

## Special article Ειδικό άρθρο

# Employment insecurity, mental health and suicide

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**W**ith the economic crisis an increase in suicidality has been reported across Europe but especially in Greece. These reports hit the mass media headlines and were also included in the debate among political parties. The literature suggests that during periods of deep economic crisis, there is an increase specifically in suicides but causality remains unclear. The prevailing picture both in the scientific literature and in the mass media is that the economic crisis acts as a more or less generic risk factor on the entire population putting at risk literally anybody. Two recent studies clearly dispute it by reporting that suicides had increased several months before unemployment increased. Additionally and specifically concerning Greece, where the economic crisis is deeper and more prolonged, the detailed inspection of age and gender specific rates are not in accord with a "male gender" by "unemployment" interaction. Taking into consideration the above and since the rise in suicides also affects prospering countries without high unemployment, including Germany and Norway, another possible explanation is that the changes in the socioeconomic environment and especially in the employment conditions have overstressed vulnerable populations (e.g. mental patients) leading to the increased suicide rates. The problem is that in the majority of the literature the economic crisis/austerity is considered to be a generic risk factor affecting the entire population and subsequently generic horizontal measures are proposed. Unfortunately patients at risk to commit suicide are not considered as such; instead they are rather considered as normal healthy people from the general population who respond with suicide to generic adverse events.

**Key words:** Employment insecurity, mental health, suicide, financial crisis.

## Introduction

After the 2008 global economic crisis and the beginning of the crisis in Europe, an increase in suicidality has been reported across Europe and especially in Greece. Several authors expressed concern on the effect of austerity on health care and especially on

suicidality. It is widely believed that crises of this kind increase suicides,<sup>1–7</sup> with men of working age being at the highest risk. There are several studies published until now, suggesting such a pattern concerning the impact of the economic crisis in European countries<sup>6,8–18</sup> Asia<sup>19,20</sup> and the US<sup>15</sup> although different and more complex interpretations also exist.<sup>21–26</sup>

These reports hit the mass media headlines and were also included in the debate among political parties. However it seems that the variability and the fluctuation of suicide rates across countries encumber the identification of the time point this increase has begun to occur. It is well known that suicidal rates vary considerably among European countries and the reasons for this are unknown although several theories have been proposed. The effect of climate has previously been discussed but has not been investigated in a systematic way across countries.

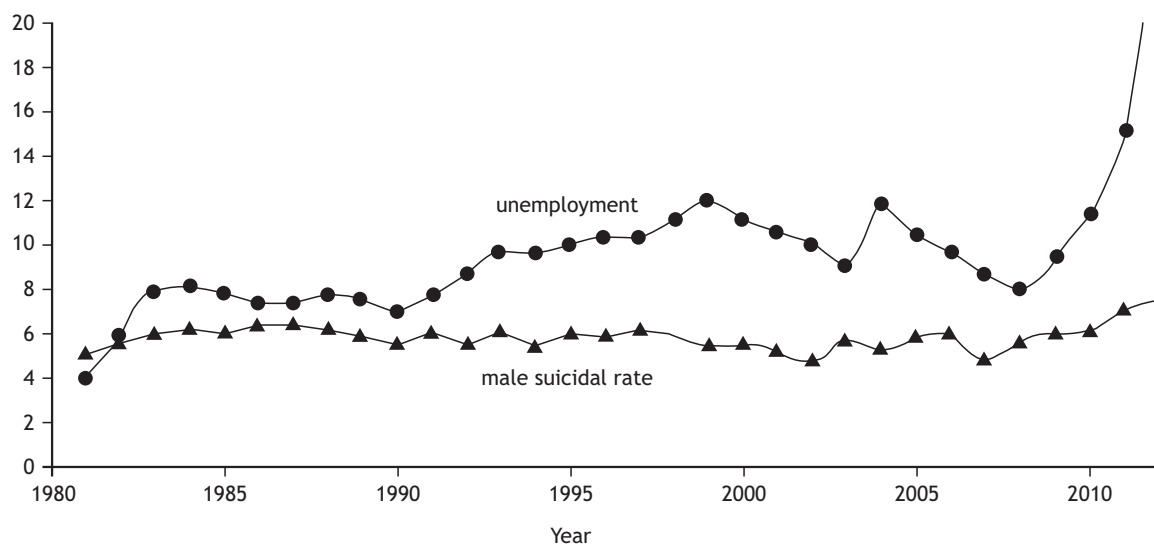
### The relationship between austerity and suicidality

One suggestion is that only after 2010 a rise in suicides is clearly visible<sup>17,21–23</sup> while, on the contrary, other authors suggest it started already after 2007.<sup>10,13,14,27,28</sup> The development of suicidal rates vs. unemployment in Greece during the last 35 years is shown in figure 1.

The critical issue is of course the causality. Concern has been expressed on the possible adverse effects of austerity on healthcare with specific focus on mental health.<sup>6,10,28–39</sup> It is well known that mental patients constitute a vulnerable group in the population and it is believed to be at a higher risk to be affected by such a crisis. Additionally, the literature suggests that during periods of deep economic cri-

sis, a deterioration in general mental health happens with an increase in depression and anxiety. This has been reported after the economic crisis in Hong Kong,<sup>40</sup> south Australia,<sup>41</sup> Greece,<sup>42</sup> UK<sup>39</sup> and Spain,<sup>11</sup> and the effect seemed more severe in population groups who experienced unstable employment or financial problems.<sup>11,40,41</sup> However these studies could not differentiate between general distress and clinically defined mood disorders, and therefore their conclusions cannot be considered reliable since many factors could act as confounders towards either a type I or a type II error.

More consistent are the data showing that economic crises and austerity increase specifically suicides<sup>1–7</sup> but again causality remains unclear. In his seminal work in 1979, Brenner reported that for every 10% increase in unemployment there is an increase of 1.2% in total mortality, including an increase by 1.7% in suicidality.<sup>43</sup> In the past, economic crises have been correlated with increases in suicides, like the Great depression,<sup>2,4,44,45</sup> the Russian crisis in the early 1990s<sup>14</sup> (although the data are not published reliably) and the Asian economic crisis in the late 1990s.<sup>19,20</sup> There are several studies published until now, suggesting a similar pattern concerning the impact of the economic crisis on suicidality in European countries<sup>6,8–18</sup> and the US.<sup>15</sup>



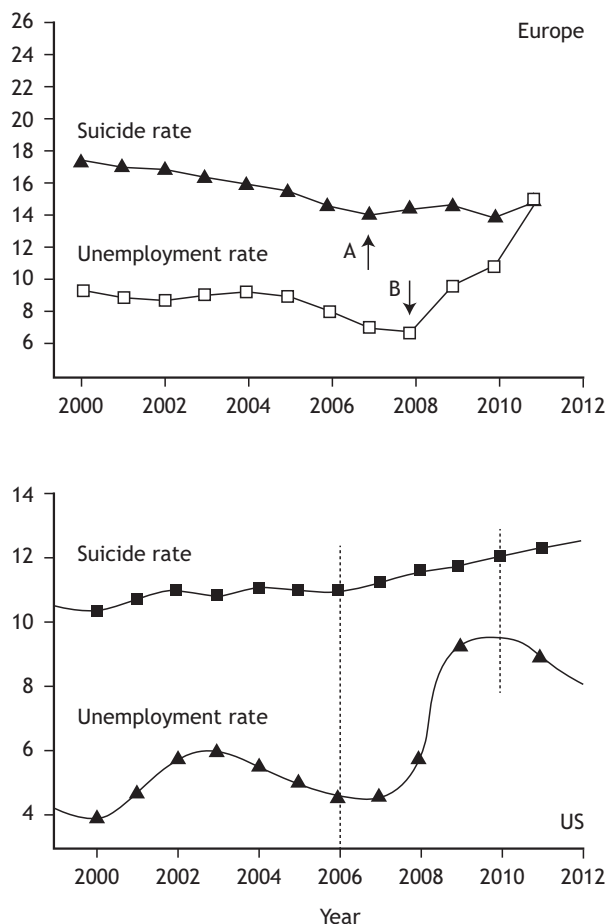
**Figure 1.** Chart of unemployment and male suicide rates for the years 1981–2012 in Greece during the last 35 years.

In line with this assumption it has been proposed that the variations in suicidal rates relate to the severity of the recession as well as to varying social support and labour market protections in different countries,<sup>14,36,46</sup> and consequently a reduction of unemployment through governmental action should lead to a reduction in suicidality.<sup>46</sup>

Thus, the prevailing picture both in the scientific literature and in the mass media is that the economic crisis acts as a more or less generic risk factor on the entire population putting at risk literally anybody. It is to be noted that the vast majority of papers are published by authors experienced in general public health and health economics but with little background in clinical or research psychiatry.

The problem is that correlation does not always imply causality and the causal relationship between the increase in unemployment and increase in suicides has been recently questioned both for the US and Europe<sup>21-24</sup> (figure 2). The Hungarian data present with a similar picture also.<sup>47</sup> Two recent studies clearly dispute it by reporting that suicides increased several months before unemployment increases.<sup>26,48</sup> Essentially in all papers publish until today, a temporal advance of the suicide increase in relationship to the increase in unemployment is observed, although not always reported or commented. Thus the temporal sequence and correlation of events (suicidal rise first, economic recession follows, synchronization of suicidal rate changes across both continents) suggests there is probably a close relationship between the economic environment and suicidal rates; however this relationship is not that of a direct cause and effect between unemployment and suicidality. One could argue that those people who are going to lose their jobs are stressed months before this happens, but "fear" of unemployment is quite different from unemployment per se, especially since such an assumption suggests that employed people do commit suicide before they become unemployed and nobody knows if they would had lost their jobs eventually if they remained alive.

Additionally and specifically concerning Greece, where the economic crisis is deeper and more prolonged, the detailed inspection of age and gender specific rates suggests that for males the increase



**Figure 2.** Unweighted average changes in suicide rates and unemployment across 29 European countries and the US. Suicide rates increase before an increase in unemployment is evident. The US charts come from Reeves et al 2012. A: Time point of the increase in suicidal rate B: Time point of the increase in unemployment rate

in suicidal rates is present in all age groups except <14, 25-29 and >80. For females the increase is also present in all age groups except 40-54 and 65-69. However, and this is of outmost importance, the greatest increase in the rates from 2003-2010 in comparison to 2011-2 is seen in females aged 15-19 (149.18%), 20-24 (148.65%), 35-39 (86.24%) and 55-59 (60.74%). In comparison the highest rate for males was seen in the age group 55-59 (61%). These results are not in accord with a "male gender" by "unemployment" interaction. Also, for the years 1981-2012 the correlation of male suicidal rate to unemploy-

ment is 0.54 but for 1981–2010 is  $-0.09$ , suggesting that there is no linear relationship.

In figure 1 there is a chart of unemployment and male suicidal rates from 1981–2012. In this chart it is clear that it is very difficult to decide when suicides started increasing. Three time points are possible and these are the years 2003, 2007 and 2010, depending on the interpretation of the pattern.

### Possible causal relationships

Taking into consideration the above and since the rise in suicides also affects prospering countries without high unemployment, including Germany and Norway, another possible explanation is that the changes in the socioeconomic environment and especially in the employment conditions (e.g. flexible employment, more rigid rules) which are now in place almost in every country irrespective of its economic status, have overstressed vulnerable populations (e.g. mental patients). Increased suicide rates are probably a consequence of this disproportionate

stress. If this is so, prosperity in general will not bring a fall in the suicide rates unless it is accompanied by targeted interventions to support these vulnerable groups which are disproportionately stress by recession. The problem is that in the majority of the literature the economic crisis/austerity is considered to be a generic risk factor affecting the entire population and subsequently generic horizontal measures are proposed. Unfortunately patients at risk to commit suicide are not considered as such; instead they are rather considered as normal healthy people from the general population who respond with suicide to generic adverse events.

There is an increasing need for the establishment of a central European Union authority for the monitoring of suicides and the design of specific measures. Probably in many countries (especially in North-Eastern Europe) suicides can be dramatically reduced, but only if interventions with proven efficacy are applied. Unfortunately most interventions applied so far are of questionable efficacy or not efficacious at all.<sup>49–52</sup>

## Εργασιακή ανασφάλεια, ψυχική υγεία και αυτοκτονία

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Με την εμφάνιση της οικονομικής κρίσης αναφέρθηκε μια αύξηση των αυτοκτονιών σε ολόκληρη την Ευρώπη αλλά ειδικότερα στην Ελλάδα. Οι αναφορές αυτές δημιούργησαν αίσθηση και κατέλαβαν τα πρωτοσέλιδα των ΜΜΕ, αλλά επίσης αποτέλεσαν πεδίο πολιτικής αντιπαράθεσης μεταξύ των κομμάτων. Η διεθνής βιβλιογραφία υποστηρίζει ότι σε περιόδους βαθιάς οικονομικής κρίσης εμφανίζεται ειδικά μια αύξηση των αυτοκτονιών αλλά η αιτιολογία της παραμένει ασαφής. Η κυρίαρχη εικόνα τόσο στην επιστημονική βιβλιογραφία όσο και στα ΜΜΕ είναι ότι η οικονομική κρίση δρα ως ένας μη-ειδικός παράγων κινδύνου πάνω σε ολόκληρο τον πληθυσμό και αυξάνει τον κίνδυνο αυτοκτονίας κυριολεκτικά για τον καθένα. Δύο πρόσφατες μελέτες το αμφισβητούν, αναφέροντας ότι οι αυτοκτονίες αυξήθηκαν αρκετούς μήνες προτού αυξηθεί η ανεργία. Επιπροσθέτως –και ειδικά για την Ελλάδα όπου η οικονομική κρίση είναι βαθύτερη και περισσότερο παρατεταμένη– η λεπτομερής επισκόπηση των ειδικών για φύλο και ηλικία ρυθμών αυτοκτονίας δεν συνάδει με μια αλληλεπίδραση «ανδρικό φύλο» επί «ανεργία». Λαμβάνοντας υπόψη τα παραπάνω και καθώς η αύξηση των αυτοκτονιών παρατηρείται και σε χώρες με ακμάζουσα οικονομία χωρίς υψηλή ανεργία, συμπεριλαμβανομένης της Γερμανίας και της Νορβηγίας, μπορεί να υποθεθεί ότι οι αλλαγές στο

κοινωνικοοικονομικό περιβάλλον και ειδικά στις συνθήκες εργασίας έχουν αυξήσει την πίεση πάνω σε ευάλωτους πληθυσμούς (π.χ. ψυχιατρικοί ασθενείς) οδηγώντας σε αύξηση των αυτοκτονιών. Το πρόβλημα είναι ότι στην πλειοψηφία της βιβλιογραφίας η οικονομική κρίση και η λιτότητα θεωρούνται μη-ειδικό παράγοντες κινδύνου που επιδρούν στον συνολικό πληθυσμό και ως συνέπεια προτείνονται μη-ειδικά οριζόντια μέτρα αντιμετώπισης. Δυστυχώς οι ασθενείς που βρίσκονται σε αυξημένο κίνδυνο να αυτοκτονήσουν δεν θεωρούνται ως ασθενείς αλλά αντίθετα θεωρούνται μάλλον ως υγιείς άνθρωποι από τον γενικό πληθυσμό που αντιδρούν με αυτοκτονικότητα σε μη-ειδικά αρνητικά γεγονότα.

**Λέξεις ευρετηρίου:** Εργασιακή ανασφάλεια, ψυχική υγεία, αυτοκτονία, οικονομική κρίση.

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