

Longevity of Southern European retiree by income and socio-demographic characteristics

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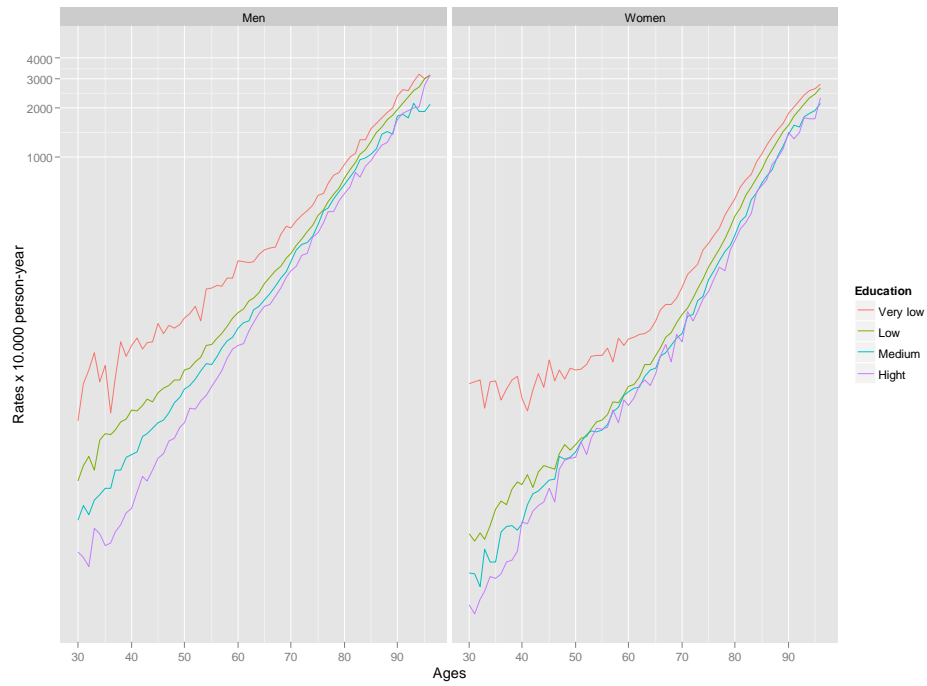
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Across Europe, governments are considering a major overhaul of public pension systems, because of doubts about their sustainability in a context of population aging and increasing government revenue reduction. Many of the arguments used to justify these reforms deal with the growth of life expectancy. However, there are few works which establish the possible relationship between the increase in the amount of the pension and increased life expectancy in southern Europe. This paper aims to make a small contribution to this debate, trying to quantify the combined effect on the longevity of income levels controlling by educational attainment and other socio-demographic and economic characteristics.

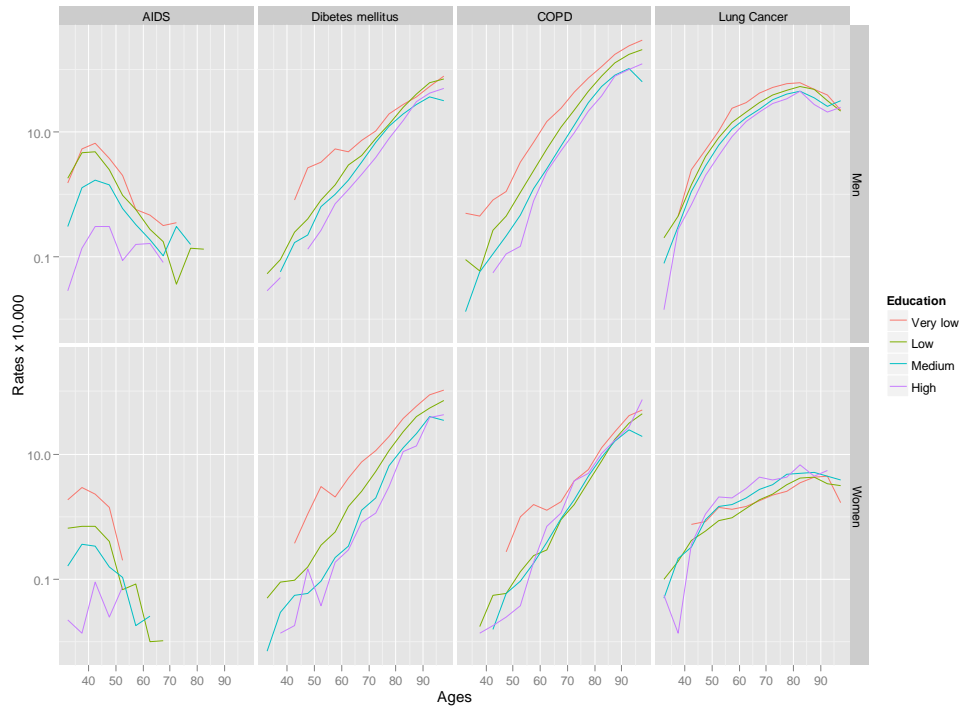
We investigate the mortality experience of a cohort of 700,000 people over 65 years old living on the 1-1-2011, residing in Andalucía and receiving a lion share of their income from the Spanish social security public pensions system. We follow them to the end of 2012 using the Longitudinal Population Register of Andalusia which has the information of these individuals, pension levels reported by the Social Security and other socio-demographic characteristics derived from the population census. With these data it has been estimated population survival models depending on their income and socio-economic characteristics using Cox regression.

In a previous analysis (see graphs bellow) we found graded educational differentials in mortality observed among both sexes with higher mortality rates related to lower educational attainment in most causes of death. Those with a strong educational gradient were more related with life styles (behaviors) or living standards (income or wealth). Those with weak or non-existent educational gradient is reasonable to suspect of etiological environmental or genetic determinants affecting equally to all educational groups but this is more difficult to measure. Life expectancy differentials at age 60 between illiterate and highly educated populations differed by 4.7 years for men and 4.3 years for women. Regarding Individual and contextual determinants we found no significant effects of municipality or census track, but significant effects at individual and household levels (Merlo et al. 2012).

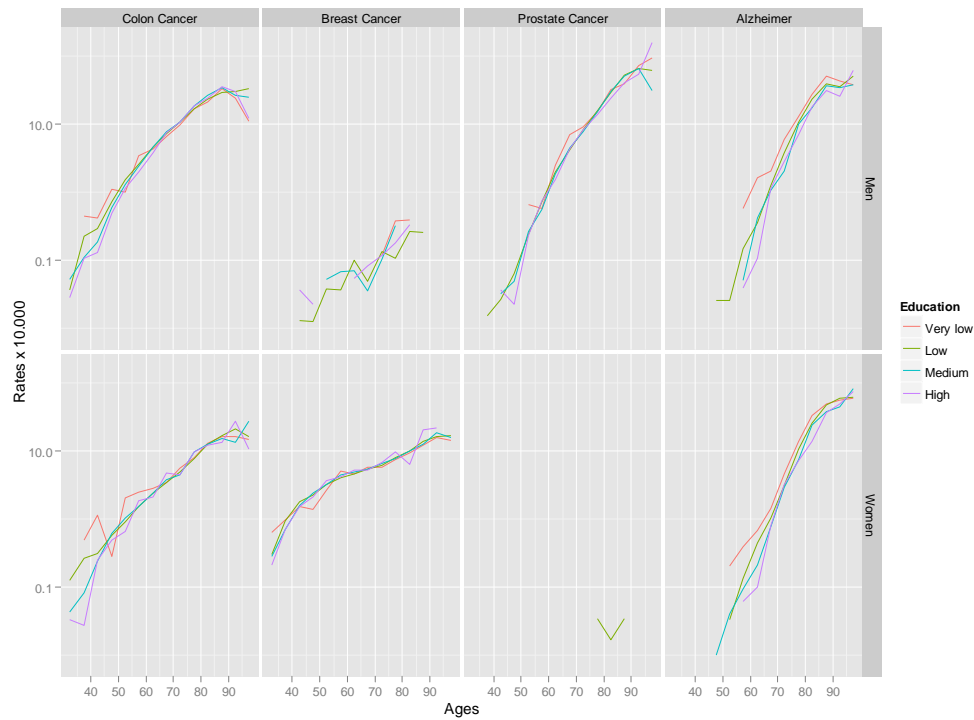
Rates per 10,000 person-year by gender and educational attainment, Andalusia. Census cohort followed from 2002 to 2010.



Rates per 10,000 person-year by age, gender, specific causes of death and educational attainment, Andalusia. Census cohort followed from 2002 to 2010. Obvious educational gradient.



Rates per 10.000 person-year by age, gender, specific causes of death and educational attainment, Andalusia. Census cohort followed from 2002 to 2010. Not obvious educational gradient



Focusing on incomes, the results show the existence of a significant gradient in mortality associated with the amount of pensions received by men. The gross effect of income is a reduction of about 1% in mortality for every increase of 100 € for the amount of the pension. The magnitude of the effect is halved, but remains significant (below 0.5 %), when controlling for other socio - economic and educational attainment. For women, although the effect of educational level on mortality is very similar to that of men, the ratio of income to mortality, although statistically significant, is not as obvious or linear as in the case of men. The paradoxical effect of low female mortality associated with low levels of pensions is explained by the confounding effect of widowhood that influences both mortality risk and on the amount of pensions in the Andalusian female population.