



1970 British Cohort Study at age 51: explore the new data

19 March 2025

Centre for Longitudinal Studies, UCL Social Research Institute

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Economic
and Social
Research Council

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Introductions

- Vanessa Moulton, Senior Research Fellow
- Carole Sanchez, Survey Manager (Senior Research Fellow)
- Sam Parsons, Principal Research Fellow

- George Ploubidis, Director of the BCS70

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Plan for today

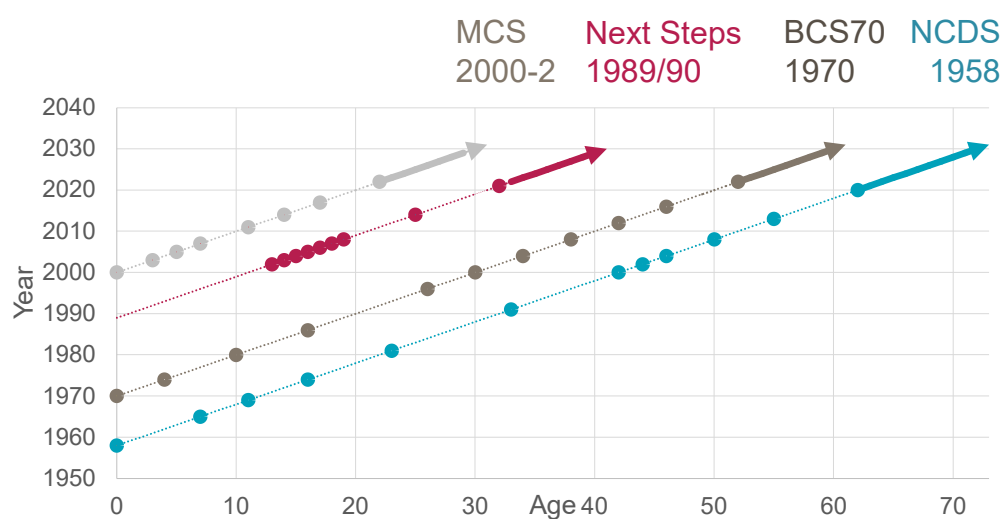
- Overview of BCS70 and resources
- Access to the data
- What's in the BCS70 Age 51 survey
- Age 51 Survey: methodology
- Some initial findings – including comparisons to the 1958 cohort
- Q&A to the panel*

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Study timelines and future 2020-2030

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BCS70 A study of everyone born in one week in 1970 (GB)

	1970	1975	1980	1986	1996	2000	2004	2008	2012	2016	2021-24
	Birth	5	10	16	26	30	34	38	42	46	51-53
main respondent	mother	parents	parents	cohort member / parents	cohort member	cohort member	cohort member	cohort member	cohort member	cohort member	cohort member
others		school	school	school			children (1 in 2)				
medical	medical exam	medical exam Ht	medical exam Ht/Wt	medical exam Ht/Wt	Ht/Wt	Ht/Wt	Ht/Wt		Ht/Wt	biomedical blood (DNA) Ht/Wt accelerometer	Ht/Wt
survey instruments		cognitive mental h.	cognitive mental h.	diet diary cognitive mental h.	mental h.	mental h.	mental h.		cognitive mental h.	diet diary cognitive mental h.	cognitive mental h.
linked data											consent for health and economic records*
response rate	16,568	13,135	14,875	11,622	9,003	11,261	9,665	8,874	9,841	8,851	8,016

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Other data enhancements in the BCS70

- Genetic data in the BCS70
 - Available, n: 5,598 [CLS | Genetic data and biological samples \(ucl.ac.uk\)](https://cls-genetics.github.io/)
- Linked administrative data
 - Health: **Hospital Episodes Statistics (HES) in England and Scottish Medical Records (SMR)** <https://cls.ucl.ac.uk/data-access-training/linked-data/>
 - Coming soon: Employment (e.g. benefit claims, tax credits, NI contributions, income) in England via UK LLC
- Geographical data
 - e.g. electoral wards, output areas, Townsend Index of Deprivation etc
- Harmonised datasets across the cohorts
 - Socio-economic, BMI, mental health, child environment...
 - Soon – health, partnerships and fertility
- COVID-19 online surveys
 - Possible impacts of pandemic on multiple aspects of life
 - Wide range of topics including family, employment, home schooling, mental health during lockdown and an open question on affects of the pandemic

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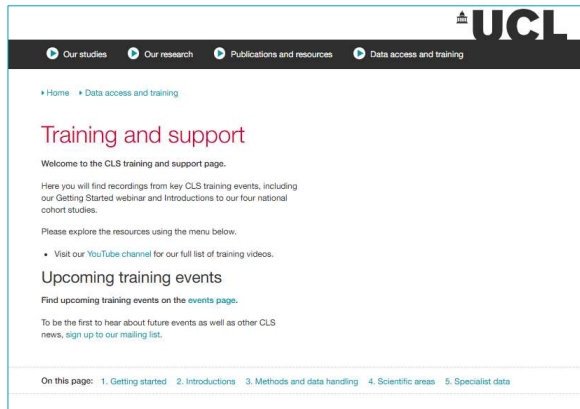
Resources

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CLS training and support

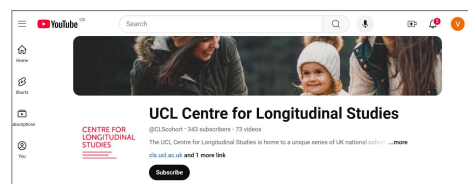


<https://cls.ucl.ac.uk/data-access-training/training-and-support/>

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Upcoming training events	
Harmonising health data in the cohorts	May 2025
New data: 1958 NCDS age 62 to 65	Early summer

<https://cls.ucl.ac.uk/events/>



<https://www.youtube.com/channel/UCUXx6J7PRyhWGF-xKDPW5eA>

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Access to BCS70 age 51 data

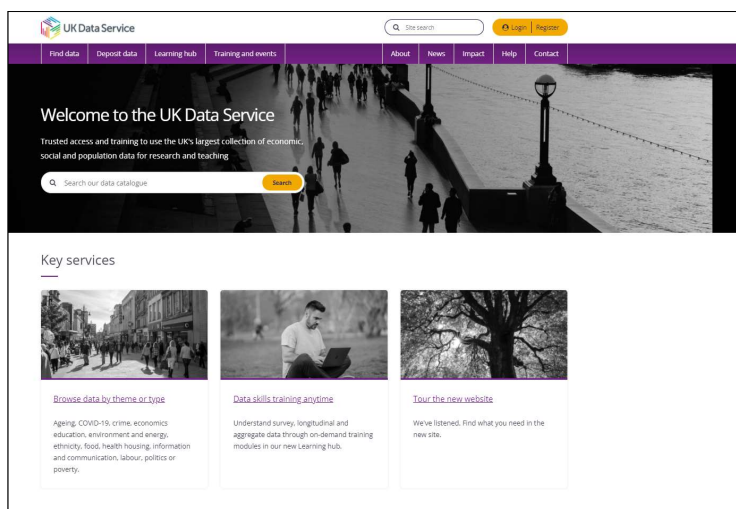
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Data freely available to researchers, government analysts and third sector

And most research data is accessed via the UK Data Service



UK Data Service



ukdataservice.ac.uk

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Access to different types of data at the UKDS

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

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Safeguarded data available under End User Licence (EUL): 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.

Special safeguarded data available under Special Licence (SL): access to moderately sensitive or disclosive data. Access through the UK Data Service and application approved by CLS before you can download the data.

Controlled data available under 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. CLS approval and access via UK Data Service SecureLab

For details on specialist linked administrative data, genetic data and more information on data access please visit: <https://cls.ucl.ac.uk/data-access-training/data-access/>

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BCS70 age 51 data (SN: 9347)

<http://discover.ukdataservice.ac.uk/series/?sn=200001>

The screenshot shows the UK Data Service website. The header includes the UK Data Service logo, a search bar, and a user account menu (My Account (3) Logout). The navigation bar contains links: Find data, Deposit data, Learning Hub, Training and events, About, News, Impact, Help, and Contact. The main content area shows the breadcrumb trail: Home > Data catalogue > Studies > Study. The study title is "1970 British Cohort Study: Age 51, Sweep 11, 2021-2024". On the left, there are input fields for "Studies" and "Series", and a text box containing the DOI: <https://doi.org/10.5255/UKDA-SN-9347-1> with a "Copy study DOI" button. Below the title, there are tabs for "Details", "Documentation", and "Resources", and an "Access data" button. The "Details" tab is active, showing a table with the following information:

Title:	1970 British Cohort Study: Age 51, Sweep 11, 2021-2024
Study number (SN):	9347
Access:	These data are safeguarded
Persistent identifier (DOI):	10.5255/UKDA-SN-9347-1
Series:	1970 British Cohort Study
Data creator(s):	University of London, Institute of Education, Centre for Longitudinal Studies

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BCS70 age 51 data (SN: 9347)

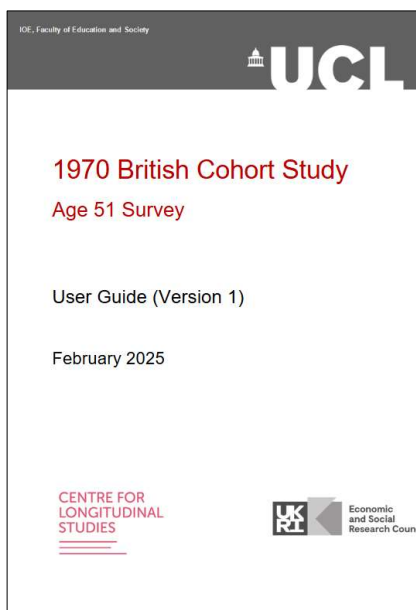
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bcs11_age51_econshock_longf.dta
bcs11_age51_econshockp_longf.dta
bcs11_age51_employment_longf.dta
bcs11_age51_housing_longf.dta
bcs11_age51_main.dta
bcs11_age51_persongrid_longf.dta
bcs11_age51_qualifications_longf.dta
bcs11_age51_qualificationsp_longf.dta
bcs11_age51_regincome_longf.dta
bcs11_age51_relationships_longf.dta
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User guide Age 51



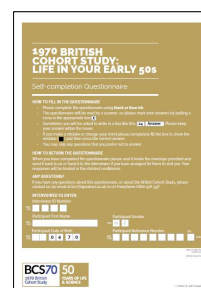
User Guide Content

- About the 1970 BCS70 and Age 51 Survey
- Fieldwork
- Questionnaire
- Response
- Survey research data
- Derivation and implementation of Non-Response weights
- Mode effects
- Appendix incl. derived variables

BCS70: Questionnaire Documentation

Main Stage

Age 51 Survey



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What's in the BCS70 Age 51 survey

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Economic activity, income and wealth

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Earnings and Income	Previous sweeps	Age 51-53
Occupation	0, 10, 16, 26, 30, 34, 38, 42, 46	51
Earnings from work	10, 16, 26, 30, 34, 38, 42, 46	51
Other income (investments, income support, benefits, etc.)	10, 30, 34, 38, 42	51
Wealth (actual):		
Housing	42	51
Financial		
- Investments/Savings	34, 42, 46	51
- Debt	42, 46	51
Pensions	30, 34, 42	51
Inheritance received	42	51

Parents, cohort members

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Overview of health measures

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Physical health measures	Previous sweeps	Age 51-53
Self assessed general health	5, 10, 16, 34, 42, 46	51
Medical conditions/ *long term illness	0, 5, 10, 16, 26, 30, 34, 38, 42, 46	51
Anthropometry (height & weight)	10, 16, 26, 30, 34, 42, 46	51
Physical activity (leisure time)	5, 10, 16, 34, 42, 46	51
Diet related measures (intake, overeating)	10, 16, 30, 34, 42, 46	51
Smoking, drugs & alcohol consumption	10, 16, 26, 30, 34, 42, 46	51
- AUDIT-PC	42, 46	51
Sleep	16, 42, 46	51
COVID	COVID sweeps	51
SF-36: (multi-purpose health survey – 36 items)	46	51
DNA /biomarkers	46 (genotyping & bio)	
Linked Health admin. data	England & Scotland	

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Age 51: Online dietary questionnaire (Oxford WebQ)

- Oxford WebQ – developed and hosted by CEU, Oxford
- Inventory of food and drink consumed in previous 24 hours
- Completed on 1 weekday and 1 weekend day 7 days following interview
- Nutrient intake calculated e.g. energy (kJ), protein (g), total fat (g) etc

Age 16: Dietary diary

- Diet questionnaire over 4 days (Fri-Mon)

- Dietary food group categories
- Diet nutrient categories

<https://cls.ucl.ac.uk/wp-content/uploads/2020/05/BCS70-Age-16-Dietary-Diaries-User-Guide.pdf>

Age 46: Online diet questionnaire

- Oxford WebQ
- Inventory of food and drink consumed on previous day
- Completed on 2 of 7 days following home visit
- Nutrient intake calculated e.g. energy (kJ), protein (g), total fat (g) etc

Not in first deposit - data will be available later in 2025

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Age 51-53: Mental health scales

Mental Health measure	Previous adult sweeps	Age 51-53
Malaise Inventory: Psychological distress	16, 26, 30, 34, 42, 46	51
GHQ-12: Psychological distress	30	
Kessler (4)	34	
36 Item Short Form Survey (SF-36) – health incl. general mental health - Mental Health Inventory (MHI-5)	46	51
GAD2 General Anxiety Disorder (2)	COVID sweeps	51
PHQ2 Patient Health Questionnaire (2)	COVID sweeps	51

Mental Health measures in childhood	BCS70
Rutter Behaviour Scales	5, 10, 16
Conners Hyperactivity Rating Scale	10, 16
Child Development Scale*	10
Malaise Inventory: Psychological distress	5, 16, 16
GHQ-12: Psychological distress	16

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self-report and
parents well-being

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Well-being scales in the cohorts

Well-being measure	Previous sweeps	Age 52-53
Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS)	42, 46	51
Life satisfaction	26, 30, 34, 42, 46	51
Self-efficacy	26, 30, 34, 42	51
Loneliness (UCLA)	COVID sweeps	51

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BCS70 age 51: cognitive measures

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- National Adult Reading Test (NART)
 - Tests knowledge of vocabulary and premorbid ability
 - Read aloud 25 unphonetic words e.g. naive
- Immediate word-list recall
- Animal naming
- Letter cancellation
- Delayed word-list recall

(Main) cognitive ability/skill	Age 42	Age 46	Age 51
Verbal skills: APU Vocabulary test National Adult Reading Tests (NART)	Y		Y
Executive function: Verbal fluency (animal naming):		Y	Y
Memory: Immediate word recall Delayed word recall		Y Y	Y Y
Processing speed: Timed letter search/cancellation		Y	Y

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Age 51: sensitive questions

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Domestic violence: Has a partner or ex-partner ever..... IF so: Any of these things in the last 12 months

- Harassed or bothered you via mobile phone, email or the internet
- Prevented you from having your fair share of the household money
- Used force on you
- Frightened or threatened you
- Made you engage in sex or certain sexual acts against your will

- Political attitudes and voting
- Relationships
- Share of household tasks
- Children who died
- Unsuccessful pregnancies
- Gynaecological problems
- Menstruation

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Age 51: some other question areas

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- Life long learning
 - Types of qualifications gained
 - Academic and vocational
- Retirement
 - Worry about how much I will have to live on
 - I can't afford to put money aside for retirement at the moment
- Caring
 - Child with special needs & hours spend helping
 - Partners' health, hours spent helping partner (physical, mental, emotional or memory problem)
 - Parents (and partners' parents) alive & type of help & hours
- Social provision Scale – social support
- Personality (Mini International Personality Item pool (IPIP) – 20 items
- Social media use

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Examples of comparable measures in: BCS70 age 51 and 1958 NCDS age 50

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General health
SF36 (physical function)
Mental health
Cognitive function
AUDIT-PC (Alcohol Use Disorders
Identification Test)

Well-being
Happiness
Self-efficacy
Life satisfaction

Financial circumstances
Retirement Q's

Personality
Trust
Interest in politics
Share of household tasks

Care of parents
Values
Leisure activities
Neighbourhood

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Age 51 Survey: methodology

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Overview

- Total number of interviews achieved = 8,016
- Fieldwork period overall ran from 2020 – 2024 due to COVID pandemic
 - Pilots: January to March 2020 and September to October 2020
 - Main stage (incl soft launch): June 2021 – November 2023
 - Mop-up: December 2023 – January 2024
- Included the following elements:
 - Cognitive assessments
 - Sensitive questions
 - Consent to take part in Online Dietary Questionnaire (ODQ)
 - Data linkage consent
 - Paper questionnaire



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Overall approach and timing

January to March 2020: in-person pilot

Autumn 2020: video only pilot

Summer 2021: BCS70 video only soft launch/W1

October 2021 - Spring 2022: video only main stage waves

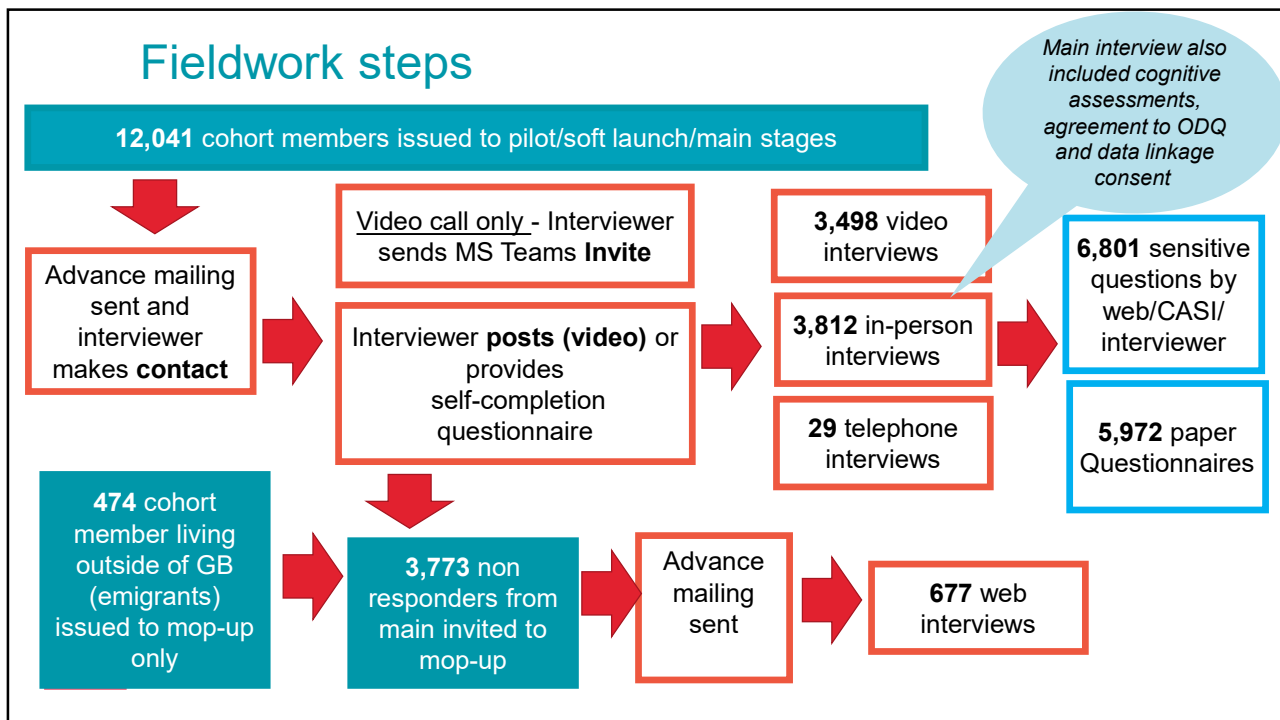
Spring 2022 – November 2023:
In-person with option of video call if requested or no 'in-person'
 interviewer Re-issues and reallocations (video – in-person)

December 2023-January 2024 Mop-up:

Web only – non responders and emigrants

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Fieldwork steps



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Main stage and pilots

- Interview an average of 80 minutes long – administered in-person or by video (small number of cases by telephone)
- Includes proxy cases and partial interviews
- Includes the following elements:
 - Cognitive assessments
 - Sensitive questions
 - Consent to take part in Online Dietary Questionnaire (ODQ)
 - Data linkage consent
 - Paper questionnaire
- Excludes cases living outside of GB 'emigrant' cases

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Some adaptations made to the questionnaire between stages but data includes all stages if no significant changes to question

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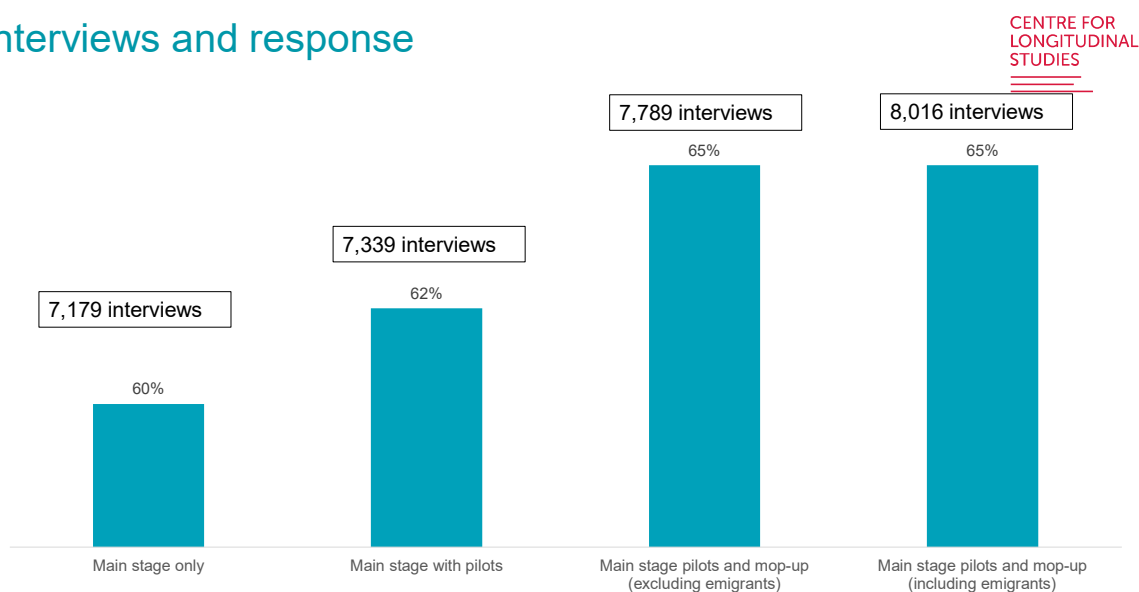
Mop-up

- Average of 25 minutes long – administered by web survey
- Partial interviews included
- Did not include the following elements:
 - Cognitive assessments
 - Sensitive questions
 - Consent to take part in Online Dietary Questionnaire (ODQ)
 - Data linkage consent
 - Paper questionnaire – although a small number returned and available in data
- Data from this questionnaire merged with main stage and pilot data

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Interviews and response

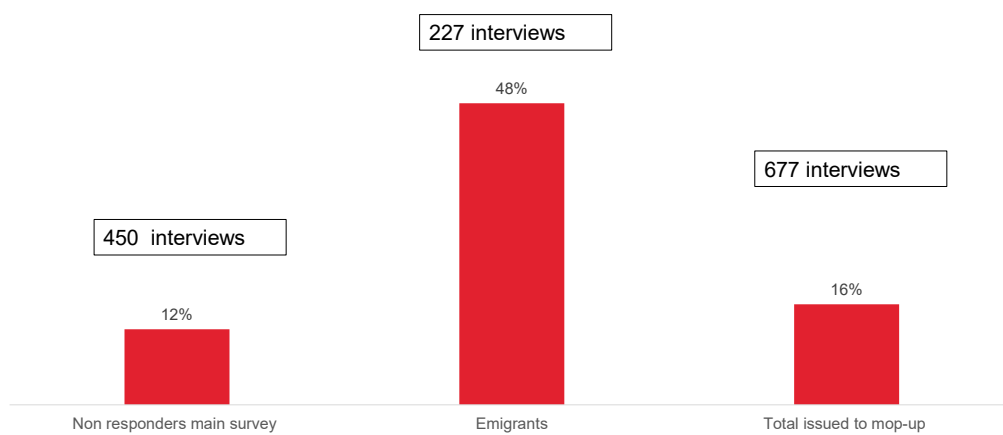


Response for main stage and pilots based on issued sample of 12041 (minus ineligible 111). 474 additional cases added for mop-up.

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Mop-up response

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3,337 non-responders from main and pilot stages issued to mop-up and 474 emigrant cases. Total mop-up issued sample = 4,247

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Mode of completion

Mode	Frequency	Percent
In-person interview	3,812	47.6%
Video call interview	3,498	43.6%
Telephone interview	29	0.4%
Web interview	677	8.4%
Total interviews	8,016	100%

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Fieldwork dates

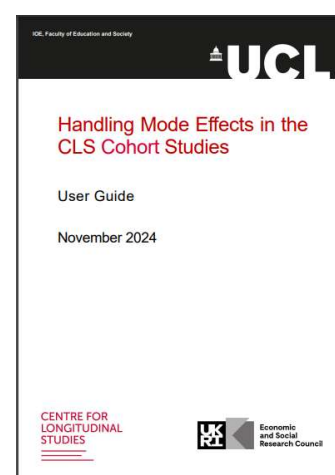
Stage	Mode	Date start	Date end
Pilot	In-person	January 2020	March 2020
Video pilot	Video	September 2020	October 2020
Soft launch	Video	June 2021	September 2021
Main stage (W2-W4)	Video	October 2021	June 2022
Main stage (W5-W7)	In-person	May 2022	November 2023
Mop-up	Web	December 2023	January 2024

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Mode effects in the Age 51 survey

- Differences in responses between survey modes can arise due to:
 - Mode effects (i.e. measurement error caused by differences in how questions are presented), or
 - Mode selection (i.e. the differences in the types of respondents who choose each mode)
- Accounting for survey mode is **necessary** when response differences are driven by mode effects (measurement error)
- Should explore for non-random allocation to survey mode – by specific characteristics (mode selection)



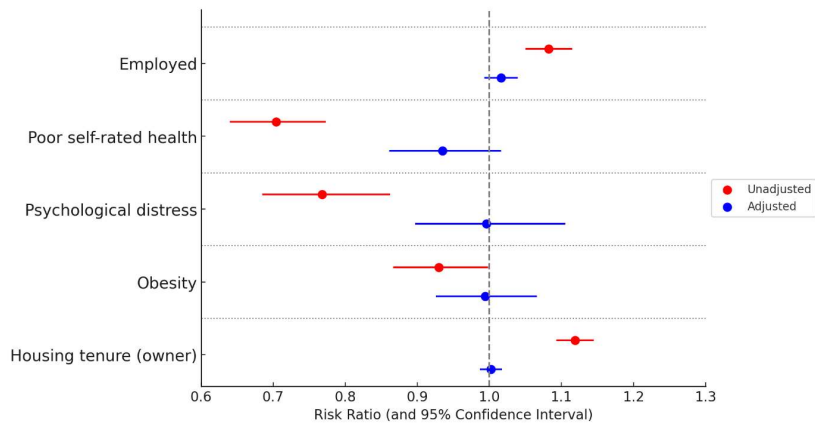
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Age 51 User Guide: Chapter 9

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Mode effects in the Age 51 survey

Comparing video and in person interview

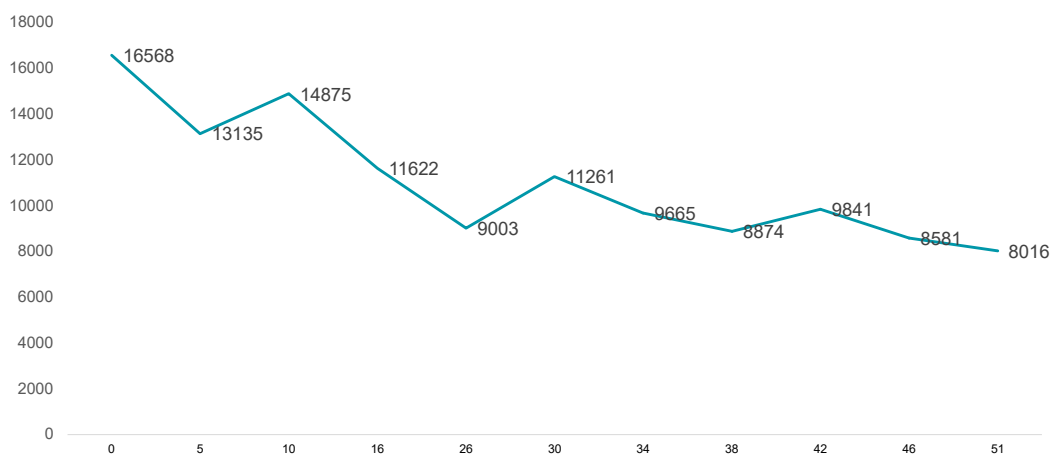


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Here five key outcomes at age 51
unadjusted and adjusted for wide range
of factors across the lifecourse

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Response in BCS70



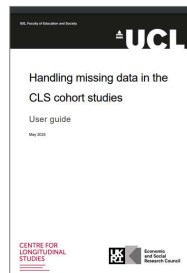
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Dealing with unit non-response in BCS70

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

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<https://cls.ucl.ac.uk/data-access-training/handling-missing-data/>

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Dealing with unit non-response in the Age 51 survey

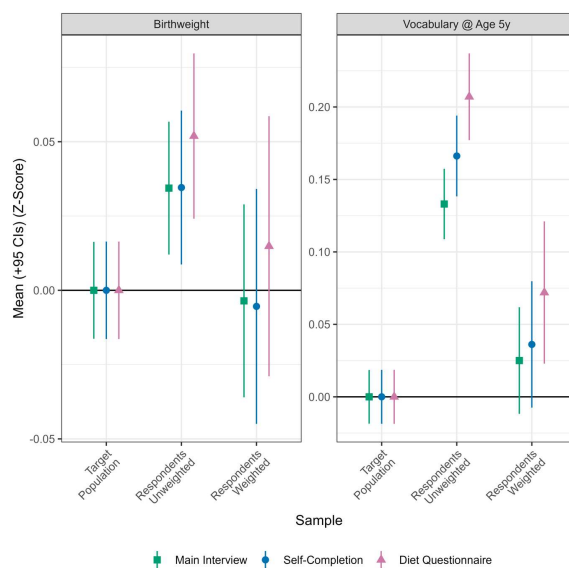
- To correct for non-response in the Age 51 survey, non-response weights are provided
- Target population = individuals born in a week in 1970 and at the start of fieldwork (Age 51) were alive and living in Great Britain (n=15,780)
- Response is conditioned on a set of covariates informed from the CLS Missing Data Strategy (see Age 51 user guide and resources)
- Three weights (in the main data file):
 - Main survey: **bd11weight_main**
 - Self-completion survey: **bd11weight_psc**
 - Online dietary questionnaire: **bd11weight_odq**

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Age 51 User Guide: Chapter 8

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Reducing bias using Age 51 non-response weights



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BCS70 age 51: Initial Findings - a comparison with NCDS age 50 -

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Initial Findings: content

- What aspects of life are the most important
- Physical health
- Mental wellbeing
- Economic activity and hours worked
- Division of labour across domestic tasks

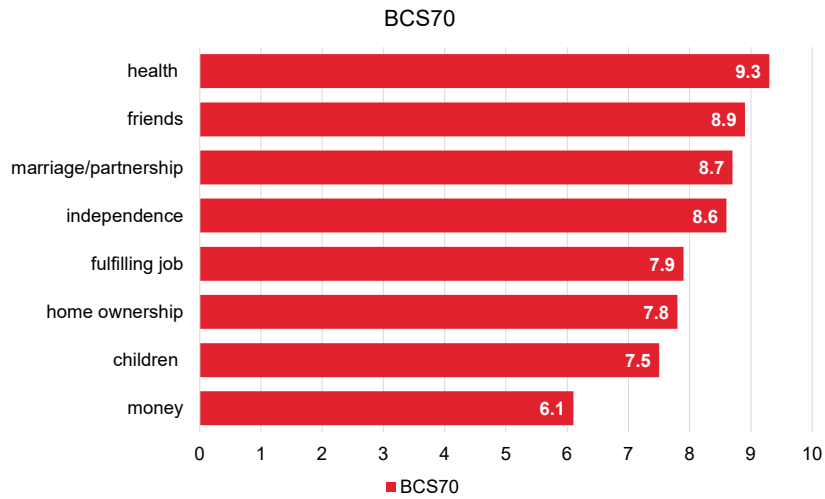
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What's the most important?

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BCS70: what's the most important aspect of life?

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Physical Health

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Physical health measures

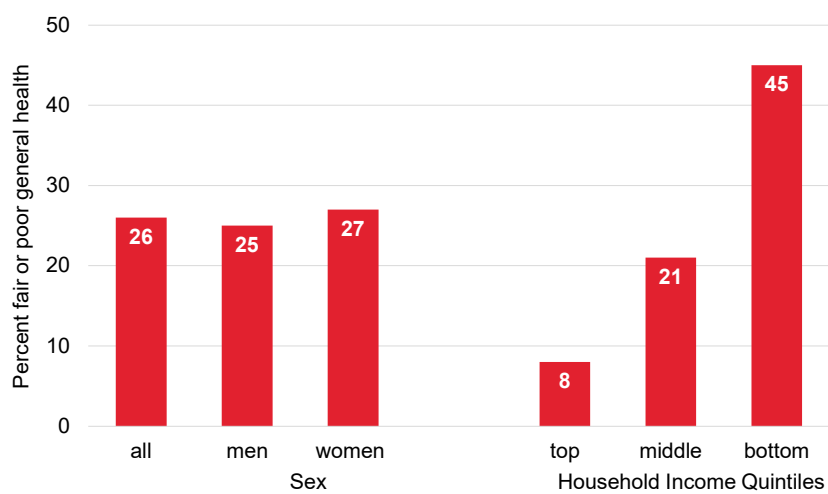
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- **General Health: excellent – good – average – fair – poor**
 - comparing those with ‘excellent’, ‘very good’ or ‘average’ health vs ‘fair’ or ‘poor’ health
- **Prevalence of obesity**
- **Prevalence of diabetes**

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BCS70: % ‘fair/poor’ self-reported health

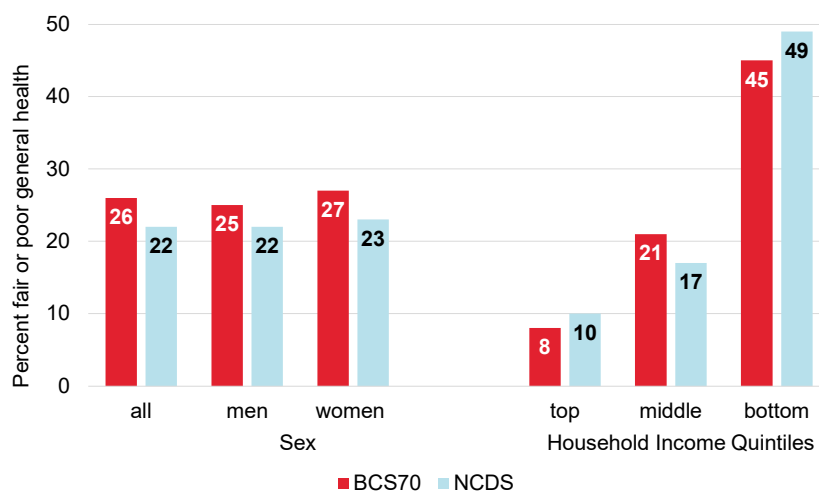
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BCS70 & NCDS: % 'fair/poor' self-reported health

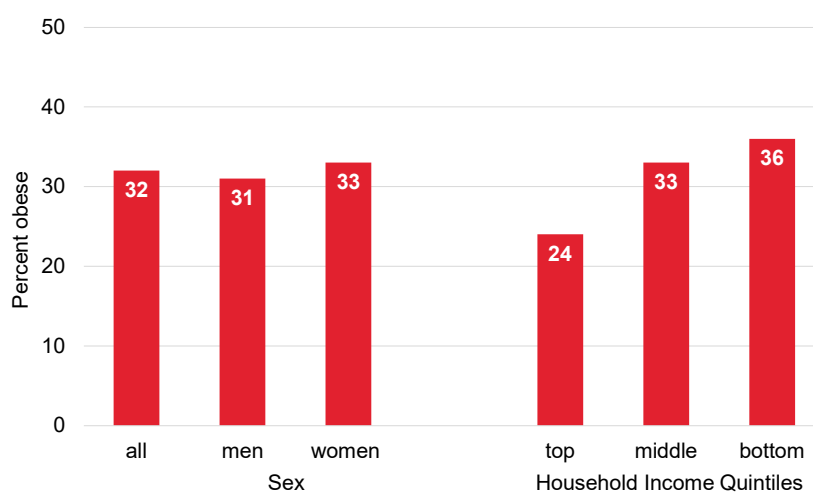
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BCS70: % obese

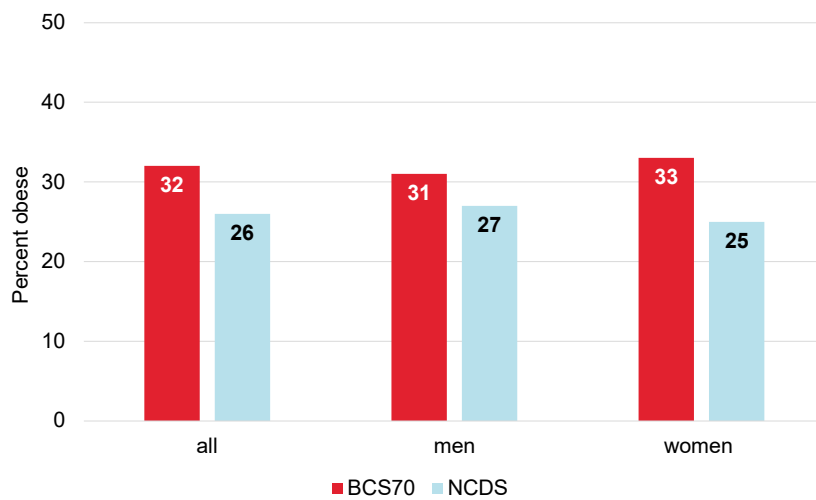
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BCS70 & NCDS: % obese

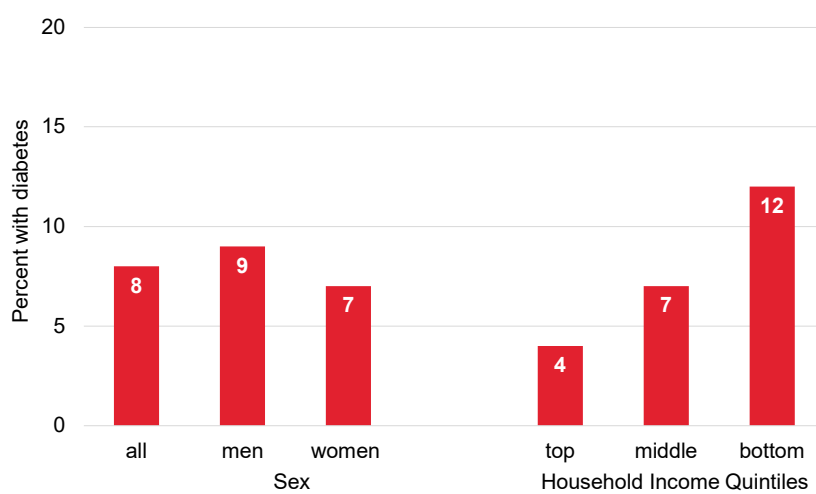
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BCS70: % with diabetes

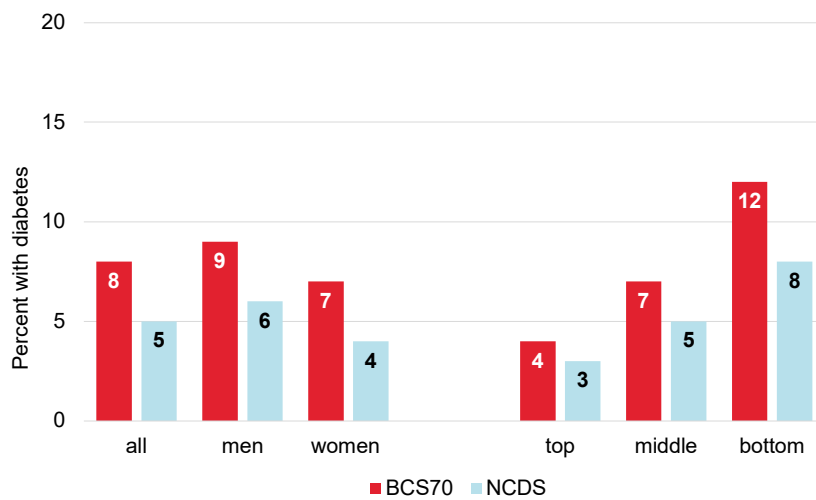
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BCS70 & NCDS: % with diabetes

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Mental Health

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Mental health measures

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- **Malaise: (shortened) 9-question inventory**
 - a score range of 0-9 with 4+ indicating a high number of symptoms associated with psychological distress

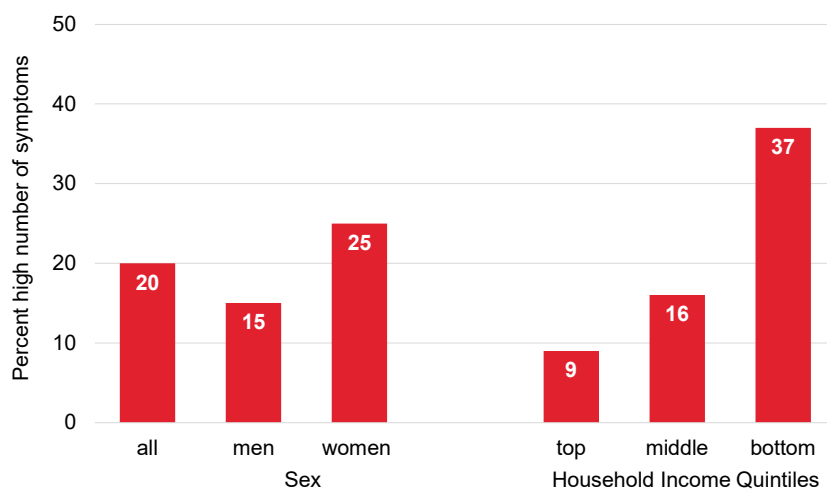
The 9 questions are:

- Do you feel **tired** most of the time?
- Do you often feel **miserable** or **depressed**?
- Do you often get **worried** about things?
- Do you often get in a **violent rage**?
- Do you often suddenly become **scared** for no good reason?
- Are you easily **upset** or **irritated**?
- Are you constantly **keyed up** and **jittery**?
- Does every little thing **get on your nerves** and wear you out?
- Does your **heart** often **race like mad**?

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BCS70: % with psychological distress

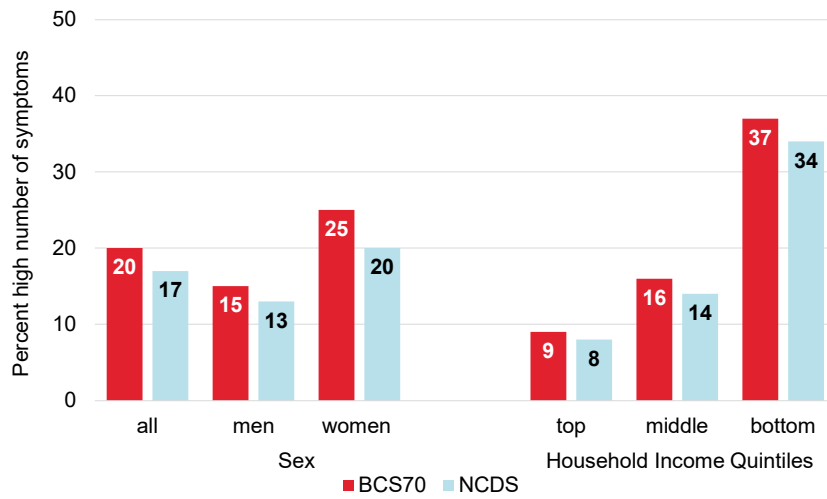
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BCS70 & NCDS: % with psychological distress

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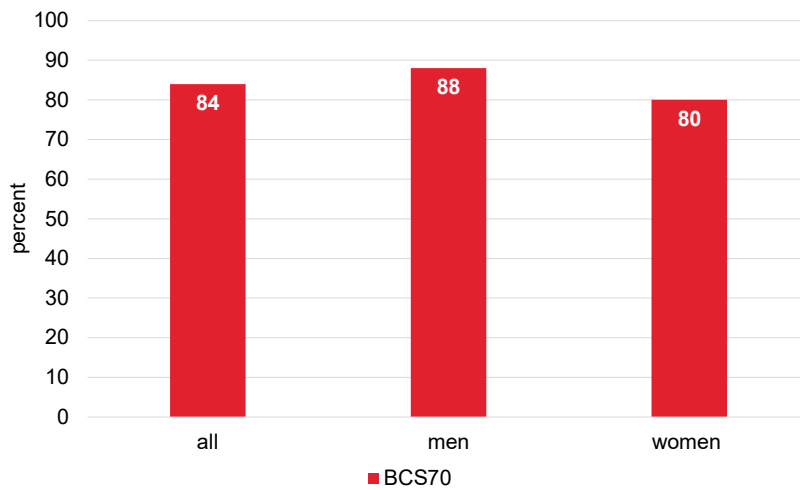
Economic Activity & Hours Worked

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BCS70: % economically active

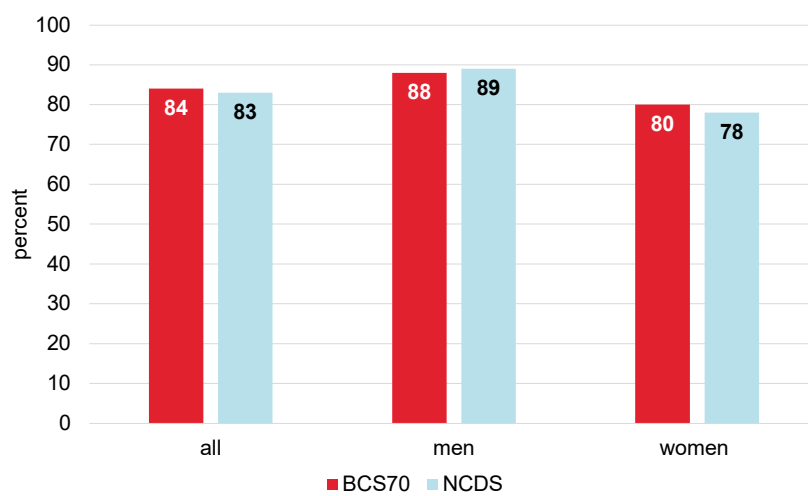
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61

BCS70 & NCDS: % economically active

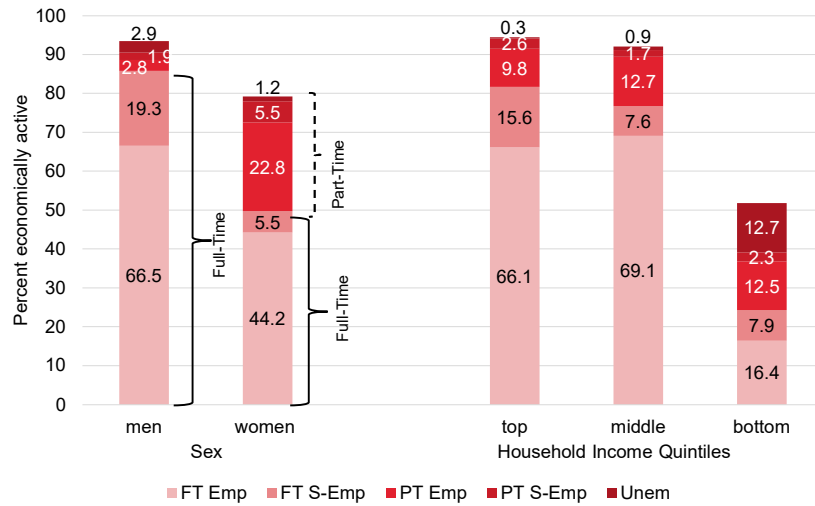
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62

BCS70: % economically active

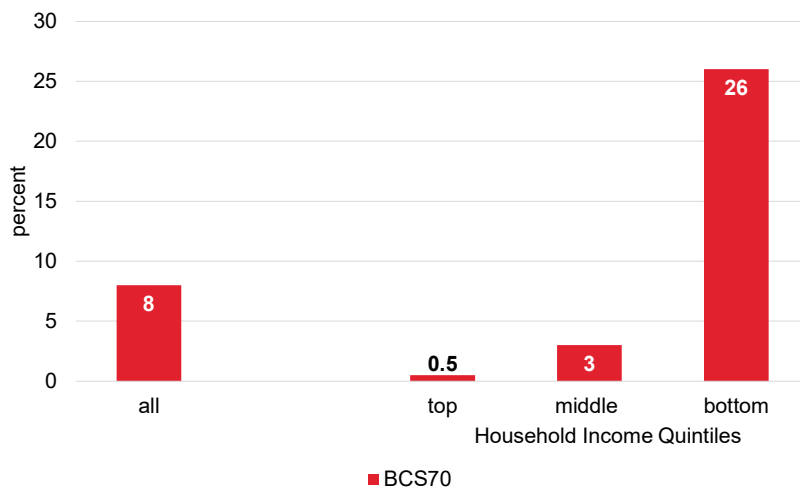
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BCS70 % sick

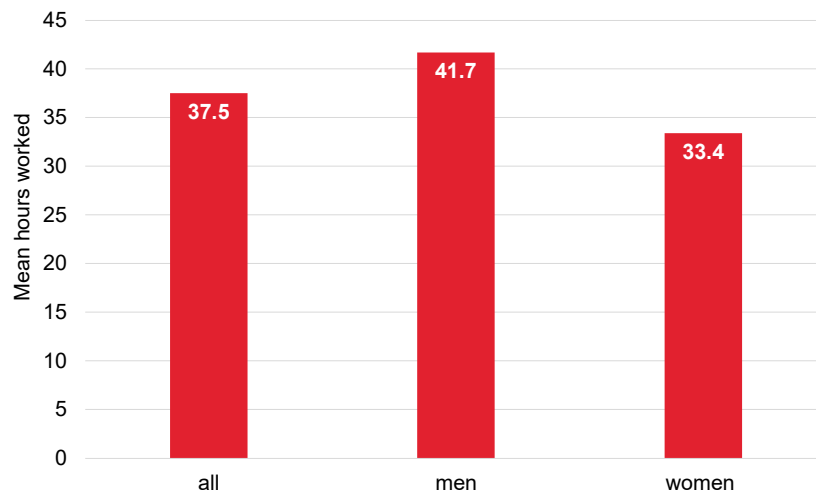
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BCS70: hours worked per week

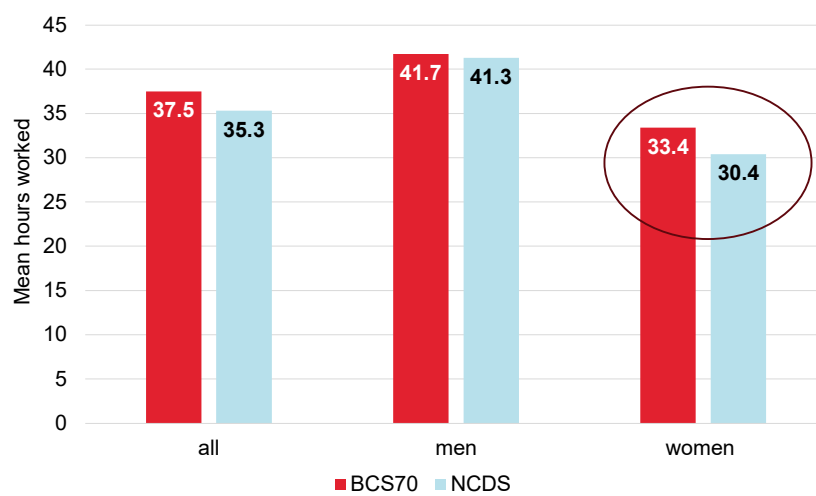
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BCS70 & NCDS: hours worked per week

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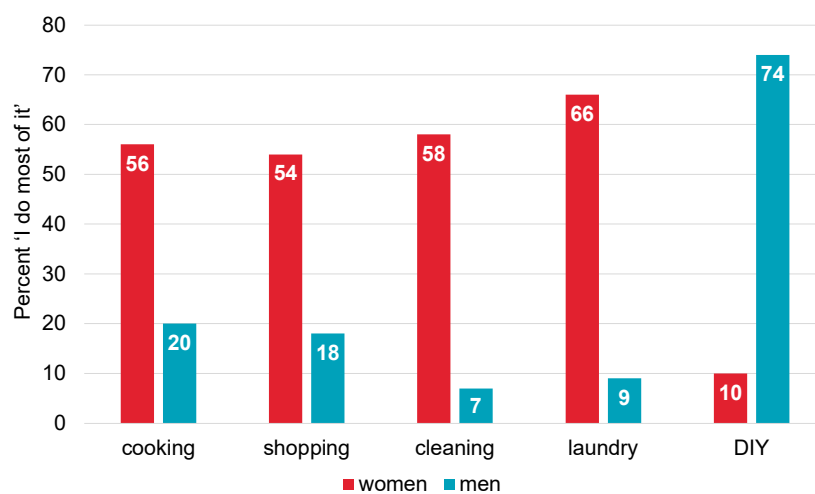


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Division of domestic tasks

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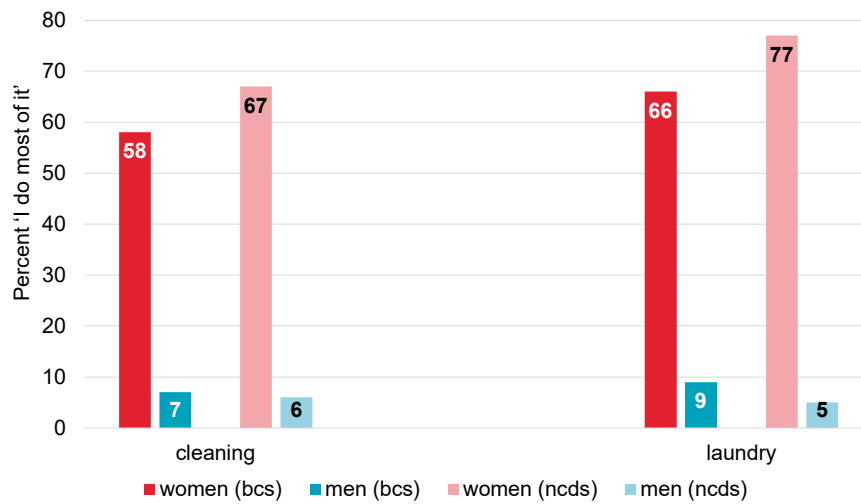
BCS70: % reporting 'I do most of it'



68

BCS70 & NCDS: % reporting 'I do most of it'

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Summary of Findings

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Summary of initial findings (1)

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- Good **health matters most** and **money matters least**
- Poor **physical health** is far more prominent in low-income households in both generations
- Levels of **obesity** and **diabetes** have increased in the 1970 cohort, and most of all among low-income households (diabetes)
- **Psychological distress** has increased in the 1970 cohort, particularly among women
 - Psychological distress is **4x higher in low-income households** on both generations

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Summary of initial findings (2)

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- Proportions of 51-year-olds **economically active** in the 1970 cohort are very similar to 50-year-olds in the 1958 cohort
 - CMs in **bottom income households** are far less likely to be economically active, with higher rates of **unemployment** or being out of work due to **poor health**
 - Women in the 1970 cohort work **3 hours more per week** than women in the 1958 cohort at 50, but **domestic tasks** remain firmly “**women’s work**”

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