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@TheIFS

# Cognitive decline and financial outcomes in retirement



Economic  
and Social  
Research Council

- As life expectancy gradually increases
  - Many more people living to much older ages
  - Risk of cognitive decline increases significantly
- Many people approaching retirement have defined contribution pension pots
- Navigating financial decision-making before and after retirement is increasingly complicated
- → Growing number of older people having to make active financial decisions into advanced ages where risk of cognitive decline is high

# Relevance today



- Exciting moment in UK pension policy
- Pensions Schemes Act
  - Guided retirement will mean big changes to how DC members transition into retirement
- New Pensions Commission considering the UK's pension system more widely
- IFS Pensions Review proposed set of policy recommendations last summer

# Roadmap for today



- Key issues around managing wealth through retirement
- Present recent IFS research focusing on cognitive decline and financial outcomes
  - What are the patterns of cognitive decline at older ages?
  - How is cognitive decline associated with changes in financial wealth later on?
- Consider implications for policy, industry, and individuals



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# Key issues around managing wealth through retirement

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*‘the nastiest, hardest problem in finance’*

*William Sharpe, Nobel Prize winning economist*

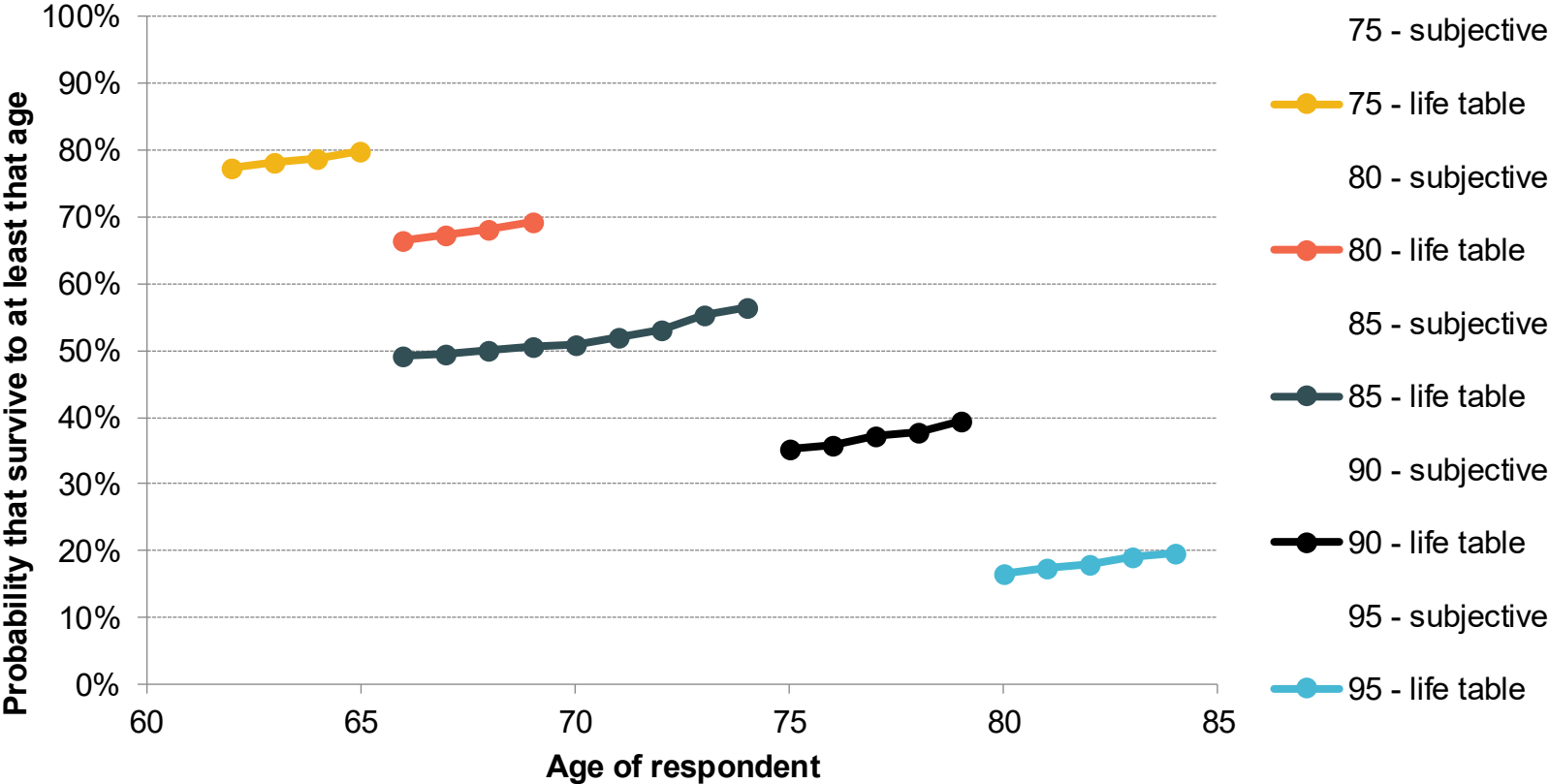
- Involves dealing with a huge amount of risk and uncertainty which most are not good at
- Decisions often only taken once and irreversible
  - Trade-off between flexibility and longevity insurance
  
- Today:
  - Behavioral biases and incomplete information
  - Use of advice and guidance rare
  - Levels of numeracy low and worsen with age

# Behavioral biases and incomplete information

- Behavioural biases and incomplete information can hinder effective decision-making around decumulation
  - People may misperceive or be unaware of key information needed for decumulation decisions
- One example: survival pessimism

# Survival pessimism – comparing subjective reports and life tables

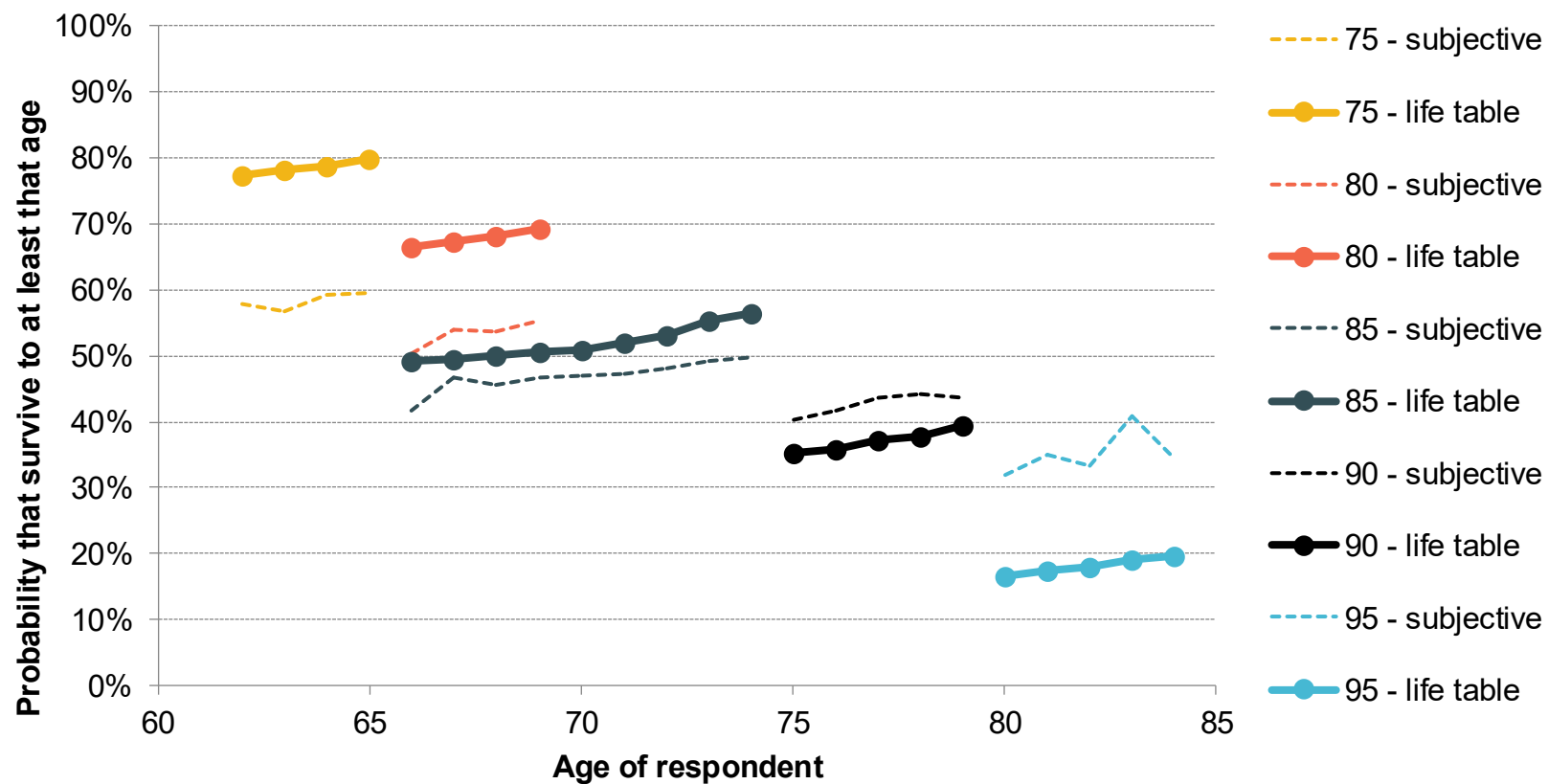
Average subjective survival rates compared to life table survival rates, for men born 1930-39



Source: Sturrock and O’Dea 2023.

# Survival pessimism – comparing subjective reports and life tables

Average subjective survival rates compared to life table survival rates, for men born 1930-39



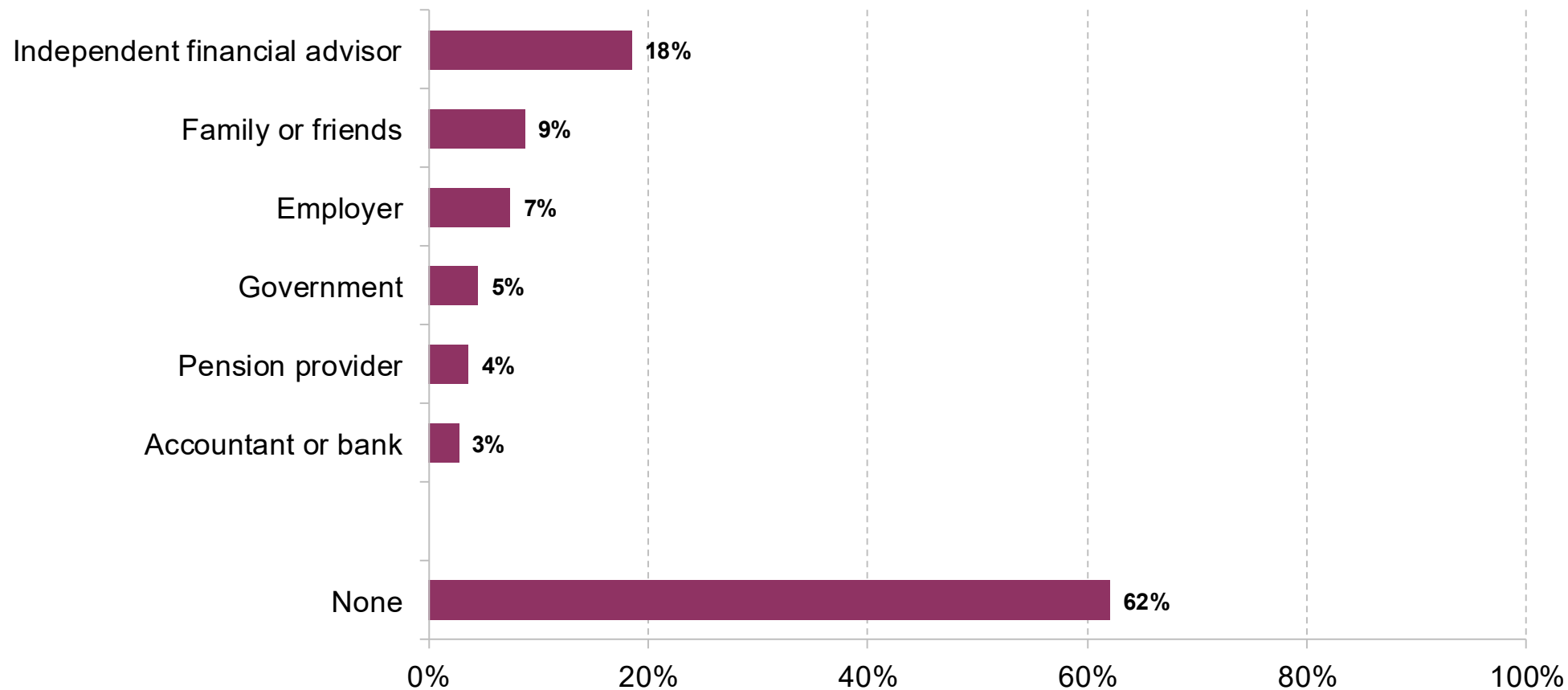
Source: Sturrock and O’Dea 2023.

# Advice and guidance

- Very few people seek financial advice or guidance
  - At any stage of retirement planning or retirement
- Despite low levels of numeracy and financial literacy
  - Low numeracy without advice may lead to sub-optimal outcomes

# Use of advice and guidance rare also in the lead up to retirement

Proportion of 55–60 year olds who had accessed information or advice about retirement or pension choices in the last three years from various sources



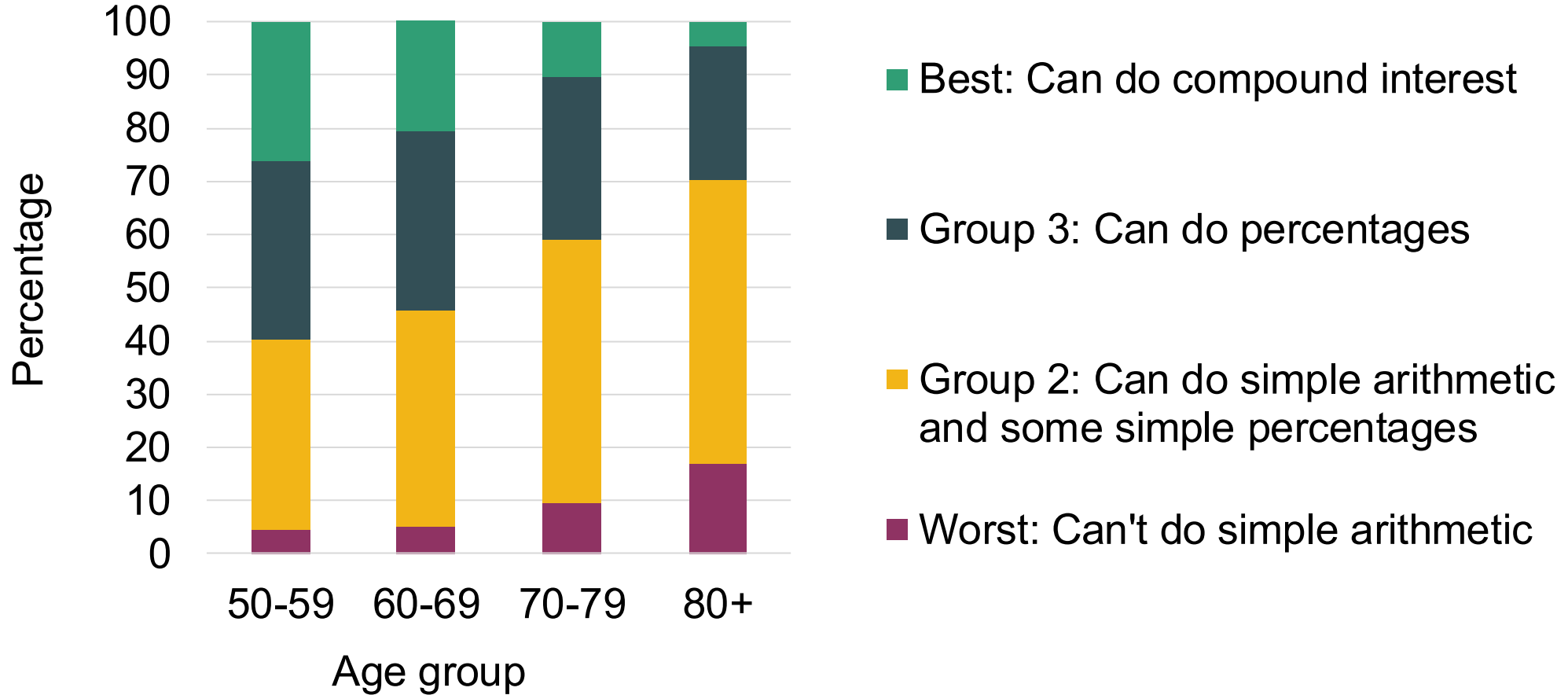
Source: English Longitudinal Study of Ageing, 2021–23

# Levels of numeracy low and worsen with age



- In order to make the right decisions around decumulation people would ideally need:
  - Understanding of financial concepts and financial markets
  - High enough level of numeracy to understand different products and strategies for decumulation

# Levels of numeracy low and worsen with age



Source: Banks and Crawford, 2023, using data from English Longitudinal Study of Ageing 2008–10 to 2018–19. Sample of people with DC wealth.



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## **Research findings: cognitive decline and financial outcomes in retirement**

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# Data and sample

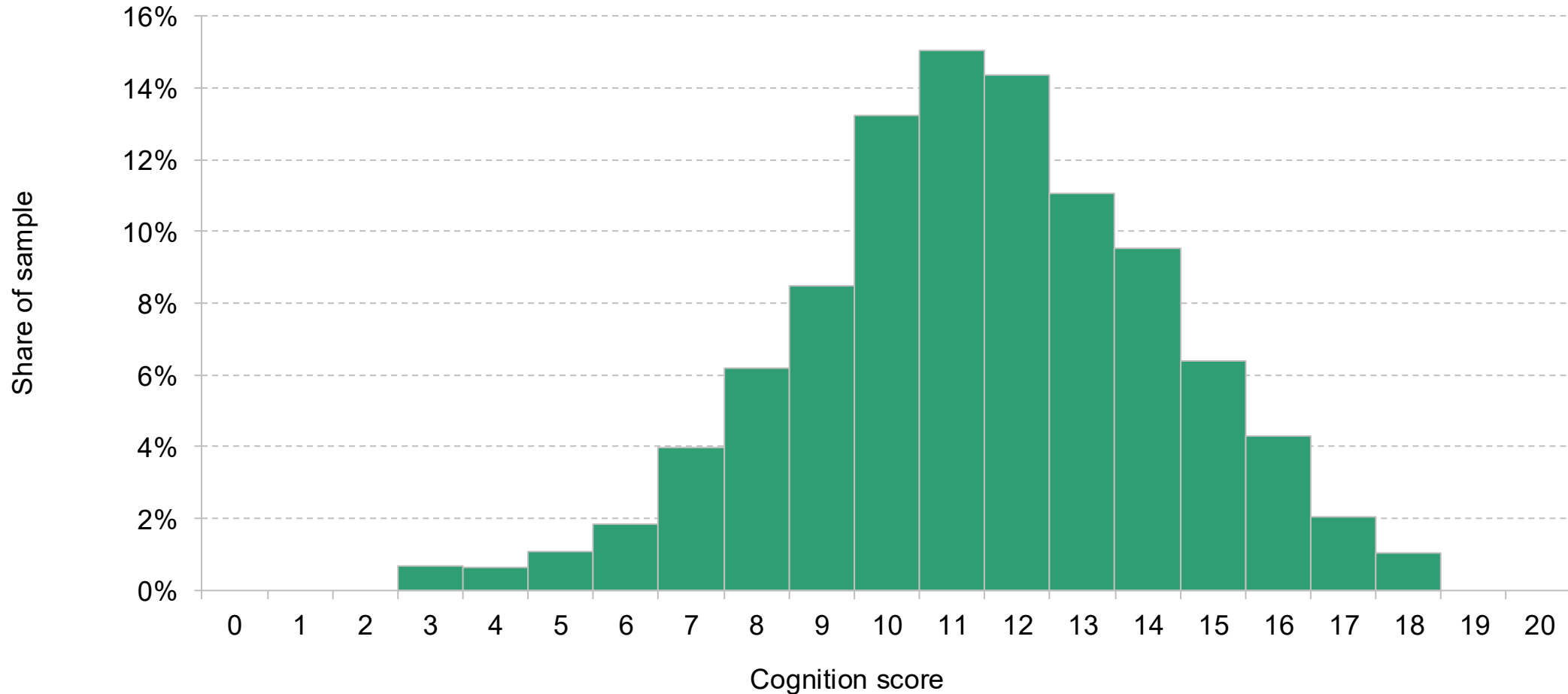
- Data: Household survey called **ELSA** (English Longitudinal Study of Ageing)
  - Nationally representative sample of the 50+ population of England
- We follow the same people over 20 years from 2002-03 to 2021-23
  - Focus on those aged 50-69 in 2002 (born 1932 to 1952)
- We define wealth as 'net financial wealth', which covers all savings less financial debt (excluding housing or pensions)
- Our main cognition score is defined based on a memory test
  - People are read a list of 10 words, and asked to repeat as many as they can immediately and later in the survey
  - We add the scores from these two tests together

# Word list example

“Now please tell me the words you can recall”

# Distribution of memory scores

Individuals aged 50–69 in 2002–03

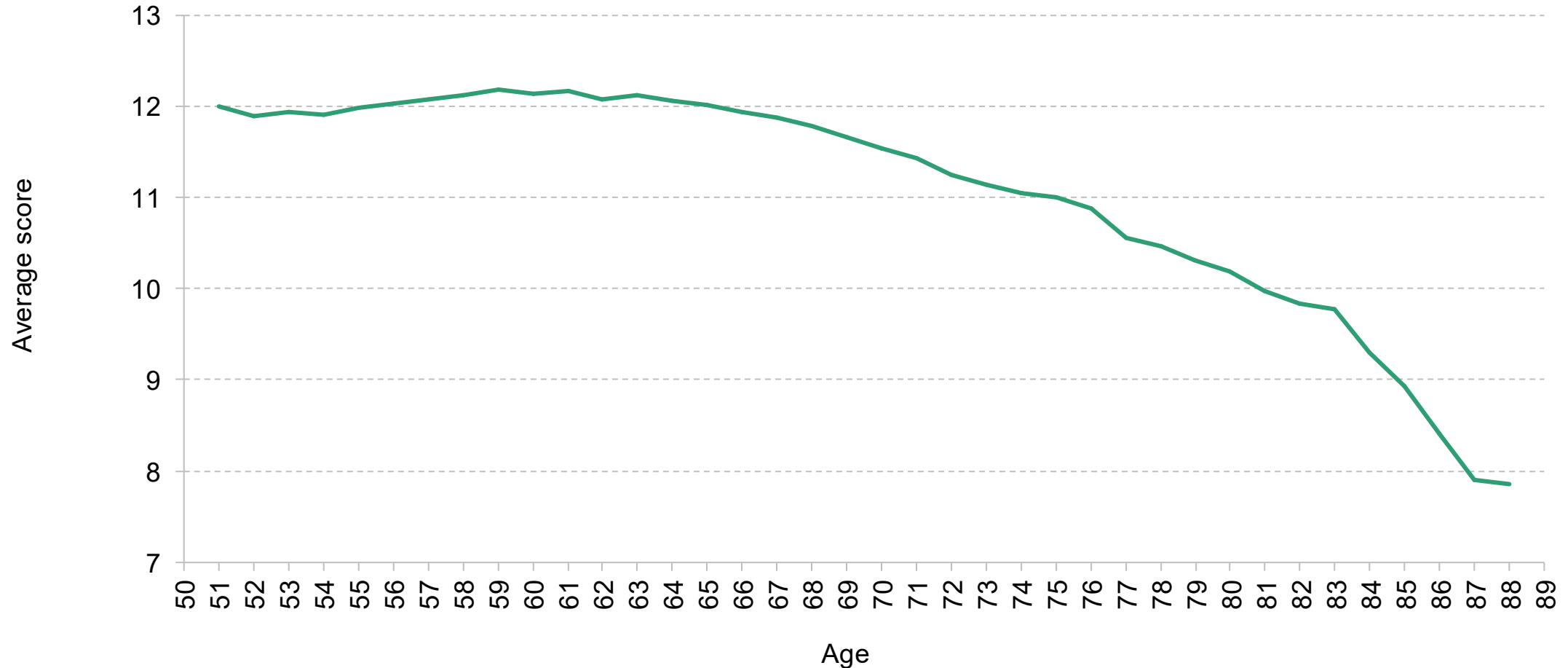


Note: Cognition score defined as the sum of immediate and delayed word recall tests. Sample of those observed in every wave, 1 to 10.

Source: Figure 1 of Karjalainen, 2025.

# Average cognition score by age

Mean cognition (word recall) score out of 20, by age

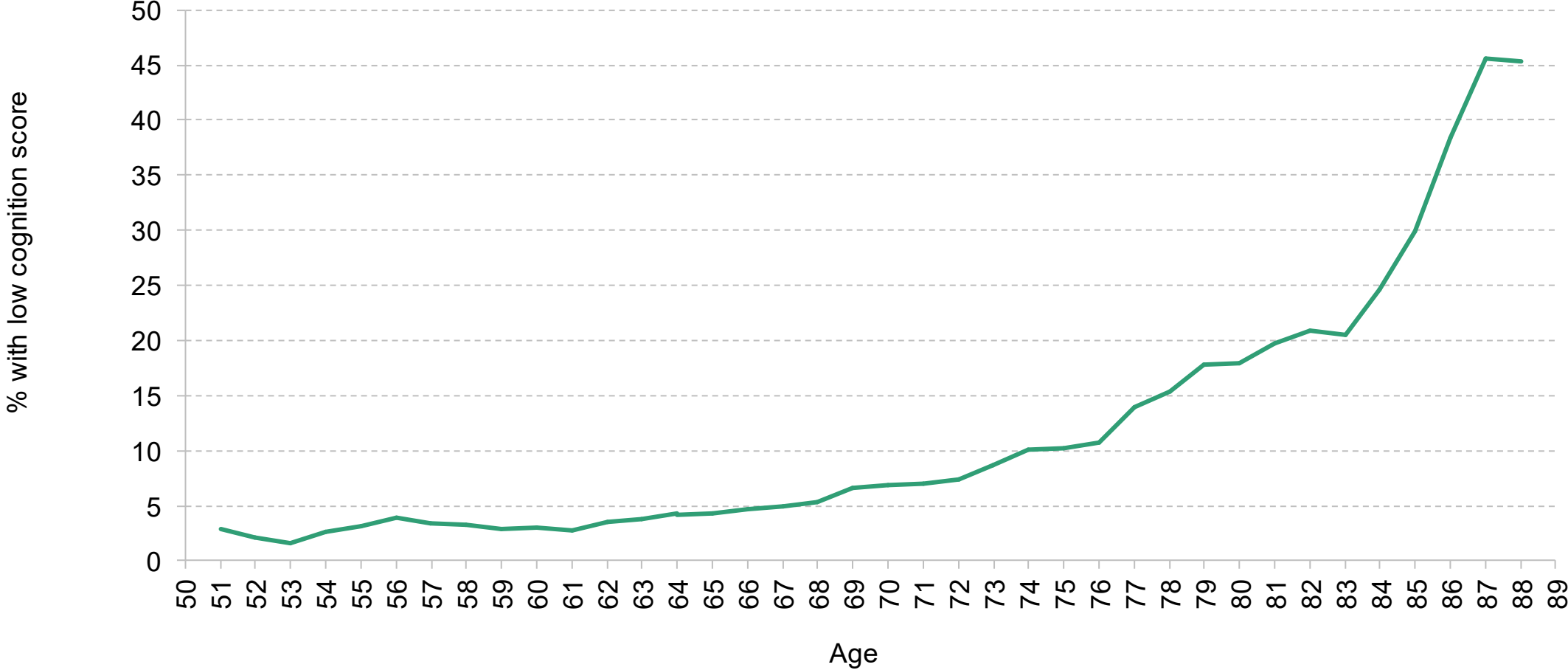


Source: Figure 2 of Karjalainen 2025.

# Low cognition measure

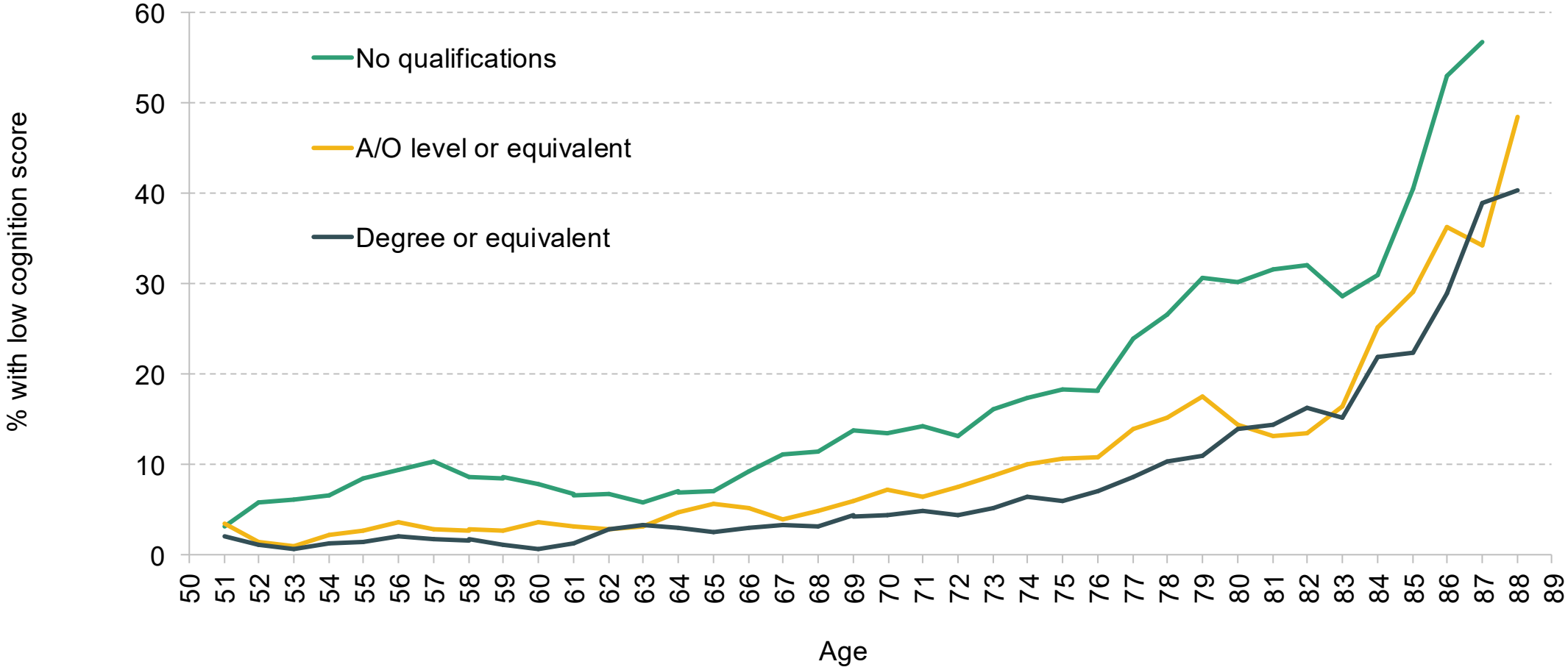
- What is likely to matter most for financial decision-making is reaching a level of low cognition, rather than decline itself
- We define as 'low cognition' having a score of less than 7 in the memory test (out of maximum score of 20)
  - This means being in the bottom ~3% of those aged 50 to 59

# Prevalence of low memory score, by age



Source: Figure 3 of Karjalainen 2025.

# Differences by education



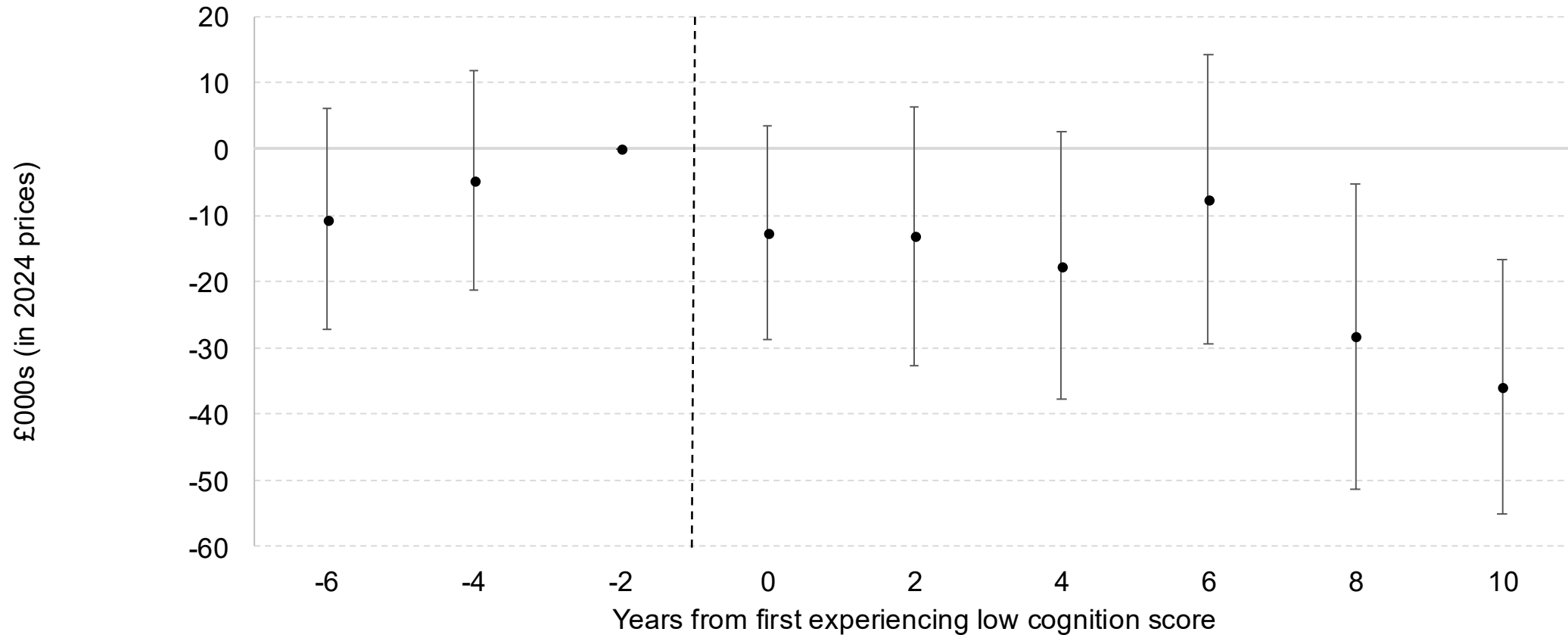
Source: Figure 4 of Karjalainen 2025.

# Cognition and financial outcomes

- Think about how financial wealth changes before and after the first point the respondent has low cognition
  - Compare those who did, and did not experience cognitive decline
- We control for **time** and:
  - **Demographic** characteristics (sex, age, education, partner status, kids, housing tenure, region, health: functional limitations, high depressive score)
  - **Baseline** characteristics observed age 50-69 (in paid work, cognition scores, who manages finances, wealth, any risky assets, DB/DC wealth, whether receiving care)
  - **Partner** characteristics (age, whether partner has low cognition)
- Results should be carefully interpreted – not necessarily all just due to the change in cognition

# Change in financial wealth

In £000s, by years since first low cognition score



Notes: Estimated coefficients from an event study. Outcome variable is net financial year. Estimation includes controls listed above. The bars indicate the 95% confidence intervals.

# Potential mechanisms?

- Those with higher levels of wealth experience larger falls (both in absolute and relative terms)
- These results are *not* driven by those receiving formal care (outside of a care home)
- Cannot be explained by changes to reported transfers (to family, friends, charity) – these also fall
- → The exact mechanisms behind the decline in net financial wealth are not yet clear
- The reductions could be a sensible response to worsening cognition where people decide to spend down their wealth more quickly
- On the other hand, related research from other countries finds that the likelihood of financial mistakes increases with age



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# Policy responses

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# What can policy do about risks around cognitive decline?

- These results suggest that there is potential for policy to **do more to protect financial security in later life**
- Fewer people now have a guaranteed income stream in retirement
- The Pension Schemes Act will require UK pension funds to provide a default retirement income product to their members
  - ‘Flex-then-fix’ type products could help make financial decisions in older age easier
- Other types of early planning could also help mitigate risks – role for individuals and families thinking ahead as well

# Additional recommendations for decumulation policy

- Some will need to **deviate from the path of least resistance**
  - Menu of options provided?
  - High-quality information to effectively communicate benefits and trade-offs
  
- People should “***have a pension and not just a savings pot***”:
  - Pots consolidated by retirement
  - Minimum access age to rise gradually to 60 by mid 2040s
  - Change framing of tax-free withdrawals away from “lump sum”



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# Summary

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# Summary – cognitive decline



- We find that risk of cognitive decline is high at advanced ages, and this is true across different groups
- Those experiencing low cognition have lower levels of wealth in later years – although this difference appears gradually
- Our findings suggest that higher level of wealth exposes people to larger declines in wealth

# Summary – decumulation

- Many people badly placed to manage decumulation risk
  - Incomplete information, behavioural biases, low levels of numeracy
  - Cognitive decline an additional risk that can also exacerbate the impact of others
- More advice / guidance and engagement can help – but will not be accessed by all at the right time
- Need for a planning and choice environment that is as robust as possible to financial decision-making errors
  - This is the direction of travel for policy based on new legislation
- Effects of cognitive decline emerge gradually rather than sharply → indicates there is a window for intervention to help prepare people

# Word list example



- Butter
- Arm
- Shore
- Letter
- Queen
- Cabin
- Grass
- Pole
- Ticket
- Engine

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