

Cognitive ability in coastal areas: a US-England comparison of pre-retirement populations

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Research Question

Are older working age adults living in coastal areas less independent and more cognitively impaired compared with those living inland?

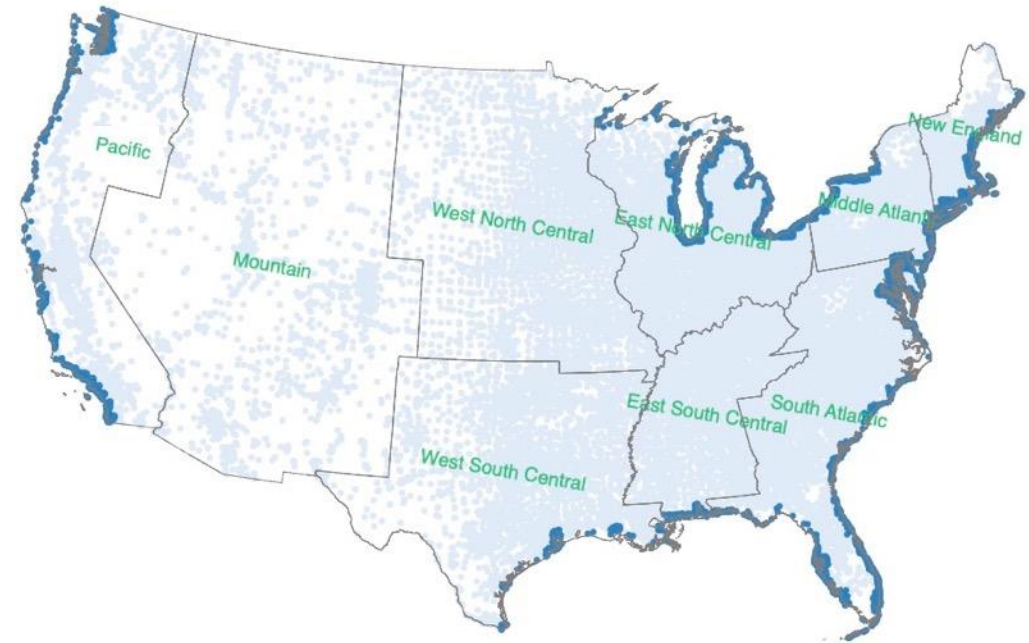
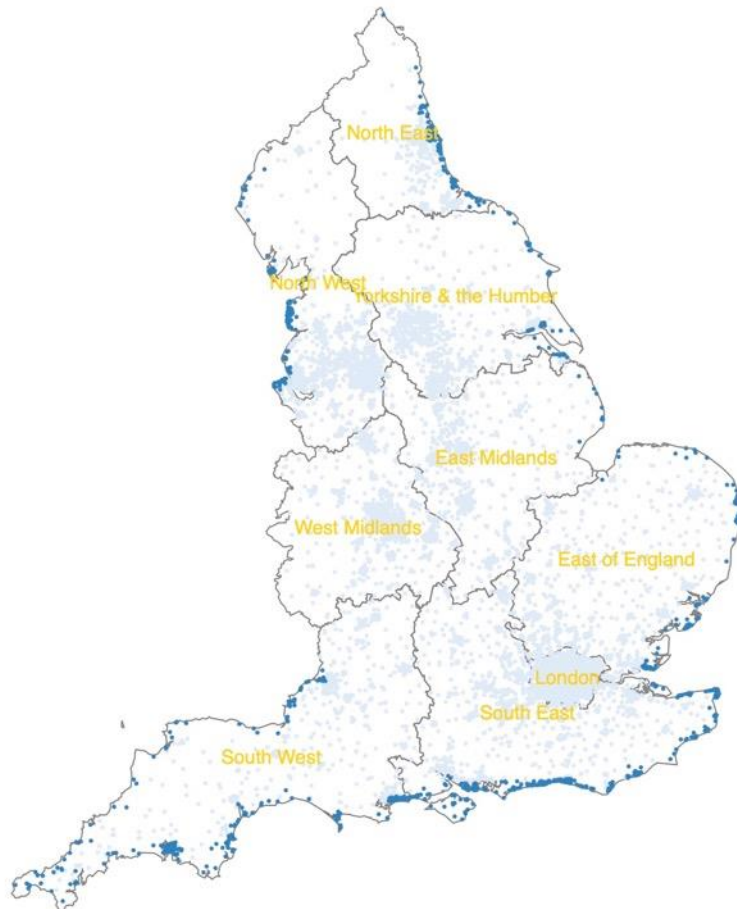


Data and Measures

- English Longitudinal Study of Ageing, waves 1-9
- Health and Retirement Study, waves 6-14
- Restricted to aged 50-64 at each wave
- Maximum of seven follow-ups between 2002-2018
- Harmonised outcome measures:
 - Cognitive function: word recall (immediate and delayed) score (0-20)
 - Presence of an Instrumental Activities of Daily Living (IADL) limitation



Identification of coastal areas in England & US

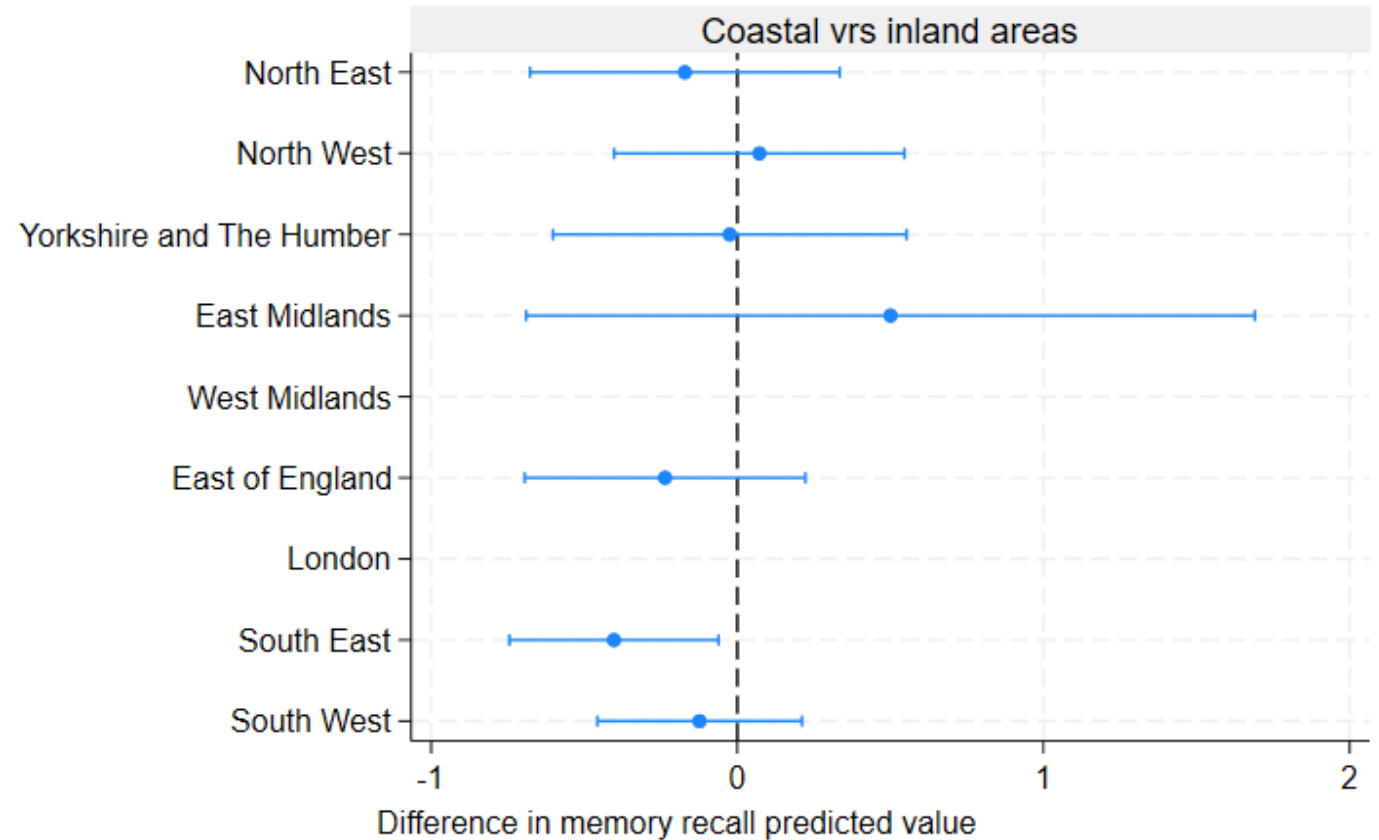


Methods

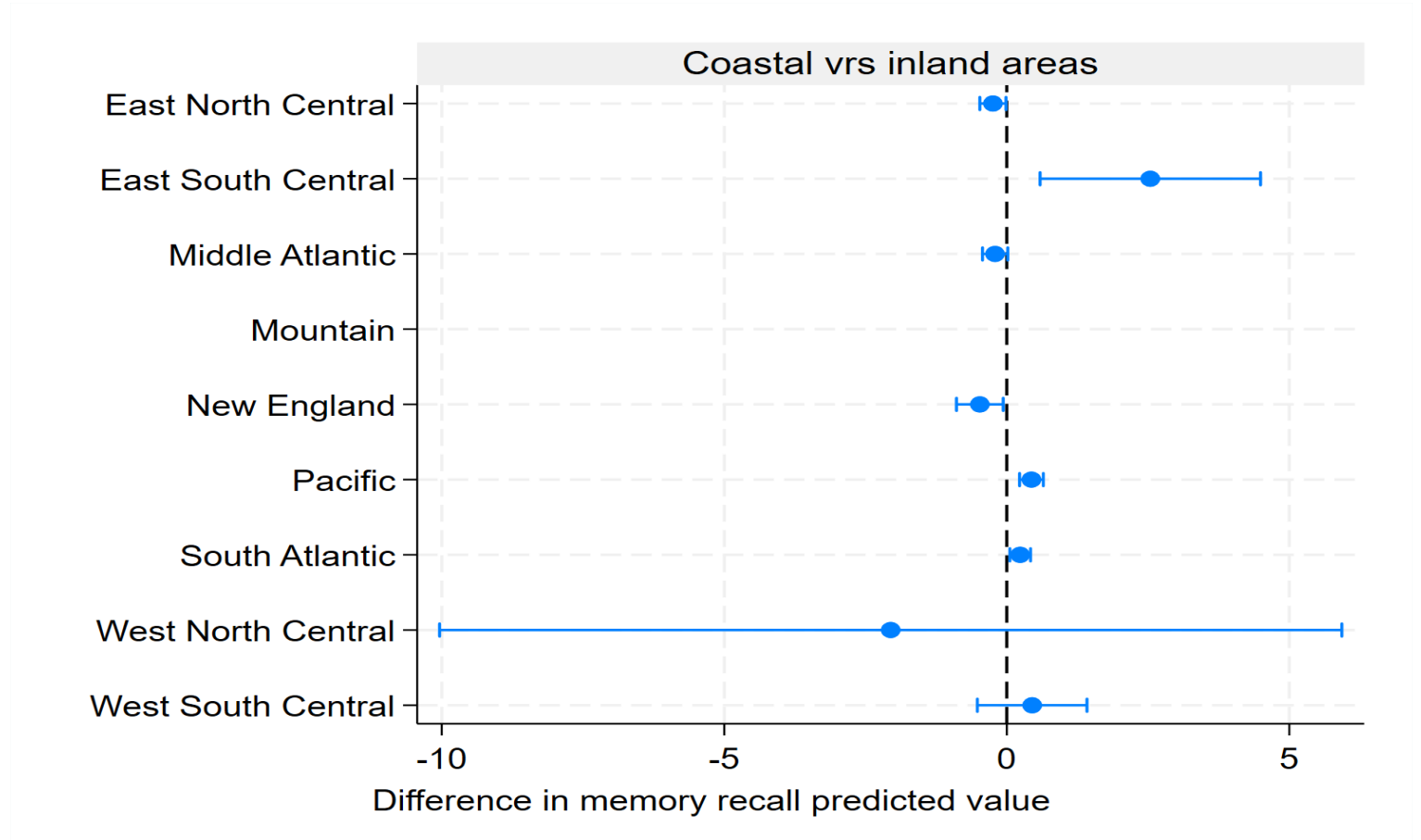
- Random effects models of linear cognition score and binary IDAL presence
- Main exposure: coastal MSOA/Census Tract
- Covariates: age, age², sex, race (HRS only), region, household income and area deprivation
- Interaction terms added between age and coastal area and region and coastal area
- ELSA: approximately 30k person waves across 10k respondents
- HRS: approximately 60k person waves across 20k respondents



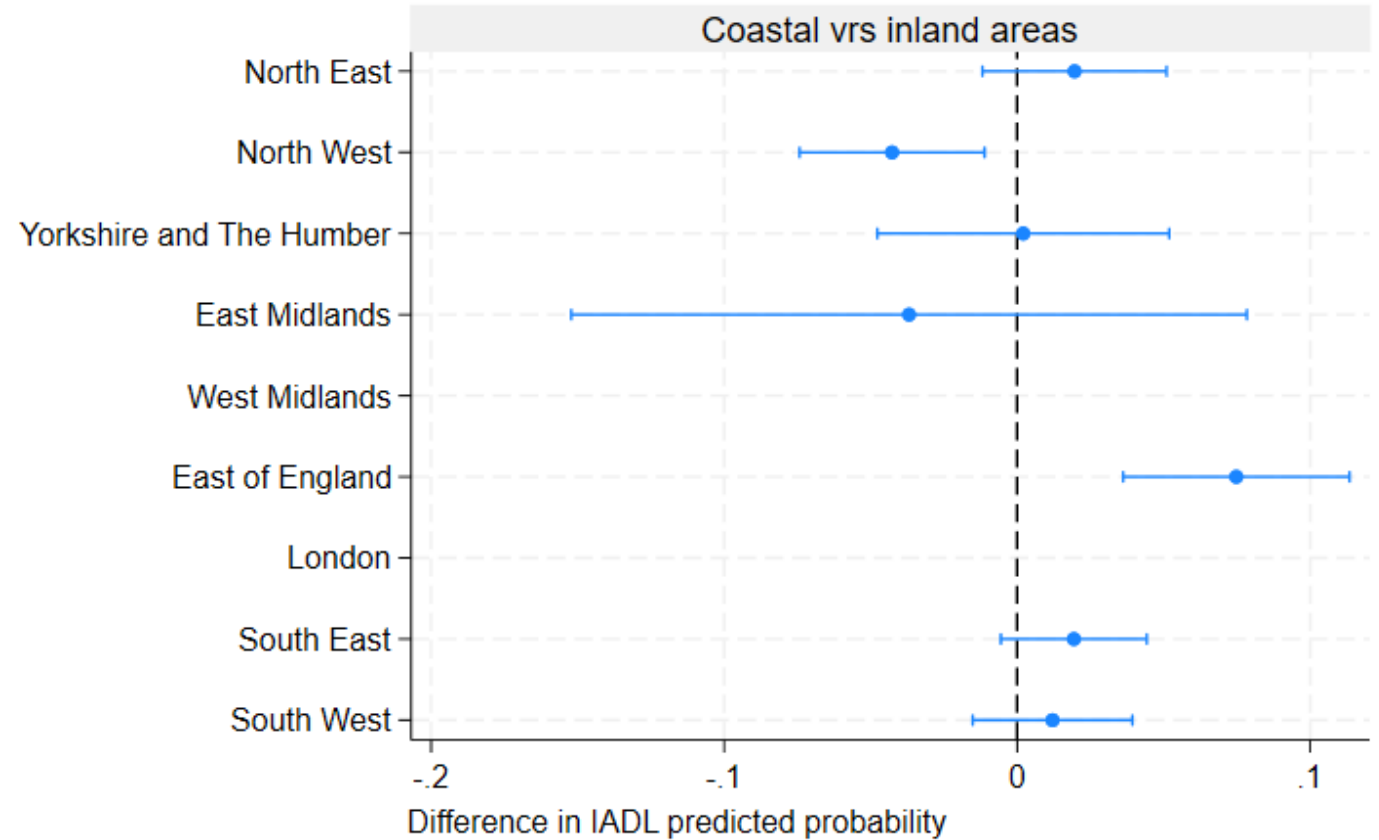
Cognition score in England



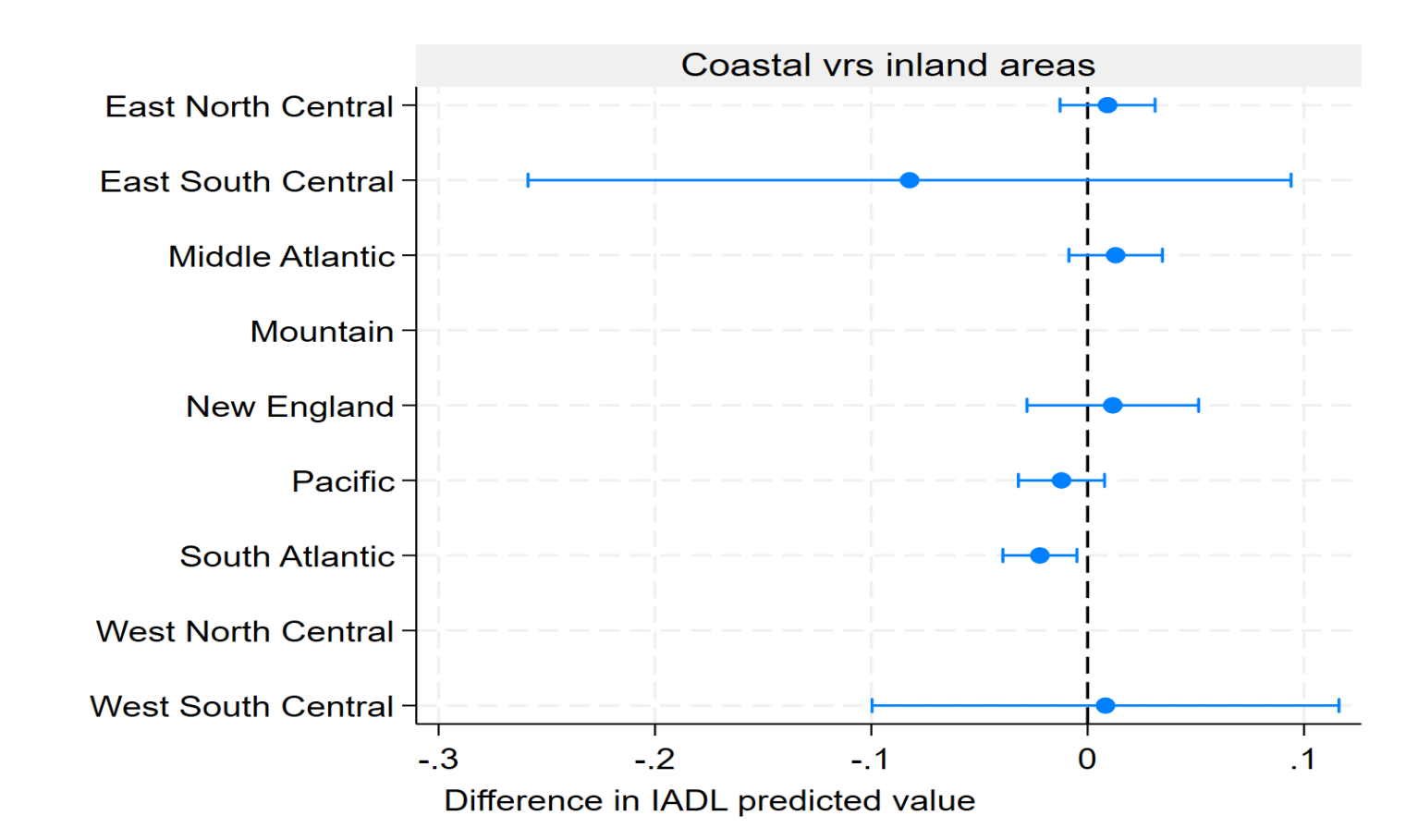
Cognition score in the US



IADL limitation in England



IADL limitation in the US



Discussion

- No universal association of living on coast between IADL or cognitive function in England
- Regional variation
- Explained by socioeconomic status
- Selective migration?
- Public health importance

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