

Semi-super and super-centenarians in Italy: implementation of a longitudinal database

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Introduction

Population ageing has produced, in recent years, a significant growth of the number of elderly in Italy, particularly among the so called "oldest-old people". The share of the population aged 85+ has increased from 2.1 to 2.8 per cent over the last ten years, marking an increase of about 500 thousand people more. The number of centenarians has tripled, from over 5 thousand to over than 16 thousand people, at the same time. In such a context is becoming increasingly important studying closely the subjects who are benefiting from such significant advantages in term of survival, opening new opportunities and posing new challenges to human longevity.

To that purpose Istat has been carrying out since 2008 a survey by collecting individual data on people above the age of 104 years.

Semisupercentenarians (people aged 105+) and, among these latter, supercentenarians (110+), are first identified from an administrative source on Population Registers (PR's), the so called POSAS survey. POSAS is a survey carried out by Istat on the resident population of the Italian Municipalities (around 8,100) broken down by sex, cohort and marital status on January 1st each year.

On brief, POSAS, collecting aggregated information, let us to know how many people of a given cohort or marital status or gender reach still alive the Jan 1st of a given year.

Such a set of information is just the starting point of our survey. In fact, all the municipalities for which the residence of people aged 105+ has been assessed, are then contacted by Istat in order to collect detailed information at individual level.

Data and method

The response of the assessment between Istat and the local PR can be one of the following:

- 1) a semisupercentenarian is verified as living on 1st January, then we got his individual characteristics (name, surname, place and date of birth, citizenship, marital status) and his birth certificate is achieved;
- 2) a semisupercentenarian is wrongly included in the register, being no confirm about his existence at the latest known address (consequent action: cancellation from the population register);
- 3) a semisupercentenarian died after 1st January the survey year and we got his birth and death certificate.

A database, containing longitudinal information for each assessed semisupercentenarian, has been implemented over the last three years. The basic covariates included in the database are:

- Name
- Date of birth
- Date of death
- Place of birth
- Place of residence
- Marital status
- Citizenship

Results

After having deleted errors in the PR's thanks to a well-established validation protocol, the implementation of the database allows us to follow the trend over time among the sub-population

of semisupercentenarians. Consequently, we are able to check the consistency of the database itself, year by year, comparing what we are observing at any January 1st.

The distribution by year of birth along three consecutive surveys is consistent with our expectations. In the last survey 631 semisupercentenarians were detected as living on January 1st 2011. Such a number has been significantly increasing: from 389 on January 2009 to 514 on January 2010.

Year of birth	1.1.2009	1.1.2010	1.1.2011
1905	-	-	314
1904	-	271	166
1903	174	109	65
1902	132	86	53
1901	42	23	15
1900	20	13	9
1899	11	8	6
1898	4	2	1
1897	1	0	0
1896	5	2	2
Total	389	514	631

The survey that will be carried out next year will provide us new information on semisuper and supercentenarians in Italy. Further analysis arising from the three last years of survey and some raw data from the new edition will be presented.

Conclusion

The semisupercentenarian survey carried out by Istat shows how it is possible to find out “oldest-old” living from administrative registers. Nevertheless, we need to pay attention to the quality and the reliability of the population registers. From that point of view the survey help us in improving accuracy and reliability of the population registers.

An interesting number of semisupercentenarians has been found in the course of three consecutive surveys (living or deceased). As of January 2011 the database contains over 600 life histories, a good starting point for studying longevity and investigating the limits of life spans.