Introduction to the 1970 British Cohort Study

October 18th 2022

13.00 - 14.15
Housekeeping

- Please keep your cameras off and mics muted at all times – recording session
- If you have a question, please use the chat function, and please note your question will be visible to all attendees
- Technical issues – please email us: ioe.clsevents@ucl.ac.uk
- We would be grateful for your feedback. Please follow the link in the chat at the end of the event for the short survey

Thank you for joining us today
Plan for today

- About CLS
- Overview of BCS70
- Examples of research
- Data, by theme
- Data enhancements and innovations
- Available resources and data access
- Outline of current sweep in the field
- Q&A to the panel*
Introductions

- Vanessa Moulton, Senior Researcher
- Morag Henderson, Associate Professor
- George Ploubidis, Director BCS70
- Matt Brown, Senior Survey Manager
- Andrew Peters, Research Data Manager
- Sam Parsons, Research Fellow
About CLS

• The Centre for Longitudinal Studies is home to four* national longitudinal cohort studies, which follow the lives of tens of thousands of people.
• Each of our four studies follows large, nationally representative groups of people born in a given time period (week, year etc).
• By collecting information from the same people over time, as they live their lives, our studies are powerful resources for answering important research questions.
Timeline of the studies

1958 National Child Development Study

1970 British Cohort Study

Next Steps

Millennium Cohort Study
Timeline of the studies

1958 National Child Development Study

1970 British Cohort Study

Next Steps

Millennium Cohort Study

**British Cohort Study** follows around 17,000 babies born in one week in 1970
# COVID-19 surveys

<table>
<thead>
<tr>
<th>Wave</th>
<th>Dates</th>
<th>Context</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wave 1</td>
<td>May 2020</td>
<td>First national lockdown</td>
<td>Web</td>
</tr>
<tr>
<td>Wave 2</td>
<td>Sept/Oct 2020</td>
<td>Eased restrictions</td>
<td>Web</td>
</tr>
<tr>
<td>Wave 3</td>
<td>Feb/Mar 2021</td>
<td>Third national lockdown</td>
<td>Web → Telephone</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Study</th>
<th>Age in 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCS</td>
<td>19</td>
</tr>
<tr>
<td>Next Steps</td>
<td>30</td>
</tr>
<tr>
<td>BCS70</td>
<td>50</td>
</tr>
<tr>
<td>NCDS</td>
<td>62</td>
</tr>
</tbody>
</table>

[https://cls.ucl.ac.uk/covid-19-survey/](https://cls.ucl.ac.uk/covid-19-survey/)
Other CLS-Affiliated Studies

**Early Life Cohort Feasibility Study**
- A two-year ESRC funded project which started in April 2021 that will test the feasibility of a new UK-wide birth cohort study

**Children of the 2020s Study**
- A new nationally representative birth cohort study of babies in England which has been commissioned by the Department for Education (DfE)
- It will include babies born September - November 2021, and seeks to recruit over 8,500 families in mid 2022

**COVID Social Mobility and Opportunities (COSMO) study**
- The study began in 2021 with a representative sample of young people in Year 11 across England
- UKRI funded, led by researchers from the UCL Centre for Education Policy and Equalising Opportunities and the Sutton Trust, in collaboration with CLS
Training and Support

- [https://cls.ucl.ac.uk/data-access-training/training-and-support-2/](https://cls.ucl.ac.uk/data-access-training/training-and-support-2/)

Welcome to the CLS training and support page. This page features recordings from past CLS training events, often with accompanying slides. Please use the menu below to navigate. If you’re looking for recordings of our COVID-19 survey training, please head to our separate COVID-19 training page. There are also many more training videos to explore on our CLS YouTube Channel.

Upcoming training events

For upcoming training events, please see our events page. If you would like to hear about future training by email, as well as other CLS news, please sign up to our mailing list.
About the 1970 British Cohort Study (BCS70)
About the 1970 British Cohort Study (BCS70)

- BCS70 is multi-purpose and multi-disciplinary study collecting detailed information on different aspects of cohort members lives (economic, social and health)

- Began as British Births Survey (BBS)

- Data collected about births and families of just over 17,000 babies born in England, Wales, Scotland and Northern Ireland* in one week in 1970

*Northern Ireland not followed up
About the 1970 British Cohort Study (BCS70)

- Early focus was medical but with each sweep the scope has broadened:
  - Childhood sweeps: educational, social and physical development
  - Transitions into adult life: Family formation, employment etc.
  - Formation and maintenance of adult identity
  - Precursors of beneficial and adverse circumstances in mid-life


# BCS70 - Overview of timeline and main survey

<table>
<thead>
<tr>
<th>Birth</th>
<th>5</th>
<th>10</th>
<th>16</th>
<th>26</th>
<th>30</th>
<th>34</th>
<th>38</th>
<th>42</th>
<th>46</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Respondents</strong></td>
<td></td>
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<tr>
<td>School</td>
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<td>School</td>
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</tr>
<tr>
<td>Cohort member</td>
<td>Cohort member</td>
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<tr>
<td>Children (1 in 2)</td>
<td>Cohort member</td>
<td>Cohort member</td>
<td>Cohort member</td>
<td>Cohort member</td>
<td>Cohort member</td>
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<td>Cohort member</td>
</tr>
<tr>
<td><strong>Instruments</strong></td>
<td></td>
<td></td>
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<tr>
<td>Medical</td>
<td>Tests Medical</td>
<td>Tests Medical</td>
<td>Diaries Tests Medical</td>
<td>Diaries Tests Medical</td>
<td>Test(s)</td>
<td>Test(s)</td>
<td>Diaries Tests Medical</td>
<td>Diaries Tests Medical</td>
<td>Diaries Tests Medical</td>
</tr>
</tbody>
</table>
# Overview of BCS70 (CM) data

<table>
<thead>
<tr>
<th>Year</th>
<th>Birth</th>
<th>5</th>
<th>10</th>
<th>16</th>
<th>26</th>
<th>30</th>
<th>34</th>
<th>38</th>
<th>42</th>
<th>46</th>
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<tbody>
<tr>
<td>Physical measurements</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Medical examination</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive assessments</td>
<td>x</td>
<td>(x)</td>
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<tr>
<td>Accelerometer</td>
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<tr>
<td>Diet diary</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Blood sample (DNA extraction)</td>
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<td>Consent for linking admin data</td>
<td></td>
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</tbody>
</table>

*Health and economic records*

*National Health Service, Dept for Work & Pensions, Her Majesty’s Revenue & Customs*
### BCS70 Sub-studies

<table>
<thead>
<tr>
<th>Impact of foetal nutrition on early development:</th>
<th>22m</th>
<th>42m</th>
<th>7</th>
<th>21</th>
<th>38</th>
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</thead>
<tbody>
<tr>
<td>▪ 10% of CM’s; &gt;42 weeks gestation and low birthweight; @2,500</td>
<td>x</td>
<td>x</td>
<td></td>
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<td></td>
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<tr>
<td>▪ Family circumstances, development, medical examination</td>
<td></td>
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</tbody>
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<tbody>
<tr>
<td>▪ Contact children not followed up at age 5</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Located 4,758, response 1,917</td>
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</tbody>
</table>

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<tbody>
<tr>
<td>▪ 10% representative sample @1,650</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Skills tests, employment, education and training</td>
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</tbody>
</table>

<table>
<thead>
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<tbody>
<tr>
<td>▪ Identify zygosity @200</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>▪ self-report, physical similarity, ‘peas-in-a-pod’ q’s</td>
<td></td>
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</tr>
</tbody>
</table>

*Comparison with NCDS age 23 survey
**also conducted in NCDS
Participation / response in BCS70

Birth

Postal

Telephone
Examples of research using BCS70
Hospital Practice

BREAST-FEEDING, BRONCHITIS, AND ADMISSIONS FOR LOWER-RESPIRATORY ILLNESS AND GASTROENTERITIS DURING THE FIRST FIVE YEARS

Brent Taylor, Jean Golding, Jane Wadsworth, Neville Butler

Abstract

The possible influence of breast-feeding on reported bronchitis and on admissions to hospital for lower-respiratory illness and gastroenteritis during the first five years was assessed in a longitudinal national British study of 13 135 children. Breast-feeding was found to have no significant association with rates of bronchitis or admission to hospital with lower-respiratory illness after allowance was made for influences associated with both lower-respiratory illness and likelihood of breast-feeding (maternal smoking, family social status, and birthweight). Admissions to hospital for gastroenteritis in the first year were marginally less likely in breast-fed
Accounting for Intergenerational Income Persistence: Noncognitive Skills, Ability and Education

Jo Blanden, Paul Gregg, Lindsey Macmillan  

The Economic Journal, Volume 117, Issue 519, March 2007, Pages C43–C60,  
https://doi.org/10.1111/j.1468-0297.2007.02034.x  
Published: 16 April 2007  

Abstract

We analyse in detail the factors that lead to intergenerational persistence among sons, where this is measured as the association between childhood family income and later adult earnings. We seek to account for the level of income persistence in the 1970 BCS cohort and also to explore the decline in mobility in the UK between the 1958 NCDS cohort and the 1970 cohort. The mediating factors considered are cognitive skills, non-cognitive traits, educational attainment and labour market attachment. Changes in the relationships between these variables, parental income and earnings are able to explain over 80% of the rise in intergenerational persistence across the cohorts.
Elite universities, fields of study and top salaries: Which degree will make you rich?

Alice Sullivan, Samantha Parsons, Francis Green, Richard D. Wiggins, George Ploubidis

First published: 11 August 2018 | https://doi.org/10.1002/berj.3453 | Citations: 15

Abstract

This article assesses the chances of entering the top 5% of earners for a British cohort currently in their 40s. We assess the difference made by a university degree from a Russell Group or non-elite university, and from different undergraduate fields of study. Our study uses rich longitudinal data from the 1970 British Cohort Study (BCS70), allowing us to control for an unusually large range of potential confounding factors, including childhood socio-economic circumstances, cognitive scores, secondary schooling and prior qualifications. We find that large raw differences in the chances of achieving a top salary are strongly attenuated by our controls, but substantial differences between degree subject areas remain. The large gap between men and women in the chance of gaining a top salary is not explained by the type of degree achieved, and we found no evidence of gender differences in the gains from institutional prestige or particular fields of study.
A third of middle-aged UK adults have at least two chronic health issues - study

Childhood poverty and health issues before adulthood all factors in decline in mid-life wellbeing
Data, by theme
Themes

- Family and relationships
- Education and cognition
- Physical health
- Mental health and well-being
- Behaviours, attitudes and identity

...but there are many more
Family and Relationships
Family and relationships

- Household composition
- Relationship to cohort member

**Childhood**

- Biological, step, adoptive parents
- Family context, e.g. marital status and partnership formation / dissolution
- Mothers’ pregnancy (history), labour and delivery
- Child care
- Socio-economic context of family e.g. parents’ employment, social class, income, housing
- Family life
- Friends and socialising
## Family and relationships

<table>
<thead>
<tr>
<th>Partner</th>
<th>Family</th>
<th>Other</th>
</tr>
</thead>
</table>
| Partnership Histories dataset (1986-2016) | Children (26, 30, 38, 42, 46)  
- Number; own, adopted, partners’  
- Parental demands (30)  
- Absent (living, contact etc) (42)  
- Older (SES, educ, marital status, fertility) (42)  
Family activities (30, 34)  
CM’s parents  
- Alive, age of death (26, 30, 38, 42, 46)  
- Relationship with parents (30)  
Care provision (38, 42, 46)  
Grandchildren (46) | Support family and friends (30)  
Social contact and support (42, 46) |
| Socio-economic status of CM and partner | Economic activity status | |
| Economic activity status | Employment current / history | |
| Employment current / history | Cohabiting and non-cohabiting relationships (38, 42, 46) | |
| Cohabiting and non-cohabiting relationships (38, 42, 46) | Relationship satisfaction (30, 42, 46) | |
| Relationship satisfaction (30, 42, 46) | Children (26, 30, 38, 42, 46) | |
| Children (26, 30, 38, 42, 46) | Other | |
| Support family and friends (30) | Social contact and support (42, 46) | |
| Social contact and support (42, 46) | | |
Education and cognitive measures
Educational attainment and skills

- Parental education (5,10)
- Early education provision (5)
- Teacher assessment (10,16)
  - Learning problems, abilities, educational environment
- Special educational needs (10,16)
- Study intentions (16)
  - Higher education, vocational and employment
- Qualifications and training (26,30,34,38,42,46)
  - Academic, technical, vocational
- Partner’s highest education (38)
- CM’S children’s highest education (42)
# BCS70 Cognitive Assessments/Skills

<table>
<thead>
<tr>
<th>Domain</th>
<th>Test</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Developmental milestones</strong></td>
<td></td>
<td>22 &amp; 42 months</td>
</tr>
<tr>
<td>Verbal skills</td>
<td>Schonell Reading Test</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>English Picture Vocabulary Test</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Edinburgh Reading Test (ERT-SV)</td>
<td>10, 16</td>
</tr>
<tr>
<td></td>
<td>Pictorial Language Comprehension Test</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>BAS Word Definitions</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>APU Vocabulary Test</td>
<td>16, 42</td>
</tr>
<tr>
<td>Verbal reasoning</td>
<td>BAS Word Similarities</td>
<td>10</td>
</tr>
<tr>
<td>Non-verbal reasoning</td>
<td>BAS Matrices</td>
<td>10, 16</td>
</tr>
<tr>
<td>Mathematics and numeracy</td>
<td>Friendly Maths Test</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>APU Arithmetic Test</td>
<td>16</td>
</tr>
<tr>
<td>Visual/spatial processing</td>
<td>Copying Designs Test</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Human Figure Drawing</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Complete a Profile Test</td>
<td>5</td>
</tr>
<tr>
<td>Memory</td>
<td>BAS Recall of Digits</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Immediate and delayed Word list recall</td>
<td>46</td>
</tr>
<tr>
<td>Cognitive function</td>
<td>Timed Letter search/cancellation (processing speed)</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>Animal Naming Test (verbal fluency)</td>
<td>46</td>
</tr>
</tbody>
</table>

* sub-sample

BAS (British Ability Scales)  
APU (Applied Psychology Unit)
## BCS70 Cognitive Assessments/Skills

### Adult Basic Skills

<table>
<thead>
<tr>
<th>Literacy and numeracy (ALBSU)</th>
<th>21*, 34</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literacy and numeracy (Skills for Life)</td>
<td>34</td>
</tr>
</tbody>
</table>

### Children of the cohort members (age 34)

<table>
<thead>
<tr>
<th>Test</th>
<th>Age appropriate tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAS Naming Vocabulary</td>
<td>Age 3 – 5 yrs 11 months</td>
</tr>
<tr>
<td>BAS Early Number Concepts</td>
<td></td>
</tr>
<tr>
<td>BAS Word Reading</td>
<td>Age 6 – 16 yrs 11 months</td>
</tr>
<tr>
<td>BAS Number Skills</td>
<td></td>
</tr>
<tr>
<td>BAS Spelling</td>
<td></td>
</tr>
</tbody>
</table>

- sub-sample
- ALBSU (Adult Literacy and Basic Skills)
- BAS (British Ability Scales)
Physical Health
Medical history

- Birth
  - Antenatal care, abnormalities in pregnancy and labour, analgesia and anaesthesia, infant (weight, progress, management and outcome), obstetric history

- Immunisation /vaccinations (5,10,16)

- Accidents (5, 10, 16, 26, 30, 34)

- Use of health services (5,10,16)

- Hospital admissions (5,10,16, 30, 34)

- Medication (10, 16, 46)

- Linked administrative health records
  - England and Scotland (UKDS secure access)

- Death (1970-2015) UKDS secure access
Physical Health in BCS70 – measurements

- **Anthropometrics:**
  - Height*, Weight and BMI (5*,10**, 16, 26, 30, 34, 42, 46)
  - Head circumference (5,10,16)
  - Hip and waist circumference (46)
  - Body fat (46)

- **Measurements (medical examination):**
  - Blood pressure (10, 16, 46)
  - Pulse (10)
  - Vision (10, 16, 30)
  - Audiometry (10,16, 26, 30, 34)
  - Laterality (10,16)
  - Co-ordination (10, 16)
  - Speech (10)
  - Maximal grip strength (46)
  - Leg-raise/balance (46)

* Height only
** also parents height and weight
Physical Health in BCS70 – measurements and samples

- **Blood samples (46):**
  - Total / HDL cholesterol*
  - Glycated haemoglobin*
  - Triglycerides
  - C-reactive protein
  - Insuline-like-growth-factor
  - Ferritin
  - Cytomegalovirus
  - Red blood cell count
  - DNA currently being extracted

- **Accelerometer (46)**
  - Sedentary time
Assessment of Physical Health

- Parent/self-assessment of CM’s general health (16, 26, 30, 34, 38, 42, 46)
  - (SF-36) General health (46)
- Medical conditions/Long standing illness (5, 10, 16, 26, 30, 34, 38, 42, 46)
- Disability and chronic illness (10, 16, 30, 34, 38)
- Reproductive health
  - Menstruation and symptoms (16); Contraception (0, 16, 46)
  - Pregnancy history (30, 34, 38, 42); Infertility (30, 42)
  - Gynaecological problems (42); Hysterectomies/Oophorectomies (42)
  - Menopause (42, 46); HRT (42)
- Dental health (46)

- Family health (5, 10, 16)
  - Mothers Health: Cornell Health Inventory (10)
- CM’s child’s physical health* (34)
Health behaviours

Cohort member (CM)
- Physical activity (16, 30, 34, 42, 46)
- Diet (10, 16, 30, 34, 42, 46)
- Smoking (10, 16, 26, 30, 34, 38, 42, 46)
- Drinking (16, 26, 30, 34, 42, 46)
- Drug use (16, 30)
- Sleep (16, 42, 46)
- Sexual (16)

CM’s parent
- Maternal smoking during pregnancy (0)
- Maternal drinking during pregnancy (10)
- Parents smoke (5, 10)
- Parents drinking (16)
- Parents exercise (16)

CM’s child
- CM’s health related behaviour during pregnancy* (34)
- CM’s children (age 10-16) smoking, drinking and drug use* (34)

* sub-sample 1 in 2 children
Mental health and well-being
<table>
<thead>
<tr>
<th>Mental Health measure</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rutter Behaviour Scales</td>
<td>5, 10, 16</td>
</tr>
<tr>
<td>Conners Hyperactivity Rating Scale</td>
<td>10, 16</td>
</tr>
<tr>
<td>Child Development Scale*</td>
<td>10</td>
</tr>
<tr>
<td>Malaise Inventory: Psychological distress</td>
<td>5m, 16m, 16, 26, 30, 34, 42, 46</td>
</tr>
<tr>
<td>GHQ-12: Psychological distress</td>
<td>16, 30</td>
</tr>
<tr>
<td>Kessler (4) Psychological distress</td>
<td>34</td>
</tr>
<tr>
<td>Warwick-Edinburgh Mental Wellbeing Scale (WEMBS)</td>
<td>42, 46</td>
</tr>
<tr>
<td>36 Item Short Form Survey (SF-36) – health incl. general mental health</td>
<td>46</td>
</tr>
<tr>
<td>Life satisfaction</td>
<td>26, 30, 34, 42, 46</td>
</tr>
</tbody>
</table>

**Parent, teacher and self-report**

**Maternal mental health**

*items from Rutter, Conners and Swansea Assessment Battery*
Behaviours, attitudes and identity
Behaviours

- Eysenck Personality Inventory (10)
- Social Judgement Scale (10)
- Locus of Control Scale (Caraloc) (10)
- Self-esteem Scale (Lawseq) (10,16)
- Self-efficacy ((26), 30, 34, 42)

- Risky and antisocial behaviour (16)
  - Stealing, fighting, criminality, contact with police
- Bullying, victimisation (16)
Attitudes, values and identity

- **Identity**
  - Religion (26, 30, 34, 42)
  - Class identity (42)
  - Sexuality (42)

- **Political**
  - Voting (26, 30, 42, 46)
  - Political participation (42)

- **Trust** (42)

- **Law and order** (16, 26)

- **Membership of organisations** (30, 34, 42, 46)

- **Activities and interests**
  - Occupational interests (16)
  - Leisure activities (16, 42)
  - Sporting activities (16, 42)
  - Reading (16, 42, 46)
  - Screen time/computer use (42, 46)

- **Attitudes**
  - School (10)
  - Leaving home (16)
  - Religion (16, 42)
  - Politics (26, 30, 34)
  - Sex equality (26)
  - Traditional marital values (26)
  - Work ethic (26)

- **Range of attitudes and values** (30, 42)
Data enhancements and innovations
Access to different types of data

Access to data held by the UK Data Service varies depending on how the data is classified:

**Tier 1:** End User Licence (EUL) for access to data with a low level of sensitivity and disclosivity.
- Most of our data are available under this licence.
- Your application is authorised directly by the UK Data Service, and you can download the data directly from there.

**Tier 2a:** Special Licence (SL) for access to moderately sensitive or disclosive data. Access through the UK Data Service and application approved by CLS before you can download the data.

**Tier 2b:** Secure Access Licence (SA) for access to the most sensitive and/or potentially disclosive data. Access through the UK Data Service and attend a specialised training course.

[https://cls.ucl.ac.uk/data-access-training/data-access/](https://cls.ucl.ac.uk/data-access-training/data-access/)
# CLS record linkage programme – available data in BCS70

<table>
<thead>
<tr>
<th>Domain</th>
<th>Country</th>
<th>Data set / information</th>
<th>Access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>England</td>
<td>• Hospital Episodes Statistics (HES)</td>
<td>via the UKDS (SA)</td>
</tr>
<tr>
<td></td>
<td>Scotland</td>
<td>• Inpatient, Outpatient, Birth Records, Immunisation, Prescribing Information, Child Health Review</td>
<td>via the UKDS (SA)</td>
</tr>
</tbody>
</table>

1970 British Cohort Study
Linked health administrative datasets – Hospital Episode Statistics (HES)

User guide
First edition, October 2020

SA (UKDS Secure Access)
# Geographical data enhancements

**Available via the UKDS**

<table>
<thead>
<tr>
<th>Domain</th>
<th>Country</th>
<th>BCS70 sweep / year</th>
<th>Data set / information</th>
<th>Access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neighbourhood</td>
<td>Great Britain</td>
<td>3 to 10 years</td>
<td>• Geographical identifiers&lt;br&gt;• Ward, Lower and Middle Layer Super Output Area, LA district, Parliamentary Constituency, IMD</td>
<td>via the UKDS (SA)</td>
</tr>
<tr>
<td></td>
<td>Great Britain</td>
<td>3 to 9 years</td>
<td>• Counties&lt;br&gt;  • Based on digitised 1981 boundary files</td>
<td>via the UKDS (SL)</td>
</tr>
<tr>
<td></td>
<td>Great Britain</td>
<td>1971-2011</td>
<td>• Townsend Index of Deprivation&lt;br&gt;• Population, persons per hectare, urban-rural indicator&lt;br&gt;• Townsend Deprivation Score and Quintile:&lt;br&gt;  • Unemployed % of economically active&lt;br&gt;  • Non-home ownership % households&lt;br&gt;  • Non-car ownership % households</td>
<td>via the UKDS (SA)</td>
</tr>
</tbody>
</table>
Harmonised data sets
(in BCS70 and across other British cohorts)
Available via the UKDS (EUL)

<table>
<thead>
<tr>
<th>Domain</th>
<th>BCS70 age</th>
<th>Data set / information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socio-Economic</td>
<td>age 10</td>
<td>• Highest parental social class (RG 1990 version)</td>
</tr>
<tr>
<td></td>
<td>age 42</td>
<td>• CM’s social class (RG 1990 version)</td>
</tr>
<tr>
<td>Body Mass Index (BMI)</td>
<td>10,16,26,34,42</td>
<td>• Weight</td>
</tr>
<tr>
<td></td>
<td>5,10,16,30,34,42</td>
<td>• Height</td>
</tr>
<tr>
<td>Mental health</td>
<td>3 (age 10)</td>
<td>• Four domains: emotional, peer problems, behavioural and attention / hyperactivity problems</td>
</tr>
<tr>
<td>Child environment</td>
<td>Various</td>
<td>• Crowding, Sole use of amenities, Housing tenure, Teen mother and/or father</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Child rearing and parenting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Family instability (divorce, separation, moves)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Parental and child health</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Well-being</td>
</tr>
</tbody>
</table>
BCS70 COVID-19 and serology surveys
Available via the UKDS (EUL)

COVID-19 surveys response

<table>
<thead>
<tr>
<th>Wave</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wave 1</td>
<td>4,223</td>
</tr>
<tr>
<td>Wave 2</td>
<td>5,320</td>
</tr>
<tr>
<td>Wave 3</td>
<td>5,578</td>
</tr>
</tbody>
</table>

Serology survey response

<table>
<thead>
<tr>
<th>Category</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invited</td>
<td>6,594</td>
</tr>
<tr>
<td>Consented</td>
<td>3,741</td>
</tr>
<tr>
<td>Blood sample returned</td>
<td>2,547</td>
</tr>
</tbody>
</table>

Serology Survey:
- Participants who took part in one of three COVID-19 Surveys were invited to provide a finger-prick blood sample
- Two antibody tests conducted - N-assay and S-assay
  - N-assay more likely to identify naturally occurring antibodies through exposure to virus
  - S-assay more likely to identify antibodies occurring following vaccination

https://cls.ucl.ac.uk/covid-19-survey/
Accelerometer (age 46)
Available via the UKDS (EUL)

- Thigh worn ActivPal device worn for 7 days

- Accelerometer and also measures postural allocation to accurately distinguish between different types of sedentary activity (standing, sitting, sleeping) and transitions between

<table>
<thead>
<tr>
<th><strong>Age 16: Dietary diary</strong></th>
<th><strong>Age 46: Online diet questionnaire</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Diet questionnaire over 4 days (Fri-Mon)</td>
<td>• Oxford WebQ – developed and hosted by CEU, Oxford</td>
</tr>
<tr>
<td>• Dietary food group categories</td>
<td>• Inventory of food and drink consumed on previous day</td>
</tr>
<tr>
<td>• Diet nutrient categories</td>
<td>• Completed on 2 of 7 days following home visit</td>
</tr>
<tr>
<td>[Image of dietary diary]</td>
<td>• Nutrient intake calculated e.g. energy (kJ), protein (g), total fat (g) etc</td>
</tr>
</tbody>
</table>

https://cls.ucl.ac.uk/wp-content/uploads/2020/05/BCS70-Age-16-Dietary-Diaries-User-Guide.pdf
Parent and Child survey (age 34)
Available via the UKDS (EUL)

- Random sample of one in two CM’s.
- Information was collected directly from over 5000 children of CMs < age 17
- Age-specific questions to parent on child’s:
  - Development, relationships, behaviour, discipline, school absence/exclusion, reading and schoolwork
- Child:
  - Age-specific (3<17) cognitive assessments
  - Age 10-16: leisure time, relationships with parents, attitudes to school, aspirations for the future, crime, self-esteem

Twins Survey 2008 (also conducted in NCDS)
Available via the UKDS (EUL)

- Data on zygosity of twins
- 202 BCS70 twins (data imputed if only one twin pair responded)

- Three measures of zygosity:
  - Self-report
  - Based on 5 standardised questions: Teachers, parents, siblings, close friends, strangers telling them apart and ‘Peas in a pod’ question
  - Physical similarity (eye colour, height, weight, hair colour & texture)
- 25-35% zygotic

Dealing with attrition
Attrition and non-response

- Attrition is the discontinued participation of some individuals in a longitudinal survey for reasons that are unknown and/or beyond the control of the researcher.
- Unit/wave non-response (attrition) as opposed to item non-response (both types of missing data).
- Types of unit/wave non-response:
  - Non-contact
  - Refusal
  - Inability
- Non-response on the increase in all surveys.
- Non-response may not be permanent.
- Non-response/attrition can have some important implications.
Dealing with unit non-response in BCS70

- **Case-wise deletion** i.e. ignoring non-response (unless missing completely at random)
  - Any individual in a data set is deleted from an analysis if they're missing data on any variable in the analysis
  - Straightforward, but doesn’t deal with any non-response bias

- **Non-response weights**
  - Adjust the sample composition to take account of the loss of particular type of respondents.
  - Inverse probability weighting (IPW)

- **Other more advanced methods e.g. multiple imputation**
  - MI involves the generation of multiple copies of the dataset in each of which missing values are replaced by imputed values sampled from their posterior predictive distribution given the observed
Dealing with unit non-response in BCS70

- No attrition weights in BCS70 dataset* – cohort specific
  ‘Missing Data Guide’ for BCS70 will be available in 2023
- Relevant examples and useful references in ‘Handling missing data in the NCDS’ and other papers

*with exception COVID-19 surveys


Resources and data access
The 1970 British Cohort Study (BCS70) is following the lives of around 17,300 people born in England, Scotland and Wales in a single week of 1970.

What’s in the study?

Over the course of cohort members’ lives, BCS70 has collected information on health, physical, educational and social development, and economic circumstances among other factors.

BCS70 has become a vital source of evidence on key policy areas such as social mobility, education, training and employment, and economic insecurity.
Available resources

- User guides
  - Overview of measures; Response and weights
- Questionnaires
  - Exact question wording; Question routing; Variable names
- Data documentation
  - Data notes; Coding frames; Variables lists, including derived variables
- Technical reports
  - Sample and questionnaire design, development
  - Fieldwork, response, ethics
  - Coding, editing
- Data dictionaries
- Previous journal publications [https://cls.ucl.ac.uk/publications-and-resources/](https://cls.ucl.ac.uk/publications-and-resources/)
SEARCH Closer Discovery (discovery.closer.ac.uk/)
Data freely available to researchers, government analysts and third sector workers: https://ukdataservice.ac.uk/
Available Resources: UK Data Service

### 1970 British Cohort Study: Age 46, Sweep 10, 2016-2018

**Details**  |  **Documentation**  |  **Resources**
---|---|---

**Documentation**

<table>
<thead>
<tr>
<th>Title</th>
<th>File name</th>
<th>Size (MB)</th>
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<tr>
<td>1970 British Cohort Study - Age 46 Derived Variables User Guide</td>
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<tr>
<td>1970 British Cohort Study - Age 46 Survey User Guide</td>
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<tr>
<td>1971 British Cohort Study - Variable Lookup Table</td>
<td>bcs.2016 variable lookup table.xlsx</td>
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<td>UK Data Archive Citation File for Study 8547</td>
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### 1970 British Cohort Study Response Dataset, 1970-2016

**Details**  |  **Documentation**  |  **Resources**
---|---|---

**Documentation**

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<thead>
<tr>
<th>Title</th>
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<th>Size (MB)</th>
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<td>A Guide to Longitudinal Linkage of BCS Data</td>
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<td>Changes in the NCDS and BCS70 Populations and Samples Over Time</td>
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<td>Realignment of BCS70 Identifiers</td>
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<tr>
<td>UK Data Archive Citation File for Study 5641</td>
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http://discover.ukdataservice.ac.uk/series/?sn=200001
<table>
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<tr>
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<tbody>
<tr>
<td>8547</td>
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<td>1970 British Cohort Study; Age 16, Sweep 4 Reading and Matrices Tests, 1986</td>
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<td>7473</td>
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<td>1970 British Cohort Study; Activity Histories, 1986-2016</td>
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<td>6941</td>
<td>1970 British Cohort Study; Partnership Histories, 1986-2016</td>
<td>Nesstar</td>
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<td>6557</td>
<td>1970 British Cohort Study; Age 38, Sweep 8, 2008-2009</td>
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<td>1970 British Cohort Study; Age 16, Sweep 4 Arithmetic Test, 1986</td>
<td>Nesstar</td>
<td></td>
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<tr>
<td>5585</td>
<td>1970 British Cohort Study; Age 34, Sweep 7, 2004-2005</td>
<td>Nesstar</td>
<td></td>
</tr>
</tbody>
</table>
Accessing the data

- Register and set up an account at the UK Data Service
- Search for the data using the ‘find data’ tab
  - BCS70
- Before downloading the data
  - Click on ‘Request Access’
  - Click on ‘Complete Actions’
  - Agree to standard ‘End User Licence’
  - Read and agree extra conditions
  - Choose data format and download zip file
    - SPSS
    - STATA
    - TAB (tab-delimited file)
Looking ahead
Looking ahead

- Age 51 survey
  - Currently in the field
    - 75 minute face to face interview*
    - Paper self-completion
    - Online diet questionnaire
  - Data deposit at UKDS ~ 2023
Age 51 content (not exhaustive)

**Employment and income**
- Occupation
- Income
- Partner’s employment and income
- Impact of COVID-19
- Benefits
- Pensions
- Debts
- Intergenerational transfers

**Physical health and health behaviours**
- General
- Longstanding
- Health conditions
- COVID tests, symptoms, long COVID
- Height/Weight
- Exercise
- Diet
- Drinking and smoking

**Cognitive skills and processes:**
- Immediate and delayed recall
- Animal naming
- Letter cancellation
- National Audit Reading Test (NART)

**Mental health and well-being**
- Psychological distress
- Mental well-being
- Life satisfaction

**Family and relationships**
- Grandchildren
- CM’s and partners parents – caring responsibilities
- Social contact
- Quality of relationships
- Menstruation
- Fertility

**Activities, attitudes and values**
We’ve covered

- A brief overview of CLS and the BCS70
- Examples of the types of research
- Data in the BCS70 by themes
- Enhancements and innovations
- Resources available and data access
- Q&A to the panel
Q&A to the panel

Please complete the feedback form
Questions to the panel

BCS70 team

▪ George Ploubidis, Director BCS70
▪ Matt Brown, Senior Survey Manager
▪ Andrew Peters, Research Data Manager
▪ Sam Parsons, Research Fellow

▪ Vanessa Moulton, Senior Researcher and
▪ Morag Henderson, Associate Professor
IOE.CLS Data User Support

clsfeedback@ucl.ac.uk

Thanks!