Health and Wellbeing in ELSA

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Different types of wellbeing

- Economic or material wellbeing
- Social wellbeing
- Psychological or subjective wellbeing
- Physical wellbeing
Policy interest in wellbeing

- Commission on the Measurement of Economic Performance and Social Progress (Stiglitz commission)
- ONS Measuring National Wellbeing Programme
- OECD Compendium of Well-being indicators
- United Nations Happiness and Well-Being Initiative
- NIA: Subjective Well-Being and Public Policy
Health interest in wellbeing

- Poor health leads to impaired wellbeing
- Depression and anxiety raise the risk of serious physical illness, and increase morbidity in people with illness
- Positive wellbeing might have protective effects
Happiness and physical illness

N = 11,523
adjusted for age, gender and wealth

PLoS One, 2011
Psychological wellbeing

- **Hedonic / affective**
  - Happiness, joy

- **Evaluative**
  - Life satisfaction

- **Eudemonic**
  - Sense of purpose, autonomy, self-realization
Measures in wave 5 of ELSA

**Hedonic / affective**
- Happiness, joy

**Pleasure / enjoyment items from CASP19**
- I enjoy the things I do
- I enjoy being in the company of others

**Positive affect scale from HRS**
- 13 items on 4-point scales
- Eg happy, enthusiastic, interested

**CESD depression**
Psychological wellbeing

**Evaluative**
- Life satisfaction

**Diener SWLS**
- 5 item scale
- Eg I am satisfied with my life

Life satisfaction

Evaluative

Psychological wellbeing
Psychological wellbeing

Eudemonic
- Sense of purpose, autonomy, self-realization

CASP19 items
- I feel that my life has meaning
- I choose to do things that I have never done before
- I feel that what happens to me is out of my control (reversed)
Positive well-being and age

Stone et al
2010, PNAS
Psychological wellbeing and age

ELSA wave 5
Psychological wellbeing and income

Kahneman & Deaton 2010, PNAS
Psychological wellbeing and wealth

-0.5
-0.4
-0.3
-0.2
-0.1
0
0.1
0.2
0.3
0.4
0.5

Lowest 1 2 3 4 Highest

Z score

Life satisfaction
Eudemonic well-being
Positive affect

Wealth quintile

ELSA wave 5
Correlates of Psychological Wellbeing

Marital status: Highest wellbeing among married participants, lowest in widowed

Employment: Higher wellbeing in the employed, and among volunteers

Health and disability: Lower wellbeing in people with limiting long-standing illness, mobility impairment, cardiovascular illness

Physical activity: Greater wellbeing in physically active respondents across the age range
Psychological wellbeing

Physical illness
Psychological wellbeing and health outcomes

- Wellbeing and the prediction of the development of health problems and disability over 6 years
- Wave 2 (2004/5) assessments of wellbeing and baseline function
- Development of impaired activities of daily living, reduced walking speed, impaired cognitive function, poor self-rated health and coronary heart disease in wave 5 (2010/11)
- Adjustment for age, sex and wealth
Wellbeing and new ADL disability

**Affective wellbeing**

<table>
<thead>
<tr>
<th>Affective wellbeing</th>
<th>Two+ ADL %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>6</td>
</tr>
<tr>
<td>Medium</td>
<td>4</td>
</tr>
<tr>
<td>High</td>
<td>1</td>
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</tbody>
</table>

Adjusted OR
- Medium: 3.04 (1.58 – 5.84)
- Low: 4.10 (2.17 – 7.74)

**Life satisfaction**

<table>
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<tr>
<td>Low</td>
<td>6</td>
</tr>
<tr>
<td>Medium</td>
<td>4</td>
</tr>
<tr>
<td>High</td>
<td>2</td>
</tr>
</tbody>
</table>

Adjusted OR
- Medium: 0.92 (0.58 – 1.47)
- Low: 1.68 (1.05 – 2.69)
Wellbeing and incident CHD

**Affective wellbeing**

- Low
- Medium
- High

CHD %

Adjusted OR
- Medium 1.40 (0.99 – 1.98)
- Low 1.70 (1.23 – 2.36)

**Life satisfaction**

- Low
- Medium
- High

CHD %

Adjusted OR
- Medium 1.19 (0.88 – 1.63)
- Low 1.30 (0.94 – 1.79)
Wellbeing and gait speed

Affective wellbeing

- Low
- Medium
- High

Life satisfaction

- Low
- Medium
- High

Regression coeff
- Medium: -0.05 (-0.07 – -0.02)
- Low: -0.05 (-0.07 – -0.03)

Adjusted OR
- Medium: -0.01 (-0.03 – -0.02)
- Low: -0.01 (-0.04 – -0.02)
Psychological wellbeing

Physical illness

Survival

Age, gender
Socioeconomic factors
Education
Baseline health
Other factors
Happy orang-utans live longer lives

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Psychological wellbeing and mortality

- Baseline measures of health and standard risk factors in a large cohort
- Measure of exposure to factor being tested (psychological wellbeing)
- Tracking of sample prospectively for mortality and morbidity
- Multivariate analysis of predictors, testing for independent association with wellbeing
Enjoyment of life and survival in ELSA

• 9,025 core members of ELSA (aged 50+) followed for 9 years, 5 months
• 1,785 dated fatalities
• Enjoyment of life from CASP19
  ➢ I enjoy the things that I do
  ➢ I enjoy being in the company of others
• Cox proportional hazards regression
Deaths
Lowest enjoyment: 28.8%
Second: 18.7%
Highest enjoyment: 9.9%

Age, gender:
HR 0.43 (0.37 - 0.51)

+ demographics & health indicators
HR 0.63 (0.53 - 0.75)

+ depression and health behaviour
HR 0.70 (0.58 - 0.84)
Life satisfaction and survival in ELSA

Deaths
Lowest satisfaction: 17.4%
Second: 13.5%
Highest satisfaction: 13.1%

Age, gender:
HR 0.69 (.60 - .80)

+ demographics & health indicators
HR 0.86 (.74 – 1.00)

+ depression and health behaviour
HR 0.91 (.77 – 1.06)
Further developments

Measurement of wellbeing

Recollected wellbeing
- Standard questionnaire measures

Experienced wellbeing
- Ecological momentary assessment
- Day reconstruction method
Ecological momentary assessment

• 4,732 participants in wave 2 (data from 4,258, 90%)
• 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)
  ➢ Happy, excited, content
  ➢ Anxious, worried, fearful
  ➢ Tired
Deaths
Lowest PA: 7.3%
Second: 4.6%
Highest PA: 3.6%

Age, gender:
HR 0.50 (.35 - .72)
+ demographics & health indicators
HR 0.56 (.38 - .82)
+ depression and health behaviour
HR 0.65 (.44 - .96)

EMA positive affect and survival in ELSA
Further developments

Measurement of wellbeing

Mechanisms
- Lifestyle factors
- Biological processes
Affective wellbeing and inflammation in women

Adjusted for age, marital status, wealth, BMI, smoking status, limiting longstanding illness, arthritis, coronary heart disease, lipid medication, and depression

Psychosom Med, 2012
Further developments

- Measurement of wellbeing
- Mechanisms
- Significance
  - Is wellbeing a mechanism or a marker?
Psychological wellbeing

- Marriage
- Social networks
- Work, volunteering
- Other health behaviours
- Physical activity
- Social, cultural participation
Further developments

- Measurement of wellbeing
- Mechanisms
- Significance
- Causality
  - Is wellbeing causally linked to future health?
Psychological wellbeing and health

- There are bidirectional associations between psychological wellbeing and health
- Poor psychological wellbeing predicts future health and functional impairments, and greater mortality risk
- The different aspects of psychological wellbeing are not interchangeable with respect to health
- Causal conclusions cannot be drawn about the associations between wellbeing and health
- Positive wellbeing needs to be taken seriously in the health context