Associations of obesity, alcohol abuse and smoking with cardiovascular disease: behaviours and risks vary with age among working people

Nearkasen Chau¹, Michèle Baumann²

¹INSERM, U669, Univ Paris-Sud and Univ Paris Descartes, UMR-S0669, 8 rue du Breuil, F-54180 Heillecourt, France, email address: Nearkasen.Chau@wanadoo.fr;
²M Baumann, University of Luxembourg, INSIDE, L-7201 Walferdange, Luxembourg, email address: michele.baumann@uni.lu.

Summary

Objectives: To assess the relationships between unhealthy behaviours (obesity, alcohol abuse and smoking) and cardiovascular disease (CVD) among working people at different ages, and to consider the mediating effects of socioeconomic characteristics.

Methods: A random selection of 2872 working people in north-eastern France completed a postal questionnaire covering: obesity, smoking, alcohol abuse (Deta-Cage questionnaire), age, physician-diagnosed CVD, and potential confounders - sex, education, occupation, living alone and income. Data were analyzed using odds ratios (OR), adjusted odds ratios (ORa) and [95%CI] computed with logistic models.

Results: Behaviours varied significantly with age. The following figures apply to ages <30, 30-49, and ≥50 years, respectively: obesity, 2.7%, 6.2% and 9.5%; alcohol abuse, 8.1%, 9.0% and 12.2%; daily smoking, 60.4%, 58.6% and 50.3%. CVD was present in 5.9%, 10.2% and 23.3%. Among young adults (<30 years), CVD related only to obesity (OR=3.64 [1.00-13.29]) and the relationship was not mediated (OR decreased to 3.54) by the confounders, among which only male sex was significant (ORa=0.27 [0.11-0.64]). In the 30-49 group, CVD related to obesity (OR=3.33 [2.12-5.23]) and alcohol abuse (OR=1.75 [1.11-2.74]). These relationships were slightly mediated (ORs decreased to 3.14 and 2.10, respectively), but only male sex and insufficient income were significant (ORa=0.66 [0.47-0.94] and ORa=1.64 [1.04-2.60], respectively). Among older workers (≥50 years), CVD related to smoking (OR=1.69 [1.05-2.71]) and alcohol abuse (OR=1.92 [1.01-3.65]). These relationships were slightly mediated (ORs decreased to 1.61 and 1.72, respectively) but only low education was significant (ORa=1.73 [1.00-3.02]).

Conclusions: CVD related to unhealthy behaviours, which vary with age. Obesity, and obesity-related risk factors, such as lack of physical activity and poor diet, affected more younger workers (<50 years), alcohol abuse affected primarily those aged >30 and smoking those aged >50. Socioeconomic factors play a role but have little confounding effect on the impact of unhealthy behaviour.

Key words: Unhealthy behaviours, cardiovascular disease, gender, age, individual confounders.