



## Teaching students quantitative methods using resources from the British Birth Cohorts

### Key Variables

This document summarises the *Key Variables* resources for teaching students quantitative methods using the British Birth Cohorts. This set of resources includes two data files, *b034KeyVariables.sav* and *n042KeyVariables.sav* and this accompanying descriptive document, *KeyVariables.doc*.

**Data files:** two SPSS data files have been prepared.

1. The **b034KeyVariables.sav** data file based on information provided by the 1970 British Cohort Study or BCS70.
2. The **n042KeyVariables.sav** data file based on the 1958 National Child Development Study or NCDS.

Each data file contains socio-economic information from childhood and adult life, including parental education, family social class in childhood, and cohort members' own education, employment and occupation experiences.

**Word document:** KeyVariables.doc contains

- a) A brief summary of BCS70 and NCDS
- b) A list of all the variables in the two *SPSS* data files: *b034KeyVariables.sav* (Table 1) and *n042KeyVariables.sav* (Table 2). (Original variable names from the full dataset and documentation of a particular survey are also included.)
- c) A description of how longitudinal information was used to derive highest qualification variables for NCDS cohort members.

## **British Cohort Studies**

The studies involve multiple surveys of large numbers of individuals from birth and throughout their lives. They have collected information on education and employment, family and parenting, physical and mental health, and social attitudes. Because they are longitudinal studies that follow the same groups of people throughout their lives, they show how histories of health, wealth, education, family and employment are interwoven for individuals, vary between them and affect outcomes and achievements in later life.

### **The 1958 National Child Development Study (NCDS)**

The National Child Development Study (NCDS) is a continuing, multi-disciplinary longitudinal study which takes as its subjects all babies born in England, Scotland and Wales in one week in March 1958. Information was gathered from almost 17,500 babies. Following the initial birth survey in 1958, there have to date been seven attempts to trace all members of the birth cohort in order to monitor their physical, educational, social and economic development. These were carried out by the National Children's Bureau in 1965, 1969, 1974, and 1981; by the Social Statistics Research Unit, City University, in 1991; and by the Centre for Longitudinal Studies, IoE in 1999/2000 and 2004/2005.

### **The 1970 British Cohort Study (BCS70)**

BCS70 began when data were collected about the births and families of just under 17,200 babies born in England, Scotland, Wales and Northern Ireland in a particular week in April, 1970. At this time, the study was named the British Births Survey (BBS), and it was sponsored by the National Birthday Trust Fund in association with the Royal College of Obstetricians and Gynaecologists. Following the initial birth survey in 1970, there have to date been six attempts to

trace all members of the birth cohort in order to monitor their physical, educational, social and economic development. These were carried out by the Department of Child Health, Bristol University in 1975 and 1980 and the study at these times was named the Child Health and Education Study (CHES); in 1986 by the International Centre for Child Studies and named Youthscan; in 1996 by the Social Statistics Research Unit, City University; and by the Centre for Longitudinal Studies, IoE in 1999/2000 and 2004/2005.

For further details of these studies see [www.cls.ioe.ac.uk](http://www.cls.ioe.ac.uk) and follow the links.

**Table 1: Variables in 'b034KeyVariables.sav' data file**

<b><u>Name</u></b>	<b><u>Label</u></b>
<b>key</b>	unique case identifier of cohort member
<b>bsex</b>	bcs70 age 0 - 34: sex of cohort member (derived from variables in childhood a0255 d003 sex10)
<b>b0region</b>	bcs70 1970: Region of residence of mother at CM birth (a0004b)
<b>b0mumage</b>	bcs70 1970: Mothers age at CM birth (a0005a)
<b>b0marry</b>	bcs70 age 0: marital status of CM mother at CM birth (a0012)
<b>b0agefb</b>	bcs70 age 0: CM mother age at 1st birth (derived from various variables)
<b>b0teenmo</b>	bcs70 age 0: ever a teenage mother (b0agefb grouped)
<b>b0bwght</b>	bcs70 age 0: birthweight of CM in grams (a0278)
<b>b0bwght1</b>	bcs70 age 0: birthweight of CM in grams < 2515 (a0278)
<b>b0mumed</b>	bcs70 age 0: age mother completed full-time education (a0009)
<b>b0mumedg</b>	bcs70 age 0: mother in education post-15 (a0009)
<b>b0daded</b>	bcs70 age 0: age father completed full-time education (a0010)
<b>b0dadedg</b>	bcs70 age 0: father in education post-15 (a0010)
<b>b0fsoc</b>	bcs70 age 0: social class at birth: fathers occupation (a0014)
<b>b0msoc</b>	bcs70 age 0: social class at birth: mothers occupation (a0018)
<b>b0psoc</b>	bcs70 age 0: social class at birth: fathers occupation (or mothers if missing) (a0014 + a0018)
<b>b5fsoc</b>	bcs70 age 5: social class from fathers occupation (e197)
<b>b5msoc</b>	bcs70 age 5: social class from mothers occupation (e206)
<b>b5psoc</b>	bcs70 age 5: social class from fathers occupation (or mothers if missing) (e197 + e206)
<b>b5crowd</b>	bcs70 age 5: bcs70 age 5: persons per room ratio (e228b)

**Table 1: Variables in 'b034KeyVariables.sav' data file**

<b><u>Name</u></b>	<b><u>Label</u></b>
<b>b5crowdg</b>	bcs70 age 5: bcs70 age 5: persons per room ratio – grouped (e228b)
<b>b5ownh</b>	bcs70 age 5: home ownership (e220)
<b>b5mhq</b>	bcs70 age 5: highest qualification of CM mother (e189a)
<b>b5dhq</b>	bcs70 age 5: highest qualification of CM father (e189b)
<b>b5ethnic</b>	bcs70 age 5: ethnic group of cohort member (e245)
<b>b10fsoc</b>	bcs70 age 10: social class from fathers occupation (c3.4)
<b>b10msoc</b>	bcs70 age 10: social class from mothers occupation (c3.11)
<b>b10psoc</b>	bcs70 age 10: social class from fathers occupation (or mothers if missing) (c3.4 + c3.11)
<b>b10ben</b>	bcs70 age 10: received state benefit last 12 months? (c8.1 to c8.11)
<b>b10inc</b>	bcs70 age 10: gross weekly family income (c9.1 to c9.8)
<b>b10fsm</b>	bcs70 age 10: child receives free school meals (m126)
<b>b10mint</b>	bcs70 age 10: CM mum interested in child's education (j097)
<b>b10fint</b>	bcs70 age 10: CM dad interested in child's education (j098)
<b>b10ledu</b>	bcs70 age 10: age parent(s) thinks CM will leave school (m134)
<b>b10read</b>	bcs70 age 10: Edinburgh Reading Test score (i3003 to i3069)
<b>b10maths</b>	bcs70 age 10: Friendly Maths Test score (i2504 to i2575)
<b>b16fsoc</b>	bcs70 age 16: social class from fathers occupation (t11.2)
<b>b16msoc</b>	bcs70 age 16: social class from mothers occupation (t11.9)
<b>b16psoc</b>	bcs70 age 16: social class from fathers occupation (or mothers if missing) (t11.2 + t11.9)
<b>b16finhd</b>	bcs70 age 16: family troubled by financial hardship in last year (oe4.1)
<b>b26soc</b>	bcs70 age 26: social class from current occupation (rgsc91)
<b>b30soc</b>	bcs70 age 30: social class from current occupation (sc)
<b>b34soc</b>	bcs70 age 34: social class from current occupation (b7sc)
<b>b34hq5</b>	bcs70 age 34: highest academic qualification – 5 groups (derived variable bd7hq5)
<b>b34hq13</b>	bcs70 age 34: highest academic qualification – 13 groups (derived variable bd7hq5)
<b>b34lefted</b>	bcs70 age 34: age cohort member left full-time education (b7lftme2)

**Table 2: Variables in 'n042KeyVariables.sav' data file**

<b><u>Name</u></b>	<b><u>Label</u></b>
<b>serial</b>	unique serial number of cohort member
<b>n0sex</b>	ncds age 0: sex of cohort member (n622)
<b>n0region</b>	ncds age 0: Region where cm born (n624)
<b>n0bwght</b>	ncds age 0: birthweight of cm in grams (n574 + n646)
<b>n0bwght1</b>	ncds age 0: birthweight of cm in grams < 2515 (n574 + n646)
<b>n0rgsc</b>	ncds age 0: social class from fathers occupation or grandfather (if missing or single mom) (n236 + n526)
<b>n0mumed</b>	ncds age 0: mum left education at min age (n537)
<b>n7rgsc</b>	ncds age 7: social class from fathers occupation (n190)
<b>n7crowd</b>	ncds age 7: persons per room ratio (n201 n419)
<b>n7crowdg</b>	ncds age 7: persons per room ratio – grouped (n201 n419)
<b>n7ownh</b>	ncds age 7: home ownership (n200)
<b>n11rgsc</b>	ncds age 11: social class from fathers occupation (n1657)
<b>n11fsm</b>	ncds age 11: CM receives free school meals? (n858)
<b>n11bens</b>	ncds age 11: family received state benefits in last year (n1176 to n1180)
<b>n11mint</b>	ncds age 11: mother's interest in CM education (n852)
<b>n11fint</b>	ncds age 11: father's interest in CM education (n851)
<b>n11read</b>	ncds age 11: reading score (n923)
<b>n11maths</b>	ncds age 11: maths score (n926)
<b>n16rgsc</b>	ncds age 16: social class from fathers occupation (n2384)
<b>n16mrgsc</b>	ncds age 16: social class from mothers occupation (n2392 + n2393)
<b>n16ledu</b>	ncds age 16: age cm parent(s) hope cm will leave school (n2407)
<b>n16finhd</b>	ncds age 16: family experienced financial hardship (n2441)
<b>n23rgsc</b>	ncds age 23: social class from current occupation (n6149)
<b>n33rgsc</b>	ncds age 33: social class from current occupation (n6166)
<b>n42rgsc</b>	ncds age 42: social class from current occupation (sc)
<b>n42lefted</b>	ncds age 42: age cohort member left full-time education (actagel2 agelfte2 furthed2 lftmore2)
<b>n42hq8</b>	ncds age 42: highest academic qualification - 8 groups (hqaca00)*.
<b>n42hq6</b>	ncds age 42: highest academic qualification - 6 groups (hqaghm00)*.

\*these are longitudinal variables, derived from information collected in 1991 and/or 1999/2000.

## **NCDS Longitudinal Derived Variables**

### **Highest Qualification held at age 42**

In 1991, all cohort members were asked about all qualifications they had achieved between age 16 and age 33.

In 1999/2000, questions were dependent upon participation in the 1991 survey.

- a) if a cohort members had participated in the 1991 survey, they were only asked about the qualifications they had achieved between age 33 and 42.
- b) if a cohort member had *not* participated in the 1991 survey, they were asked about all qualifications they had achieved between age 16 and 42.

The information on qualifications from the 1991 and the 1999/2000 survey was combined to produce the derived highest qualification held in 1999/2000 variables n42hq8 (original derived variable hqaca00) and n42hq6 (original derived variable hqaghm00).

- Qualification variables from 1991 survey: **n501441 to n501469**
- Qualification variables from 1999/2000 survey: **edqtyp14 to edqtyp26, edgcse1 edgcse2 edolev1 edolev2 edcse1 edcse2 edasl1 edasl2 edgcasl1 edgcasl2 edscot1 edscot2 edscot3 edscot4 edscot5 edscot6 numdeg numothdg numparam.**

The original SPSS code used to construct the derived summary highest qualification variables is very long and not included here.