The effect of retirement on self-reported health: a gender comparison in Italy.

Lucia Coppola lcoppola@istat.it - ISTAT
Daniele Spizzichino daspizzi@istat.it - ISTAT

Theoretical background

In an era characterised by the aging of population, two main concerns for policy-makers are the burden on the pension system, as well as that on the health care system. Policies aiming at reducing costs of any of these two dimensions, should take into account the retirement-health nexus. In particular, if retiring is expected to be good for health, for instance for individuals involved in physically demanding jobs (Sickles and Taubman 1986), postponing retirement may decrease the costs for financing pensions but may increase those for the health care. Conversely, if retirement has a negative effect on individual health, for instance reducing mental activity or depriving individuals of the economic and social roles they are used to, postponing retirement may reduce costs for both pension and health care systems.

The relationship between retirement and health status have been widely investigated in the literature, but the debate on the effect of retirement on subsequent health outcomes is still open. Some studies, in fact, show that retirement has a negative effect on health conditions (Dave, Rashad and Spasojevic, 2006; Szinovacz and Davey 2004), while other authors maintain that there is no evidence of such a negative effect (Ekerd 1987; Ekerdt and Bosse 1982; Solinge 2007) and in some cases even a positive effect has be found (Bound and Waidmann 2007; Midanik et al. 1995; Kremer 1985). It is worth noting that deteriorating health may lead individuals to retire early (Dwyer and Mitchell 1999), and the issue of endogeneity of health conditions and timing to retirement has been pointed out (Bound and Waidmann 2007; Anderson and Burkhauser 1985), and need to be taken into account in order to achieve unbiased estimates of the net effect of retirement on health.

In this paper we investigate the effect of retirement on self-reported health in Italy, a country that is experiencing the aging process at a faster pace than other EU countries. We use the EU-SILC longitudinal data (2004-2009), for providing information on both occupational and health conditions. We particularly focus on the existence of a positive/negative effect of retirement on health outcomes, using a gender perspective. We assume that becoming retired implies important changes in the individual life-style and social roles, that may differ according to gender and in turn may affect individual perception of health. We apply a logistic regression to provide a description of the relationship between different individual characteristics, including retirement, and the self-reported health, as well as a difference-in-difference estimator combined with propensity score matching (Rosenbaum and Rubin 1983; Heckman et al. 1997) to estimate the net effect of retirement on health, once endogeneity is controlled for.

Data and Methods

We use data from the EU-SILC longitudinal release. The survey is carried out yearly and is based on a rotational panel design. Thus, for each individual, information over a period of four years of observation is available. We particularly focus on self-defined health and employment status, as well as other characteristics as sex, age, marital status, education, income and disability or chronic conditions. We select only individuals aged 50+, since retirement at an earlier age is unlikely.

By comparing information at time t and t+1, we study the effect of change in the employment condition on the change in the self-defined health. Transitions in employment are from employed to retired; from employed to other inactive; from employed to employed. Health is self-assessed

according to a five values scale, from very good (1) to very bad (5). We define an improvement in health when the self-defined health value at time t+1 is higher than that at time t, and a worsening when the opposite is true. By gender, we regress alternatively the improvement and the worsening of health, controlling for the effect of the transition from employed to retired, as well as changes in disability or chronic conditions, and other individual control variables. After providing a description of the role of retirement and other individual characteristics in shaping individual changes in self-defined health, we use a difference-in-difference estimator combined with propensity score matching techniques to control for endogeneity between the decision to retire and health, and achieve an unbiased estimate of the net effect of retirement. In particular, we match retired individuals at time t+1 (treated) with the most "similar" not retired individuals at time t+1 (untreated) using propensity score matching. Then we compare the health conditions between the two groups using a difference-in-difference estimator and any significant difference is attributed to retirement (the treatment).

Preliminary results

According to our preliminary analyses, logistic regressions show that retirement is not significantly related with an improvement in the self-assessed health condition for either men or women. But when we regress the worsening of self-defined health, we find that for men the transition from employed to retired is significantly associated with a higher risk of experience worse health conditions at time t+1. Interestingly, this result does not hold for women.

Since a worsening in health is likely to lead individuals to retire early, we want to check that these results hold also when endogeneity between retirement and health is controlled for. Thus we test different techniques of propensity score matching to find the "best" match between retired and not retired (treated and untreated) and we apply a difference-in-difference estimator to compare the two groups. According to this method, we confirm that there is a significant decline in the self-reported health status after retirement for men but not for women.

Preliminary conclusions and further research

We find evidence of a relationship between retirement and health in Italy for men but not for women. Retirement, in fact, is associated with a significant decline of men self-reported health, while this is not true for women. By comparing health conditions in two following years, we are able to catch only a very short term effect of retirement, that may be due to an adjustment to new social and economic roles. When definitively quitting the labour market, in fact, job lose its centrality in one's daily life and individuals have to reallocate the time usually spent in paid job in alternative activities. Such an adjustment may be more traumatic for men than for women, especially in a country still characterised by a traditional gender division of economic and domestic roles as Italy. Women are more used to devote their time to other demanding activities as domestic tasks or family care, and may more easily adapt to the new life style, for instance by increasing time investments in family related activities. For men, such an adjustment may require a stronger effort, and may take longer. If this is true, the negative effect of retirement on self-reported health may be lower or become no more significant when changes in health are observed over a longer period of observation. To better disentangle the effect of retirement on subsequent self-reported health, we will include an analysis of the change in health over a period of two years of observation, or even longer if data allow for it.

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