

**Studentship 4: Life course social determinants of cognitive ageing: the role of lifetime education, labour market attachment, and social mobility for cognitive function from early to late middle age.**

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Socioeconomic status powerfully stratifies cognitive function, with important implications for social inequalities in the rate of cognitive ageing. However, there have been few attempts to draw together its lifetime components for a comprehensive investigation of education and labour market determinants of cognitive change. The MRC National Survey of Health and Development (NSHD), now aged 65 years and the oldest of the UK birth cohorts, provides an ideal resource for this. This study has gathered information on parental education and occupational social class from birth of the survey members in 1946 and throughout childhood.

Individual studies have been published using this cohort, on the effects of adult education and inter-generational social mobility on midlife cognitive function (Hatch et al, 2007; Richard & Sacker, 2003), but further work on these topics is needed, particularly the latter (and adding intra-generational mobility). In addition, no work to date has investigated effects of lifetime socioeconomic position on cognitive ageing in this cohort, for example cumulative effects of social disadvantage. Studies investigating predictors of sickness absence in this cohort, including childhood cognition, are nearing completion, but no work has been conducted on cognitive ageing in relation to economic inactivity over the lifetime. Thus NSHD offers a compelling opportunity to draw these strands together into a comprehensive project.

Using data from the National Survey of Health and Development, the project will investigate:

- The relationship between inter-and intra-generational social mobility and cognitive ageing
- The effects of lifetime socio-economic position on cognitive ageing
- The effects of lifetime economic inactivity on cognitive ageing

Information is available on the survey members themselves for: formal educational attainment and elected adult education and training; occupational social class at entry into the labour market and throughout adulthood to age 65 years; and labour market attachment during this phase of the life course, including reasons for any economic inactivity. In addition, cognitive function has been measured three times in childhood (in regard to possible cognitive selection effects), once in early adulthood, and three times at ages 43, 53 and 65 years, including measures at all these latter ages of memory, speed and concentration. The relationship of measures of lifetime socioeconomic position and mobility with baseline cognitive functioning and its rate of decline will be assessed using methods such as latent growth curve models.

**References:**

Hatch SL, Feinstein L, Link B, Wadsworth MEJ, Richards M. The continuing benefits of education: adult education and midlife cognitive ability in the British 1946 birth cohort. *Journal of Gerontology Series B* 2007;62:S404-S414.

Richards M, Sacker A. Lifetime antecedents of cognitive reserve. *Journal of Clinical and Experimental Neuropsychology*, 2003, 25, 614-24.