag w1 R whether imputed value	Categ
1	R1ACT_MEALD	r1act_meald:w1 Activities- days a week R prepare hot meals	Categ
1	R1ACT_WORK	r1act_work:w1 Activities- R work or volunteer	Categ
1	R1FACT_WORK	r1fact_work:impflag w1 R whether imputed value	Categ
1	R1ACT_STOR	r1act_stor:w1 Activities- R go to store or market for food	Categ
1	R1FACT_STOR	r1fact_stor:impflag w1 R whether imputed value	Categ
1	R1ACT_STORA	r1act_stora:w1 Activities- R go to store/market alone or wit	Categ
1	R1ACT_DAIL	r1act_dail:w1 Activities- change in R’s daily activities	Categ
1	R1FACT_DAIL	r1fact_dail:impflag w1 R whether imputed value	Categ
1	R1ACT_SENI	r1act_seni:w1 Activities- R participate in activities for el	Categ
1	R1FACT_SENI	r1fact_seni:impflag w1 R whether imputed value	Categ
1	R1ACT_SENID	r1act_senid:w1 R Activities- days R assist/participate in ac	Categ
1	R1ACT_PUZL	r1act_puzl:w1 Activities- R doing puzzles or crossword games	Categ
1	R1FACT_PUZL	r1fact_puzl:impflag w1 R whether imputed value	Categ
1	R1ACT_CONV	r1act_conv:w1 Activities- R having conversation	Categ
1	R1FACT_CONV	r1fact_conv:impflag w1 R whether imputed value	Categ
1	R1ACT_VISI	r1act_visi:w1 Activities- R visits friends or relatives	Categ
1	R1FACT_VISI	r1fact_visi:impflag w1 R whether imputed value	Categ
1	R1ACT_VISIA	r1act_visia:w1 Activities- R visits friends/relatives alone	Categ
1	R1ACT_EVNT	r1act_evnt:w1 Activities- R attends religious or social even	Categ
1	R1FACT_EVNT	r1fact_evnt:impflag w1 R whether imputed value	Categ
1	R1ACT_EVNTA	r1act_evnta:w1 Activities- R attends religious/social events	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1ACT_CHOR_M	2042	2.48	1.57	0.00	5.00
R1FACT_CHR_M	2042	1.15	3.51	0.00	12.00

R1ACT_MEAL	2042	0.72	0.45	0.00	1.00
R1FACT_MEAL	2042	1.14	3.51	0.00	12.00
R1ACT_MEALD	1300	5.50	2.22	1.00	7.00
R1ACT_WORK	2042	3.73	2.15	1.00	6.00
R1FACT_WORK	2042	1.14	3.51	0.00	12.00
R1ACT_STOR	2042	2.88	1.88	1.00	6.00
R1FACT_STOR	2042	1.14	3.51	0.00	12.00
R1ACT_STORA	1490	1.29	0.45	1.00	2.00
R1ACT_DAIL	2042	1.25	1.28	0.00	3.00
R1FACT_DAIL	2042	1.14	3.51	0.00	12.00
R1ACT_SENI	2042	0.12	0.33	0.00	1.00
R1FACT_SENI	2042	1.15	3.51	0.00	12.00
R1ACT_SENID	214	3.53	2.93	0.00	8.00
R1ACT_PUZL	2042	0.39	0.92	0.00	5.00
R1FACT_PUZL	2042	1.16	3.51	0.00	12.00
R1ACT_CONV	2042	2.72	1.24	0.00	5.00
R1FACT_CONV	2042	1.15	3.51	0.00	12.00
R1ACT_VISI	2042	4.22	1.61	1.00	6.00
R1FACT_VISI	2042	1.14	3.51	0.00	12.00
R1ACT_VISIA	1361	1.47	0.50	1.00	2.00
R1ACT_EVNT	2042	4.01	1.48	1.00	6.00
R1FACT_EVNT	2042	1.14	3.51	0.00	12.00
R1ACT_EVNTA	1408	1.62	0.49	1.00	2.00

Categorical Variable Codes

Value	R1ACT_CHOR_M
0.never	368
1.half an hour	192
2.one hour	339
3.two to three hours	570
4.four to six hours	380
5.seven or more hours	193

Value	R1FACT_CHR_M
0.Not imputed	1813
1.Dont know	32
2.Missing	3
4.Refused	1
12.No informant interview completed	193

Value	R1ACT_MEAL
0.no	581
1.yes	1461

Value	R1FACT_MEAL
0.Not imputed	1840
1.Dont know	4
2.Missing	3
4.Refused	2
12.No informant interview completed	193

Value	R1ACT_MEALD
.h:No informant interview completed	193
.m:Missing	3
.s:Skipped	546
1	118
2	114
3	99
4	45
5	46
6	46
7	832

Value	R1ACT_WORK
1.daily	519
2.few times a week	347
3.once a week	127
4.once a month	38
5.sometimes	202
6.never	809

Value	R1FACT_WORK
0.Not imputed	1841
1.Dont know	4
2.Missing	3
4.Refused	1
12.No informant interview completed	193

Value	R1ACT_STOR
1.daily	654
2.few times a week	490
3.once a week	288
4.once a month	52
5.sometimes	181
6.never	377

Value	R1FACT_STOR
0.Not imputed	1837
1.Dont know	8
2.Missing	3
4.Refused	1
12.No informant interview completed	193

Value	R1ACT_STORA
.d:DK	1
.h:No informant interview completed	193
.m:Missing	3
.s:Skipped	355
1.Alone	1061
2.Accompanied by someone	429

Value	R1ACT_DAIL
0.No change	932
1.Decrease in the variety of activities	210
2.Decrease in abilities to realize activ	350
3.Decrease in variety and abilities	550

Value	R1FACT_DAIL
0.Not imputed	1845
1.Dont know	4
12.No informant interview completed	193

Value	R1ACT_SENI
0.no	1788
1.yes	254

Value	R1FACT_SENI
0.Not imputed	1827
1.Dont know	18
2.Missing	3
4.Refused	1
12.No informant interview completed	193

Value	R1ACT_SENID
.d:DK	8
.h:No informant interview completed	193
.m:Missing	3
.s:Skipped	1624
0	7
1	80
2	30
3	16
4	9
5	10
6	4
7	6
8.Less than once a week	52

Value	R1ACT_PUZL
0.never	1677
1.half an hour	110
2.one hour	116
3.two to three hours	113
4.four to six hours	22
5.seven or more hours	4

Value	R1FACT_PUZL
0.Not imputed	1806
1.Dont know	37
2.Missing	3
4.Refused	3
12.No informant interview completed	193

Value	R1ACT_CONV
0.never	75
1.half an hour	282
2.one hour	459
3.two to three hours	738
4.four to six hours	301
5.seven or more hours	187

Value	R1FACT_CONV
0.Not imputed	1816
1.Dont know	28
2.Missing	3
4.Refused	2
12.No informant interview completed	193

Value	R1ACT_VISI
1.daily	154
2.few times a week	244
3.once a week	299
4.once a month	176
5.sometimes	642
6.never	527

Value	R1FACT_VISI
0.Not imputed	1833
1.Dont know	12
2.Missing	3
4.Refused	1
12.No informant interview completed	193

Value	R1ACT_VISIA
.d:DK	1
.h:No informant interview completed	193
.m:Missing	3
.s:Skipped	484
1.Alone	716
2.Accompanied by someone	645

Value	R1ACT_EVNT
1.daily	77
2.few times a week	195
3.once a week	709
4.once a month	163
5.sometimes	437
6.never	461

Value	R1FACT_EVNT
0.Not imputed	1834
1.Dont know	11
2.Missing	3
4.Refused	1
12.No informant interview completed	193

Value	R1ACT_EVNTA
.d:DK	1
.h:No informant interview completed	193
.m:Missing	3
.s:Skipped	437
1.Alone	533
2.Accompanied by someone	875

How Constructed

The following variables pertain to a series of questions regarding the respondent's activity level, according to the informant.

RwACT_CHOR_M asks the informant to list the number of hours in an average day the respondent spends doing house or daily chores. RwACT_CHOR_M is coded as follows: 0.Never, 1.Half an hour, 2.One hour, 3.Two to three hours, 4.Four to six hours, and 5.Seven or more hours.

RwACT_MEAL asks the informant whether the respondent prepares hot meals. A 1 indicates that the respondent prepares hot meals. A 0 indicates that the respondent does not prepare hot meals.

RwACT_MEALD asks the informant to record the number of days per week the respondent spends preparing hot meals. Possible answers range from 1 to 7 days. This variable is coded as special missing (.s) if the respondent does not prepare hot meals. Special missing code (.h) is assigned if no informant interview was completed. Other missing responses are assigned special missing code (.m).

RwACT_WORK asks the informant how often the respondent does paid work or volunteers outside of the home. RwACT_WORK is coded as follows: 1.Daily, 2.Few times a week, 3.Once a week, 4.Once a month, 5.Sometimes, and 6.Never.

RwACT_STOR asks the informant how often the respondent goes to the store or market for food and other things. RwACT_STOR is coded as follows: 1.Daily, 2.Few times a week, 3.Once a week, 4.Once a month, 5.Sometimes, and 6.Never.

RwACT_STORA asks the informant whether the respondent goes to the store or market alone or with someone. A 1 indicates that the respondent goes alone and 2 indicates that the respondent is accompanied by someone. This variable is assigned special missing code (.s) if the respondent never goes to the store. Special missing code (.h) is assigned if no informant interview was completed. Don't know, refused, or other missing responses are assigned as special missing (.d), (.r), and (.m), respectively.

RwACT_DAIL indicates whether the informant has seen a change in the respondent's daily activities in the past few years. RwACT_DAIL is coded as follows: 0.No change, 1.Decrease in the variety of activities, 2.Decrease in their abilities to realize activities, and 3.Decrease in variety and abilities.

RwACT_SENI asks the informant whether the respondent participates in any activity for the elderly or seniors. A 1 indicates the respondent attends such activities and 0 indicates that the respondent does not.

RwACT_SENID asks the informant to record the number of days the respondent assists or participates in activities for the elderly or seniors. RwACT_SENID is coded as follows: 0 for not assisting, 1 - 7 days, and 8 for assisting or participating less than once a week. This variable is assigned special missing code (.s) if the respondent does not participate in activities for the elderly. Special missing code (.h) is assigned if no informant interview was completed. Don't know or other missing responses are assigned as special missing (.d) or (.m), respectively.

RwACT_PUZL asks the informant to list the number of hours in an average day the respondent spends doing puzzles and crossword games. RwACT_PUZL is coded as follows: 0.Never, 1.Half an hour, 2.One hour, 3.Two to three hours, 4.Four to six hours, and 5.Seven or more hours.

RwACT_CONV asks the informant to list the number of hours in an average day the respondent spends talking/conversing with friends or relatives. RwACT_CONV is coded as follows: 0.Never, 1.Half an hour, 2.One hour, 3.Two to three hours, 4.Four to six hours, and 5.Seven or more hours.

RwACT_VISI asks the informant how often the respondent visits friends or family. RwACT_VISI is coded as follows: 1.Daily, 2.Few times a week, 3.Once a week, 4.Once a month, 5.Sometimes, and 6.Never.

RwACT_VISIA asks the informant whether the respondent visits friends or family members alone or with someone. A 1 indicates that the respondent goes alone and 2 indicates that the respondent is accompanied by someone. The variable is coded as special missing (.s) if the respondent never visits friends or family. Special missing code (.h) is assigned if no informant interview was completed. Don't know or other missing responses are assigned special missing codes (.d) or (.m), respectively.

RwACT_EVNT asks the informant how often the respondent attends religious activities or social events. RwACT_EVNT is coded as follows: 1.Daily, 2.Few times a week, 3.Once a week, 4.Once a month, 5.Sometimes, and 6.Never.

RwACT_EVNTA asks the informant whether the respondent attends religious or social events alone or with someone. A 1 indicates that the respondent goes alone and 2 indicates that the respondent is accompanied by someone. This variable is coded as special missing (.s) if the respondent never attends religious activities or social events. Special missing code (.h) is assigned if no informant interview was completed. Don't know or other missing responses are assigned special missing codes (.d) or (.m), respectively.

RwFACT_CHR_M, RwFACT_MEAL, RwFACT_WORK, RwFACT_STOR, RwFACT_DAIL, RwFACT_SENI, RwFACT_PUZL, RwFACT_CONV, RwFACT_VISI, and RwFACT_EVNT are flag variables that indicate whether responses to RwACT_CHOR_M, RwACT_MEAL, RwACT_WORK, RwACT_STOR, RwACT_DAIL, RwACT_SENI, RwACT_PUZL, RwACT_CONV, RwACT_VISI, and RwACT_EVNT, respectively, are imputed. They are coded as follows: 0.Not imputed, 1.Don't know, 2.Missing, 4.Refused, and 12.No informant interview completed. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

Of the harmonized variables, there are some that have slight differences in how the questions are asked. For example, in the question asking about chores, both HRS-HCAP and LASI-DAD ask about the number of hours the respondent spent doing chores, maintenance, or gardening. However, the ELSA-HCAP does not ask about chores and instead, asks about housework. Because the MHAS Mex-Cog asks about both house and daily chores, an "_M" has been added to the end of the variable's name to indicate that there are some slight differences and that this variable may not be strictly comparable across studies. In the question about travel, the HRS-HCAP and ELSA-HCAP ask whether the respondent is able to drive on their own while the LASI-DAD asks whether the respondent is able to travel somewhere on their own. In the question about exercise, both HRS-HCAP and ELSA-HCAP ask about the frequency the respondent plays sports or exercises

while LASI-DAD asks about the frequency the respondent does yoga or any other exercise. The MHAS Mex-Cog does not have these latter two questions.

Additionally, the MHAS Mex-Cog asks 8 additional questions that are not asked in the other studies. These include whether the respondent participates in some activity for seniors, the number of days the respondent spent assisting or participating in activities for elder seniors, the number of hours the respondent spent on conversing, the frequency the respondent visits friends or relatives, whether the respondent visits friends or relatives alone or with someone, the frequency the respondent attends religious or social events, and whether the respondent attends religious or social events alone or with someone.

The Harmonized HRS-HCAP and Harmonized ELSA-HCAP do not provide imputed responses if there was no informant interview, while the Harmonized Mex-Cog and Harmonized LASI-DAD impute responses if there was no informant interview.

Mex-Cog Variables Used

Wave 1 Informant Interview:

MI_Q1_16	1: change in daily activities. cambio en sus
MI_Q42_16	42: activities for the elderly or seniors? ac
MI_Q43_16	43: days assist or participate in activities?
MI_Q44_16	44: hours spent doing puzzles, crossword game
MI_Q45_16	45: hours spent in daily chores. cuantas hora
MI_Q46_16	46: hours spent in conversation ? horas pasa
MI_Q47_16	47: usually prepares a hot meal? suele prepa
MI_Q48_16	48: how many days a week prepares a hot meal?
MI_Q49_16	49: does paid work or volunteer outside of ho
MI_Q50_16	50: goes to the store or market va a la tiend
MI_Q51_16	51: generally goes alone or with somebody els
MI_Q52_16	52: frequently visits friends or relatives. f
MI_Q53_16	53: generally goes alone or with somebody els
MI_Q54_16	54: attend religious or social events? activ
MI_Q55_16	55: generally goes alone or with somebody els

Cognitive Activity Score (CSI)

Wave	Variable	Label	Type
1	R1CSI1	r1csi1:w1 CSI- general decline in R's mental functioning	Categ
1	R1FCSI1	r1fcsi1:impflag w1 R whether imputed value	Categ
1	R1CSI2	r1csi2:w1 CSI- R remembering things a serious problem	Categ
1	R1FCSI2	r1fcsi2:impflag w1 R whether imputed value	Categ
1	R1CSI3	r1csi3:w1 CSI- R forgets where put things	Categ
1	R1FCSI3	r1fcsi3:impflag w1 R whether imputed value	Categ
1	R1CSI4	r1csi4:w1 CSI- R forgets where things are usually kept	Categ
1	R1FCSI4	r1fcsi4:impflag w1 R whether imputed value	Categ
1	R1CSI5	r1csi5:w1 CSI- R forgets the names of friends	Categ
1	R1FCSI5	r1fcsi5:impflag w1 R whether imputed value	Categ
1	R1CSI6	r1csi6:w1 CSI- R forgets the names of family members	Categ
1	R1FCSI6	r1fcsi6:impflag w1 R whether imputed value	Categ
1	R1CSI7	r1csi7:w1 CSI- R forgets what R wanted to say in the middle	Categ
1	R1FCSI7	r1fcsi7:impflag w1 R whether imputed value	Categ
1	R1CSI8	r1csi8:w1 CSI- R has difficulty finding the right words	Categ
1	R1FCSI8	r1fcsi8:impflag w1 R whether imputed value	Categ
1	R1CSI9	r1csi9:w1 CSI- R uses the wrong words	Categ
1	R1FCSI9	r1fcsi9:impflag w1 R whether imputed value	Categ
1	R1CSI10	r1csi10:w1 CSI- R tends to talk about long ago	Categ
1	R1FCSI10	r1fcsi10:impflag w1 R whether imputed value	Categ
1	R1CSI11	r1csi11:w1 CSI- R forgets when last saw informant	Categ
1	R1FCSI11	r1fcsi11:impflag w1 R whether imputed value	Categ
1	R1CSI12	r1csi12:w1 CSI- R forgets what happened the day before	Categ
1	R1FCSI12	r1fcsi12:impflag w1 R whether imputed value	Categ
1	R1CSI13	r1csi13:w1 CSI- R forgets where they are	Categ
1	R1FCSI13	r1fcsi13:impflag w1 R whether imputed value	Categ
1	R1CSI14	r1csi14:w1 CSI- R gets lost in the community	Categ
1	R1FCSI14	r1fcsi14:impflag w1 R whether imputed value	Categ
1	R1CSI15	r1csi15:w1 CSI- R gets lost in own home	Categ

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  1  R1FCSI15      r1fcsi15:impflag w1 R whether imputed value                  Categ
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Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1CSI1	2042	0.32	0.47	0.00	1.00
R1FCSI1	2042	1.13	3.51	0.00	12.00
R1CSI2	2042	0.29	0.45	0.00	1.00
R1FCSI2	2042	1.14	3.51	0.00	12.00
R1CSI3	2042	1.17	0.99	0.00	2.00
R1FCSI3	2042	1.14	3.51	0.00	12.00
R1CSI4	2042	0.86	0.94	0.00	2.00
R1FCSI4	2042	1.14	3.51	0.00	12.00
R1CSI5	2042	0.20	0.58	0.00	2.00
R1FCSI5	2042	1.14	3.51	0.00	12.00
R1CSI6	2042	0.12	0.45	0.00	2.00
R1FCSI6	2042	1.14	3.51	0.00	12.00
R1CSI7	2042	0.52	0.85	0.00	2.00
R1FCSI7	2042	1.14	3.51	0.00	12.00
R1CSI8	2042	0.42	0.79	0.00	2.00
R1FCSI8	2042	1.14	3.51	0.00	12.00
R1CSI9	2042	0.41	0.79	0.00	2.00
R1FCSI9	2042	1.14	3.51	0.00	12.00
R1CSI10	2042	0.61	0.86	0.00	2.00
R1FCSI10	2042	1.14	3.51	0.00	12.00
R1CSI11	2042	0.08	0.39	0.00	2.00
R1FCSI11	2042	1.15	3.51	0.00	12.00
R1CSI12	2042	0.35	0.76	0.00	2.00
R1FCSI12	2042	1.15	3.51	0.00	12.00
R1CSI13	2042	0.08	0.40	0.00	2.00
R1FCSI13	2042	1.14	3.51	0.00	12.00
R1CSI14	2042	0.06	0.34	0.00	2.00
R1FCSI14	2042	1.14	3.51	0.00	12.00

R1CSI15	2042	0.03	0.23	0.00	2.00
R1FCSI15	2042	1.14	3.51	0.00	12.00

Categorical Variable Codes

Value	R1CSI1
0.no	1391
1.yes	651

Value	R1FCSI1
0.Not imputed	1849
12.No informant interview completed	193

Value	R1CSI2
0.no	1452
1.yes	590

Value	R1FCSI2
0.Not imputed	1839
1.Dont know	9
4.Refused	1
12.No informant interview completed	193

Value	R1CSI3
0.No	849
2.Sometimes	1193

Value	R1FCSI3
0.Not imputed	1841
1.Dont know	8
12.No informant interview completed	193

Value	R1CSI4
0.No	1064
1.Yes	210
2.Sometimes	768

Value	R1FCSI4
0.Not imputed	1833
1.Dont know	15
2.Missing	1
12.No informant interview completed	193

Value	R1CSI5
0.No	1803
1.Yes	61
2.Sometimes	178

Value	R1FCSI5
0.Not imputed	1833
1.Dont know	13
2.Missing	2
4.Refused	1
12.No informant interview completed	193

Value	R1CSI6
0.No	1905
1.Yes	33
2.Sometimes	104

Value	R1FCSI6
0.Not imputed	1842
1.Dont know	5
2.Missing	2
12.No informant interview completed	193

Value	R1CSI7
0.No	1461

1.Yes	91
2.Sometimes	490

Value	R1FCSI7
0.Not imputed	1841
1.Dont know	6
2.Missing	2
12.No informant interview completed	193

Value	R1CSI8
0.No	1567
1.Yes	93
2.Sometimes	382

Value	R1FCSI8
0.Not imputed	1841
1.Dont know	3
2.Missing	2
4.Refused	3
12.No informant interview completed	193

Value	R1CSI9
0.No	1583
1.Yes	76
2.Sometimes	383

Value	R1FCSI9
0.Not imputed	1841
1.Dont know	5
2.Missing	2
4.Refused	1
12.No informant interview completed	193

Value	R1CSI10
0.No	1309
1.Yes	212
2.Sometimes	521

Value	R1FCSI10
0.Not imputed	1843
1.Dont know	3
2.Missing	2
4.Refused	1
12.No informant interview completed	193

Value	R1CSI11
0.No	1952
1.Yes	14
2.Sometimes	76

Value	R1FCSI11
0.Not imputed	1834
1.Dont know	11
2.Missing	2
4.Refused	2
12.No informant interview completed	193

Value	R1CSI12
0.No	1689
2.Sometimes	353

Value	R1FCSI12
0.Not imputed	1828
1.Dont know	18
2.Missing	2
4.Refused	1
12.No informant interview completed	193

Value	R1CSI13
0.No	1956
2.Sometimes	86

Value	R1FCSI13
0.Not imputed	1846
2.Missing	2
4.Refused	1
12.No informant interview completed	193

Value	R1CSI14
0.No	1973
1.Yes	11
2.Sometimes	58

Value	R1FCSI14
0.Not imputed	1846
2.Missing	2
4.Refused	1
12.No informant interview completed	193

Value	R1CSI15
0.No	2006
1.Yes	11
2.Sometimes	25

Value	R1FCSI15
0.Not imputed	1842
1.Dont know	4
2.Missing	2
4.Refused	1
12.No informant interview completed	193

How Constructed

The following variables pertain to a series of questions that ask the informant about any changes they may have noticed in the respondent.

RwCSI1 indicates whether the informant has noticed a general decline in the respondent’s mental functioning.

RwCSI2 indicates whether the informant has noticed that the respondent has problems with remembering things.

RwCSI3 indicates whether the informant has noticed that the respondent forgets where they have put things.

RwCSI4 indicates whether the informant has noticed that the respondent forgets where things are usually kept.

RwCSI5 indicates whether the informant has noticed that the respondent forgets names of friends.

RwCSI6 indicates whether the informant has noticed that the respondent forgets names of family members.

RwCSI7 indicates whether the informant has noticed that the respondent forgets what they wanted to say in the middle of a conversation.

RwCSI8 indicates whether the informant has noticed that the respondent has difficulty finding the right words.

RwCSI9 indicates whether the informant has noticed that the respondent uses the wrong words.

RwCSI10 indicates whether the informant has noticed that the respondent tends to talk about what happened long ago, rather than the present.

RwCSI11 indicates whether the informant has noticed that the respondent forgets when they last saw the informant.

RwCSI12 indicates whether the informant has noticed that the respondent forgets what happened the day before.

RwCSI13 indicates whether the informant has noticed that the respondent forgets where they are.

RwCSI14 indicates whether the informant has noticed that the respondent gets lost in the community, such as locating the right street or neighborhood of their house.

RwCSI15 indicates whether the informant has noticed that the respondent gets lost in their own home, such as when finding the bathroom.

RwCSI1 and RwCSI2 are coded as follows: 0.No and 1.Yes. RwCSI3 - RwCSI15 are coded as follows: 0.No, 1.Yes, and 2.Sometimes.

RwFCSI1 - RwFCSI15 are flag variables that indicate whether responses to RwCSI1 - RwCSI15, respectively, are imputed. They are coded as follows: 0.Not imputed, 1.Don't know, 2.Missing, 4.Refused, and 12.No informant interview completed. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

The Harmonized HRS-HCAP and Harmonized ELSA-HCAP do not provide imputed responses if there was no informant interview, while the Harmonized Mex-Cog and Harmonized LASI-DAD impute responses if there was no informant interview.

Mex-Cog Variables Used

Wave 1 Informant Interview:

MI_Q10_16	10: does (he/she) use wrong words? utiliza p
MI_Q11_16	11: tends to talk about long ago? habla de co
MI_Q12_16	12: forgets when last saw you? se le olvida
MI_Q13_16	13: forgest what happened the day before? se
MI_Q14_16	14: does (he/she) forget where (he/she) is? s
MI_Q15_16	15: gets lost in the community? se pierde don
MI_Q16_16	16: gets lost in own home? se pierde en la c
MI_Q2_16	2: decline in mental functioning? disminucion
MI_Q3_16	3: difficulties remembering things dificultad
MI_Q4_16	4: forgets where (he/she) has put things? olv
MI_Q5_16	5: forgets where things are usually kept? olv
MI_Q6_16	6: does (he/she) forget the names of friends?
MI_Q7_16	7: forgets the names of family members? olvi
MI_Q8_16	8: forgets in the middle of a conversation?
MI_Q9_16	9: difficulty finding the right words? dificu

Part of `10/66 Tests

Wave	Variable	Label	Type
1	R1TEN1	r1ten1:w1 10-66- R has difficulty with household chores	Categ
1	R1FTEN1	r1ften1:impflag w1 R whether imputed value	Categ
1	R1TEN2	r1ten2:w1 10-66- R has stopped skill or hobby	Categ
1	R1FTEN2	r1ften2:impflag w1 R whether imputed value	Categ
1	R1TEN3	r1ten3:w1 10-66- R has difficulty handling money	Categ
1	R1FTEN3	r1ften3:impflag w1 R whether imputed value	Categ
1	R1TEN4	r1ten4:w1 10-66- R has difficulty adjusting to routine chang	Categ
1	R1FTEN4	r1ften4:impflag w1 R whether imputed value	Categ
1	R1TEN5	r1ten5:w1 10-66- R has change in ability to think and reason	Categ
1	R1FTEN5	r1ften5:impflag w1 R whether imputed value	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1TEN1	2042	0.29	0.65	0.00	2.00
R1FTEN1	2042	1.14	3.51	0.00	12.00
R1TEN2	2042	0.37	0.48	0.00	1.00
R1FTEN2	2042	1.14	3.51	0.00	12.00
R1TEN3	2042	0.13	0.42	0.00	2.00
R1FTEN3	2042	1.16	3.52	0.00	12.00
R1TEN4	2042	0.29	0.67	0.00	2.00
R1FTEN4	2042	1.17	3.52	0.00	12.00
R1TEN5	2042	0.18	0.39	0.00	1.00
R1FTEN5	2042	1.16	3.52	0.00	12.00

Categorical Variable Codes

Value	R1TEN1
0.No	1655
1.Yes	173
2.Yes, sometimes	214

Value	R1FTEN1
0.Not imputed	1841
1.Dont know	5
2.Missing	2
4.Refused	1
12.No informant interview completed	193

Value	R1TEN2
0.no	1286
1.yes	756

Value	R1FTEN2
0.Not imputed	1836
1.Dont know	10
2.Missing	2
4.Refused	1
12.No informant interview completed	193

Value	R1TEN3
0.no difficulty	1837
1.some difficulty	142
2.cannot handle money	63

Value	R1FTEN3
0.Not imputed	1834
2.Missing	2
4.Refused	13
12.No informant interview completed	193

Value	R1TEN4
0.No	1709
1.Yes	80
2.Yes, sometimes	253

Value	R1FTEN4
0.Not imputed	1830
2.Missing	2
4.Refused	17
12.No informant interview completed	193

Value	R1TEN5
0.no	1671
1.yes	371

Value	R1FTEN5
0.Not imputed	1836
2.Missing	2
4.Refused	11
12.No informant interview completed	193

How Constructed

The following variables refer to questions that were asked in the 10-66 battery. Please note that the Mex-Cog did not field the full 10-66 battery and only selected a subset of questions to ask.

RwTEN1 asks the informant whether the respondent has difficulty performing household chores that they used to do, such as preparing food or making a cup of coffee. RwTEN1 is coded as follows: 0.No, 1.Yes, and 2.Yes, sometimes.

RwTEN2 asks the informant whether the respondent has stopped performing an activity or hobby that they used to do. RwTEN2 is coded as 0 if the respondent has not stopped and coded as 1 if the respondent has stopped.

RwTEN3 asks the informant whether there has been a change in the respondent’s ability to handle money. RwTEN3 is coded as follows: 0.No difficulty, 1.Some difficulty, and 2.Cannot handle money.

RwTEN4 asks the informant whether the respondent has difficulty in adapting to change in their daily routine. RwTEN4 is coded as follows: 0.No, 1.Yes, and 2.Yes, sometimes.

RwTEN5 asks the informant whether there has been a change in the respondent’s ability to think and reason. RwTEN5 is coded as 0 if there has been no change and 1 if there has been a change.

RwFTEN1 - RwFTEN5 are flag variables that indicate whether responses to RwTEN1 - RwTEN5, respectively, are imputed. They are coded as follows: 0.Not imputed, 1.Don't know, 2.Missing, 4.Refused, and 12.No informant interview completed. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

The Harmonized HRS-HCAP and Harmonized ELSA-HCAP do not provide imputed responses if there was no informant interview, while the Harmonized Mex-Cog and Harmonized LASI-DAD impute responses if there was no informant interview.

Mex-Cog Variables Used

Wave 1 Informant Interview:

MI_Q17_16	17: difficulty performing chores? dificulta
MI_Q18_16	18: stopped doing activities or hobbies? ha d
MI_Q19_16	19: change in ability to handle money. cambio
MI_Q20_16	20: difficulty adapting to changes in routine
MI_Q21_16	21: change in ability to think and reason? ca

General Cognitive Decline

Wave	Variable	Label	Type
1	R1INF_CONF	r1inf_conf:w1 Informant: R confused I with another person	Categ
1	R1FINF_CONF	r1finf_conf:impflag w1 R whether imputed value	Categ
1	R1INF_DECI	r1inf_deci:w1 Informant: R difficulty making everyday decisi	Categ
1	R1FINF_DECI	r1finf_deci:impflag w1 R whether imputed value	Categ
1	R1INF_REASN	f1inf_reasn:w1 Informant: R reasoning is confusing/illogical	Categ
1	R1FINF_REASN	r1finf_reasn:impflag w1 R whether imputed value	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1INF_CONF	2042	0.05	0.21	0.00	1.00
R1FINF_CONF	2042	1.14	3.51	0.00	12.00
R1INF_DECI	2042	0.12	0.32	0.00	1.00
R1FINF_DECI	2042	1.15	3.51	0.00	12.00
R1INF_REASN	2042	0.14	0.35	0.00	1.00
R1FINF_REASN	2042	1.14	3.51	0.00	12.00

Categorical Variable Codes

Value	R1INF_CONF
0.no	1944
1.yes	98

Value	R1FINF_CONF
0.Not imputed	1844
1.Dont know	2
2.Missing	2
4.Refused	1
12.No informant interview completed	193

Value	R1INF_DECI
0.no	1806
1.yes	236

Value	R1FINF_DECI
0.Not imputed	1831
1.Dont know	15
2.Missing	2
4.Refused	1
12.No informant interview completed	193

Value	R1INF_REASN
0.no	1756
1.yes	286

Value	R1FINF_REASN
0.Not imputed	1840
1.Dont know	5

2.Missing	2
4.Refused	2
12.No informant interview completed	193

How Constructed

The following variables pertain to a series of questions that ask the informant about any general cognitive decline they may have noticed in the respondent.

RwINF_CONF indicates whether the informant has noticed that the respondent confuses the informant with another person.

RwINF_DECI indicates whether the informant has noticed that the respondent has difficulties in making decisions in their daily life.

RwINF_REASN indicates whether the informant has noticed that the things the respondent says are confusing or illogical.

RwINF_CONF, RwINF_DECI, and RwINF_REASN are coded as follows: 0.No and 1.Yes.

RwFINF_CONF, RwFINF_DECI, and RwFINF_REASN are flag variables that indicate whether responses to RwINF_CONF, RwINF_DECI, and RwINF_REASN, respectively, are imputed. They are coded as follows: 0.Not imputed, 1.Don't know, 2.Missing, 4.Refused, and 12.No informant interview completed. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

Questions in this section are MHAS Mex-Cog specific, and are not asked in the HRS-HCAP, ELSA-HCAP, and LASI-DAD.

Mex-Cog Variables Used

Wave 1 Informant Interview:

MI_Q25_16	25: ever confused with another person? confun
MI_Q26_16	26: difficulty taking everyday decisions. dif
MI_Q27_16	27: his reasoning is confusing or illogical.

Evolution of Deterioration Section

Wave	Variable	Label	Type
1	R1INF_PROBM	r1inf_probm:w1 Informant: month noticed R has problems	Categ
1	R1INF_PROBY	r1inf_proby:w1 Informant: year noticed R has problems	Cont
1	R1INF_BEGAN	r1inf_began:w1 Informant: R problems began quickly or gradua	Categ
1	R1FINF_BEGAN	r1finf_began:impflag w1 R whether imputed value	Categ
1	R1INF_COND	r1inf_cond:w1 Informant: R condition now compared to time pr	Categ
1	R1FINF_COND	r1finf_cond:impflag w1 R whether imputed value	Categ
1	R1INF_VARY	r1inf_vary:w1 Informant: R problems or difficulties vary	Categ
1	R1INF_SLOW	r1inf_slow:w1 Informant: R difficulties have been slow and g	Categ
1	R1FINF_SLOW	r1finf_slow:impflag w1 R whether imputed value	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1INF_PROBM	217	6.28	3.69	1.00	12.00
R1INF_PROBY	625	2013.20	3.33	1982.00	2016.00
R1INF_BEGAN	726	1.89	0.31	1.00	2.00
R1FINF_BEGAN	2042	10.15	7.38	0.00	16.00
R1INF_COND	726	2.55	0.79	1.00	3.00
R1FINF_COND	2042	10.15	7.39	0.00	16.00
R1INF_VARY	120	1.59	0.49	1.00	2.00
R1INF_SLOW	726	1.78	0.41	1.00	2.00
R1FINF_SLOW	2042	10.16	7.38	0.00	16.00

Categorical Variable Codes

Value	R1INF_PROBM
.d:DK	419
.h:No informant interview completed	193
.l:Has always had problems (mentally dis	4
.m:Missing	2
.q:Skipped because short interview	1146
.r:Refuse	61
1.January	26
2.February	15
3.March	29
4.April	12
5.May	15
6.June	23
7.July	10
8.August	17
9.September	15

10.October	13
11.November	17
12.December	25

Value	R1INF_BEGAN
.q:Skipped because short interview	1316
1.Suddenly	77
2.Slowly	649

Value	R1FINF_BEGAN
0.Not imputed	672
1.Dont know	21
2.Missing	2
4.Refused	5
11.Not applicable	3
12.No informant interview completed	193
16.Skipped because short interview	1146

Value	R1INF_COND
.q:Skipped because short interview	1316
1.Gotten worse	136
2.Gotten better	56
3.No change	534

Value	R1FINF_COND
0.Not imputed	681
1.Dont know	13
2.Missing	2
4.Refused	3
11.Not applicable	3
12.No informant interview completed	193
16.Skipped because short interview	1147

Value	R1INF_VARY
.d:DK	2
.h:No informant interview completed	193
.m:Missing	2
.q:Skipped because short interview	1147
.r:Refuse	2
.s:Skipped	576
1.Worsens and recovers	49
2.No noticeable changes	71

Value	R1INF_SLOW
.q:Skipped because short interview	1316
1.No	158
2.Yes, slow and gradual	568

Value	R1FINF_SLOW
0.Not imputed	672
1.Dont know	21
2.Missing	2
4.Refused	4
11.Not applicable	3
12.No informant interview completed	193
16.Skipped because short interview	1147

How Constructed

The following variables pertain to a series of questions that ask the informant about the evolution of the respondent's cognitive deterioration that the informant may have noticed.

RwINF_PROBM asks the informant to list the month they started noticing problems in the respondent. RwINF_PROBM is coded as follows: 1.January, 2.February, 3.March, 4.April, 5.May, 6.June, 7.July, 8.August, 9.September, 10.October, 11.November, and 12.December. Special missing code (.h) is assigned if no informant interview was completed. Informants who skipped this question because they only completed the short interview are coded as special missing (.q). Respondents who have always had problems due to a mental disability are coded as special missing (.l). Don't know, refused, or other missing responses are assigned special missing codes (.d), (.r), or (.m), respectively.

RwINF_PROBY asks the informant to list the year they started noticing problems in the respondent. Answers range from 1982 to 2016. Special missing code (.h) is assigned if no informant interview was completed. Informants who skipped this question because they only completed the short interview are coded as special missing (.q). Respondents who have always had problems due to a mental disability are coded as special missing (.l). Don't know, refused, or other missing responses are coded as special missing (.d), (.r), or (.m), respectively.

RwINF_BEGAN asks the informant whether the problems began quickly or gradually. RwINF_BEGAN is coded as follows: 1.Suddenly and 2.Slowly. Informants who skipped this question because they only completed the short interview are coded as special missing (.q).

RwINF_COND asks the informant to describe the respondent's condition at present compared to the time when the problems first began. RwINF_COND is coded as follows: 1.Gotten worse, 2.Gotten better, and 3.No change. Informants who skipped this question because they only completed the short interview are coded as special missing (.q).

RwINF_VARY asks the informant whether the respondent's problems and difficulties vary. RwINF_VARY is coded as follows: 1.Worsens and recovers and 2.No noticeable change. This variable is coded as special missing (.s) if the respondent's condition has gotten better or had no change since the problems first began. Special missing code (.h) is assigned if no informant interview was completed. Informants who skipped this question because they only completed the short interview are coded as special missing (.q). Don't know, refused, or other missing responses are coded as special missing (.d), (.r), or (.m), respectively.

RwINF_SLOW asks the informant whether the respondent's problems and difficulties have been slow and gradual. RwINF_SLOW is coded as follows: 1.No and 2.Yes, slow and gradual. Informants who skipped this question because they only completed the short interview are coded as special missing (.q).

RwFINF_BEGAN, RwFINF_COND, and RwFINF_SLOW are flag variables that indicate whether responses to RwINF_BEGAN, RwINF_COND, and RwINF_SLOW, respectively, are imputed. They are coded as follows: 0.Not imputed, 1.Don't know, 2.Missing, 4.Refused, 11.Not applicable, 12.No informant interview completed, and 16.Skipped because short interview. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

Questions in this section are MHAS Mex-Cog specific, and are not asked in the HRS-HCAP, ELSA-HCAP, and LASI-DAD.

The MHAS Mex-Cog has a different skip pattern in the questionnaire for the adequate informant, which is determined by the informant's responses to the CSI-D. If the informant answers affirmatively to two or more of six questions, this suggests the presence of cognitive deterioration in the respondent, and the long interview is carried out. Otherwise, the short interview is carried out. Thus, the MHAS Mex-Cog includes a special missing value .q in the informant assessment to capture informants who skipped certain questions due to only completing the short version of the adequate informant questionnaire.

Mex-Cog Variables Used

Wave 1 Informant Interview:

MI_Q28_1_16	28.1: month and year you noticed problems? mo
MI_Q28_2_16	28.2: month and year you noticed problems? ye
MI_Q29_16	29: began quickly or gradual? empezo de maner
MI_Q30_16	30: condition now compared to time problems b
MI_Q31_16	31: problems/ difficulties remembering vary
MI_Q32_16	32: difficulties have been slow and gradual?

Mental and Behavioral Disturbances

Wave	Variable	Label	Type
1	R1INF_DOUBT	r1inf_doubt:w1 Informant: R doubts or distrusts a lot	Categ
1	R1FINF_DOUBT	r1finf_doubt:impflag w1 R whether imputed value	Categ
1	R1INF_BEHAV	r1inf_behav:w1 Informant: R behavior changed	Categ
1	R1FINF_BEHAV	r1finf_behav:impflag w1 R whether imputed value	Categ
1	R1INF_RECNT	r1inf_recnt:w1 Informant: R first changes observed or recent	Categ
1	R1INF_HALLU	r1inf_hallu:w1 Informant: R see or hear things	Categ
1	R1FINF_HALLU	r1finf_hallu:impflag w1 R whether imputed value	Categ
1	R1INF_ACCI	r1inf_acci:w1 Informant: R accident or illness to head or br	Categ
1	R1FINF_ACCI	r1finf_acci:impflag w1 R whether imputed value	Categ
1	R1INF_UNCON	r1inf_uncon:w1 Informant: R unconscious after the accident o	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1INF_DOUBT	726	0.22	0.41	0.00	1.00
R1FINF_DOUBT	2042	10.15	7.39	0.00	16.00
R1INF_BEHAV	726	0.20	0.40	0.00	1.00
R1FINF_BEHAV	2042	10.15	7.39	0.00	16.00
R1INF_RECNT	128	1.52	0.50	1.00	2.00
R1INF_HALLU	726	3.66	0.77	1.00	4.00
R1FINF_HALLU	2042	10.15	7.39	0.00	16.00
R1INF_ACCI	726	2.54	0.74	1.00	3.00
R1FINF_ACCI	2042	10.16	7.38	0.00	16.00
R1INF_UNCON	174	2.25	0.89	1.00	3.00

Categorical Variable Codes

Value	R1INF_DOUBT
.q:Skipped because short interview	1316
0.no	566
1.yes	160

Value	R1FINF_DOUBT
0.Not imputed	684
1.Dont know	11
2.Missing	2
4.Refused	2
11.Not applicable	3

```
12.No informant interview completed     |         193
16.Skipped because short interview      |        1147

Value-----------------------------------| R1INF_BEHAV
.q:Skipped because short interview      |        1316
0.no                                    |         582
1.yes                                   |         144

Value-----------------------------------|R1FINF_BEHAV
0.Not imputed                           |         686
1.Dont know                             |           8
2.Missing                               |           3
4.Refused                               |           2
11.Not applicable                       |           3
12.No informant interview completed     |         193
16.Skipped because short interview      |        1147

Value-----------------------------------| R1INF_RECNT
.d:DK                                   |           3
.h:No informant interview completed     |         193
.m:Missing                              |           3
.q:Skipped because short interview      |        1147
.r:Refuse                               |           1
.s:Skipped                              |         567
1.Recent change                         |          62
2.One of the first thing I observed     |          66

Value-----------------------------------| R1INF_HALLU
.q:Skipped because short interview      |        1316
1.Says they see things (Visual Hallucina|          32
2.Says they hear things (Auditory Halluc|          36
3.Both: sees and hears things           |          82
4.Does not happen                       |         576

Value-----------------------------------|R1FINF_HALLU
0.Not imputed                           |         683
1.Dont know                             |          11
2.Missing                               |           3
4.Refused                               |           2
11.Not applicable                       |           3
12.No informant interview completed     |         193
16.Skipped because short interview      |        1147

Value-----------------------------------|  R1INF_ACCI
.q:Skipped because short interview      |        1316
1.Yes, probably                         |         106
2.Yes, definitely                       |         124
3.No                                    |         496

Value-----------------------------------| R1FINF_ACCI
0.Not imputed                           |         670
1.Dont know                             |          24
2.Missing                               |           3
4.Refused                               |           2
11.Not applicable                       |           3
12.No informant interview completed     |         193
16.Skipped because short interview      |        1147

Value-----------------------------------| R1INF_UNCON
.d:DK                                   |          35
.h:No informant interview completed     |         193
.m:Missing                              |           3
.q:Skipped because short interview      |        1147
.s:Skipped                              |         490
1.Yes, between a few minutes and an hour|          52
2.Yes, more than an hour                |          26
3.No                                    |          96
```

How Constructed

The following variables pertain to a series of questions that ask the informant about the presence of additional behavioral problems and whether the respondent has had an accident or illness to the brain or head.

RwINF_DOUBT asks the informant whether the respondent doubts or distrusts a lot. A 1 indicates that the respondent distrusts or doubts a lot and 0 indicates that the respondent does not. Informants who skipped this question because they only completed the short interview are coded as special missing (.q).

RwINF_BEHAV asks the informant whether the respondent's behavior has changed. A 1 indicates that the behavior has changed and a 0 indicates that it has not. Informants who skipped this question because they only completed the short interview are coded as special missing (.q).

RwINF_RECNT asks the informant to indicate whether the respondent's behavioral changes were recent or were already present when the informant first knew the respondent. RwINF_RECNT is coded as follows: 1.Recent change and 2.One of the first thing I observed. Special missing code (.h) is assigned if the respondent does not have an informant interview. Skipped responses are coded as special missing (.s). Informants who skipped this question because they only completed the short interview are coded as special missing (.q). Don't know, refused, or other missing responses are coded as special missing (.d), (.r), or (.m), respectively.

RwINF_HALLU asks the informant whether the respondent sees or hears things that others do not. RwINF_HALLU is coded as follows: 1.Says they see things (visual hallucinations), 2.Says they hear things (auditory hallucinations), 3.Both: sees and hears things, and 4.Does not happen. Informants who skipped this question because they only completed the short interview are coded as special missing (.q).

RwINF_ACCI asks the informant whether the respondent has had an accident or illness to the head or the brain. RwINF_ACCI is coded as follows: 1.Yes, probably, 2.Yes, definitely, and 3.No. Informants who skipped this question because they only completed the short interview are coded as special missing (.q).

RwINF_UNCON asks the informant whether the respondent was unconscious after the accident or illness. RwINF_UNCON is coded as follows: 1.Yes, between a few minutes and an hour, 2.Yes, more than an hour, and 3.No. This variable is coded as special missing (.s) if the respondent did not have an accident or illness to the head or brain. Special missing code (.h) is assigned if the respondent does not have an informant interview. Informants who skipped this question because they only completed the short interview are coded as special missing (.q). Don't know, refused, or other missing responses are coded as special missing (.d), (.r), or (.m), respectively.

RwFINF_DOUBT, RwFINF_BEHAV, RwFINF_HALLU, and RwFINF_ACCI are flag variables that indicate whether responses to RwINF_DOUBT, RwINF_BEHAV, RwINF_HALLU, and RwINF_ACCI, respectively, are imputed. They are coded as follows: 0.Not imputed, 1.Don't know, 2.Missing, 4.Refused, 11.Not applicable, 12.No informant interview completed, and 16.Skipped because short interview. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

Questions in this section are MHAS Mex-Cog specific, and are not asked in the HRS-HCAP, ELSA-HCAP, and LASI-DAD.

The MHAS Mex-Cog has a different skip pattern in the questionnaire for the adequate informant, which is determined by the informant's responses to the CSI-D. If the informant answers affirmatively to two or more of six questions, this suggests the presence of cognitive deterioration in the respondent, and the long interview is carried out. Otherwise, the short interview is carried out. Thus, the MHAS Mex-Cog includes a special missing value .q in the informant assessment to capture informants who skipped certain questions due to only completing the short version of the adequate informant questionnaire.

Mex-Cog Variables Used

Wave 1 Informant Interview:

MI_Q33_16	33: doubts or distrusts a lot? duda o desconf
MI_Q34_16	34: has behavior changed? ha cambiado su comp
MI_Q35_16	35: first changes observed or recent changes?
MI_Q36_16	36: see or hear things that nobody else does?
MI_Q37_16	37: accident or illnes his head or brain? ac
MI_Q38_16	38: unconscious after the accident or illness

Care

Wave	Variable	Label	Type
1	R1INF_ALONE	r1inf_alone:w1 Informant: can R be alone for an hour or more	Categ
1	R1FINF_ALONE	r1finf_alone:impflag w1 R whether imputed value	Categ
1	R1INF_TURN	r1inf_turn:w1 Informant: R family members or friends take tu	Categ
1	R1INF_PAID	r1inf_paid:w1 Informant: somebody been paid to take care of	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1INF_ALONE	726	0.95	0.22	0.00	1.00
R1FINF_ALONE	2042	10.13	7.41	0.00	16.00
R1INF_TURN	36	0.67	0.48	0.00	1.00
R1INF_PAID	36	0.08	0.28	0.00	1.00

Categorical Variable Codes

Value	R1INF_ALONE
.q:Skipped because short interview	1316
0.no	38
1.yes	688

Value	R1FINF_ALONE
0.Not imputed	697
2.Missing	3
4.Refused	2
12.No informant interview completed	193
16.Skipped because short interview	1147

Value	R1INF_TURN
.h:No informant interview completed	193
.m:Missing	3
.q:Skipped because short interview	1147
.r:Refuse	2
.s:Skipped	661
0.no	12
1.yes	24

Value	R1INF_PAID
.h:No informant interview completed	193
.m:Missing	3
.q:Skipped because short interview	1147
.r:Refuse	2
.s:Skipped	661
0.no	33
1.yes	3

How Constructed

The following variables pertain to a series of questions that ask the informant about how the respondent is cared for at home.

RwINF_ALONE asks the informant whether the respondent can be alone for an hour or more. A 1 indicates that the respondent can be alone for an hour or more and a 0 indicates that the respondent cannot.

Informants who skipped this question because they only completed the short interview are coded as special missing (.q).

RwINF_TURN asks the informant whether family members or friends take turns caring for the respondent. A 1 indicates that family members or friends take turns caring for the respondent and a 0 indicates they do not. This variable is coded as special missing (.s) if the respondent can be alone for an hour or more. Special missing code (.h) is assigned if the respondent does not have an informant interview. Informants who skipped this question because they only completed the short interview are coded as special missing (.q). Don't know or refused responses are coded as special missing (.r). Other missing is coded as special missing (.m).

RwINF_PAID asks the informant whether someone has been paid to take care of the respondent. A 1 indicates that someone has been paid and 0 indicates that no one has been paid to take care of the respondent. This variable is coded as special missing (.s) if the respondent can be alone for an hour or more. Special missing code (.h) is assigned if the respondent does not have an informant interview. Informants who skipped this question because they only completed the short interview are coded as special missing (.q). Don't know or refused responses are coded as special missing (.r). Other missing is assigned special missing code (.m).

RwFINF_ALONE is a flag variable that indicates whether responses to RwINF_ALONE are imputed. It is coded as follows: 0.Not imputed, 2.Missing, 4.Refused, 12.No informant interview completed, and 16.Skipped because short interview. The original missing value is otherwise included.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

Questions in this section are MHAS Mex-Cog specific, and are not asked in the HRS-HCAP, ELSA-HCAP, and LASI-DAD.

The MHAS Mex-Cog has a different skip pattern in the questionnaire for the adequate informant, which is determined by the informant's responses to the CSI-D. If the informant answers affirmatively to two or more of six questions, this suggests the presence of cognitive deterioration in the respondent, and the long interview is carried out. Otherwise, the short interview is carried out. Thus, the MHAS Mex-Cog includes a special missing value .q in the informant assessment to capture informants who skipped certain questions due to only completing the short version of the adequate informant questionnaire.

Mex-Cog Variables Used

Wave 1 Informant Interview:

MI_Q39_16	39: can be alone for an hour or more? puede
MI_Q40_16	40: family members or friends take turns cari
MI_Q41_16	41: has somebody been paid to take care? se l

Section D: Health & Physical Measures

Self-rated Abilities

Wave	Variable	Label	Type
1	R1I_MEMORY	r1i_memory:w1 R self rated memory,present time(1-5)	Categ
1	R1I_COMPMEM	r1i_compmem:w1 R self rated memory compared to two years ago	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1I_MEMORY	1911	3.89	0.73	1.00	5.00
R1I_COMPMEM	1903	2.30	0.58	1.00	3.00

Categorical Variable Codes

Value	R1I_MEMORY
.d:DK	4
.m:Missing	5
.q:Skipped because short interview	115
.r:Refuse	7
1.Excellent	25
2.Very good	50
3.Good	328
4.Regular	1214
5.Bad	294

Value	R1I_COMPMEM
.d:DK	11
.m:Missing	5
.q:Skipped because short interview	115
.r:Refuse	8
1.Better	117
2.More or less the same	1089
3.Worse	697

How Constructed

RwI_MEMORY indicates how the respondent self-reported their memory at the present interview. RwI_MEMORY is coded as follows: 1.Excellent, 2.Very good, 3.Good, 4.Regular, and 5.Bad.

RwI_COMPMEM indicates how the respondent would compare their memory at the time of the current interview to two years ago. RwI_COMPMEM is coded as follows: 1.Better, 2.More or less the same, and 3.Worse.

Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q). Don't know, refused, or other missing responses are coded as special missing (.d), (.r), or (.m), respectively.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

These questions are not asked in the HRS-HCAP. The MHAS Mex-Cog, ELSA-HCAP, and LASI-DAD all ask respondents to self-report their memory at the present interview. However, each study also asks additional questions. The MHAS Mex-Cog asks respondents to compare their memory at the time of the current interview to two years ago. The ELSA-HCAP asks additional self-rated ability questions about their general health status, eyesight, hearing, and sense of smell, which are not asked in the other

studies. The LASI-DAD asks additional questions on hearing or seeing difficulty, sleep quality, and mental abilities, and also asks them to compare their memory or mental abilities at the time of the current interview to two years ago.

The MHAS Mex-Cog has a different skip pattern, which is determined by the respondent's cognitive performance on the MMSE. If the participant obtains a score higher than 10 points on the MMSE, they are given the total (long) version of the cognitive assessment. If they obtain a score of 10 points or less on the MMSE, they are asked to complete the partial (short) version of the assessment. Thus, the MHAS Mex-Cog includes a special missing value .q to capture respondents who skipped certain tasks due to only completing the short version of the cognitive assessment.

Mex-Cog Variables Used

Wave 1 Cognitive Assessment:

MC_Q44_16	44: how is your memory? como evaluaria usted
MC_Q45_16	45: memory today versus two years ago? su mem

Mental Health (CESD)

Wave	Variable	Label	Type
1	R1HDEPRES	r1hdepres:w1 R CESD felt depressed	Categ
1	R1HEFFORT	r1heffort:w1 R CESD everything was an effort	Categ
1	R1HSLEEPR	r1hsleepr:w1 R CESD sleep was restless	Categ
1	R1HWHAPPY	r1hwhappy:w1 R CESD was happy	Categ
1	R1HFLONE	r1hflone:w1 R CESD lonely	Categ
1	R1HENLIFE	r1henlife:w1 R CESD enjoyed life	Categ
1	R1HFSAD	r1hfsad:w1 R CESD felt sad	Categ
1	R1HFTIRED	r1hftired: w1 R CESD felt tired	Categ
1	R1HENERG	r1henerg:w1 R CESD a lot of energy	Categ
1	R1HCESD9	r1hcesd9:w1 R CESD score 9 item(0-9)	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
R1HDEPRES	1907	0.42	0.49	0.00	1.00
R1HEFFORT	1913	0.49	0.50	0.00	1.00
R1HSLEEPR	1914	0.51	0.50	0.00	1.00
R1HWHAPPY	1908	0.71	0.45	0.00	1.00
R1HFLONE	1914	0.30	0.46	0.00	1.00
R1HENLIFE	1907	0.77	0.42	0.00	1.00
R1HFSAD	1912	0.38	0.49	0.00	1.00
R1HFTIRED	1915	0.62	0.49	0.00	1.00
R1HENERG	1907	0.45	0.50	0.00	1.00
R1HCESD9	1874	3.80	2.70	0.00	9.00

Categorical Variable Codes

Value	R1HDEPRES
.d:DK	6
.m:Missing	5
.q:Skipped because short interview	115
.r:Refuse	9
0.No	1097
1.Yes	810

Value	R1HEFFORT
.d:DK	1
.m:Missing	5

```
.q:Skipped because short interview      |         115
.r:Refuse                               |           8
0.No                                    |         980
1.Yes                                   |         933

Value-----------------------------------|   R1HSLEEPR
.d:DK                                   |           1
.m:Missing                              |           5
.q:Skipped because short interview      |         115
.r:Refuse                               |           7
0.No                                    |         944
1.Yes                                   |         970

Value-----------------------------------|   R1HWHAPPY
.d:DK                                   |           9
.m:Missing                              |           5
.q:Skipped because short interview      |         115
.r:Refuse                               |           5
0.No                                    |         551
1.Yes                                   |        1357

Value-----------------------------------|    R1HFLONE
.d:DK                                   |           4
.m:Missing                              |           5
.q:Skipped because short interview      |         115
.r:Refuse                               |           4
0.No                                    |        1341
1.Yes                                   |         573

Value-----------------------------------|   R1HENLIFE
.d:DK                                   |           6
.m:Missing                              |           5
.q:Skipped because short interview      |         115
.r:Refuse                               |           9
0.No                                    |         446
1.Yes                                   |        1461

Value-----------------------------------|     R1HFSAD
.d:DK                                   |           5
.m:Missing                              |           5
.q:Skipped because short interview      |         115
.r:Refuse                               |           5
0.No                                    |        1180
1.Yes                                   |         732

Value-----------------------------------|   R1HFTIRED
.d:DK                                   |           2
.m:Missing                              |           5
.q:Skipped because short interview      |         115
.r:Refuse                               |           5
0.No                                    |         733
1.Yes                                   |        1182

Value-----------------------------------|    R1HENERG
.d:DK                                   |           9
.m:Missing                              |           5
.q:Skipped because short interview      |         115
.r:Refuse                               |           6
0.No                                    |        1057
1.Yes                                   |         850
```

How Constructed

Respondents are asked a series of questions that refer to how they have felt recently in the past week.

RwHDEPRES indicates whether the respondent has been depressed in the past week. A value of 0 indicates No and 1 indicates yes.

RwHEFFORT indicates whether the respondent felt that during the past week, everything has been an effort. A value of 0 indicates No and 1 indicates yes.

RwHSLEEPR indicates whether the respondent's sleep was restless during the past week. A value of 0 indicates No and 1 indicates yes.

RwHWHAPPY indicates whether the respondent felt happy in the past week. A value of 0 indicates No and 1 indicates yes.

RwHFLONE indicates whether the respondent felt lonely in the past week. A value of 0 indicates No and 1 indicates yes.

RwHENLIFE indicates whether the respondent enjoyed life in the past week. A value of 0 indicates No and 1 indicates yes.

RwHFSAD indicates whether the respondent felt sad in the past week. A value of 0 indicates No and 1 indicates yes.

RwHFTIRED indicates whether the respondent felt tired in the past week. A value of 0 indicates No and 1 indicates yes.

RwHENERG indicates whether the respondent had a lot of energy in the past week. A value of 0 indicates No and 1 indicates yes.

RwHCESD9 is the summary measure of RwHDEPRES, RwHEFFORT, RwHSLEEPR, RwHWHAPPY, RwHFLONE, RwHENLIFE, RwHFSAD, RwHFTIRED, and RwHENERG. Scores range from 0 to 9. RwHCESD9 is summed when no components are missing.

Respondents who skipped these questions because they only completed the short interview are coded as special missing (.q). Don't know, refused, or other missing responses are coded as special missing (.d), (.r), or (.m), respectively.

Cross Wave Differences in Mex-Cog

No differences known.

Differences with other HCAP studies

Each study varies in the number and type of questions asked in this section. The MHAS Mex-Cog has 9 items in this section while the HRS-HCAP and ELSA-HCAP ask the same 11 items and LASI-DAD asks 10 items.

In general, all studies included questions on whether respondents have felt depressed, enjoyed life, felt lonely, or felt happy. Scores in the MHAS Mex-Cog, HRS-HCAP, and ELSA-HCAP are based on a "0.No" and "1.Yes" scale, but the LASI-DAD expanded this further and used the following scale: 1.Rarely or never (less than 1 day), 2.Sometimes (1 or 2 days), 3.Often (3 or 4 days), and 4.Most or all of the time (5-7 days). The MHAS Mex-Cog and ELSA-HCAP sleep questions ask whether the respondent's sleep was restless while HRS-HCAP asks whether the respondent has trouble sleeping and LASI-DAD asks about the respondent's self-rated quality of sleep.

The MHAS Mex-Cog has a different skip pattern, which is determined by the respondent's cognitive performance on the MMSE. If the participant obtains a score higher than 10 points on the MMSE, they are given the total (long) version of the cognitive assessment. If they obtain a score of 10 points or less on the MMSE, they are asked to complete the partial (short) version of the assessment. Thus, the MHAS Mex-Cog includes a special missing value .q to capture respondents who skipped certain tasks due to only completing the short version of the cognitive assessment.

Mex-Cog Variables Used

Wave 1 Cognitive Assessment:

MC_Q46_10_16	46.10: last week, a lot of energy? la ultima
MC_Q46_1_16	46.1: last week, been depressed? la ultima se
MC_Q46_2_16	46.2: last week, everything an effort? la ult

MC_Q46_3_16	46.3: last week, trouble sleeping? la ultima
MC_Q46_4_16	46.4: last week, have you felt happy? la ulti
MC_Q46_5_16	46.5: last week, have you felt lonely? la ult
MC_Q46_7_16	46.7: last week, did you enjoy life? la ultim
MC_Q46_8_16	46.8: last week, did you feel sad? la ultima
MC_Q46_9_16	46.9: last week, did you fell tired? la ultim

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