



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

### Measuring behaviour difficulties of children and teenagers

**RutterBehaviourVariables.doc:** this document includes

- a) A summary of all the variables in the *b016rutter.sav* and the *n016rutter.sav* SPSS data files
- b) A list of all the variables in the *b016rutter.sav* and the *n016rutter.sav* SPSS data files. (The original variable name that was assigned to a question and found in the full dataset and documentation of a particular survey is also included.)
  - *b016rutter.sav* contains all individual Rutter Behaviour Scale questions asked in BCS70 at ages 5, 10 and 16, overall summary Behaviour scores at ages 5, 10 and 16, together with a variety socio-economic measures from the cohort members childhood and adult years.
  - *n016rutter.sav* contains all individual Rutter Behaviour Scale questions asked in NCDS at ages 7, 11 and 16, overall summary Rutter Behaviour Scale scores at ages 7, 11 and 16, together with a variety socio-economic measures from the cohort members childhood and adult years.
- c) SPSS syntax showing how the continuous and categorical summary Rutter behaviour score variables were derived.

## **The NCDS Rutter Behaviour Data file**

**File:** 'n016rutter.sav'

### **The data**

This longitudinal dataset includes information from the 1958 National Child Development Study (NCDS), for looking at the relationship between socio-economic circumstances and behaviour difficulties in childhood and adult outcomes. Users can look at the stability or changes in a child's behaviour over time and explore the relationship between behaviour difficulties and the socio-economic characteristics of their family when they were growing up, together with their own occupation and education outcomes in adulthood. This file contains 113 variables, representing information collected from cohort members' birth in 1958 through to 2000 (when they had reached age 42). Information included in this file from birth is provided by the cohort members' mothers. Information collected at ages 7 and 11 is provided by the mother or father. Information at age 16 was provided by the child's mother (or father) and their teacher. At age 23, 33 and 42 the cohort member themselves provided the information. There are 18,560 cases in the dataset, 8,960 are women and 9,593 are men (7 did not have a sex recorded at their premature birth). At age 7, parents answered at least one Rutter question for 14,590 cohort members; at age 11, parents answered at least one Rutter question for 13,798 cohort members; at age 16 parents answered at least one Rutter question for 11,645 cohort members and teachers answered at least one Rutter question for 12,483 cohort members. To enable the information included here to be cross referenced with the original questionnaire documentation, original variable names are included in the variable label. The variables are listed in Table 1.

## **The BCS70 Rutter Behaviour Data file**

**File:** 'b016rutter.sav'

### **The data**

This longitudinal dataset includes information from the 1970 British Cohort Study (BCS70), focusing particularly on behaviour difficulties in childhood. Users can look at the stability or changes in a child's behaviour over time and explore the relationship between behaviour difficulties and the socio-economic characteristics of their family when they were growing up, together with their own occupation and education outcomes in adulthood. This file contains 113 variables, representing information collected from cohort members' birth in 1970 through to 2004 (when they had reached age 34). Data from birth are provided by the cohort members' mothers; data collected at ages 5, 10 and 16 were from the mother or father and information included at ages 30 and 34 was provided by the cohort member themselves. There are 18,732 cohort members in the dataset, 9,740 (52%) are men and 8,984 (48%) are women (8 did not have a sex recorded at their premature birth). At age 5, parents answered at least one Rutter question for 13,023 cohort members; at age 10, parents answered at least one Rutter question for 13,548 cohort members; at age 16 parents answered at least one Rutter question for 8,713 cohort members. To enable the information included here to be cross referenced with the original questionnaire documentation, original variable names are included in the variable label. The variables are listed in Table 2.

**Table 1: Variables in 'n016rutter.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>n7mrutt</b>	ncds age 7: total Rutter Behaviour score (mother)
<b>n7mruttg</b>	ncds age 7: total Rutter Behaviour score (mother) - grouped
<b>n7in</b>	ncds age 7: cohort member has information for at least one Rutter question
<b>n11mrutt</b>	ncds age 11: total Rutter Behaviour score (mother)
<b>n11mruttg</b>	ncds age 11: total Rutter Behaviour score (mother) - grouped
<b>n11in</b>	ncds age 11: cohort member has information for at least one Rutter question
<b>n16mrutt</b>	ncds age 16: total Rutter Behaviour score (mother)
<b>n16mruttg</b>	ncds age 16: total Rutter Behaviour score (mother) - grouped
<b>n16in</b>	ncds age 16: cohort member has information for at least one Rutter question
<b>n16rutt</b>	ncds age 16: total Rutter Behaviour score (teacher)
<b>n16ruttgA</b>	ncds age 16: total Rutter Behaviour score (teacher) – grouped to match mother variables
<b>n16ruttgB</b>	ncds age 16: total Rutter Behaviour score (teacher) – grouped standard way
<b>n16int</b>	ncds age 16: cohort member has information for at least one Rutter question (teacher)
<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 (actage12 agelfte2)

**Table 1: Variables in 'n016rutter.sav' data file**

<b><u>Name</u></b>	<b><u>Label</u></b>
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<b>n42hq8*</b>	ncds age 42: highest academic qualification - 8 groups (hqaca00).
<b>n42hq6*</b>	ncds age 42: highest academic qualification - 6 groups (hqaghm00).
<b>n7rut01</b>	ncds age 7: has difficulty in settling to anything for more than a few moments (n133)
<b>n7rut02</b>	ncds age 7: prefers to do things on his/her own rather than with others (n134)
<b>n7rut03</b>	ncds age 7: is bullied by other children (n135) (this question is not one of the 18 questions in section 3 of Child Scale A)
<b>n7rut04</b>	ncds age 7: destroys own or others belongings (n136) (this question is not one of the 18 questions in section 3 of Child Scale A)
<b>n7rut05</b>	ncds age 7: is miserable or tearful (n137)
<b>n7rut06</b>	ncds age 7: is squirmy or fidgety (n138)
<b>n7rut07</b>	ncds age 7: worries about many things (n139)
<b>n7rut08</b>	ncds age 7: is irritable, quick to fly off the handle (n140)
<b>n7rut09</b>	ncds age 7: sucks thumb or finger during day (n141)
<b>n7rut10</b>	ncds age 7: is upset by new situation (n142)
<b>n7rut11</b>	ncds age 7: has twitches or mannerisms of the face, eyes or body (n143)
<b>n7rut12</b>	ncds age 7: fights with other children (n144)
<b>n7rut13</b>	ncds age 7: bites nails (n145)
<b>n7rut14</b>	ncds age 7: is disobedient at home (n146)
<b>n11rut01</b>	ncds age 11: has difficulty in settling to anything for more than a few moments (n1447)
<b>n11rut02</b>	ncds age 11: prefers to do things on his/her own rather than with others (n1448)
<b>n11rut03</b>	ncds age 11: is bullied by other children (n1449) *(this question is not one of the 18 questions in section 3 of Child Scale A)
<b>n11rut04</b>	ncds age 11: destroys own or others belongings (n1450) *(this question is not one of the 18 questions in section 3 of Child Scale A)
<b>n11rut05</b>	ncds age 11: is miserable or tearful (n1451)
<b>n11rut06</b>	ncds age 11: is squirmy or fidgety (n1452)
<b>n11rut07</b>	ncds age 11: worries about many things (n1453)
<b>n11rut08</b>	ncds age 11: is irritable, quick to fly off the handle (n1454)
<b>n11rut09</b>	ncds age 11: sucks thumb or finger during day (n1455)
<b>n11rut10</b>	ncds age 11: is upset by new situation (n1456)
<b>n11rut11</b>	ncds age 11: has twitches or mannerisms of the face, eyes or body (n1457)
<b>n11rut12</b>	ncds age 11: fights with other children (n1458)
<b>n11rut13</b>	ncds age 11: bites nails (n1459)
<b>n11rut14</b>	ncds age 11: is disobedient at home (n1460)
<b>n16rut01</b>	ncds age 16: very restless. has difficulty staying seated for long (n2517)
<b>n16rut02</b>	ncds age 16: squirmy, fidgety child (n2518)
<b>n16rut03</b>	ncds age 16: often destroys others property often destroys own or others property (n2519)
<b>n16rut04</b>	ncds age 16: frequently fights or is extremely quarrelsome with other children (n2520)
<b>n16rut05</b>	ncds age 16: not much liked by other children (n2521)

**Table 1: Variables in 'n016rutter.sav' data file**

<b><u>Name</u></b>	<b><u>Label</u></b>
<b>n16rut06</b>	ncds age 16: often worried, worries about many things (n2522)
<b>n16rut07</b>	ncds age 16: tends to do things on own - rather solitary (n2523)
<b>n16rut08</b>	ncds age 16: irritable, is quick to fly off the handle (n2524)
<b>n16rut09</b>	ncds age 16: often appears miserable, unhappy, tearful or distressed (n2525)
<b>n16rut10</b>	ncds age 16: has twitches, mannerisms or tics of the face or body (n2526)
<b>n16rut11</b>	ncds age 16: frequently sucks thumb or fingers (n2527)
<b>n16rut12</b>	ncds age 16: frequently bites nails or fingers (n2528)
<b>n16rut13</b>	ncds age 16: is often disobedient (n2529)
<b>n16rut14</b>	ncds age 16: cannot settle to anything for more than a few moments (n2530)
<b>n16rut15</b>	ncds age 16: tends to be fearful or afraid of new things or new situations (n2531)
<b>n16rut16</b>	ncds age 16: fussy or over-particular (n2532)
<b>n16rut17</b>	ncds age 16: often tells lies (n2533)
<b>n16rut18</b>	ncds age 16: bullies other children (n2534)
<b>n16rutt01</b>	ncds age 16: (t) very restless, has difficulty staying seated for long (n2296)
<b>n16rutt02</b>	ncds age 16: (t) truants from school (n2297)
<b>n16rutt03</b>	ncds age 16: (t) squirmy, fidgety child (n2298)
<b>n16rutt04</b>	ncds age 16: (t) often destroys own or others property (n2297)
<b>n16rutt05</b>	ncds age 16: (t) frequently fights or is extremely quarrelsome with other children (n2300)
<b>n16rutt06</b>	ncds age 16: (t) not much liked by other children (n2301)
<b>n16rutt07</b>	ncds age 16: (t) often worried, worries about many things (n2302)
<b>n16rutt08</b>	ncds age 16: (t) tends to do things on own - rather solitary (n2303)
<b>n16rutt09</b>	ncds age 16: (t) irritable, touchy, is quick to fly off the handle (n2304)
<b>n16rutt10</b>	ncds age 16: (t) often appears miserable, unhappy, tearful or distressed (n2305)
<b>n16rutt11</b>	ncds age 16: (t) has twitches, mannerisms or tics of the face or body (n2306)
<b>n16rutt12</b>	ncds age 16: (t) frequently sucks thumb or fingers (n2307)
<b>n16rutt13</b>	ncds age 16: (t) frequently bites nails or fingers (n2308)
<b>n16rutt14</b>	ncds age 16: (t) tends to be absent from school for trivial reasons (n2309)
<b>n16rutt15</b>	ncds age 16: (t) is often disobedient (n2310)
<b>n16rutt16</b>	ncds age 16: (t) cannot settle to anything for more than a few moments (n2311)
<b>n16rutt17</b>	ncds age 16: (t) tends to be fearful or afraid of new things or new situations (n2312)
<b>n16rutt18</b>	ncds age 16: (t) fussy or over-particular (n2313)
<b>n16rutt19</b>	ncds age 16: (t) often tells lies (n2314)
<b>n16rutt20</b>	ncds age 16: (t) has stolen things on one or more occasions in the past 12 months (n2315)
<b>n16rutt21</b>	ncds age 16: (t) unresponsive, inert or apathetic (n2316)
<b>n16rutt22</b>	ncds age 16: (t) often complains of aches or pains (n2317)
<b>n16rutt23</b>	ncds age 16: (t) has had tears on arrival at school (n2318)
<b>n16rutt24</b>	ncds age 16: (t) has a stutter or stammer (n2319)

**Table 1: Variables in 'n016rutter.sav' data file**

<b><u>Name</u></b>	<b><u>Label</u></b>
<b>n16rutt25</b>	ncds age 16: (t) resentful or aggressive when corrected (n2320)
<b>n16rutt26</b>	ncds age 16: (t) bullies other children (n2321)

\* longitudinal derived variables; (t) = answered by teacher.

**Table 2: Variables in 'b016rutter.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>b5mrutt</b>	bcs70 age 5: total Rutter behaviour score (mother)
<b>b5mrutt</b>	bcs70 age 5: total Rutter behaviour score (mother) – grouped
<b>b10mrutt</b>	bcs70 age 10: total Rutter behaviour score (mother)
<b>b10mrutt</b>	bcs70 age 10: total Rutter behaviour score (mother) – grouped
<b>b16mrutt</b>	bcs70 age 16: total Rutter behaviour score (mother)
<b>b16mrutt</b>	bcs70 age 16: total Rutter behaviour score (mother) – grouped
<b>b5in</b>	bcs70 age 5: cohort member has information for at least one Rutter question
<b>b10in</b>	bcs70 age 10: cohort member has information for at least one Rutter question
<b>b16in</b>	bcs70 age 16: cohort member has information for at least one Rutter question
<b>b0region</b>	bcs70 age 0: region of residence of mother at CM birth (a0004b)
<b>b0mumage</b>	bcs70 age 0: 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 2: Variables in 'b016rutter.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)
<b>b5rut01</b>	bcs70 age 5: very restless, often running about or jumping up and down (d025)
<b>b5rut02</b>	bcs70 age 5: is squirmy or fidgety (d026)
<b>b5rut03</b>	bcs70 age 5: often destroys own or others property (d027)
<b>b5rut04</b>	bcs70 age 5: frequently fights with other children (d028)
<b>b5rut05</b>	bcs70 age 5: not much liked by other children (d029)
<b>b5rut06</b>	bcs70 age 5: often worried, worries about many things (d030)
<b>b5rut07</b>	bcs70 age 5: tends to do things on own - rather solitary (d031)
<b>b5rut08</b>	bcs70 age 5: irritable, is quick to fly off the handle (d032)
<b>b5rut09</b>	bcs70 age 5: often appears miserable, unhappy, tearful or distressed (d033)
<b>b5rut10*</b>	bcs70 age 5: sometimes takes things belonging to others (d034) *(this question is not one of the 18 questions in section 3 of Child Scale A)
<b>b5rut11</b>	bcs70 age 5: has twitches, mannerisms or tics of the face or body (d035)
<b>b5rut12</b>	bcs70 age 5: frequently sucks thumb or fingers (d036)



**Table 2: Variables in 'b016rutter.sav' data file**

<b><u>Name</u></b>	<b><u>Label</u></b>
<b>b5rut13</b>	bcs70 age 5: frequently bites nails or fingers (d037)
<b>b5rut14</b>	bcs70 age 5: is often disobedient (d038)
<b>b5rut15</b>	bcs70 age 5: cannot settle to anything for more than a few moments (d039)
<b>b5rut16</b>	bcs70 age 5: tends to be fearful or afraid of new things or new situations (d040)
<b>b5rut17</b>	bcs70 age 5: is fussy or over-particular (d041)
<b>b5rut18</b>	bcs70 age 5: often tells lies (d042)
<b>b5rut19</b>	bcs70 age 5: bullies other children (d043)
<b>b10rut01</b>	bcs70 age 10: very restless, often running about or jumping up and down (m43)
<b>b10rut02</b>	bcs70 age 10: is squirmy or fidgety (m44)
<b>b10rut03</b>	bcs70 age 10: often destroys own or others property (m45)
<b>b10rut04</b>	bcs70 age 10: frequently fights with other children (m46)
<b>b10rut05</b>	bcs70 age 10: not much liked by other children (m47)
<b>b10rut06</b>	bcs70 age 10: often worried, worries about many things (m48)
<b>b10rut07</b>	bcs70 age 10: tends to do things on own - rather solitary (m49)
<b>b10rut08</b>	bcs70 age 10: irritable, is quick to fly off the handle (m50)
<b>b10rut09</b>	bcs70 age 10: often appears miserable, unhappy, tearful or distressed (m51)
<b>b10rut10</b>	bcs70 age 10: sometimes takes things belonging to others (m52) *(this question is not one of the 18 questions in section 3 of Child Scale A)
<b>b10rut11</b>	bcs70 age 10: has twitches, mannerisms or tics of the face or body (m53)
<b>b10rut12</b>	bcs70 age 10: frequently sucks thumb or fingers (m54)
<b>b10rut13</b>	bcs70 age 10: frequently bites nails or fingers (m55)
<b>b10rut14</b>	bcs70 age 10: is often disobedient (m56)
<b>b10rut15</b>	bcs70 age 10: cannot settle to anything for more than a few moments (m57)
<b>b10rut16</b>	bcs70 age 10: tends to be fearful or afraid of new things or new situations (m58)
<b>b10rut17</b>	bcs70 age 10: is fussy or over-particular (m59)
<b>b10rut18</b>	bcs70 age 10: often tells lies (m60)
<b>b10rut19</b>	bcs70 age 10: bullies other children (m61)
<b>b16rut01</b>	bcs70 age 16: very restless, often running about or jumping up and down (pa5.1)
<b>b16rut02</b>	bcs70 age 16: is squirmy or fidgety (pa5.2)
<b>b16rut03</b>	bcs70 age 16: often destroys own or others property (pa5.3)
<b>b16rut04</b>	bcs70 age 16: frequently fights with other children (pa5.4)
<b>b16rut05</b>	bcs70 age 16: not much liked by other children (pa5.5)
<b>b16rut06</b>	bcs70 age 16: often worried, worries about many things (pa5.6)
<b>b16rut07</b>	bcs70 age 16: tends to do things on own - rather solitary (pa5.7)
<b>b16rut08</b>	bcs70 age 16: irritable, is quick to fly off the handle (pa5.8)
<b>b16rut09</b>	bcs70 age 16: often appears miserable, unhappy, tearful or distressed (pa5.9)

**Table 2: Variables in 'b016rutter.sav' data file**

<b><u>Name</u></b>	<b><u>Label</u></b>
<b>b16rut10*</b>	bcs70 age 16: sometimes takes things belonging to others (pa5.10) *(this question is not one of the 18 questions in section 3 of Child Scale A)
<b>b16rut11</b>	bcs70 age 16: has twitches, mannerisms or tics of the face or body (pa5.11)
<b>b16rut12</b>	bcs70 age 16: frequently sucks thumb or fingers (pa5.12)
<b>b16rut13</b>	bcs70 age 16: frequently bites nails or fingers (pa5.13)
<b>b16rut14</b>	bcs70 age 16: is often disobedient (pa5.14)
<b>b16rut15</b>	bcs70 age 16: cannot settle to anything for more than a few moments (pa5.15)
<b>b16rut16</b>	bcs70 age 16: tends to be fearful or afraid of new things or new situations (pa5.16)
<b>b16rut17</b>	bcs70 age 16: is fussy or over-particular (pa5.17)
<b>b16rut18</b>	bcs70 age 16: often tells lies (pa5.18)
<b>b16rut19</b>	bcs70 age 16: bullies other children (pa5.19)

## **SPSS syntax used to derive Rutter behaviour score variables**

### **NCDS variables**

#### **Age 7**

```
COMPUTE n7mrutt = SUM(n7rut01,n7rut02,n7rut03,n7rut04,n7rut05,  
n7rut06,n7rut07,n7rut08,n7rut09,n7rut10,n7rut11,n7rut12,n7rut13,n7rut14) .  
count n7miss = n7rut01 n7rut02 n7rut03 n7rut04 n7rut05 n7rut06 n7rut07  
n7rut08 n7rut09 n7rut10 n7rut11 n7rut12 n7rut13 n7rut14 (missing).  
if (n7miss > 0) n7mrutt = -1.  
if (n7miss = 14) n7mrutt = -2.  
missing values n7mrutt (-1,-2).  
value labels n7mrutt -1'some info missing' -2'no question answered'.  
variable labels n7mrutt 'ncds age 7: total Rutter behaviour score (mother)'.  
freq n7mrutt.
```

```
recode n7mrutt (0 thru 9=1) (10 thru 12=2) (13 thru highest = 3) (-1,-2=copy) into  
n7mruttg.  
missing values n7mruttg (-1,-2).  
value labels n7mruttg 1'0-80th centile - normal behaviour' 2'81st-95th centile -  
moderate behaviour problems' 3'95+ centile - severe behaviour problems'  
-1'incomplete info' -2'not stated any questions' .  
variable labels n7mruttg 'ncds age 7: total Rutter behaviour score (mother) -  
grouped'.  
freq n7mruttg.
```

#### **Age 11**

```
COMPUTE n11mrutt = SUM(n11rut01,n11rut02,n11rut03,n11rut04,n11rut05,  
n11rut06,n11rut07,n11rut08,n11rut09,n11rut10,n11rut11,n11rut12,n11rut13,  
n11rut14) .  
count n11miss = n11rut01 n11rut02 n11rut03 n11rut04 n11rut05 n11rut06  
n11rut07 n11rut08 n11rut09 n11rut10 n11rut11 n11rut12 n11rut13 n11rut14  
(missing).  
if (n11miss > 0) n11mrutt = -1.  
if (n11miss = 14) n11mrutt = -2.  
missing values n11mrutt (-1,-2).  
value labels n11mrutt -1'some info missing' -2'no question answered'.  
variable labels n11mrutt 'ncds age 11: total Rutter behaviour score (mother)'.  
freq n11mrutt.
```

```
recode n11mrutt (0 thru 9=1) (10 thru 12=2) (13 thru highest = 3) (-1,-2=copy)  
into n11mruttg.  
missing values n11mruttg (-1,-2).  
value labels n11mruttg 1'0-80th centile - normal behaviour' 2'81st-95th centile -  
moderate behaviour problems' 3'95+ centile - severe behaviour problems'  
-1'incomplete info' -2'not stated any questions' .
```

variable labels n11mruttg 'ncds age 11: total Rutter behaviour score (mother) - grouped'.  
freq n11mruttg.

#### Age 16

COMPUTE n16mrutt = SUM(n16rut01,n16rut02,n16rut03,n16rut04,n16rut05,  
n16rut06,n16rut07,n16rut08,n16rut09,n16rut10,n16rut11,n16rut12,n16rut13,  
n16rut14,n16rut15,n16rut16,n16rut17,n16rut18) .  
count n16miss = n16rut01 n16rut02 n16rut03 n16rut04 n16rut05 n16rut06  
n16rut07 n16rut08 n16rut09 n16rut10 n16rut11 n16rut12 n16rut13 n16rut14  
n16rut15 n16rut16 n16rut17 n16rut18 (missing).  
if (n16miss > 0 ) n16mrutt = -1 .  
if (n16miss = 18) n16mrutt = -2.  
missing values n16mrutt (-1,-2).  
value labels n16mrutt -1'some info missing' -2'no question answered'.  
variable labels n16mrutt 'ncds age 16: total Rutter behaviour score (mother)'.  
freq n16mrutt.

recode n16mrutt (0 thru 6=1) (7 thru 11=2) (12 thru highest = 3) (-1,-2=copy) into  
n16mruttg.  
missing values n16mruttg (-1,-2).  
value labels n16mruttg 1'0-80th centile - normal behaviour' 2'81st-95th centile -  
moderate behaviour problems' 3'95+ centile - severe behaviour problems'  
-1'incomplete info' -2'not stated any questions' .  
variable labels n16mruttg 'ncds age 11: total Rutter behaviour score (mother) -  
grouped'.  
freq n16mruttg.

#### Age 16 (teacher)

COMPUTE n16rutt = SUM(n16rutt01,n16rutt02,n16rutt03,n16rutt04,n16rutt05,  
n16rutt06,n16rutt07,n16rutt08,n16rutt09,n16rutt10,n16rutt11,n16rutt12,n16rutt13,  
n16rutt14,n16rutt15,n16rutt16,n16rutt17,n16rutt18,n16rutt19,n16rutt20,n16rutt21,  
n16rutt22,n16rutt23,n16rutt24,n16rutt25,n16rutt26) .  
count n16miss = n16rutt01 n16rutt02 n16rutt03 n16rutt04 n16rutt05 n16rutt06  
n16rutt07 n16rutt08 n16rutt09 n16rutt10 n16rutt11 n16rutt12 n16rutt13 n16rutt14  
n16rutt15 n16rutt16 n16rutt17 n16rutt18 n16rutt19 n16rutt20 n16rutt21 n16rutt22  
n16rutt23 n16rutt24 n16rutt25 n16rutt26 (missing).  
if (n16miss > 0 ) n16rutt = -1 .  
if (n16miss = 26) n16rutt = -2.  
missing values n16rutt (-1,-2).  
value labels n16rutt -1'some info missing' -2'no question answered'.  
variable labels n16rutt 'ncds 16: total Rutter behaviour score (teacher)'.  
freq n16rutt .

Two categorical variables have been derived. Version A matches categorical variables from information provided by the mother. Version B is derived in the standard form, where a score of 9+ indicated behaviour problems.

Version A

recode n16rutt (0 thru 7=1) (8 thru 17=2) (18 thru highest = 3) (-1,-2=copy) into n16ruttgA.

missing values n16ruttgA (-1,-2).

value labels n16ruttgA 1'0-80th centile - normal behaviour' 2'81st-95th centile - moderate behaviour problems' 3'95+ centile - severe behaviour problems' -1'incomplete info' -2'not stated any questions' .

variable labels n16ruttgA 'ncds age 16: total Rutter behaviour score (teacher) - grouped to match mother variables'.

freq n16ruttgA.

Version B

recode n16rutt (0 thru 8=1) (9 thru highest = 2) (-1,-2=copy) into n16ruttgB.

missing values n16ruttgB (-1,-2).

value labels n16ruttgB 1'0-8 normal behaviour' 2'9+ behaviour problems' -1'incomplete info' -2'not stated any questions' .

variable labels n16ruttgB 'ncds age 16: total Rutter behaviour score (teacher) - grouped standard way'.

freq n16ruttgB.

**BCS70 variables**

**Age 5**

compute b5mrutt = SUM(b5rut01,b5rut02,b5rut03,b5rut04,b5rut05,b5rut06,b5rut07,b5rut08,b5rut09,b5rut10,b5rut11,b5rut12,b5rut13,b5rut14,b5rut15,b5rut16,b5rut17,b5rut18,b5rut19) .

count b5miss = b5rut01 b5rut02 b5rut03 b5rut04 b5rut05 b5rut06 b5rut07 b5rut08 b5rut09 b5rut10 b5rut11 b5rut12 b5rut13 b5rut14 b5rut15 b5rut16 b5rut17 b5rut18 b5rut19 (missing).

if (b5miss > 0) b5mrutt = -1.

if (b5miss = 19) b5mrutt = -2.

missing values b5mrutt (-1,-2).

value labels b5mrutt -1'incomplete info' -2'not stated any questions' .

variable labels b5mrutt 'bcs70 age 5: total Rutter behaviour score (mother)'.

freq b5mrutt.

recode b5mrutt (0 thru 11=1) (12 thru 16=2) (17 thru highest = 3) (-1,-2=copy) into b5mruttg.

missing values b5mruttg (-1,-2).

value labels b5mruttg 1'0-80th centile - normal behaviour' 2'81st-95th centile - moderate behaviour problems' 3'95+ centile - severe behaviour problems' -1'incomplete info' -2'not stated any questions' .

variable labels b5mruttg 'bcs70 age 10: total Rutter behaviour score (mother) - grouped'.

freq b5mruttg.

### Age 10

```
compute b10mrutt = SUM(b10rut01,b10rut02,b10rut03,b10rut04,b10rut05,
b10rut06,b10rut07,b10rut08,b10rut09,b10rut10,b10rut11,b10rut12,b10rut13,
b10rut14,b10rut15,b10rut16,b10rut17,b10rut18,b10rut19).
compute b10mrutt = trunc(b10mrutt).
count b10miss = b10rut01 b10rut02 b10rut03 b10rut04 b10rut05 b10rut06
b10rut07 b10rut08 b10rut09 b10rut10 b10rut11 b10rut12 b10rut13 b10rut14
b10rut15 b10rut16 b10rut17 b10rut18 b10rut19 (missing).
if (b10miss > 0) b10mrutt = -1.
if (b10miss = 19) b10mrutt = -2.
missing values b10mrutt (-1,-2).
value labels b10mrutt -1'incomplete info' -2'not stated any questions' .
variable labels b10mrutt 'bcs70 age 10: total Rutter behaviour score (mother)'.
freq b10mrutt.
```

```
recode b10mrutt (0 thru 611=1) (612 thru 834=2) (835 thru highest = 3) (-1,-
2=copy) into b10mruttg.
missing values b10mruttg (-1,-2).
value labels b10mruttg 1'0-80th centile - normal behaviour' 2'81st-95th centile -
moderate behaviour problems' 3'95+ centile - severe behaviour problems'
-1'incomplete info' -2'not stated any questions' .
variable labels b10mruttg 'bcs70 age 10: total Rutter behaviour score (mother) -
grouped'.
freq b10mruttg.
```

### Age 16

```
compute b16mrutt = sum(b16rut01,b16rut02,b16rut03,b16rut04,b16rut05,
b16rut06,b16rut07,b16rut08,b16rut09,b16rut10,b16rut11,b16rut12,b16rut13,
b16rut14,b16rut15,b16rut16,b16rut17,b16rut18,b16rut19).
count b16miss = b16rut01 b16rut02 b16rut03 b16rut04 b16rut05 b16rut06
b16rut07 b16rut08 b16rut09 b16rut10 b16rut11 b16rut12 b16rut13 b16rut14
b16rut15 b16rut16 b16rut17 b16rut18 b16rut19 (missing).
if (b16miss > 0) b16mrutt = -1.
if (b16miss = 19) b16mrutt = -2.
missing values b16mrutt (-1,-2).
```

```
value labels b16mrutt -1'incomplete info' -2'no questions answered'
variable labels b16mrutt 'bcs70 age 16: total Rutter behaviour score (mother)'.
freq b16mrutt.
```

```
recode b16mrutt (0 thru 7=1) (8 thru 12=2) (13 thru highest = 3) (-1,-2=copy) into
b16mruttg.
missing values b16mruttg (-1,-2).
value labels b16mruttg 1'0-80th centile - normal behaviour' 2'81st-95th centile -
moderate behaviour problems' 3'95+ centile - severe behaviour problems'
-1'incomplete info' -2'not stated any questions' .
```

## RutterBehaviourVariables.doc

variable labels b16mruttg 'bcs70 age 10: total Rutter behaviour score (mother) -  
grouped'.  
freq b16mruttg.