Cognitive impairment in ELSA

Summary

We measure cognitive function using English Longitudinal Study of Ageing (ELSA) data by combining scores from numerical-based tests and recall tasks and utilising a proxy measure completed by an informant. Of the overall sample, 16% were classified as cognitively impaired at our baseline, wave 7. Individuals with cognitive impairment were older, more likely to live alone and demonstrated poorer health than those without cognitive impairment. The data also showed that the majority of people with cognitive impairment already had home adaptations installed at baseline, which could suggest that adaptations may be more advantageous to individuals towards the start of their cognitive change.

Measuring cognitive impairment

Cognitive impairment was determined using a combination of the **modified Telephone Interview for Cognitive Status** (TICS27) and the **Informant Questionnaire on Cognitive Decline in the Elderly** (IQCODE).

TICS27 consists of two recall tasks and two number-based tasks: respondents complete an immediate and delayed 10-word free recall, backwards counting from 20, and serial 7 subtraction from 100. Cognitive function was classified as 'probable dementia or cognitive impairment' (0-11 points) and 'no impairment' (12-26 points) (Williams et al., 2020). For some respondents unable to complete cognitive function tests, IQCODE scores were used to augment the sample.

The IQCODE involves a structured interview with an informant, often a spouse or relative (Ding et al., 2018), 16 questions are asked about how the individual's cognitive and functional performance has changed compared to 2 years ago. Examples include asking about the individual's ability to remember things about family and friends, recent events, their address and phone number, and their ability to learn new things, make decisions, reason, and handle finances. Cut-off scores used to indicate cognitive impairment can range from 3.3-3.6 points (Quinn et al., 2014). In this analysis, individuals with an IQCODE score ≥3.38 were included in the cognitive impairment group, as evidence suggests this is achieves a balance of sensitivity and specificity (ability to correctly identify people with and without cognitive impairment) (Jorm, 1994).

Who has cognitive impairment?

In ELSA a higher prevalence of cognitive impairment is seen among older respondents, 31% of people with cognitive impairment were aged 80 years or over compared to only 8% of people without cognitive impairment (Figure 1).

People with cognitive impairment were more socioeconomically disadvantaged than those without cognitive impairment, with higher percentages in the lowest

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wealth and income quartiles. Respondents with cognitive impairment were more likely to be separated or divorced and residing in single person households compared to those without cognitive impairment. Finally, individuals with cognitive impairment demonstrated poorer health, with higher percentages reporting poor/fair self-rated general health, increased presence of limiting long-term illnesses, and more activities of daily living (ADL) difficulties than those without cognitive impairment.

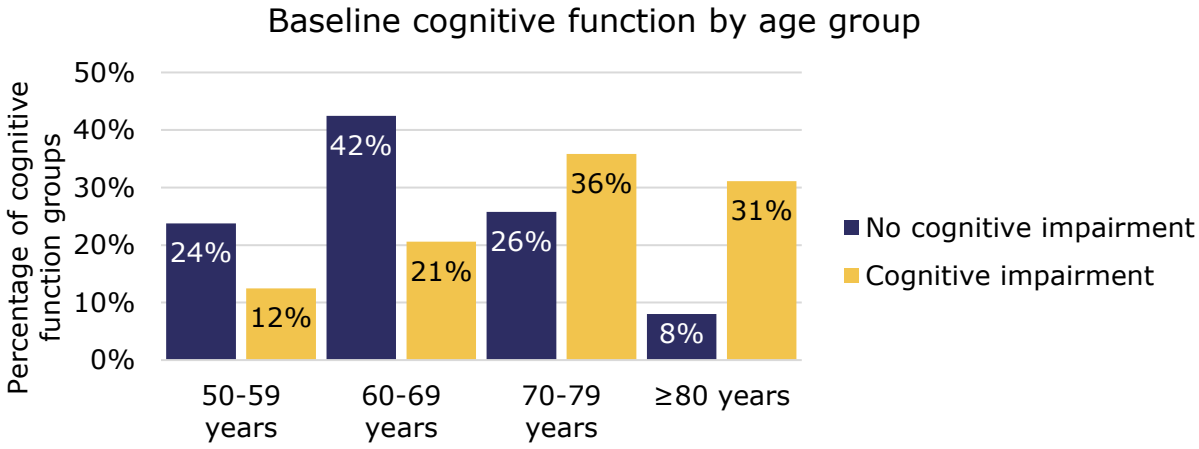

Figure 1: Bar chart showing age distribution at wave 7 by cognitive function

Cognitive impairment and home adaptations

Initially at baseline 16% (N=1,395) of all respondents (N=8,753) were classified as having cognitive impairment. Individuals with cognitive impairment were more likely to report having home adaptations in wave 7; 69% reported having adaptations installed compared to 63% without cognitive impairment (Figure 2). The higher ages of the cognitive impairment group may help to explain the higher proportion of adaptations; installation of adaptations may be more likely to occur at slightly younger ages, perhaps when the first signs of cognitive decline or ADL difficulties occur.

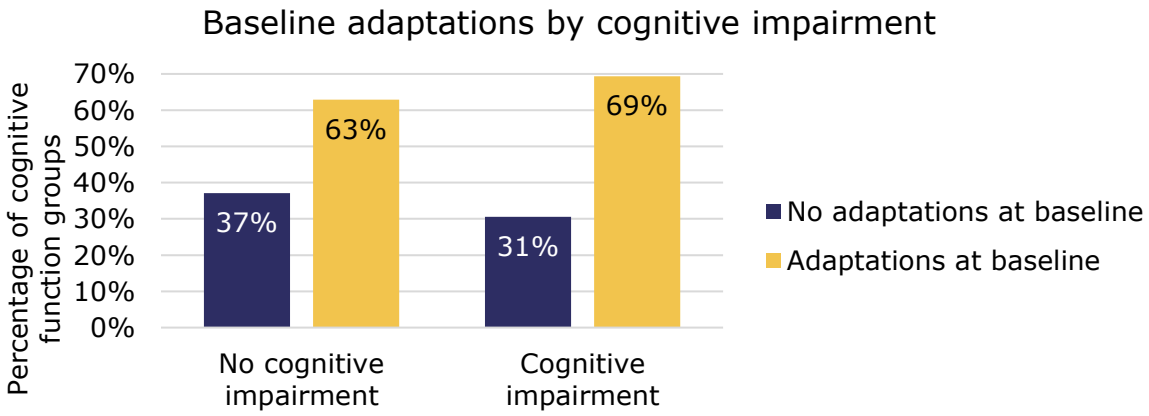

Figure 2: Bar chart showing adaptations reported at wave 7 by cognitive function

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