

**HEALTH EFFECTS OF JOB INSECURITY
AMONG EMPLOYEES IN
SWISS GENERAL POPULATION**

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ABSTRACT

Objectives. To investigate at national level the association between health and the social distress in which the whole employed population is plunged as a consequence of job insecurity.

Design. Cross-sectional study.

Setting. Switzerland.

Subjects. Individuals working full or part time as employees drawn from a random sample (N=2024) of the Swiss general population interviewed by phone.

Main outcome measures. Prevalence rates of ten self reported health and health related behaviour indicators according to three levels of perceived job insecurity (low, middle, high). Odds ratios estimated with logistic regression adjusted for relevant respondents characteristics (sex, age, education, having a chronic disease, working full or part-time and in public or private field).

Results. One employee out of 10 experienced a high level of job insecurity, out of five a middle level while about 2/3 have no or a very low perception of job insecurity. The results clearly show that psychosocial stress induced in general employed population by fear of unemployment has a negative impact on the individual health and related health behaviour. A positive "dose-response" gradient was found between rise in job insecurity level's and the indicators investigated, suggesting a linear deterioration of health. In particular, employees in high insecurity group, compared to those in low one, have significantly higher odds ratios for seven indicators out of ten [not being in good health OR 1.6 (CI 1.0-2.7); high level of subjective stress OR 1.6 (CI 1.1-2.3); low self-esteem OR 2.9 (CI 1.5-5.7); daily or weekly consumption of tranquillisers OR 2.1 (CI 1.0-4.3); regular low-back pain OR 2.0 (CI 1.3-3.2); regular smoking OR 1.6 (CI 1.0-2.4); avoiding medical consultation or caring for themselves for fear of missing work OR 3.4 (CI 1.9-5.9)]. Employees with higher educational status seem to have more difficulties than less educated in coping with job insecurity.

Conclusions. There is a positive association between health status and health related behaviour and social distress due to perception of job insecurity. Fear of unemployment seems to have stronger unfavourable effect in high educated employees than in less educated, probably because investment in career and in personal expectations are, in that group, generally higher.

Although this cross-sectional study carried out at national level do not reach the "gold standard" represented by longitudinal ones, the results are fully consistent with those of few analysis on job insecurity carried out prospectively at firm level.

Recommendations. In terms of concrete actions the main recommendations stemming from this study could be [i] to break the wall of silence generally erected around studies showing the positive relationship between job insecurity and deterioration of health, in order to promote a public and political consciousness in favour of less excluding and more solidary social and economic choices and [ii] to promote a systematic measure of health impact of policies and legislations with particular emphasis on those affecting labour market and work environment.

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Keywords.

Economic Development; Labour Market; Unemployment; Job Insecurity; Deprivation; Health; Public Health; Health Impact Assessment.

JEL classification: A13, E24, E60, H10, I12, I30, J20, J6, K2, L20, 011

HEALTH EFFECTS OF JOB INSECURITY AMONG EMPLOYEES IN SWISS GENERAL POPULATION

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BACKGROUND

Despite the general silence of the lay press, the relationship between welfare, economic and social development and the health of groups and populations has been extensively analysed, particularly on the basis of classical morbidity and mortality indicators [1]

Socio-economic status [2,3,4], unemployment [5], psychosocial work environment [6] and its control by individuals [7] have been recognised as key factors in explaining differences in risk factors, in morbidity and in mortality between groups and populations.

The use of this kind of indicators (such as morbidity and mortality rates) does not allow to appropriately describe how macro- and microeconomic changes and differences in personal social and economic status affect individuals in their everyday life, particularly with respect to nutrition, social contacts and behaviour, sense of belonging and mattering, humiliation, etc. [8].

More troubling evidence suggests that, even in nations that since 1950 have assured equity of access to health care and services for the whole population, the mortality gap between higher and lower social classes has increased dramatically, instead of decreasing as expected consequence of the universal access to care [9].

All these results suggest that (i) improvements in the economic and social environment are independent key factors in improving the health of populations and also that (ii) for several groups of individuals health promotion and services consumption might be regarded as a mere "survival techniques" for coping with deprived socio-economic situations. This seems today particularly true for the growing "new poverty" groups in Western countries and for large groups of the populations on the way to "democratic transition" in Central and Eastern Europe [10,11].

All the evidence showing the key role of economic and social environment on health status is, in general, ignored by politicians and top health administrators, because emphasizing these factors could mean that (i) they would have to seriously consider the problem of mastering the current model of economic and social development, (ii) they would have to explicitly and publicly acknowledge that the mere consumption of the health goods is not sufficient for maintaining and improving health and wellbeing.

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Job insecurity and health indicators

The today model of economic development, largely dominated in the nineties by neoliberalism, has greatly contributed to spread even further in the public opinion the arbitrary opposition between the economic logic founded on a competition deemed to lead to effectiveness and the social logic making place for the principle of equity [12].

In particular, the postulates (i) to throw discredit on every collective structure able to interpose obstacles in the way of the faith in free trade, (ii) to achieve the highest "flexibility" of market labour, and (iii) to cut down social security expenses and framework, have been, in this decade, widely publicised and in part implemented by policies and laws.

In this perspective, the notions of "winner" and "looser" have been tied to the professional status attained and above all to having or not a remunerated activity. At the same time, the number of unemployed in the OECD European countries has increased from 7% in 1990 to 10,5% in 1997 [13] reaching 17 millions of unemployed in EU area and the proportion of part-time workers has reached 33% in the Netherlands and about 25% in Switzerland, Sweden and the U.K. [14]. This last form of activity corresponds essentially to the needs of business [15].

The diffusion by the mass media of the "new" economical paradigms, added to the daily news reporting business closures, worker lay-off and the increase of unemployment, has created a situation of generalised psychosocial stress among large sections of the population, stress wich has further accentuated the basic anxiety level due to the fear of unemployment. Not surprisingly, recent public opinion polls in Switzerland show that unemployment has become the first worry [16], as in the case in most European countries.

While studies on the impact of unemployment on health are numerous and clearly show the negative effect of this social situation on several objective and subjective health indicators, studies on the effects of fear of unemployment on health are scanty although much clinical research has been done on the health effects of workplace conditions and environment.

Two studies [17, 18] carried out in two firms (one public) assessed the effect of anticipating job change or unemployment on self-reported health status and behaviour before and during the period when employees were facing, respectively, massive layoffs and privatisation. The results showed that anticipation of job change or loss affects health even before the change has occurred in employment status.

Three other studies at firm level [19, 20, 21] reached the same conclusions. One of these [21] is of particular interest because it analyses the current practice of organizational downsizing (reduction of personnel) as a tactic to ensure "the survival" of the firm in today's global "economic war". The authors concluded that "downsizing is a risk to the health of employees" although that risk varies according to individual and workplace factors.

Rationale of the present study on the general population

As mentioned, several clinical and epidemiological studies carried out on selected groups of individuals and firms have shown that job insecurity, anticipation of job change and downsizing techniques result in worsened health of the individuals exposed to those conditions. However, because the fear of unemployment is to some extent influenced by the actual situation in which one worker finds himself or herself as an employee of a particular firm or organisation, those studies do not reflect the **general social anxiety** in which the whole society is plunged as a consequence of the perceived level of insecurity generated by the general economic and social situation and the basic model of development. **This study, which to our knowledge is the first carried out on the general population of a whole nation, aims at investigating the consequences on health of this social distress.**

The present study is exploratory in order to test the methodology in view of a more important now ongoing analysis of a sample of 4024 subjects working in full or part-time as employees. This last survey could allow to draw a more detailed picture regarding the issues discussed above.

METHODOLOGY

To measure the level of job insecurity among employees and to test if differences in prevalence of health indicators exist between groups experiencing subjectively different levels of fear, we carried out a phone survey on a representative sample of the Swiss general population aged 20 and over (N= 2024 ; response rate 63%).

The phone survey was carried out in May-June 1997 before the announcement of the massive cut of 13,000 workplaces following the merger of the Union Bank of Switzerland with the Swiss Bank Corporation, but after the creation of the new firm Novartis following the merger implicating the multinational pharmaceutical companies Ciba and Sandoz, which resulted in 10'000 job losses. At this time, the official unemployment rate for Switzerland was 5,1%.

The survey was mainly aimed at exploring population views on physician-patient relationship (50 questions), self-reported health status and medical consumption practices of the respondents (10 questions), personal characteristics (age, sex, education, professional status, working full or part-time and in public or private sector, etc.). One question explored the perception of job insecurity.

The question posed in the survey to discriminate the perceived level of job insecurity among employed subjects was:

There is lots of talk about the economic crisis. Presently, how do you estimate the probability of losing your job? Can you tell me whether this risk is: (1) very low, (2) low, (3) average, (4) high or (5) very high?

These five levels were recoded in three groups expressing a **low** (items 1+ 2), **middle** (item 3) and **high** (items 4 + 5) perception of job insecurity.

The analysis of the relationship between insecurity levels and health related indicators was carried out only, (i) on the respondents working full or part-time as employees at the time of the survey and (ii) having reported the perceived level of fear of unemployment (N=1150).

In order to show a possible relationship between the perception of job insecurity and health, we first calculated prevalence rates of each health indicator mentioned in **Table 4** separately for the group of employed people perceiving their job as secure (**low insecurity group**) and for those considering themselves at a middle risk (**middle insecurity group**) and at a high risk of unemployment (**high insecurity group**).

The significance of the linear trend in risk for the three levels (low, middle, high) of job insecurity, was assessed comparing the difference between the deviances of the models without or with the term for job insecurity to the chi-square distribution with one degree of freedom. The differences in crude prevalence rates between low and high fear groups were measured by classical chi-square test in univariate analyses.

Furthermore, odds ratios were derived from a multivariate logistic regression model in which level of job insecurity (high versus low) was assumed as independent variable and relevant respondents characteristics (sex, age education, having a chronic disease, working full or, the part-time and in public or private field) as covariates (see **Appendix**).

Finally we investigated in high and low educated subjects separately the ability of coping with high job insecurity, and odds ratios were computed for all health indicators. The test for interaction between education and job insecurity was also led in order to evaluate the significance of the difference between the two groups of education.

Subjects were classified in two groups of education according to the last school degree achieved. The cut-off point for "high educational level" was university and high schools degree and examinations after at least three years of full-time schools in business and arts and crafts.

RESULTS

1. Employment status and job insecurity among employees in the general population.

Table 1 gives the distribution of employment status among the respondents and **Table 2** shows the proportion of employees (N=1050) according to the three different levels of job insecurity.

TABLE 1 EMPLOYMENT STATUS OF THE RANDOM SAMPLE OF THE SWISS GENERAL POPULATION (N=2024)							
CASES		EMPLOYED		WORKING FULL-TIME		WORKING PART-TIME	
N	%	N	%	N	%	N	%
2024	100	1175	58.1	862	42.6	313	15.5

TABLE 2 DISTRIBUTION OF LEVELS OF JOB INSECURITY AMONG EMPLOYEES IN THE GENERAL POPULATION (N=1175)							
LOW		MIDDLE		HIGH		DON'T KNOW	
N	%	N	%	N	%	N	%
801	68.2	228	19.4	121	10.3	25	2.1

In Switzerland, in May-June 1997, 1 employee out of 10 experienced a high degree of job insecurity, one in five a "middle" level, while about 2/3 have no or a very low perception of job insecurity.

Translated into the real world, that means that about 400'000 workers were in 1997 plunged in a high level of anxiety induced by the fear of unemployment (that will probably also affect indirectly their familial environment).

Table 3 shows that job insecurity perception varies according to employment in private or public field, this late having a "protective" effect against work insecurity.

TABLE 3 JOB INSECURITY ACCORDING TO EMPLOYMENT IN PRIVATE OR PUBLIC FIELD			
Level of insecurity	Perception by employees (in %)		
	Private N=719	Public (N=431)	P value
LOW	65.9	75.9	P<0.001
MIDDLE	22.5	15.3	P<0.01
HIGH	11.6	8.8	Not significant

2. Job insecurity and health

Table 4 shows (i) the crude prevalence rates of health indicators by **low**, **middle** and **high** levels of job insecurity and (ii) gives for **high** versus **low** job insecurity the adjusted odds ratios to check the independent effect of "job insecurity" among the other covariates (see also **Figure 1**).

TABLE 4 CRUDE PREVALENCE RATES AND ADJUSTED ODDS RATIOS OF VARIOUS HEALTH INDICATORS ACCORDING TO LEVELS OF JOB INSECURITY						
INDICATORS	CRUDE PREVALENCE RATES (%)			SIGNIFICANCE		ODDS RATIOS [95% Confidence interval] [***]
	Levels of insecurity			x2 trend [*]	x2 (high versus low) [**]	high versus low
	LOW (N=801)	MIDDLE (N=228)	HIGH (N121)			
Self-perceived health status (not being in good health)	13,4	16,7	23,1	p<0,05	p<0,01	1,6 (1,0-2,7)
Perceived level of stress (high)	33,3	38,6	45,5	p<0,05	p<0,01	1,6 (1,1-2,3)
Self-esteem (low level)	4,7	6,6	14,1	p<0,01	p<0,001	2,9 (1,5-5,7)
Sleeplessness (regularly and often)	34,6	40,8	47,9	p<0,01	p<0,01	1,6 (0,8-3,3)
Tranquillizers (daily or weekly)	3,9	4,8	9,1	NS	p<0,02	2,1 (1,0-4,3)
Medical consultations last two months (at least one)	40,8	33,3	42,2	NS	NS	0,8 (0,5-1,3)
Low-back pain (regularly)	15,1	21,9	28,1	p<0,001	p<0,001	2,0 (1,3-3,2)
Smoking (regularly)	27,1	30,3	34,7	p<0,05	p<0,01	1,6 (1,0-2,4)
Alcohol consumption (regularly)	11,2	14,5	12,4	NS	NS	1,3 (0,7-2,3)
Has avoided a medical consultation or caring for him/herself for fear of missing work (yes)	6,2	11,4	20,7	p<0,001	p<0,001	3,4 (1,9-5,9)

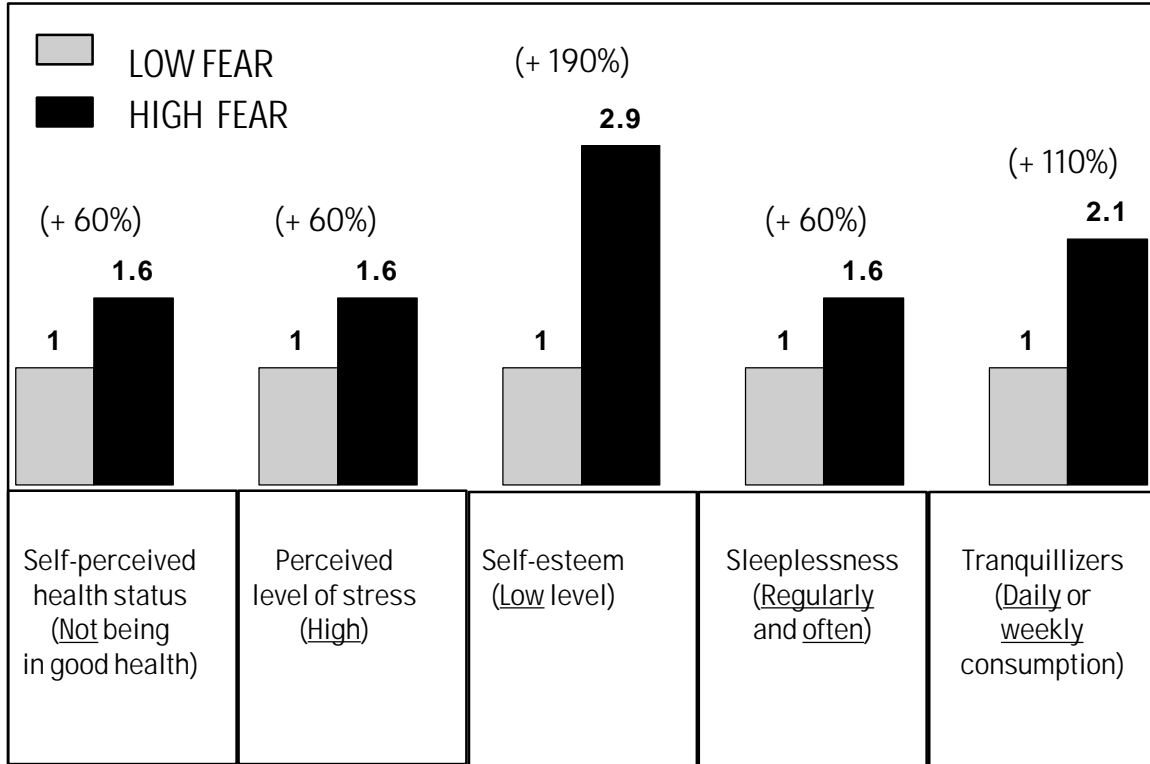
NS= Not Significant

[*] The test shows the significance of the linear associations between job insecurity levels (from low to middle and high) and the corresponding health indicators.

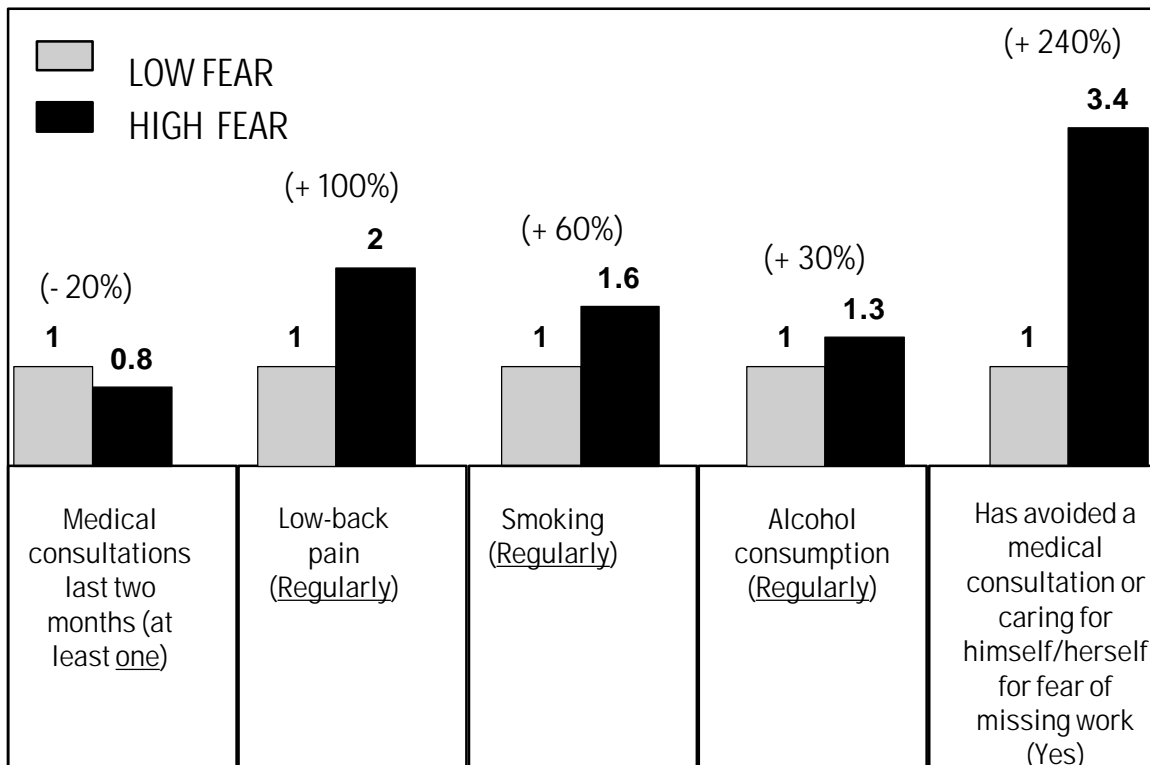
[**] The test shows the significance of the differences in crude prevalence rates between high and low job insecurity levels

[***] Value 1 refers to **low** level fear group / The multivariate logistic regression model includes terms for sex, age, education, having a chronic disease, working full or part-time and in a public or private field.

FIGURE 1 ADJUSTED ODDS-RATIOS OF VARIOUS HEALTH INDICATORS
 ACCORDING TO LEVELS OF JOB INSECURITY
 (Switzerland; Employees in general population; 1997)



INDEX 1 = reference value for low fear group



As expected, the great majority of indicators shows a linear association of the health indicators with increasing levels of job insecurity .

For 7 indicators out of 10 the association (suggesting a deterioration of health when insecurity perception increases) is statistically significant.

Multivariate logistic regression analysis taking into account subjects characteristics as possible confounding factors, confirms the deterioration of health when individuals are plunged in a high perception of insecurity due to the fear of losing job. This is true for seven indicators out of ten (not being in good health / high level of stress / low self-esteem/ daily or weekly consumption of tranquillizers / regular low-back pain / regular smoking / avoiding medical consultation).

Particularly troubling is the result showing that people under high job insecurity stress avoid 3,4 times more than subjects in low insecurity group to consult a physician or taking care of themselves for fear of missing work, perhaps in order not to give the impression of having passed from the status of "winner" to one of "loser". This could also explain why the prevalence of medical consultations is the same in high and low fear of unemployment groups.

3. Coping with job insecurity and educational level

Table 5 shows results about coping with job insecurity in two educational levels. The table gives for each health indicator considered, the odds ratios **under a status of high job insecurity** for respondents classified in the two educational groups (see Methodology)

The reference category (OR = 1) for the estimation of odds ratios is, for both strata of education, low level of job insecurity.

It is suggested that people with a higher educational level seem to have more difficulties than less educated in coping with job insecurity. The odds ratios values for 8 indicators are higher for more educated respondents. The less educated group shows under insecurity status an higher increase than more educated only for smoking and alcohol consumption.

Anyway, confidence intervals in the two groups overlap for most factors and the test for interaction between education and job insecurity is of borderline statistical significance, thus preventing to drawn any firm conclusion.

This issue, deserving further investigation on larger samples, could find a possible explanation in the fact that investment in the career and in personal expectations is generally more important among higher educated people, a fact which could lead more easily to feel like a "loser" in case of job loss.

TABLE 5. ADJUSTED ODDS RATIOS (OR) AND CONFIDENCE INTERVALS (C.I.) OF VARIOUS HEALTH INDICATORS UNDER A STATUS OF HIGH JOB INSECURITY ACCORDING TO LEVEL OF EDUCATION (*)		
INDICATORS	EDUCATIONAL LEVEL	
	LOW (N=642)	HIGH (N=508)
	OR (95% C.I.)	OR (95% C.I.)
Self perceived health status (not being in good health)	1.1 (0.5 - 2.2)	2.9 (1.3 - 6.4)
Perceived level of stress (high)	1.3 (0.8 - 2.2)	2.1 (1.1 - 4.1)
Self-esteem (low level)	1.9 (0.8 - 4.5)	7.2 (2.3 - 22.2)
Sleeplessness (regularly and often)	1.6 (1.0 - 2.7)	1.8 (0.9 - 3.5)
Tranquillizers (daily or weekly)	1.8 (0.9 - 3.5)	3.2 (1.1 - 9.0)
Medical consultations last two months (at least one)	0.8 (0.4 - 1.3)	1.0 (0.5 - 2.1)
Low-back pain (regularly)	1.5 (0.8 - 2.7)	3.0 (1.5 - 6.0)
Smoking (regularly)	2.2 (1.3 - 3.7)	0.9 (0.4 - 1.8)
Alcohol consumption (regularly)	1.6 (0.7 - 3.6)	1.1 (0.4 - 2.8)
Has avoided a medical consultation or caring for him/herself for fear of missing work (yes)	2.8 (1.3 - 6.0)	4.1 (1.8 - 9.3)

(*) In both strata of education references categories for the estimation of the ORs is low level of job insecurity (value 1).
The model is adjusted for sex, age, having a chronic disease, working full or part-time and in public or private field.

COMMENT

This analysis clearly shows that condition of psychosocial stress induced in the general population by fear of unemployment has a negative impact on the self-reported health status of employees and, probably, also on their familial environment.

The main limitation of this analysis is that it is unable to consider whether health selection underlies the observed association [20]. In fact only longitudinal studies could be considered as "gold standard" because they can measure employee health before and after any rumour or event of change has taken place.

Nevertheless this study is the first carried out at national level with the aim to explore the effects on health and related indicators of the social anxiety generated by the problem of job insecurity in which all population is plunged.

This survey could therefore be considered as a "baseline" investigation for further and larger population surveys.

It is important to point out that the results of this cross-sectional study at national level are fully compatibles with those of the few analyses carried out prospectively at firm level [18,20,21]. Furthermore, the "dose-response" relationship between rise in job insecurity perception and deterioration of health indicators, seems to exclude that the results are due to chance.

These results, added to the studies on the impact on health of socio-economic status, unemployment and working conditions [1-10] put into question some relevant choices in our societies (often presented as "scientific" ones) required by the present "economic global war".

For example, the expansion in the OECD countries from 1950 to 1995 has also dramatically expanded unemployment [22] and future perspectives predict that part-time work, mainly due to respond to needs of business [15], will increase to over 40% of the active population [14]. The "markets disarmament" [23] and a "human economic policy" [24] are not for tomorrow, although measures such as, for example, the proposition to introduce at world level a tax on financial transactions and currency exchange rates, have been evoked at several international meetings [25], in order to give back to governments a certain degree of autonomy in macroeconomic policy.

RECOMMENDATIONS

Today there is no doubt that the major determinants of health are, as ever, due to social and economical environment [26]. Factors outside individual's control affect physical and psychosocial hazard. Unfortunately, health policy interventions are today mainly limited to encourage lifestyle changes and neglect the environmental change options. As Blane as pointed out [27] this could lead, at best, to ineffective health policy interventions and, at worst, to holding individuals responsible for events which are outside their control. In fact the biomedical model of disease causation has very often distorted public health priorities in recent years [26].

In terms of concrete actions, the main recommendations stemming from this study and those previously quoted [1-10, 17-21] are:

1. to break the "**wall of silence**" generally existing around these findings, which question directly **[i]** the current political action and the new model of social and economic development and **[ii]** the today health policy interventions generally neglecting the social determinants of health. The press, in part because of its dependence on advertising budgets and its increasing concentration, seems largely subservient to the new economic paradigms and, with few exception, does not give importance to results of studies showing the huge relationship between socio-economic factors and health status of individuals and population, also when those findings are published in leading medical journals. The breaking of the silence could help bringing about a greater political and social consciousness of the relation between models of economic development and health, **promoting in this way public pressures for economic and political choices less excluding and more solidary.**
2. work is probably today the main factor affecting individual level of social integration. An independent commission should be established **to monitor the effects on health of economic policies and legislations** (with particular emphasis on those affecting labour and work) and give also an active and independent advice on potential **health impact** before policies and legislation's will be adopted . Such a recommendation was included in the final declaration of the fifth Conference of European Health Ministers that took place in Warsaw in november 1996 [28].

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APPENDIX

CHARACTERISTICS OF RESPONDENTS ACCORDING TO LEVELS OF JOB INSECURITY			
Characteristics	% of cases by level of insecurity		
	LOW (N=801)	MIDDLE (N=228)	HIGH (N=121)
Sex			
- male	56,2	57,9	48,8
- female	43,8	42,1	51,2
Age			
- 20-29	19,1	17,1	19,0
- 30-39	28,8	26,7	22,3
- 40-49	22,7	25,9	29,8
- 50-59	21,5	25,9	22,3
- 60+	7,9	4,4	6,6
Education			
- low	55,3	54,4	62,0
- high	44,7	45,6	38,0
Having a chronic disease			
yes	20,1	20,2	30,6
no	79,9	79,8	69,4
Working full-time			
- yes	74,4	69,7	72,7
- no	25,6	30,3	27,3
Working in			
- public field	40,8	29,0	31,4
- private field	59,2	71,0	68,6