

# Associations between multiple deprivation and tobacco, alcohol, and psychotropic drug use

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## Objectives

Worldwide, the use of tobacco, alcohol and psychotropic drugs results in substantial morbidity and mortality. Social and material deprivation affects a large number of people and could increase the risk of substance use. The risk may differ between the two sexes and age groups.

The study assessed the relationships between social and material deprivation and the use of tobacco, excessive alcohol and psychotropic drugs by both sexes and in various age groups. The knowledge of these issues may help public policies in designing prevention to reduce the use of these substances.

## Design and methods

The sample comprised 6,216 people aged  $\geq 15$  years randomly selected from the population in north-eastern France.

Subjects completed a post-mailed questionnaire covering socio-demographic characteristics, occupation, employment, income, smoking habits, alcohol abuse (Deta questionnaire) and frequent "psychotropic" drug intake (for headache, tiredness, nervousness, anxiety, insomnia).

**Multiple deprivation (D)** defined by the cumulative number of: low educational level, manual worker, unemployment, living alone, nationality (other than Western Europe), low income, and non-home-ownership.

Data were analysed using adjusted odds ratios (ORa) computed with logistic models.

## Results

### Deprivations:

- Low educational (primary school): 26.4% in men and 32.1% in women,  $p < 0.001$
- Manual worker: 27.0% and 9.5%,  $p < 0.001$
- Low perceived income (with difficulties): 8.8% and 9.0%
- Living alone: 7.7% and 15.0%,  $p < 0.001$
- Unemployed: 3.1% and 4.6%,  $p < 0.001$
- Foreign nationality (other than Western European): 2.4% and 1.8%
- Not home-owner: 36.9% and 40.9%,  $p < 0.001$

### Prevalence of multiple deprivation (D):

37.4% for D=1, 21.2% for D=2, 10.0% for D $\geq$ 3.

**Tobacco use:** 30.2% in men and 21.9% in women,  $p < 0.001$

**Excess alcohol use:** 12.5% and 3.3%,  $p < 0.001$

**Frequent psychotropic drug use:** 23.8% and 41.0%,  $p < 0.001$

Table 1. Exposure-response relationship between D and substance use: odds ratios and 95% CI (n=6,216)

	D=1	D=2	D $\geq$ 3
Tabacco	1.2 (1.0-1.3)	1.5 (1.3-1.7)	1.9 (1.6-2.3)
Excess alcohol	1.2 (0.9-1.5)	1.3 (1.0-1.7)	1.8 (1.3-2.5)
Psychotropic drugs	1.3 (1.1-1.4)	1.5 (1.3-1.7)	1.9 (1.6-2.3)

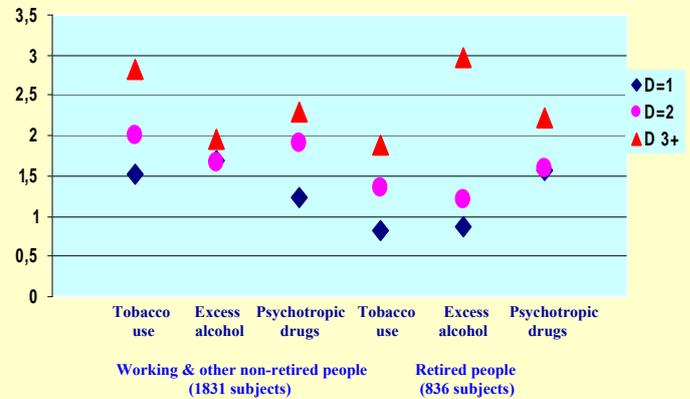


Fig. 1: Odds ratios adjusted for age for various D levels vs. D=0 in men

### Association between D levels and substance use

**Men:** Exposure-response relationship in working/other non-retired men for the 3 substances (Fig. 1)

**Women:** Exposure-response relationship for tobacco and psychotropic drug uses in working/other non-retired people only (slightly less marked than in men).

Among working/other non-retired men, low educational level, manual employment and low income were related to tobacco and psychotropic drug use, whereas low income was associated with the use of all three substances, living alone with alcohol abuse only; and not being a home-owner with alcohol abuse. Among retired men, being manual worker was associated with alcohol abuse only, and low income with alcohol abuse and psychotropic drug use.

In women, low educational level, being manual worker and low income were associated with psychotropic drug use, but low income, living alone and unemployment were associated with tobacco use in working/other non-retired and retired subjects. In retired women a significant association was noted between not being a home-owner and alcohol abuse only.

## Conclusions

The present study elucidates the influence of material and social deprivation on tobacco, excessive alcohol and psychotropic drug use among both sexes and in various age-groups.

It shows that there was a gradient in the relationship between deprivation and tobacco, excessive alcohol and psychotropic drug use in all age groups during active life and after retirement.

Alcohol abuse was related to poverty and family structure, whereas tobacco and psychotropic drug use were related to poverty, educational level and working conditions.

Public policies aiming at reducing substance use should address the need to improve physical and mental work conditions, reduce deprivation, and help the deprived populations to be more aware of the risk and to find remedial measures.

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