Factors associated with traffic accident.

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Background

Traffic accident may be associated with socioeconomic characteristics, lifestyle, and health-related factors.

This study assessed its association with gender, age, education, living alone, socioeconomic position, income, poor health, obesity, smoking, alcohol abuse, fatigue/sleep disorders, and physical, sensorial and cognitive disabilities.

Methods

This cross-sectional study was conducted in 6,198 people, aged 15 years or over, randomly selected in north-eastern France.

They completed a post-mailed questionnaire that covered:
- Socio-economic characteristics: gender, age, education, living alone, socioeconomic position, income,
- lifestyle: obesity, smoking, alcohol abuse,
- health status, fatigue and sleep disorders during the previous 8 days
- physical disability for daily living activities (a 20-item scale), sensorial (seeing and hearing) disability, and cognitive disabilities (problems with concentration, attention, orientation, problem-solving, and memory).

Any traffic accidents during the previous 2 years

Data were analyzed using adjusted odds ratios computed with logistic regression models.

Results

The 2-year incidence rate of traffic accident was 3.4%.

Analysis using multivariate regression model reveals that traffic accident was associated with younger age (under 30 years), living alone, poor heath, and physical disability (Table 1).

However, smoking, insufficient income, fatigue/sleep disorders, and cognitive disability had significant age-gender adjusted odds ratios between 1.4 and 1.7, but they became non-significant when controlling for all covariates.

Conclusions

Traffic accident is associated with younger age, living alone, poor heath and physical disability.

Preventive measures to reduce traffic accidents should aim at improving health and lifestyle and increase awareness of risk, particularly among people who smoke, are on a low income, or suffer from fatigue, sleep disorders, or physical or cognitive disabilities.

Table 1. Relationships between traffic accident and various factors: adjusted odds ratios and 95% confidence intervals (6,198 subjects)

	%	ORa	95% CI
Men	12	1.19	0.87-1.63
Age (yr):			
< 30	23	1.00	
30-39	21	0.38**	0.26-0.57
40-49	16	0.39**	0.25-0.60
50-59	12	0.18**	0.10-0.33
60-69	15	0.08**	0.04-0.18
≥70	13	0.12**	0.06-0.24
Obese	19	0.86	0.57-1.30
Smoking	26	1.27	0.94-1.72
Alcohol abuse	8	0.98	0.60-1.59
Educational level			
University	17	1.00	
High and middle schools	48	1.09	0.72-1.66
Primary school	35	1.05	0.61-1.79
Occupational category			
Upper professionals	12	1.00	
Intermediate professionals	8	0.75	0.38-1.49
Manual workers	18	0.82	0.46-1.47
Employees	27	0.64	0.38-1.10
Farmers, craftsmen, tradesmen and heads of firms	7	1.17	0.57-2.40
Others and unknown	29	0.54*	0.31-0.95
Low income (insufficient)	9	1.33	0.88-2.01
Living alone	11	1.98**	1.34-2.92
Poor health	43	1.41*	1.01-1.96
Fatigue and/or Sleep disorders	69	1.28	0.91-1.81
Physical disability	28	1.88**	1.30-2.74
Sensorial disability	27	0.88	0.60-1.28
Cognitive disability	34	1.05	0.75-1.46

*p<0.05, **p<0.001.

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