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Cardiovascular risk goes up as your mood goes down: Interaction of depression and socioeconomic status in determination of cardiovascular risk in the CONSTANCES cohort

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ABSTRACT

BACKGROUND - Recent evidence suggests that the association of psychological variables with the risk of coronary heart disease (CHD) might depend upon socioeconomic status (SES). However, it is unclear whether the association between depressive symptoms and CHD risk might differ according to three SES indicators (education, occupational status and household monthly income). METHODS -Among 34,836 working participants of the French CONSTANCES cohort (16,221 men, mean age [SD]: 44.0 [10.4] years) without history of cardiovascular disease, depressive symptoms were assessed with the Center of Epidemiologic Studies Depression scale (CES-D). The Framingham risk equation calibrated to the French population estimated the participant's 10-year risk of CHD. Associations between depressive symptoms and CHD risk were estimated using linear regression models in SES strata. RESULTS - The estimated 10-year risk of CHD was 16.9% in men and 1.8% in women. In men, the increased CHD risk in those with (versus without) depressive symptoms was more pronounced as occupational status decreased, being 0.65% (-0.57; 1.88), 1.58% (0.50; 2.66) and 3.19% (1.30; 5.07) higher in individuals of high, medium and low occupational status, respectively (p for interaction: 0.01). In contrast, effect modification by education or household income was less evident, despite similar trends. In women, no effect modification was found whatever the SES indicator. CONCLUSIONS - Depressive symptoms and 10-year estimated CHD risk were more tightly linked in individuals of lower SES, at least in men. Occupational status was the SES indicator that displays the most obvious effect modification on this association.

KEYWORDS: Coronary heart disease; Depression; Effect modifier; Epidemiology; Risk factors; Socioeconomic status

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