

Promoting the Collaboration of Age Research

English Longitudinal Study of Ageing (ELSA)

Andrew Steptoe

Department of Epidemiology and Public Health
University College London

ELSA: Primary objectives

To collect longitudinal data on health, disability, economic circumstances, social participation, and well-being, from a representative sample of the English population aged 50 and older

To explore the unfolding dynamic relationships between health and functioning, social participation, and economic position and well-being, as people plan for, move into and progress beyond retirement

1. Multidisciplinary collaboration

- Epidemiology, economics, psychology, sociology, clinical medicine

2. Representative sample

3. Longitudinal

4. Open access

Issues in ageing

- Income, wealth
- Pensions, benefits
- Physical and mental health
- Health care
- Disability
- Cognitive impairment
- Mobility, frailty
- Transport
- Social care
- Housing
- Social connectedness
- Loneliness
- Employment, caregiving
- Quality of life
- Health behaviours
- Empowerment and active engagement

Collaboration between:

- University College London
 - Professor Sir Michael Marmot, Professor Andrew Steptoe, Dr Mai Stafford
- Institute for Fiscal Studies
 - Professor Richard Blundell, Professor James Banks
- National Centre for Social Research

- University of Manchester (Professor James Nazroo)
- University of Cambridge (Professor Felicia Huppert)
- University of East Anglia (Dr Nicholas Steel)

- UK Data Archive

Funded by:

- National Institute on Aging (USA)
- UK government departments (coordinated by the Office for National Statistics)
 - Health
 - Work and Pensions
 - Transport
 - Environment, Food and Rural Affairs
 - Communities and Local Government
 - Her Majesty's Revenue and Customs

**Health Survey for England
1998-1999-2001**

**ELSA Wave One 2002
Interview (12100) aged 50 and over**

**Wave Two 2004
Interview (9432)**

**Wave Two 2004
Nurse (8688)**

**Wave Three 2006
Interview (9771 core +
refreshment group)**

**Life history
(7848)**

**Wave Four 2008/9
Interview (10,860 core
+ refreshment group)**

**Wave Four
2008/9
Nurse (8,466)**

Methods of data collection

Interviewer visit (every wave)

- CAPI (computer assisted interviews)
- Self-completion
- Measurements – timed walk, cognitive assessment

Nurse visit (wave 2, wave 4..)

- Measurements, e.g. anthropometry, blood pressure
- Measures of functioning, e.g. grip strength
- Blood samples

- Self-completion questionnaire posted back

Measures

- Demographic data and household composition
- Employment
- Income, wealth, pensions
- Physical health (symptoms, diagnosed disease)
- Mental health (depression, anxiety, diagnosed disease)
- Physical function (objective and self-report)
- Cognitive function (objective and self-report)
- Health behaviours (smoking, activity, alcohol, diet)
- Social engagement (organisations, volunteering, caring)
- Social support, social capital, loneliness
- Cultural engagement
- Expectations, perceptions of ageing
- Quality of life

Measures – nurse assessment

- Anthropometric measures
- Grip strength, balance, chair rise
- Lung function
- Blood pressure
- Blood measures
 - Lipids
 - Haemoglobin, ferritin
 - Blood sugar, glycated haemoglobin (HbA1c)
 - C-reactive protein, fibrinogen, IGF-1, DHEAS
- DNA data bank

Data repository and linkage

- HSE and waves 1 – 4 available from the UKDA

Planned or actual linkage to:

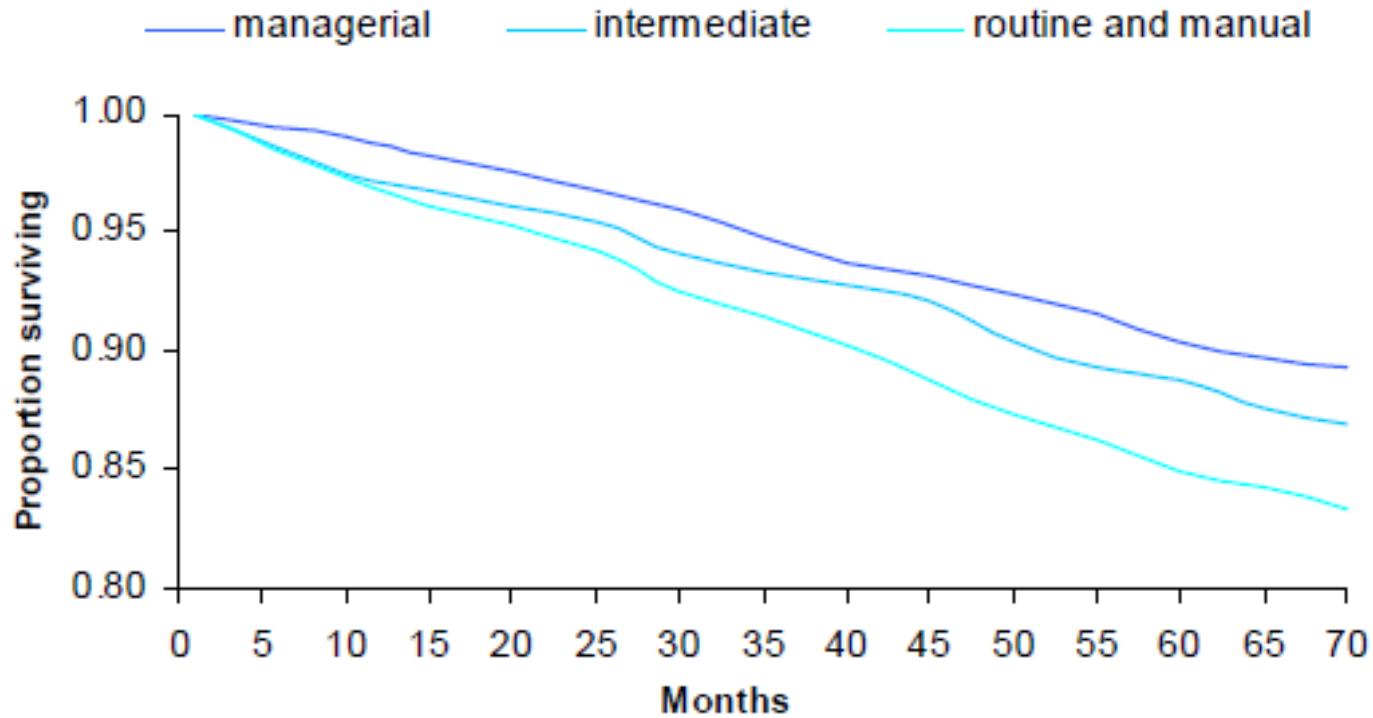
- NHS Central Register (mortality)
- Hospital Episode statistics
- National Insurance contributions
- Benefits incl. state pensions and tax credits
- Tax records, savings, private pensions

Findings from ELSA

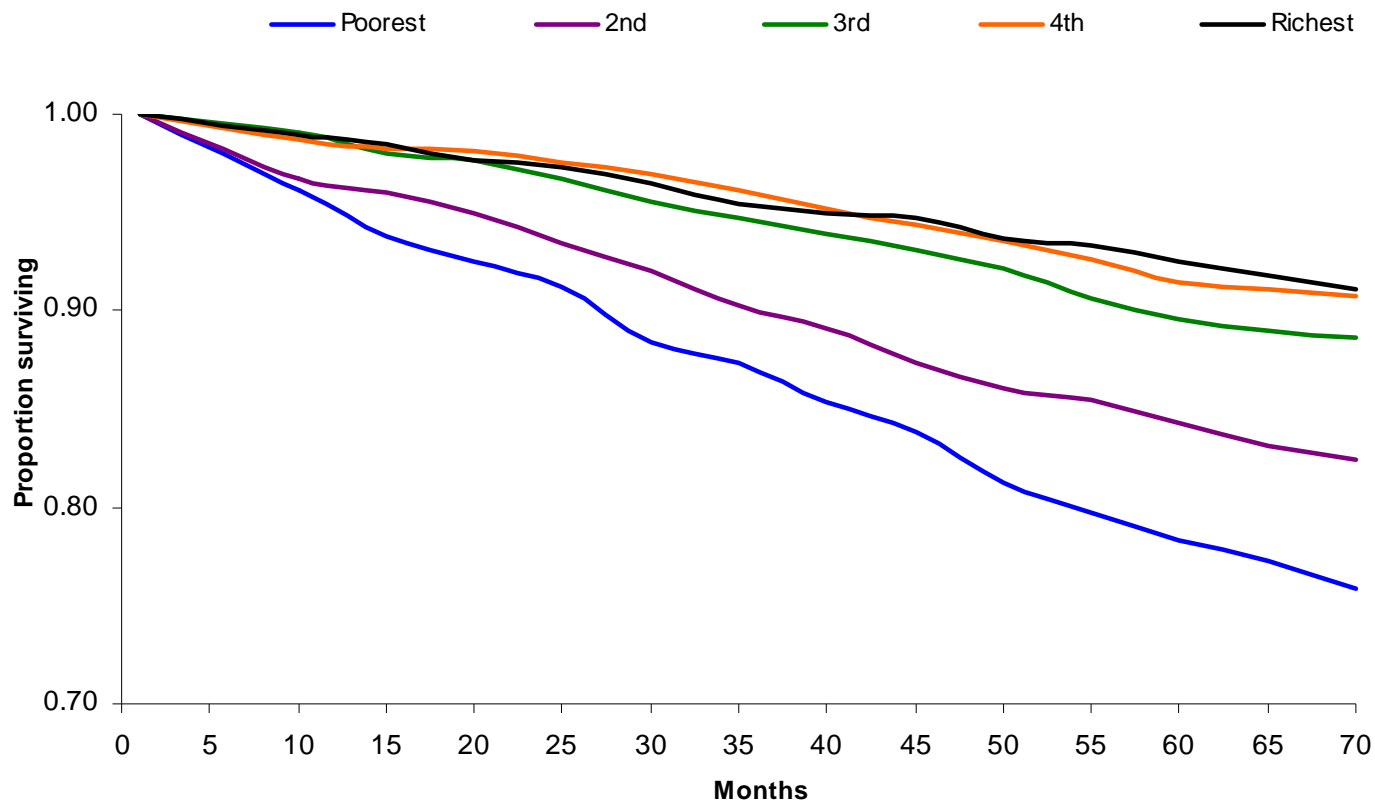
1. Critical role of socioeconomic circumstances
 - Education
 - Occupation
 - Income

 - Wealth

Occupational class and survival: Men



Wealth and survival: Men

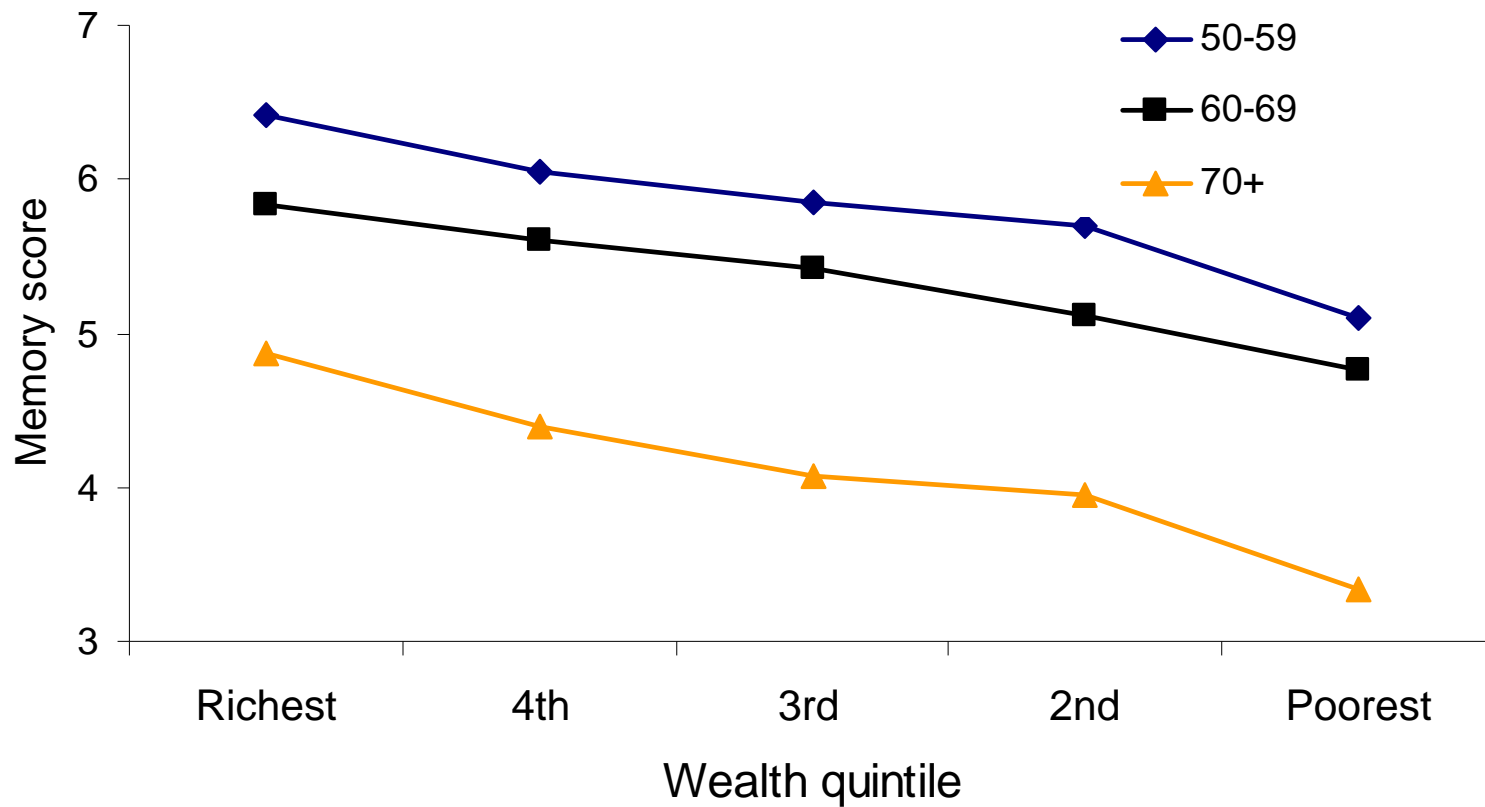


Wealth and impaired activities of daily living

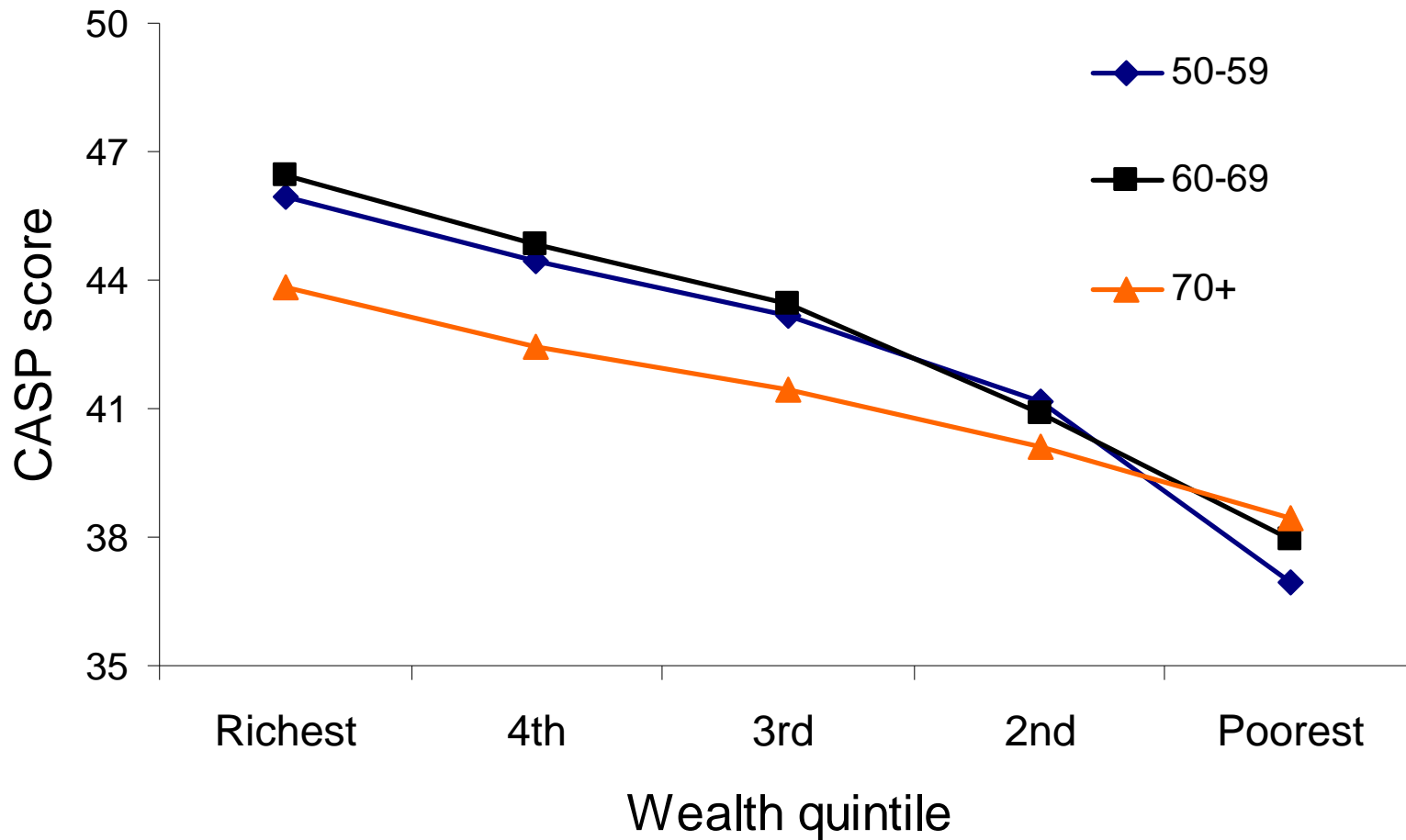


Age-adjusted

Wealth and prospective memory



Wealth and quality of life



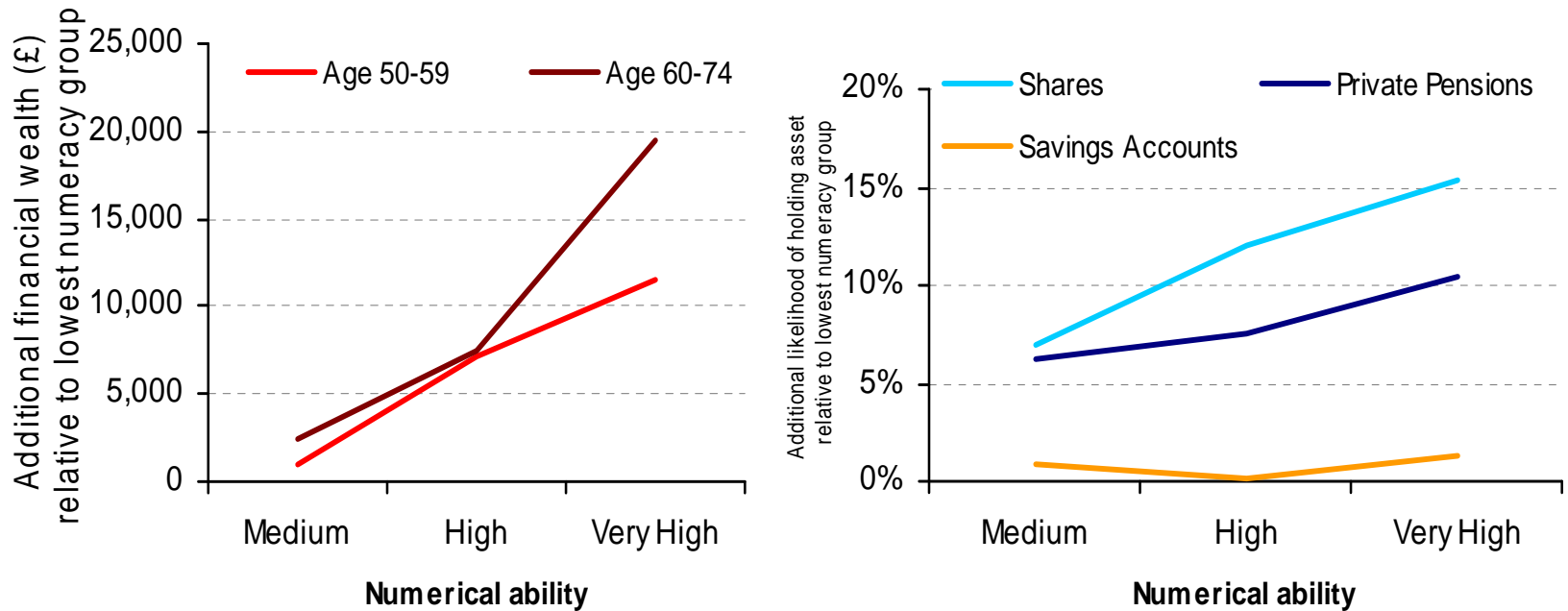
Findings from ELSA

1. Critical role of socioeconomic circumstances
2. Interrelationships between different domains

Planning for financial provision in later life

- Substantial proportions of the population have low levels of numeracy
- Numeracy levels worse at older ages
- After controlling for education & other aspects of cognition, numeracy level correlated with:
 - Saving for retirement and with investment portfolio
 - Knowledge & understanding of pension arrangements
 - Perceived financial security

Planning and numeracy



Analysis controls for differences in education, sex, marital status, and other dimensions of cognitive functioning and abilities.

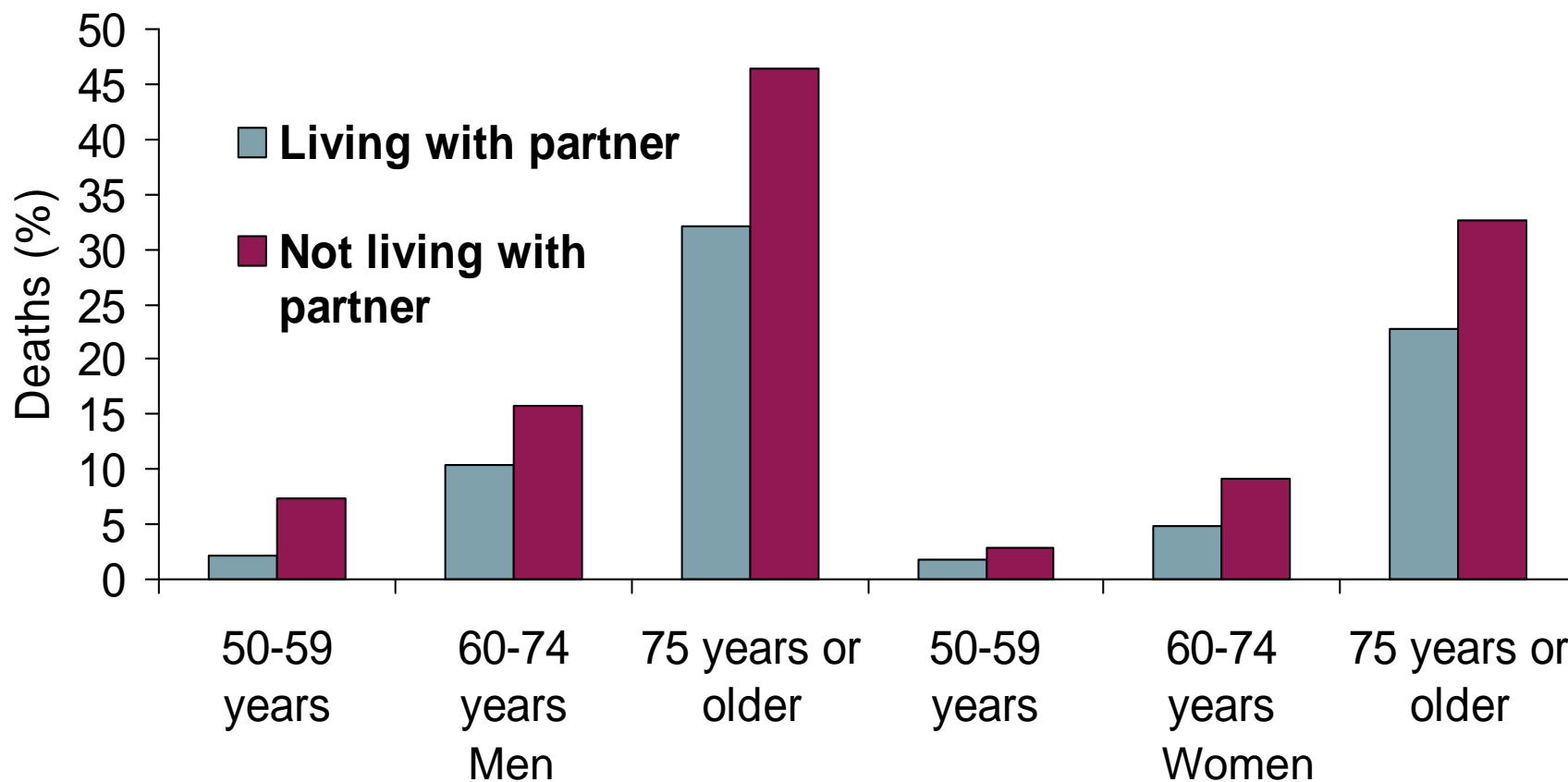
Left hand panel: median wealth differences across groups.

Right hand panel: percentage differences in asset ownership rates, controlling for financial wealth

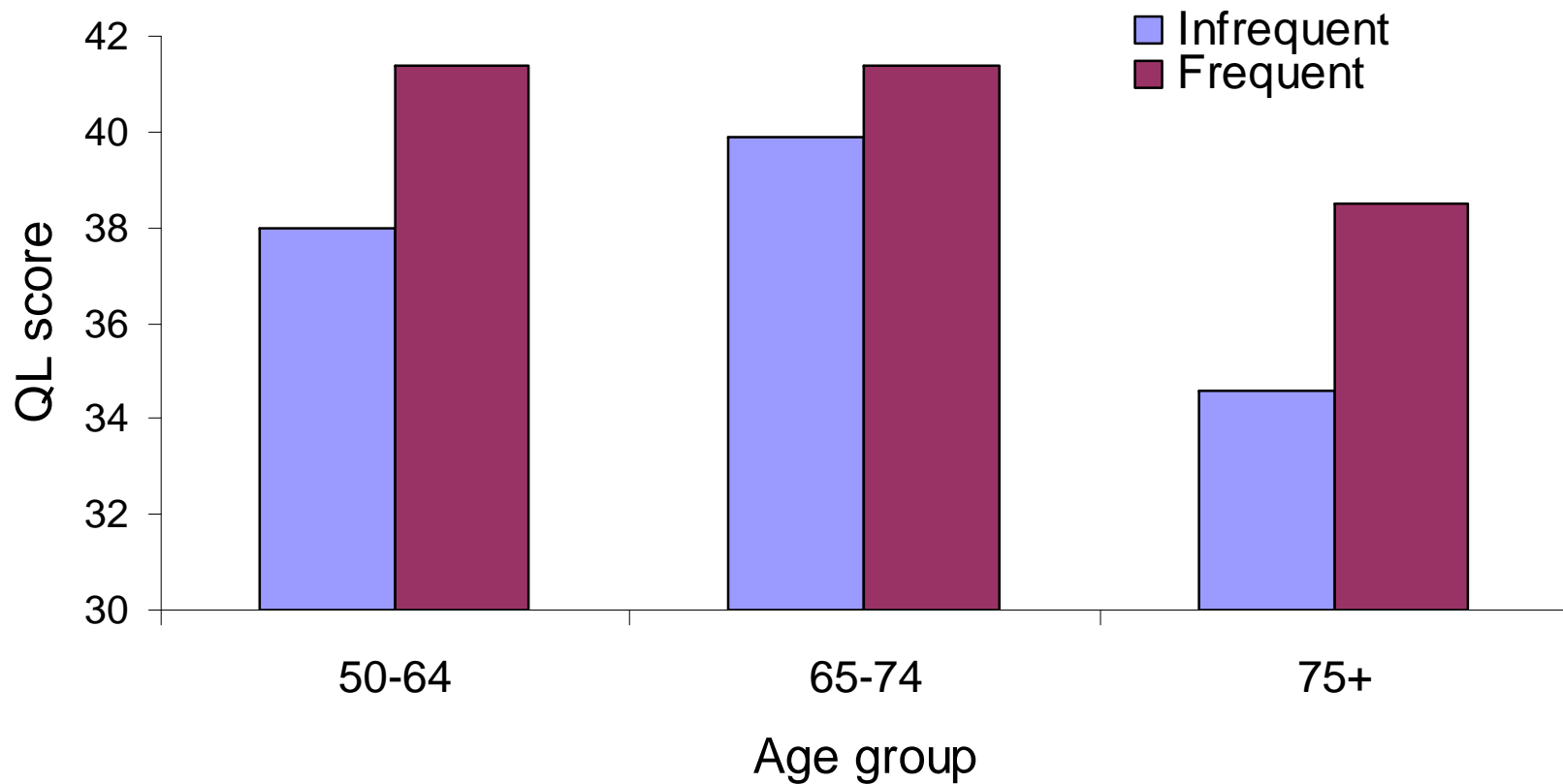
Findings from ELSA

1. Critical role of socioeconomic circumstances
2. Interrelationships between different domains
3. Central importance of social relationships

Mortality and partnership status



Quality of life and social contact



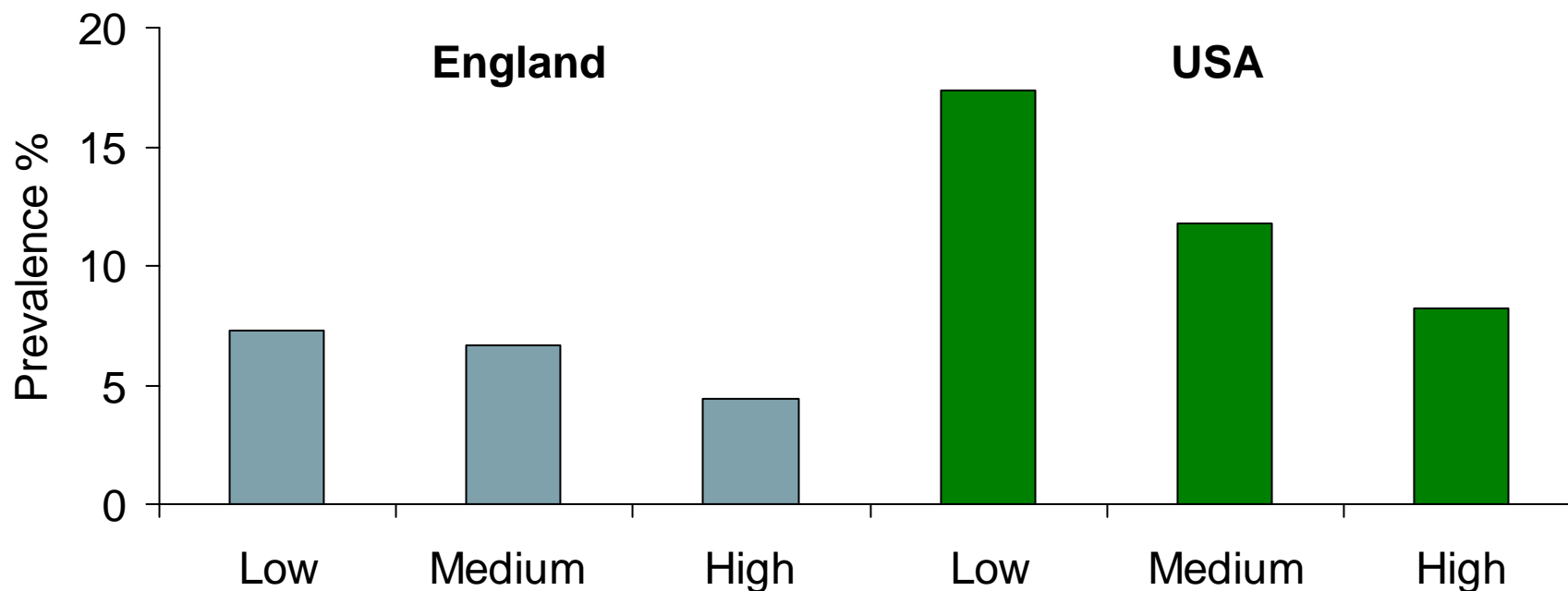
Findings from ELSA

1. Critical role of socioeconomic circumstances
2. Interrelationships between different domains
3. Central importance of social relationships
4. International perspectives

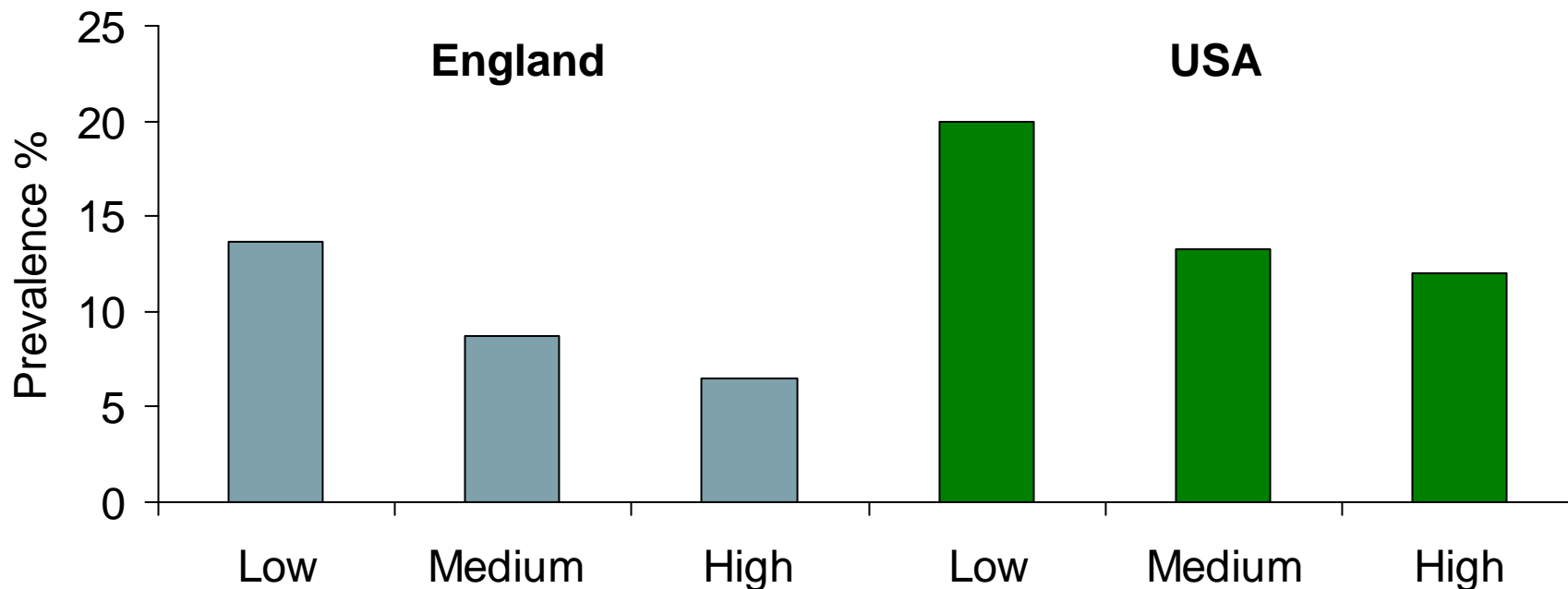
Longitudinal studies of ageing

- Health and Retirement Study (HRS)
- Study of Health, Ageing and Retirement in Europe (SHARE)
- TILDA – Ireland
- CHARLS – China
- LASI – India
- CLSA – Canada
- Brazilian study

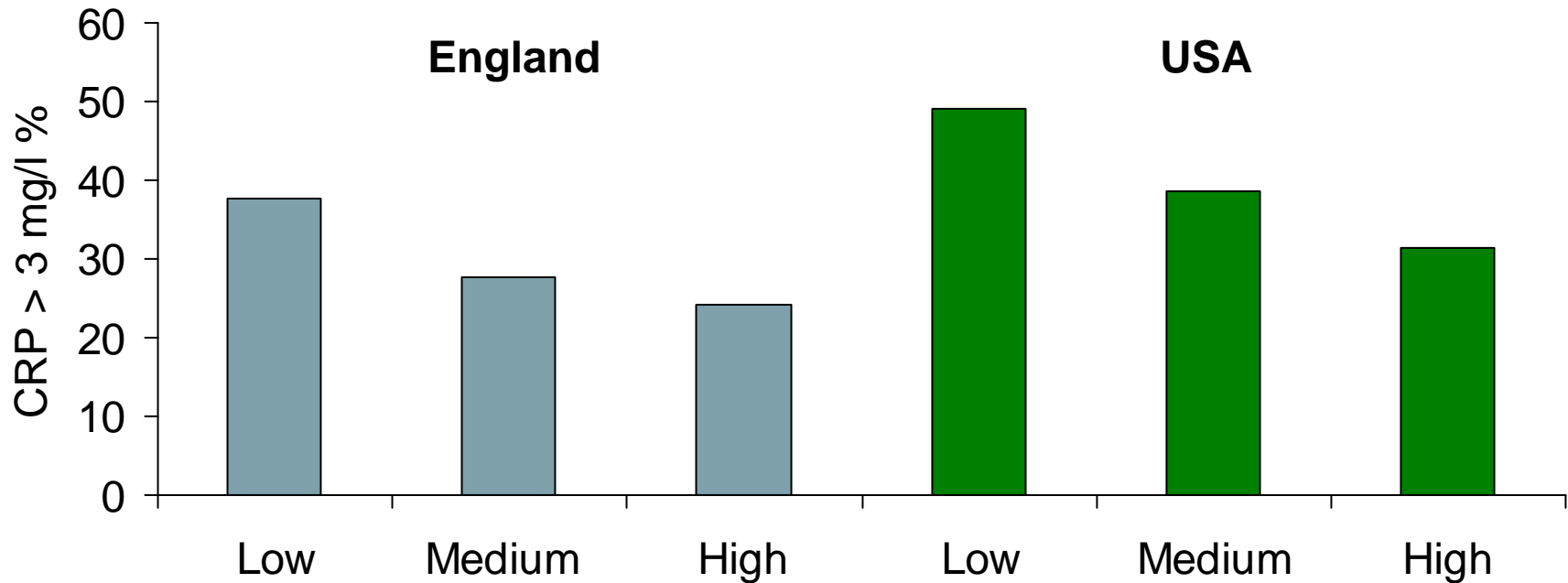
USA versus England, aged 55-64 years Prevalence of diabetes (by income)



USA versus England, aged 55-64 years Prevalence of heart disease (by income)

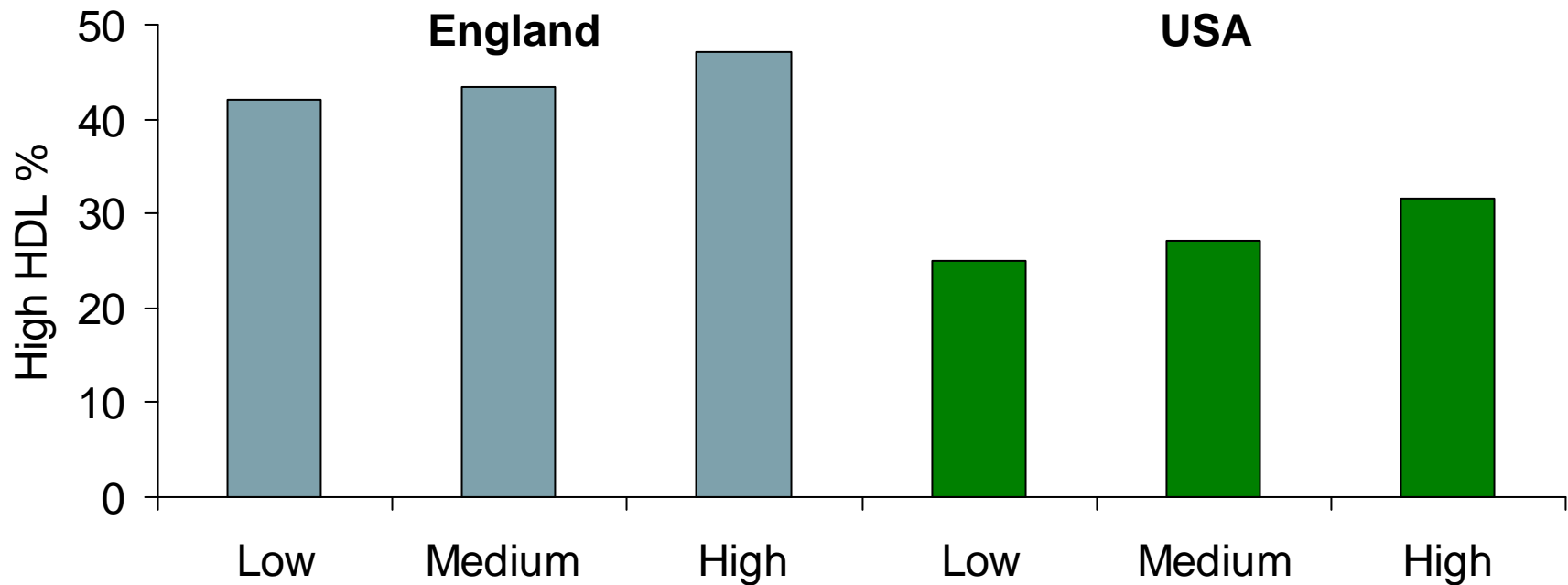


USA versus England, aged 40-70 years High C-reactive protein (by income)



USA versus England, aged 40-70 years

Prevalence of high HDL-cholesterol (by income)



Findings from ELSA

1. Critical role of socioeconomic circumstances
2. Interrelationships between different domains
3. Central importance of social relationships
4. International perspectives
5. Innovative measures for population studies

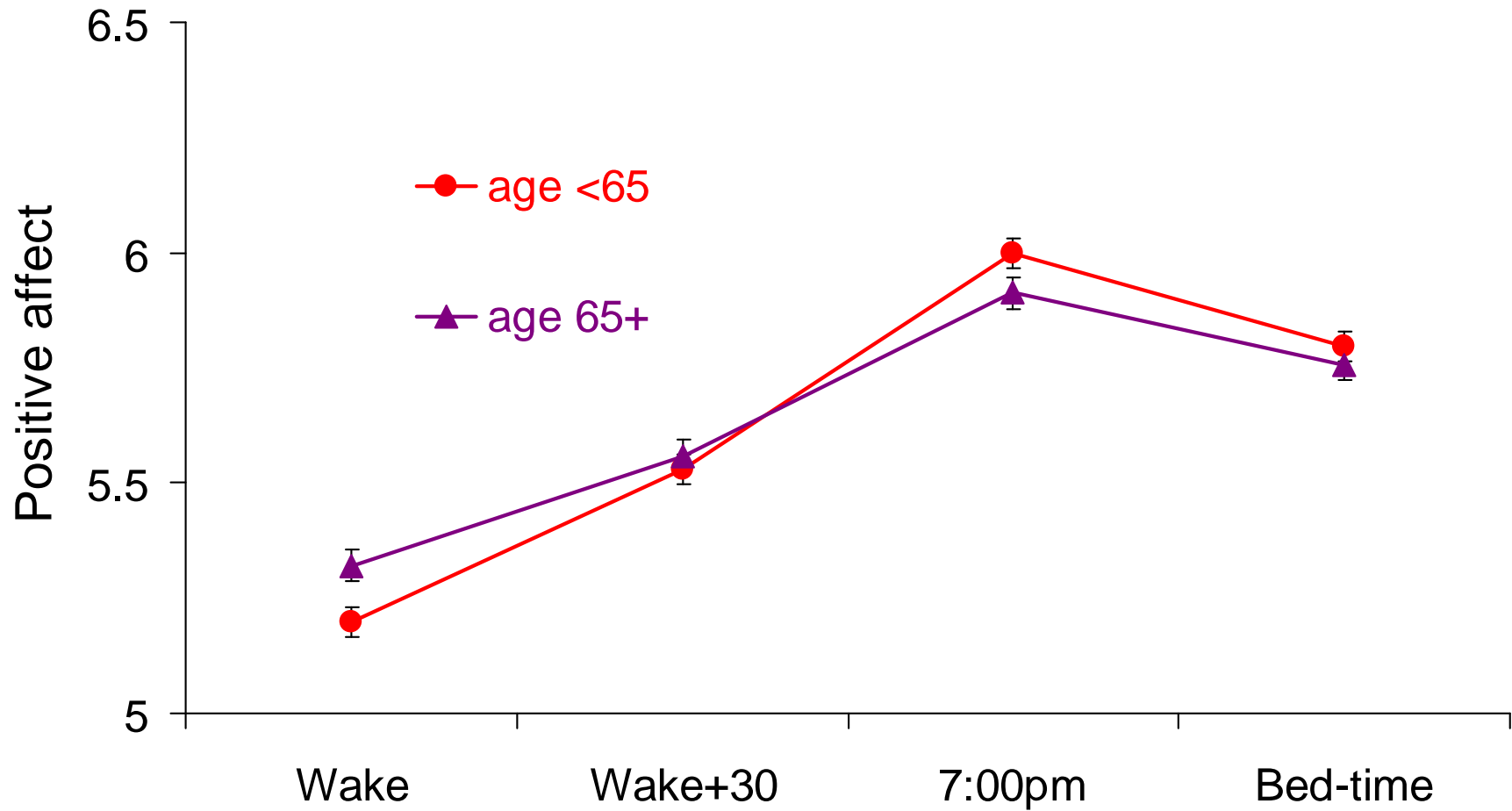
Measures of affect in population studies

- **Recollected affect**
 - CES-D depression scale
 - General Health Questionnaire
 - Geriatric depression scale
- **Problems of retrospective accounts**
 - Recall errors
 - Recall biases (salience memory heuristics, etc)
 - 'Memory – experience gap'
- **Ecological momentary assessment**

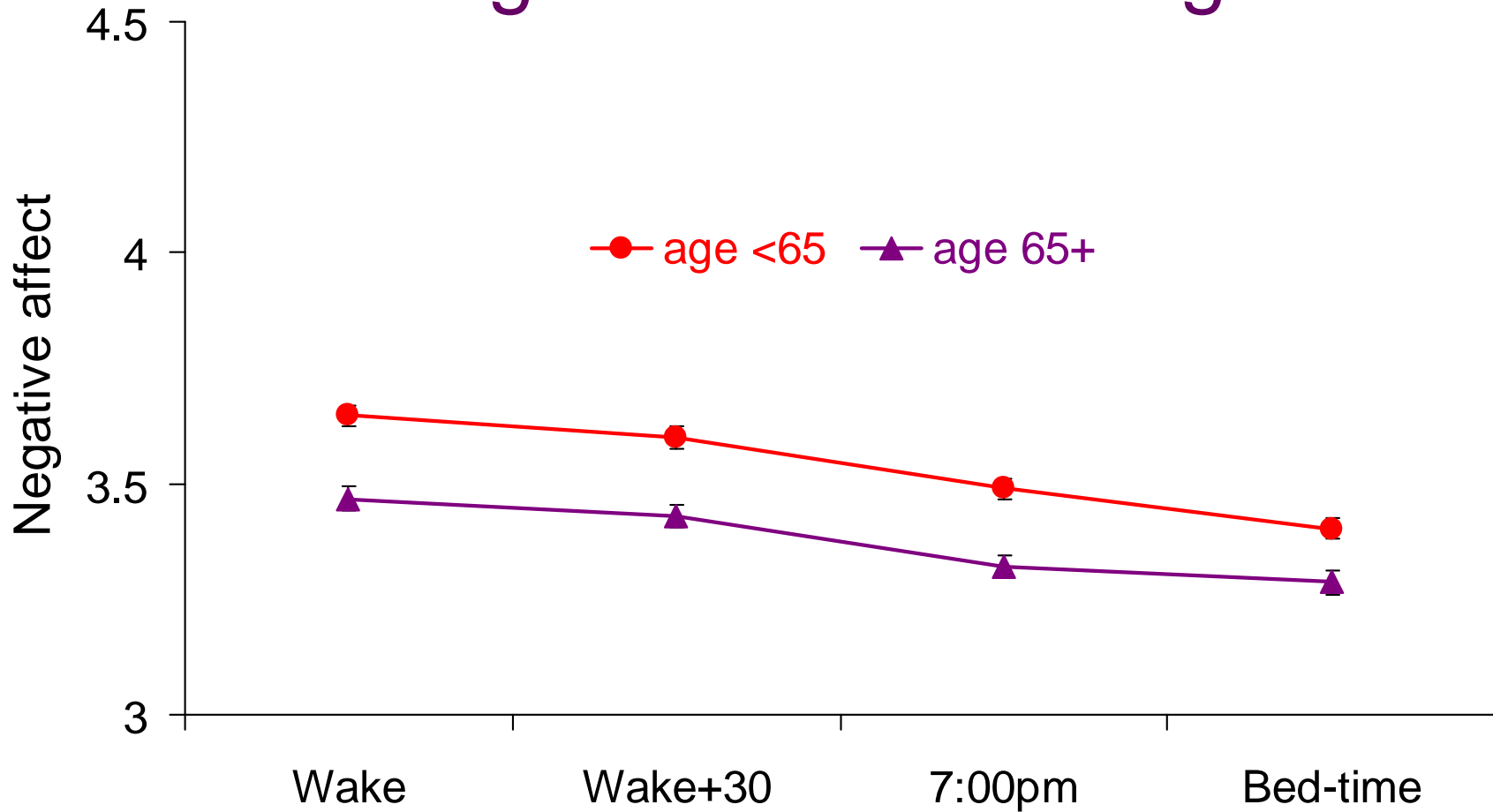
Ecological momentary assessment

- 4399 participants in wave 2
- Mean age 64.39, range 52 - 79
- Four assessments
 - Waking
 - 30 minutes after waking
 - 7:00 pm
 - Bedtime
- 4-point ratings (1 = not at all; 4 = extremely)
 - Positive affect (happy, excited, contented)
 - Negative affect (worried, anxious, fearful)

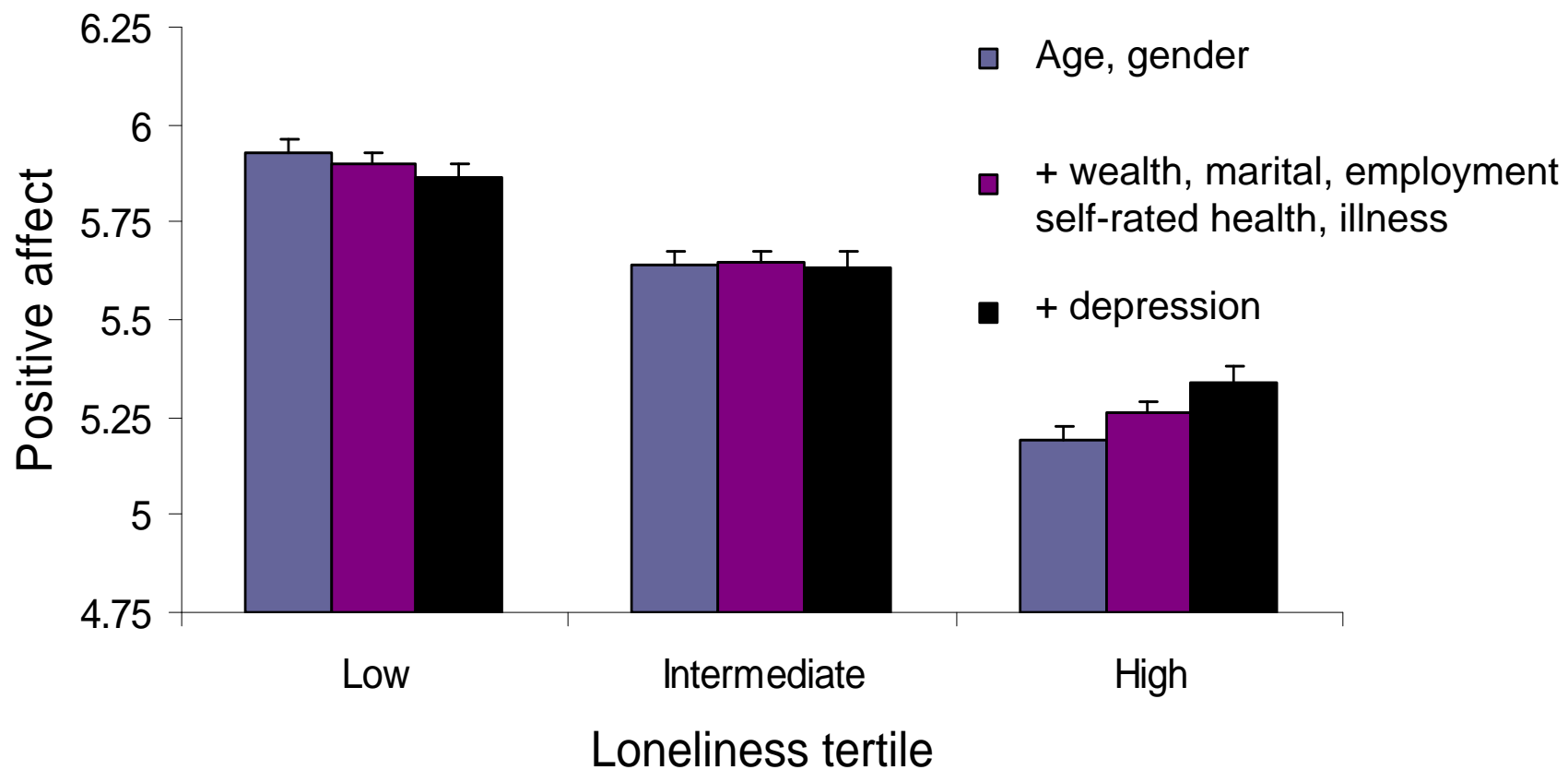
Positive affect and age



Negative affect and age



Positive affect and loneliness



The future

- Wave 5 (2010) in progress
 - Behavioural economic module
 - Additional items about religion, positive affect, cancer screening
- Wave 6 (2012) funded

What ELSA cannot do

- Replace studies of specific issues in ageing
- Establish causal effects

In the public domain

- Wave 1 2002-3; report Marmot et al 2003
- Wave 2 2004-5; report Banks et al 2006
- Wave 3 2006-7; report Banks et al 2008

- www.ifs.org.uk/elsa
- <http://www.esds.ac.uk/longitudinal/access/elsa/l5050.asp>

