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Una ventana a la vejez: Bienestar de la gente mayor en México e Inglaterra

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Resumen:

En la actualidad, hay varios estudios dentro de la literatura de la Economía del Desarrollo que abordan temas del bienestar de las personas de edad avanzada. Nuestro proyecto hará un estudio comparativo en encuestas tipo panel de dos países diferentes, México e Inglaterra, y se harán consideraciones acerca de la distribución del ingreso, la salud (salud física, salud mental y bienestar subjetivo), y los respectivos indicadores de bienestar que serán aproximados con métricas precisas de pobreza e inequidad. Muchas de las teorías y los hechos en relación a este tema se han quedado rezagados porque no existe un buen conjunto de datos que permitan el análisis a fondo. Afortunadamente para nuestro caso, es posible el acceso a dos bases de datos tipo panel interesantes. La primera base de datos de panel es el Estudio Nacional de Salud y Envejecimiento en México (ENASEM/MHAS). La segunda base de datos comparativa es el Estudio Longitudinal para el Estudio de la Gente Mayor de Inglaterra (English Longitudinal Study of Ageing-ELSA). Veremos cómo estos factores en su conjunto impactan el bienestar de las personas de edad avanzada, de tal manera que se podrá proporcionar mediciones exactas de bienestar, haciendo más factible la medición del impacto de políticas públicas en este estrato de la población.

Abstract

Recently, there are various studies in development literature that address elderly people's welfare. Our project will make a comparative study in two longitudinal surveys of populations of Mexico and England in regards to their income distribution, their health status (physical, mental health and subjective well-being) and their levels of welfare approximated with poverty and inequality levels of these populations. We will see how those factors all together make an impact on the elderly people's welfare. It is difficult to know certain facts or to prove theories in regards to elderly people unless a good data set is provided. Fortunately, for our case, we can get two datasets, the Mexican study MHAS/ENASEM (Mexican Health and Ageing Study), and the English survey ELSA (English Longitudinal Study of Ageing). This research will also provide a better means to measure the impact of public policy, through the accurate measurement of welfare, on this part of the population.

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1) Introduction

This paper is part of a broader on-going research in regards to the elderly people in Mexico and England. The demographic pyramid in developed countries and some developing countries has changed recently. Mexico and the United Kingdom are not the exception for this demographic trend. According to official sources, aged people are increasing their number more rapidly (Olshansky, 1997), and also they live longer (Furner et. al., 1997). For instance, in Mexico, elder population used to be 5.6% in the 70's, but in the year 2000 reached 7.1%, almost 7 million people (INEGI, 2005, p. 8). In England, estimates for 2007 say that there are almost 21% people aged 60 or older in England, that is about 11 million of elders (ONS, 2007).[2] We know that the cohort of "baby boomers" starts retirement at the end of the previous decade and there is an enormous pressure on the financial and the health system today because of that. Hence, elderly people have been the focus of recent studies because of the importance that that group represents for the society overall, and because of that, the interest of this research is to know more in depth about them, comparing how similar and dissimilar are elder populations in countries with different levels of development.

This paper relies on the effort of a new trend of studies about the aged.[3] Firstly, the use of state-of-the-art techniques to collect information have been increasing the chances to make better research, that is the case of longitudinal studies, which track people's information in an intertemporal framework. Secondly, various public programs are trying to increase elderly people's well being, and the impact of those programs in people's welfare is known better as more information is acquired in data sets. Our study will provide indicators that might help policy makers in order to quantify the size of the benefit of those programs that make impact on well being, at the same time that other scientists may know specific issues of this cohort. During the course of this study, we will know a little bit more about Mexican population, and we will compare their health and welfare with English population as well.

The focus of our study is in regards to elderly people's physical well being, mental health, subjective well being and income. The approximation of physical health with self perception measurement, and the pattern of its socioeconomic determinants

[2] From the 61 million people living in the UK, England represents roughly 51 million people, which is 83% of the total population.

[3] Discussion of these types of surveys in Corder and Manton (1991). A list of data sets available in http://en.wikipedia.org/wiki/Retirement#Data_sets.

have been documented in economic literature (Strauss et al. 1993). There is also a variety of studies that discusses mental health of elders (Hall et. al., 1989; Krenz et. al., 1988; Commenges et. al., 1992; Banerjee et al., 2006), so this important aspect of their lives, approximated in our study with cognition ability, influences in their well being overall. Literature on subjective well being (happiness), income, and other variables are researched nowadays with a variety of effects on people's lives (Blanchflower and Oswald, 2011), including elders. Therefore, our study will address these dimensions about people's well being, including stratification of age and gender, because nowadays these dimensions seem to matter in public discussion.

It is difficult to know certain facts or to prove theories in regards to elderly people unless a proper data set is provided. For our case, the Mexican study MHAS/ENASEM (Mexican Health and Ageing Study),[4] and the English survey ELSA (English Longitudinal Study of Ageing) are data sets available. Our project make a comparative study in these longitudinal surveys of two different populations (Mexico/England) in regards to their income distribution, their health status, which is physical, mental health and subjective well-being.[5] Our research will be focused on the study of two longitudinal datasets using traditional tools. Our study first describes the main dataset variables, such as people's age, health status or income averages, and those figures are compared with external sources of information in order to see their reliability. We also describe technical information about these datasets, for instance, number of participants, data set attrition, number of waves, etc. With all this information we have a sense of reliability for the econometric tests that will be performed later on.

2) Hypothesis

The main hypothesis is such that, regardless common characteristics of elderly people because of their age, there are significant differences of people when we consider their culture and the region where they live. Naturally, what we also expect is to see differences in regards to their earnings. We suspect that a variety of reasons, mainly historical, tends to shape elderly people's differences. In order to see those differences,

[4] The acronym in Spanish is known as ENASEM (Estudio Nacional de Salud y Envejecimiento en México).

[5] We are working also on measuring welfare approximated with poverty and inequality levels of these populations.

we will concentrate in particular aspects of elderly people (and relationships among those aspects) because we think those dimensions are important for society, as we see present literature in geriatrics.

3) Data sets

On the one hand, the Mexican Health and Aging Study (MHAS), is a survey that focuses its attention in the health of aged people in Mexico. This survey is funded by the National Institute on Aging and the National Institutes of Health in the United States.[6] This study provides a longitudinal panel with rounds in the year 2001 and 2003. Through this study, to track the same people along this study was possible; this was done in order to get an idea about the changes of status and patterns of behavior of the population older than 50 years with their spouses, these last ones regardless their age. Official estimates for Mexico of households with at least one elder (60+) are about a quarter of the total (23.3%), which means 5.3 million households (INEGI, 2005, p. 71). MHAS study is national representative of this population. This study includes, among other things, information about health care services and health conditions, cognition tests, data about employment, housing details, financial information such as income, pensions and assets data. This data set also includes anthropometric measures of the respondents and some questions that shed some light in regards to issues of migration to the United States.

On the other hand, we have The English Longitudinal Study of Ageing (ELSA), which is, according to their sources, "an interdisciplinary data resource on health, economic position and quality of life as people age" (IFS, 2008).[7] There are four rounds, from the year 1998 to the year 2004. The aim of this survey is to provide relevant information about health, economic issues and social networks of the ageing population in the UK, particularly in England, which are 50 years old individuals with their spouses, these last ones regardless their age. This survey was funded, among others, by the National Institute on Aging in the US.[8]

We see the tradition of the US' type of longitudinal studies in both data sets. The MHAS project was a joint effort of the University of Pennsylvania, Maryland and

[6] NIA/NIH grant. AG18016.
[7] http://www.ifs.org.uk/elsa/index.php, accessed on September 22, 2008.
[8] Economic and Social Data Service (ESDS), (http://www.esds.ac.uk/findingData/snDescription.asp?sn=5050, accessed on September 23, 2008)

Wisconsin in the US, and the institute of information in Mexico (Instituto Nacional de Estadistica, Geografia e Informatica –INEGI).[9] This project has the purpose to answer questions in regards to the influence of the Mexican migrant population on the US population. The questions have the purpose to know a bit more about the seeming 'Hispanic paradox',[10] which shows in general better health of the Mexican born migrants than of the Mexican-American born population living in the United States. For the ELSA study, the survey was funded by the National Institute on Aging in the US, and in the same degree by several governmental institutions in the UK, such as the Department of Health, or the Department of Work and Pensions, among others.

On the one hand, the sample of MHAS is nationally representative, so this study includes enough observations that consider appropriately urban and rural areas. Most of the information provided use as a basis the household, with details about the selected individuals that are 50 or older with their spouses. The total number of observations was about 11,000 households. Six states were 'over-sampled', because of the importance of those states on the contribution of migrants to the US (Durango, Guanajuato, Jalisco, Michoacan, Nayarit and Zacatecas). Once the households were randomly selected, the chosen person of 50 years of older was also randomly selected. In the case of two or more persons of 50 years of older within the same household, only one of the individuals was chosen for the interview.[11] The percentage of females in the sample was about 53.3, and there is no substitution of the respondents that were not found or were deceased in the second round.

On the other hand, in the ELSA study, there are general categories of information that are common to all the rounds in the panel, but some waves have more information than others, as is the case when nurse visits were included. The sample for ELSA study was drawn from another survey, the Health Survey for England (HSE). HSE, which include information collected for the years 1998, 1999 and 2001, is known as 'ELSA wave 0'.[12] So taking as a basis HSE, the first round of ELSA (wave 1) was surveyed on 2002. Subsequent rounds were done in a biannual basis. The fourth round of 2008 is still

[9] INEGI (2004). 'Estudio Nacional de Salud y Envejecimiento en México (ENASEM) 2001: Documento Metodológico, Reporte de Proyecto, Versión 2'. (http://www.mhas.pop.upenn.edu/english/documents/Methodological/Doc_metodologico-v2.pdf, accessed September 22, 2008).

[10] http://www.mhas.pop.upenn.edu/english/project_sg.htm, accessed September 21, 2008.

[11] Detail of the procedure in INEGI (2004), section 1.4.

[12] The common variables of the three different years of HSE can be found on IFS (2008a). 'English Longitudinal Study of Ageing (ELSA): User Guide for the Wave 0 (HSE) Core Datasets'. Available in (http://www.esds.ac.uk/findingData/snDescription.asp?sn=5050, retrieved September 23, 2008).

an ongoing agenda. In general, ELSA study provides information about health and life expectancy. Not only physical health, but also cognitive health is included. There is a variety of economic indicators asked in the survey, such as retirement market activity, social networks participation, and family structure of the respondents, among other things. The basis of the ELSA study is the individual. In 2002, the number of respondents, including their spouses was 12,100, 56% of them were female. Just up to the third round some substitution of the deceased or the non located persons was done. Detail of these two surveys in **Appendix 11)a)**.

4) General Statistics

In order to show the age stratification and gender distribution, we choose Wave 1 of ELSA study as a typical wave in **Table 1**. The results of the other waves are quite similar. At the left we have all the members of the data set in Wave 1, while at the right we have only the core members, the proportions are similar as well. If we focus on the gender distribution of the core members, we have a slightly higher proportion of females on the distribution. The increasing proportion of females in regards to the age strata, for instance, 13.6% females vs. 10.4% males for people aged more than 80 years, is consistent with the stylized fact that females live longer. Our estimates are similar to those of the Office for National Statistics in the UK, which says that "The ratio of females to males increases progressively from 1.1 at age 70, to 2.1 by the age of 89. This reflects the higher life expectancy of women at older ages and higher male mortality during the Second World War."[13]

[13] "Population Estimates. UK population grows to 61.8 million." http://www.statistics.gov.uk/CCI/nugget.asp?ID=6&Pos=3&ColRank=2&Rank=160. Retrieved 9 March, 2011.

Table 1

Age and Gender, wave 1, all members and only core members

Gender and age stratification of wave 1*
ALL MEMBERS

	Gender		
	men	women	Total
Age			
<=49	1.6%	3.7%	4.1%
50-54	9.7%	9.6%	15.8%
55-59	12.0%	11.0%	18.8%
60-64	9.5%	7.9%	14.1%
65-69	9.6%	8.1%	14.3%
70-74	8.0%	7.2%	12.4%
75-79	6.0%	5.4%	9.3%
>=80	6.1%	7.4%	11.2%
Total	44.1%	55.9%	100.0%
n	5,335	6,764	12,099

*ELSA data

Gender and age stratification of wave 1*
CORE MEMBERS

	Gender		
	men	women	Total
Age			
<=49	0.0%	0.0%	0.0%
50-54	15.7%	15.4%	15.3%
55-59	20.3%	20.0%	19.8%
60-64	16.1%	14.4%	14.9%
65-69	16.2%	14.7%	15.1%
70-74	13.6%	13.0%	13.1%
75-79	10.2%	9.9%	9.9%
>=80	10.4%	13.6%	11.9%
Total	45.5%	54.5%	100.0%
n	5,186	6,205	11,391

*ELSA data

For Mexico we also choose Wave 1 of MHAS study as a typical wave (**Table 2**). Here, similar stylized facts are present, as is the increasing proportion of females in regards to the age strata, but this higher proportion of females is present since earlier times, for instance, there are 17.1% females vs. 14.3% for males in the 60-64 year strata. According to official sources, the "feminization" of elder population accounts for 88 males for every 100 females at the age of 60, and increases this female proportion at the age of 85 having 74 males for every 100 females (INEGI, 2005, p. 8). For the UK population, the bigger gender gap is only noticeable after the age of 80. This means that being male in a developed country reduces life expectancy much more than is reduced for females.

Table 2

Age and Gender, wave 1, all members and only core members

Gender and age stratification of wave 1*
ALL MEMBERS

	Gender		
	men	women	Total
Age			
<=49	3.6%	17.2%	11.3%
50-54	24.6%	21.2%	22.7%
55-59	20.2%	17.6%	18.8%
60-64	16.0%	14.6%	15.2%
65-69	13.6%	10.9%	12.1%
70-74	9.7%	7.8%	8.6%
75-79	6.8%	5.4%	6.0%
>=80	5.5%	5.3%	5.4%
Total	43.0%	57.0%	100.0%
n	6,603	8,736	15,339

*MHAS

Gender and age stratification of wave 1*
CORE MEMBERS

	Gender		
	men	women	Total
Age			
<=49	1.7%	1.3%	1.5%
50-54	29.7%	22.8%	26.0%
55-59	20.0%	20.1%	20.1%
60-64	14.3%	17.1%	15.8%
65-69	12.7%	13.6%	13.2%
70-74	9.3%	10.2%	9.8%
75-79	6.8%	7.1%	7.0%
>=80	5.6%	7.8%	6.8%
Total	45.9%	54.1%	100.0%
n	4,495	5,289	9,784

Individuals' economic activity of the English population is seen in **Table 3,** Wave 1, core members only. The distribution for the entire sample (not shown) is very similar than for the core members just presented here. Not surprisingly, the percentage of retired people is an increasing proportion, and employed and self-employed people consistently decrease through time. The people disable to work became retired as well. For Wave 1, the proportions are slightly different than for Wave 0 (not shown): the proportion of retired people is higher, but this can be understood in the sense that Wave 1 was a subset of Wave 0 sample; therefore, the persons within this sample were relatively older than the previous sample at the time of the survey. Some people started to be replaced, as we said, only up to Wave 3; that some people needed to be replaced because of natural ageing of the panel was considered because during the course of the interviews unfortunately some people die.

Table 3

Economic activity by age, wave 1, core members only (ELSA)

Economic Activity of wave 1* by age.
CORE MEMBERS ONLY

	Economic activity							
Age	Retired	Employed	Self Employed	Unemployed	Disable to work	Looking after home	Other	Total
<=49								0%
50-54	4%	64%	11%	2%	9%	9%	1%	15%
55-59	10%	54%	10%	2%	11%	11%	2%	20%
60-64	42%	29%	7%	2%	10%	9%	2%	15%
65-69	78%	7%	3%	0%	3%	8%	1%	15%
70-74	84%	2%	2%	0%	2%	10%	1%	13%
75-79	86%	0%	1%	0%	2%	9%	1%	10%
>=80	84%	0%	0%	0%	4%	11%	1%	12%
Total	50%	26%	6%	1%	7%	10%	1%	100%
n	5696	2973	634	118	745	1092	133	11391

*ELSA data

Table 4 shows economic activity for Mexicans. The same as in England, we have the same stylized fact of the percentage of retired people being increased. Being different to the English population, where people disable to work became retired or looking after home, more Mexican people disable to work remained disabled to work in an increasing proportion.

Table 4

Economic activity by age, wave 1, core members only (MHAS)

Economic Activity of wave 1* by age.
CORE MEMBERS ONLY

	Economic activity							
Age	Retired	Employed	Self Employed	Unemployed	Disable to work	Looking after home	Other	Total
<=49	3%	57%	22%	1%	6%	10%	0%	2%
50-54	4%	52%	20%	1%	7%	16%	0%	28%
55-59	9%	42%	20%	1%	9%	20%	0%	20%
60-64	17%	29%	18%	0%	13%	24%	0%	16%
65-69	20%	21%	17%	0%	16%	25%	0%	13%
70-74	23%	18%	13%	0%	23%	23%	0%	9%
75-79	21%	12%	14%	0%	30%	21%	0%	7%
>=80	18%	6%	8%	0%	43%	24%	1%	6%
Total	13%	34%	17%	0%	15%	20%	0%	100%
n	1055	2767	1419	37	1202	1668	29	8177

* MHAS data

In England, the Social Occupational Sector distribution by age stratification is shown in Error! Reference source not found.. The concentration in regards to the occupational sectors remains more or less the same across waves, and the age stratification varies within each wave accordingly. The last issue is understandable, because in the HSE survey, the age of the respondents was not a major concern, but it became a central issue in ELSA waves, so many observations were dropped if those did not account with the condition of having an elder person in the household. The information about the occupational sectors is not available in all the waves, but that information might be inferred from previous waves where the respondent answers for the first time. The sector codes in these tables are the following:

1 Managers and senior officials
2 Professional occupations
3 Associate professional and technical occupations
4 Administrative and secretarial occupations
5 Skilled trade occupations
6 Personal service occupations
7 Sales and customer service occupations
8 Process, plant and machine operatives
9 Elementary occupations

Table 5

Social Occupational Sector by age, wave 1, core members only (ELSA)

Social Occupational Sector of wave 1* by age.
CORE MEMBERS ONLY

	Social Occupational Sector									
	1	2	3	4	5	6	7	8	9	Total
Age										
<=49										0%
50-54	14%	12%	11%	15%	11%	9%	7%	9%	13%	15%
55-59	13%	10%	10%	15%	12%	7%	7%	9%	16%	20%
60-64	11%	11%	9%	13%	12%	8%	7%	13%	15%	15%
65-69	10%	9%	8%	16%	12%	6%	8%	13%	19%	15%
70-74	10%	9%	7%	16%	14%	6%	6%	13%	19%	13%
75-79	10%	10%	7%	18%	15%	5%	7%	14%	14%	10%
>=80	10%	8%	8%	20%	12%	5%	7%	13%	17%	12%
Total	11%	10%	9%	16%	12%	7%	7%	12%	16%	100%
n	1265	1117	988	1768	1384	743	776	1305	1802	11148

*ELSA data

For Mexico, the Social Occupational Sector distribution by age stratification is shown in Error! Reference source not found.. The sector codes in these tables are the following:

1 Professional

2 Technicians

3 Educators

4 Workers in Art, Shows, and Sports

5 Officials and Directors in the Public, Private, and Social Sectors

6 Workers in Agriculture, Livestock, Forestry, and Fishing

7 Bosses, Supervisors, etc. in Artistic and Industrial Production and in Repair and Maintenance Activities

8 Artisans and Workers in Production, Repair, and Maintenance

9 Operators of Fixed Machinery and Equipment for Industrial Production

10 Assistants, Laborers, etc. in Industrial Production, Repair, and Maintenance

11 Drivers and Assistant Drivers of Mobile Machinery and Transport Vehicles

12 Department Heads, Coordinators, and Supervisors in Administrative and Service Activities

13 Administrative Support Staff

14 Merchants and Sales Representatives

15 Travelling Salespeople and Travelling Salespeople of Services

16 Workers in the Service Industry

17 Domestic Workers

18 Safety and Security Personnel

19 Other Workers

Table 6

Social Occupational Sector by age, wave 1, core members only (MHAS)

Social Occupational Sector of wave 1* by age.
CORE MEMBERS ONLY

	Social Occupational Sector																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total
Age																				
<=49	3%	3%	2%	2%	2%	16%	2%	18%	3%	2%	6%	3%	5%	10%	2%	7%	8%	4%	1%	2%
50-54	4%	4%	5%	1%	2%	13%	2%	18%	3%	3%	5%	2%	7%	11%	2%	6%	9%	2%	1%	28%
55-59	2%	3%	4%	1%	2%	17%	1%	17%	3%	4%	5%	2%	6%	11%	2%	6%	13%	2%	0%	20%
60-64	2%	3%	3%	1%	2%	19%	1%	16%	2%	2%	4%	1%	5%	13%	3%	6%	15%	2%	1%	16%
65-69	2%	3%	3%	0%	1%	25%	1%	19%	3%	2%	4%	1%	4%	10%	3%	6%	13%	2%	0%	13%
70-74	1%	3%	2%	1%	1%	24%	1%	20%	3%	3%	4%	1%	4%	9%	3%	4%	15%	1%	1%	9%
75-79	1%	1%	2%	0%	2%	28%	1%	18%	3%	3%	3%	2%	3%	9%	2%	4%	16%	1%	1%	7%
>=80	1%	2%	3%	1%	1%	32%	1%	19%	1%	2%	2%	1%	3%	7%	1%	4%	16%	2%	2%	6%
Total	2%	3%	4%	1%	2%	20%	1%	18%	3%	3%	4%	2%	5%	10%	2%	5%	13%	2%	1%	100%
n	194	239	295	50	149	1586	96	1441	210	218	360	131	425	846	184	444	1021	151	53	8093

* MHAS data

5) Self perception of Health.

There is a variety of studies that support the use of self-perception of health in order to approximate physical health as a reliable source (Whalin, 2004, p. 281; Strauss et. al. 1993, p. 796, and several references therein), so we will use the information contained in the data in regards to this finding.[14] The self-reported health provides information in order to track changes on individuals in different periods of time. There is a question in how a person considers his health in general in the ELSA study, and here we found that English people consider themselves 'healthy' in average. The numbers are consistent in every cross section, for instance, in a typical wave, lets say Wave 1 (in

Table 7), the reports of 'very good' and 'good' health are higher first and later decrease consistently throughout time. The distribution is skewed towards 'fair-good' reports. There are differences in regards to gender in the reported health, males reporting slightly more 'bad' health, and females with higher reports of 'not good' health, but the averages overall here are quite the same. There are some stylized facts in regards to gender that become noticeable in the Mexican case.

[14] The correlation measures of physical functioning and self-perception of health have a small bias when education is considered, such as more educated people report fewer problems. Further, the correlation checks have been performed for elderly people mostly in developed countries (Strauss et. al. 1993, p. 796}, so, though the reliability of these surveys in general has been established, it might be worth to check the accuracy of self perception of health with physical health in future research, particularly for Mexico and the UK .

Table 7

Self-reported health by age and gender, wave 1, core members only.

Self-reported health by gender and age stratification of wave 1* (MALES)
CORE MEMBERS

Age	Self Reported Health					
	Very Good	Good	Fair	Not good	Bad	Total
<=49						0%
50-54	19%	31%	29%	13%	8%	15%
55-59	14%	29%	32%	15%	10%	20%
60-64	16%	25%	27%	22%	10%	15%
65-69	14%	23%	33%	23%	8%	15%
70-74	11%	24%	29%	26%	10%	14%
75-79	12%	25%	31%	20%	12%	10%
>=80	8%	24%	26%	27%	15%	11%
Total	14%	26%	30%	20%	10%	100%
n	354	671	764	517	258	2,564

* ELSA data

Self-reported health by gender and age of wave 1* (FEMALES)
CORE MEMBERS

Age	Self Reported Health					
	Very Good	Good	Fair	Not good	Bad	Total
<=49						0%
50-54	18%	31%	29%	15%	7%	15%
55-59	15%	32%	27%	18%	8%	19%
60-64	14%	29%	30%	20%	6%	15%
65-69	14%	29%	35%	17%	6%	15%
70-74	10%	21%	30%	26%	13%	13%
75-79	8%	24%	36%	22%	10%	10%
>=80	10%	19%	29%	30%	12%	13%
Total	13%	27%	30%	21%	9%	100%
n	395	815	913	619	262	3,004

* ELSA data

At the difference with the English data, which is skewed towards 'fair-good' reports, the Mexican people report consistently a poorer health condition (in **Table 8**). Most of the distribution relies on the 'fair-not good' condition. There are differences in regards to gender in the reported health for Mexicans: females consistently and strongly reported weaker health in all strata, though they live longer (Wahlin, 2004, p. 287). "Not good" and "bad" health for females account for 70% of their reporting, while males report only 55% percent in the same categories. This last finding is unlikely to be an indication of reporting bias, and is a common pattern in a variety of studies in the US and other countries, so a misallocation of resources might be present (Strauss et. al. 1993, p. 793).

Table 8

Self-reported health by age and gender, wave 1, core members only (MHAS)

Self-reported health by gender and age stratification of wave 1* (MALES)

Age	Self Reported Health					
	Very Good	Good	Fair	Not good	Bad	Total
<=49	6%	9%	44%	36%	6%	2%
50-54	4%	9%	42%	39%	7%	30%
55-59	2%	7%	39%	41%	12%	20%
60-64	2%	5%	35%	44%	13%	14%
65-69	2%	4%	32%	44%	18%	13%
70-74	1%	3%	33%	41%	22%	9%
75-79	1%	4%	31%	40%	24%	7%
>=80	1%	4%	24%	46%	25%	5%
Total	2%	6%	37%	41%	14%	100%
n	99	249	1,494	1,682	552	4,076

* MHAS data

Self-reported health by gender and age of wave 1* (FEMALES)

Age	Self Reported Health					
	Very Good	Good	Fair	Not good	Bad	Total
<=49	0%	2%	29%	63%	6%	1%
50-54	2%	4%	30%	51%	13%	23%
55-59	1%	3%	29%	50%	16%	21%
60-64	1%	2%	26%	53%	17%	17%
65-69	2%	3%	22%	51%	22%	13%
70-74	1%	2%	21%	50%	25%	10%
75-79	1%	2%	18%	50%	29%	7%
>=80	1%	3%	21%	49%	26%	7%
Total	1%	3%	26%	51%	19%	100%
n	73	153	1,267	2,514	919	4,926

* MHAS data

6) Cognition

An important aspect of elders well being is related with their mental health. There is a variety of ways to measure mental health (Albert, 1997), and is documented that an aspect of mental ability, which is cognition, is closely correlated with mental health. We care about people's cognition because that is usually associated with diseases found on

elderly people, as is dementia or Alzheimer disease.[15] On the one hand, there is a well documented body of research that talks about the myth saying that elder people loose mental ability because of the normal process of ageing, where sometimes, seems to be the opposite (Park and Minear, 2004, p. 19; Furner et. al. 1997, p. 41;). On the other hand, there is a variety of physical disorders that have effects on mental health, and those are the ones that more frequently occur as people age (Albert, 1997, p. 181). Therefore, in this study, as proxies for health status, we use self reported cognition ability (only available for ELSA study), and cognition measured by word recall.

As we said before, there are several ways to measure cognition ability (Albert, 1997; Commenges et. al., 1992). One way to measure it could be self-perception. If this is the case, there is a question in the survey about the self perception of cognition ability, for instance: 'How would you rate your memory at present time?' (Excellent/Very Good/Good/Fair/Poor). If this question is analyzed in a cross sectional data set, the problem of individual heterogeneity can bias the information, because each individual might have a different perceptions of their own ability, and rate him/herself differently. Rather than to look only at a cross section of individual effects, individual changes on these perceptions is possible to analyze in a longitudinal data set, so the possible bias is diminished importantly. Another way to measure cognition ability is through a word recall count. This is a very direct way: the respondents are asked to recall a simple list of words. In order to avoid some bias related with the words themselves, from a variety of lists, a single list is chosen randomly. Then, words are loudly and clearly read once, and then, the respondents have up to two minutes to recall as many words as they can. The immediate recall of words is recorded by the interviewer; this is what is known as the 'immediate recall'. Later on in the interview, without noticing the person that a second check will take place, the interviewer asks again about the same words read minutes before. Then the respondents answer as many words as they recall again. This is the 'delayed recall'.

So, we start with self reported cognition. In **Table 9** is shown self reported cognition ability for English people; the question is about how people rate their memory at the present time.[16] In general, people report worse memory through time, but the

[15] "The Dementia involves a multifaceted loss of intellectual abilities, such as memory, judgment, abstract thought, and other higher cortical functions, and changes in personality and behavior." (APA, 1987, p. 119).

[16] This is the question for Waves 1-3. For Wave 0 the question is related with the ability to be concentrated, with a categorical variable of four rankings, rather than five.

average member think that they have either 'good' or 'fair' memory. In regards to gender, it seems to be that female report slightly better memory than males in average,[17] and this issue is accentuated in the cohort between 65 and 80 years.

Table 9

Self-reported memory by age and gender, wave 1, core members only

Self-reported memory by gender and age of wave 1* (MALES)
CORE MEMBERS

	Self reported memory					
Age	Very Good	Good	Fair	Not good	Bad	Total
<=49						0%
50-54	9%	22%	41%	23%	6%	15%
55-59	8%	21%	40%	26%	6%	20%
60-64	5%	24%	37%	27%	7%	16%
65-69	5%	20%	41%	28%	6%	16%
70-74	4%	21%	39%	27%	9%	13%
75-79	4%	25%	37%	25%	9%	10%
>=80	5%	17%	38%	26%	14%	10%
Total	6%	21%	39%	26%	7%	100%
n	297	1,075	1,972	1,314	377	5,035

* ELSA data

Self-reported memory by gender and age of wave 1* (FEMALES)
CORE MEMBERS

	Self reported memory					
Age	Very Good	Good	Fair	Not good	Bad	Total
<=49						0%
50-54	5%	18%	44%	26%	6%	16%
55-59	4%	22%	41%	27%	6%	20%
60-64	5%	20%	46%	25%	5%	14%
65-69	5%	24%	44%	23%	4%	14%
70-74	4%	23%	42%	26%	5%	13%
75-79	5%	22%	43%	25%	5%	10%
>=80	5%	21%	37%	27%	10%	13%
Total	5%	21%	42%	26%	6%	100%
n	291	1,295	2,570	1,550	351	6,057

* ELSA data

There is not self-reported cognition ability in the Mexican study, but there is, as we explain before, an objective way that was used to measure cognition in both ELSA and MHAS studies. We notice that techniques used in both studies were quite similar, so we are able to compare the results in both populations. As it is explained above, the list of words was read once, and then the respondent gave answers. The methodology to get the answers is totally comparable in the way the survey was conducted, but there are some small variants. For instance, in England, the respondents were asked 10 words, while in Mexico were given just 8. For comparison purposes, we use percentage of words recalled rather than word count. **Table 10** show the immediate average answers of the respondents by country, age and gender of representative waves. In this table can be clear that cognition ability decreases with age, and that females perform better in this task. This study shows that, in average, English people perform 13 points better than Mexicans.

Table 10

Cognition comparison, England-Mexico. Immediate memory.

Cognition ability Mexico and England, Core members (MHAS/ELSA data)
Immediate recalling*

	Mexico			England		
Age	Male	Female	Overall	Male	Female	Overall
<=49	0.54	0.55	0.54	-	-	-
50-54	0.51	0.51	0.51	0.64	0.65	0.64
55-59	0.48	0.49	0.49	0.61	0.63	0.62
60-64	0.45	0.46	0.46	0.58	0.61	0.60
65-69	0.41	0.43	0.42	0.55	0.58	0.57
70-74	0.37	0.40	0.38	0.51	0.54	0.53
75-79	0.35	0.35	0.35	0.48	0.50	0.49
>=80	0.29	0.31	0.30	0.40	0.42	0.41
Overall	0.42	0.43	0.42	0.54	0.56	0.55

* Percentage of words recalled, (10 words UK, 8 in Mexico)

[17] This is the general finding; we are working on checking objectively this issue with the word counting.

Later on, the respondents were asked to remember again the past list of words. This delayed cognition is shown in **Table 11**, where the general results in regards to age and gender remain, but it seems to be here that Mexicans perform better in the delayed cognition by 14 percentage points.[18]

Table 11

Cognition comparison, England-Mexico. Delayed memory

Cognition ability Mexico and England, Core members (MHAS/ELSA data)
Delayed recalling*

	Mexico			England		
Age	Male	Female	Overall	Male	Female	Overall
<=49	0.68	0.71	0.69	-	-	-
50-54	0.64	0.68	0.66	0.52	0.52	0.52
55-59	0.61	0.65	0.63	0.49	0.52	0.50
60-64	0.57	0.62	0.60	0.44	0.49	0.47
65-69	0.53	0.58	0.56	0.40	0.45	0.43
70-74	0.48	0.52	0.50	0.36	0.41	0.38
75-79	0.45	0.49	0.47	0.32	0.35	0.34
>=80	0.36	0.41	0.39	0.23	0.24	0.24
Overall	0.53	0.57	0.55	0.39	0.43	0.41

* Percentage of words recalled, (10 words UK, 8 in Mexico)

In order to make the results comparable by country, we calculate the decay on cognition, that is the difference between the first (immediate) and the second (delayed) round of recalled words, that is shown in **Table 12**.[19] Gender and age issues remain the same, and there are up to 6 percentage points of difference between Mexicans and English people.

Table 12

Cognition comparison, England-Mexico. Decay on cognition.

Cognition ability Mexico and England, Core members (MHAS/ELSA data)
Decay on cognition*

	Mexico			England		
Age	Male	Female	Overall	Male	Female	Overall
<=49	0.04	0.03	0.04	-	-	-
50-54	0.08	0.06	0.07	0.12	0.12	0.12
55-59	0.08	0.07	0.08	0.13	0.12	0.12
60-64	0.09	0.07	0.08	0.14	0.12	0.13
65-69	0.09	0.08	0.08	0.14	0.13	0.14
70-74	0.09	0.08	0.09	0.15	0.13	0.14
75-79	0.09	0.10	0.09	0.16	0.15	0.15
>=80	0.11	0.11	0.11	0.17	0.18	0.17
Overall	0.09	0.08	0.08	0.14	0.14	0.14

* % difference between immediate and delayed recall (higher is worse)

[18] There was a small difference here, in the immediate recalling section, for Mexico it seems to be that the list was read again twice, and the answers were recorded. The respondents have the chance to test their progressive ability in order to remember the lists of words, so they have three 'immediate' recalls, but as it is expected, the second and third round of immediate recalling is an increasing number in average. From the immediate answers, seems to be that only the first round is totally comparable with the English procedure.

[19] For the Mexican survey, it is considered the last of the immediate recalling, not the first one.

7) Subjective well being (happiness).

An alternative measurement of well being that has been gaining recognition in economics literature is related with the subjective nature of well being, commonly known as happiness. Despite the fact that this measurement was taken aside from economic mainstream because of the supposedly imprecise nature of this, just recall the work of Robbins (1932, 1938) rejecting interpersonal comparisons assumed by Bentham's utilitarianism, the subjective nature of well being has been studied again. In the beginning, the abuse of this type of subjective measurement 'as the only' well being measured by sociologists was pointed out, but the difficulty to assess well being only in regards to 'informational' or 'objective' ways (e.g. income) was recognized (Sen, 1998, p. 84). Nowadays there is a body or research that includes comparisons of well being among different persons, or research that consider the use of questionnaires with self assessment of happiness. There is list of references in Sen (1998, p. 84), or a more comprehensive literature in Blanchflower and Oswald (2011, pp. 1-2).

The self-reported perception of happiness for English elderly people is available in **Table 13**. The question evaluated here is whether the person has been feeling reasonably happy recently, all the things considered. We can see that most of the people assess their own happiness as 'the same' (83%), with variants in regards to gender and age. Related with age, the feeling of 'more' happiness than usual decreases with age, but not very much. Interestingly, females report slightly higher scores at both ends of the distribution, which is clear by the report of a more exacerbated feeling of happiness/unhappiness. This issue might be consistent with the common knowledge that females are more emotional.

Table 13

Feeling of happiness by age and gender, wave 1, core members only.

Happiness by gender and age of wave 1* (MALE)
CORE MEMBERS

Age	Have you been reasonable happy? More	The same	Less	Not at all	Total
<=49					0%
50-54	10%	82%	7%	1%	16%
55-59	8%	83%	7%	1%	20%
60-64	9%	85%	5%	1%	16%
65-69	8%	87%	4%	1%	16%
70-74	9%	86%	3%	1%	13%
75-79	9%	85%	5%	1%	10%
>=80	7%	87%	4%	2%	9%
Total	9%	85%	5%	1%	100%
n	403	3,919	249	57	4,628

* ELSA data

Happiness by gender and age of wave 1* (FEMALE)
CORE MEMBERS

Age	Have you been reasonable happy? More	The same	Less	Not at all	Total
<=49					0%
50-54	11%	78%	8%	2%	16%
55-59	11%	80%	7%	2%	21%
60-64	11%	81%	7%	1%	15%
65-69	10%	85%	4%	1%	15%
70-74	9%	85%	6%	1%	13%
75-79	10%	83%	5%	1%	9%
>=80	7%	87%	5%	1%	12%
Total	10%	82%	6%	1%	100%
n	558	4,556	347	80	5,541

* ELSA data

For the Mexican population, the perception of happiness is available in **Table 14**. These tables show a constructed indicator made of several questions in regards to subjective well-being (happiness, loneliness, depression, etc.), in order to make the results comparable with the English population contained in the ELSA study. In general, what we could find is that males report being happier in general. In the Mexican case, the difference is much more significant, up to 13 percentage points by each category. What we see in the data is that females report more problems of depression and loneliness. The general case that the feeling of happiness decreases with time is also found in Mexico. We can also see that Mexican women report higher feeling of happiness and unhappiness, issue that was found in ELSA study as well, but more accentuated in the Mexican side.

Table 14

Feeling of happiness by age and gender, wave 1, core members only (MHAS)

Happiness by gender and age of wave 1* (MALE)

	Have you been reasonable happy?				
Age	More	The same	Less	Not at all	Total
<=49	49%	31%	17%	3%	2%
50-54	52%	32%	12%	3%	30%
55-59	46%	33%	16%	5%	20%
60-64	44%	34%	16%	5%	14%
65-69	38%	36%	19%	6%	13%
70-74	38%	36%	20%	7%	9%
75-79	35%	32%	27%	7%	7%
>=80	25%	41%	22%	12%	5%
Total	44%	34%	17%	5%	100%
n	1,765	1,351	673	211	4,000

* MHAS data

Happiness by gender and age of wave 1* (FEMALE)

	Have you been reasonable happy?				
Age	More	The same	Less	Not at all	Total
<=49	43%	17%	27%	13%	1%
50-54	35%	29%	24%	11%	24%
55-59	34%	30%	25%	11%	21%
60-64	31%	31%	26%	12%	18%
65-69	27%	31%	29%	13%	13%
70-74	27%	29%	27%	17%	10%
75-79	26%	30%	30%	14%	7%
>=80	19%	29%	35%	18%	7%
Total	31%	30%	27%	13%	100%
n	1,474	1,434	1,286	617	4,811

* MHAS data

8) Income

There are no big surprises when we analyze income of elderly people: English people are richer and Mexican distribution is more unequal. In England, the bigger the household size means the bigger the income. For Mexico, a bigger household number means less income. Older people in England have less income, but on the contrary, older people in Mexico have more income. The explanation for these findings is related with cultural and institutional differences. In Mexico, for instance, elders need to work even after retirement age, this is because the lack of an effective pension system, then, it seems to be as if as people age they increase their salary, that only means that they are still working in order to have a decent way of living. Also, there is still some sort of 'parental' pension system going on in Mexico, so there are social norms in regards to transfers from younger generations to their relatives. These issues can explain why elder people in Mexico 'increase' their income through time. On the other hand, the tradition in Mexico of younger generations joining households with elders, but not always

contributing to the household budget, can explain why the bigger the household mean less income.

For England, **Table 15** shows the individual income per household size and age, it also includes an overall mean (389.66 GBP), and the distribution of the median income. The numbers between the median and the mean are not very different.

Table 15

Mean and Median Income, core members, England-ELSA (2002)

MEAN household income by age and size of household, Wave 1*
CORE MEMBERS (Weekly income)

	Household Size					Mean
	1	2	3	4	>=5	All Sizes
Age						
<=49	0.00	0.00	0.00	0.00	0.00	0.00
50-54	249.70	448.43	480.54	520.78	620.67	453.13
55-59	214.45	458.05	505.63	486.59	450.09	433.33
60-64	226.16	438.69	380.40	334.43	384.38	391.48
65-69	193.03	371.30	283.19	305.77	326.36	322.39
70-74	169.54	314.47	262.60	306.62	306.38	269.02
75-79	154.17	277.85	233.78	182.50	206.87	230.40
>=80	162.23	271.22	185.46	138.75	270.25	203.94
All ages	185.57	382.85	423.88	456.31	499.71	389.66
n	2,850	6,358	1,378	608	197	11,391

* ELSA data

MEDIAN household income by age and size of household, Wave 1*
CORE MEMBERS (Weekly income)

	Household Size					Median
	1	2	3	4	>=5	All Sizes
Age						
<=49	0.00	0.00	0.00	0.00	0.00	0.00
50-54	195.02	397.86	435.66	456.71	492.82	397.86
55-59	172.06	377.94	397.87	414.82	339.39	353.12
60-64	160.88	333.34	306.32	317.34	333.00	300.23
65-69	150.69	281.78	229.79	291.90	313.08	252.54
70-74	135.00	240.23	245.92	295.22	170.00	205.87
75-79	117.87	218.53	189.54	174.15	197.47	180.79
>=80	122.08	209.66	159.40	120.96	190.48	156.52
All ages	139.97	293.79	332.23	403.87	377.6	
n	2,850	6,358	1,378	608	197	11,391

* ELSA data

In **Table 16** we have the Mexican income. The data is given in GBP as well. The conversion used considered 1 GBP equal to 12.98 pesos, taking the year 2002 as a base year, and it was used also an extra factor of 1 Mexican unit equal to 2.3 British units, which is the factor applied by the Home Office (the UK Border Agency) when is considered income from other countries, in this case, from Mexico.[20] When we compare overall mean income, Mexican purchase power seems to be 65 % of the English income (252.80 vs. 389.66), which is not very different, but the distribution shown by the median income makes clear the higher inequality in Mexico. In Mexico, the median income is 68.41 GBP for the people aged 50, to 32.71 GBP for the oldest people, compared with 397.86 to 156.52 for the same type of people in the English data. The differences here are much bigger.

[20] Calculator is find in http://www.ukvisas.gov.uk/en/

Table 16

Mean and Median Income, core members, Mexico-MHAS (2001), HR PPP

MEAN household income by age and size of household, Wave 1*
CORE MEMBERS (Weekly income)

	Household Size					Mean
	1	2	3	4	>=5	All Sizes
Age						
<=49	141.89	118.59	314.71	314.73	113.70	175.24
50-54	175.75	215.58	170.84	208.91	218.75	205.87
55-59	293.49	642.38	196.10	322.69	230.30	320.31
60-64	210.71	247.07	178.94	153.50	139.38	183.05
65-69	185.68	251.99	285.67	240.42	222.58	239.43
70-74	303.79	152.06	130.05	339.51	148.14	200.24
75-79	279.02	161.48	516.65	284.95	845.94	438.56
>=80	309.87	210.31	493.16	210.89	400.10	317.39
All ages	254.33	290.54	230.54	243.00	245.58	252.80
n	1,088	1,932	1,597	1,521	3,198	9,336

* MHAS data (income calculated in British pounds, with a PPP 2.3:1)

MEDIAN household income by age and size of household, Wave 1*
CORE MEMBERS (Weekly income)

	Household Size					Median
	1	2	3	4	>=5	All Sizes
Age						
<=49	86.89	67.11	163.57	92.01	61.34	76.77
50-54	119.27	84.17	77.52	69.52	57.79	68.41
55-59	89.52	81.78	62.02	61.34	53.16	61.34
60-64	71.56	57.86	49.07	54.52	49.07	52.55
65-69	53.84	52.78	53.50	49.48	49.07	50.13
70-74	53.16	45.25	46.51	44.41	32.71	44.98
75-79	49.07	40.89	50.17	41.71	33.46	42.94
>=80	33.12	40.89	22.08	27.33	16.36	32.71
All ages	60.46	54.83	55.88	57.25	49.07	55.50
n	1,088	1,932	1,597	1,521	3,198	9,336

* MHAS data (income calculated in British pounds, with a PPP 2.3:1)

In **Table 17** we have the Mexican income, but now using the conversion given by the Statistics Directorate of the OECD.[21] The factor that is used here considers 1 Mexican unit equal to 11.067 British units. There seems to be, with this conversion, that the mean English income is three times the Mexican income, and proportionally, the median income is much higher than in the previous case.

Table 17

Mean and Median Income, core members, Mexico-MHAS (2001), OECD PPP

MEAN household income by age and size of household, Wave 1*
CORE MEMBERS (Weekly income)

	Household Size					Mean
	1	2	3	4	>=5	All Sizes
Age						
<=49	103.64	86.62	229.88	229.89	83.05	128.00
50-54	128.37	157.47	124.79	152.60	159.78	150.37
55-59	214.38	469.22	143.24	235.70	168.22	233.97
60-64	153.91	180.47	130.70	112.12	101.81	133.71
65-69	135.63	184.06	208.66	175.61	162.58	174.89
70-74	221.90	111.07	94.99	247.99	108.21	146.26
75-79	203.81	117.95	377.38	208.14	617.90	320.34
>=80	226.34	153.62	360.22	154.04	292.25	231.83
All ages	185.77	212.22	168.39	177.50	179.38	184.65
n	1,088	1,932	1,597	1,521	3,198	9,336

* MHAS data (income in GBP, PPP of OECD, 1 Pound=11.07 Pesos)

MEDIAN household income by age and size of household, Wave 1*
CORE MEMBERS (Weekly income)

	Household Size					Median
	1	2	3	4	>=5	All Sizes
Age						
<=49	63.47	49.02	119.48	67.21	44.80	56.08
50-54	87.12	61.48	56.62	50.78	42.21	49.97
55-59	65.39	59.73	45.30	44.80	38.83	44.80
60-64	52.27	42.26	35.84	39.82	35.84	38.38
65-69	39.33	38.55	39.08	36.14	35.84	36.62
70-74	38.83	33.05	33.97	32.44	23.89	32.85
75-79	35.84	29.87	36.65	30.47	24.44	31.36
>=80	24.19	29.87	16.13	19.96	11.95	23.89
All ages	44.16	40.05	40.82	41.82	35.84	40.54
n	1,088	1,932	1,597	1,521	3,198	9,336

* MHAS data (income in GBP, PPP of OECD, 1 Pound=11.07 Pesos)

9) Concluding Remarks.

The differences and similitude of elderly people between Mexico and England have been shown. The common patterns are related with higher living expectancy for female population, a decrease of physical health as people age, a consistent reporting bias of female population with poorer health, a better cognition ability of females, and a tendency of females to report a more exacerbated feeling of emotions (happiness or unhappiness) rather than males, among other findings. The differences found were in

[21] http://www.oecd.org/department/0,3355,en_2649_34357_1_1_1_1_1,00.html. FAQ http://www.oecd.org/document/5/0,3746,en_2649_34357_45854149_1_1_1_1,00.html

regards to poorer health of males in Mexico in relation to their counterparts in England, better immediate cognition of English people, but better delayed cognition for Mexicans, happier Mexican people, particularly males, and of course, higher income of English people with a very emphasized inequality distribution for Mexicans.

The next step will be to deepen the understanding on the relationships of the variables, including causation analysis, and also to consider other objective measures of well being, as it could be poverty and inequality measurement among elders. Though the relationships among these covariates might work as theory predicts, the size of the coefficients in regards to people's nationality might be different, and that will helps us to prove that that Mexican population behaves differently than English population in regards to income incentives, health, subjective well-being and individual welfare

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10) Appendix.

a) Data Sets.

Household members of ELSA study are categorized by their role and wave.

Table 18 shows the type of individuals that take part in the study and the number of them that are present in different waves. In regards to the wave, there are fourth of them. The basis of the sample is the Health Survey for England (HSE) survey, which is named Wave 'zero'. From the HSE sample, a sub-sample was selected later on for piloting samples for the English Longitudinal Study of Ageing (ELSA), which includes first, second and third waves. The individuals present in the data of Wave 0 are not the total of HSE study, but only those who are needed in subsequent waves.[22] Wave 0 is composed by three different rounds surveyed during the years 1998, 1999 and 2001. Wave 1 was carried out between 2002 and 2003, Wave 2 during 2004 and 2005, and Wave 3 during 2006 and 2007. For the sake of simplicity, in the text we will consider the year of each wave to be 2001, 2002, 2004 and 2007 for waves 0, 1, 2 and 3 respectively; but the calculations are done with respect to the exact year that the observation was taken. Despite the fact that Wave 0 was not originally designed as part of the longitudinal study, some questions are similar to those of subsequent waves, then is used. In regards to the role in the household, Core members, named "C1CM", are the people having 50 years old or more, regardless gender. If both household partners have this age, both are considered core members. When any partner is younger than the core member, this younger person is included in the sample in a different category, say "C1YP". The group of individuals that were initially chosen for the study but, for a variety of reasons, not questioned, are named "Other"; they were either issued or 'unproductive'

[22] There will be some replacement of individuals aged 50 or more in wave three, and these respondents will be available later on in the data set of Wave 0.

in the following rounds, and they were not chosen for sampling in the next phase of the study.[23]

Table 18
Respondents and attrition in each wave, HSE and ELSA
Individuals part of the study.

	Wave*			
	0	1	2	3
Status				
Core Members (>50)	11,205	11,391	8,780	7,535
Core Partner	833	636	550	396
Other	7,796	72	102	1,840
Total	19,834	12,099	9,432	9,771

* Wave 0 (HSE), Wave 1-3 (ELSA).

The decreasing number of (the same) individuals across time can be seen in **Table 19**. Many of the individuals present in Wave 0 were not chosen to be considered in following rounds. That is the reason there is a high number of individuals in the first wave, while in subsequent waves we have less individuals. We mainly concentrate on core members (C1CM).

Table 19
Repeated individuals in different waves, HSE and ELSA
Consistency of the panel, same individuals in all waves.

Individuals present in	All members	**Only Core Members (>50)**
1 wave	21859	11391
2 waves	12127	11322
3 waves	9647	9076
4 waves	7503	7122
Total observations	51136	38911

Both HSE and ELSA waves.

The transition matrix in

[23] See the technical documentation for a detailed explanation of the type of members.

Table 20 shows the possible combinations of individuals that are present in two of the different waves; here we can have an idea of the stability of the panel. This table gives more detailed information, for instance, waves 1 and 2 of ELSA study have in common 8780 core members. The attrition membership is mainly due to death of individuals or to a change of address

Table 20

Transition matrix, all individuals and core members, HSE and ELSA

Transition matrix (Same people present in two waves)

		Wave*		
All Individuals		1	2	3
	0	11828	9202	7920
Wave	1		9324	7976
	2			7680
Only Core members				
	0	11205	8675	7448
Wave	1		8780	7535
	2			7197

* Wave 0 (HSE), Wave 1-3 (ELSA).

For the Mexican MHAS study, **Table 21** shows the type of individuals that take part in the study and the number of them that are present in the different waves. Core members (the variable PS3 is equal to 1) are the people that are 50 years or more, also regardless their gender. When there are two partners of this age in the household, only one of them is (randomly) selected as a core member. Partners are included in the sample regardless their age (PS3=2)

Table 21

Respondents and attrition in each wave MHAS

Individuals part of the study.

	Wave*	
	1	2
Status		
Core Members (>50)	9,813	8,614
Core Partner	5,596	4,883
Total	15,409	13,497

* MHAS, Wave 1 (2001), Wave 2 (2003).

In **Table 22** we also show the same individuals present in one or two waves. There are a high number of individuals (15409) in the first wave, while in the last wave looks fewer when we compare them with the original sample (13497). We also concentrate on core individuals.

Table 22

Repeated individuals in different waves, MHAS

Consistency of the panel, same individuals in all waves.

Individuals present in	All members	**Only Core Members (>50)**
1 wave	15409	9813
2 waves	13497	8614
Total observations	28906	18427

* MHAS, Wave 1 (2001), Wave 2 (2003).