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Early-life cognitive ability and recovery from stroke

Altschul, D^{1*}, Iveson, M¹, and Deary, I¹

¹The University of Edinburgh

Background

In ageing populations it is increasingly important to understand what contributes to health and wellbeing in later life. Older adults in particular are prone to function-limiting health issues which impair their ability to be productive and live independently. The incidence of stroke – one of the most common morbidities among older adults – has been shown to be predicted by early-life cognitive ability, such that those with higher cognitive ability are at lower risk. However, less is known about the role that early-life cognitive ability plays in recovery from stroke.

Aim

Investigate the association between early-life circumstances, particularly cognitive ability, and later-life recovery from stroke.

Methods

Using a large sample of individuals born in Scotland in 1936, historic data from the Scottish Mental Survey 1947 will be linked to administrative and healthcare records from across the life course. Incidence of stroke can be identified using healthcare records prior to 2011, and later functional outcomes will be extracted from the Scottish Stroke Care Audit and from Scottish Censuses 2001 and 2011.

Analysis

Multiple regression models will be used to examine associations between early-life variables and changes in post-morbid general health and physical function among those experiencing stroke prior to 2011. Time since morbidity, number of morbidity events prior to follow-up, and severity of morbidity will be included as covariates. Analyses will be stratified by type of stroke to account for heterogeneity in aetiology, and recovery profiles will be compared between different types of stroke where possible.

*Corresponding Author:

Email Address: drew.altschul@ed.ac.uk (D Altschul)