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Life Course: Later Life

OP71 COGNITIVE PERFORMANCE TRAJECTORIES AFTER AGE 50 BY RELIGIOUS AFFILIATION AND RELIGIOUS PRACTICE: RESULTS FROM THE IRISH LONGITUDINAL STUDY ON AGEING

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Background Religious participation has been shown to be associated with a number of health outcomes in later life. Research into religion and cognitive decline has been inconclusive, although there is some evidence for a protective effect. There is a lack of evidence on mechanisms around this relationship, and what the implications are for those who are not religious. We aimed to assess whether religious affiliation or religious practice was associated with cognitive trajectories, and to test possible mechanisms for an association.

Methods Data came from the Irish Longitudinal Study on Ageing (TILDA), a nationally representative study of the over 50s population in Ireland. A total of 7,331 had available data on all measures of interest. We used Latent Growth Class Analysis (LGCA) to identify different latent trajectory classes for cognition using the Mini Mental State Examination (MMSE) measure. Five waves of data collection were used to identify latent class trajectories. We then used multinomial logistic regression to assess the likelihood of membership to each trajectory class by religious affiliation or non-affiliation, and by level of religious attendance. We tested three possible mediation pathways to explain observed relationships; depressive symptoms, social network and smoking.

Results Three MMSE trajectory classes were identified using LGCA. These included a 'high steady' class, a 'medium declining' class and a 'low declining' class. There were no differences in class membership by religious affiliation or non-affiliation. Women who attended religious services were less likely to be in the low declining MMSE class (relative risk ratio=0.73, 95% confidence interval=0.55; 0.96). This effect was fully mediated by depressive symptoms, social network and smoking. No effects were found for men.

Discussion Cognitive trajectories after age 50 are not uniform. Being religious or nonreligious in the over 50s in Ireland is not associated with the type of cognitive trajectory experienced. However, frequent religious attendance in women who are religious appears to have a small protective effect. This effect appears to be driven through better mental health, more social participation and lower rates of smoking.

OP72 SOCIOECONOMIC DIFFERENTIALS AND COGNITIVE HEALTH IN LATER LIFE: THE MEDIATING BIOLOGICAL AND PSYCHOLOGICAL PATHWAYS

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Background The socioeconomic gradient in relation to physical and cognitive health has been already documented. However, substantial gaps remain in understanding the potential mediating pathways linking socioeconomic disparities to late-life cognitive health. We assessed the socioeconomic differentials and the biopsychosocial mechanisms associated with the late-life cognition in a representative subsample of the English population.

Methods Participants were 1,273 ELSA core members, aged 65 and older at the time of recruitment, from the Harmonised Cognitive Assessment Protocol (HCAP) a sub-study of from the English Longitudinal Study of Ageing (ELSA) completed in April 2018. The respondent interview incorporated an assessment of a broad range of cognitive domains (memory, language, executive function, psychomotor speed, and problem-solving) and complemented well the existing longitudinal data on health, cognition, biomarkers, genetics, lifestyle, health-care utilisation, and economic resources across 16 years of follow-up. We used structural equation modelling to estimate direct and indirect pathways between education (low, medium, high) and wealth (tertiles) as markers of SES, Apolipoprotein E (APOE) status, inflammatory markers (serum fibrinogen and C-reactive protein [CRP]), chronic conditions, measured in 2010 in relation to depressive symptoms (≥ 4 on the Center for Epidemiologic Studies Depression Scale) and the overall latent factor of cognitive performance based on multiple domains measured in 2018.

Results Our findings suggest that medium ($\beta=2.15$, standard error (SE=0.35), $p \leq 0.001$) and higher levels ($\beta=3.33$, SE=0.59, $p \leq 0.001$) of education were linked with a higher overall cognitive score in later life, while increased levels of wealth did not. Depressive symptomatology was interlinked with lower cognitive health($\beta=-1.01$, SE=0.25, $p \leq 0.001$), while APOEe4 and inflammatory markers were not directly associated with the overall cognitive factor. However, the overall inflammation was indirectly associated with overall cognition in later life, via a positive association with chronic conditions ($\beta=0.39$, SE=0.19, $p=0.042$), and depressive symptoms ($\beta=0.08$, SE=0.03, $p=0.020$).

Conclusion We found that education and specific psychosocial risk factors were directly associated with late-life cognition. In contrast, biological factors such as overall inflammation contributed indirectly via the development of chronic conditions and depressive symptoms. These findings support evidence for the psychosocial paradigm, which may be able to explain how life gets under the skin, influencing both physical and cognitive health in later life; indicating the imperative need to reduce socioeconomic inequalities.

OP73 SOCIOECONOMIC TRAJECTORIES OF EARLY ADULTHOOD AND THEIR CONTRIBUTION TO LATER LIFE CARDIOMETABOLIC HEALTH, 1970 BRITISH COHORT STUDY (BCS70)

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Background Cardiovascular health shows significant socioeconomic inequalities, however there is limited understanding of how these inequalities are generated across the life course. Early adulthood (age 16–24y) is an important period for development of cardiovascular risk factors such as obesity and atherosclerosis, as well as for changes in behavioural risk factors. In