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Session 3– Supporting paper

NATIONAL HEALTH SURVEY OF SPAIN

Submitted by National Statistics Institute of Spain*

A) National Health Survey of Spain. Characteristics: sample design, sample size, regional representativity, quarterly periodicity…

B) Differences in results due to self/proxy report

A) NATIONAL HEALTH SURVEY OF SPAIN. CHARACTERISTICS

1. Overview of the Survey

a. Name of the survey: National Health Survey 2003 (Encuesta Nacional de Salud, ENS).
b. Date of data collection: April 2003 to April 2004.
c. Periodicity of survey: Biennial.
d. Brief Summary of survey

1. The National Health Survey (NHS) is an investigation directed at households. Its main objective is to obtain data on the health status and health determinants from the citizens' viewpoint. The initial sample is approximately 22.000 dwellings and 28.000 people. Results are provided at national and regional level. There are quarterly national previews supplying main indicators.

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2. The Survey consists on three questionnaires: The *Household Questionnaire* is a document designed with the objective of collecting information on socio-demographic characteristics of all members. It also obtains aspects relative to the household (main provider, economic situation, income sources…). The *Adults Questionnaire*, directed to adults 16 and over, is designed to collect information on health status, use of health services, health determinants as smoking and drinking habits, preventive care, use of medicines, etc. The *Children Questionnaire* contains similar information related to children under 16 years old.

2. Sampling

3. *a. Sample coverage:* The Survey is directed to the population living in main family dwellings.

b. Sample design: A three stage stratified sample has been used. In the first stage censal sections were selected. In each province the sections are grouped in strata according to the demographic importance of the municipality to which they belong and the socio-economic category of the homes located there. In the second stage family dwellings were selected with the same probability by means of the systematic sample with random start. In each dwelling everyone resident was investigated. To fill in the Adults Questionnaire a person within the home was randomly selected. In those homes containing at least one child, one of them was randomly selected.

3. Non-response

4. *a. Case (person/household) non-response:* Total household non-response is 24,25%. This rate decomposes into 10,25% due to non-cooperation or respondent refusal, 13% due to non-contact or absence and 1% due to inability to answer.

b. Item non-response: It varies, being on average less than 5%.

4. Data collection

5. *a. Manner of collection:* Personal interview.

b. Type of respondent: As a general regulation, the informant of the Household Questionnaire is the main breadwinner. However, another household member may supply the information. For Adults Questionnaire self-response was required, although exceptionally another member could provide the information. The respondent of the Children Questionnaire is the person responsible for the minor (parents or guardians), being the mother the preferred respondent.

5. Highlights of the strengths and limitations of survey

6. <u>*Strengths of the Survey:*</u>

- A large and nationally representative sample: it guarantees the development of a series of health indicators that would give a lot of information even at a regional level.
- Huge amount of health-related variables investigated.
- Continuation of historical series: the first National Health Survey of Spain was conducted in 1987 by the Ministry of Sanity, and was followed by the 1993, 1995, 1997 and 2001 surveys. This is the sixth, and contains and extends the information provided by the previous, so that long-term comparisons can be made.
- European comparability, as far as Eurostat recommendations are observed.
- Short-term availability of results.

- Data collection distributed all along the year, thus reflecting the variability of twelve months.

Limitations/Objections of the Survey:

- Effect of proxy-respondents on survey results.
- Lack of certain topics of interest (mental health, drugs consumption…).
- Expensive survey (2.26 million Euros).

B) EFFECT OF PROXY-RESPONDENTS ON SURVEY RESULTS

7. As mentioned above, self-response was preferable for Adults Questionnaire. However, in many occasions, the selected person was not at home neither in the moment of the interview, nor in later tries. As a result, a rather high rate of proxy-response has been found in the survey: 30.4% for women and 59.2% for men.

8. When investigating objective areas or aspects of life very known by all the members in a family, proxy-report might not have an important effect on the results, that is, answers given by the selected person are quite similar to those provided by any other household member. But if the area of interest contains subjective or very personal information, it is founded to think that proxy-response could introduce a bias in the variables under consideration.

9. Although this subject is important enough as to deserve an in-depth study, hereby I will briefly describe some health-related variables from the respondent perspective, showing the differences between the group formed by the self-respondents and that established by the proxy-respondents.

10. This investigation is restricted to the population of 16 years old and over.

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11. Let's first define some terms to be used in this report: we will call *proxy-group* the subset of registers formed by questionnaires collected via proxy-response. Similarly we speak about *self-group*, *proxy-women/men* and *self-women/men*.

12. This analysis of proxy-report should start studying the basic sociodemographic characteristics of the selected person, that is age and gender. In **graph 0** it is easy to perceive that men present a proxy-report proportion higher than women do at all ages. This difference is minimum at extreme intervals: 75 and over and 16-24 years old. On the contrary, it is very pronounced between 35 and 64.

13. To obtain a questionnaire directly or not from the selected person, it is to say, the circumstance of being at home when the interviewer visits the dwelling, depends on age and gender. It seems reasonable to think that in a country like Spain, where female activity rate is only 65% of male's, the fact that middle-aged women's proxy rate is lower than men's is closely related to the economic activity situation. Nevertheless, to confirm this point the study ought to be made also concerning that variable.

14. Therefore, women not only become the main informants of their health status, but also report up to a certain point men's information.

15. Next are shown, by gender, observable differences between the answers given by self- and proxy-groups to the main health-related variables in the survey.

1) HEALTH STATUS

16. Question: *In the last 12 months, would you rate your health status as being 'very good', 'good', 'fair', 'bad' or 'very bad'?*

Graphs 1a and **1b** show that proxy-perceived health is slightly better than self-perceived health, since proportion of 'good health' categories increase in general, while 'bad health' categories decrease or stay constant. In particular, if we consider the addition of *good* and *very good* as an indicator of 'good health', we obtain that proxy-group increases the indicator in 9.4 percent for women and 16.7 percent for men, with regard to the information provided by the self-group.

2) ACTIVITY RESTRICTION

17. Question: *In the last 12 months, have you been limited in activities people usually do because of any ailment, illness or health problem?*

As shown in **graph 2**, the percentage of women informing activity restriction due to a health problem decreases from 24.3 to 20.4 percent, that means a descent of 15.9 percent. This decrement reaches 18.9 percent in the case of men. Thus, it could be said that proxy-group minimises the perception of activity restriction.

3) CHRONIC CONDITIONS

18. Question: *Have your doctor told you that you suffer from any of the following long-standing illnesses or health problems? (A list of 16 illnesses is shown to the interviewee)*

While discussing about illnesses diagnosed by a doctor, which usually come together with medicine consumption, we expected to find minor differences between self- and proxy- groups, compared to other variables, since all the members of the family usually know these diseases. However, an important gap between both groups can be seen in **graph 3a**. In fact, proxy-group reports a rate of chronic illness 20 percent lesser than the self-group.

19. Considering the population of 55 and over to be the subset who suffer more from chronic conditions, we may face the study of this variable restricted to this group. In that case (**graph 3b**) we can confirm an alteration in the proxy-respondents contribution. Proxy-report does not cause a decrease of the rate anymore; on the contrary it means a slight increase of 1 to 2 percent with regard to self-report. This change could be due to the fact that younger relatives who act as proxy-respondents know the health condition of the elderly even better than they do.

4) TEMPORARY CUT DOWN OF USUAL ACTIVITIES

20. Question: *During the last two weeks, have you cut down on any of the things you usually do at work or in your free time because of illness or injury?*

Regarding the cut down of *main activity* (work, study, etc.) in **graph 4a** we observe a different pattern as seen in the previously studied variables: while proxy-women inform up to 20.7% **less** limitation than self-women, the behaviour of men is the opposite: the proxy-group report 10.8% **more** reduction in usual activities.
Similar effect occurs with *free time activity* (**graph 4b**).

5) STAY IN BED FOR HEALTH REASONS

21. Question: *During the last two weeks, have you stayed in bed more than half a day due to health reasons?*

For health reasons 50.5 percent of proxy-women need to stay in bed, which compared to 43.8 percent in the self-group, means an increase of 15.3 percent (**graph 5**). Among men this gap is even higher, for proxy-respondents present an increment of 50.4 percent with regard to self-respondents. These results contradict the preconceived idea that proxy-report 'improves' health.

6) LIMITATION IN EVERYDAY LIFE ACTIVITIES (ELA)

22. Question: *For the following list of (27) everyday life activities, could you tell for each of them if you are capable of doing them on your own or not (can do it with personal aid or cannot do it in any case)? (**Collected for 65 and over**)*

As in point 5, **graph 6** shows that proxy-report increases the perception of activity limitation. The percentage of proxy-reported ELA limitation is 63.6 for women and 44.1 for men. These figures are respectively 50.5 percent and 67.8 percent higher than those in self-groups are. Taking into account that this question is pointed to people of 65 and over, in many cases the proxy respondent would be a younger relative, probably the same in charge of providing the cares demanded by the elderly. Maybe this circumstance makes the care provider more aware of the health problems of the care demander.

CONCLUSIONS

23. Here we tried to find out whether information reported by the proxy-group could be considered equivalent to that provided by the self-group. In case it could not, we would try to find a pattern that let us correct the bias introduced by the proxy-responses.

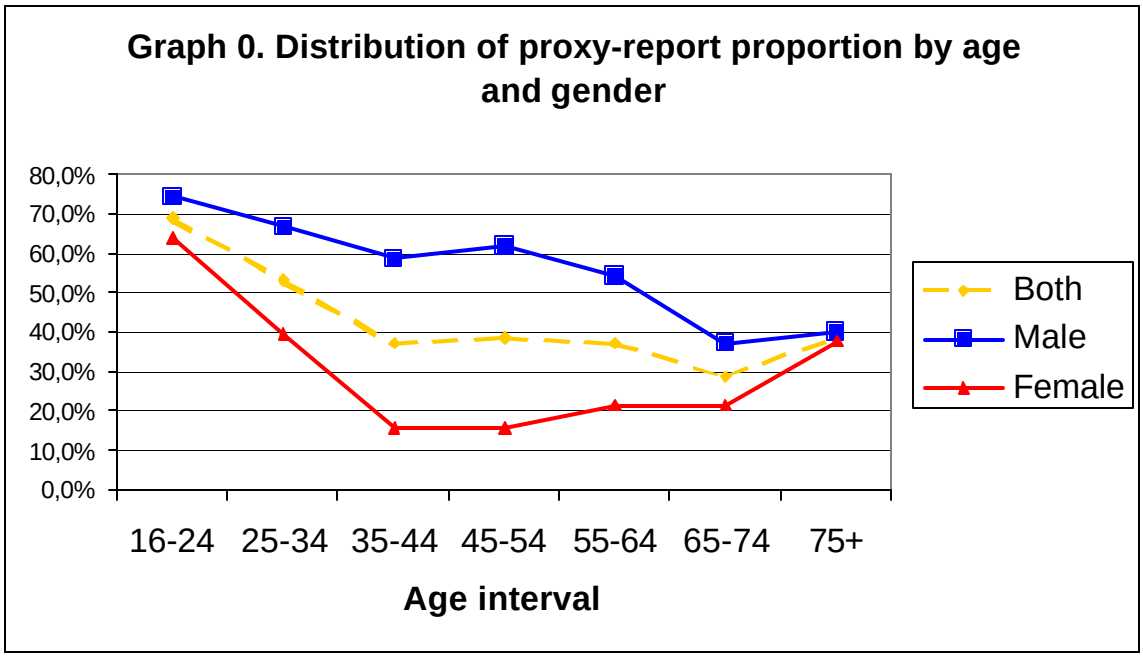
- Although lacking in a profounder investigation, we venture to say that there really exists a difference between both collectives, since some indicators differ in more than 20 percent. To understand the origin of the observed gap between self- and proxy- groups, we should look into many sociodemographic variables, including age and gender (of both the selected person and the informant), economic activity, etc.

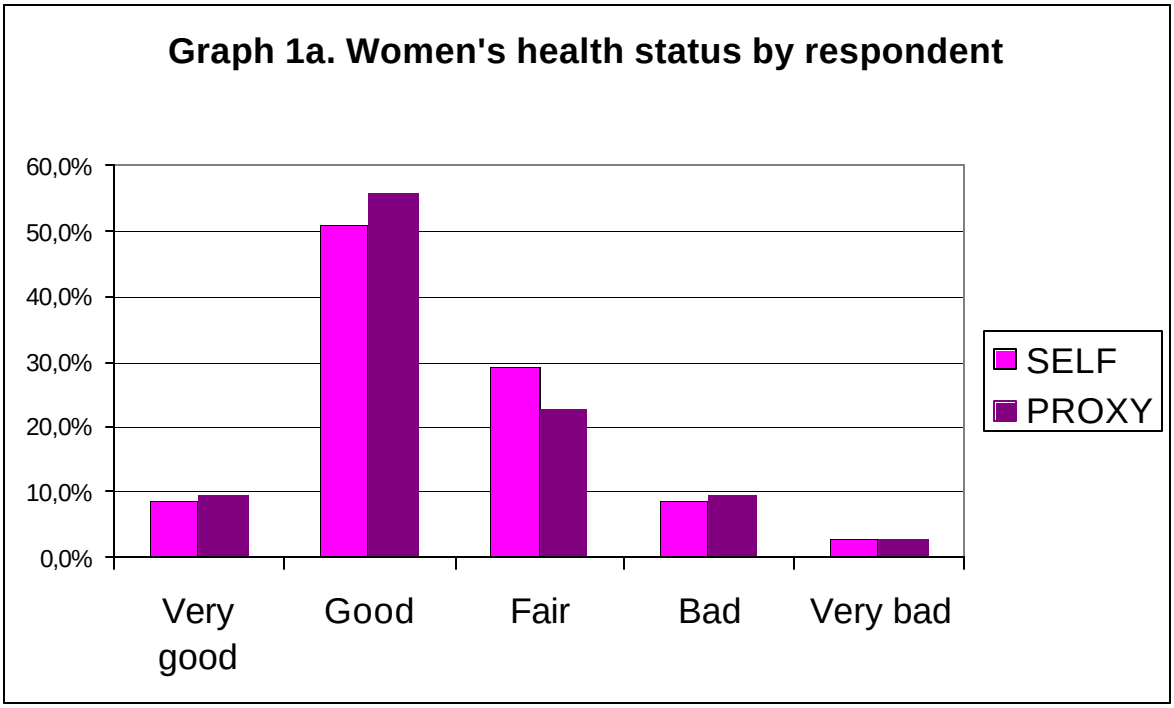
24. As a first attempt to identify the key of the issue, we have standardised by age self- and proxy- populations to the whole population, and the consequence is that the previously observed differences decreased as shown in the table. This means that an important part of the gap between both collectives is due to an unequal age distribution of these populations. As a result, health status of the total population, including self and proxy response, is not so distinct to that provided only by the standardised self-population.

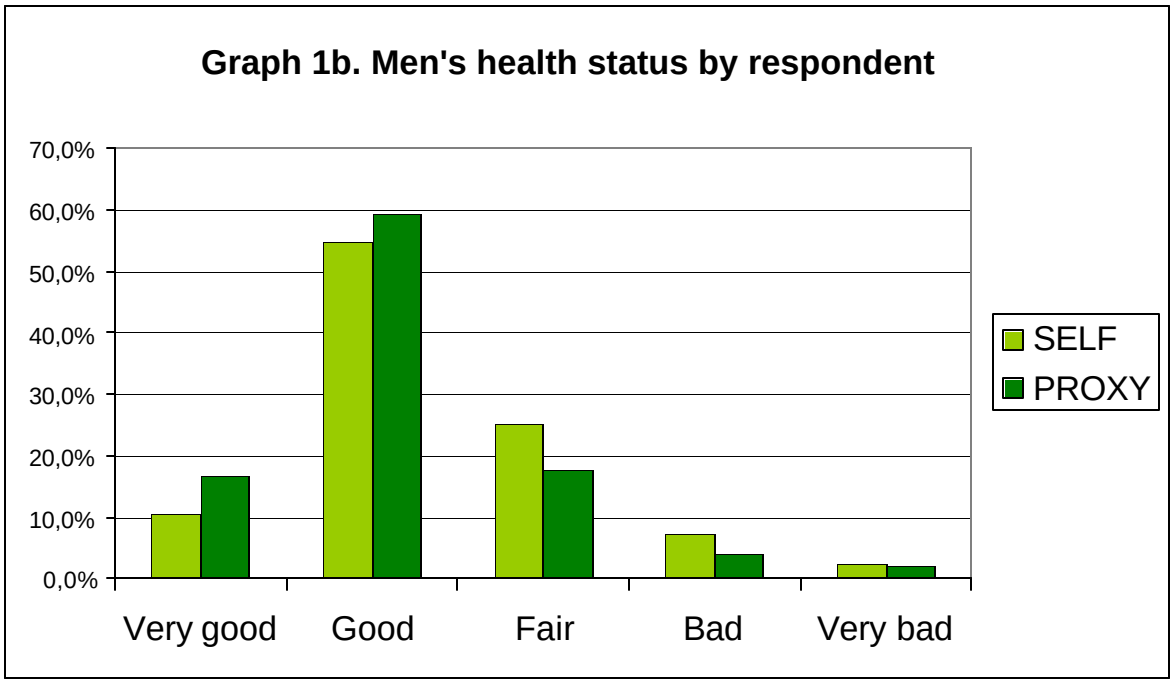
25. However, a deep investigation should me made in order to clarify the real effect of several variables on the results of the proxy-group.
The positive or negative sign of the differences also change depending on the indicator under study and would need further analysis.

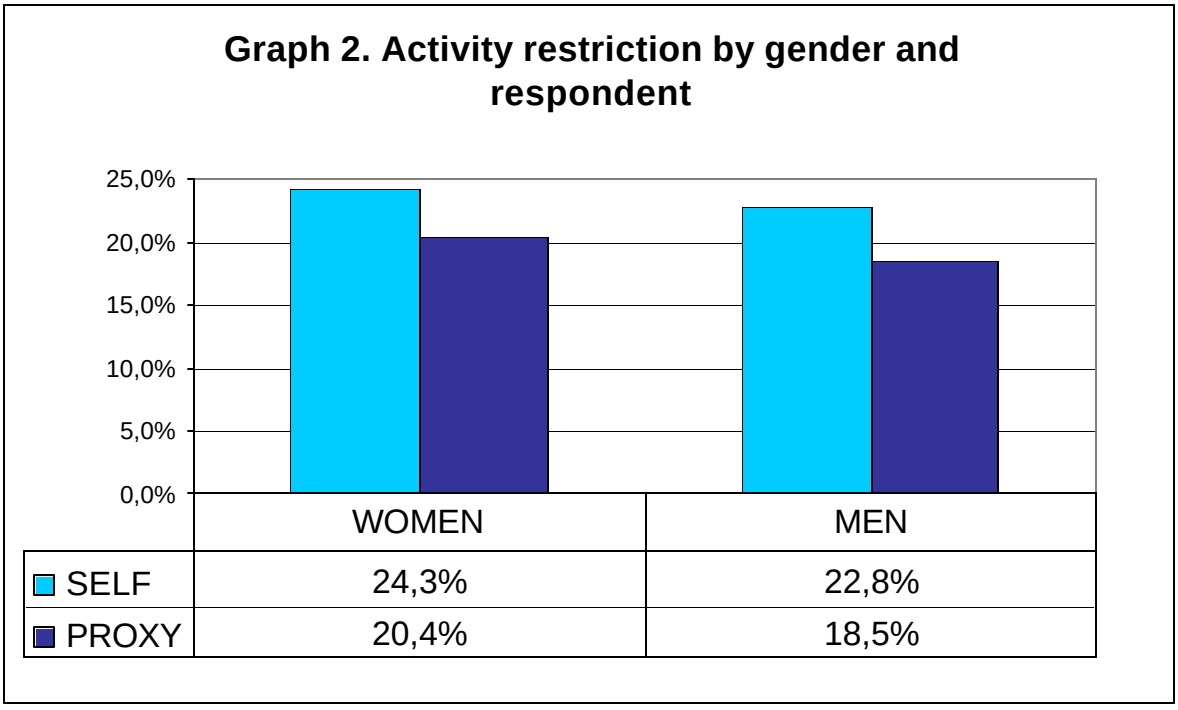
	Population group	Very good	Good	Fair	Bad	Vey bad
Standardised	**SELF**	**10,4**	**54,1**	**25,8**	**7,4**	**2,3**
	PROXY	13,0	56,0	21,1	7,0	2,9
Not standardised	**SELF**	9,3	52,2	27,8	8,1	2,6
	PROXY	14,2	58,0	19,4	6,0	2,4
Total population		**11,5**	**54,8**	**24,1**	**7,1**	**2,5**

- It is remarkable the importance of making all the efforts to get the questionnaire directly from the selected person

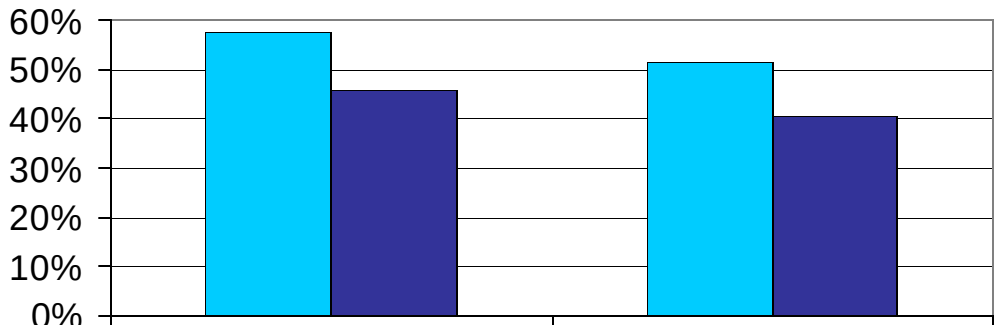

Graph 0. Distribution of proxy-report proportion by age and gender
80,0%
70,0%
60,0%
50,0%
40,0%
30,0%
20,0%
10,0%
0,0%
16-24
25-34
35-44
45-54
55-64
65-74
75+
Age interval
Both
Male
Female


Graph 1a. Women's health status by respondent
60,0%
50,0%
40,0%
30,0%
20,0%
10,0%
0,0%
Very good
Good
Fair
Bad
Very bad
SELF
PROXY


Graph 1b. Men's health status by respondent
70,0%
60,0%
50,0%
40,0%
30,0%
20,0%
10,0%
0,0%
Very good
Good
Fair
Bad
Very bad
SELF
PROXY

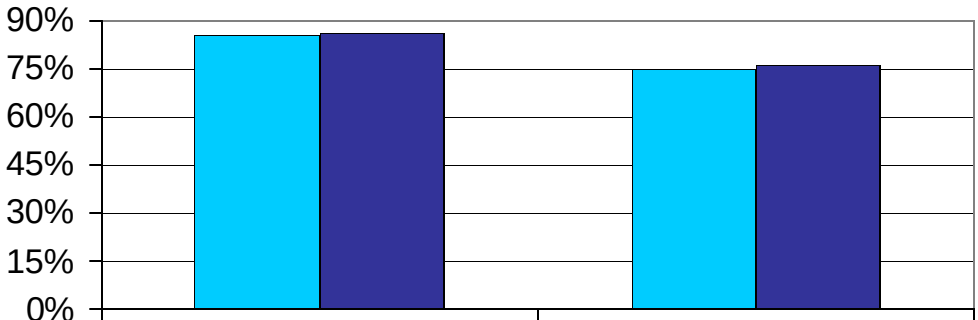

Graph 2. Activity restriction by gender and respondent
25,0%
20,0%
15,0%
10,0%
5,0%
0,0%
WOMEN
MEN
SELF
24,3%
22,8%
PROXY
20,4%
18,5%

Graph 3a. Chronic illnesses by gender and respondent



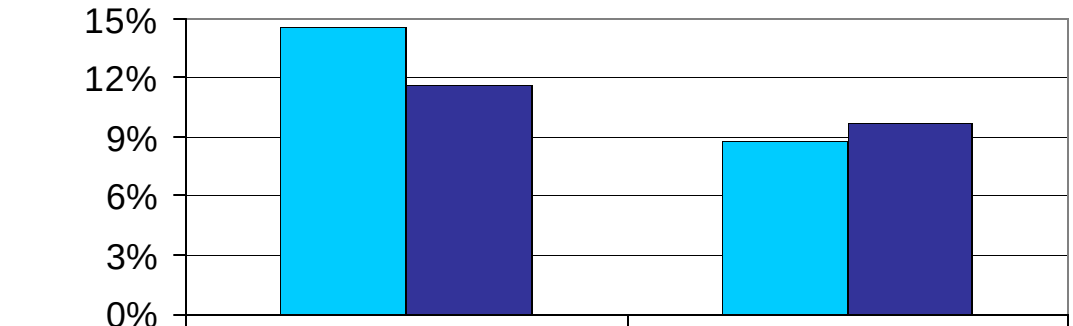
	WOMEN	MEN
SELF	57,7%	51,4%
PROXY	45,9%	40,4%

Graph 3b. Chronic illnesses by gender and respondent. Population 55 and over



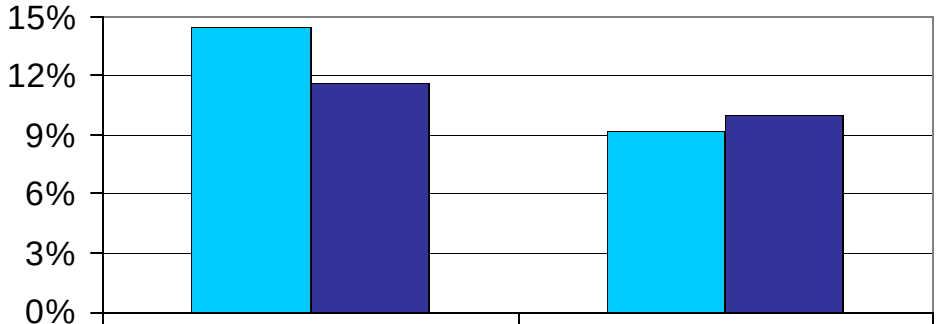
	WOMEN	MEN
SELF	85,45%	74,67%
PROXY	86,28%	75,92%

Graph 4a. Temporary cut down of main activities by gender and respondent



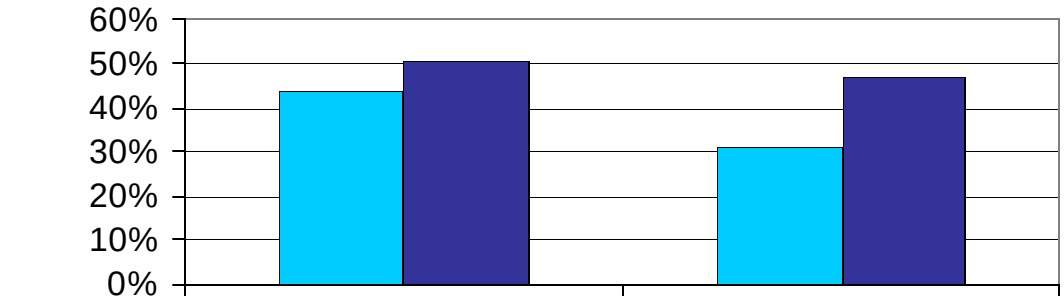
	WOMEN	MEN
SELF	14,7%	8,8%
PROXY	11,6%	9,8%

Graph 4b. Temporary cut down of free time activities by gender and respondent



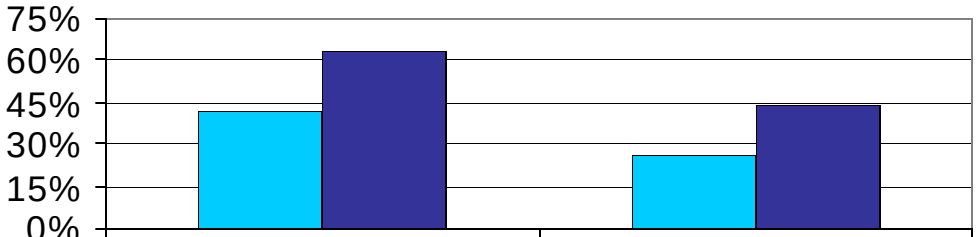
	WOMEN	MEN
SELF	14,5%	9,3%
PROXY	11,6%	10,0%

Graph 5. Stay in bed for health reasons by gender and respondent



	WOMEN	MEN
SELF	43,8%	31,3%
PROXY	50,5%	47,0%

Graph 6. Limitation in everyday life activities (ELA) by gender and respondent



	WOMEN	MEN
SELF	42,3%	26,3%
PROXY	63,6%	44,1%

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