The economic crisis and health in Spain and Europe: Is mortality increasing?

La crisis y la salud en España y en Europa: ¿Está aumentando la mortalidad?

Tapia Granados, José A.[1]

[1]Physician, PhD in Economics. Associate Professor, Department of Politics, Drexel University, Philadelphia, USA. jat368@drexel.edu

ABSTRACT In recent publications it has been suggested that the health of the European population is deteriorating as a consequence of the economic crisis. Such deterioration would be manifested by an increase in mortality, particularly in those countries applying austerity measures. It has also been suggested that as a consequence of these policies, suicides have skyrocketed and the situation could become a public health catastrophe of the kind that occurred in the 1990s in the countries formerly part of the USSR. These assertions have no basis in the existing data. Statistics indicate that in European countries in general and especially in those most affected by the crisis, general mortality has decreased and the health of the population has improved in 2007-2010. Paradoxically, the crisis has had a beneficial effect on health in these countries. Such findings are in substantial agreement with previous studies that have shown throughout various periods within market economies that recessions are favorable for health while periods of economic expansion are harmful.
KEY WORDS Economic Recession; Life Expectancy at Birth; Mortality Rate; European Union.

RESUMEN En publicaciones recientes se ha sugerido que por efecto de la crisis económica la salud de la población se está deteriorando en Europa, lo que se manifestaría en aumentos de la mortalidad, particularmente en los países donde se están aplicando políticas de austeridad. Se ha sugerido también que, como consecuencia de esas políticas, los suicidios se han disparado y que la situación podría derivar en una catástrofe sanitaria como la que ocurrió en los antiguos países de la URSS durante los años noventa. Esas afirmaciones no tienen base en los datos disponibles. Las estadísticas indican que, en los países europeos en general y sobre todo en los más afectados por la crisis, las tasas de mortalidad general han disminuido y la salud de la población ha mejorado durante los años 2007-2010. Paradójicamente, la crisis ha tenido un efecto beneficioso para la salud en estos países. Esto supone una confirmación sustancial de investigaciones previas que han mostrado en diversos períodos y economías de mercado que las recesiones son favorables para la salud, mientras que los períodos de expansión económica son perjudiciales.
PALABRAS CLAVES Recesión Económica; Esperanza de Vida al Nacer; Tasa de Mortalidad; Unión Europea.

INTRODUCTION

In the general climate of economic crisis experienced in many European countries, in which governments continue to apply austerity policies, unemployment and falling incomes continue to wreak havoc in the welfare of the population, and social conflicts of all types are heightened, voices have emerged suggesting or affirming that negative effects on population health are already being observed, particularly in countries where austerity policies are applied more intensely. In a book whose translation into Spanish was recently published (1), and in articles that appeared in *The Lancet* (2), *The New York Times*, *The Guardian* and *El País*, David Stuckler, Sanjai Basu and others have suggested that such negative effects should be attributed either to the crisis itself or to policies cutting back on social spending and health spending in particular, thereby compromising access to or the quality of health care services. Manuel Díaz Olalla, a Spanish author who has echoed these arguments, is of the opinion that in Spain the effects of the cutbacks in social spending in general and in health spending in particular can be seen in increased mortality in the Spanish population in 2012 (3). According to Díaz Olalla, preliminary mortality data reported by the National Statistics Institute for the first half of 2012 are well beyond the most pessimistic predictions. If these preliminary data were to be confirmed, a 9.7% increase in mortality in comparison with 2012 would be observed. According to Díaz Olalla, "the most plausible explanation" of that "alarming phenomenon and, in addition, the only explanation well-supported by scientific knowledge" would be "the deficit in social protection resulting from cuts in social spending." If this increase in mortality were confirmed in 2012, it would indicate

> ...a disaster in terms of health and human development of incalculable dimensions, this being a phenomenon that has occurred in the world in times of very severe crisis in which the obligation of the State to protect remains absolutely inert, as has happened [...] in scenarios of prolonged, bloody wars or, like now, in the context of wide-reaching economic crisis with very serious restrictions of social protection. This happened in many countries in Eastern Europe after the fall of the Soviet Union... (3 p.6) [Own translation]

Díaz Olalla is not the only author who has compared the potential effects on health of the present economic crisis in Spain or other European countries and the crisis that took place in the countries of Eastern Europe during the 1990s, when the communist parties were displaced from power and the centrally planned economy in these countries was quickly replaced by a market economy. Stuckler, Basu and other authors have made this comparison (1,2) and have suggested at the same time that the economic crisis in general and the austerity policies in particular are having negative consequences in the health of the population.

This article questions such statements regarding the recent developments of health in Europe and shows that the comparisons between the current economic recession and what happened in Eastern Europe in the 1990s are inappropriate because they are economically and socially heterogeneous phenomena, and, above all, different from a public health standpoint. To date there is no evidence of a significant increase in mortality in Spain; on the contrary, the available data indicate that mortality decreased in the triennium 2007-2010. Moreover, it is rarely plausible to attribute a significant short-term change in mortality to an improvement or deterioration in the access to or quality of health care services (4).

THE PRESENT RECESSION AND THE ECONOMIC CRISIS IN EASTERN EUROPE IN THE 1990S

A basic principle of epidemiological practice and public health planning is that the descriptions, causal statements, and recommendations for public health policy should be based on solid and verifiable data. The authors affirming that in public health terms, the present European situation might be similar to the economic collapse of the post-Soviet republics – a collapse that certainly had devastating consequences on population health – are simply based on the analogy

that both are "economic crises," but they do not go any deeper or provide data to support the comparison.

It is true that both the Great Recession, which started in late 2007 and affected to a greater or lesser degree all countries of the world, and the troubled transition to a classic form of capitalism that took place in the countries of the former Soviet bloc in the 1990s are "economic crises," if we consider as such the periods when the production and distribution of goods and services decrease and are severely disrupted. But the analogy goes no further, because while the transition in Eastern Europe was a unique historical phenomenon determined by a complete reorganization of the productive system with extremely important socio-political changes, the economic crisis that started in late 2007 is a manifestation of the irregular boom and bust cycle, which is typical of market economies. Half a century ago, Paul Samuelson and other Keynesian economists proclaimed that economic science had the necessary tools to eliminate this cycle which has received many different names (industrial, trade, business or crisis cycle, among others). All the recessions that have taken place since then more than prove that such an assertion is not supported by the facts.

On the other hand, suggesting a parallel in terms of the effects on health of the recessions that recurrently afflict market economies and the crisis generated by the transition in Eastern Europe in 1990s is especially misleading, since the former have in general a positive effect on health, while the latter was an absolute public health disaster to which millions of preventable deaths can be attributed. During the transition in Eastern Europe in the early 1990s, mortality increased in an unusual manner (5,6), while in general mortality has decreased during recessions and even depressions in market economies (7-15), and as shown below it has also decreased in European countries since 2007, especially in the countries most severely hit by the crisis.

As Table 1 shows, in the period of 1990-1993 in the countries formerly belonging to the USSR or the Soviet bloc, the crude mortality rate (that is to say, deaths per 1,000 inhabitants) increased by astonishing jumps (for instance, by 29.5% in Russia, by more than 15% in the Baltic countries, by 7.0% in Bulgaria). However, in 1929-1933,

during the Great Depression in the US, crude mortality dropped by 10.0% and in 1975-1978 during the recession of the so-called Oil Crisis mortality decreased by 4.0% in Italy and by 4.7% in Spain (while the unemployment rate rose from 1.9% to 6.2% in Spain and from 5.9% to 7.2% in Italy). In 2007-2010, after the start of the Great Recession, the crude mortality rate decreased by 1.7% in Greece, by 3.5% in Spain, by 3.6% in the US, and by more than 5% in the three Baltic countries. This shows that the crisis in Eastern Europe in the 1990s was a "Great Disaster" in public health terms with substantial and unexpected increases in mortality, while recessions in Western Europe in the last three decades of the twentieth century have been periods of declining mortality.

Table 1. Percent change in crude mortality rates in several countries in periods of "crisis."

Country	Period and years of change in mortality rates		Mortality change (%)
USA	Great Depression	1929-1933	-10.0
Italy	Oil Crisis	1975-1978	-4.0
Greece	Oil Crisis	1975-1978	-1.5
Spain	Oil Crisis	1975-1978	-4.7
Greece	Great Recession	2007-2010	-1.7
Spain	Great Recession	2007-2010	-3.5
UK	Great Recession	2007-2010	-4.2
USA	Great Recession	2007-2010	-3.6
Bulgaria	Great Recession	2007-2010	-0.9
Hungary	Great Recession	2007-2010	-1.3
Romania	Great Recession	2007-2010	+3.6
Estonia	Great Recession	2007-2010	-9.2
Latvia	Great Recession	2007-2010	-7.1
Lithuania	Great Recession	2007-2010	-5.3
Russia	Great Recession	2007-2010	-3.0
Bulgaria	"Great Disaster"	1990-1993	+7.0
Hungary	"Great Disaster"	1990-1993	+3.4
Romania	"Great Disaster"	1990-1993	+8.6
Estonia	"Great Disaster"	1990-1993	+14.5
Latvia	"Great Disaster"	1990-1993	+17.1
Lithuania	"Great Disaster"	1990-1993	+16.5
Russia	"Great Disaster"	1990-1993	+29.5

Source: Own elaboration from mortality data for the US reported in *Historical Statistics of the United States. Millennial Edition* (16) and *Deaths: Final Data for 2010* (17). For the other countries, mortality rates were taken from the Health for All Database (HFA-DB) of the World Health Organization (18), which at present includes crude mortality rates for Italy only up to 2009.

EVIDENCE OF HEALTH IMPROVEMENT DURING THE GREAT RECESSION

Total crude mortality rates are easy to understand and, when they suffer large increases or decreases, can provide a rough indication of the evolution of population health in the short term. Thus, Table 1 shows that for instance in Latvia the years 1990-1993 were deleterious for population health, while the years 2007-2010 were a health bonanza, as measured by general mortality. However, for finer estimates of the evolution of population health, crude mortality rates are not appropriate because age structure has an important influence on them, and the population aging of the society may generate a high crude death rate, even if health conditions are good.

Life expectancy at birth (abbreviated e_o by demographers) is an indicator of population health that summarizes age-specific mortality at all ages and is increasingly used – by the United Nations and many other institutions and authors (19,20) – as the best comprehensive indicator of population health for inter-temporal and cross-national or cross-group comparisons. The Health For All (HFA) database of the Regional Office for Europe of the World Health Organization (WHO) provides e_0 data for all European countries and most of the years from 1970 to the present. As of July 2013, e_0 data were available for almost all countries in the WHO European region until 2010, and for only a very few countries until 2011.

Table 2 shows e_0 for 19 European countries in 2004, 2007 and 2010. This table excludes small countries like Andorra or San Marino and the countries that had been part of the former USSR (such as Ukraine, Belarus, and Armenia), except for the Baltic countries, which are now part of the European Union. This table also excludes Iceland, Italy, France and other countries that do not have e_0 data in the HFA database for any of the three years (2004, 2007 or 2010).

Since the start of the global economic crisis that has been named Great Recession may be dated to late 2007, the comparison between what happened in the 3-year periods before and after the start of the crisis (that is, 2004-2007 and 2007-2010) may serve to estimate the effect of the crisis on population health.

For instance, as shown in Table 2, in Greece, e_0 rose six-tenths of a year in 2004-2007 and almost twice that (1.1 years) in 2007-2010. In Spain, the e_0 that had increased 0.7 years in 2004-2007 grew 1.1 years in 2007-2010. In Lithuania, e_0 declined one year in 2004-2007, but increased 2.6 years in 2007-2010. This indicates that in these three countries mortality rates declined in 2007-2010 faster than in 2004-2007. In Germany, e_0 had a gain of 0.8 years in 2004-2007 and only half that figure in 2007-2010. Summarizing, in 2007-2010 e_0 did not decrease in a single country of those 19 listed in Table 2, while it had dropped in two countries (Latvia and Lithuania) in 2004-2007. When comparing the gains in e_0 in the periods before and after the start of the crisis, the cases where gains in population health were greater after 2007 correspond to Bulgaria, Estonia, Greece, Latvia, Lithuania, Poland, Slovakia, Slovenia, and Spain (9 countries), while in Austria, the Czech Republic, Finland, Germany, Ireland, the Netherlands, Romania and Switzerland (8 countries) gains in population health were greater in 2004-2007, that is before the crisis. In the United Kingdom and Sweden, the gains in population health before and after the start of the crisis were identical. All this "circumstantial evidence" is hardly compatible with any harmful effect of the crisis on general mortality rates, particularly in the first group of countries where the increase in e_0, which reflects the decrease in mortality, accelerated after 2007.

The group of countries where e_0 increases were higher in the three-year period 2007-2010 of recession includes the Baltic countries, where unemployment rates skyrocketed in those years. As shown in Table 2, the unemployment rate rose from 4.7% to 16.9% in Estonia, from 6.0% to 18.7% in Latvia, and from 4.3% to 17.8% in Lithuania. Spain also belongs to this group of countries that show good health results, although the unemployment rate rose from 8.5% in 2006 to 20.1% in 2010. In Greece, Poland, Slovakia and Slovenia there were also significant increases in the unemployment rate in 2007-2010, while e_0 evolved better than in the previous 3-year period.

In the group of countries where progress in population health measured by e_0 declined in 2007-2010 compared with the three years before the crisis, we found the Czech Republic, Germany, Sweden, Finland, the Netherlands, and Switzerland,

Table 2. Life expectancy at birth (e_0, in years), unemployment rate (U, percentage of the active population) in 2004, 2007 and 2010, and their respective changes (Δe_0 and ΔU) in 2004-2007 and 2007-2010 in 19 European countries.

Country	Year	e_0	Δe_0	U	ΔU
Austria	2004	79.5	-	5.0	-
	2007	80.5	1.0	4.4	-0.6
	2010	80.9	0.4	4.4	0.0
Bulgaria	2004	72.6	-	12.0	-
	2007	73.1	0.5	7.3	-4.7
	2010	73.8	0.7	10.2	2.9
Czech Republic	2004	76.0	-	8.3	-
	2007	77.1	1.1	5.3	-3.0
	2010	77.8	0.7	7.3	2.0
Estonia	2004	72.3	-	9.7	-
	2007	73.2	0.9	4.7	-5.0
	2010	76.0	2.8	16.9	12.2
Finland	2004	79.0	-	8.8	-
	2007	79.7	0.7	6.9	-1.9
	2010	80.3	0.6	8.4	1.5
Germany	2004	79.4	-	11.0	-
	2007	80.2	0.8	8.7	-2.3
	2010	80.6	0.4	7.1	-1.6
Greece	2004	79.0	-	10.5	-
	2007	79.6	0.6	8.3	-2.2
	2010	80.7	1.1	12.5	4.2
Ireland	2004	78.7	-	4.5	-
	2007	79.8	1.1	4.6	0.1
	2010	80.8	1.0	13.6	9.0
Latvia	2004	71.3	-	8.5	-
	2007	71.2	-0.1	6.0	-2.5
	2010	73.7	2.5	18.7	12.7
Lithuania	2004	72.0	-	11.4	-
	2007	71.0	-1.0	4.3	-7.1
	2010	73.6	2.6	17.8	13.5
Netherlands	2004	79.4	-	5.1	-
	2007	80.5	1.1	3.6	-1.5
	2010	81.2	0.7	4.5	0.9
Poland	2004	75.0	-	19.0	-
	2007	75.5	0.5	9.6	-9.4
	2010	76.6	1.1	12.4	2.8
Romania	2004	71.9	-	8.1	-
	2007	73.3	1.4	6.6	-1.5
	2010	73.8	0.5	7.0	0.4
Slovakia	2004	74.4	-	18.2	-
	2007	74.7	0.3	11.0	-7.2
	2010	75.7	1.0	14.4	3.4
Slovenia	2004	77.3	-	10.6	-
	2007	78.5	1.2	7.7	-2.9
	2010	80.0	1.5	11.8	4.1
Spain	2004	80.5	-	11.0	-
	2007	81.2	0.7	9.9	-1.1
	2010	82.3	1.1	20.1	10.2
Sweden	2004	80.6	-	5.5	-
	2007	81.2	0.6	6.6	1.1
	2010	81.8	0.6	8.4	1.8
Switzerland	2004	81.4	-	3.9	-
	2007	82.2	0.8	3.6	-0.3
	2010	82.8	0.6	4.5	0.9
United Kingdom	2004	79.0	-	4.7	-
	2007	79.9	0.9	5.5	0.8
	2010	80.8	0.9	7.8	2.3

Source: Own elaboration from data reported by WHO (18). Unemployment data for Spain, Sweden, Bulgaria, Romania, and the United Kingdom regarding 2007 is not available in the database; however, data is available for 2006 and 2008. In order to avoid using heterogeneous sources, unemployment data for these countries in 2007 is based on an interpolation of data from the HFA database for the previous and subsequent years.

all of them countries where the economic crisis was quite mild and only minor increases in the unemployment rate – for instance, from 7.1% to 7.3% in the Czech Republic and from 4.4% to 4.5% in the Netherlands (Table 2) – were experienced between 2007 and 2010. In the case of Germany, the unemployment rate even declined, from 8.7% in 2007 to 7.1% in 2010.

It seems therefore that, paradoxically, the greater the increase in the unemployment rate (ΔU in Table 2), the greater the gain in population health (Δe_0). This impression is confirmed by the correlation between these two variables. Considering the 19 paired values of ΔU and Δe_0 for 2007-2010, the Pearson's correlation coefficient is $r = 0.89$, which is statistically significant at the highest level of statistical significance ($p < 0.001$). However, the correlation is also positive, $r = 0.50$, and statistically significant ($p = 0.028$) for the 19 paired values of ΔU and Δe_0 for 2004-2007. Considering the 38 paired values of ΔU and Δe_0 for 2004-2007 and 2007-2010, the correlation is $r = 0.74$ ($p < 0.001$). The positive and significant correlation is robust in relation to the period specification in 2004-2007 and 2007-2010. According to Okun's law, the change in the unemployment rate negatively and significantly correlates with the growth of the gross domestic product (GDP). Therefore, these correlations show that higher economic growth is correlated with a deceleration of the progress of health.

PREVIOUS RESEARCH ABOUT THE MACROECONOMIC EFFECTS ON HEALTH

The results presented here show:

a. that the European countries in which the gains in population health were greater in the period after the start of the Great Recession include the nations in which the economic crisis was more severe;
b. that the European countries where gains in population health slowed down after 2007 include the countries where the crisis has been less severe;
c. that considering either 2007-2010, 2004-2007, or both periods, there is a positive correlation

between gain in population health and increase in unemployment rates.

The evidence indicates not only that population health as indexed by e_0 has evolved better in the European countries in which the economic crisis has been deeper, but also that the worse the evolution of the economy as measured by change in unemployment rates, the better for health. This is obviously a counterintuitive and surprising finding. However, it is consistent with a whole body of previous research that, for instance, shows that mortality rates strongly declined in the US in the worse years of the Great Depression of the 1930s (21), that in Argentina in the 1980s and 1990s there was a *positive* correlation between economic growth and annual change in mortality rates (14), and that in the Asian-Pacific countries, considering the years 1976-2003 which include the "Asian crisis" around the turn of the century, both total mortality rates and mortality due to cardiovascular diseases and other important causes increased over the secular trend during the expansions of the economy and fell regarding the trend during the recessions (15). These are just some of the many research studies that have shown that in the market economies of North and South America, Europe and Asia, health evolved better in recessions than in expansions (8,10,11,13,14,22,23).

The cited research studies have shown that economic recessions are generally associated with an increase in suicides (24), as well as with declines in deaths due to cardiovascular diseases, infectious diseases, diseases of the liver and respiratory system, traffic accidents, and occupational injuries. The consequence is a decrease in net mortality with the consequent increase in e_0, in spite of the increase in suicides. The data presented here on the evolution of population health in 19 European countries support the conclusion that economic recessions are beneficial for health. This finding necessarily means that the more accelerated the economy is, the less intense the processes reducing mortality are. In the case of mortality due to traffic accidents – which increases and decreases along with the level of economic growth because more economic activity means more commercial, industrial and recreational traffic, and more injured and dead on the roads – it is clear why mortality increases in times of prosperity and decreases when

the economy deteriorates. It also seems quite clear why suicides increase when the economy deteriorates and many people lose their jobs, or have to face the threat of mortgage foreclosure, bankruptcy of their business, or substantial income cuts (it is interesting, however, that this suicide fluctuation in Spain affects suicides in males but not females) (13). In summary, we understand quite poorly the reasons why total mortality tends to increase in periods of expansion and decrease in periods of recession. But that it is happening is a fact. To deny a phenomenon because we do not fully understand the reasons for it is not a scientific stance.

DATA FROM THE SPANISH CASE

Table 3 and Table 4 show several health indicators for the Spanish population according to sources of WHO and the National Statistics Institute (INE) [*Instituto Nacional de Estadística*]. The comparison between both tables shows that both sources provide essentially the same information, despite minor differences in the reported parameters. Thus, for instance, while according to the INE e_0 was 81.2 in 2008 and 81.6 in 2009, according to the WHO the figures were 81.5 and 81.9. If the year-to-year change for the figures reported by both sources is compared, it can be demonstrated that the evolution is almost identical. In this way, there are no serious problems of data conflict according to source.

According to Díaz Olalla (3), the data provided by INE would indicate a significant increase (9.7%) in deaths in 2012 compared to 2011, announcing a catastrophic increase in mortality as a result of the deterioration of public spending and health care services.

As cited by Díaz Olalla, death data for the first six months of 2012 was provided by INE in an article dated December 12, 2012. In July 2013 the INE's website reported a crude mortality rate (per 1,000 inhabitants) of 8.6 for 2012 and 8.3 for 2011. If these figures are confirmed — which remains to be seen because the INE provides a provisional estimated rate for 2012 — the increase with regard to the previous year would be 3.4%, and not 9.7% as Diaz Olalla states. Furthermore, the increase in the crude death rate in a population

such as the Spanish population, which in recent years may have aged as a result of a very low birth rate and a selective migration of younger people, may be compatible with an increase of e_0. Thus, according to the same figures from INE (Table 4), crude mortality increased from 8.2 to 8.3 per 1,000 from 2010 to 2011, and at the same time e_0 increased from 82.0 to 82.1 years.

It is much more interesting to consider the final data of health indicators of the Spanish population in the first decade of the century than it is to pay attention to the preliminary data that may change when the final statistics are published. Those figures, presented in Table 3, indicate that the crisis that started in 2007 did not alter the downward course of general mortality, infant mortality, and mortality caused by cardiovascular diseases in general or ischemic heart disease in particular, by traffic accidents, and by homicides. However, *suicides and maternal mortality did increase.* Maternal mortality increased from 2.6 to 4.6 per 1,000 live births, almost doubling between 2007 and 2008. The rates remained high in 2009 and 2010, at significantly higher levels than before the start of the crisis. Suicides increased between 2007 and 2008 but declined somewhat in 2009, and in 2010 they were below the levels of 2007. These increases in maternal mortality and suicide rates could be consequences of the crisis, and since both maternal deaths and suicides are preventable, they could indicate a deterioration of the pertinent health care services. In any case, data show the need to strengthen prevention measures in those areas.

The evolution of health in 2011, 2012 and 2013 – years in which the living conditions of many sectors of the Spanish population certainly deteriorated and changes in health care services were introduced, making it more difficult to access such services and affecting their quality – will be established by the figures as they appear. On the one hand, over a century of historical experience does not suggest expecting increases in general mortality, but rather quite the opposite. On the other hand, there is no sure guarantee that the patterns observed in the past will be exactly those observed in the future.

Table 3. Indicators of the health of the Spanish population, 2000-2010.

Year	e_0	General mortality rates and mortality rates due to specific causes								CM
				Mortality rate standardized by age						
		IM	MM	Cardio-vascular diseases	Ischemic heart disease	Suicides	Homicides	Traffic accidents	All causes	
2000	79.5	4.4	3.8	197.9	65.3	7.3	1.0	14.8	610.7	8.97
2001	79.8	4.1	4.2	191.0	62.7	6.7	1.0	13.8	596.5	8.87
2002	79.9	4.2	3.3	187.5	61.7	7.0	1.0	13.1	592.7	8.92
2003	79.8	3.9	4.5	187.4	61.5	7.1	1.0	13.0	600.1	9.16
2004	80.5	4.0	4.6	173.5	57.3	7.0	1.4	11.3	565.2	8.71
2005	80.4	3.8	3.9	172.0	56.3	6.6	0.8	10.4	568.5	8.93
2006	81.2	3.5	2.9	159.0	51.9	6.2	0.8	9.5	532.4	8.43
2007	81.2	3.5	2.6	157.8	50.4	6.1	0.7	8.7	534.0	8.59
2008	81.5	3.4	4.6	151.3	47.4	6.5	0.8	7.2	519.7	8.47
2009	81.9	3.3	3.4	143.1	45.3	6.3	0.7	5.7	503.7	8.38
2010	82.3	3.2	4.1	137.6	43.8	5.8	0.7	5.1	487.0	8.29

Source: Own elaboration based on data obtained in July 2013 from the Health for All Database (HFA-DB) of the World Health Organization (18).
Note: The infant mortality rate refers to deaths of children under one year of age, and the maternal mortality rate to maternal deaths, both estimated per 1,000 live births. "Homicides" refers to intentional injuries and the homicide rate, estimated per 100,000 people in a standard European population aged less than 65 years. The rest of the mortality rates standardized by age include all ages and are estimated per 100,000 people in a standard European population. The crude mortality rate refers to deaths per 1,000 inhabitants.
e_0 = life expectancy at birth, in years. IM = Infant mortality. MM = Maternal mortality. CM = Crude mortality.

CONCLUDING REMARKS

The economic crisis that started in 2007 and is far from resolved in many European countries has been associated with increases in population health that have been particularly large in the Baltic countries, Spain, Greece, and other countries most affected by the crisis. Among the 19 European countries, the three Baltic nations have had the greatest gains in e_0 (between 2.5 and 2.8 years) between the start of the crisis in 2007 and the last data available in 2010 (Table 2). However, the Baltic countries are among those members of the European Union most severely hit by the crisis. This astonishing finding and, more generally, the positive correlation between increases in unemployment rates and decreases in mortality (indicated by the positive correlation between change in unemployment and gains in e_0) confirm the paradox that periods of economic recession have beneficial effects on health. This fact, discovered by Dorothy Thomas and William Ogburn almost a century ago (22), remains disconcerting today.

In the context of a controversy on the effects of recessions on health, an epidemiologist wondered a few years ago if public health practitioners should recommend economic recessions, given that expansions seem to be harmful to health (25). It was a rhetorical question, but it highlights how puzzled researchers are when they find something

Table 4. Life expectancy at birth (in years) and crude mortality rate (per 1,000) for Spain, 2000-2012.

Year	e_0	CMR
2000	79.3	8.9
2001	79.7	8.8
2002	79.8	8.8
2003	79.7	9.1
2004	80.3	8.6
2005	80.3	8.8
2006	80.9	8.3
2007	80.9	8.5
2008	81.2	8.4
2009	81.6	8.3
2010	82.0	8.2
2011	82.1	8.3
2012	-	8.6*

Source: Own elaboration based on data reported by the National Statistics Institute (INE) [*Instituto Nacional de Estadística*] in July 2013.
* Data reported as provisional on the INE's website.
e_0 = life expectancy at birth. CMR = Crude mortality rate.

that seems to be absurd. The association of falling mortality with rising unemployment appears absurd because it is, at first glance, at odds with an entire body of health research showing: a) that compared with employed individuals, unemployed individuals have worse health outcomes; b) that there is a strong health gradient by social class, so that higher income correlates with better health; c) that health is generally better in countries with higher GDP per capita. If that is the case, how can it be true that health improves in recessions when unemployment is more frequent and incomes decline across the board? Hypotheses have been advanced in order to answer this question, suggesting that less pollution and stress in the work environment, more social support, and lower circulation of pathogens when the economy turns downward could be the causes of the decrease in those periods of deaths due to cardiovascular, infectious, and respiratory diseases (26-31). Nonetheless, the answer is that we truly do not know the causes of this phenomenon.

We do know, however, that there is no evidence to support the claims of those who affirm that countries like Greece, Italy, and Spain have seen starkly worse health outcomes than countries like Germany, Iceland and Sweden (1,2). Data indicate (Table 2) that Greece and Spain gained both more than a year in e_0 between 2007 and 2010, while Germany gained 0.4 years and Sweden 0.6 years.

The authors emphasizing the impact of the crisis on health highlight the increase of suicides in Europe in recent years, which they say is a direct consequence of the crisis. They are probably right about that, but even that assertion must be qualified. According to Stuckler and Basu, part of what represents for them the health disaster in Greece, "which used to have one of Europe's lowest suicide rates," is that the rate has now doubled (1). The statement seems to suggest unusual increases in suicides in Greece, but data provided by WHO (Figure 1) show that the only change in the suicide rate that could be related to the crisis is a moderate increase in 2007-2009. Greece had much lower levels of suicide in 2010 than, for instance, Iceland and Germany. In many European countries the suicide rate increased starting in 2007 but, for instance, it increased in a sustained and pronounced way in the Netherlands
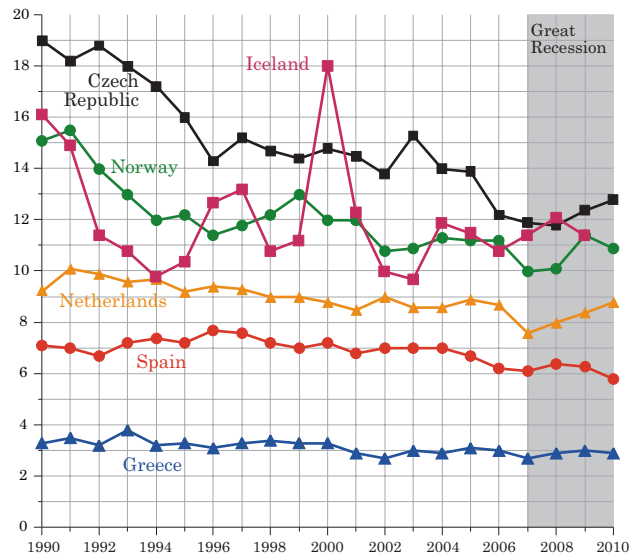

Figure 1. Standardized suicide rates by age in six European countries, 1990-2010.

Source: Own elaboration based on data reported by WHO (18) in July 2013.
Note: The standardized rate corresponds to deaths caused by suicide or self-inflicted injuries, per 100,000 people in a standard European population.

and Germany, where the crisis was very mild and austerity policies inexistent. In Greece and Spain, where the crisis has been very strong, the suicide rate increased in a moderate way in 2007-2009, but then it declined in 2009 and 2010, when the crisis was still in full swing. This suggests that factors not directly related to the economy have a crucial role in determining suicide rates.

Many European nations are going through a time of crisis in which millions of people are unemployed or are afraid of losing their jobs at any moment. At the same time, wages suffer significant cutbacks, mortgage foreclosures threaten to leave homeless those who are unable to pay their debts, and governments reduce their provisions of social services. All of these are reasons enough to cause worry, social unrest and protest. Additional reasons based only on exaggerations and myths, with no basis in reality, are unnecessary.

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