

## Suicide and unemployment in Italy, 1982-1994

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### Abstract

**Objective**—To investigate whether either the condition of being unemployed, or changes in unemployment rates are associated with suicide risk.

**Design**—Administrative data for suicide according to occupational status have been analysed considering three employment categories: employed, seeking new job (unemployed), seeking first job (never employed). Comparison of suicide rates by economic position and correlation between suicide and unemployment rates have been made.

**Subjects and settings**—20 457 deaths by suicide registered in Italy among economically active people from 1982 to 1994.

**Main outcome measures**—Change over time in suicide rates by economic position; coefficient of aggravation according to occupational status.

**Results**—Suicide rates among the unemployed are clearly and constantly higher than those among the employed: up to three times higher among men, and twice as high among women. Among the unemployed a clear and significant rise in suicide rates in both sexes took place over the study period; suicide rates among the employed showed a less marked increase. The rise in suicide rates was accompanied by a concurrent rise in unemployment rate percentage. Men seem to be affected most by this change in unemployment rate percentage; women are subject to less evident influences and variations.

**Conclusion**—Different suicidal behaviour trends among unemployed compared with employed people indicate that unemployment (and above all the prospect of not having access to a working role) acts as a contributing factor for suicide. Unemployment, even if symptomatic of a mental disorder, should therefore always be taken into consideration as a risk factor for suicide: the potentially lethal consequences of its negative influence on both self esteem and the ability to use supportive networks in an efficient way is an element to which great attention should be paid.

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In Italy and in other Western countries there has been a progressive rise in suicide rates for both sexes over the past 20 years, especially among young people.<sup>1-3</sup> The main factors that have been suggested to explain this phenomenon are the increase in life stress (particularly for younger people), and the increase in the incidence of medical and psychiatric illnesses

leading to suicidal ideation.<sup>2-4</sup> In suicide, mental disorders indeed seem to be the determinant element.<sup>5-7</sup> Negative life events are thought to act as favouring or precipitating factors: adverse financial circumstances and social isolation have been found to be significant predictors of suicide risk, and evidence both among younger and older groups indicates that stressful experiences, such as the loss of a loved one or interpersonal conflict, can often precede suicide attempts.<sup>7-9</sup>

Special attention is often paid to the stress caused by working roles, especially when access to such a role is rendered problematic by economic crisis.<sup>10-12</sup> Unemployment, in particular, is thought to be an important risk factor for suicide.<sup>13 14</sup> Individual level cross sectional studies have generally found that people who committed suicide were more likely to be jobless when they died than were people who died from other causes.<sup>13 14</sup> Conversely, aggregate level studies have not consistently shown an increased incidence of suicide in areas of higher unemployment.<sup>13 14</sup> Time series analyses have found strong aggregate level correlations between unemployment and suicide, particularly among young adults.<sup>13 15 16</sup>

Many studies indicate a role for unemployment as a precipitating, rather than causative, factor in suicidal crisis. Its contribution to the precipitation of suicide is thought to work on two levels: both by reducing financial availability—which makes relational networks less supportive—and by provoking the loss of the social role and self esteem that a job confers.<sup>11 12 15 17 18</sup> The link between unemployment and suicide risk, however, is far from clearly defined. Three pathways from unemployment to suicide have been suggested.<sup>19 20</sup> The “vulnerability model” indicates that unemployment, by limiting access to supportive resources, may increase the impact of stressful life events, thus increasing the risk of suicide. The “indirect causative model” suggests that unemployment, through the relationship difficulties or financial problems it can provoke, may favour the occurrence of events that in turn precipitate suicide. A third model proposes a non-causal link between unemployment and suicide, both of which could be taken as resulting from a third factor, such as belonging to a disadvantaged social class, which in itself would increase the risk of suicide and unemployment.<sup>21</sup>

All these models share a process of “social causation”, which supposes that unemployment, whether directly or indirectly, is damaging to well being and health. A different set of explanations, grouped under the “health selection” hypothesis, asserts that poorer health itself, including poorer mental health, increases

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the risk of unemployment: thus, having a disorder that implies a higher risk of suicide would also lead to unemployment.<sup>21 22</sup> According to this interpretation of existing data, more people at risk of suicide are unemployed because of their illness, so higher suicide rates among the unemployed would be an artefact of selection bias. In fact, a higher mortality from causes other than suicide is also seen among the unemployed: this excess mortality for all causes of death among the unemployed is often considered proof of the "health selection" hypothesis.<sup>23 24</sup>

Some authors suggest that if selection were a major factor explaining above average mortality among the unemployed, then this excess would be smaller when the general unemployment rate is high than when it is low.<sup>25</sup> At a time of high unemployment, becoming and remaining jobless can be assumed to be less dependent on individual characteristics that might also increase the risk of ill health, and more fit and healthy people can be assumed to join the ranks of the unemployed than in periods of low unemployment. The same reasoning could also be applied to suicide.<sup>16</sup>

Over the past 20 years Italy, more than other European countries, has suffered a difficult economic period with a progressive rise in unemployment rates: Italy thus represents an obvious location for the study of the relation between unemployment and suicide. The "health selection" hypothesis would lead you to expect a weaker association between unemployment and suicide in recent years: the reverse would be true if unemployment directly or indirectly increased suicide risk by adding to pre-existing health conditions.

### Method

To evaluate the impact of occupational status on patterns of suicidal behaviour in Italy, the yearly distribution of suicides by occupational status between 1982 and 1994 has therefore been analysed. As mortality is low among those of working age, data must relate to a sizeable population if appreciable differences are to be noted: therefore official national statistics have been used in this study, taking into account the limitations that derive from using this type of data, exposed as they are to risks of under-reporting and incompleteness.

The source of data for suicides was the Italian National Institute for Statistical Analysis (ISTAT). Classification of suicides was completed according to the Ninth revision of the ICD. Data were collected from the police and the carabinieri (military police), who compile detailed case reports based both on preliminary death certificates completed by the examining doctor, and on extensive inquiries among key informants and relevant witnesses. In this study, data from 1982 to 1994 have been compared by taking into account people with a job, regardless of the type of job, and people without a job. Rates per 100 000 by economic position have been calculated on the basis of the distribution of the Italian population according to occupational status.

The source of the data on occupational status is work statistics compiled by ISTAT: data derive from a trimestral cross sectional survey and are collected at municipal level. Yearly National data represent the average of the four trimesters of the year: appropriate integrations are carried out to correct the changing composition of the population by gender and age. The economically active population comprises all those people aged 15 and over who, when asked for the survey, claimed to be employed or to be seeking a job. All people who do not satisfy this definition were considered not to be part of the economically active population. In particular, this second "inactive" group comprises those aged under 15; those who, though aged 15 or above, answered the survey stating that they had no job and were not seeking one; and those who reported to be one of the following: housewife; student; retired from work (for whatever reason); disabled; under military service. Economically active people have been divided between those who were employed and those who were unemployed. This second group is further divided between people looking for a new job (those properly titled "unemployed") and people seeking their first job (never employed). Unemployment rate percentage is the proportion of unemployed to economically active people (both employed and unemployed).

The coefficient of aggravation (COA) for suicide, calculated according to Stack,<sup>26</sup> has been reported for each economic position to further aid interpretation of the data. The COA is the ratio between the suicide rates in one social group and in the general population, and allows a measure of the relative risk in the group under study.

Changes in rates over time were analysed using a test for trend. Linear regression analysis of suicide rates for economic position (employed, unemployed, seeking their first job) over 13 consecutive years was performed. A two tailed *t* test was performed to test the hypothesis of a significant slope. As an alternative to the simple linear regression model, a quadratic model was examined, whereby a second explanatory variable is added, which is simply the square of the year. This model assumes the possibility of a yearly change of rate and assumes that suicide rates by economic position follow a single smooth parabolic trend instead of strictly linear trends.

Ordinary least squares (OLS) regression has been used to evaluate the influence of change over time of unemployment rates (independent variable) on suicide rates by economic position (dependent variable). OLS regression has also been used to test the ecological (geographical) association between unemployment rate (independent variable) and suicide rates (dependent variable).

### Results

From 1982 to 1994 a total of 20 457 deaths by suicide were registered among economically active people in Italy. Of these persons, 13 276 were employed men, 3401 unemployed men,

Table 1 Suicide rates (per 100 000) in Italy by gender and economic position (economically active only), 1982–1994

	Employed	Unemployed	In search of first job	Ratio unemployed/employed
<b>Men</b>				
1982	6.7	17.8	6.2	2.6
1983	5.6	15.9	4.8	2.8
1984	6.5	19.2	6.9	2.9
1985	7.1	25.9	7.8	3.6
1986	7.2	25.6	11.5	3.5
1987	7.8	29.9	15.3	3.8
1988	7.0	22.7	12.0	3.2
1989	6.8	24.0	14.0	3.5
1990	7.2	33.6	19.4	4.6
1991	8.1	36.5	21.7	4.4
1992	8.6	35.2	21.0	4.1
1993	8.5	35.9	35.1	4.2
1994	8.4	32.8	35.1	3.9
<b>Women</b>				
1982	1.9	1.7	0.9	0.9
1983	1.6	2.9	0.5	1.7
1984	1.8	3.2	1.9	1.7
1985	1.8	2.3	1.3	1.2
1986	2.1	3.2	1.1	1.5
1987	1.9	4.5	2.3	2.3
1988	2.0	3.3	2.0	1.6
1989	1.8	2.6	1.5	1.4
1990	2.1	6.1	4.4	2.8
1991	2.2	5.7	5.3	2.5
1992	2.2	6.3	4.7	2.7
1993	2.3	4.0	6.3	1.6
1994	2.2	4.5	7.0	2.0

1282 men in search of their first job; 1863 were employed women, 483 unemployed women, 242 women in search of their first job.

Table 1 shows the distribution by gender over the study period of the related suicide rates per 100 000. Suicide rates among the unemployed are clearly and constantly higher than those among the employed: the ratio between suicide rates for the unemployed and

Table 2 Change over time of suicide rates (per 100 000) among the economically active (suicide rates over years)

	Simple linear regression model		
	Slope (SE)	t	p
Employed men	0.19 (0.03)	5.24	<0.001
Unemployed men			
seeking a new job	1.62 (0.26)	6.18	<0.001
seeking their first job	2.40 (0.28)	8.56	<0.001
Employed women	0.04 (0.00)	5.01	<0.001
Unemployed women			
seeking a new job	0.26 (0.08)	3.29	<0.01
seeking their first job	0.51 (0.07)	7.27	<0.001
Quadratic regression model			
Unemployed men			
seeking their first job			
year =	-32.58 (11.03)	2.95	<0.01
year 2 =	0.19 (0.06)	3.17	<0.01
Unemployed women			
seeking their first job			
year =	-8.14	2.85	<0.01
year 2 =	0.04	3.03	<0.01

those for the employed always has a value higher than one both for men and (to a lesser extent) for women. Women show lower suicide rates than men irrespective of economic position. Suicide rates among unemployed women, however, show the same trends as for unemployed men, being higher than among employed women. The COA is three times higher for unemployed men (COA 1982 = 2.33; 1994 = 3.08) than for employed men (COA 1982 = 0.87; 1994 = 0.78), and this difference tends to become more marked with the passing of time. As far as women are concerned, the COA for the unemployed tends to worsen with the passing of time (1982 = 0.60; 1994 = 1.37), with an increment of 128 %,

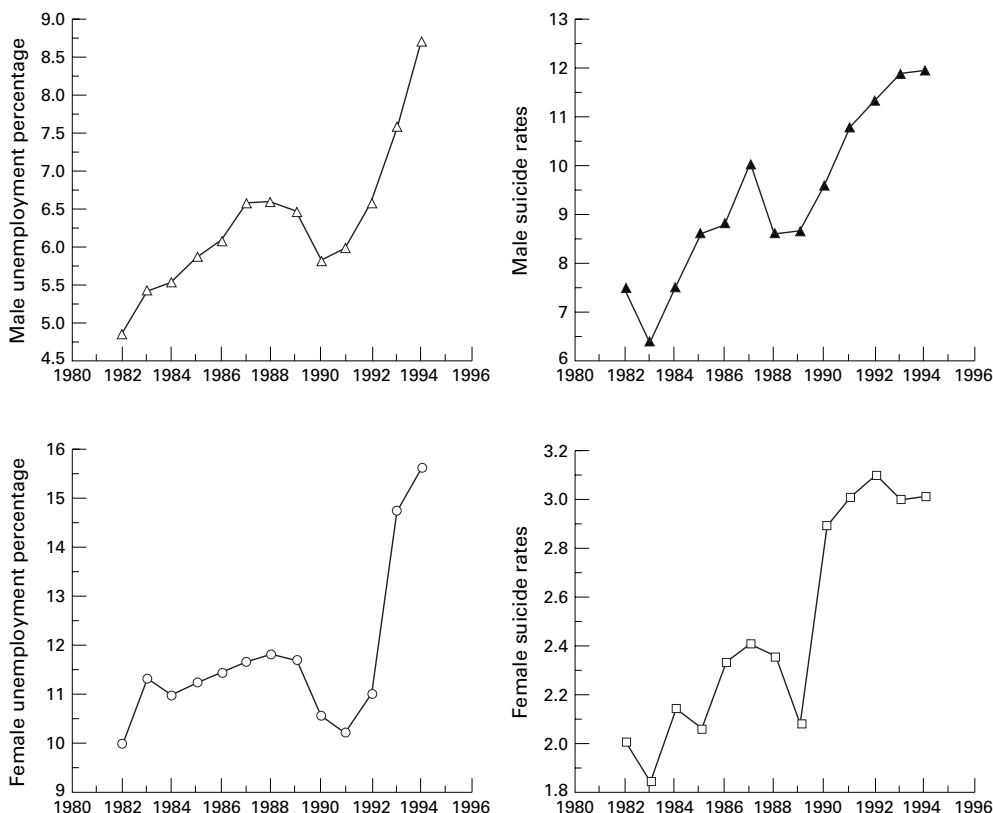


Figure 1 Trends in suicide rate/100 000 among the economically active and unemployment rate percentage, 1982–1994 (n = 13 years).

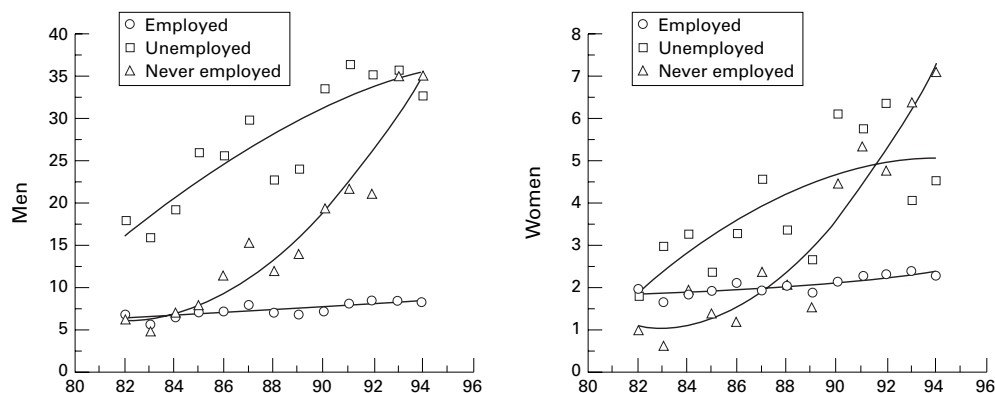


Figure 2 Trends in suicide rates/100 000 in Italy (1982-1994) by gender and economic position: employed, unemployed and seeking their first job (never employed).

whereas among employed women the change of COA over time is considerably less (1982 = 0.65; 1994 = 0.68).

Over time, suicide rates increase for both men and women (fig 1). The increase is higher among the unemployed than among the employed in both genders (table 2). Each year, total suicide mortality increases by 1.62 deaths per 100 000 (95% confidence intervals 1.04 to 2.20) among male unemployed and by 2.40 deaths per 100 000 (95% confidence intervals 1.78 to 3.02) among men in search of their first job. The increase is lower among unemployed women, but still higher than among employed women (table 2). When related to suicides in both genders among those seeking their first job the results of the quadratic model have a significantly better fit than does the simple linear regression model: for men, adjusted  $r^2 = 0.92$ ,  $p < 0.0001$  in the quadratic model, against adjusted  $r^2 = 0.85$ ,  $p < 0.001$  in the simple linear regression model; for women, adjusted  $r^2 = 0.89$ ,  $p < 0.0001$  in the quadratic model, compared with adjusted  $r^2 = 0.81$ ,  $p < 0.001$  in the simple linear regression model (table 2, fig 2).

All age groups are affected by the rise in suicide rates (table 3). This rise is associated with a concurrent rise in unemployment rate percentage. During the study period unemployment rate percentage rose from 4.7% of economically active people in 1982 to 8.7% in 1994 among men, and from 9.9% among women in 1982 to 15.6% in 1994. Men seem to be affected most by this change in unemployment rate percentage, as can be seen

in figure 1: women are subject to less evident influences and variations. Over time, each percentage increase in the unemployment rate was associated with an increase in total male suicide mortality among the economically active equal to 1.39 deaths per 100 000 (95% confidence intervals 0.67 to 2.11, SE = 0.32,  $t = 4.26$ ,  $p = 0.001$ ). The link between unemployment rate and suicide rates is greater among unemployed men (OLS, people seeking a new job:  $\beta = 4.28$ , 95% confidence intervals 0.43 to 8.13, SE = 1.75,  $t = 2.44$ ,  $p = 0.03$ ; people seeking their first job:  $\beta = 8.65$ , 95% confidence intervals 5.22 to 12.08, SE = 1.55,  $t = 5.55$ ,  $p = 0.0002$ ) than among employed men (OLS:  $\beta = 0.62$ , 95% confidence intervals 0.20 to 1.04, SE = 0.19,  $t = 3.29$ ,  $p = 0.007$ ). The association between female unemployment rate and female suicide rates among economically active women is less significant (OLS:  $\beta = 0.10$ , 95% confidence intervals 0.06 to 0.27, SE = 0.09,  $t = 1.39$ ,  $p = \text{NS}$ ). Suicide rates among women show a greater link to male than female unemployment rate percentage. This is especially evident among women in employment (OLS:  $\beta = 0.12$ , 95% confidence intervals 0.01 to 0.24, SE = 0.05,  $t = 2.47$ ,  $p = 0.03$ ) or in search of a first job (OLS:  $\beta = 1.64$ , 95% confidence intervals 0.65 to 2.63, SE = 0.45,  $t = 3.64$ ,  $p = 0.003$ ).

If the longitudinal (time series) analyses suggests a link between risk of suicide and unemployment, the ecological (geographical) evaluation introduces an element of uncertainty. By considering suicide rate distribution across the 20 Italian regions along with the respective unemployment rate percentages, a slight negative relation between the two factors (both for men and women) can be observed ( $p < 0.05$ ). This negative relation is also observed when a comparison is made between the 1982-1994 changes in regional suicide and the correspondent unemployment rates. However, when unemployment rates are regressed on suicide rates after adjustment for the regional Gross Domestic Product per capita or the regional consumer expenditures per person (two indicators of an area's wealth, the source of which is the ISTAT Yearbook) the association is no longer significant, though the percentage of variance accounted for does not change considerably.

Table 3 Absolute number of suicides and age specific suicide rates per 100 000 in Italy, 1982-1993

Year	18-24		25-44		45-65		65+	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
1982	202	1.45	701	3.54	987	5.01	1010	11.34
1983	166	1.19	665	3.35	935	4.74	1041	11.69
1984	182	1.30	786	3.96	1102	5.59	1057	11.87
1985	194	1.39	811	4.09	1325	6.72	1310	14.71
1986	211	1.51	856	4.32	1301	6.60	1335	15.00
1987	235	1.69	985	4.97	1378	6.99	1438	16.15
1988	248	1.78	903	4.56	1182	6.00	1427	16.03
1989	229	1.64	872	4.40	1164	5.90	1404	15.77
1990	279	2.00	1048	5.29	1183	6.00	1282	14.40
1991	281	2.02	1116	5.63	1286	6.52	1336	15.01
1992	284	2.04	1100	5.55	1264	6.41	1333	14.97
1993	307	2.20	1102	5.56	1225	6.21	1420	15.95
1994	282	2.02	1093	5.51	1138	5.76	1343	15.08

## Discussion

The period 1982 to 1994 was characterised in Italy by an economic crisis with growing unemployment rate percentage. There was also an increase in suicide rates for both sexes. This increase was higher among the unemployed than among the employed; a particularly significant increase was seen among those looking for a first job, with a greater increase in the most recent years, when unemployment was higher. Becoming and remaining jobless during a period of high unemployment (such as the latter years of this study period) can be assumed to be less dependent than at other times on the person's characteristics, among which are characteristics that might also confer a higher risk of ill health. It is noteworthy, then, that the unemployed in Italy have been subject to higher suicide rates in recent years than at the beginning of the study period, when unemployment was lower.

The economic position of "unemployed" is linked to a higher risk of suicide than that observed among the employed: the risk of suicide is three times higher among unemployed than employed men, and about two times higher among unemployed than employed women. People searching for a first job are at higher risk: the probable age difference between groups (people seeking a first job conceivably being younger on average than employed people) does not seem to act as a misleading factor, as suicide rates for the same period of time in Italy increase with the age of the person. However, because data are rates per 100 000 rather than standardised mortality ratio, these figures are vulnerable to changes in the age composition of the sample. Suicide rates, indeed, are highly sensitive to age: this means that, if the "never employed" group should "get older" during the period under study, a substantial rise in its suicide rate could be expected for this reason alone. It would furthermore not be surprising if the "never employed" group had increased in age given Italy's economic circumstances since the early 1980s.

### CONFOUNDING FACTORS AND LIMITATIONS

The lack of data on the age composition of the samples is not the only limitation of this study. Working with official suicide statistics implies a risk of bias both in terms of data collection and in the reconstruction of rates among social groups. Under-reporting of suicides in official statistics is a worldwide problem.<sup>27</sup> It is known that there are geographical differences in the consideration given to a self destructive act because of social and cultural factors.<sup>28</sup> However, careful studies performed in other countries, as well as in Italy, indicate that underestimation can only mask the dimension of the phenomenon and the weight of the influence exerted by social and environmental factors, but not hide the importance of these influences.<sup>29, 30</sup> Whatever the reliability of official suicide statistics, the problem remains of the possible existence of biases in the rating of data according to the economic position of the victim. For various reasons, relatives and the

### KEY POINTS

- Despite limitation, official statistics are still a reasonable approximation to study suicide trends among those of working age.
- Periods of economic crisis with growing unemployment associate to a rise in suicide rates, higher among unemployed than among employed.
- Even if this study could not adjust for potential confounders, the results are consistent with the view that unemployment per se increases the risk of suicide.

authorities may be more prone to mask as an accident the suicide of an employed person than that of an unemployed person. This could help to explain the uneven distribution of suicide rates by economic position and the changes in administrative suicide rates among employed compared with unemployed people. Thus the increase in administrative suicide rates reported herein could be determined by a better rating of data, the tendency to hide suicide exerting a different influence in employed and unemployed cases.

Another limitation is the use of data from cross sectional surveys to construct rates among social groups according to their occupational status. Respondents, for example, may be unwilling to reveal their unemployed status, so inflating the numbers of the employed group and diluting suicide rates among employed people. Seasonal fluctuations in employment, particularly in areas with a predominantly agricultural economy, may not be adjusted by national statistics deriving from a yearly mean, yielding to incorrect measurement. On the other hand, the attribution of occupational status to a suicide victim may be based on inaccurate rating: it could be that on occasion suicide victims are registered in official statistics on the basis of most recent employment, even when this employment ceased some time beforehand. So it is possible that unemployed status is attributed to suicide victims less often than is strictly accurate. Nevertheless, as the study of a low base rate phenomenon like suicide requires a large population to detect significant differences and specifically collected data are difficult to obtain, the use of official statistics is a reasonable compromise in the study of social influences on suicide.

The temporal relation between the rise in unemployment rate percentage and suicide rate is, indeed, very suggestive of a causal link, although the influence of concurrent factors cannot be excluded: among these is the effect of economic crisis on social integration.<sup>14, 17</sup> All three methods used in this study, however, have well known limitations: comparison of suicide rates across social groups at individual level exposes data to bias because of under-reporting and incompleteness. Time series analyses do not allow researchers to disentangle effects attributable to social change as a whole from effects attributable to changing rates of unemployment. Aggregate level cross

sectional analyses are exposed to risk from the so called "ecological fallacy".

#### THE "ECOLOGICAL FALLACY"

The term "ecological fallacy" refers to the problems that arise from making inferences about people from studies of groups. William Robinson first demonstrated in 1950 that the correlations between two individual level variables frequently differ markedly from the correlations between the same two variables at the aggregate level: sometime the correlations may even be in the opposite direction.<sup>31</sup> Studies on social correlates of suicide are often rich in examples of this kind of problem<sup>32</sup>: in this study, as in others,<sup>11 13 33</sup> the aggregate level cross sectional analysis indicates that areas with higher unemployment rate percentages have lower suicide rates, whereas at an individual level, the unemployed were found to have higher suicide rates than the employed. To explain this discrepancy many factors have been invoked: general opinion is that, in regions with lower unemployment, becoming unemployed implies entry into a high risk bracket (in terms of access to supportive networks), whereas in regions where many people are long term unemployed the development of alternative supportive relations to those related to working roles is facilitated.<sup>11 34-36</sup> In addition, in regions with higher unemployment, the stigma associated with being unemployed will be lower, and more tolerable.<sup>11 33</sup>

The higher suicide risk among unemployed men, although being a reflection of the trend in the general population, suggests that the lack of a job has a different influence on the two sexes. Men more than women associate their social identity with a specific working role, the loss of which can seriously undermine a man's position in society, and not only in terms of access to resources. Women, on the other hand, are able to assume a well defined social position even in the absence of a specific working role. The position of "housewife", indeed, confers on women precise commitments and occupation of time in defined activities, which imply responsibility and personal engagement. It is less common for a woman than for a man to feel deprived of her social identity, as long as she can maintain a specific role in her familial network. This may justify the lesser impact of being unemployed on administrative suicide rates for women.

Taking into account the limitations of ecological analyses, you can speculate on the link between the rise in male unemployment percentage and the changes in suicide rates among women. The relation between the rise in male unemployment rate percentage and the increase in the suicide rates among unemployed women may be a reflection of the destructive effect exerted by economic crisis on the degree of family cohesion. Studies performed in other contexts show that the dissolution of the familial network is particularly closely linked to suicide risk in the female population.<sup>37-40</sup> Unemployment also favours the dissolution of familial ties, as it implies

increased social stress and difficulties on a relational level that often culminate in divorce.<sup>18</sup> Aside from the severing of familial ties, however, a husband's "undesirable job events" are likely to associate to emotional symptoms for his wife and relatives: in general stressful events affect the mental health not only of the people who directly experience the events but also of their close associates who are indirectly affected by the events.<sup>41 42</sup>

Mental suffering of a depressive type is the most often reported antecedent of suicide.<sup>43-45</sup> Adverse circumstances often favour or precipitate a depressive crisis among predisposed people: the quantity and quality of access to social support also influences the course of a depressive episode.<sup>46 47</sup> Job loss usually comprises a whole sequence of stressful events from anticipation of job loss, to job search and training for re-employment, when possible.<sup>48 49</sup> Psychological wellbeing can therefore be diminished by the experience of unemployment, and effectively, losing a job seems a likely trigger for mental disorders, in particular those of a depressive type.<sup>50-52</sup> Exclusion from ordinary living patterns, customs and activities arising from a lack of resources adds independently to the stress caused by job loss, and further increases the risk of depression and subsequent suicide.<sup>7 53-55</sup>

#### RECENT STUDIES AND FUTURE DIRECTIONS

An oft disregarded aspect in the study of the link between unemployment and suicide is the role of social class. People belonging to the less advantaged social classes have a significantly higher probability of becoming unemployed.<sup>21 36</sup> During an economic crisis men in professional and managerial occupations will tend to maintain their employment, whereas those in semiskilled and unskilled occupations are at greater risk of job loss.<sup>36</sup> In addition, both social class at birth and adverse financial circumstances in childhood are predictive of unemployment in adulthood.<sup>21</sup> The risk of becoming unemployed, therefore, increases inversely as a function of social class: the more disadvantaged are at higher risk.

Breed<sup>56</sup> and Maris,<sup>57</sup> in USA, and later Kreitman and coworkers<sup>58</sup> in Great Britain, showed that the lowest social class also has higher suicide rates compared with other social classes. Though higher suicide rates among the less advantaged may be a reflection of social drift associated with chronic mental illness, the impact of poverty and material deprivation, and of unemployment as an aggravating factor, could equally contribute to this finding. Poverty is an important risk factor for both the development and the outcome of a mental illness.<sup>59-62</sup> Therefore, it is not surprising that a person of a low socioeconomic status is at risk of both a mental disorder and of unemployment. Recently, Neeleman and coworkers reported that low parental social class is a risk factor for suicide and premature death in the general population, as is poor academic performance, which may be related to adverse circumstances in childhood and adolescence.<sup>63</sup> In a study concerning the

role of unemployment in violent suicide attempt survivors, Beautrais and coworkers also reported that adverse social and family factors antecedent to the experience of unemployment were significantly related to suicide attempt.<sup>20</sup> In their study they found that those making serious suicide attempts reported higher rates of unemployment than control subjects. Much of the association between unemployment and suicidal behaviour in their sample was attributed to factors antecedent to both the onset of unemployment and the suicide attempt such as lack of formal educational qualifications, poor parental relationship and low levels of parental care. All these factors, however, are more likely to occur among people of low socioeconomic status<sup>24</sup>; as the comparison group was stratified by age and gender but not social class, this aspect had been lost in their analyses. A closer exploration of the role of socioeconomic status would doubtless offer useful additional information on suicidal behaviour and the factors affecting its lethal outcome.

Even taking into account the contribution of social class in mediating the link between job loss and suicide, the role of unemployment in the chain leading to suicidal crisis is far from clear. Many recent studies emphasise the importance of a mental disorder to explain the higher risk of suicide among the unemployed.<sup>19, 20</sup> Unemployment in these studies is thought to account for a very small fraction of the risk, contributing merely to worsen the decourse of a mental disorder or being a consequence of the disorder itself.

Job loss, however, by implying a contraction of the personal social network and a relevant alteration of the time structure of daily life, may lead to a reduction in surveillance, which, together with availability to lethal means, is another key element in suicide, particularly among mentally troubled people.<sup>55</sup> Therefore unemployment, even if symptomatic of a mental disorder, should always be taken into consideration as a risk factor for suicide. In fact, unemployment has a negative influence on both self esteem and the ability to use supportive networks in a efficient way.<sup>11-13</sup> Unemployment is also a relevant source of social stress leading to increased family tensions, increased isolation from others, and the loss of self esteem and confidence.<sup>11</sup> Moreover, lack of economical independence as a result of unemployment reduces the possibility of using social and health services: this may prejudice compliance with therapeutically prescribed treatment, contributing to worsen the course of a mental disorder.

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