

Association between depressive mood and cardiovascular disease: social disparities and role of education, lifestyle, and disabilities

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Background

Cardiovascular diseases (CVD) should be associated with depressive mood, and their associations as well as the confounding roles of occupation, education level, life style and living conditions may differ between social groups.

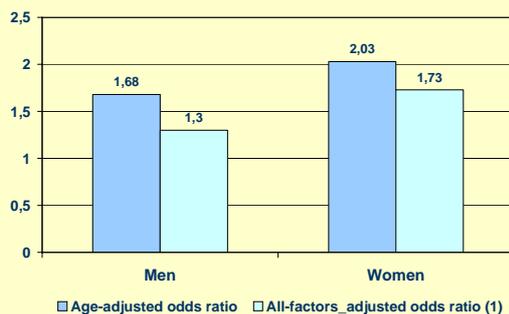
This study assessed the associations between depressive mood and CVD, their social disparities and the confounding roles of education, living alone, smoking, alcohol abuse, and physical and cognitive disabilities.

Methods

The sample included 6200 (2951 men and 3249 women), aged 15 years or over, randomly selected in north-eastern France.

They completed a postal questionnaire gathering more characteristics and alcohol abuse (with Deta questionnaire), depressive mood (Duke questionnaire: giving up too easily, difficulty for concentrating or sleeping, getting tired and nervousness), CVD diagnosed/treated by a physician, and disabilities.

Data were analyzed using odds ratios (OR) computed with logistic models.



(1) Adjusted for socio-occupational category, education, living alone, smoking, alcohol abuse, and physical and cognitive disabilities

Fig 1. Association between depressive mood and CVD: odds ratio

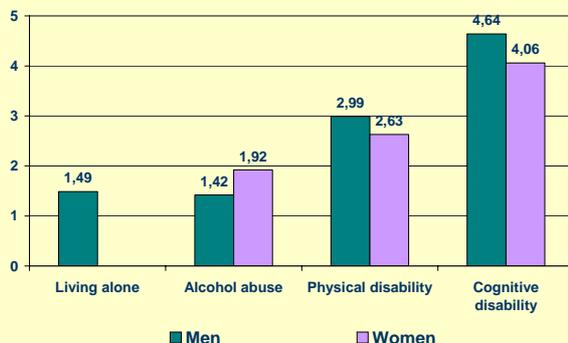


Fig 2. Potential confounders of the association between depressive mood and CVD: odds ratios adjusted for all confounders

Results

Depressive mood affected 17.4% of subjects (11.4% men, 22.8% women, $p < 0.001$) and CVD 19.9% (18.6 vs 21.0% respectively, $p = 0.02$).

Depressive mood was more strongly associated with CVD among women (age-adjusted OR 2.03, 95% [CI 1.66-2.47]) than among men (1.68, 1.26-2.23). These ORs decreased to 1.73 (85%) and 1.30 (77%) respectively with further adjustment for socio-occupational category, education, living alone, smoking, alcohol abuse, and physical and cognitive disabilities (Fig. 1).

Among these confounders those significant were living alone (all-factors-adjusted OR 1.49 [1.00-2.22] for men, NS for women), alcohol abuse (1.42 [1.04-1.97] for men, 1.92 [1.24-2.99] for women), physical disability (2.99 [2.24-4.00] for men, 2.63 [2.12-3.26] for women), and cognitive disability (4.64 [3.56-6.05] for men; 4.06 [3.36-4.91] for women) (Fig. 2).

Among men depressive mood related to CVD in manual workers only: gender-age-adjusted OR 1.76 [1.09-2.85] (similar ORs but non-significant were found for managers, clerks and farmers/craftsmen/tradesmen).

Among women depressive mood related to CVD among manual workers (gender-age-adjusted OR 1.78 [1.03-3.07]), clerks (2.01 [1.45-2.77]) and among farmers/craftsmen/tradesmen (2.39 [1.16-4.95]), but not among managers and intermediate professionals.

Table 1. Characteristics of the subjects (%)

	Men (n=2951)	Women (n=3249)	p-value
Depressive mood	11.4	22.8	<0.001
Cardiovascular disease	18.6	21.0	0.017
Age (y)			<0.001
<30	22.4	25.8	
30-39	22.2	19.4	
40-49	17.2	15.2	
50 or over	38.2	39.6	
SES (occupation)			<0.001
Managers, professionals	15.1	9.0	
Farmers, craftsmen, tradesmen, heads of firms	8.4	5.5	
Technicians, foremen	14.8	2.7	
Manual workers	27.6	9.9	
Clerks	16.9	38.1	
Others	17.2	34.8	
Living alone	7.6	14.9	<0.001
Diploma			0.018
University level	17.2	16.6	
Middle and high schools	66.6	69.5	
Primary school	16.2	13.8	
Tobacco smoking	30.2	21.9	<0.001
Alcohol abuse	12.4	3.3	<0.001
Obesity (>30kg/m ²)	8.2	8.5	0.644
Physical disability	21.6	33.2	<0.001
Cognitive disability	29.2	39.2	<0.001

Conclusions

There was a strong association between depressive and cardiovascular disease which greatly differed between men and women and social groups.

Alcohol abuse and physical and cognitive disabilities are potential confounders.

Improving lifestyle and disabilities of people with cardiovascular disease/depressive mood is important, especially for lower social groups.

Lorhandicap group: N. Chau, F. Guillemin, J.F. Ravaut, J. Sanchez, S. Guillaume, J.P. Michaely, C. Otero Sierra, B. Legras, A. Dazord, M. Choquet, L. Méjean, N. Tubiana-Rufi, J.P. Meyer, Y. Schéret, J.M. Mur.

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