

Older Age at retirement is associated with decreased risk of dementia. Analysis of a healthcare insurance database of self-employed workers

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Background

Intellectual stimulation and mental engagement throughout life might be protective against dementia. We investigated whether age at retirement influences dementia risk among self-employed workers in France.

Methods

We linked health and pension databases including self-employed workers who were living and retired as of December 31st 2010. Dementia cases were defined based either on ICD-10th diagnosis or on claim for one of the medication against dementia (donepezil, galantamine, rivastigmine). Data were analysed using Cox proportional hazard model where age at dementia diagnosis or age at censoring (31st December 2010) was the dependent variable and age of retirement was the independent variable. Hazard ratios were computed adjusting for gender, marital status, occupational category, type of retirement, pension amount, diagnosis of hypertension, diabetes. Sensitivity analyses to assess potential reverse causation and differential cohort or temporal diagnosis biases were undertaken.

Results

Among the 429,803 retired self-employed workers alive on December 31st 2010, prevalence of dementia was 2.65%. Workers had been retired on average for more than 12 years. Multivariable analyses showed that the hazard ratio (HR) of dementia was 0.968 (95% Confidence Interval= [0.962-0.973]) per each extra year of age at retirement. After excluding workers who had dementia diagnosed within the 5 years following retirement, the results remained unchanged and highly significant ($p < 0.0001$). Results were also similar in further analyses stratified by age categories or year of dementia diagnosis.

Conclusions

Professional activity may be an important determinant of mental exercise and social integration. Our data show strong evidence of a significant decrease in the risk of developing dementia associated with older age at retirement, in line with the "use it or lose it" hypothesis. This health perspective should be taken into consideration when the age of cessation of professional activity is discussed. Our results thus highlight the importance of maintaining high levels of cognitive and social stimulation throughout work and retiree life and emphasize the need for interventions and policies to help older individuals achieve such cognitive and social engagement.