

CFAS II additional data information

The following document details some key information regarding the CFAS II datasets and measurements.

CFAS II variables in need of explanation

The following contains information on some of the key variables used across the CFAS II datasets:

CENTRE	11 = Cambridgeshire 12 = Newcastle 13 = Nottingham
IDENT	Participant project number (unique within centre)
WAVE	Wave of the interview (items stamped with xx_w1 reflect wave 1; xx_w2 reflect wave 2)
SEX	1 = male; 2 = female
DOB	Date of birth listed is the format of day/month/year (dd/mm/yyyy)
DATE	Date of interview in the format of day/month/year (dd/mm/yyyy)
BREAK	Details the last question number which an answer was given for (i.e. on which question did the interview terminate)
PRIORITY	Indicates whether the interview entered priority mode (shortened version of the interview consisting of the cognitive section so that an MMSE score can be obtained along with medication questions and observer ratings)
QUITQ	Indicates at which question the priority mode was initiated
HAS_ELIG	Indicates if the interview required a HAS interview (informant)
EHAS_ELIG	Indicates if the interview required a EHAS interview (informant)
SEVENS	Total score on serial seven question (Q325 at w1; Q308 at w2). This total score is a component for generating the MMSE score
MMSE	MMSE score (please note this would have been re-calculated after all data cleaning had been performed to incorporate interviewer coding errors to MMSE scored items)
MMSE_GP	MMSE group – 1 = MMSE 1-17; 2 = MMSE 18-21; 3 = MMSE 22-25; 4 = MMSE 26-30
AGECAT	AGECAT score. If one or more agecat questions are missing then AGECAT = 0. This variable is the laptop definition of AGECAT. The laptop AGECAT has been used for sampling.
DX	Full agecat algorithm (0 = normal; 1 = demented; 2 = depression; 3 = anxiety)
ORG	Indicates organicity level within dx

DEP	Indicates depression level within dx
ANX	Indicates anxiety level within dx
ALGORITHM_DX	Dx score as calculated from running the AGEKAT algorithm. Please note dx should be used over the algorithm_dx as the dx score reflects any additional information such as vignette notes which were used when the algorithm could not be run or did not appear to give a representative score.
PROXY	<p>The main dataset will contain all the participant ID numbers included in that wave of interviewing. If only informant interviews were conducted then certain questions could be mapped across into the main dataset as well as leaving the full informant interview data in its entirety in the separate HAS and EHAS datasets.</p> <p>The proxy variable indicates in the main dataset whether the information recorded there comes from a participant interview (proxy = 0); whether questions in that dataset have been mapped from an EHAS interview with an informant (proxy = 1); or if the data has been mapped from a HAS interview with an informant (proxy = 2)</p>
N85	Indicates if the data was mapped from a Newcastle 85+ study participant (N85 = 1)
XX_EDITED	Variables appearing in the dataset with ‘_edited’ reflect where changes were made to the data post-interview during data cleaning. For example such checking included where the status of accommodation did not match up with status of living in an institution (both coded by interviewer at time of interview). Necessary paperwork was checked and changes applied to the data - accommodation variable changes are listed in (v6_edited in w1; v7_edited in w2) and changes in whether the participant was living in an institution are listed in (v9_edited in w1; v10_edited in w2). These edited accommodation and institution variables should replace the answers recorded by the interviewer if an edited answer is present.
AUDIT	Variable reflecting participation status at each wave with the following labels: 1 = interview done; 2 = dead; 3 = dead at present wave but also had refused present wave; 4 = refused; 5 = moved; 6 = HAS needed but not obtained; 7 = interview done but data corrupted; 8 = lost before present wave; 9 = not applicable
AUDIT_HAS	Reflects HAS interview status: 1 = eligible for HAS and completed; 3 = eligible for HAS but not completed and no reason recorded why; 4 = eligible for HAS but refused (refusal could be by participant or informant); 5 = HAS only interview completed; 6 = not eligible for HAS but HAS completed; 9 = not applicable

CFAS II measurements

Mini Mental State Examination (MMSE) (Folstein, 1975)

The table below details the questions in both the wave 1 and wave 2 interviews which are involved in calculating the MMSE score (**mmse_w1 / mmse_w2**). The component questions have been re-coded and can be found in the main datasets (**mmse01 - mmse26**). All are worth one point with the exception of **mmse16** (serial seven's score) which is worth a maximum of five points.

VARIABLE	QUESTION	WAVE 1	WAVE 2
mmse01	Name of city/town/village	Q17	Q21
mmse02	Day of week today?	Q22	Q26
mmse03	Date today – day	Q23	Q27
mmse04	Date today – month	Q24	Q28
mmse05	Date today – year	Q25	Q29
mmse06	Season	Q266	Q249
mmse07	County	Q267	Q250
mmse08	Name two main streets nearby	Q268	Q251
mmse09	On what floor of building?	Q269	Q252
mmse10*	What is this called? (pencil)	Q277	Q260
mmse11*	What is this called? (wristwatch)	Q278	Q261
mmse12*	Repeat: 'No ifs, ands or buts'	Q292	Q275
mmse13-15	Repeat 3 words: apple table penny	Q320-Q322	Q303-Q305
mmse16	Sevens	Q325	Q308
mmse17-19	Recall 3 words: apple table penny	Q326-Q328	Q309-Q311
mmse20*	Read and do: Close your eyes	Q329	Q312
mmse21*	Copy this diagram (pentagon)	Q331	Q314
mmse22*	Write a sentence	Q337	Q320
mmse23*	Paper – take in right hand	Q339	Q322
mmse24*	Paper – fold in half	Q340	Q323
mmse25*	Paper – place on lap	Q341	Q324
mmse26	Address of this place?	Q16/Q18	Q20/Q22

Key: * Physical items

mmse_gp

The MMSE scores have been grouped into the following 4 category group:

mmse	mmse_gp
26 – 30	4
22 – 25	3
18 – 21	2
0 – 17	1
Missing / uncertain of which above group the individual falls within	.

The Cambridge Cognitive Examination (CAMCOG) and subscales (Roth, 1988)

CAMCOG and its subscales has been coded up

Cognitive function	Subscale	Variable	Description	Wave 1	Wave 2	Points	Total
Orientation		scgor	Day*	Q22	Q26	1	10
			Date*	Q23	Q27	1	
			Month*	Q24	Q28	1	
			Year*	Q25	Q29	1	
			Season*	Q266	Q249	1	
			County*	Q267	Q250	1	
			Town	Q17	Q21	1	
			Streets*	Q268	Q251	1	
			Floor*	Q269	Q252	1	
Place*	Q16/Q18	Q20/Q22	1				
Language	Comprehension	scglc	.Nod	Q273	Q256	1	9
			.Touch	Q272	Q255	1	
			.Ceiling	Q270	Q253	1	
			.Tap	Q271	Q254	1	
			Hotel	Q276	Q259	1	
			Village	Q274	Q257	1	
			Radio	Q275	Q258	1	
			.Read1	Q329	Q312	1	
			.Read2	Q330	Q313	1	
Language	Expression	scgle	Hammer	Q291	Q274	1	21
			Chemist	Q290	Q273	1	
			Bridge	Q288	Q271	2	
			Opinion	Q289	Q272	2	
			.Name obj.	Q280-Q285	Q263-Q268	6	
			Fluency	Q287	Q270	6	
			.ifs*	Q292	Q275	1	
			.Address	Q343	Q326	2	
Memory	Remote	scgmm	WW1	Q311	Q294	1	6
			WW2	Q312	Q295	1	
			German	Q313	Q296	1	
			Russian	Q314	Q297	1	
			Mae	Q315	Q298	1	
			Kidnap	Q316	Q299	1	
Memory	Recent	scgcm	Queen	Q317	Q300	1	4
			Heir	Q318	Q301	1	
			PM	Q147	Q130	1	
			News	Q319	Q302	1	
Memory	Learning	scglm	.Recall pics	Q293-Q298	Q276-Q281	6	17
			.Recog. pics	Q299-Q304	Q282-Q287	6	
			.Recall addr.	Q352-Q356	Q335-Q339	5	
Attention/ Calculation		scgac	Count	Q324	Q307	2	8
			Sevens*	Q325	Q308	5	
			Calculation	Q351	Q334	1	
Praxis		scgpr	.Pentagon*	Q331	Q314	1	12
			.Spiral	Q332	Q315	1	
			.Cube	Q333	Q316	1	
			.Clock	Q334-Q336	Q317-Q319	3	
			.Envelope	Q342	Q325	1	
			.Wave	Q347	Q330	1	
			.Cut	Q345	Q328	2	

			.Teeth	Q346	Q329	2	
Abstract thinking		scgat	Similarities	Q357-Q360	Q340-Q343	8	8
Perception		scgpc	.Faces	Q361-Q362	Q344-Q345	2	8
			.Views	Q363-Q368	Q346-Q351	6	
TOTAL		ccog					103

Key: * Items in MMSE also / . physical items

As in CFAS I, CAMCOG was scored with a maximum of 103 points with three items of the standard CAMCOG interview (Roth, 1988) not included in the calculation. The omitted items were the tactile recognition of coins (which is omitted in the revised CAMCOG-R (Roth, 1998)); calculating their sum, and recognition of two people in the room. These items counted for 4 points and hence the maximum score that could be achieved was 103 rather than 107. The subscales are defined as in CAMCOG-R (Roth, 1998) except the attention/calculation and the perception subscales which are worth one point less due to an item missing.

Questions that may have been missed due to sensory or motor impairment (the 'physical items' identified above by a dot before the description) were recoded to 0 (i.e. treated as not able to answer the questions).

When just one item was missing, 0 was imputed so that the whole scale would not be missing. The various subscales were calculated before this final stage.

Number of people with complete CAMCOG score by interview:

	Wave 1	Wave 2
Number interviewed	7,762	5,288
CAMCOG score obtained	7,085 (91%)	5,109 (97%)
Missing CAMCOG score	677 (9%)	179 (3%)

References:

Williams, J. G., Huppert, F. A., Matthews, F. E., & Nickson, J. (2003). Performance and normative values of a concise neuropsychological test (CAMCOG) in an elderly population sample. *International journal of geriatric psychiatry*, 18(7), 631-644.

Roth, M., Huppert, F. A., Tym, E., & Mountjoy, C. Q. (1988). The Cambridge examination for mental disorders of the elderly (CAMDEX). *The Cambridge Examination for Mental Disorders of the Elderly (CAMDEX)*.

Roth, M., Huppert, F. A., Mountjoy, C. Q., & Tym, E. (1998). The Cambridge examination for mental disorders of the elderly—revised. *The Cambridge Examination for Mental Disorder of the Elderly-revised*.

ADL-IADL disability / IADL disability / No ADL or IADL disability

Our classification splits people into one of four groups. The first is those who have ADL-IADL disability and is based on activities of daily living (ADL) and instrumental activities of daily living (IADL). This group require help at least several times per week. The second is those who have IADL disability and are not in the first group, and this is based on two IADLs. This group require help regularly. The third group is those that have no ADL or IADL disability, and the fourth group is those who were unclassifiable due to their pattern of missing data.

ADL-IADL disability requiring help at least several times per week (disab = 2)

Questions which determine ADL-IADL disability in screen/combined screen and assessment interviews are:

Q533 Are you able to wash all over or bath?

Q539 Are you able to prepare and cook a hot meal? [This is an IADL]

Q542 Are you able to put on your shoes and socks or stockings?

Possible answers to questions above:

0 = (No), needs help

1 = (Yes), some difficulty *(Use of special aids: Code 1)*

2 = (Yes), no difficulty

Q559 Mobility of subject (*possible answers:*)

1 = Usually ambulant non-housebound

2 = Usually ambulant housebound

3 = Chairfast permanently

4 = Bedfast permanently

A person has ADL-IADL disability if they need help with washing or hot meals or shoes and socks (any of the first three questions answered 0) or if they cannot get around outside (last question answered as 2, 3 or 4).

It is inferred that if a person answered the first few questions showing they were unfocused in time, they have ADL-IADL disability. These people were asked a select subset of questions (i.e. went into priority mode) which did not include the above questions.

If a person did not need help with washing or hot meals or shoes and socks (i.e. all of first three questions answered 1 or 2) and they could get around outside (i.e. last question rated 1) then they were divided into IADL disability or no ADL or IADL disability.

IADL disability (disab = 1)

A person has IADL disability if they need help with heavy housework or shopping and carrying heavy bags.

Q537 Are you able to do the heavy housework?

Q538 Are you able to shop and carry heavy bags?

No ADL or IADL disability (disab = 0)

A person has no ADL or IADL disability if they do not need help with washing, hot meals, shoes and socks, heavy housework or shopping and carrying heavy bags, and they can get around outside. If a person did not need help with the two IADLS* and had some missing data on the ADLs then they were coded as having no ADL or IADL disability (by the hierarchical nature of ADL and IADL). Also a person could be recoded to no ADL or IADL disability if they had one IADL missing and ADL disability had been ruled out. These ways of dealing with missing data affected a very small number of people

* For this paragraph, preparing a hot meal is treated as an ADL

Unclassifiable (disab = -1)

This only affects people who did not answer all of the questions above. This includes a lot of cognitively frail people who went into priority mode but not immediately after the first few questions.

disab	Wave 1
0 (No ADL or IADL impairment)	4,975
1 (IADL impairment)	1,495
2 (ADL impairment)	981
Missing	311
Total	7,762

Modified Townsend Disability Scale

This scale consists of 9 activities: cutting own toenails, washing all over or bath, getting on a bus (replaced running to catch a bus in Townsend (1979)), going up and down stairs, heavy housework, shopping and carrying heavy bags, preparing and cooking a hot meal, reaching an overhead shelf and tying a good know in string (Bond, 1982).

For each activity, a person was assigned a score of 2 if they needed help; 1 if they had some difficulty or used aids in order to complete the activity; and 0 if they had no difficulty and did not need any use of aids.

The scores (**town**) from these activities are added up to form a score from 0 – 18 where 0 is no functional incapacity and 18 is very severe functional incapacity.

The relevant questions are as follows listed in the format wave 1 / wave 2:

- Q532 / Q505 Able to cut own toenails
- Q533 / Q506 Able to wash all over
- Q534 / Q507 Able to get on a bus
- Q535 / Q508 Able to go up and down stairs
- Q537 / Q510 Able to do heavy housework
- Q538 / Q511 Able to shop and carry heavy bags
- Q539 / Q512 Able to prepare and cook a hot meal
- Q540 / Q513 Able to reach an overhead shelf
- Q541 / Q514 Able to tie a good knot in a piece of string
- Q559 / Q532 Degree of mobility of subject

Getting on a bus, and to a lesser extent, going up and down stairs were quite often missing, and so a score of 2 was imputed if a person's mobility as assessed by interviewer (Q559/Q532) was poor. If these activities were still missing then if not asked, a score of 2 was given, and if no answer or the interviewee didn't know, a score of 1 was given.

A person had an unclassifiable score (town= -1) if they were missing an answer to any questions other than getting on a bus and going up and down stairs. This mostly happened to people who went into priority mode due to being disorientated in time and space.

This scale of functional incapacity has also been dichotomized (**towng**) where a score of 1 is given if the scale was 11-18, and 0 if the scale was 0-10. If someone did not have a modified Townsend Disability score, but they were likely (or certainly) going to fall one side of 10/11, they were coded.

References:

Bond, J., & Carstairs, V. D. (1982). *Services for the elderly*. Edinburgh: Scottish Home and Health Department.

Townsend, P. (1979). *Poverty in the United Kingdom*. Harmondsworth, UK; Pelican

Dementia Scale of Blessed (1968)

As has been done by other researchers (e.g. Roth, 1998), the section on personality, interests and drive has been discarded and a score from 0-17 has been produced. The score has been composed for individuals where an informant was interviewed (**bless_w1, bless_w2**).

The items of the scale, their corresponding questions, ways of dealing with missingness and maximum points are outline below. The comment 'go to other interviews' means go to the same question(s) on earlier or later informant interviews. Earlier interviews are used if they were unable to perform the task. Later interviews are used if they were able to perform the task.

1) Inability to perform household tasks (max score = 1)

Q51 Does s/he have difficulty performing common household tasks, for example, can s/he make a cup of tea? (Recode 9 ('due to disability') to 0 ('no difficulty'))

If missing:

Q50 Is s/he less able to take care of her/himself without help?

If still missing: go to other interviews.

2) Inability to cope with small sums of money (max score = 1)

Q52 Does s/he have difficulty managing small amounts of money?

If missing: go to other interviews. *If still missing:* assume can't use money if Q52 not asked, recode to 0.

3) Inability to remember short lists of items, e.g. in shopping (max score = 1)

Q19 Can s/he remember short lists of items when shopping? (For example if s/he went to buy 3 things would s/he remember them or be able to tell someone else what s/he needs?)

If missing: go to other interviews.

If still missing: Q18 Has s/he had any difficulty with her/his memory? (If yes: Have you noticed any change over the last year or two?)

4) Inability to find way about indoors (max score = 1)

Q30 Does s/he have difficulty finding the way around the home (or ward), or finding the toilet?

If missing: go to other interviews.

If still missing: and few or no problems with Q31 (see below), assume fine on this question.

5) Inability to find way about familiar streets (max score = 1)

Q31 Has s/he had difficulty finding the way around the neighbourhood, for example, to the shops or post office near home? (If yes, Has there been any change in the last year or two?)

If missing: Q22 Has s/he had difficulty finding her/his direction or has lost the way when you have been out together or s/he has been out alone? Have you noticed any change over the last year or two?
If still missing: and few or many problems with Q30 (see above), assume difficulty with this question.
If still missing: go to other interviews.

6) Inability to interpret surroundings (max score = 1)

Q28 Does s/he have difficulty in telling the difference between people such as visitors, relatives and doctors?

If missing: Q29 Does s/he ever mistake you (or (other) family members or friends) for someone else?

If still missing: go to other interviews.

7) Inability to recall recent events (max score = 1)

Q21 Is there difficulty remembering what happened yesterday?

If missing: go to other interviews.

If still missing: Q27 Does s/he have difficulty remembering when s/he last saw you?

8) Tendency to dwell in the past (max score = 1)

Q25 Does s/he tend to talk about what happened long ago rather than in the present?

If missing: go to other interviews.

9) Eating (max score = 3)

Q56 Does s/he have difficulty feeding her/himself?

If missing: go to other interviews.

10) Dressing (max score = 3)

Q53 Does s/he have difficulty dressing? In what way? (Is help needed?) (Recode 9 ('due to disability') to 0 ('no difficulty'))

If missing: go to other interviews.

11) Complete sphincter control (max score = 3)

Q57 Does s/he ever wet or soil her/himself by mistake? (How often?)

If missing: go to other interviews.

Questions from items 4, 5, 9 and 11 featured in skip sections and hence persons not entering the skip section have no difficulties.

Many people did not have an answer to item 5 (inability to find way about familiar streets). It was fairly common for people to have up to 2 answers missing for the first 8 items (often items 4 and 5). As none of these questions dominate the scale, 0 was imputed for up to 2 of these questions, and a score given.

There is a bias in that cognitively frail people were more likely to have HAS interviews than cognitively intact people.

References:

Blessed, G. T. B. E., Tomlinson, B. E., & Roth, M. (1968). The association between quantitative measures of dementia and of senile change in the cerebral grey matter of elderly subjects. *The British Journal of Psychiatry*.

Roth, M., Huppert, F. A., Mountjoy, C. Q., & Tym, E. (1998). The Cambridge examination for mental disorders of the elderly—revised. *The Cambridge Examination for Mental Disorder of the Elderly-revised*.

Hachinski Ischaemic Score (HIS)

The HIS (Hachinski et al. 1975) has been coded up on all those who we classified as demented and for whom we had informant interviews. The notes of Wade et al. 1987 were particularly helpful.

The questions and points for each component are given below which add up to a maximum of 18 points. A score greater than 7 points suggests vascular impairment. All questions are from informant (HAS) interviews unless stated otherwise. Answers to questions are given in brackets like this (first answer that would score positively / second answer that would score positively ... : first answer that would score negatively / second answer that would score negatively).

With the exception of components D (Nocturnal confusion) and E (Relative preservation of personality), just one piece of evidence was enough to get the whole component positively scored. For D, both questions had to be answered 'Yes'. For E, one piece of evidence in favour of a change in personality was enough to score it negatively. Components were missing if there was no evidence in favour or against the component. When appropriate, answers from backup questions were used to reduce the number of missing components and missing HIS scores. With the exception of component A (abrupt onset), this affected very few individuals and so these questions are not mentioned.

A) Abrupt onset (max score = 2)

Q107 Did (the problems/symptoms/illness) happen suddenly, in a matter of hours or over days, or did it happen slowly over weeks or months? (>=0.5 months: <0.5 months)

Backup questions - any evidence from:

Q34 Did these problems with memory begin rapidly or gradually? (Rapid onset 1-3 days probable/certain /Rapid onset 4-21 days probable/certain: Gradual onset probable/certain)

Q41 Have these difficulties with thinking and making decisions developed in a gradual manner or have they come on suddenly? (Sudden : Gradual)

Q59 Have these (aphasia/apraxia) difficulties developed gradually or did they come on suddenly? (Sudden : Gradual)

B) Stepwise deterioration (max score = 1)

Q42 Have these difficulties (with thinking and making decisions) developed in steps and stages? (Yes : No)

C) Fluctuating course (max score = 2)

Q81 Are there periods lasting days or weeks when his/her thinking seems quite clear and then muddled? (Yes : No)

Q110 Has the (present illness) tended to vary a lot, day to day, week to week, becoming worse and then perhaps improving for a while - up and down? (If yes, how much did it vary? How long did these periods last?)

(Mild/Moderate or marked fluctuation : No fluctuations)

D) Nocturnal confusion (max score = 1)

Q83 Are there long periods during the day when s/he is lucid and not confused (that is, knows where s/he is and knows what s/he is doing and saying)? (Yes : No) AND

Q84 Does s/he get confused at night, wander about or talk nonsense? (Yes : No)

E) Relative preservation of personality (max score = 1) - includes preservation of insight

Q60 Have you noticed any changes in his/her personality such as the way s/he behaves socially (with other people)? (No : Yes)

Q72 How does s/he treat you (his/her relatives, friends) now. Is there a tendency to show a lack of interest, concern or affection? (No : Mild/Severe)

Q640 (subject interview) Observer rating: Lack of insight into present disability (No : Yes)

F) Depression (max score = 1)

dep - calculated from the AGECA algorithm in the subject interview dataset

(dp3/dp4/dp5/dn3/dn4/dn5 : d0/d1/d2)

Q87 Has there been any indication that s/he may be depressed, for example, is there a loss of interest or enjoyment in things in general? (Yes : No)

Q92 Do you think s/he is depressed? (Yes : No)

G) Somatic complaints (max score = 1)

Q613 (Subject interview) Observer rating: Gait normal, just unsteady (Mild/Severe : Absent)

Q442 (Subject interview) Do you suffer from regular headaches? (Yes, non-specific : No/Yes, migraine)

Q181 (Subject interview) Do you often feel dizzy? (More than once per week : No or rarely)

Q278 Does s/he have a tendency to fall? (Yes : No)

H) Emotional incontinence (max score = 1)

Q269 If something happens to make subject laugh or feel sad or cry, is it sometimes difficult to control? (Fairly certain/Unsure but probably : No)

I) History of hypertension (max score = 1)

Q261 & Q262 Has s/he ever had high blood pressure? How was it treated? (Hypertension probable/Certain and Medication Probable/Certain: No/ Yes but not treated)

J) History of strokes (max score = 2)

Q268 Has there ever been a stroke or a time when part of the body became paralysed? (If YES when was that? Did it happen suddenly? (Probably/Certainly after age 40 : No history of stroke or sudden paralysis)

K) Evidence of associated atherosclerosis (max score = 1)

Q259 Has a heart attack ever been diagnosed by a doctor when several weeks rest was advised? (Probable/Certain : No)

Q256 Has there ever been pain or discomfort in the legs on walking that goes away with rest? (Intermittent Claudication Probable/Certain : No)

Q260 Has there ever been pain or discomfort in the chest that goes away with rest? (Angina pectoris Probable/Certain : No)

L) Focal neurological symptoms (max score = 2)

Q264 Has s/he ever had sudden blindness in one eye? (Probable/Certain : No)

Q265 Has s/he ever had weakness or difficulty with speech, memory or vision which got better after a day? (Yes : No)

Q266 Has there been a weakness in one arm or one leg, or an arm and a leg on the same side of the body? (Probably lasted <24hrs/Certainly lasted <24 hrs/ Probably lasted 24+hrs/Certainly lasted 24+hrs : No)

Q625 (Subject interview) Observer rating: Dysarthria due to brain damage (Yes : No)

M) Focal neurological signs (max score = 2)

Q611 (Subject interview) Observer rating: Obvious evidence of paralysis or stroke (mild/severe : no)

Q189 (Subject interview) Observer rating: One or more limbs appear to be wholly or partially paralysed, or one side of the face (yes left sided/yes right sided/other : no)

There are fewer missing here because often the scores of people, who had just a few missing components, would fall into one group irrespective of the missing values had they been observed.

References:

Hachinski, V. C., Iliff, L. D., Zilhka, E., Du Boulay, G. H., McAllister, V. L., Marshall, J., ... & Symon, L. (1975). Cerebral blood flow in dementia. *Archives of neurology*, 32(9), 632-637.

Wade, J. P. H., & Hachinski, V. C. (1987). Multi-infarct dementia. *Dementia*, London: Churchill Livingstone, 209-28.

Rose, G. A. (1962). The diagnosis of ischaemic heart pain and intermittent claudication in field surveys. *Bulletin of the World Health Organization*, 27(6), 645.

Social class and Social economic group

During the wave 1 interview, participants are asked to give details of their main occupation and where applicable give these details for their partner also. The occupation questions in the wave 1 interview fall within the section of Q45-Q57.

A program called CASCOT (<http://www2.warwick.ac.uk/fac/soc/ier/software/cascot/>), developed by Warwick University was used to convert the occupation details given at interview into the Standard Occupational Classification (SOC) developed by the UK Office for National Statistics. The resulting data is the social class (**SC**) and social economic group (**SEG**) for participants in cases where codings could be completed.

Townsend Deprivation Index

The Townsend deprivation score is a measure of area-based socio-economic status. It does not include a component that overlaps with the individual indicators of socio-economic status. It is a composite measure that takes into account the proportion of unemployed, yet economically active, individuals aged 16-59/64, the proportion of households who do not possess a car, the proportion of households with more than one person per room, and the proportion of households that are not owner-occupied. The higher the score, the more deprived the area.

References:

Townsend, P., Phillimore, P., & Beattie, A. (1988). *Health and deprivation: inequality and the North*. Routledge.