Economic hardship over twenty-two consecutive years of adult life and markers of early ageing

Foverskov, E.; Petersen, G. L.; Pedersen, Jolene Lee Masters; Rod, N. H.; Mortensen, E. L.; Bruunsgaard, H.; Lund, R.

Published in:
European Journal of Public Health

Link to article, DOI:
10.1093/eurpub/ckz185.085

Publication date:
2019

Document Version
Publisher's PDF, also known as Version of record

Link back to DTU Orbit

Citation (APA):

General rights
Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.
Background:
The authors examined the associations between annual measures of economic hardship (EH) across 22 years of adulthood and objective measures of early ageing in a Danish late-middle aged population.

Methods:
A linkage of longitudinal register data from Statistics Denmark covering the period 1987-2008 and cross-sectional survey data from the Copenhagen Ageing and Midlife Biobank collected in 2009-11 (N = 5,575). EH was defined as < 60% of the National median equivalized household disposable income and two exposures were calculated: 1) a categorical measure of total number if years in EH, and 2) trajectories of the probability of EH being low, declining, rising or high. Early ageing outcomes included four measures of physical capability, three inflammatory markers and one cognitive test. Associations were analyzed using linear regression models adjusted for sex, age, cohort, education, baseline income and long-term parental unemployment/financial problems.

Results:
Four or more years in EH (reference = null years in EH) was related to poorer physical capability (chair rise: -1.49 counts/30 seconds [95% confidence interval (CI) -2.36, -0.61], hand grip strength: -1.22 kg [95% CI -2.38, -0.07], jump height: -1.67 cm [95% CI -2.44, -0.91] and balance: 18% [95% CI 9, 28]), poorer cognitive function (Intelligenz-Struktur-Test: -1.50 points [95% CI -2.89, -0.12]) and higher inflammatory levels (C-reactive protein: 22% [95% CI 4, 44], and Interleukin-6: 23% [95% CI 10, 39]). Comparing the four EH trajectories, people with a high vs. low probability of EH over time had poorer physical capability (chair rise: -1.70 counts/30 seconds [95% CI -3.38, -0.01], grip: -4.33 kg [95% CI -6.50, -2.16], jump: -1.68 cm [95% CI -3.12, -0.25], and balance: 31% [95% CI 12, 52]). No associations were observed with Tumor necrosis factor α.

Conclusions:
This study suggests that sustained EH across adulthood may lead to early ageing.

Key messages:
- Sustained economic hardship in adulthood may lead to early ageing.
- Being in economic hardship for a few years is not associated with early ageing.