The impact of economic crisis on mental and physical health in Italy

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Economic crisis, unemployment, mental health, suicide, psychotropic drugs

Summary
Background: The global crisis that began in 2007 has been the most prolonged economic recession since 1929. It has caused worldwide tangible costs in terms of cuts in employment and income, which have been widely recognised also as major social determinants of mental health (1, 2). The so-called “Great Recession” has disproportionately affected the most vulnerable part of society of the whole Eurozone (3). Across Europe, an increase in suicides and deaths rates due to mental and behavioural disorders was reported among those who lost their jobs, houses and economic activities as a consequence of the crisis.

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The global crisis has resulted in a considerable increase in poverty rates and inequality, which in turn have worsened in many cases the inequalities in access to health care with an increased risk for people’s health. In recent years, austerity policies have been implemented in many countries. Social spending has been reduced as a consequence of austerity policies, making access to social and health services more difficult creating the conditions for an increase in inequalities. The negative impact of austerity measures on public health services (4) and the detrimental impact of cutting back on health care and social welfare measures in times of crisis have been widely emphasised. The differences in behavior between the different social strata of the population has further disadvantaged the poor than those who have more resources.

This has not only caused an increase of existing diseases, and in particular major depression and dysthymia, but also the appearance of „new“ diseases. People’s economical constraints have elicited the demand for medical services and the request of help for many problems related to lifestyle such as alcohol, smoking, drugs, physical exercise.

In the international scenario, Italy is no exception. Italy has not been spared from the financial crisis with severe societal and mental health consequences. Along with many other Countries, Italy has been severely hit by the...
economic crisis showing overtime a significant increase in unemployment rates.

The Farmalphafracting Foundation (5) has investigated the relationship between the economic crisis, health inequalities and the effects on human health showing that the economic effects of the crisis have reverberated on all the aspects of people’s daily lives, including those health, life satisfaction, and trust in the institutions, which declined significantly, with a surge in stress levels in people.

The same agency has shown that health cuts have had substantial effects on the part of the expenditure dedicated to services to the patient, resulting in less funds given for hospital, outpatient and diagnostic services.

Some negative effects on the Italians mental health have been detected also by Costa et al. (6), who found in the short term an increased occurrence of unfavorable indicators of mental health such as suicides, depression, addictions, that could be explained in particular by the insecurity of the workplace.

Among the various indicators available to analyze the health trend, the most relevant found in the literature are: 1) subjectively perceived health, 2) physical health, and 3) mental health.

The ones most likely to highlight short-term effects are the indicators related to subjective and mental health, which can aggravate the effect of stress caused by the crisis. In addition, the worsening of mental health should lead to highlight changes in mortality as a consequence of an increase of incidents due to violence (murders, suicides and suicide attempts) and an increased use of anxiolytics and antidepressants. In this paper we will provide a description of the available data concerning the impact of the economic crisis on: 1) unemployment, 2) use of psychotropic drugs as a proxy of mental health status, 3) suicide, and 4) physical health.

**Unemployment and mental health**

Since the beginning in 2007, the Economic Crisis has caused worldwide tangible costs in terms of cuts in employment and income.

Uncertainties linked to decreased job opportunities and the spread of insecure employment conditions have been reported as determinants of poor mental health.

On the other hand, economic recession may represent a particularly difficult experience for people with mental illness: they have higher risks of losing their jobs, and it may become even more difficult for them to be re-employed within the context of a highly competitive labour market. Several studies have documented the incidence of large disparities in unemployment rates between people with and without mental illness in times of crisis (7).

Unemployment per se might have a significant negative impact upon the course and the outcome of mental illness: It may represent a critical determinant in the genesis of social exclusion and marginalisation and may act as a specific hurdle to prevent recovery (8).

Accordingly, countries with higher and favourable scores in mental health are those ensuring the strongest social safety net. According to WHO (1), protective factors that might mitigate the effect of the crisis are: 1) active labour market programmes; 2) family support programmes; 3) control of alcohol prices and availability; 4) primary care for the people at high risk of mental health problems; 5) debt relief programmes; 6) support mental health systems in the economic crisis; 7) tackle the stigma of mental illness; 8) build the case for investing in mental health; 9) continue mental health reforms; 10) ensure universalism in mental health services.

Unfortunately, these factors have been activated only in an uneven way in Europe.

Referring to these WHO principles we expect that the existence in Italy of a universalistic National Health Service, of a network of psychiatric community services that has been developed after the 180 Reform Law, and provides integrated care to defined catchment areas (9), and a strong cohesion in the families might have acted as a protective factor.

However, along with many other countries, Italy too has been severely hit by the economic crisis.

Between 2009 and 2013, Eurozone saw average increase of 26.3% (from 9.5% to 12%) and 18.8% (from 20.2% to 24%) in overall unemployment rates and youth unemployment rates, respectively. In the same period, Italy saw an increase in overall unemployment of 56.4% (from 7.8% to 12.2%). The increase in youth unemployment rate was 57.5% (from 25.4% to 40%). Both indicators so were above the average rate in Europe, showing a main problem occurring in youth people.

In Italy, the Gross Domestic Product (GDP) per person between 2009 and 2013 has seen a cumulative decline of 3.11% as compared to the cumulative increase of 0.94% in the whole Eurozone. Finally, government debt as a percentage of GDP in the same interval increased by 73.9% (from 54% to 93.9%).
As shown in Table 1, ISTAT (the Italian Institute of Statistics) data show that the different regions of Italy have a very heterogeneous panorama in terms of GDP, with a trend for an increase that has continued to take place since 1995, but slowing down progressively. For example Lombardy, the most industrialized Northern Italy region, had an increase of GDP of 4.4% in the interval 1995–2000; of 3.6% in the interval 2000–2005, and of 2.2% in the interval 2005–2010. The same trend was true for all regions (10).

When the GDP per person is considered (Table 2), it appears very clear that all regions have suffered a decrease in GDP between 2008 and 2014 (11). The percentage decrease ranges from –3.5% in Trentino Alto Adige to −15.5% in Campania region. Overall, the GDP per person in Italy has passed from 28,194 euro in 2008 to 25,257 euro in 2014, with a percentage decrease of −10.4%.

Table 2 shows that Lombardy too—the Italian Region with the highest GDP (Gross Domestic Product)—was marked by a severe economic crisis. Starting from 2009, in Italy key indicators, such as unemployment, data on corporate crises, and birth and death of enterprises all show a decidedly negative trend. In 2009, as a result of the economic crisis, layoffs jumped from 47.2 million of the previous year to 271.7 million, an increase of 475%. In 2010, an increase was again recorded, reaching a peak with a 313.2 millions of authorised hours (15% compared to 2009). In 2011, the authorised hours were 221.7 million (29% compared to 2010) recording a worst decrease in value, thus showing a trend for improvement (12).

Another study has proven the devastating impact on the lives of the population by comparing the impact of economic crisis and a severe earthquake that has hit the province of Moden in the Region Emilia Romagna in 2012. The results of a multivariate analysis for year 2012 show important differences of the two events on the population living in the district. Living in a municipality that has been affected by the earthquake deteriorated both physical and mental health, although the effect was higher for mental health. Being unemployed had a negative effect only on psychological health, and it was higher than the

### Table 1: Gross Domestic Product (GDP – millions Euro) in the regions of Italy. Legend: N (North); C (Centre); S (South) (Source: ISTAT, 2015)

<table>
<thead>
<tr>
<th>Region</th>
<th>1995</th>
<th>Δ '95–’00</th>
<th>2000</th>
<th>Δ ’00–’05</th>
<th>2005</th>
<th>Δ ’05–’10</th>
<th>2010</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lombardia – N</td>
<td>198.727</td>
<td>4.4%</td>
<td>246.239</td>
<td>3.6%</td>
<td>294.535</td>
<td>2.2%</td>
<td>328.474</td>
<td>331.405</td>
</tr>
<tr>
<td>Lazio – C</td>
<td>99.158</td>
<td>4.4%</td>
<td>123.232</td>
<td>4.8%</td>
<td>155.432</td>
<td>1.5%</td>
<td>168.319</td>
<td>169.483</td>
</tr>
<tr>
<td>Veneto – N</td>
<td>88.298</td>
<td>5.1%</td>
<td>113.182</td>
<td>3.7%</td>
<td>135.690</td>
<td>1.3%</td>
<td>144.323</td>
<td>146.605</td>
</tr>
<tr>
<td>Emilia-Romagna – N</td>
<td>82.336</td>
<td>5.4%</td>
<td>106.890</td>
<td>3.4%</td>
<td>126.194</td>
<td>1.7%</td>
<td>137.667</td>
<td>140.914</td>
</tr>
<tr>
<td>Piemonte – N</td>
<td>80.968</td>
<td>4.3%</td>
<td>100.071</td>
<td>3.5%</td>
<td>118.618</td>
<td>0.9%</td>
<td>123.865</td>
<td>124.926</td>
</tr>
<tr>
<td>Toscana – N</td>
<td>62.785</td>
<td>4.9%</td>
<td>79.860</td>
<td>3.6%</td>
<td>95.213</td>
<td>1.8%</td>
<td>104.026</td>
<td>105.895</td>
</tr>
<tr>
<td>Campania – S</td>
<td>59.319</td>
<td>5.0%</td>
<td>75.685</td>
<td>3.9%</td>
<td>91.534</td>
<td>1.1%</td>
<td>95.968</td>
<td>95.488</td>
</tr>
<tr>
<td>Sicilia – S</td>
<td>54.300</td>
<td>4.2%</td>
<td>66.718</td>
<td>3.9%</td>
<td>80.902</td>
<td>1.1%</td>
<td>85.091</td>
<td>84.888</td>
</tr>
<tr>
<td>Puglia – S</td>
<td>44.884</td>
<td>4.9%</td>
<td>57.127</td>
<td>3.1%</td>
<td>66.526</td>
<td>1.2%</td>
<td>70.242</td>
<td>70.314</td>
</tr>
<tr>
<td>Liguria – N</td>
<td>27.387</td>
<td>4.8%</td>
<td>34.596</td>
<td>3.4%</td>
<td>40.856</td>
<td>1.4%</td>
<td>43.558</td>
<td>44.064</td>
</tr>
<tr>
<td>Marche – C</td>
<td>24.230</td>
<td>5.1%</td>
<td>31.083</td>
<td>4.0%</td>
<td>37.835</td>
<td>1.4%</td>
<td>40.504</td>
<td>40.192</td>
</tr>
<tr>
<td>Friuli-Venezia Giulia – N</td>
<td>22.483</td>
<td>4.8%</td>
<td>28.368</td>
<td>3.3%</td>
<td>33.408</td>
<td>1.3%</td>
<td>35.644</td>
<td>35.996</td>
</tr>
<tr>
<td>Trentino-Alto Adige – N</td>
<td>20.266</td>
<td>4.8%</td>
<td>25.573</td>
<td>3.3%</td>
<td>30.099</td>
<td>2.7%</td>
<td>34.313</td>
<td>35.405</td>
</tr>
<tr>
<td>Calabria – S</td>
<td>20.523</td>
<td>4.7%</td>
<td>25.842</td>
<td>3.8%</td>
<td>31.137</td>
<td>1.3%</td>
<td>33.329</td>
<td>33.282</td>
</tr>
<tr>
<td>Sardegna – S</td>
<td>20.057</td>
<td>4.7%</td>
<td>25.237</td>
<td>3.8%</td>
<td>30.380</td>
<td>1.7%</td>
<td>32.766</td>
<td>33.025</td>
</tr>
<tr>
<td>Abruzzo – C</td>
<td>18.352</td>
<td>4.5%</td>
<td>22.887</td>
<td>2.8%</td>
<td>26.262</td>
<td>1.9%</td>
<td>28.999</td>
<td>30.048</td>
</tr>
<tr>
<td>Umbria – C</td>
<td>13.498</td>
<td>4.8%</td>
<td>17.038</td>
<td>3.3%</td>
<td>20.087</td>
<td>1.4%</td>
<td>21.403</td>
<td>21.222</td>
</tr>
<tr>
<td>Basilicata – S</td>
<td>6.998</td>
<td>5.3%</td>
<td>8.675</td>
<td>2.6%</td>
<td>9.850</td>
<td>1.0%</td>
<td>10.371</td>
<td>10.516</td>
</tr>
<tr>
<td>Molise – C</td>
<td>4.148</td>
<td>4.6%</td>
<td>5.205</td>
<td>3.1%</td>
<td>6.072</td>
<td>1.2%</td>
<td>6.400</td>
<td>6.385</td>
</tr>
<tr>
<td>Valle d’Aosta – N</td>
<td>2.814</td>
<td>2.8%</td>
<td>3.226</td>
<td>4.6%</td>
<td>4.032</td>
<td>2.0%</td>
<td>4.424</td>
<td>4.443</td>
</tr>
<tr>
<td>Italia (Italy)</td>
<td>952.158</td>
<td>4.7%</td>
<td>1,198.292</td>
<td>3.7%</td>
<td>1,436.379</td>
<td>1.6%</td>
<td>1,551.886</td>
<td>1,567.010</td>
</tr>
</tbody>
</table>
one of the earthquake. Being unemployed decreased mental health by 6.4 percentage points, and living in a municipality within the district hit by the earthquake decreased mental health by 5 percentage points. Further analyses carried out by the Authors on 2006 data, before the crisis hit the district of Modena too, had revealed a non-significant effect of unemployment status on people’s mental health (13).

Unemployment is thus confirmed to be a sensitive indicator of mental health. Figure 1 shows the trends in unemployment rates in three different geographical areas in Italy (North, Centre, and South) and in overall Italy in the interval period 2004–2015 (ISTAT 2015). Four separate boxes analyze the age ranges of: 25–34; 35–44; 45–54. All boxes show a trend for an increase in unemployment starting around 2009, increasing until 2014 and decreasing thereafter. In all age boxes unemployment rates are higher in Southern Italy and lower in Northern Italy, and this is true of all age intervals. The age range 25–34 seems to be the most damaged by the economical crisis, especially in Southern Italy. These data make the case for the need of actions targeted to the youth in order to prevent negative implications for their mental health.

Psychotropic drug consumption

In times of crisis, the tensions generated in the labor market, often because of the greater risk of losing their jobs, tend to create considerable problems of stress to individuals and families that inevitably reverberate on health and in particular mental health.

Several studies have shown that there has been an increase in the prescription of psychotropic drugs (PDs), particularly antidepressants (ADs) over recent years. The prescriptions of PDs in Great Britain increased by an average of 6.8% per year between 1998 and 2010, but the trend was also clear previously: the number of AD prescriptions more than doubled in the period 1975–1998 and, in 1998, a total of 23.4 million AD prescriptions were issued by general practitioners (GPs) in the United Kingdom (14).
In the working population, available data show that job insecurity, being in debt, and working in repetitive occupations are all independently associated with an increased likelihood of depression (15), and the increased use of PDs significantly relates to poor job satisfaction and an unsatisfactory atmosphere at work (16). This is true for both genders, but more so among males (17), particularly with regard to the use of AD and the benzodiazepines (BZDs).

The data available for Italy confirm this hypothesis. The strongest impact of the crisis occurs in fact on the psychological dimension of well-being in the broadest sense, and this is a phenomenon that seems to be transversal to social groups. According to the AIFA (Italian Drug Agency), in 2000 the daily doses of drugs (DDD) taken per thousand inhabitants were little more than 8, while in 2015 they rose to about 36. In 2012 consumption of drugs for the central nervous system increased of 1.4%. A survey conducted by the Italian Society of Psychiatry (November 2013) in over 1/3 of the Departments of Mental Health belonging to 14 Italian regions, showed that the serious and persistent economic crisis of recent years has impacted strongly on the increase in mental disorders, especially among the poorer: the incidence of psychiatric disorders among those with fewer economic resources doubled compared to those who belong to a medium-high socio-economic level.

Several studies has shown that in Italy, as in several other countries in the world, AD use is growing and it is of the utmost relevance that these trends are monitored also in the light of the possible effects of the current economic crisis on mental health. Use of AD thus seems to be a sensitive marker connected to social changes and also to economical crisis.

The total number of AD prescriptions in Italy increased by 55% from 1984 to 1999, and costs increased by 4.5% from 2004 to 2012 (Italian Medicines Agency) despite a 5.6% reduction in the total expenditure for medications (www.sanitanews.it). In Lombardy, GPs were responsible for almost 90% of AD prescriptions (18). AD prescription rates have increased markedly in all age and gender groups, with as much as a three-fold increase in older age groups.

A study performed between 2000 and 2011 using the Italian Medicines Agency database, proved that the increase of antidepressant consumption has drastically increased, between 2000 and 2011, from 8.18 to 36.12 Defined Daily Dose (DDD), with the higher increase for selective serotonin uptake inhibitors (19). This seems however a global trend that might have both good and bad implications: it might undermine probably higher capacity to detect depression, and less stigmatisation than in the past. On the other side, antidepressant prescription could be connected to the negative impact on mental health of the current economical crisis. This last occurrence opens also a series of considerations. In fact, in anxiety depressive symptoms related to social stressors, there is the risk that drug prescription by the General Practitioners prevents a more comprehensive assessment of the patient’s needs. Instead, data have shown that psychosocial preventions programs designed to reduce these symptoms, such as educational interventions, lifestyle interventions, anxiety management and cognitive therapy are more effective.

A more specific study conducted in Lombardy (12) has evaluated the use of PD by adult employees in the period 2007–2011, to assess whether the economic crisis that began in the middle of this period led to a change in the

![Figure 1](image-url)

Figure 1 The figure shows the trends in unemployment rates in the different geographical areas of Italy (North, Centre and South) in the period 2004–2015. In the four boxes unemployment rates are reported for different age intervals [Source: ISTAT 2015] (a: unemployment rates age 25-34; b: unemployment rates age 35-44; c: unemployment rates age 45-54)
utilization of PD in a highly productive area of Italy and tried to determine which demographic variables were associated with this possible change. The use of PD was associated to being an Italian woman older than 55 with a basic education, a blue collar job and an unstable working position. In 39% of the cases the use of PDs was limited to one trimester. The curve of increase in the number of prescriptions of PD after the economic crisis was the same as before it.

Suicide

A good indicator of the impact of work-related problems on mental health is the suicide rate, especially in periods of economic crisis. A trend analysis of 54 countries (of whom 27 European and 18 American) compared the number of suicides in 2009 with the number that would be expected based on trends before the economic crisis. The authors found that the increase in the suicide rate mainly involved men aged 15–24 in European countries, and aged 45–64 in American countries (20, 21).

A key aspect in assessing the short-term impact of the economic crisis on mental health is to analyze mortality due to incidents of violence (murders, suicides and suicide attempts). An association between unemployment and suicide in Italy has been detected, with Lombardy being one of the regions in which the association is stronger (22; 23).

In Italy, as measured by Costa et al. (6), a survey on suicides and attempted suicides (ISTAT) showed that the Italian population is at low risk of suicide, as in the whole of Southern Europe, but that the number of suicides for economic reasons, started to increase before the crisis and continues to grow with remarkable speed (24; 25).

Latest data on this phenomenon are those collected by Link Lab, the socio-economic research laboratory of the University Link Campus University Studies, which studies this phenomenon by 2013. According to this source in the year 2013 there were a total of 149 people who took their own lives for economic reasons, compared with 89 cases recorded in 2012.

Nearly half of the suicide cases (45.6%) in 2013 refer to the occupational figure, but compared to 2012, a growing number of victims among the unemployed is detected: 58 are, in fact, suicides among the unemployed, a number that is more than doubled compared to 2012 when the episodes recorded were 28. In 2013, as in 2012, the economic crisis, understood as a lack of money or debt situation incurable, is the main motivation for the tragic gesture (108 suicides, 72.5% in 2013, compared to 44 in 2012). In 2013, the loss of employment continues to be the second leading cause of suicide: 26 registered incidents, a slight increase compared to 2012 when cases were 25. In addition, an-other cause that affects the tragic outcome is being indebted with tax authorities: 13 people in 2013 committed suicide due to inability to pay their debts to the State. To these figures should be added those related to suicide attempts: 86 people who in 2013 tried to take their own life for reasons attributable to the economic crisis, including 72 men and 14 women, compared with 48 total cases registered in 2012.

Even among suicide attempters, a higher number is recorded in Southern Italy, the area of the Country with the highest proportion of unoccupied: from five cases in 2012 to over 25 attempts recorded in 2013. Unemployed persons who in 2013 attempted to take their own lives were 50; they were 20 in 2012.

Physical Health

A survey made by ISTAT (ISTAT, 2013), has identified two synthetic health indices, one referring to physical health and the other referred to the psychological health. According to the survey, women always have lower average scores for both physical and psychological health. The number of subjects, which felt to be in psychological health, fell from 49.6 to 48.8. It is noteworthy also that 10% of living subjects in the Campania region – one of the regions with the highest decrease GDP and the highest rates of unemployed young people – detects lack psychological support. Instead, compared to 2005, the perception of physical health seems to improve, with the average score of the Index of physical health for the population above the age of 14, checked by age, rising from 49.9 to 50.7 (26).

In spite of the general state of health and chronic diseases, all sources and all the indicators show that to date the overall Italian Health System has not been affected by the crisis. The ISTAT data show a substantial stability since 2000, while as a result of the crisis some of the indicators seem to even be slightly improved (in particular for certain subgroups of the wealthier population). Territorial inequalities, based on demographic and socio-economic variables in relation to health, continue to persist; however, also in this case no sign of a deteriorating situation due to the crisis seems to be detected.

The picture provided by the report Osservasalute 2013 (20) indicates that the physical health of Italians, measured in terms of mortality, held despite the economic crisis that hinders prevention, access to care and early diagnosis. This was mainly due to the reduced mortality from circulatory system diseases and tumors, due to investment in prevention policies conducted over the past years and of developments in diagnosis and treatment.
The positive result of the population’s health status – almost unchanged by the crisis – however, should not be fooled into thinking that the Italian population is immune to these phenomena and, above all, that we will be so in the future.

Conclusions

The crisis posed significant challenges to the health systems of all the most advanced countries, including those in Europe where welfare systems are very generous. In a context in which unemployment and poverty on one hand will increase the demand for health services, and on the other hand, public budgets continue to be limited in terms of available resources, the effects of the crisis on health will risk becoming more evident with the passing of time.

Social policies can definitely mitigate the adverse effects on health, by limiting periods of unemployment, providing safety nets for people out of work, thus preventing the negative health effects of being unemployed. In addition, the health sector has a key role in social protection by providing timely and equitable access to effective health services, and to guarantee that people will not suffer new financial difficulties because of health problems. From this point of view, the good organization of the Italian NHS and, as regards mental health, the solid structure of the community psychiatry certainly reduces the damages related to the economic crisis. Data provided by research made in Italy have confirmed that – in spite of the economical crisis that has severely hit the country – protective factors do still exist: a universalistic National Health Service, a network of psychiatric community services that provides care to defined catchment areas, and a strong cohesion in the families, and in several areas of the society. However, it is not hard to imagine that in the coming years we can expect an increase in the territorial and regional differences in the population’s health as a result of the heterogeneity.

Further longitudinal research is needed in order to disentangle protective factors and identify strategies to implement them with the highest cost-effectiveness. Policy makers have a main role in this phase, and the professionals in the mental health area have the duty to prompt them to be sensitive to mental health needs and to be promoters of evidence based interventions that preserve the well-being of the population.

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Conflict of interest

The authors declare, that there is no conflict of interest.

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10. ISTAT 2015.


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