

The effects of the economic crisis on the older population in Italy: is the recession bad for their health?

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Introduction and background

After a period of economic growth which started at the beginning of the millennium, in 2008 the financial crisis hit the Italian real economy, inflicting enduring social distress. According to the latest available data (ISTAT), the principal economic indicators show a significant deterioration. The greatest impact was on the employment sector where unemployment rose from 6.1% in 2007 to 12.1% in 2013, while 28,4% of Italians were at risk of poverty or social exclusion in 2013 (ISTAT 2014). The worsened economic conditions, a decrease in social (work), economic (income) and service (austerity measures) resources, impacting with increasing severity, have raised major concerns in the research community that the economic crisis may have had a negative impact on health and on health inequalities. Compared to other European countries, Italy may be even more vulnerable because of the size of its public debt, its resistance to economic innovations and the inadequacy of its social welfare system (De Belvis et al. 2012).

Conceptual frameworks have highlighted the importance of different distal and proximal determinants of health such as unemployment, job insecurity and reduction in government expenditure (Costa et al. 2012, Suhrcke and Stuckler 2012, Meltzer et al. 2010, Martikainen et al. 1996). However, the literature on the health effects of the economic recession reports mixed results for the population as a whole and a clear picture does not emerge yet (CSDH 2008). In general, studies show that positive economic cycles are accompanied by mainly negative health outcomes in the short term. Indeed, economic growth facilitates environmental stressors such as traffic accidents and pollution, while it increases and allocates new economic resources, allowing more people to adopt unhealthy behaviors. During a period of economic recession, however, these pressure mechanisms decrease, giving short-term positive effects on health. Nevertheless, over the same short term, the economic downturn may lead to job loss or salary insecurity, as well as government cuts, generating negative effects on health, particularly within the more vulnerable groups, leading to different outcomes for different socioeconomic groups (Bartoll et al. 2015, Hessel 2014, Nandi et al. 2013, Tekin 2013, Suhrcke and Stuckler 2012, Wada et al. 2012).

Two main levels of analysis must be taken into consideration. On a more global level, we consider all the distal determinants of health such as employment, economic status and level of social services, whose response to the economic crisis are more consistent and on which austerity measures more often are applied. During a period of economic crisis or recession the more important distal factors that change are economic well-being, job security and protection, the health care system and social security. Moreover, in areas with

unequal resource distribution economic well-being seems to be one of the most important variables due to its effect on health (Wilkinson and Pickett 2010, Costa et al. 2012).

At a lower level, closer to individuals themselves, the exposure to major risk factors for health may increase or decrease the impact of the context. First among others, the economic downturn may affect income, implying that with less disposable income demand for ‘healthy life goods’ beneficial for health might decrease (Zavras et al. 2012, Hessel et al. 2014). On the contrary, if demand decreases for unhealthy products which are harmful to health, people may see an improvement in their health (Bartoll et al. 2015, Kondo et al. 2008). Besides, the current economic cycle may affect individual lifestyles: healthy daily life habits such as good food habits, sport or physical activities might be discouraged by budget restrictions. These effects must be also taken into account considering that the economic crisis might also be a shock for the national health system, as well as for the welfare state. Thus, people may have lower income available for health expenditure and this reduction may not be compensated by an increase in public health spending, accessibility and quality of services (Cislaghi 2012, Ierardi et al. 2012). Strongly connected with the ‘income effect’ there are also some psychological risk factors, mainly correlated with job strain and the quality of work. Work-related stress may rise with the deterioration of working conditions, as well as social exclusion, isolation and loneliness. Consequences can be multiple and conflicting: the threat of unemployment may result in adverse health effects, leading to negative mental health outcomes (Fryers et al. 2003, Dooley et al. 1996, Wilson and Walker 1993), or push people to act more cooperatively and adopt healthier behaviors in order to avoid dismissal (Berkowitz 1989).

As shown for other countries, in Italy the general health and lifestyle trend could also mask totally different behaviors across the country, hiding more negative effects on disadvantaged areas or groups. To our knowledge, older adults are rarely considered in studies on the health impact of economic crisis in Italy. However, they might be highly vulnerable to the imposed austerity measures that have limited social protection. Indeed, social and health services have been reduced, retirement old age pensions have not been adjusted to the cost of living and consumer purchasing power is reduced. In addition, often older adults become the main source of economic support for the younger family members. It is also likely that the vulnerability worsen among women, whose pensions are generally lower than those of men. The present study aims to begin to shed light on the short-term evolution of self-perceived health over the years of the current economic crisis in Italy. For this purpose we consider health outcome as the self-perceived health of individuals, known as one of the health outcomes normally related to economic trends (Costa et al. 2012), a reliable measure of objective health (Martikainen et al. 1999) and a good predictor of mortality and morbidities in individuals (Pietz and Petersen 2007).

Data and method

Our sample was drawn from seven waves from 2007 to 2013 of the national survey ‘Aspects of daily life – *Aspetti della vita quotidiana*’, a repeated cross-sectional study part of an integrated system of social surveys

'Indagine Multiscopo Sulle Famiglie'. The final sample we used is made up of 107.358 individuals older than 55 years clustered in a maximum of 19,535 families (year 2010). To analyse the association between the economic crisis and health, we applied logistic regression models with self-reported health (SRH) as the dependent variable. The SRH has been assessed on the basis of respondents' answers to the question *'How is your health in general?'*. In 2009 the response categories were modified by changing the label of the intermediate category. To overcome this problem, the variable of interest in our study has been dichotomized and takes the value 'one' if the person perceived their health as bad or very bad and 'zero' otherwise (i.e. very good, good or fair health). The main explanatory variable (year) consists of a set of dummy variables for the survey year, that take value 1 for the year 2007, up to value 7 for the year 2013.

In order to account for the many supposed influences on SRH, a set of control variables are included in the multivariate analysis. Two demographic variables are built-in: age groups and marital status. Socio-economic status is controlled by several variables: education level, employment status, area of residence, dwelling typology, dwelling tenure status, household income judgment and participation in any cultural activities over the last twelve months. Moreover, in order to take into account the effect of differing health status, behaviour and risk factors, we control for the presence of serious chronic diseases and for the existence of multiple chronic diseases. The body mass index (BMI), smoking behavior and the engagement in sport or physical activities are also taken into account. All the estimations are presented separately by gender and, in order to assess whether and how the association varies according to socioeconomic position, we stratify the analysis by education level. Finally, taking into consideration that the individuals in our sample are nested in families, we specify that the standard errors allow for intra-group correlation.

Preliminary results and discussion

Tables 1 presents the odds ratio (OR) of the associations between bad or very bad self-rated health (SRH) status (compared to excellent, very good or good health as a reference category) and the years of economic crisis, accounting for all sets of covariates.

Overall, there is a negative association between the SRH of individuals and the year of observation, such that we do not observe a general worsening trend in self-reported health conditions for both men and women. However, between 2009 and 2012 we note a slight deterioration of this protective effect, especially for men, while in 2013 the risks return to 2008 levels. Separated analysis by education level reveal similar decreases (i.e. no strong worsening conditions), but with different gender effects. In general, the higher the level of education the higher the protective effect. However, while the effect is more consistent for men, we see minor significant effect for higher educated women, so that their general trend is mainly driven by lower educated females, under which the year of observation starts to be significant and follows the overall tendency.

Regarding employment status, job seeking and retired report a higher probability of rating their health as bad or very bad with respect to those in employment and this risk increases, respectively by 56.2% and 109.7%

for men and by 49.8% and 102.4% for women. Stratifying by education level these trends are confirmed, but risks are clearly higher for lower educated individuals.

In addition to professional conditions, the other socioeconomic variables included in the study confirm our expectations. Living in a rented or sublet house increases the risk of bad or very bad SRH. Dwelling typology shows that living in a council house, compared to a residential building, has a positive correlation with SRH outcome such that the risks of perceiving negative health increase by 10.8% for females and 17.4% for men. These general results are mainly driven by lower educated individuals. The self-reported satisfaction with income resources follows our hypothesis, showing increasing risks of bad or very bad SRH when resources are insufficient or absolutely inadequate. In the latter case, the risks are more than doubled for both sexes. No evident differences emerge by education level.

The health controls are also consistent with our assumptions, showing the strong effect of chronic diseases on negative SRH for both sexes, and increasing risks for underweight individuals which intensify with decreasing educational level, especially for men. Smoking does not appear to be a strongly significant variable for women, while for men being a smoker increase the risk of negative health outcome compare to not smoking. Finally, the consequences of moderate or intense physical activities or sports follow the expectations, showing a consistently increasing protective effect of these activities on the risk of perceiving bad or very bad health. The same trend is observed in those participating in cultural activities: the greater the participation, the lower the risk of poor SRH. Both outcomes are heterogeneous by education but, even if the magnitude of the effect changes, the positive trends are confirmed for all levels.

According to our first results, the self-rated health of individuals does not seem to have worsened over the years of the economic crisis in Italy. However, it is important to underline that the general trends mask relevant variations across individuals and education level.

Since the employment rate and other economic indicators deteriorated rapidly in Italy between 2008 and 2013, we expect that the survey captures much of the relevant short term health responses to the economic downturn. However, it has been proven that health inequalities between individuals of different socioeconomic status remained for a long period after the economic crisis and may not be captured over a short term period (Kondo et al. 2008). In order to draw inferences on the long-term changes, more data would be required. Nevertheless, due to the lack of data on duration and exposure, for instance to unemployment, we cannot oversee possible mechanisms of adaptation or adjustment to the adverse situation which would affect reported health over time. Our results are also limited by the use of repeated cross-sectional observations and results could mask reverse causality effects between our dependent and independent variables. Nevertheless, in order to disentangle the mechanisms behind our results as much as possible, further analysis will be implemented. In particular, risk factors will be analyzed separately by age groups, employment status, including more years of observations and exploring possible interaction effects.

Table 1. Odds ratio (OR) for self-reported health status (SRH) on demographic and socio-economic variables by gender and educational level, robust standard errors in parentheses

	Men			
	Overall	Education level		
		High	Medium	Low
Year (ref=2007)				
2008	0.778*** (0.0457)	0.626*** (0.0897)	0.783* (0.105)	0.809*** (0.0598)
2009	0.882** (0.0515)	0.940 (0.129)	0.744** (0.0976)	0.910 (0.0674)
2010	0.905* (0.0529)	0.832 (0.115)	0.933 (0.119)	0.902 (0.0675)
2011	0.869** (0.0508)	0.886 (0.121)	0.760** (0.0981)	0.894 (0.0668)
2012	0.719*** (0.0433)	0.717** (0.0988)	0.598*** (0.0799)	0.747*** (0.0579)
2013	0.794*** (0.0466)	0.620*** (0.0857)	0.709*** (0.0903)	0.874* (0.0661)
Observations	48,844	14,642	12,801	21,401
	Women			
Year (ref=2007)				
2008	0.793*** (0.0367)	0.654*** (0.102)	0.852 (0.114)	0.798*** (0.0415)
2009	0.898** (0.0413)	0.894 (0.128)	0.912 (0.121)	0.895** (0.0472)
2010	0.840*** (0.0390)	0.851 (0.124)	0.977 (0.125)	0.814*** (0.0432)
2011	0.806*** (0.0374)	0.846 (0.122)	0.876 (0.112)	0.786*** (0.0419)
2012	0.820*** (0.0380)	0.793* (0.112)	0.888 (0.114)	0.812*** (0.0434)
2013	0.784*** (0.0364)	0.927 (0.129)	0.694*** (0.0903)	0.781*** (0.0419)
Observations	58,514	12,294	11,688	34,518

Note: Each extension includes all control variables. Standard errors are clustered within countries.

*** p<0.01, ** p<0.05, * p<0.1

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