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Body mass index trajectories at older age: can adult socioeconomic circumstances compensate a bad start in life? Longitudinal study

Introduction

Childhood socioeconomic circumstances (CSC) and childhood adversities influence body mass index (BMI) in young adulthood, but it is unclear whether these influences persist in old age, and whether adulthood socioeconomic circumstances (ASC) mediate this association.

Objective

To examine if (1) CSC and childhood adversities are associated with trajectories of BMI in old age, and if (2) these associations are mediated by social mobility and ASC

Method

Data:

Survey of Health Ageing and Retirement in Europe, a population-based cohort study (2004-2015) with **repeated measurement every 2 years** and retrospective life-course data of 10,277 women and 8,190 men

Measures:

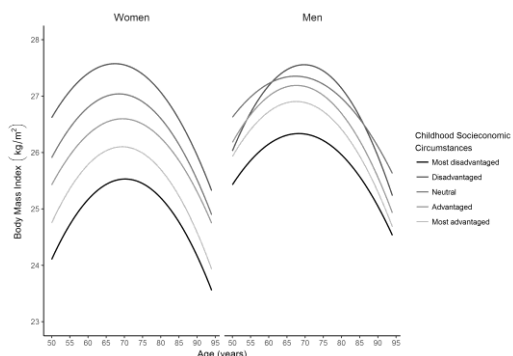
- **BMI:** self-reported weight (kg) divided by height squared (m²)
- **CSC:** index of disadvantaged/advantaged circumstances based on bread-winner's main occupation, number of home books, overcrowding, housing quality)
- **Childhood adversities:** set of traumatic events (emotional, physical, or linked to household dysfunction)
- **ASC:** education, main occupation, ability to make end meet with income
- **Confounders:** birth cohort, countries, childhood health, attrition
- **Covariates:** index of health behaviours, number of chronic conditions

Data analysis:

Linear mixed-effects models stratified by gender, adjusting for confounders and covariates.

Results

BMI trajectories were concave shaped: BMI increased until around 70 years of age and then decreased afterwards. Across CSC strata, BMI trajectories were mostly **parallel**, with a gradient between the more advantaged (lower BMI) and the disadvantaged (higher BMI), among men and women (see Figure); with the exception of the most disadvantaged, whose trajectories depicted lower BMI. Similar findings were observed for childhood adversities. ASC were associated with BMI trajectories but did not fully mediate the CSC / childhood adversities and BMI association.



Conclusion

Childhood (socioeconomic circumstances and adversities) have long-lasting influence on trajectories of BMI in old age. The influence of childhood was not mediated by the socioeconomic life course.