

```

1 *****
2 ***SYNTAX FOR "Socio-economic status and trajectories of a novel multidimensional metric of Active
and Healthy Ageing: the English Longitudinal Study of Ageing"***
3 *****
4
5 * STATA version: 17.0, BE-Basic Edition
6
7 * STATA citation: StataCorp. 2021. Stata Statistical Software: Release 17. College Station, TX:
StataCorp LLC.
8
9 * Data citation: Banks, J., Batty, G. David, Breedvelt, J., Coughlin, K., Crawford, R., Marmot, M.,
Nazroo, J., Oldfield, Z., Steel, N., Steptoe, A., Wood, M., Zaninotto, P. (2021). English
Longitudinal Study of Ageing: Waves 0-9, 1998-2019. [data collection]. 37th Edition. UK Data
Service. SN: 5050, DOI: 10.5255/UKDA-SN-5050-24
10
11 * Data access statement: ELSA data from all waves are available through the UK Data Service
(https://ukdataservice.ac.uk/). The main ELSA dataset is safeguarded and can be accessed via
https://beta.ukdataservice.ac.uk/datacatalogue/studies/study?id=5050#!/access-data. More information
on how to access ELSA, including the conditions of use, can be found on the UK Data Service website
(https://beta.ukdataservice.ac.uk/datacatalogue/studies/study?id=5050#!/details) and the ELSA
website (https://www.elsa-project.ac.uk/accessing-elsa-data).
12
13 * Date of data access/download (dd/mm/yyyy): 25/05/2022
14
15 * Project ID: 212810
16
17 * Data documentation: Documentation pertaining to ELSA (e.g., data dictionaries, questionnaires,
technical reports, user guides) is available on the UK Data Service website
(https://beta.ukdataservice.ac.uk/datacatalogue/studies/study?id=5050#!/documentation) and the ELSA
website (https://www.elsa-project.ac.uk/data-and-documentation).
18
19 *****
20 ***DATA PROCESSING***
21 *****
22
23 * Change working directory - add pathname in between quotation marks for Windows
24 cd ""
25
26 * Variables Wave 2
27 use idauniq Heill Helim MmAlone MmHSS Hehelf w2nssec8 MmTrya MMWlkA MmTryb MMWlkB heada01 heada02
heada03 heada04 heada05 heada06 heada07 heada08 heada09 heada10 headb01 headb02 headb03 headb04
headb05 headb06 headb07 headb08 headb09 headb10 headb11 headb12 headb13 scorg01 scorg02 scorg03
scorg04 scorg05 scorg06 scorg07 scorg08 scacta scactb scactc scactd scpt04 scpt05 sampsta dhager
diagr indager DhSex DiSex indsex HeSmk HESka HeSkb HeSkc HeSkd HeSke HeSkf HeActa HeActb HeActc skako
fqethnr scqola scqolb scqolc scqold scqole scqolf scqolg scqolh scqoli scqolj scqolk scqoll scqolm
scqoln scqolo scqolp scqolq scqolr scqols PScedA PScedB PScedC PScedD PScedE PScedF PScedG PScedH
scfeela scfeelb scfeelc CfDScr CfTest CfLisEn CfAni CfLisD MmWill MmSaf MmAvsp MmWala MmAid mmaidc
CfDatD CfDatM CfDatY CfDay CfWrds MmSchs bhesmk bheska finstat w2wgt using wave_2_core_data_v4.dta
28 * Describe dataset
29 describe
30 * Sort from lowest to highest participant identifier (ID)
31 sort idauniq
32 * Rename variables to shorter or more convenient forms
33 rename MmSchs mmschs
34 rename MmWill mmwill
35 rename MmSaf mmsaf
36 rename MmAvsp mmavsp
37 rename MmWala mmwala
38 rename MmAid mmaid
39 rename CfDatD cfdatd
40 rename CfDatM cfdatm

```

```

41  rename CfDatY cfdaty
42  rename CfDay cfday
43  rename CfTest cftest
44  rename CfWrds cfwrds
45  rename Heill heill
46  rename Helim helim
47  rename MmAlone mmalone
48  rename MmHSS mmhss
49  rename Hehelf hehelf
50  rename MmTrya mmtrya
51  rename MMWlkA mmwlka
52  rename MmTryb mmtryb
53  rename MMWlkB mmwlkb
54  rename sampsta samptyp2
55  rename DhSex dhsex
56  rename DiSex disex
57  rename HeSmk hesmk
58  rename HESka heska
59  rename HeSkb heskb
60  rename HeSkc heskc
61  rename HeSkd heskd
62  rename HeSke heske
63  rename HeSkf heskf
64  rename HeActa heacta
65  rename HeActb heactb
66  rename HeActc heactc
67  rename PScedA psceda
68  rename PScedB pscedb
69  rename PScedC pscedc
70  rename PScedD pscedd
71  rename PScedE pscede
72  rename PScedF pscedf
73  rename PScedG pscedg
74  rename PScedH pscedh
75  rename CfDScr cfdscr
76  rename CfLisEn cflisen
77  rename CfAni cfani
78  rename CfLisD cflisd
79  rename w2nssec8 nssec8
80  rename finstat finstatw2
81  * Generate a new variable called wave and assign the number 2 to each observation (to designate Wave
82  2)
83  gen wave = 2
84  * Save Wave 2 core dataset
85  save wave2.dta
86  * Variables Wave 3
87  use idauniq heill helim w3nssec8 mmalone mmhss hegenh mmtrya mmwlka mmtryb mmwlkb hemobwa hemobsi
hemobch hemobcs hemobcl hemobst hemobre hemobpu hemobli hemobpi hemob96 headldr headlwa headlba
headlea headlbe headlwc headlma headlpr headlsh headlph headlme headlho headlmo headl96 scorg01
scorg02 scorg03 scorg04 scorg05 scorg06 scorg07 scorg08 scacta scactb scactc scactd scpt04 scpt05
sampsta dhager diagr indager dhsex disex indsex hesmk heska heskb heskc heskd heske heskf chesmk
cheska heacta heactb heactc scako fqethnr w3edqual scqola scqolb scqolc scqold scqole scqolf scqolg
scqolh scqoli scqolj scqolk scqoll scqolm scqoln scqolo scqolp scqolq scqolr scqols psceda pscedb
pscedc pscedd pscede pscedf pscedg pscedh scfeela scfeelb scfeelc cfdscr cftest cflisen cfani cflisd
mmwill mmsaf mmavsp mmwala mmaid mmaidc cfdatd cfdatm cfdaty cfday cfwrds mmschs finstat w3xwgt using
wave_3_elsa_data_v4.dta
88  * Describe dataset
89  describe
90  * Sort from lowest to highest participant ID
91  sort idauniq
92  * Rename variables to ensure consistency across waves
93  rename w3nssec8 nssec8

```

```

94  rename sampsta samptyp3
95  rename w3edqual edqual
96  rename finstat finstatw3
97  * Generate a new variable called wave and assign the number 3 to each observation (to designate Wave
    3)
98  gen wave = 3
99  * Save Wave 3 core dataset
100 save wave3.dta
101
102 * Variables Wave 4
103 use idauniq heill helim w4nssec8 mmalone mmhss hehelf mmtrya mmwlka mmtryb mmwlkb hemobwa hemobsi
    hemobch hemobcs hemobcl hemobst hemobre hemobpu hemobli hemobpi hemob96 headldr headlwa headlba
    headlea headlbe headlwc headlma headlpr headlsh headlte headlme headlho headlmo headl96 scorg01
    scorg02 scorg03 scorg04 scorg05 scorg06 scorg07 scorg08 scacta scactb scactc scactd scpt03 scpt04
    samptyp diagr indager dhsex disex indsex hesmk heska heskb heskc heskd heske heskf dhesmk dheska
    heacta heactb heactc scako fqethnr w4edqual scqola scqolb scqolc scqold scqole scqolf scqolg scqolh
    scqoli scqolj scqolk scqoll scqolm scqoln scqolo scqolp scqolq scqolr scqols psceda pscedb pscedc
    pscedd pscede pscedf pscedg pscedh scfeela scfeelb scfeelc cfdscr cftest cflisen cfani cflisd mmwill
    mmsaf mmavsp mmwala mmaid mmaidc cfdatd cfdatm cfdaty cfday cfwrds mmschs finstat4 w4xwgt using
    wave_4_elsa_data_v3.dta
104 * Describe dataset
105 describe
106 * Sort from lowest to highest participant ID
107 sort idauniq
108 * Rename variables to ensure consistency across waves
109 rename w4nssec8 nssec8
110 rename headlte headlph
111 rename scpt04 scpt05
112 rename scpt03 scpt04
113 rename w4edqual edqual
114 rename samptyp samptyp4
115 rename finstat4 finstatw4
116 * Generate a new variable called wave and assign the number 4 to each observation (to designate Wave
    4)
117 gen wave = 4
118 * Save Wave 4 core dataset
119 save wave4.dta
120
121 * Variables Wave 5
122 use idauniq heill helim mmalone w5nssec8 mmhss hehelf mmtrya mmwlka mmtryb mmwlkb hemobwa hemobsi
    hemobch hemobcs hemobcl hemobst hemobre hemobpu hemobli hemobpi hemob96 headldr headlwa headlba
    headlea headlbe headlwc headlma headlpr headlsh headlte headlme headlho headlmo headl96 scorg01
    scorg02 scorg03 scorg04 scorg05 scorg06 scorg07 scorg08 scacta scactb scactc scactd scpt03 scpt04
    samptyp diagr indager dhsex disex indsex hesmk heska heskb heskc heskd heske heskf dhesmk dheska
    heacta heactb heactc scako fqethnr w5edqual scqola scqolb scqolc scqold scqole scqolf scqolg scqolh
    scqoli scqolj scqolk scqoll scqolm scqoln scqolo scqolp scqolq scqolr scqols psceda pscedb pscedc
    pscedd pscede pscedf pscedg pscedh scfeela scfeelb scfeelc cfdscr cftest cflisen cfani cflisd mmwill
    mmsaf mmavsp mmwala mmaid mmaidc cfdatd cfdatm cfdaty cfday cfwrds mmschs finstatw5 w5xwgt using
    wave_5_elsa_data_v4.dta
123 * Describe dataset
124 describe
125 * Sort from lowest to highest participant ID
126 sort idauniq
127 * Rename variables to ensure consistency across waves
128 rename w5nssec8 nssec8
129 rename headlte headlph
130 rename scpt04 scpt05
131 rename scpt03 scpt04
132 rename w5edqual edqual
133 rename samptyp samptyp5
134 * Generate a new variable called wave and assign the number 5 to each observation (to designate Wave
    5)
135 gen wave = 5

```

```

136 * Save Wave 5 core dataset
137 save wave5.dta
138
139 * Variables Wave 6
140 use idauniq Heill Helim w6nssec8 MmAlone MmHSS Hehelf MmTrya MMWlKA MmTryb MMWlKB hemobwa hemobsi
hemobch hemobcs hemobcl hemobst hemobre hemobpu hemobli hemobpi hemob96 headldr headlwa headlba
headlea headlbe headlwc headlma headlpr headlsh headlph headlme headlho headlmo headl96 scorg01
scorg02 scorg03 scorg04 scorg05 scorg06 scorg07 scorg08 scacta scactb scactc scactd scptr3 scptr4
samptyp indager DhSex DiSex indsex HeSmk HESka HeSkb HeSkc HeSkd HeSke HeSkf HeActa HeActb HeActc
scako Fqethnr scqola scqolb scqolc scqold scqole scqolf scqolg scqolh scqoli scqolj scqolk scqoll
scqolm scqoln scqolo scqolp scqolq scqolr scqols PScedA PScedB PScedC PScedD PScedE PScedF PScedG
PScedH scfeela scfeelb scfeelc CfDScr CfTest CfLisEn CfLisD MmWill MmSaf MmAvsp MmWala MmAid CfDatD
CfDatM CfDatY CfDay CfWrds MmSchs finstatw6 w6xwgt using wave_6_elsa_data_v2.dta
141 * Describe dataset
142 describe
143 * Sort from lowest to highest participant ID
144 sort idauniq
145 * Rename variables to ensure consistency across waves
146 rename MmSchs mmschs
147 rename MmWill mmwill
148 rename MmSaf mmsaf
149 rename MmAvsp mmavsp
150 rename MmWala mmwala
151 rename MmAid mmaid
152 rename CfDatD cfdatd
153 rename CfDatM cfdatm
154 rename CfDatY cfdaty
155 rename CfDay cfday
156 rename CfTest cftest
157 rename CfWrds cfwrds
158 rename w6nssec8 nssec8
159 rename Heill heill
160 rename Helim helim
161 rename MmAlone mmalone
162 rename MmHSS mmhss
163 rename Hehelf hehelf
164 rename MmTrya mmtrya
165 rename MMWlKA mmwlka
166 rename MmTryb mmtryb
167 rename MMWlKB mmwlkb
168 rename scptr3 scpt04
169 rename scptr4 scpt05
170 rename DhSex dhsex
171 rename DiSex disex
172 rename HeSmk hesmk
173 rename HESka heska
174 rename HeSkb heskb
175 rename HeSkc heskc
176 rename HeSkd heskd
177 rename HeSke heske
178 rename HeSkf heskf
179 rename HeActa heacta
180 rename HeActb heactb
181 rename HeActc heactc
182 rename Fqethnr fqethnr
183 rename samptyp samtyp6
184 rename PScedA psceda
185 rename PScedB pscedb
186 rename PScedC pscedc
187 rename PScedD pscedd
188 rename PScedE pscede
189 rename PScedF pscedf
190 rename PScedG pscedg

```

```

191 rename PScedH pscedh
192 rename CfDScr cfdscr
193 rename CfLisEn cflisen
194 rename CfLisD cflisd
195 * Generate a new variable called wave and assign the number 6 to each observation (to designate Wave
    6)
196 gen wave = 6
197 * Save Wave 6 core dataset
198 save wave6.dta
199
200 * Variables Wave 7
201 use idauniq Heill Helim NSSEC MmAlone MmHSS Hehelf MmTrya MMWlKA MmTryb MMWlKB hemobwa hemobsi
    hemobch hemobcs hemobcl hemobst hemobre hemobpu hemobli hemobpi hemob96 headldr headlwa headlba
    headlea headlbe headlwc headlma headlpr headlsh headlph headlme headlho headlmo headl96 scorg01
    scorg02 scorg03 scorg04 scorg05 scorg06 scorg07 scorg08 scacta scactb scactc scactd scptr3 scptr4
    samptyp indager DhSex DiSex indsex HeSmk HESka HeSkb HeSkc HeSkd HeSke HeSkf HeActa HeActb HeActc
    scako Fqethnr scqola scqolb scqolc scqold scqole scqolf scqolg scqolh scqoli scqolj scqolk scqoll
    scqolm scqoln scqolo scqolp scqolq scqolr scqols PScedA PScedB PScedC PScedD PScedE PScedF PScedG
    PScedH scfeela scfeelb scfeelc CfDScr CfTest CfLisEn CfAni CfLisD MmWill MmSaf MmAvsp MmWala MmAid
    CfDatD CfDatM CfDatY CfDay CfWrds MmSchs finstatw7 w7xwgt using wave_7_elsa_data.dta
202 * Describe dataset
203 describe
204 * Sort from lowest to highest participant ID
205 sort idauniq
206 * Rename variables to ensure consistency across waves
207 rename MmSchs mmschs
208 rename MmWill mmwill
209 rename MmSaf mmsaf
210 rename MmAvsp mmavsp
211 rename MmWala mmwala
212 rename MmAid mmaid
213 rename CfDatD cfdatd
214 rename CfDatM cfdatm
215 rename CfDatY cfdaty
216 rename CfDay cfday
217 rename CfTest cftest
218 rename CfWrds cfwrds
219 rename Heill heill
220 rename Helim helim
221 rename MmAlone mmalone
222 rename MmHSS mmhss
223 rename Hehelf hehelf
224 rename MmTrya mmtrya
225 rename MMWlKA mmwlka
226 rename MmTryb mmtryb
227 rename MMWlKB mmwlkb
228 rename scptr3 scpt04
229 rename scptr4 scpt05
230 rename DhSex dhsex
231 rename DiSex disex
232 rename HeSmk hesmk
233 rename HESka heska
234 rename HeSkb heskb
235 rename HeSkc heskc
236 rename HeSkd heskd
237 rename HeSke heske
238 rename HeSkf heskf
239 rename HeActa heacta
240 rename HeActb heactb
241 rename HeActc heactc
242 rename Fqethnr fqethnr
243 rename samptyp samptyp7
244 rename PScedA psceda

```

```

245 rename PScedB pscedb
246 rename PScedC pscedc
247 rename PScedD pscedd
248 rename PScedE pscede
249 rename PScedF pscedf
250 rename PScedG pscedg
251 rename PScedH pscedh
252 rename CfDScr cfdscr
253 rename CfLisEn cflisen
254 rename CfAni cfani
255 rename CfLisD cflisd
256 * Generate a new variable called wave and assign the number 7 to each observation (to designate Wave
7)
257 gen wave = 7
258 * Save Wave 7 core dataset
259 save wave7.dta
260
261 * Variables Wave 8
262 use idauniq heill helim w8nssec8 mmalone mmhss hehelf mmtrya mmwlka mmtryb mmwlkb hemobwa hemobsi
hemobch hemobcs hemobcl hemobst hemobre hemobpu hemobli hemobpi hemob96 headldr headlwa headlba
headlea headlbe headlwc headlma headlpr headlsh headlph headlme headlho headlmo headl96 scorgpo
scorgnw scorgrl scorgch scorged scorgsc scorgsp scorg95 scacta scactb scactc scactd scptruk scptrab
samptyp indager indsex hesmk heska heskb hesk heskd heske heskf heacta heactb heactc scako fqethnmr
scqola scqolb scqolc scqold scqole scqolf scqolg scqolh scqoli scqolj scqolk scqoll scqolm scqoln
scqolo scqolp scqolq scqolr scqols psceda pscedb pscedc pscedd pscede pscedf pscedg pscedh scfeela
scfeelb scfeelc cfdscr cftest cflisen cfani cflisd mmwill mmsaf mmavsp mmwala mmaid cfdatd cfdatm
cfdaty cfday cfwrds mmschs finstat w8xwgt using wave_8_elsa_data_eul_v2.dta
263 * Describe dataset
264 describe
265 * Sort from lowest to highest participant ID
266 sort idauniq
267 * Rename variables to ensure consistency across waves
268 rename w8nssec8 nssec8
269 rename scorgpo scorg01
270 rename scorgnw scorg02
271 rename scorgrl scorg03
272 rename scorgch scorg04
273 rename scorged scorg05
274 rename scorgsc scorg06
275 rename scorgsp scorg07
276 rename scorg95 scorg08
277 rename scptruk scpt04
278 rename scptrab scpt05
279 rename fqethnmr fqethnr
280 rename samptyp samptyp8
281 rename finstat finstatw8
282 * Generate a new variable called wave and assign the number 8 to each observation (to designate Wave
8)
283 gen wave = 8
284 * Save Wave 8 core dataset
285 save wave8.dta
286
287 * Variables Wave 9
288 use idauniq heill helim w9nssec8 mmalone mmhss hehelf mmtrya mmwlka mmtryb mmwlkb hemobwa hemobsi
hemobch hemobcs hemobcl hemobst hemobre hemobpu hemobli hemobpi hemob96 headldr headlwa headlba
headlea headlbe headlwc headlma headlpr headlsh headlph headlme headlho headlmo headl96 scorgpo
scorgnw scorgrl scorgch scorged scorgsc scorgsp scorg95 scacta scactb scactc scactd scptruk scptrab
samptyp indager indsex hesmk heska heskb hesk heskd heske heskf heacta heactb heactc scalcm fqethnmr
scqola scqolb scqolc scqold scqole scqolf scqolg scqolh scqoli scqolj scqolk scqoll scqolm scqoln
scqolo scqolp scqolq scqolr scqols psceda pscedb pscedc pscedd pscede pscedf pscedg pscedh scfeela
scfeelb scfeelc cfdscr cftest cflisen cfani cflisd mmwill mmsaf mmavsp mmwala mmaid cfdatd cfdatm
cfdaty cfday cfwrds mmschs finstat w9xwgt using wave_9_elsa_data_eul_v1.dta
289 * Describe dataset

```

```

290 describe
291 * Sort from lowest to highest participant ID
292 sort idauniq
293 * Rename variables to ensure consistency across waves
294 rename w9nssec8 nssec8
295 rename scorgpo scorg01
296 rename scorgnw scorg02
297 rename scorgrl scorg03
298 rename scorgch scorg04
299 rename scorged scorg05
300 rename scorgsc scorg06
301 rename scorgsp scorg07
302 rename scorg95 scorg08
303 rename scptruk scpt04
304 rename scptrab scpt05
305 rename scalcm scako
306 rename fqethnmr fqethnr
307 rename samptyp samptyp9
308 rename finstat finstatw9
309 * Generate a new variable called wave and assign the number 9 to each observation (to designate Wave
310 9)
311 gen wave = 9
312 * Save Wave 9 core dataset
313 save wave9.dta
314
315 * Variables Wave 2 Financial Derived
316 use idauniq totwq5_bu_s using wave_2_financial_derived_variables.dta
317 * Describe dataset
318 describe
319 * Sort from lowest to highest participant ID
320 sort idauniq
321 * Save Wave 2 financial derived dataset
322 save wave2financial.dta
323
324 * Variables Wave 2 Nurse
325 use idauniq mmsstre mmssti mmstre mmstti mmftre2 mmrrre mmftti mmrrfti mmsna mmstna mmftna mmcrre
326 mmcrna mmrrna cfib hdl trig ldl hscrp hba1c mmgsd1 mmgsn1 mmgsd2 mmgsn2 mmgsd3 mmgsn3 mmgswil mmgsdom
327 mmgssta mmgstp mmgsres mmbcsc mmsssc mmstsc mmftsc mmcrav mmcrsc mmrrsc mmrrtti mmrroc using
328 wave_2_nurse_data_v2.dta
329 * Describe dataset
330 describe
331 * Sort from lowest to highest participant ID
332 sort idauniq
333 * Save Wave 2 nurse dataset
334 save wave2nurse.dta
335
336 * Variables Wave 2 Derived
337 use idauniq w2edqual using wave_2_derived_variables.dta
338 * Describe dataset
339 describe
340 * Sort from lowest to highest participant ID
341 sort idauniq
342 * Rename variables to shorter or more convenient forms
343 rename w2edqual edqual
344 * Save Wave 2 derived dataset
345 save wave2derived.dta
346
347 * Variables Wave 3 Financial Derived
348 use idauniq totwq5_bu_s using wave_3_financial_derived_variables.dta
349 * Describe dataset
350 describe
351 * Sort from lowest to highest participant ID
352 sort idauniq

```



```

406 sort idauniq
407 * Save Wave 6 derived dataset
408 save wave6derived.dta
409
410 * Variables Wave 7 Financial Derived
411 use idauniq totwq5_bu_s using wave_7_financial_derived_variables.dta
412 * Describe dataset
413 describe
414 * Sort from lowest to highest participant ID
415 sort idauniq
416 * Save Wave 7 financial derived dataset
417 save wave7financial.dta
418
419 * Variables Wave 7 Derived
420 use idauniq edqual using wave_7_ifs_derived_variables.dta
421 * Describe dataset
422 describe
423 * Sort from lowest to highest participant ID
424 sort idauniq
425 * Save Wave 7 derived dataset
426 save wave7derived.dta
427
428 * Variables Wave 8 Financial Derived
429 use idauniq totwq5_bu_s using wave_8_elsa_financial_dvs_eul_v1.dta
430 * Describe dataset
431 describe
432 * Sort from lowest to highest participant ID
433 sort idauniq
434 * Save Wave 8 financial derived dataset
435 save wave8financial.dta
436
437 * Variables Wave 8 Derived
438 use idauniq edqual using wave_8_elsa_ifs_dvs_eul_v1.dta
439 * Describe dataset
440 describe
441 * Sort from lowest to highest participant ID
442 sort idauniq
443 * Save Wave 8 derived dataset
444 save wave8derived.dta
445
446 * Variables Wave 8-9 Nurse
447 use idauniq wave cfib hdl trig ldl hscrp hba1c mmgsd1 mmgsn1 mmgsd2 mmgsn2 mmgsd3 mmgsn3 mmgswil
mmgsdom mmgssta mmgstp mmgsres using elsa_nurse_w8w9_data_eul.dta
448 * Describe dataset
449 describe
450 * Sort from lowest to highest participant ID
451 sort idauniq
452 * Save Wave 8-9 nurse dataset
453 save wave89nurse.dta
454 * Keep data from Wave 8 only
455 keep if wave==8
456 * Save Wave 8 nurse dataset
457 save wave8nurse.dta
458 * Use Wave 8-9 nurse dataset
459 use wave89nurse.dta
460 * Keep data from Wave 9 only
461 keep if wave==9
462 * Save Wave 9 nurse dataset
463 save wave9nurse.dta
464
465 * Variables Wave 9 Financial Derived
466 use idauniq totwq5_bu_s using wave_9_financial_derived_variables.dta
467 * Describe dataset

```

```

468 describe
469 * Sort from lowest to highest participant ID
470 sort idauniq
471 * Save Wave 9 financial derived dataset
472 save wave9financial.dta
473
474 * Wave 9 Derived variables
475 use idauniq edqual using wave_9_ifs_derived_variables.dta
476 * Describe dataset
477 describe
478 * Sort from lowest to highest participant ID
479 sort idauniq
480 * Save Wave 9 derived dataset
481 save wave9derived.dta
482
483 * Wave 2 complete data
484 * Merge core, financial, nurse, and derived datasets for Wave 2 using the participant ID
485 * Use Wave 2 core dataset
486 use wave2.dta
487 * One-to-one merge of data in memory with wave2financial.dta on participant ID
488 merge 1:1 idauniq using wave2financial.dta, generate (merge_financial2)
489 * Overwrite Wave 2 dataset, by replacing the previously saved file
490 save wave2.dta, replace
491 * Use the newly saved file for Wave 2
492 use wave2.dta
493 * One-to-one merge of data in memory with wave2nurse.dta on participant ID
494 merge 1:1 idauniq using wave2nurse.dta, generate (merge_nurse2)
495 * Overwrite Wave 2 dataset, by replacing the previously saved file
496 save wave2.dta, replace
497 * Use the newly saved file for Wave 2
498 use wave2.dta
499 * One-to-one merge of data in memory with wave2derived.dta on participant ID
500 merge 1:1 idauniq using wave2derived.dta, generate (merge_derived2)
501 * Sort from lowest to highest participant ID
502 sort idauniq
503 * Overwrite Wave 2 dataset, by replacing the previously saved file
504 save wave2.dta, replace
505
506 * Wave 3 complete data
507 * Merge core and financial datasets for Wave 3 using the participant ID
508 * Use Wave 3 core dataset
509 use wave3.dta
510 * One-to-one merge of data in memory with wave3financial.dta on participant ID
511 merge 1:1 idauniq using wave3financial.dta, generate (merge_financial3)
512 * Sort from lowest to highest participant ID
513 sort idauniq
514 * Overwrite Wave 3 dataset, by replacing the previously saved file
515 save wave3.dta, replace
516
517 * Wave 4 complete data
518 * Merge core, financial, and nurse datasets for Wave 4 using the participant ID
519 * Use Wave 4 core dataset
520 use wave4.dta
521 * One-to-one merge of data in memory with wave4financial.dta on participant ID
522 merge 1:1 idauniq using wave4financial.dta, generate (merge_financial4)
523 * Overwrite Wave 4 dataset, by replacing the previously saved file
524 save wave4.dta, replace
525 * Use the newly saved file for Wave 4
526 use wave4.dta
527 * One-to-one merge of data in memory with wave4nurse.dta on participant ID
528 merge 1:1 idauniq using wave4nurse.dta, generate (merge_nurse4)
529 * Sort from lowest to highest participant ID
530 sort idauniq

```

```

531 * Overwrite Wave 4 dataset, by replacing the previously saved file
532 save wave4.dta, replace
533
534 * Wave 5 complete data
535 * Merge core and financial datasets for Wave 5 using the participant ID
536 * Use Wave 5 core dataset
537 use wave5.dta
538 * One-to-one merge of data in memory with wave5financial.dta on participant ID
539 merge 1:1 idauniq using wave5financial.dta, generate (merge_financial5)
540 * Sort from lowest to highest participant ID
541 sort idauniq
542 * Overwrite Wave 5 dataset, by replacing the previously saved file
543 save wave5.dta, replace
544
545 * Wave 6 complete data
546 * Merge core, financial, nurse, and derived datasets for Wave 6 using the participant ID
547 * Use Wave 6 core dataset
548 use wave6.dta
549 * One-to-one merge of data in memory with wave6financial.dta on participant ID
550 merge 1:1 idauniq using wave6financial.dta, generate (merge_financial6)
551 * Overwrite Wave 6 dataset, by replacing the previously saved file
552 save wave6.dta, replace
553 * Use the newly saved file for Wave 6
554 use wave6.dta
555 * One-to-one merge of data in memory with wave6nurse.dta on participant ID
556 merge 1:1 idauniq using wave6nurse.dta, generate (merge_nurse6)
557 * Overwrite Wave 6 dataset, by replacing the previously saved file
558 save wave6.dta, replace
559 * Use the newly saved file for Wave 6
560 use wave6.dta
561 * One-to-one merge of data in memory with wave6derived.dta on participant ID
562 merge 1:1 idauniq using wave6derived.dta, generate (merge_derived6)
563 * Sort from lowest to highest participant ID
564 sort idauniq
565 * Overwrite Wave 6 dataset, by replacing the previously saved file
566 save wave6.dta, replace
567
568 * Wave 7 complete data
569 * Merge core, financial, and derived datasets for Wave 7 using the participant ID
570 * Use Wave 7 core dataset
571 use wave7.dta
572 * One-to-one merge of data in memory with wave7financial.dta on participant ID
573 merge 1:1 idauniq using wave7financial.dta, generate (merge_financial7)
574 * Overwrite Wave 7 dataset, by replacing the previously saved file
575 save wave7.dta, replace
576 * Use the newly saved file for Wave 7
577 use wave7.dta
578 * One-to-one merge of data in memory with wave7derived.dta on participant ID
579 merge 1:1 idauniq using wave7derived.dta, generate (merge_derived7)
580 * Sort from lowest to highest participant ID
581 sort idauniq
582 * Overwrite Wave 7 dataset, by replacing the previously saved file
583 save wave7.dta, replace
584
585 * Wave 8 complete data
586 * Merge core, financial, nurse, and derived datasets for Wave 8 using the participant ID
587 * Use Wave 8 core dataset
588 use wave8.dta
589 * One-to-one merge of data in memory with wave8financial.dta on participant ID
590 merge 1:1 idauniq using wave8financial.dta, generate (merge_financial8)
591 * Overwrite Wave 8 dataset, by replacing the previously saved file
592 save wave8.dta, replace
593 * Use the newly saved file for Wave 8

```

```

594 use wave8.dta
595 * One-to-one merge of data in memory with wave8nurse.dta on participant ID
596 merge 1:1 idauniq using wave8nurse.dta, generate (merge_nurse8)
597 * Sort from lowest to highest participant ID
598 sort idauniq
599 * Overwrite Wave 8 dataset, by replacing the previously saved file
600 save wave8.dta, replace
601 * Use the newly saved file for Wave 8
602 use wave8.dta
603 * One-to-one merge of data in memory with wave8derived.dta on participant ID
604 merge 1:1 idauniq using wave8derived.dta, generate (merge_derived8)
605 * Sort from lowest to highest participant ID
606 sort idauniq
607 * Overwrite Wave 8 dataset, by replacing the previously saved file
608 save wave8.dta, replace
609
610 * Wave 9 complete data
611 * Merge core, financial, nurse, and derived datasets for Wave 9 using the participant ID
612 * Use Wave 9 core dataset
613 use wave9.dta
614 * One-to-one merge of data in memory with wave9financial.dta on participant ID
615 merge 1:1 idauniq using wave9financial.dta, generate (merge_financial9)
616 * Overwrite Wave 9 dataset, by replacing the previously saved file
617 save wave9.dta, replace
618 * Use the newly saved file for Wave 9
619 use wave9.dta
620 * One-to-one merge of data in memory with wave9derived.dta on participant ID
621 merge 1:1 idauniq using wave9derived.dta, generate (merge_derived9)
622 * Sort from lowest to highest participant ID
623 sort idauniq
624 * Overwrite Wave 9 dataset, by replacing the previously saved file
625 save wave9.dta, replace
626 * Use the newly saved file for Wave 9
627 use wave9.dta
628 * One-to-one merge of data in memory with wave9nurse.dta on participant ID
629 merge 1:1 idauniq using wave9nurse.dta, generate (merge_nurse9)
630 * Sort from lowest to highest participant ID
631 sort idauniq
632 * Overwrite Wave 9 dataset, by replacing the previously saved file
633 save wave9.dta, replace
634
635 * Append Wave 3 dataset to Wave 2 dataset
636 use wave2.dta
637 append using wave3.dta
638 * Sort by participant ID and wave (lowest to highest)
639 sort idauniq wave
640 * Append Wave 4 dataset
641 append using wave4.dta
642 * Sort by participant ID and wave (lowest to highest)
643 sort idauniq wave
644 * Append Wave 5 dataset
645 append using wave5.dta
646 * Sort by participant ID and wave (lowest to highest)
647 sort idauniq wave
648 * Append Wave 6 dataset
649 append using wave6.dta
650 * Sort by participant ID and wave (lowest to highest)
651 sort idauniq wave
652 * Append Wave 7 dataset
653 append using wave7.dta
654 * Sort by participant ID and wave (lowest to highest)
655 sort idauniq wave
656 * Append Wave 8 dataset

```

```

657 append using wave8.dta
658 * Sort by participant ID and wave (lowest to highest)
659 sort idauniq wave
660 * Append Wave 9 dataset
661 append using wave9.dta
662 * Sort by participant ID and wave (lowest to highest)
663 sort idauniq wave
664 * Assign a number in ascending order to each row of observations
665 gen ascnr = _n
666
667 * Organising dataset
668 * Generate a variable that assigns the observation number (i.e., 1 for first data collection
timepoint, 2 for second data collection timepoint etc.) to each row by participant ID
669 bysort idauniq (wave): gen obsnr = _n
670 * Generate a variable that assigns the number of total observations to each row of data for a given
participant
671 bysort idauniq: gen obscount = _N
672 * Check how many participants have data at 1 to 8 timepoints - the "if obsnr==1" statement is used
to prevent participants with data at more than one timepoint from contributing to the counts more
than once
673 tabulate obscount if obsnr==1
674 * Generate a variable that assigns the number 1 to the row representing participants' first
observation
675 bysort idauniq (wave): gen first = 1 if _n==1
676 * Generate a variable that assigns the number 1 to the row representing participants' last observation
677 bysort idauniq (wave): gen last = 1 if _n==_N
678 * Generate a variable that assigns the number 1 to the row representing participants' first
observation if this corresponds to Wave 2 (baseline)
679 bysort idauniq (wave): gen firstwave = 1 if obsnr==1 & wave==2
680 * Carry the value of this last variable forwards to the remainder of a participant's observations
681 bysort idauniq: gen firstwave_cons = firstwave[1]
682 * Install unique command
683 ssc install unique
684 * Count total number of participants and observations
685 unique idauniq
686 * 19,807 individuals, 80,750 observations
687 * Save dataset with a new name
688 save raw.dta
689
690 * Keep if participant is a core member (include core members who had a proxy or partial interview or
those who had been interviewed in an institution)
691 keep if finstatw2=="C1CM" | inlist(finstatw3,"C1CM","C3CM") | inlist(finstatw4,"C1CM","C3CM","C4CM")
| inlist(finstatw5,"C1CM","C3CM","C4CM") | inlist(finstatw6,1,7,14,25) | inlist(finstatw7,1,7,14,25,
33) | inlist(finstatw8,1,7,14,25,33) | inlist(finstatw9,1,7,14,25,33,48)
692 * Count total number of participants and observations
693 unique idauniq
694 * 15,022 individuals, 68,496 observations
695 * Replace age = 90 if participant is aged 90+ years (collapsed in ELSA and coded as 99 at Wave 2, 3,
and 4)
696 replace indager = 90 if indager==99 & inlist(wave,2,3,4)
697 * Replace age = 90 if participant is aged 90+ years (collapsed in ELSA and coded as -7 at Wave 5, 6,
7, 8, and 9)
698 replace indager = 90 if indager==-7 & inlist(wave,5,6,7,8,9)
699 * Save dataset with a new name
700 save data.dta
701
702 * WAVE 2, 3, 4, 5, 6, 7, 8, 9
703 * [b37-b40] Socio-cultural trips (reversed)
704 * [b7-b8] Holidays
705 * Replace variables as missing for any missing cases (coded as negative numbers in the ELSA dataset)
706 * [b37] How often respondent goes to the cinema
707 replace scacta = . if scacta<0
708 * [b38] How often respondent eats out of the house

```

```

709 replace scactb = . if scactb<0
710 * [b39] How often respondent goes to an art gallery or museum
711 replace scactc = . if scactc<0
712 * [b40] How often respondent goes to the theatre, a concert, or the opera
713 replace scactd = . if scactd<0
714 * [b7] Respondent has taken a holiday in the UK in the last 12 months
715 replace scpt04 = . if scpt04<0
716 * [b8] Respondent has taken a holiday abroad in the last 12 months
717 replace scpt05 = . if scpt05<0
718
719 * Reverse the negatively framed variables (this creates new variables and adds the "rev" prefix to
the original variable names)
720 revrs scacta
721 revrs scactb
722 revrs scactc
723 revrs scactd
724 * Collapse categories with a small number of participants
725 replace revscacta = 5 if revscacta == 6
726 replace revscactc = 5 if revscactc == 6
727 replace revscactd = 5 if revscactd == 6
728 replace revscactb = 1 if revscactb ==2
729 replace revscactb = 2 if revscactb ==3
730 replace revscactb = 3 if revscactb ==4
731 replace revscactb = 4 if revscactb ==5
732 replace revscactb = 5 if revscactb ==6
733
734 * WAVE 2, 3, 4, 5, 6, 7, 8, 9
735 * [b26-b36] (+ 2 omitted) ADL and IADL disabilities (reversed)
736 * Replace variables as missing for any missing cases (coded as negative numbers in the ELSA dataset)
737 replace heada01 = . if heada01<0
738 replace heada02 = . if heada02<0
739 replace heada03 = . if heada03<0
740 replace heada04 = . if heada04<0
741 replace heada05 = . if heada05<0
742 replace heada06 = . if heada06<0
743 replace heada07 = . if heada07<0
744 replace heada08 = . if heada08<0
745 replace heada09 = . if heada09<0
746 replace heada10 = . if heada10<0
747 replace headb01 = . if headb01<0
748 replace headb02 = . if headb02<0
749 replace headb03 = . if headb03<0
750 replace headb04 = . if headb04<0
751 replace headb05 = . if headb05<0
752 replace headb06 = . if headb06<0
753 replace headb07 = . if headb07<0
754 replace headb08 = . if headb08<0
755 replace headb09 = . if headb09<0
756 replace headb10 = . if headb10<0
757 replace headb11 = . if headb11<0
758 replace headb12 = . if headb12<0
759 replace headb13 = . if headb13<0
760
761 replace headldr = . if headldr<0
762 replace headlwa = . if headlwa<0
763 replace headlba = . if headlba<0
764 replace headlea = . if headlea<0
765 replace headlbe = . if headlbe<0
766 replace headlwc = . if headlwc<0
767 replace headlma = . if headlma<0
768 replace headlpr = . if headlpr<0
769 replace headlsh = . if headlsh<0
770 replace headlph = . if headlph<0

```



```

771 replace headlme = . if headlme<0
772 replace headlho = . if headlho<0
773 replace headlmo = . if headlmo<0
774 replace headl96 = . if headl96<0
775
776 * ADL
777 * [b26] ADL: difficulty dressing, including putting on shoes and socks
778 replace headldr = 2 if headldr == 0
779 * Assign the number 0 if the participant reported difficulties performing the first listed activity
780 replace headldr = 0 if headldr == 1
781 * Assign the number 1 if the participant reported no difficulties performing the first listed activity
782 replace headldr = 1 if headldr == 2
783 * Assign the number 0 if the participant reported difficulties performing the first listed activity
784 replace headldr = 0 if (headb01 == 1 | headb02 == 1 | headb03 == 1 | headb04 == 1 | headb05 == 1 |
headb06 == 1 | headb07 == 1 | headb08 == 1 | headb09 == 1 | headb10 == 1 | headb11 == 1 | headb12 ==
1 | headb13 == 1) & wave==2
785 * Assign the number 1 if the participant reported any answer other than the listed activity in
headb01-headb13 and data are not missing
786 replace headldr = 1 if inlist(headb01,2,3,4,5,6,7,8,9,10,11,12,13,96) & headldr!=0
787 replace headldr = 1 if inlist(headb02,2,3,4,5,6,7,8,9,10,11,12,13,96) & headldr!=0
788 replace headldr = 1 if inlist(headb03,2,3,4,5,6,7,8,9,10,11,12,13,96) & headldr!=0
789 replace headldr = 1 if inlist(headb04,2,3,4,5,6,7,8,9,10,11,12,13,96) & headldr!=0
790 replace headldr = 1 if inlist(headb05,2,3,4,5,6,7,8,9,10,11,12,13,96) & headldr!=0
791 replace headldr = 1 if inlist(headb06,2,3,4,5,6,7,8,9,10,11,12,13,96) & headldr!=0
792 replace headldr = 1 if inlist(headb07,2,3,4,5,6,7,8,9,10,11,12,13,96) & headldr!=0
793 replace headldr = 1 if inlist(headb08,2,3,4,5,6,7,8,9,10,11,12,13,96) & headldr!=0
794 replace headldr = 1 if inlist(headb09,2,3,4,5,6,7,8,9,10,11,12,13,96) & headldr!=0
795 replace headldr = 1 if inlist(headb10,2,3,4,5,6,7,8,9,10,11,12,13,96) & headldr!=0
796 replace headldr = 1 if inlist(headb11,2,3,4,5,6,7,8,9,10,11,12,13,96) & headldr!=0
797 replace headldr = 1 if inlist(headb12,2,3,4,5,6,7,8,9,10,11,12,13,96) & headldr!=0
798 replace headldr = 1 if inlist(headb13,2,3,4,5,6,7,8,9,10,11,12,13,96) & headldr!=0
799
800 * [b27] ADL: difficulty walking across a room
801 replace headlwa = 2 if headlwa == 0
802 * Assign the number 0 if the participant reported difficulties performing the second listed activity
803 replace headlwa = 0 if headlwa == 1
804 * Assign the number 1 if the participant reported no difficulties performing the second listed
activity
805 replace headlwa = 1 if headlwa == 2
806 * Assign the number 0 if the participant reported difficulties performing the second listed activity
807 replace headlwa = 0 if (headb01 == 2 | headb02 == 2 | headb03 == 2 | headb04 == 2 | headb05 == 2 |
headb06 == 2 | headb07 == 2 | headb08 == 2 | headb09 == 2 | headb10 == 2 | headb11 == 2 | headb12 ==
2 | headb13 == 2) & wave==2
808 * Assign the number 1 if the participant reported any answer other than the listed activity in
headb01-headb13 and data are not missing
809 replace headlwa = 1 if inlist(headb01,1,3,4,5,6,7,8,9,10,11,12,13,96) & headlwa!=0
810 replace headlwa = 1 if inlist(headb02,1,3,4,5,6,7,8,9,10,11,12,13,96) & headlwa!=0
811 replace headlwa = 1 if inlist(headb03,1,3,4,5,6,7,8,9,10,11,12,13,96) & headlwa!=0
812 replace headlwa = 1 if inlist(headb04,1,3,4,5,6,7,8,9,10,11,12,13,96) & headlwa!=0
813 replace headlwa = 1 if inlist(headb05,1,3,4,5,6,7,8,9,10,11,12,13,96) & headlwa!=0
814 replace headlwa = 1 if inlist(headb06,1,3,4,5,6,7,8,9,10,11,12,13,96) & headlwa!=0
815 replace headlwa = 1 if inlist(headb07,1,3,4,5,6,7,8,9,10,11,12,13,96) & headlwa!=0
816 replace headlwa = 1 if inlist(headb08,1,3,4,5,6,7,8,9,10,11,12,13,96) & headlwa!=0
817 replace headlwa = 1 if inlist(headb09,1,3,4,5,6,7,8,9,10,11,12,13,96) & headlwa!=0
818 replace headlwa = 1 if inlist(headb10,1,3,4,5,6,7,8,9,10,11,12,13,96) & headlwa!=0
819 replace headlwa = 1 if inlist(headb11,1,3,4,5,6,7,8,9,10,11,12,13,96) & headlwa!=0
820 replace headlwa = 1 if inlist(headb12,1,3,4,5,6,7,8,9,10,11,12,13,96) & headlwa!=0
821 replace headlwa = 1 if inlist(headb13,1,3,4,5,6,7,8,9,10,11,12,13,96) & headlwa!=0
822
823 * [b28] ADL: difficulty bathing or showering
824 replace headlba = 2 if headlba == 0
825 * Assign the number 0 if the participant reported difficulties performing the third listed activity
826 replace headlba = 0 if headlba == 1

```



```

827 * Assign the number 1 if the participant reported no difficulties performing the third listed activity
828 replace headlba = 1 if headlba == 2
829 * Assign the number 0 if the participant reported difficulties performing the third listed activity
830 replace headlba = 0 if (headb01 == 3 | headb02 == 3 | headb03 == 3 | headb04 == 3 | headb05 == 3 |
headb06 == 3 | headb07 == 3 | headb08 == 3 | headb09 == 3 | headb10 == 3 | headb11 == 3 | headb12 ==
3 | headb13 == 3) & wave==2
831 * Assign the number 1 if the participant reported any answer other than the listed activity in
headb01-headb13 and data are not missing
832 replace headlba = 1 if inlist(headb01,1,2,4,5,6,7,8,9,10,11,12,13,96) & headlba!=0
833 replace headlba = 1 if inlist(headb02,1,2,4,5,6,7,8,9,10,11,12,13,96) & headlba!=0
834 replace headlba = 1 if inlist(headb03,1,2,4,5,6,7,8,9,10,11,12,13,96) & headlba!=0
835 replace headlba = 1 if inlist(headb04,1,2,4,5,6,7,8,9,10,11,12,13,96) & headlba!=0
836 replace headlba = 1 if inlist(headb05,1,2,4,5,6,7,8,9,10,11,12,13,96) & headlba!=0
837 replace headlba = 1 if inlist(headb06,1,2,4,5,6,7,8,9,10,11,12,13,96) & headlba!=0
838 replace headlba = 1 if inlist(headb07,1,2,4,5,6,7,8,9,10,11,12,13,96) & headlba!=0
839 replace headlba = 1 if inlist(headb08,1,2,4,5,6,7,8,9,10,11,12,13,96) & headlba!=0
840 replace headlba = 1 if inlist(headb09,1,2,4,5,6,7,8,9,10,11,12,13,96) & headlba!=0
841 replace headlba = 1 if inlist(headb10,1,2,4,5,6,7,8,9,10,11,12,13,96) & headlba!=0
842 replace headlba = 1 if inlist(headb11,1,2,4,5,6,7,8,9,10,11,12,13,96) & headlba!=0
843 replace headlba = 1 if inlist(headb12,1,2,4,5,6,7,8,9,10,11,12,13,96) & headlba!=0
844 replace headlba = 1 if inlist(headb13,1,2,4,5,6,7,8,9,10,11,12,13,96) & headlba!=0
845
846 * [b29] ADL: difficulty eating, such as cutting up your food
847 replace headlea = 2 if headlea == 0
848 * Assign the number 0 if the participant reported difficulties performing the fourth listed activity
849 replace headlea = 0 if headlea == 1
850 * Assign the number 1 if the participant reported no difficulties performing the fourth listed
activity
851 replace headlea = 1 if headlea == 2
852 * Assign the number 0 if the participant reported difficulties performing the fourth listed activity
853 replace headlea = 0 if (headb01 == 4 | headb02 == 4 | headb03 == 4 | headb04 == 4 | headb05 == 4 |
headb06 == 4 | headb07 == 4 | headb08 == 4 | headb09 == 4 | headb10 == 4 | headb11 == 4 | headb12 ==
4 | headb13 == 4) & wave==2
854 * Assign the number 1 if the participant reported any answer other than the listed activity in
headb01-headb13 and data are not missing
855 replace headlea = 1 if inlist(headb01,1,2,3,5,6,7,8,9,10,11,12,13,96) & headlea!=0
856 replace headlea = 1 if inlist(headb02,1,2,3,5,6,7,8,9,10,11,12,13,96) & headlea!=0
857 replace headlea = 1 if inlist(headb03,1,2,3,5,6,7,8,9,10,11,12,13,96) & headlea!=0
858 replace headlea = 1 if inlist(headb04,1,2,3,5,6,7,8,9,10,11,12,13,96) & headlea!=0
859 replace headlea = 1 if inlist(headb05,1,2,3,5,6,7,8,9,10,11,12,13,96) & headlea!=0
860 replace headlea = 1 if inlist(headb06,1,2,3,5,6,7,8,9,10,11,12,13,96) & headlea!=0
861 replace headlea = 1 if inlist(headb07,1,2,3,5,6,7,8,9,10,11,12,13,96) & headlea!=0
862 replace headlea = 1 if inlist(headb08,1,2,3,5,6,7,8,9,10,11,12,13,96) & headlea!=0
863 replace headlea = 1 if inlist(headb09,1,2,3,5,6,7,8,9,10,11,12,13,96) & headlea!=0
864 replace headlea = 1 if inlist(headb10,1,2,3,5,6,7,8,9,10,11,12,13,96) & headlea!=0
865 replace headlea = 1 if inlist(headb11,1,2,3,5,6,7,8,9,10,11,12,13,96) & headlea!=0
866 replace headlea = 1 if inlist(headb12,1,2,3,5,6,7,8,9,10,11,12,13,96) & headlea!=0
867 replace headlea = 1 if inlist(headb13,1,2,3,5,6,7,8,9,10,11,12,13,96) & headlea!=0
868
869 * [b30] ADL: difficulty getting in or out of bed
870 replace headlbe = 2 if headlbe == 0
871 * Assign the number 0 if the participant reported difficulties performing the fifth listed activity
872 replace headlbe = 0 if headlbe == 1
873 * Assign the number 1 if the participant reported no difficulties performing the fifth listed activity
874 replace headlbe = 1 if headlbe == 2
875 * Assign the number 0 if the participant reported difficulties performing the fifth listed activity
876 replace headlbe = 0 if (headb01 == 5 | headb02 == 5 | headb03 == 5 | headb04 == 5 | headb05 == 5 |
headb06 == 5 | headb07 == 5 | headb08 == 5 | headb09 == 5 | headb10 == 5 | headb11 == 5 | headb12 ==
5 | headb13 == 5) & wave==2
877 * Assign the number 1 if the participant reported any answer other than the listed activity in
headb01-headb13 and data are not missing
878 replace headlbe = 1 if inlist(headb01,1,2,3,4,6,7,8,9,10,11,12,13,96) & headlbe!=0
879 replace headlbe = 1 if inlist(headb02,1,2,3,4,6,7,8,9,10,11,12,13,96) & headlbe!=0

```

```

880 replace headlbe = 1 if inlist(headb03,1,2,3,4,6,7,8,9,10,11,12,13,96) & headlbe!=0
881 replace headlbe = 1 if inlist(headb04,1,2,3,4,6,7,8,9,10,11,12,13,96) & headlbe!=0
882 replace headlbe = 1 if inlist(headb05,1,2,3,4,6,7,8,9,10,11,12,13,96) & headlbe!=0
883 replace headlbe = 1 if inlist(headb06,1,2,3,4,6,7,8,9,10,11,12,13,96) & headlbe!=0
884 replace headlbe = 1 if inlist(headb07,1,2,3,4,6,7,8,9,10,11,12,13,96) & headlbe!=0
885 replace headlbe = 1 if inlist(headb08,1,2,3,4,6,7,8,9,10,11,12,13,96) & headlbe!=0
886 replace headlbe = 1 if inlist(headb09,1,2,3,4,6,7,8,9,10,11,12,13,96) & headlbe!=0
887 replace headlbe = 1 if inlist(headb10,1,2,3,4,6,7,8,9,10,11,12,13,96) & headlbe!=0
888 replace headlbe = 1 if inlist(headb11,1,2,3,4,6,7,8,9,10,11,12,13,96) & headlbe!=0
889 replace headlbe = 1 if inlist(headb12,1,2,3,4,6,7,8,9,10,11,12,13,96) & headlbe!=0
890 replace headlbe = 1 if inlist(headb13,1,2,3,4,6,7,8,9,10,11,12,13,96) & headlbe!=0
891
892 * [b31] ADL: difficulty using the toilet, including getting up or down
893 replace headlwc = 2 if headlwc == 0
894 * Assign the number 0 if the participant reported difficulties performing the sixth listed activity
895 replace headlwc = 0 if headlwc == 1
896 * Assign the number 1 if the participant reported no difficulties performing the sixth listed activity
897 replace headlwc = 1 if headlwc == 2
898 * Assign the number 0 if the participant reported difficulties performing the sixth listed activity
899 replace headlwc = 0 if (headb01 == 6 | headb02 == 6 | headb03 == 6 | headb04 == 6 | headb05 == 6 |
headb06 == 6 | headb07 == 6 | headb08 == 6 | headb09 == 6 | headb10 == 6 | headb11 == 6 | headb12 ==
6 | headb13 == 6) & wave==2
900 * Assign the number 1 if the participant reported any answer other than the listed activity in
headb01-headb13 and data are not missing
901 replace headlwc = 1 if inlist(headb01,1,2,3,4,5,7,8,9,10,11,12,13,96) & headlwc!=0
902 replace headlwc = 1 if inlist(headb02,1,2,3,4,5,7,8,9,10,11,12,13,96) & headlwc!=0
903 replace headlwc = 1 if inlist(headb03,1,2,3,4,5,7,8,9,10,11,12,13,96) & headlwc!=0
904 replace headlwc = 1 if inlist(headb04,1,2,3,4,5,7,8,9,10,11,12,13,96) & headlwc!=0
905 replace headlwc = 1 if inlist(headb05,1,2,3,4,5,7,8,9,10,11,12,13,96) & headlwc!=0
906 replace headlwc = 1 if inlist(headb06,1,2,3,4,5,7,8,9,10,11,12,13,96) & headlwc!=0
907 replace headlwc = 1 if inlist(headb07,1,2,3,4,5,7,8,9,10,11,12,13,96) & headlwc!=0
908 replace headlwc = 1 if inlist(headb08,1,2,3,4,5,7,8,9,10,11,12,13,96) & headlwc!=0
909 replace headlwc = 1 if inlist(headb09,1,2,3,4,5,7,8,9,10,11,12,13,96) & headlwc!=0
910 replace headlwc = 1 if inlist(headb10,1,2,3,4,5,7,8,9,10,11,12,13,96) & headlwc!=0
911 replace headlwc = 1 if inlist(headb11,1,2,3,4,5,7,8,9,10,11,12,13,96) & headlwc!=0
912 replace headlwc = 1 if inlist(headb12,1,2,3,4,5,7,8,9,10,11,12,13,96) & headlwc!=0
913 replace headlwc = 1 if inlist(headb13,1,2,3,4,5,7,8,9,10,11,12,13,96) & headlwc!=0
914
915 * IADL
916 * [b32] IADL: difficulty using a map to figure out how to get around in a strange place
917 replace headlma = 2 if headlma == 0
918 * Assign the number 0 if the participant reported difficulties performing the first listed activity
919 replace headlma = 0 if headlma == 1
920 * Assign the number 1 if the participant reported no difficulties performing the first listed activity
921 replace headlma = 1 if headlma == 2
922 * Assign the number 0 if the participant reported difficulties performing the first listed activity
923 replace headlma = 0 if (headb01 == 7 | headb02 == 7 | headb03 == 7 | headb04 == 7 | headb05 == 7 |
headb06 == 7 | headb07 == 7 | headb08 == 7 | headb09 == 7 | headb10 == 7 | headb11 == 7 | headb12 ==
7 | headb13 == 7) & wave==2
924 * Assign the number 1 if the participant reported any answer other than the listed activity in
headb01-headb13 and data are not missing
925 replace headlma = 1 if inlist(headb01,1,2,3,4,5,6,8,9,10,11,12,13,96) & headlma!=0
926 replace headlma = 1 if inlist(headb02,1,2,3,4,5,6,8,9,10,11,12,13,96) & headlma!=0
927 replace headlma = 1 if inlist(headb03,1,2,3,4,5,6,8,9,10,11,12,13,96) & headlma!=0
928 replace headlma = 1 if inlist(headb04,1,2,3,4,5,6,8,9,10,11,12,13,96) & headlma!=0
929 replace headlma = 1 if inlist(headb05,1,2,3,4,5,6,8,9,10,11,12,13,96) & headlma!=0
930 replace headlma = 1 if inlist(headb06,1,2,3,4,5,6,8,9,10,11,12,13,96) & headlma!=0
931 replace headlma = 1 if inlist(headb07,1,2,3,4,5,6,8,9,10,11,12,13,96) & headlma!=0
932 replace headlma = 1 if inlist(headb08,1,2,3,4,5,6,8,9,10,11,12,13,96) & headlma!=0
933 replace headlma = 1 if inlist(headb09,1,2,3,4,5,6,8,9,10,11,12,13,96) & headlma!=0
934 replace headlma = 1 if inlist(headb10,1,2,3,4,5,6,8,9,10,11,12,13,96) & headlma!=0
935 replace headlma = 1 if inlist(headb11,1,2,3,4,5,6,8,9,10,11,12,13,96) & headlma!=0
936 replace headlma = 1 if inlist(headb12,1,2,3,4,5,6,8,9,10,11,12,13,96) & headlma!=0

```

```

937 replace headlma = 1 if inlist(headb13,1,2,3,4,5,6,8,9,10,11,12,13,96) & headlma!=0
938
939 * [b33] IADL: difficulty preparing a hot meal
940 replace headlpr = 2 if headlpr == 0
941 * Assign the number 0 if the participant reported difficulties performing the second listed activity
942 replace headlpr = 0 if headlpr == 1
943 * Assign the number 1 if the participant reported no difficulties performing the second listed
    activity
944 replace headlpr = 1 if headlpr == 2
945 * Assign the number 0 if the participant reported difficulties performing the second listed activity
946 replace headlpr = 0 if (headb01 == 8 | headb02 == 8 | headb03 == 8 | headb04 == 8 | headb05 == 8 |
    headb06 == 8 | headb07 == 8 | headb08 == 8 | headb09 == 8 | headb10 == 8 | headb11 == 8 | headb12 ==
    8 | headb13 == 8) & wave==2
947 * Assign the number 1 if the participant reported any answer other than the listed activity in
    headb01-headb13 and data are not missing
948 replace headlpr = 1 if inlist(headb01,1,2,3,4,5,6,7,9,10,11,12,13,96) & headlpr!=0
949 replace headlpr = 1 if inlist(headb02,1,2,3,4,5,6,7,9,10,11,12,13,96) & headlpr!=0
950 replace headlpr = 1 if inlist(headb03,1,2,3,4,5,6,7,9,10,11,12,13,96) & headlpr!=0
951 replace headlpr = 1 if inlist(headb04,1,2,3,4,5,6,7,9,10,11,12,13,96) & headlpr!=0
952 replace headlpr = 1 if inlist(headb05,1,2,3,4,5,6,7,9,10,11,12,13,96) & headlpr!=0
953 replace headlpr = 1 if inlist(headb06,1,2,3,4,5,6,7,9,10,11,12,13,96) & headlpr!=0
954 replace headlpr = 1 if inlist(headb07,1,2,3,4,5,6,7,9,10,11,12,13,96) & headlpr!=0
955 replace headlpr = 1 if inlist(headb08,1,2,3,4,5,6,7,9,10,11,12,13,96) & headlpr!=0
956 replace headlpr = 1 if inlist(headb09,1,2,3,4,5,6,7,9,10,11,12,13,96) & headlpr!=0
957 replace headlpr = 1 if inlist(headb10,1,2,3,4,5,6,7,9,10,11,12,13,96) & headlpr!=0
958 replace headlpr = 1 if inlist(headb11,1,2,3,4,5,6,7,9,10,11,12,13,96) & headlpr!=0
959 replace headlpr = 1 if inlist(headb12,1,2,3,4,5,6,7,9,10,11,12,13,96) & headlpr!=0
960 replace headlpr = 1 if inlist(headb13,1,2,3,4,5,6,7,9,10,11,12,13,96) & headlpr!=0
961
962 * [b34] IADL: difficulty shopping for groceries
963 replace headlsh = 2 if headlsh == 0
964 * Assign the number 0 if the participant reported difficulties performing the third listed activity
965 replace headlsh = 0 if headlsh == 1
966 * Assign the number 1 if the participant reported no difficulties performing the third listed activity
967 replace headlsh = 1 if headlsh == 2
968 * Assign the number 0 if the participant reported difficulties performing the third listed activity
969 replace headlsh = 0 if (headb01 == 9 | headb02 == 9 | headb03 == 9 | headb04 == 9 | headb05 == 9 |
    headb06 == 9 | headb07 == 9 | headb08 == 9 | headb09 == 9 | headb10 == 9 | headb11 == 9 | headb12 ==
    9 | headb13 == 9) & wave==2
970 * Assign the number 1 if the participant reported any answer other than the listed activity in
    headb01-headb13 and data are not missing
971 replace headlsh = 1 if inlist(headb01,1,2,3,4,5,6,7,8,10,11,12,13,96) & headlsh!=0
972 replace headlsh = 1 if inlist(headb02,1,2,3,4,5,6,7,8,10,11,12,13,96) & headlsh!=0
973 replace headlsh = 1 if inlist(headb03,1,2,3,4,5,6,7,8,10,11,12,13,96) & headlsh!=0
974 replace headlsh = 1 if inlist(headb04,1,2,3,4,5,6,7,8,10,11,12,13,96) & headlsh!=0
975 replace headlsh = 1 if inlist(headb05,1,2,3,4,5,6,7,8,10,11,12,13,96) & headlsh!=0
976 replace headlsh = 1 if inlist(headb06,1,2,3,4,5,6,7,8,10,11,12,13,96) & headlsh!=0
977 replace headlsh = 1 if inlist(headb07,1,2,3,4,5,6,7,8,10,11,12,13,96) & headlsh!=0
978 replace headlsh = 1 if inlist(headb08,1,2,3,4,5,6,7,8,10,11,12,13,96) & headlsh!=0
979 replace headlsh = 1 if inlist(headb09,1,2,3,4,5,6,7,8,10,11,12,13,96) & headlsh!=0
980 replace headlsh = 1 if inlist(headb10,1,2,3,4,5,6,7,8,10,11,12,13,96) & headlsh!=0
981 replace headlsh = 1 if inlist(headb11,1,2,3,4,5,6,7,8,10,11,12,13,96) & headlsh!=0
982 replace headlsh = 1 if inlist(headb12,1,2,3,4,5,6,7,8,10,11,12,13,96) & headlsh!=0
983 replace headlsh = 1 if inlist(headb13,1,2,3,4,5,6,7,8,10,11,12,13,96) & headlsh!=0
984
985 * [b35] IADL: difficulty making telephone calls
986 replace headlph = 2 if headlph == 0
987 * Assign the number 0 if the participant reported difficulties performing the fourth listed activity
988 replace headlph = 0 if headlph == 1
989 * Assign the number 1 if the participant reported no difficulties performing the fourth listed
    activity
990 replace headlph = 1 if headlph == 2
991 * Assign the number 0 if the participant reported difficulties performing the fourth listed activity

```

```

992  replace headlph = 0 if (headb01 == 10 | headb02 == 10 | headb03 == 10 | headb04 == 10 | headb05 == 10
    | headb06 == 10 | headb07 == 10 | headb08 == 10 | headb09 == 10 | headb10 == 10 | headb11 == 10 |
    headb12 == 10 | headb13 == 10) & wave==2
993  * Assign the number 1 if the participant reported any answer other than the listed activity in
    headb01-headb13 and data are not missing
994  replace headlph = 1 if inlist(headb01,1,2,3,4,5,6,7,8,9,11,12,13,96) & headlph!=0
995  replace headlph = 1 if inlist(headb02,1,2,3,4,5,6,7,8,9,11,12,13,96) & headlph!=0
996  replace headlph = 1 if inlist(headb03,1,2,3,4,5,6,7,8,9,11,12,13,96) & headlph!=0
997  replace headlph = 1 if inlist(headb04,1,2,3,4,5,6,7,8,9,11,12,13,96) & headlph!=0
998  replace headlph = 1 if inlist(headb05,1,2,3,4,5,6,7,8,9,11,12,13,96) & headlph!=0
999  replace headlph = 1 if inlist(headb06,1,2,3,4,5,6,7,8,9,11,12,13,96) & headlph!=0
1000 replace headlph = 1 if inlist(headb07,1,2,3,4,5,6,7,8,9,11,12,13,96) & headlph!=0
1001 replace headlph = 1 if inlist(headb08,1,2,3,4,5,6,7,8,9,11,12,13,96) & headlph!=0
1002 replace headlph = 1 if inlist(headb09,1,2,3,4,5,6,7,8,9,11,12,13,96) & headlph!=0
1003 replace headlph = 1 if inlist(headb10,1,2,3,4,5,6,7,8,9,11,12,13,96) & headlph!=0
1004 replace headlph = 1 if inlist(headb11,1,2,3,4,5,6,7,8,9,11,12,13,96) & headlph!=0
1005 replace headlph = 1 if inlist(headb12,1,2,3,4,5,6,7,8,9,11,12,13,96) & headlph!=0
1006 replace headlph = 1 if inlist(headb13,1,2,3,4,5,6,7,8,9,11,12,13,96) & headlph!=0
1007
1008 * (1 omitted) IADL: difficulty talking medications
1009 replace headlme = 2 if headlme == 0
1010 * Assign the number 0 if the participant reported difficulties performing the fifth listed activity
1011 replace headlme = 0 if headlme == 1
1012 * Assign the number 1 if the participant reported no difficulties performing the fifth listed activity
1013 replace headlme = 1 if headlme == 2
1014 * Assign the number 0 if the participant reported difficulties performing the fifth listed activity
1015 replace headlme = 0 if (headb01 == 11 | headb02 == 11 | headb03 == 11 | headb04 == 11 | headb05 == 11
    | headb06 == 11 | headb07 == 11 | headb08 == 11 | headb09 == 11 | headb10 == 11 | headb11 == 11 |
    headb12 == 11 | headb13 == 11) & wave==2
1016 * Assign the number 1 if the participant reported any answer other than the listed activity in
    headb01-headb13 and data are not missing
1017 replace headlme = 1 if inlist(headb01,1,2,3,4,5,6,7,8,9,10,12,13,96) & headlme!=0
1018 replace headlme = 1 if inlist(headb02,1,2,3,4,5,6,7,8,9,10,12,13,96) & headlme!=0
1019 replace headlme = 1 if inlist(headb03,1,2,3,4,5,6,7,8,9,10,12,13,96) & headlme!=0
1020 replace headlme = 1 if inlist(headb04,1,2,3,4,5,6,7,8,9,10,12,13,96) & headlme!=0
1021 replace headlme = 1 if inlist(headb05,1,2,3,4,5,6,7,8,9,10,12,13,96) & headlme!=0
1022 replace headlme = 1 if inlist(headb06,1,2,3,4,5,6,7,8,9,10,12,13,96) & headlme!=0
1023 replace headlme = 1 if inlist(headb07,1,2,3,4,5,6,7,8,9,10,12,13,96) & headlme!=0
1024 replace headlme = 1 if inlist(headb08,1,2,3,4,5,6,7,8,9,10,12,13,96) & headlme!=0
1025 replace headlme = 1 if inlist(headb09,1,2,3,4,5,6,7,8,9,10,12,13,96) & headlme!=0
1026 replace headlme = 1 if inlist(headb10,1,2,3,4,5,6,7,8,9,10,12,13,96) & headlme!=0
1027 replace headlme = 1 if inlist(headb11,1,2,3,4,5,6,7,8,9,10,12,13,96) & headlme!=0
1028 replace headlme = 1 if inlist(headb12,1,2,3,4,5,6,7,8,9,10,12,13,96) & headlme!=0
1029 replace headlme = 1 if inlist(headb13,1,2,3,4,5,6,7,8,9,10,12,13,96) & headlme!=0
1030
1031 * [b36] IADL: difficulty doing work around the house or garden
1032 replace headlho = 2 if headlho == 0
1033 * Assign the number 0 if the participant reported difficulties performing the sixth listed activity
1034 replace headlho = 0 if headlho == 1
1035 * Assign the number 1 if the participant reported no difficulties performing the sixth listed activity
1036 replace headlho = 1 if headlho == 2
1037 * Assign the number 0 if the participant reported difficulties performing the sixth listed activity
1038 replace headlho = 0 if (headb01 == 12 | headb02 == 12 | headb03 == 12 | headb04 == 12 | headb05 == 12
    | headb06 == 12 | headb07 == 12 | headb08 == 12 | headb09 == 12 | headb10 == 12 | headb11 == 12 |
    headb12 == 12 | headb13 == 12) & wave==2
1039 * Assign the number 1 if the participant reported any answer other than the listed activity in
    headb01-headb13 and data are not missing
1040 replace headlho = 1 if inlist(headb01,1,2,3,4,5,6,7,8,9,10,11,13,96) & headlho!=0
1041 replace headlho = 1 if inlist(headb02,1,2,3,4,5,6,7,8,9,10,11,13,96) & headlho!=0
1042 replace headlho = 1 if inlist(headb03,1,2,3,4,5,6,7,8,9,10,11,13,96) & headlho!=0
1043 replace headlho = 1 if inlist(headb04,1,2,3,4,5,6,7,8,9,10,11,13,96) & headlho!=0
1044 replace headlho = 1 if inlist(headb05,1,2,3,4,5,6,7,8,9,10,11,13,96) & headlho!=0
1045 replace headlho = 1 if inlist(headb06,1,2,3,4,5,6,7,8,9,10,11,13,96) & headlho!=0

```



```

1046 replace headlho = 1 if inlist(headb07,1,2,3,4,5,6,7,8,9,10,11,13,96) & headlho!=0
1047 replace headlho = 1 if inlist(headb08,1,2,3,4,5,6,7,8,9,10,11,13,96) & headlho!=0
1048 replace headlho = 1 if inlist(headb09,1,2,3,4,5,6,7,8,9,10,11,13,96) & headlho!=0
1049 replace headlho = 1 if inlist(headb10,1,2,3,4,5,6,7,8,9,10,11,13,96) & headlho!=0
1050 replace headlho = 1 if inlist(headb11,1,2,3,4,5,6,7,8,9,10,11,13,96) & headlho!=0
1051 replace headlho = 1 if inlist(headb12,1,2,3,4,5,6,7,8,9,10,11,13,96) & headlho!=0
1052 replace headlho = 1 if inlist(headb13,1,2,3,4,5,6,7,8,9,10,11,13,96) & headlho!=0
1053
1054 * (1 omitted) IADL: difficulty managing money, such as paying bills and keeping track of expenses
1055 replace headlmo = 2 if headlmo == 0
1056 * Assign the number 0 if the participant reported difficulties performing the seventh listed activity
1057 replace headlmo = 0 if headlmo == 1
1058 * Assign the number 1 if the participant reported no difficulties performing the seventh listed
    activity
1059 replace headlmo = 1 if headlmo == 2
1060 * Assign the number 0 if the participant reported difficulties performing the seventh listed activity
1061 replace headlmo = 0 if (headb01 == 13 | headb02 == 13 | headb03 == 13 | headb04 == 13 | headb05 == 13 |
    | headb06 == 13 | headb07 == 13 | headb08 == 13 | headb09 == 13 | headb10 == 13 | headb11 == 13 |
    headb12 == 13 | headb13 == 13) & wave==2
1062 * Assign the number 1 if the participant reported any answer other than the listed activity in
    headb01-headb13 and data are not missing
1063 replace headlmo = 1 if inlist(headb01,1,2,3,4,5,6,7,8,9,10,11,12,96) & headlmo!=0
1064 replace headlmo = 1 if inlist(headb02,1,2,3,4,5,6,7,8,9,10,11,12,96) & headlmo!=0
1065 replace headlmo = 1 if inlist(headb03,1,2,3,4,5,6,7,8,9,10,11,12,96) & headlmo!=0
1066 replace headlmo = 1 if inlist(headb04,1,2,3,4,5,6,7,8,9,10,11,12,96) & headlmo!=0
1067 replace headlmo = 1 if inlist(headb05,1,2,3,4,5,6,7,8,9,10,11,12,96) & headlmo!=0
1068 replace headlmo = 1 if inlist(headb06,1,2,3,4,5,6,7,8,9,10,11,12,96) & headlmo!=0
1069 replace headlmo = 1 if inlist(headb07,1,2,3,4,5,6,7,8,9,10,11,12,96) & headlmo!=0
1070 replace headlmo = 1 if inlist(headb08,1,2,3,4,5,6,7,8,9,10,11,12,96) & headlmo!=0
1071 replace headlmo = 1 if inlist(headb09,1,2,3,4,5,6,7,8,9,10,11,12,96) & headlmo!=0
1072 replace headlmo = 1 if inlist(headb10,1,2,3,4,5,6,7,8,9,10,11,12,96) & headlmo!=0
1073 replace headlmo = 1 if inlist(headb11,1,2,3,4,5,6,7,8,9,10,11,12,96) & headlmo!=0
1074 replace headlmo = 1 if inlist(headb12,1,2,3,4,5,6,7,8,9,10,11,12,96) & headlmo!=0
1075 replace headlmo = 1 if inlist(headb13,1,2,3,4,5,6,7,8,9,10,11,12,96) & headlmo!=0
1076
1077 * Save dataset with a new name
1078 save datavariables.dta
1079
1080 * WAVE 2, 3, 4, 5, 6, 7, 8, 9
1081 * [b16-b25] Mobility (reversed)
1082 * Replace variables as missing for any missing cases (coded as negative numbers in the ELSA dataset)
1083 replace hemobwa = . if hemobwa<0
1084 replace hemobsi = . if hemobsi<0
1085 replace hemobch = . if hemobch<0
1086 replace hemobcs = . if hemobcs<0
1087 replace hemobcl = . if hemobcl<0
1088 replace hemobst = . if hemobst<0
1089 replace hemobre = . if hemobre<0
1090 replace hemobpu = . if hemobpu<0
1091 replace hemobli = . if hemobli<0
1092 replace hemobpi = . if hemobpi<0
1093 replace hemob96 = . if hemob96<0
1094
1095 * [b16] Mobility: difficulty walking 100 yards
1096 replace hemobwa = 2 if hemobwa == 0
1097 * Assign the number 0 if the participant reported difficulties performing the first listed activity
1098 replace hemobwa = 0 if hemobwa == 1
1099 * Assign the number 1 if the participant reported no difficulties performing the first listed activity
1100 replace hemobwa = 1 if hemobwa == 2
1101 * Assign the number 0 if the participant reported difficulties performing the first listed activity
1102 replace hemobwa = 0 if (heada01 == 1 | heada02 == 1 | heada03 == 1 | heada04 == 1 | heada05 == 1 |
    heada06 == 1 | heada07 == 1 | heada08 == 1 | heada09 == 1 | heada10 == 1) & wave==2
1103 * Assign the number 1 if the participant reported any answer other than the listed activity in

```

```

heada01-heada10 and data are not missing
1104 replace hemobwa = 1 if inlist(heada01,2,3,4,5,6,7,8,9,10,96) & hemobwa!=0
1105 replace hemobwa = 1 if inlist(heada02,2,3,4,5,6,7,8,9,10,96) & hemobwa!=0
1106 replace hemobwa = 1 if inlist(heada03,2,3,4,5,6,7,8,9,10,96) & hemobwa!=0
1107 replace hemobwa = 1 if inlist(heada04,2,3,4,5,6,7,8,9,10,96) & hemobwa!=0
1108 replace hemobwa = 1 if inlist(heada05,2,3,4,5,6,7,8,9,10,96) & hemobwa!=0
1109 replace hemobwa = 1 if inlist(heada06,2,3,4,5,6,7,8,9,10,96) & hemobwa!=0
1110 replace hemobwa = 1 if inlist(heada07,2,3,4,5,6,7,8,9,10,96) & hemobwa!=0
1111 replace hemobwa = 1 if inlist(heada08,2,3,4,5,6,7,8,9,10,96) & hemobwa!=0
1112 replace hemobwa = 1 if inlist(heada09,2,3,4,5,6,7,8,9,10,96) & hemobwa!=0
1113 replace hemobwa = 1 if inlist(heada10,2,3,4,5,6,7,8,9,10,96) & hemobwa!=0
1114
1115 * [b17] Mobility: difficulty sitting for about two hours
1116 replace hemobsi = 2 if hemobsi == 0
1117 * Assign the number 0 if the participant reported difficulties performing the second listed activity
1118 replace hemobsi = 0 if hemobsi == 1
1119 * Assign the number 1 if the participant reported no difficulties performing the second listed
activity
1120 replace hemobsi = 1 if hemobsi == 2
1121 * Assign the number 0 if the participant reported difficulties performing the second listed activity
1122 replace hemobsi = 0 if (heada01 == 2 | heada02 == 2 | heada03 == 2 | heada04 == 2 | heada05 == 2 |
heada06 == 2 | heada07 == 2 | heada08 == 2 | heada09 == 2 | heada10 == 2) & wave==2
1123 * Assign the number 1 if the participant reported any answer other than the listed activity in
heada01-heada10 and data are not missing
1124 replace hemobsi = 1 if inlist(heada01,1,3,4,5,6,7,8,9,10,96) & hemobsi!=0
1125 replace hemobsi = 1 if inlist(heada02,1,3,4,5,6,7,8,9,10,96) & hemobsi!=0
1126 replace hemobsi = 1 if inlist(heada03,1,3,4,5,6,7,8,9,10,96) & hemobsi!=0
1127 replace hemobsi = 1 if inlist(heada04,1,3,4,5,6,7,8,9,10,96) & hemobsi!=0
1128 replace hemobsi = 1 if inlist(heada05,1,3,4,5,6,7,8,9,10,96) & hemobsi!=0
1129 replace hemobsi = 1 if inlist(heada06,1,3,4,5,6,7,8,9,10,96) & hemobsi!=0
1130 replace hemobsi = 1 if inlist(heada07,1,3,4,5,6,7,8,9,10,96) & hemobsi!=0
1131 replace hemobsi = 1 if inlist(heada08,1,3,4,5,6,7,8,9,10,96) & hemobsi!=0
1132 replace hemobsi = 1 if inlist(heada09,1,3,4,5,6,7,8,9,10,96) & hemobsi!=0
1133 replace hemobsi = 1 if inlist(heada10,1,3,4,5,6,7,8,9,10,96) & hemobsi!=0
1134
1135 * [b18] Mobility: difficulty getting up from a chair after sitting for long periods
1136 replace hemobch = 2 if hemobch == 0
1137 * Assign the number 0 if the participant reported difficulties performing the third listed activity
1138 replace hemobch = 0 if hemobch == 1
1139 * Assign the number 1 if the participant reported no difficulties performing the third listed activity
1140 replace hemobch = 1 if hemobch == 2
1141 * Assign the number 0 if the participant reported difficulties performing the third listed activity
1142 replace hemobch = 0 if (heada01 == 3 | heada02 == 3 | heada03 == 3 | heada04 == 3 | heada05 == 3 |
heada06 == 3 | heada07 == 3 | heada08 == 3 | heada09 == 3 | heada10 == 3) & wave==2
1143 * Assign the number 1 if the participant reported any answer other than the listed activity in
heada01-heada10 and data are not missing
1144 replace hemobch = 1 if inlist(heada01,1,2,4,5,6,7,8,9,10,96) & hemobch!=0
1145 replace hemobch = 1 if inlist(heada02,1,2,4,5,6,7,8,9,10,96) & hemobch!=0
1146 replace hemobch = 1 if inlist(heada03,1,2,4,5,6,7,8,9,10,96) & hemobch!=0
1147 replace hemobch = 1 if inlist(heada04,1,2,4,5,6,7,8,9,10,96) & hemobch!=0
1148 replace hemobch = 1 if inlist(heada05,1,2,4,5,6,7,8,9,10,96) & hemobch!=0
1149 replace hemobch = 1 if inlist(heada06,1,2,4,5,6,7,8,9,10,96) & hemobch!=0
1150 replace hemobch = 1 if inlist(heada07,1,2,4,5,6,7,8,9,10,96) & hemobch!=0
1151 replace hemobch = 1 if inlist(heada08,1,2,4,5,6,7,8,9,10,96) & hemobch!=0
1152 replace hemobch = 1 if inlist(heada09,1,2,4,5,6,7,8,9,10,96) & hemobch!=0
1153 replace hemobch = 1 if inlist(heada10,1,2,4,5,6,7,8,9,10,96) & hemobch!=0
1154
1155 * [b19] Mobility: difficulty climbing several flights of stairs without resting
1156 replace hemobcs = 2 if hemobcs == 0
1157 * Assign the number 0 if the participant reported difficulties performing the fourth listed activity
1158 replace hemobcs = 0 if hemobcs == 1
1159 * Assign the number 1 if the participant reported no difficulties performing the fourth listed
activity

```

```

1160 replace hemobcs = 1 if hemobcs == 2
1161 * Assign the number 0 if the participant reported difficulties performing the fourth listed activity
1162 replace hemobcs = 0 if (heada01 == 4 | heada02 == 4 | heada03 == 4 | heada04 == 4 | heada05 == 4 |
heada06 == 4 | heada07 == 4 | heada08 == 4 | heada09 == 4 | heada10 == 4) & wave==2
1163 * Assign the number 1 if the participant reported any answer other than the listed activity in
heada01-heada10 and data are not missing
1164 replace hemobcs = 1 if inlist(heada01,1,2,3,5,6,7,8,9,10,96) & hemobcs!=0
1165 replace hemobcs = 1 if inlist(heada02,1,2,3,5,6,7,8,9,10,96) & hemobcs!=0
1166 replace hemobcs = 1 if inlist(heada03,1,2,3,5,6,7,8,9,10,96) & hemobcs!=0
1167 replace hemobcs = 1 if inlist(heada04,1,2,3,5,6,7,8,9,10,96) & hemobcs!=0
1168 replace hemobcs = 1 if inlist(heada05,1,2,3,5,6,7,8,9,10,96) & hemobcs!=0
1169 replace hemobcs = 1 if inlist(heada06,1,2,3,5,6,7,8,9,10,96) & hemobcs!=0
1170 replace hemobcs = 1 if inlist(heada07,1,2,3,5,6,7,8,9,10,96) & hemobcs!=0
1171 replace hemobcs = 1 if inlist(heada08,1,2,3,5,6,7,8,9,10,96) & hemobcs!=0
1172 replace hemobcs = 1 if inlist(heada09,1,2,3,5,6,7,8,9,10,96) & hemobcs!=0
1173 replace hemobcs = 1 if inlist(heada10,1,2,3,5,6,7,8,9,10,96) & hemobcs!=0
1174
1175 * [b20] Mobility: difficulty climbing one flight of stairs without resting
1176 replace hemobcl = 2 if hemobcl == 0
1177 * Assign the number 0 if the participant reported difficulties performing the fifth listed activity
1178 replace hemobcl = 0 if hemobcl == 1
1179 * Assign the number 1 if the participant reported no difficulties performing the fifth listed activity
1180 replace hemobcl = 1 if hemobcl == 2
1181 * Assign the number 0 if the participant reported difficulties performing the fifth listed activity
1182 replace hemobcl = 0 if (heada01 == 5 | heada02 == 5 | heada03 == 5 | heada04 == 5 | heada05 == 5 |
heada06 == 5 | heada07 == 5 | heada08 == 5 | heada09 == 5 | heada10 == 5) & wave==2
1183 * Assign the number 1 if the participant reported any answer other than the listed activity in
heada01-heada10 and data are not missing
1184 replace hemobcl = 1 if inlist(heada01,1,2,3,4,6,7,8,9,10,96) & hemobcl!=0
1185 replace hemobcl = 1 if inlist(heada02,1,2,3,4,6,7,8,9,10,96) & hemobcl!=0
1186 replace hemobcl = 1 if inlist(heada03,1,2,3,4,6,7,8,9,10,96) & hemobcl!=0
1187 replace hemobcl = 1 if inlist(heada04,1,2,3,4,6,7,8,9,10,96) & hemobcl!=0
1188 replace hemobcl = 1 if inlist(heada05,1,2,3,4,6,7,8,9,10,96) & hemobcl!=0
1189 replace hemobcl = 1 if inlist(heada06,1,2,3,4,6,7,8,9,10,96) & hemobcl!=0
1190 replace hemobcl = 1 if inlist(heada07,1,2,3,4,6,7,8,9,10,96) & hemobcl!=0
1191 replace hemobcl = 1 if inlist(heada08,1,2,3,4,6,7,8,9,10,96) & hemobcl!=0
1192 replace hemobcl = 1 if inlist(heada09,1,2,3,4,6,7,8,9,10,96) & hemobcl!=0
1193 replace hemobcl = 1 if inlist(heada10,1,2,3,4,6,7,8,9,10,96) & hemobcl!=0
1194
1195 * [b21] Mobility: difficulty stooping, kneeling, or crouching
1196 replace hemobst = 2 if hemobst == 0
1197 * Assign the number 0 if the participant reported difficulties performing the sixth listed activity
1198 replace hemobst = 0 if hemobst == 1
1199 * Assign the number 1 if the participant reported no difficulties performing the sixth listed activity
1200 replace hemobst = 1 if hemobst == 2
1201 * Assign the number 0 if the participant reported difficulties performing the sixth listed activity
1202 replace hemobst = 0 if (heada01 == 6 | heada02 == 6 | heada03 == 6 | heada04 == 6 | heada05 == 6 |
heada06 == 6 | heada07 == 6 | heada08 == 6 | heada09 == 6 | heada10 == 6) & wave==2
1203 * Assign the number 1 if the participant reported any answer other than the listed activity in
heada01-heada10 and data are not missing
1204 replace hemobst = 1 if inlist(heada01,1,2,3,4,5,7,8,9,10,96) & hemobst!=0
1205 replace hemobst = 1 if inlist(heada02,1,2,3,4,5,7,8,9,10,96) & hemobst!=0
1206 replace hemobst = 1 if inlist(heada03,1,2,3,4,5,7,8,9,10,96) & hemobst!=0
1207 replace hemobst = 1 if inlist(heada04,1,2,3,4,5,7,8,9,10,96) & hemobst!=0
1208 replace hemobst = 1 if inlist(heada05,1,2,3,4,5,7,8,9,10,96) & hemobst!=0
1209 replace hemobst = 1 if inlist(heada06,1,2,3,4,5,7,8,9,10,96) & hemobst!=0
1210 replace hemobst = 1 if inlist(heada07,1,2,3,4,5,7,8,9,10,96) & hemobst!=0
1211 replace hemobst = 1 if inlist(heada08,1,2,3,4,5,7,8,9,10,96) & hemobst!=0
1212 replace hemobst = 1 if inlist(heada09,1,2,3,4,5,7,8,9,10,96) & hemobst!=0
1213 replace hemobst = 1 if inlist(heada10,1,2,3,4,5,7,8,9,10,96) & hemobst!=0
1214
1215 * [b22] Mobility: difficulty reaching or extending arms above shoulder level
1216 replace hemobre = 2 if hemobre == 0

```



```

1217 * Assign the number 0 if the participant reported difficulties performing the seventh listed activity
1218 replace hemobre = 0 if hemobre == 1
1219 * Assign the number 1 if the participant reported no difficulties performing the seventh listed
    activity
1220 replace hemobre = 1 if hemobre == 2
1221 * Assign the number 0 if the participant reported difficulties performing the seventh listed activity
1222 replace hemobre = 0 if (heada01 == 7 | heada02 == 7 | heada03 == 7 | heada04 == 7 | heada05 == 7 |
    heada06 == 7 | heada07 == 7 | heada08 == 7 | heada09 == 7 | heada10 == 7) & wave==2
1223 * Assign the number 1 if the participant reported any answer other than the listed activity in
    heada01-heada10 and data are not missing
1224 replace hemobre = 1 if inlist(heada01,1,2,3,4,5,6,8,9,10,96) & hemobre!=0
1225 replace hemobre = 1 if inlist(heada02,1,2,3,4,5,6,8,9,10,96) & hemobre!=0
1226 replace hemobre = 1 if inlist(heada03,1,2,3,4,5,6,8,9,10,96) & hemobre!=0
1227 replace hemobre = 1 if inlist(heada04,1,2,3,4,5,6,8,9,10,96) & hemobre!=0
1228 replace hemobre = 1 if inlist(heada05,1,2,3,4,5,6,8,9,10,96) & hemobre!=0
1229 replace hemobre = 1 if inlist(heada06,1,2,3,4,5,6,8,9,10,96) & hemobre!=0
1230 replace hemobre = 1 if inlist(heada07,1,2,3,4,5,6,8,9,10,96) & hemobre!=0
1231 replace hemobre = 1 if inlist(heada08,1,2,3,4,5,6,8,9,10,96) & hemobre!=0
1232 replace hemobre = 1 if inlist(heada09,1,2,3,4,5,6,8,9,10,96) & hemobre!=0
1233 replace hemobre = 1 if inlist(heada10,1,2,3,4,5,6,8,9,10,96) & hemobre!=0
1234
1235 * [b23] Mobility: difficulty pulling or pushing large objects, like a living room chair
1236 replace hemobpu = 2 if hemobpu == 0
1237 * Assign the number 0 if the participant reported difficulties performing the eighth listed activity
1238 replace hemobpu = 0 if hemobpu == 1
1239 * Assign the number 1 if the participant reported no difficulties performing the eighth listed
    activity
1240 replace hemobpu = 1 if hemobpu == 2
1241 * Assign the number 0 if the participant reported difficulties performing the eighth listed activity
1242 replace hemobpu = 0 if (heada01 == 8 | heada02 == 8 | heada03 == 8 | heada04 == 8 | heada05 == 8 |
    heada06 == 8 | heada07 == 8 | heada08 == 8 | heada09 == 8 | heada10 == 8) & wave==2
1243 * Assign the number 1 if the participant reported any answer other than the listed activity in
    heada01-heada10 and data are not missing
1244 replace hemobpu = 1 if inlist(heada01,1,2,3,4,5,6,7,9,10,96) & hemobpu!=0
1245 replace hemobpu = 1 if inlist(heada02,1,2,3,4,5,6,7,9,10,96) & hemobpu!=0
1246 replace hemobpu = 1 if inlist(heada03,1,2,3,4,5,6,7,9,10,96) & hemobpu!=0
1247 replace hemobpu = 1 if inlist(heada04,1,2,3,4,5,6,7,9,10,96) & hemobpu!=0
1248 replace hemobpu = 1 if inlist(heada05,1,2,3,4,5,6,7,9,10,96) & hemobpu!=0
1249 replace hemobpu = 1 if inlist(heada06,1,2,3,4,5,6,7,9,10,96) & hemobpu!=0
1250 replace hemobpu = 1 if inlist(heada07,1,2,3,4,5,6,7,9,10,96) & hemobpu!=0
1251 replace hemobpu = 1 if inlist(heada08,1,2,3,4,5,6,7,9,10,96) & hemobpu!=0
1252 replace hemobpu = 1 if inlist(heada09,1,2,3,4,5,6,7,9,10,96) & hemobpu!=0
1253 replace hemobpu = 1 if inlist(heada10,1,2,3,4,5,6,7,9,10,96) & hemobpu!=0
1254
1255 * [b24] Mobility: difficulty lifting or carrying weights over 10 pounds, like a heavy bag of groceries
1256 replace hemobli = 2 if hemobli == 0
1257 * Assign the number 0 if the participant reported difficulties performing the ninth listed activity
1258 replace hemobli = 0 if hemobli == 1
1259 * Assign the number 1 if the participant reported no difficulties performing the ninth listed activity
1260 replace hemobli = 1 if hemobli == 2
1261 * Assign the number 0 if the participant reported difficulties performing the ninth listed activity
1262 replace hemobli = 0 if (heada01 == 9 | heada02 == 9 | heada03 == 9 | heada04 == 9 | heada05 == 9 |
    heada06 == 9 | heada07 == 9 | heada08 == 9 | heada09 == 9 | heada10 == 9) & wave==2
1263 * Assign the number 1 if the participant reported any answer other than the listed activity in
    heada01-heada10 and data are not missing
1264 replace hemobli = 1 if inlist(heada01,1,2,3,4,5,6,7,8,10,96) & hemobli!=0
1265 replace hemobli = 1 if inlist(heada02,1,2,3,4,5,6,7,8,10,96) & hemobli!=0
1266 replace hemobli = 1 if inlist(heada03,1,2,3,4,5,6,7,8,10,96) & hemobli!=0
1267 replace hemobli = 1 if inlist(heada04,1,2,3,4,5,6,7,8,10,96) & hemobli!=0
1268 replace hemobli = 1 if inlist(heada05,1,2,3,4,5,6,7,8,10,96) & hemobli!=0
1269 replace hemobli = 1 if inlist(heada06,1,2,3,4,5,6,7,8,10,96) & hemobli!=0
1270 replace hemobli = 1 if inlist(heada07,1,2,3,4,5,6,7,8,10,96) & hemobli!=0
1271 replace hemobli = 1 if inlist(heada08,1,2,3,4,5,6,7,8,10,96) & hemobli!=0

```

```

1272 replace hemobli = 1 if inlist(heada09,1,2,3,4,5,6,7,8,10,96) & hemobli!=0
1273 replace hemobli = 1 if inlist(heada10,1,2,3,4,5,6,7,8,10,96) & hemobli!=0
1274
1275 * [b25] Mobility: difficulty picking up a 5p coin from a table
1276 replace hemobpi = 2 if hemobpi == 0
1277 * Assign the number 0 if the participant reported difficulties performing the tenth listed activity
1278 replace hemobpi = 0 if hemobpi == 1
1279 * Assign the number 1 if the participant reported no difficulties performing the tenth listed activity
1280 replace hemobpi = 1 if hemobpi == 2
1281 * Assign the number 0 if the participant reported difficulties performing the tenth listed activity
1282 replace hemobpi = 0 if (heada01 == 10 | heada02 == 10 | heada03 == 10 | heada04 == 10 | heada05 == 10
| heada06 == 10 | heada07 == 10 | heada08 == 10 | heada09 == 10 | heada10 == 10) & wave==2
1283 * Assign the number 1 if the participant reported any answer other than the listed activity in
heada01-heada10 and data are not missing
1284 replace hemobpi = 1 if inlist(heada01,1,2,3,4,5,6,7,8,9,96) & hemobpi!=0
1285 replace hemobpi = 1 if inlist(heada02,1,2,3,4,5,6,7,8,9,96) & hemobpi!=0
1286 replace hemobpi = 1 if inlist(heada03,1,2,3,4,5,6,7,8,9,96) & hemobpi!=0
1287 replace hemobpi = 1 if inlist(heada04,1,2,3,4,5,6,7,8,9,96) & hemobpi!=0
1288 replace hemobpi = 1 if inlist(heada05,1,2,3,4,5,6,7,8,9,96) & hemobpi!=0
1289 replace hemobpi = 1 if inlist(heada06,1,2,3,4,5,6,7,8,9,96) & hemobpi!=0
1290 replace hemobpi = 1 if inlist(heada07,1,2,3,4,5,6,7,8,9,96) & hemobpi!=0
1291 replace hemobpi = 1 if inlist(heada08,1,2,3,4,5,6,7,8,9,96) & hemobpi!=0
1292 replace hemobpi = 1 if inlist(heada09,1,2,3,4,5,6,7,8,9,96) & hemobpi!=0
1293 replace hemobpi = 1 if inlist(heada10,1,2,3,4,5,6,7,8,9,96) & hemobpi!=0
1294
1295 * Overwrite dataset, by replacing the previously saved file
1296 save datavariables.dta, replace
1297
1298 * WAVE 2, 3, 4, 5, 6, 7, 8, 9
1299 * Socio-economic covariate - Quintiles of BU total (non-pension) wealth
1300 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
1301 replace totwq5_bu_s = . if totwq5_bu_s<0
1302
1303 * WAVE 2, 3, 4, 5, 6, 7, 8, 9
1304 * [b41] Whether has self-reported limiting long-standing illness (reversed)
1305 * Generate a new variable and assign the number 0 for participants with a limiting long-standing
illness
1306 gen limiting = 0 if helim==1
1307 * Assign the number 1 for participants with no long-standing illness or a long-standing illness that
is not limiting
1308 replace limiting = 1 if heill == 2 | helim == 2
1309
1310 * WAVE 2, 3, 4, 5, 6, 7, 8, 9
1311 * [b9-b15] (+ 1 omitted) Organisational memberships
1312 * Replace variables as missing for any missing cases (coded as negative numbers in the ELSA dataset)
1313 * [b9] Political party, trade union or environmental group
1314 replace scorg01 = . if scorg01<0
1315 * [b10] Tenants or resident group or neighbourhood watch
1316 replace scorg02 = . if scorg02<0
1317 * [b11] Member of a church or other religious group
1318 replace scorg03 = . if scorg03<0
1319 * [b12] Member of a charitable association
1320 replace scorg04 = . if scorg04<0
1321 * [b13] An education, arts or music group or evening class
1322 replace scorg05 = . if scorg05<0
1323 * (1 omitted) Member of a social club
1324 replace scorg06 = . if scorg06<0
1325 * [b14] Member of a sports club, gym, or exercise class
1326 replace scorg07 = . if scorg07<0
1327 * [b15] Member of any other organisations, clubs, or societies
1328 replace scorg08 = . if scorg08<0
1329
1330 * Save dataset with a new name

```

```

1331 save datavariab01.dta
1332
1333 * [b42-b43] (+ 1 omitted) Short Physical Performance Battery
1334 * WAVE 2, 4, 6
1335 * (1 omitted) Standing balance
1336 tab mmbcsc
1337 tab mmsssc
1338 tab mmsre
1339 tab mmsssc if mmsre==3
1340 tab mmbcsc if mmsssc<0
1341 tab mmsssc if mmsre<0
1342 sum mmssti if mmssti!=-1
1343 tab mmsre if mmssti!=-1
1344 sum mmssna if mmssna!=-1
1345 tab mmssna if mmssna!=-1 & wave==2
1346 tab mmssna if mmssna!=-1 & inlist(wave,4,6)
1347 tab mmsssc if mmssna!=-1
1348
1349 tab mmstsc
1350 tab mmstsc if mmssna!=-1
1351 tab mmsre if mmstsc==1
1352 tab mmstre
1353 tab mmstsc if mmstre==3
1354 sum mmstti if mmstti!=-1
1355 tab mmstre if mmstti!=-1
1356 sum mmstna if mmstna!=-1
1357 tab mmstna if mmstna!=-1 & wave==2
1358 tab mmstna if mmstna!=-1 & inlist(wave,4,6)
1359 tab mmstsc if mmstna!=-1
1360
1361 tab mmftsc
1362 tab mmftsc if mmstna!=-1
1363 tab mmftsc if mmstti!=-1
1364 tab mmftsc if mmssna!=-1 | mmssti!=-1
1365 tab mmftsc if mmsssc<0
1366 tab mmftre2
1367 tab mmftsc if mmftre2==5
1368 sum mmftti if mmftti!=-1
1369 sum mmftti if inlist(mmftre2,2,4)
1370 tab mmftre2 if mmftti!=-1
1371 tab mmftre2 if inlist(mmftre2,2,4)
1372 sum mmftti if mmftti >=3 & mmftti < 10
1373 sum mmftti if mmftti < 3 & mmftti!=-1
1374 tab mmftre2 if mmftti >=10 & mmftti!=.
1375 sum mmftti if mmftti >=10 & mmftti!=.
1376 sum mmftna if mmftna!=-1
1377 tab mmftna if mmftna!=-1 & wave==2
1378 tab mmftna if mmftna!=-1 & inlist(wave,4,6)
1379 tab mmftsc if mmftna!=-1
1380 tab mmftre2 if wave==6
1381 tab mmftre
1382
1383 * Side-by-side stand
1384 * Generate a new variable and assign the number 0 if the participant held for less than 10 seconds
or did not attempt the stand
1385 gen sidebyside = 0 if inlist(mmsre,2,3)
1386 * Assign the number 1 if the participant held for 10 seconds
1387 replace sidebyside = 1 if mmsre==1
1388
1389 * Semi-tandem stand
1390 * Generate a new variable and assign the number 0 if the participant scored 0 points in the
side-by-side stand
1391 gen semitandem = 0 if sidebyside==0

```

```

1392 * Assign the number 0 if the participant held for less than 10 seconds or did not attempt the stand
1393 replace semitandem = 0 if inlist(mmstre,2,3)
1394 * Assign the number 1 if the participant held for 10 seconds
1395 replace semitandem = 1 if mmstre==1
1396
1397 * Full tandem stand
1398 * Generate a new variable and assign the number 0 if the participant did not attempt the stand or
scored 0 points in the semi-tandem stand
1399 gen tandem = 0 if (mmftre2 == 5 | semitandem == 0)
1400 * Assign the number 2 if the participant held for at least 10 seconds, irrespective of age
1401 replace tandem = 2 if (mmftre2 == 1 | mmftre2 == 3)
1402 * Assign the number 1 if the participant held for at least 3 seconds but less than 10 seconds
1403 replace tandem = 1 if mmftti >=3 & mmftti < 10
1404 * Assign the number 0 if the participant held for less than 3 seconds and data are not missing
1405 replace tandem = 0 if mmftti < 3 & mmftti!= -1
1406 * Assign the number 2 if the participant held for at least 10 seconds (but less than 30 seconds) and
was aged less than 70 years
1407 replace tandem = 2 if mmftti >=10 & mmftti!=. & mmftre2==4
1408
1409 * Generate a new variable equal to the sum of the points scored on the side-by-side, semi-tandem,
and full tandem stands (three items) to create a total balance score (range 0-4)
1410 gen balance = sidebyside + semitandem + tandem
1411
1412 gen balance2 = 0 if inlist(mmsre,2,3)
1413 replace balance2 = 1 if mmsre==1 & inlist(mmstre,2,3)
1414 replace balance2 = 2 if mmstre==1 & tandem==0
1415 replace balance2 = 3 if mmstre==1 & tandem==1
1416 replace balance2 = 4 if mmstre==1 & tandem==2
1417
1418 * WAVE 2, 4, 6
1419 * [b42] Repeated chair stands
1420 tab mmcrav
1421 * Generate a new variable and assign a missing value if there was no suitable chair available or
data are missing
1422 gen repctest = . if mmcrav==2 | mmcrav<0
1423 tab mmcrsc
1424 tab mmcrsc if mmcrav==2 | mmcrav<0
1425 tab mmcrre
1426 tab mmcrre if mmcrav==2 | mmcrav<0 | inlist(mmcrsc,-8,2)
1427 * Assign the number 0 if the participant did not feel it was safe to attempt the single chair rise
or the response was coded "Don't know"
1428 replace repctest = 0 if inlist(mmcrsc,-8,2)
1429 * Assign the number 0 if the participant used their arms to stand in the single chair rise or did
not complete the test
1430 replace repctest = 0 if inlist(mmcrre,2,3)
1431 tab mmcrav if mmcrre== -1
1432 tab mmcrsc if mmcrre== -1
1433 sum mmcrna if mmcrna!= -1
1434 tab mmcrna if mmcrna!= -1 & wave==2
1435 tab mmcrna if mmcrna!= -1 & inlist(wave,4,6)
1436 tab mmrrsc
1437 tab mmcrre if mmrrsc== -1
1438 tab mmrrre
1439 tab mmrrsc if mmrrre== -1
1440 tab mmrrre if inlist(mmrrsc,2,-1)
1441 * Assign the number 0 if the participant did not feel it was safe to attempt multiple chair rises
(and subsequently did not perform the multiple chair rise test)
1442 replace repctest = 0 if mmrrsc==2 & mmrrre== -1
1443 * Assign the number 0 if the participant completed less than five sit-to-stands
1444 replace repctest = 0 if inlist(mmrrre,0,1,2,3,4)
1445 tab mmrrfti if mmrrfti<0
1446 tab mmrrre if mmrrfti<0
1447 sum mmrrfti if mmrrre>=5

```

```

1448 sum mmrrfti if mmrrfti>=0
1449 tab mmrrfti if mmrrfti<0 & wave==2
1450 tab mmrrfti if mmrrfti<0 & wave==4
1451 tab mmrrfti if mmrrfti<0 & wave==6
1452 * Assign a missing value if the participant completed five or more sit-to-stands but their time to
complete five rises was coded as "Don't know" or the test was not timed correctly
1453 replace repctest = . if inlist(mmrrfti,-8,-3) & mmrrre>=5
1454 tab mmrrfti if mmrrfti>=0 & mmrrfti<4
1455 * Assign a missing value if the participant completed five or more sit-to-stands but their time to
complete five rises was equal to 0 or 1 seconds (i.e., outlier)
1456 replace repctest = . if inlist(mmrrfti,0,1) & inlist(mmrrre,5,6,7,8,9,10)
1457 sum mmrrfti if mmrrfti<=11.19 & mmrrfti>=0
1458 sum mmrrfti if mmrrfti<=11.19 & mmrrfti>1
1459 * Assign the number 4 if the participant completed five sit-to-stands in less than or equal to 11.19
seconds and it took them more than 1 second
1460 replace repctest = 4 if mmrrfti <= 11.19 & mmrrfti > 1 & inlist(mmrrre,5,6,7,8,9,10)
1461 sum mmrrfti if mmrrfti>=16.7 & mmrrfti<=60
1462 * Assign the number 1 if the participant completed five sit-to-stands in 16.7 seconds or more but
less than or equal to 60 seconds
1463 replace repctest = 1 if mmrrfti >= 16.7 & mmrrfti <= 60 & inlist(mmrrre,5,6,7,8,9,10)
1464 sum mmrrfti if mmrrfti>=13.7 & mmrrfti<16.7
1465 * Assign the number 2 if the participant completed five sit-to-stands in 13.7 seconds or more but
less than 16.7 seconds
1466 replace repctest = 2 if mmrrfti >= 13.7 & mmrrfti < 16.7 & inlist(mmrrre,5,6,7,8,9,10)
1467 sum mmrrfti if mmrrfti>=11.2 & mmrrfti<13.7
1468 * Assign the number 3 if the participant completed five sit-to-stands in 11.2 seconds or more but
less than 13.7 seconds
1469 replace repctest = 3 if mmrrfti >= 11.2 & mmrrfti < 13.7 & inlist(mmrrre,5,6,7,8,9,10)
1470 sum mmrrfti if mmrrfti > 60
1471 * Assign the number 0 if the participant completed five sit-to-stands in more than 60 seconds and
data are not missing
1472 replace repctest = 0 if mmrrfti > 60 & mmrrfti <= 64 & inlist(mmrrre,5,6,7,8,9,10)
1473
1474 tab mmrrre if inlist(mmrrroc,1,3)
1475 tab mmrrre if mmrrroc==2
1476 tab mmrrre if mmrrroc==4
1477 tab mmrrre if inlist(mmrrroc,1,2,3,4)
1478
1479 sum mmrrna if mmrrna!=-1
1480 tab mmrrna if mmrrna!=-1 & wave==2
1481 tab mmrrna if mmrrna!=-1 & inlist(wave,4,6)
1482 tab mmrrre if mmrrna!=-1 & inlist(mmrrroc,3,4)
1483 tab mmrrre if mmrrna!=-1 & inlist(mmrrroc,1,2)
1484 tab mmrrsc if mmrrna!=-1
1485 tab mmrrna if mmrrre==5 & inlist(mmrrroc,1,2)
1486 sum mmrrfti if mmrrre==5 & inlist(mmrrroc,1,2) & mmrrna!=-1
1487
1488 * Save dataset with a new name
1489 save datavariab02.dta
1490
1491 * WAVE 2, 3, 4, 5, 6, 7, 8, 9
1492 * [b43] Gait speed
1493 tab mmschs if indager >=60
1494 tab mmalone if indager >=60
1495 tab mmschs if mmalone==1 & indager >=60
1496 tab mmschs if mmalone==9 & indager >=60
1497 tab mmschs if mmalone==8 & indager >=60
1498 tab mmschs if mmalone==2 & indager >=60
1499 tab mmschs if mmalone==1 & indager >=60
1500 tab mmschs if mmalone==2 & indager >=60
1501 tab mmschs if mmalone==3 & indager >=60
1502 tab mmhss if indager >=60
1503 tab mmalone if mmhss==1 & indager >=60

```



```

1504 tab mmalone if mmhss== -9 & indager >=60
1505 tab mmalone if mmhss== -8 & indager >=60
1506 tab mmalone if mmhss== -2 & indager >=60
1507 tab mmalone if mmhss== 1 & indager >=60
1508 tab mmalone if mmhss== 2 & indager >=60
1509 tab mmalone if mmhss== 3 & indager >=60
1510 tab mmalone if mmhss== 4 & indager >=60
1511 tab mmwill if indager >=60
1512 tab mmhss if mmwill== -9 & indager >=60
1513 tab mmhss if mmwill== -8 & indager >=60
1514 tab mmhss if mmwill== -2 & indager >=60
1515 tab mmhss if mmwill== -1 & indager >=60
1516 tab mmhss if mmwill== 1 & indager >=60
1517 tab mmhss if mmwill== 2 & indager >=60
1518 tab mmsaf if indager >=60
1519 tab mmwill if mmsaf== 1 & indager >=60
1520 tab mmwill if mmsaf== 2 & indager >=60
1521 tab mmavsp if indager >=60
1522 tab mmsaf if mmavsp== -9 & indager >=60
1523 tab mmsaf if mmavsp== -8 & indager >=60
1524 tab mmsaf if mmavsp== -2 & indager >=60
1525 tab mmsaf if mmavsp== -1 & indager >=60
1526 tab mmsaf if mmavsp== 1 & indager >=60
1527 tab mmsaf if mmavsp== 2 & indager >=60
1528 tab mmwala if indager >=60
1529 tab mmavsp if inlist(mmwala,1,2) & indager >=60
1530
1531 tab mmtrya if indager >=60
1532 tab mmwala if inlist(mmtrya,-9,1,2,3) & indager >=60
1533 tab mmwala if mmtrya== 4 & indager >=60
1534 tab mmwala if mmtrya== -8 & indager >=60
1535 tab mmwala if mmtrya== -2 & indager >=60
1536 tab mmwlka if mmwlka<0 & indager >=60
1537 sum mmwlka if mmwlka>=0 & indager >=60
1538 tab mmtrya if mmwlka== -1 & indager >=60
1539 tab mmtrya if mmwlka== -2 & indager >=60
1540 tab mmtrya if mmwlka== -8 & indager >=60
1541 tab mmtrya if mmwlka== -9 & indager >=60
1542 tab mmtrya if mmwlka>=0 & indager >=60
1543
1544 tab mmtryb if indager >=60
1545 tab mmtrya if inlist(mmtryb,-8,1,2,3,4) & indager >=60
1546 tab mmwlka if inlist(mmtryb,-9,-8,-2,-1) & indager >=60
1547 tab mmwlkb if mmwlkb<0 & indager >=60
1548 sum mmwlkb if mmwlkb>=0 & indager >=60
1549 tab mmtryb if mmwlkb== -1 & indager >=60
1550 tab mmtryb if mmwlkb== -2 & indager >=60
1551 tab mmtryb if mmwlkb== -8 & indager >=60
1552 tab mmtryb if mmwlkb== -9 & indager >=60
1553 tab mmtryb if mmwlkb>=0 & indager >=60
1554
1555 tab mmwlka if mmwlka>=0 & mmwlka<2 & indager >=60
1556 tab mmwlkb if mmwlkb>=0 & mmwlkb<2 & indager >=60
1557
1558 sum idauniq if ((mmwlka>=0 & mmwlka!=.) | (mmwlkb>=0 & mmwlkb!=.)) & indager >=60
1559 sum idauniq if mmwlka>=0 & mmwlkb>=0 & mmwlka!=. & mmwlkb!=. & indager >=60
1560
1561 sum idauniq if mmwlka<0 & indager >=60
1562 keep if mmwlka<0 & indager >=60
1563 tab mmschs if indager >=60
1564 tab mmalone if indager >=60
1565 tab mmschs if mmalone== -1 & indager >=60
1566 tab mmschs if mmalone== 3 & indager >=60

```

```

1567 tab mmschs if mmalone== -9 & indager >=60
1568 tab mmschs if mmalone== -8 & indager >=60
1569 tab mmschs if mmalone== -2 & indager >=60
1570 tab mmhss if indager >=60
1571 tab mmalone if mmhss== -1 & indager >=60
1572 tab mmwill if indager >=60
1573 tab mmhss if mmwill== -1 & indager >=60
1574 tab mmsaf if indager >=60
1575 tab mmwill if mmsaf== -1 & indager >=60
1576 tab mmavsp if indager >=60
1577 tab mmsaf if mmavsp== -1 & indager >=60
1578 tab mmwala if indager >=60
1579 tab mmavsp if mmwala== -1 & indager >=60
1580 tab mmtrya if indager >=60
1581 tab mmwala if mmtrya== -1 & indager >=60
1582 tab mmwlka if indager >=60
1583 tab mmtrya if mmwlka== -1 & indager >=60
1584 tab mmtrya if mmwlka<0 & mmwlka!= -1 & indager >=60
1585
1586 clear
1587 * Use full dataset
1588 use datavariables02.dta
1589
1590 * Generate a new variable duplicating the "time taken for first walk" variable if data are not missing
1591 gen walk1 = mmwlka if mmwlka>=0 & indager >=60
1592 * Generate a new variable duplicating the "time taken for second walk" variable if data are not
missing
1593 gen walk2 = mmwlkb if mmwlkb>=0 & indager >=60
1594 * Generate a new variable equal to the fastest time of the two walks (or the only time available if
only one attempt was performed or recorded)
1595 egen gaittime = rowmin(walk1 walk2) if ((mmwlka>=0 & mmwlka!=.) | (mmwlkb>=0 & mmwlkb!=.)) & indager
>=60
1596 sum gaittime
1597 sum gaittime if (mmwlka>=0 & mmwlka!=.) & (mmwlkb<0|mmwlkb==.)
1598 sum mmwlka if (mmwlka>=0 & mmwlka!=.) & (mmwlkb<0|mmwlkb==.)
1599
1600 * Generate a new variable
1601 gen gaittest = .
1602 * Assign the number 1 if the participant completed the gait test in more than or equal to 5.7 seconds
1603 replace gaittest = 1 if gaittime >= 5.7 & gaittime!=.
1604 * Assign the number 2 if the participant completed the gait test in more than or equal to 4.1
seconds and less than 5.7 seconds
1605 replace gaittest = 2 if gaittime >= 4.1 & gaittime < 5.7
1606 * Assign the number 3 if the participant completed the gait test in more than or equal to 3.2
seconds and less than 4.1 seconds
1607 replace gaittest = 3 if gaittime >= 3.2 & gaittime < 4.1
1608 * Assign the number 4 if the participant completed the gait test in less than 3.2 seconds
1609 replace gaittest = 4 if gaittime < 3.2
1610 * Assign the number 0 if a) the participant was not able to walk alone (with aid); b) a health
condition (i.e., recent surgery, injury, other health condition) prevented the participant from
walking; c) the interviewer felt it was not safe to continue the test; d) the respondent did not
feel the walk would be safe; or e) the participant attempted the walk but was unable to complete it
or was stopped by the interviewer because of safety reasons
1611 replace gaittest = 0 if (mmalone==3 | inlist(mmhss,2,3,4) | mmsaf==2 | mmwala==2 | inlist(mmtrya,2,3
)) & indager >=60
1612
1613 * Save dataset with a new name
1614 save datavariables03.dta
1615
1616 * WAVE 2, 4, 5, 6, 7, 8, 9
1617 * [b44] Self-reported general health (reversed)
1618 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
1619 replace hehelp = . if hehelp<0

```



```

1620 * Reverse the self-rated health variable
1621 revrs hehelf
1622
1623 * WAVE 2, 3, 4, 5, 6, 7, 8, 9
1624 * [b1-b6] (+ 2 omitted) Depressive symptoms
1625 * Replace variables as missing for any missing cases (coded as negative numbers in the ELSA dataset)
1626 * [b1] Whether respondent has felt depressed much of the time during the past week
1627 replace psceda = . if psceda<0
1628 * (1 omitted) Whether respondent felt everything they did during the past week was an effort
1629 replace pscedb = . if pscedb<0
1630 * [b2] Whether respondent felt their sleep was restless during the past week
1631 replace pscedc = . if pscedc<0
1632 * [b3] Whether respondent was happy much of the time during the past week (reversed)
1633 replace pscedd = . if pscedd<0
1634 * [b4] Whether respondent felt lonely much of the time during the past week
1635 replace pscede = . if pscede<0
1636 * [b5] Whether respondent enjoyed life much of the time during the past week (reversed)
1637 replace pscedf = . if pscedf<0
1638 * [b6] Whether respondent felt sad much of the time during the past week
1639 replace pscedg = . if pscedg<0
1640 * (1 omitted) Whether respondent could not get going much of the time during the past week
1641 replace pscedh = . if pscedh<0
1642
1643 * Recode to the number 0 if participant answered "Yes"
1644 replace psceda = 0 if psceda == 1
1645 * Recode to the number 1 if participant answered "No"
1646 replace psceda = 1 if psceda == 2
1647
1648 * Recode to the number 0 if participant answered "Yes"
1649 replace pscedb = 0 if pscedb == 1
1650 * Recode to the number 1 if participant answered "No"
1651 replace pscedb = 1 if pscedb == 2
1652
1653 * Recode to the number 0 if participant answered "Yes"
1654 replace pscedc = 0 if pscedc == 1
1655 * Recode to the number 1 if participant answered "No"
1656 replace pscedc = 1 if pscedc == 2
1657
1658 * Recode to the number 0 if participant answered "Yes"
1659 replace pscede = 0 if pscede == 1
1660 * Recode to the number 1 if participant answered "No"
1661 replace pscede = 1 if pscede == 2
1662
1663 * Recode to the number 0 if participant answered "Yes"
1664 replace pscedg = 0 if pscedg == 1
1665 * Recode to the number 1 if participant answered "No"
1666 replace pscedg = 1 if pscedg == 2
1667
1668 * Recode to the number 0 if participant answered "Yes"
1669 replace pscedh = 0 if pscedh == 1
1670 * Recode to the number 1 if participant answered "No"
1671 replace pscedh = 1 if pscedh == 2
1672
1673 * Recode to the number 0 if participant answered "No"
1674 replace pscedd = 0 if pscedd == 2
1675 * Recode to the number 0 if participant answered "No"
1676 replace pscedf = 0 if pscedf == 2
1677
1678 * WAVE 2, 3, 4, 5, 6, 7, 8, 9
1679 * (3 omitted) Loneliness (reversed)
1680 * Replace variables as missing for any missing cases (coded as negative numbers in the ELSA dataset)
1681 * (1 omitted) How often respondent feels they lack companionship
1682 replace scfeela = . if scfeela<0

```

```

1683 * (1 omitted) How often respondent feels left out
1684 replace scfeelb = . if scfeelb<0
1685 * (1 omitted) How often respondent feels isolated from others
1686 replace scfeelc = . if scfeelc<0
1687
1688 * Reverse the negatively framed variables
1689 revrs scfeela
1690 revrs scfeelb
1691 revrs scfeelc
1692
1693 * WAVE 2, 3, 4, 5, 6, 7, 8, 9
1694 * Outcome variable - Quality-of-life
1695 * Replace variables as missing for any missing cases (coded as negative numbers in the ELSA dataset)
1696 replace scqola = . if scqola<0
1697 replace scqolb = . if scqolb<0
1698 replace scqolc = . if scqolc<0
1699 replace scqold = . if scqold<0
1700 replace scqole = . if scqole<0
1701 replace scqolf = . if scqolf<0
1702 replace scqolg = . if scqolg<0
1703 replace scqolh = . if scqolh<0
1704 replace scqoli = . if scqoli<0
1705 replace scqolj = . if scqolj<0
1706 replace scqolk = . if scqolk<0
1707 replace scqoll = . if scqoll<0
1708 replace scqolm = . if scqolm<0
1709 replace scqoln = . if scqoln<0
1710 replace scqolo = . if scqolo<0
1711 replace scqolp = . if scqolp<0
1712 replace scqolq = . if scqolq<0
1713 replace scqolr = . if scqolr<0
1714 replace scqols = . if scqols<0
1715
1716 * Recode each item into a 0-3 scale (13 of the 19 items were reversed)
1717 replace scqola = 0 if scqola == 1
1718 replace scqola = 1 if scqola == 2
1719 replace scqola = 2 if scqola == 3
1720 replace scqola = 3 if scqola == 4
1721 replace scqolb = 0 if scqolb == 1
1722 replace scqolb = 1 if scqolb == 2
1723 replace scqolb = 2 if scqolb == 3
1724 replace scqolb = 3 if scqolb == 4
1725 revrs scqolc
1726 replace revscqolc = 0 if revscqolc == 1
1727 replace revscqolc = 1 if revscqolc == 2
1728 replace revscqolc = 2 if revscqolc == 3
1729 replace revscqolc = 3 if revscqolc == 4
1730 replace scqold = 0 if scqold == 1
1731 replace scqold = 1 if scqold == 2
1732 replace scqold = 2 if scqold == 3
1733 replace scqold = 3 if scqold == 4
1734 revrs scqole
1735 replace revscqole = 0 if revscqole == 1
1736 replace revscqole = 1 if revscqole == 2
1737 replace revscqole = 2 if revscqole == 3
1738 replace revscqole = 3 if revscqole == 4
1739 replace scqolf = 0 if scqolf == 1
1740 replace scqolf = 1 if scqolf == 2
1741 replace scqolf = 2 if scqolf == 3
1742 replace scqolf = 3 if scqolf == 4
1743 revrs scqolg
1744 replace revscqolg = 0 if revscqolg == 1
1745 replace revscqolg = 1 if revscqolg == 2

```

```

1746 replace revscqolg = 2 if revscqolg == 3
1747 replace revscqolg = 3 if revscqolg == 4
1748 replace scqolh = 0 if scqolh == 1
1749 replace scqolh = 1 if scqolh == 2
1750 replace scqolh = 2 if scqolh == 3
1751 replace scqolh = 3 if scqolh == 4
1752 replace scqoli = 0 if scqoli == 1
1753 replace scqoli = 1 if scqoli == 2
1754 replace scqoli = 2 if scqoli == 3
1755 replace scqoli = 3 if scqoli == 4
1756 revrs scqolj
1757 replace revscqolj = 0 if revscqolj == 1
1758 replace revscqolj = 1 if revscqolj == 2
1759 replace revscqolj = 2 if revscqolj == 3
1760 replace revscqolj = 3 if revscqolj == 4
1761 revrs scqolk
1762 replace revscqolk = 0 if revscqolk == 1
1763 replace revscqolk = 1 if revscqolk == 2
1764 replace revscqolk = 2 if revscqolk == 3
1765 replace revscqolk = 3 if revscqolk == 4
1766 revrs scqoll
1767 replace revscqoll = 0 if revscqoll == 1
1768 replace revscqoll = 1 if revscqoll == 2
1769 replace revscqoll = 2 if revscqoll == 3
1770 replace revscqoll = 3 if revscqoll == 4
1771 revrs scqolm
1772 replace revscqolm = 0 if revscqolm == 1
1773 replace revscqolm = 1 if revscqolm == 2
1774 replace revscqolm = 2 if revscqolm == 3
1775 replace revscqolm = 3 if revscqolm == 4
1776 revrs scqoln
1777 replace revscqoln = 0 if revscqoln == 1
1778 replace revscqoln = 1 if revscqoln == 2
1779 replace revscqoln = 2 if revscqoln == 3
1780 replace revscqoln = 3 if revscqoln == 4
1781 revrs scqolo
1782 replace revscqolo = 0 if revscqolo == 1
1783 replace revscqolo = 1 if revscqolo == 2
1784 replace revscqolo = 2 if revscqolo == 3
1785 replace revscqolo = 3 if revscqolo == 4
1786 revrs scqolp
1787 replace revscqolp = 0 if revscqolp == 1
1788 replace revscqolp = 1 if revscqolp == 2
1789 replace revscqolp = 2 if revscqolp == 3
1790 replace revscqolp = 3 if revscqolp == 4
1791 revrs scqolq
1792 replace revscqolq = 0 if revscqolq == 1
1793 replace revscqolq = 1 if revscqolq == 2
1794 replace revscqolq = 2 if revscqolq == 3
1795 replace revscqolq = 3 if revscqolq == 4
1796 revrs scqolr
1797 replace revscqolr = 0 if revscqolr == 1
1798 replace revscqolr = 1 if revscqolr == 2
1799 replace revscqolr = 2 if revscqolr == 3
1800 replace revscqolr = 3 if revscqolr == 4
1801 revrs scqols
1802 replace revscqols = 0 if revscqols == 1
1803 replace revscqols = 1 if revscqols == 2
1804 replace revscqols = 2 if revscqols == 3
1805 replace revscqols = 3 if revscqols == 4
1806
1807 * Generate a new variable equal to the sum of the 19 items (range 0-57)
1808 gen QoL = scqola + scqolb + revscqolc + scqold + revscqole + scqolf + revscqolg + scqolh + scqoli +

```

```

revscqolj + revscqolk + revscqoll + revscqolm + revscqoln + revscqolo + revscqolp + revscqolq +
revscqolr + revscqols
1809
1810 * Overwrite dataset, by replacing the previously saved file
1811 save datavariab03.dta, replace
1812
1813 * WAVE 2, 3, 4, 5, 6, 7, 8, 9
1814 * Independent variable - Alcohol consumption
1815 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
1816 replace scako = . if scako<0
1817 * Assign the number 0 if the participant reported having an alcoholic drink once a month or less
    during the last 12 months
1818 replace scako = 0 if inlist(scako,5,6,7,8)
1819 * Assign the number 2 if the participant reported having an alcoholic drink a) almost every day; or
    b) five or six days a week
1820 replace scako = 2 if scako==1
1821 * Assign the number 1 if the participant reported having an alcoholic drink a) three or four days a
    week; or b) once or twice a week
1822 replace scako = 1 if inlist(scako,3,4)
1823
1824 * WAVE 2, 3, 4, 5, 6, 7, 8, 9
1825 * Socio-economic covariate - Education
1826 * Generate a new variable
1827 gen education = .
1828 * Assign the number 0 if the participant does not have any formal qualifications
1829 replace education = 0 if edqual==7
1830 * Assign the number 1 if the participant has A level equivalent, O level equivalent, or other grade
    equivalent
1831 replace education = 1 if inlist(edqual,3,4,5)
1832 * Assign the number 2 if the participant has completed some higher education (below degree), or has
    a degree or equivalent
1833 replace education = 2 if inlist(edqual,1,2)
1834
1835 * WAVE 2, 3, 4, 5, 6, 7, 8, 9
1836 * Demographic covariate - Ethnicity
1837 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
1838 replace fqethnr = . if fqethnr<0
1839 * Assign the number 0 if the participant is White
1840 replace fqethnr = 0 if fqethnr==1
1841 * Assign the number 1 if the participant is Non-White
1842 replace fqethnr = 1 if fqethnr==2
1843
1844 * WAVE 2, 3, 4, 5, 6, 7, 8, 9
1845 * Demographic covariate - Biological sex
1846 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
1847 replace disex = . if disex<0
1848 * Assign the number 0 if the participant is male
1849 replace disex = 0 if disex==1
1850 * Assign the number 1 if the participant is female
1851 replace disex = 1 if disex==2
1852
1853 * WAVE 2, 3, 4, 5, 6, 7, 8, 9
1854 * Independent variable - Physical activity
1855 * Generate a new variable
1856 gen activity2 = .
1857 * Assign the number 3 if the participant partakes in vigorous activity more than once a week or once
    a week
1858 replace activity2 = 3 if heacta==1 | heacta==2
1859 * Assign the number 2 if the participant partakes in moderate activity more than once a week or once
    a week, and takes part in vigorous activity less than once a week
1860 replace activity2 = 2 if (heactb==1 | heactb==2) & inlist(heacta,3,4)
1861 * Assign the number 1 if the participant partakes in mild activity more than once a week or once a
    week, and takes part in moderate and vigorous activities less than once a week

```

```

1862 replace activity2 = 1 if (heactc==1 | heactc==2) & inlist(heacta,3,4) & inlist(heactb,3,4)
1863 * Assign the number 0 if the participant does not take part in activity of any intensity once a week
    or more
1864 replace activity2 = 0 if inlist(heacta,3,4) & inlist(heactb,3,4) & inlist(heactc,3,4)
1865 * Replace the variable as missing for participants with missing cases on all three variables
1866 replace activity2 = . if inlist(heacta,.) & inlist(heactb,.) & inlist(heactc,.)
1867
1868 * WAVE 2, 3, 4, 5, 6, 7, 8, 9
1869 * Independent variable - Smoking status
1870 * Generate a new variable duplicating the heske (reason disputed reported smoking from previous
    wave) variable at Wave 2
1871 gen heske2 = heske if wave==2
1872 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
1873 tsset idauniq wave
1874 * Generate a completely balanced dataset (i.e., all participants have a row for each wave from 2 to 9)
1875 tsfill, full
1876 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
    follow-up waves) by participant ID
1877 bysort idauniq: carryforward heske2, replace
1878
1879 * Generate a new variable duplicating the heske (reason disputed reported smoking from previous
    wave) variable at Wave 3
1880 gen heske3 = heske if wave==3
1881 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
1882 tsset idauniq wave
1883 * Generate a completely balanced dataset
1884 tsfill, full
1885 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 3 to the
    follow-up waves) by participant ID
1886 bysort idauniq: carryforward heske3, replace
1887 * Sort data in memory by ascending values of the participant ID variable "idauniq" and descending
    values of the time variable "wave"
1888 gsort idauniq - wave
1889 * Carryforward (in a backward way) observations with respect to the time variable "wave" by
    participant ID
1890 bysort idauniq: carryforward heske3, replace
1891
1892 * Generate a new variable duplicating the heske (reason disputed reported smoking from previous
    wave) variable at Wave 4
1893 gen heske4 = heske if wave==4
1894 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
1895 tsset idauniq wave
1896 * Generate a completely balanced dataset
1897 tsfill, full
1898 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 4 to the
    follow-up waves) by participant ID
1899 bysort idauniq: carryforward heske4, replace
1900 * Sort data in memory by ascending values of the participant ID variable "idauniq" and descending
    values of the time variable "wave"
1901 gsort idauniq - wave
1902 * Carryforward (in a backward way) observations with respect to the time variable "wave" by
    participant ID
1903 bysort idauniq: carryforward heske4, replace
1904
1905 * Generate a new variable duplicating the heske (reason disputed reported smoking from previous
    wave) variable at Wave 5
1906 gen heske5 = heske if wave==5
1907 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
1908 tsset idauniq wave
1909 * Generate a completely balanced dataset
1910 tsfill, full
1911 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 5 to the
    follow-up waves) by participant ID

```

```

1912 bysort idauniq: carryforward heske5, replace
1913 * Sort data in memory by ascending values of the participant ID variable "idauniq" and descending
1914 values of the time variable "wave"
1915 gsort idauniq - wave
1916 * Carryforward (in a backward way) observations with respect to the time variable "wave" by
1917 participant ID
1918 bysort idauniq: carryforward heske5, replace
1919
1920 * Generate a new variable duplicating the heske (reason disputed reported smoking from previous
1921 wave) variable at Wave 6
1922 gen heske6 = heske if wave==6
1923 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
1924 tsset idauniq wave
1925 * Generate a completely balanced dataset
1926 tsfill, full
1927 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 6 to the
1928 follow-up waves) by participant ID
1929 bysort idauniq: carryforward heske6, replace
1930
1931 * Generate a new variable duplicating the heske (reason disputed reported smoking from previous
1932 wave) variable at Wave 7
1933 gen heske7 = heske if wave==7
1934 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
1935 tsset idauniq wave
1936 * Generate a completely balanced dataset
1937 tsfill, full
1938 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 7 to the
1939 follow-up waves) by participant ID
1940 bysort idauniq: carryforward heske7, replace
1941
1942 * Sort data in memory by ascending values of the participant ID variable "idauniq" and descending
1943 values of the time variable "wave"
1944 gsort idauniq - wave
1945 * Carryforward (in a backward way) observations with respect to the time variable "wave" by
1946 participant ID
1947 bysort idauniq: carryforward heske7, replace
1948
1949 * Generate a new variable duplicating the heske (reason disputed reported smoking from previous
1950 wave) variable at Wave 8
1951 gen heske8 = heske if wave==8
1952 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
1953 tsset idauniq wave
1954 * Generate a completely balanced dataset
1955 tsfill, full
1956 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 8 to the
1957 follow-up wave) by participant ID
1958 bysort idauniq: carryforward heske8, replace
1959
1960 * Sort data in memory by ascending values of the participant ID variable "idauniq" and descending
1961 values of the time variable "wave"
1962 gsort idauniq - wave
1963 * Carryforward (in a backward way) observations with respect to the time variable "wave" by
1964 participant ID
1965 bysort idauniq: carryforward heske8, replace
1966
1967 * Generate a new variable duplicating the heske (reason disputed reported smoking from previous
1968 wave) variable at Wave 9
1969 gen heske9 = heske if wave==9
1970 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"

```



```

1960 tsset idauniq wave
1961 * Generate a completely balanced dataset
1962 tsfill, full
1963 * Sort data in memory by ascending values of the participant ID variable "idauniq" and descending
values of the time variable "wave"
1964 gsort idauniq - wave
1965 * Carryforward (in a backward way) observations with respect to the time variable "wave" by
participant ID
1966 bysort idauniq: carryforward heske9, replace
1967
1968 * Generate a new variable duplicating the bhesmkc (whether reported ever smoked cigarettes at Wave
1) variable at Wave 2
1969 gen bhesmkc = bhesmk
1970 * Assign the number 1 if the participant reported no longer smoking cigarettes by last interview
(Wave 1)
1971 replace bhesmkc = 1 if heske==2 & wave==2
1972 * Assign the number 2 if the participant reported never having smoked cigarettes
1973 replace bhesmkc = 2 if heske==1 & wave==2
1974
1975 * Generate a new variable and assign the number 0 if the participant reported never having smoked
cigarettes
1976 gen smoking = 0 if hesmk==2
1977 * Assign the number 0 if the participant reported never having smoked cigarettes at Wave 1 and
reported that they do not smoke cigarettes at all nowadays
1978 replace smoking = 0 if bhesmkc==2 & heska==2
1979 * Assign the number 1 if the participant reported having ever smoked cigarettes but reported that
they do not smoke cigarettes at all nowadays
1980 replace smoking = 1 if (hesmk==1 | bhesmkc==1) & heska==2
1981 * Assign the number 2 if the participant reported smoking nowadays
1982 replace smoking = 2 if heska==1
1983
1984 * Assign the number 1 if the participant reported that they stopped smoking between Wave 1 and Wave
2 and reported that they do not smoke cigarettes at all nowadays at Wave 2
1985 replace smoking = 1 if heske==3 & heska==2 & wave==2
1986 tab heskd
1987 * Assign the number 0 if the participant reported never having smoked cigarettes and reported that
they do not smoke cigarettes at all nowadays at Wave 2
1988 replace smoking = 0 if heske3==1 & heska==2 & wave==2
1989 * Assign the number 1 if the participant reported that they were no longer smoking cigarettes by
Wave 2 and reported that they do not smoke cigarettes at all nowadays at Wave 2
1990 replace smoking = 1 if heske3==2 & heska==2 & wave==2
1991
1992 * Assign the number 1 if the participant reported that they stopped smoking between Wave 2 and Wave
3 and reported that they do not smoke cigarettes at all nowadays at Wave 3
1993 replace smoking = 1 if heske==3 & heska==2 & wave==3
1994 * Assign the number 0 if the participant reported never having smoked cigarettes and reported that
they do not smoke cigarettes at all nowadays at Wave 3
1995 replace smoking = 0 if heske4==1 & heska==2 & wave==3
1996 * Assign the number 1 if the participant reported that they were no longer smoking cigarettes by
Wave 3 and reported that they do not smoke cigarettes at all nowadays at Wave 3
1997 replace smoking = 1 if heske4==2 & heska==2 & wave==3
1998
1999 * Assign the number 1 if the participant reported that they stopped smoking between Wave 3 and Wave
4 and reported that they do not smoke cigarettes at all nowadays at Wave 4
2000 replace smoking = 1 if heske==3 & heska==2 & wave==4
2001 * Assign the number 0 if the participant reported never having smoked cigarettes and reported that
they do not smoke cigarettes at all nowadays at Wave 4
2002 replace smoking = 0 if heske5==1 & heska==2 & wave==4
2003 * Assign the number 1 if the participant reported that they were no longer smoking cigarettes by
Wave 4 and reported that they do not smoke cigarettes at all nowadays at Wave 4
2004 replace smoking = 1 if heske5==2 & heska==2 & wave==4
2005
2006 tab heske6

```



```

2007 tab heske5
2008 tab heske7
2009 * Assign the number 1 if the participant reported that they stopped smoking between Wave 4 and Wave
2010 5 and reported that they do not smoke cigarettes at all nowadays at Wave 5
2011 replace smoking = 1 if heske==3 & heska==2 & wave==5
2012 * Assign the number 0 if the participant reported never having smoked cigarettes and reported that
2013 they do not smoke cigarettes at all nowadays at Wave 5
2014 replace smoking = 0 if heske6==1 & heska==2 & wave==5
2015 * Assign the number 1 if the participant reported that they were no longer smoking cigarettes by
2016 Wave 5 and reported that they do not smoke cigarettes at all nowadays at Wave 5
2017 replace smoking = 1 if heske6==2 & heska==2 & wave==5
2018 * Assign the number 1 if the participant reported that they stopped smoking between Wave 5 and Wave
2019 6 and reported that they do not smoke cigarettes at all nowadays at Wave 6
2020 replace smoking = 1 if heske==3 & heska==2 & wave==6
2021 * Assign the number 0 if the participant reported never having smoked cigarettes and reported that
2022 they do not smoke cigarettes at all nowadays at Wave 6
2023 replace smoking = 0 if heske7==1 & heska==2 & wave==6
2024 * Assign the number 1 if the participant reported that they were no longer smoking cigarettes by
2025 Wave 6 and reported that they do not smoke cigarettes at all nowadays at Wave 6
2026 replace smoking = 1 if heske7==2 & heska==2 & wave==6
2027 * Assign the number 1 if the participant reported that they stopped smoking between Wave 6 and Wave
2028 7 and reported that they do not smoke cigarettes at all nowadays at Wave 7
2029 replace smoking = 1 if heske==3 & heska==2 & wave==7
2030 * Assign the number 0 if the participant reported never having smoked cigarettes and reported that
2031 they do not smoke cigarettes at all nowadays at Wave 7
2032 replace smoking = 0 if heske8==1 & heska==2 & wave==7
2033 * Assign the number 1 if the participant reported that they were no longer smoking cigarettes by
2034 Wave 7 and reported that they do not smoke cigarettes at all nowadays at Wave 7
2035 replace smoking = 1 if heske8==2 & heska==2 & wave==7
2036 * Assign the number 1 if the participant reported that they stopped smoking between Wave 7 and Wave
2037 8 and reported that they do not smoke cigarettes at all nowadays at Wave 8
2038 replace smoking = 1 if heske==3 & heska==2 & wave==8
2039 * Assign the number 0 if the participant reported never having smoked cigarettes and reported that
2040 they do not smoke cigarettes at all nowadays at Wave 8
2041 replace smoking = 0 if heske9==1 & heska==2 & wave==8
2042 * Assign the number 1 if the participant reported that they were no longer smoking cigarettes by
2043 Wave 8 and reported that they do not smoke cigarettes at all nowadays at Wave 8
2044 replace smoking = 1 if heske9==2 & heska==2 & wave==8
2045 * Assign the number 1 if the participant reported that they stopped smoking between Wave 8 and Wave
2046 9 and reported that they do not smoke cigarettes at all nowadays at Wave 9
2047 replace smoking = 1 if heske==3 & heska==2 & wave==9
2048 * Assign the number 1 if the participant reported that they stopped smoking cigarettes
2049 replace smoking = 1 if heskf==2
2050 * Assign the number 2 if the participant reported smoking cigarettes nowadays
2051 replace smoking = 2 if heskf==1
2052 * Count total number of participants and observations
2053 unique idauniq
2054 * 15,022 individuals, 120,176 observations
2055 * Save dataset with a new name
2056 save datavariab04.dta
2057
2058 * [b45-b48] Cognitive function
2059 * WAVE 2, 3, 4, 5, 6, 7, 8, 9
2060 * [b45] Computed score from date questions (orientation in time)
2061 * Generate a new variable duplicating the cfdatd variable
2062 gen daymonth = cfdatd

```

```

2057 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
2058 replace daymonth = . if daymonth<0
2059 * Assign the number 0 if the participant answered incorrectly or didn't know the answer
2060 replace daymonth = 0 if daymonth==2
2061 * Generate a new variable duplicating the cfday variable
2062 gen day = cfday
2063 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
2064 replace day = . if day<0
2065 * Assign the number 0 if the participant answered incorrectly or didn't know the answer
2066 replace day = 0 if day==2
2067 * Generate a new variable duplicating the cfday variable
2068 gen year = cfday
2069 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
2070 replace year = . if year<0
2071 * Assign the number 0 if the participant answered incorrectly or didn't know the answer
2072 replace year = 0 if year==2
2073 * Generate a new variable duplicating the cfday variable
2074 gen month = cfday
2075 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
2076 replace month = . if month<0
2077 * Assign the number 0 if the participant answered incorrectly or didn't know the answer
2078 replace month = 0 if month==2
2079 * Generate a new variable equal to the sum of the four orientation in time items to create a total
    score
2080 gen orientation = daymonth + day + year + month
2081 gen orientation2 = cfday if cfday>=0
2082 * Generate a new variable and assign the number 0 for participants who scored 0, 1, 2, or 3 points
    on the time orientation test
2083 gen oribi = 0 if inlist(orientation,0,1,2,3)
2084 * Assign the number 1 for participants who answered all questions correctly (i.e., scored 4) on the
    time orientation test
2085 replace oribi = 1 if orientation==4
2086
2087 * WAVE 2, 3, 4, 5, 6, 7, 8, 9
2088 * [b46-b47] Word-list learning (verbal learning and recall)
2089 tab cfday
2090 tab cfday
2091 * Generate a new variable duplicating the cfday variable for participants with a score from 0 to 10
2092 gen learning = cfday if cfday>=0
2093 * Generate a new variable duplicating the cfday variable for participants with a score from 0 to 10
2094 gen recall = cfday if cfday>=0
2095
2096 * [b46] Number of words recalled immediately
2097 sum learning
2098 * Assign the number 0 for participants with scores >1 standard deviation below the mean
2099 replace learning = 0 if learning >= 0 & learning < 3.990809
2100 * Assign the number 1 for participants with scores ±1 standard deviation around the mean
2101 replace learning = 1 if learning >= 3.990809 & learning <= 7.640907
2102 * Assign the number 2 for participants with scores >1 standard deviation above the mean
2103 replace learning = 2 if learning > 7.640907 & learning != .
2104
2105 * [b47] Number of words recalled after delay
2106 sum recall
2107 * Assign the number 0 for participants with scores >1 standard deviation below the mean
2108 replace recall = 0 if recall >= 0 & recall < 2.353383
2109 * Assign the number 1 for participants with scores ±1 standard deviation around the mean
2110 replace recall = 1 if recall >= 2.353383 & recall <= 6.666215
2111 * Assign the number 2 for participants with scores >1 standard deviation above the mean
2112 replace recall = 2 if recall > 6.666215 & recall != .
2113
2114 * WAVE 2, 3, 4, 5, 7, 8, 9
2115 * [b48] Number of animals mentioned (verbal fluency)
2116 tab cfani

```

```

2117 * Generate a new variable duplicating the cfani variable for participants with a score of 0 or more
2118 gen fluency = cfani if cfani>=0
2119 sum fluency
2120 * Assign the number 0 for participants with scores >1 standard deviation below the mean
2121 replace fluency = 0 if fluency >= 0 & fluency < 13.60175
2122 * Assign the number 1 for participants with scores ±1 standard deviation around the mean
2123 replace fluency = 1 if fluency >= 13.60175 & fluency <= 27.79781
2124 * Assign the number 2 for participants with scores >1 standard deviation above the mean
2125 replace fluency = 2 if fluency > 27.79781 & fluency != .
2126
2127 * WAVE 2, 4, 6, 8, 9
2128 * [b49] Grip strength
2129 * Replace variable as missing for any missing cases (coded as negative numbers or 99 in the ELSA
dataset)
2130 replace mmgsd1 = . if mmgsd1 < 0
2131 replace mmgsd2 = . if mmgsd2 < 0
2132 replace mmgsd3 = . if mmgsd3 < 0
2133 replace mmgsn1 = . if mmgsn1 < 0
2134 replace mmgsn2 = . if mmgsn2 < 0
2135 replace mmgsn3 = . if mmgsn3 < 0
2136 replace mmgsd1 = . if mmgsd1==99
2137 replace mmgsd2 = . if mmgsd2==99
2138 replace mmgsd3 = . if mmgsd3==99
2139 replace mmgsn1 = . if mmgsn1==99
2140 replace mmgsn2 = . if mmgsn2==99
2141 replace mmgsn3 = . if mmgsn3==99
2142
2143 * Generate a new variable equal to the maximum grip strength across all available measures
2144 egen maxgrip = rowmax(mmgsd1 mmgsd2 mmgsd3 mmgsn1 mmgsn2 mmgsn3)
2145
2146 sum maxgrip
2147 * Assign the number 0 for participants with scores >1 standard deviation below the mean
2148 replace maxgrip = 0 if maxgrip >= 0 & maxgrip < 19.61438
2149 * Assign the number 1 for participants with scores ±1 standard deviation around the mean
2150 replace maxgrip = 1 if maxgrip >= 19.61438 & maxgrip <= 42.36316
2151 * Assign the number 2 for participants with scores >1 standard deviation above the mean
2152 replace maxgrip = 2 if maxgrip > 42.36316 & maxgrip != .
2153
2154 * Save dataset with a new name
2155 save datastop.dta
2156
2157 * [b50-b51] (+ 4 omitted) Biomarkers
2158 * WAVE 2, 4, 6, 8, 9
2159 * [b50] Blood fibrinogen level (g/L)
2160 tab cfib if cfib<0
2161 * Generate a new variable duplicating the cfib variable
2162 gen fibrinogen = cfib
2163 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
2164 replace fibrinogen = . if fibrinogen < 0
2165 replace fibrinogen = . if fibrinogen > 9000
2166 sum fibrinogen
2167 * Assign the number 1 for participants with a fibrinogen level ≤4 g/L
2168 replace fibrinogen = 1 if fibrinogen <= 4
2169 * Assign the number 0 for participants with a fibrinogen level >4 g/L
2170 replace fibrinogen = 0 if fibrinogen > 4 & fibrinogen != .
2171
2172 * (1 omitted) Blood HDL level (mmol/L)
2173 tab hdl if hdl<0
2174 * Generate a new variable duplicating the hdl variable
2175 gen highdensity = hdl
2176 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
2177 replace highdensity = . if highdensity < 0
2178 replace highdensity = . if highdensity > 9000

```

```

2179 sum highdensity
2180 * Assign the number 0 for participants with a HDL level <1 mmol/L
2181 replace highdensity = 0 if highdensity <1
2182 * Assign the number 1 for participants with a HDL level ≥1 mmol/L
2183 replace highdensity = 1 if highdensity >= 1 & highdensity != .
2184
2185 * (1 omitted) Blood triglyceride level (mmol/L)
2186 tab trig if trig<0
2187 * Generate a new variable duplicating the trig variable
2188 gen triglyceride = trig
2189 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
2190 replace triglyceride = . if triglyceride < 0
2191 replace triglyceride = . if triglyceride > 9000
2192 sum triglyceride
2193 * Assign the number 1 for participants with a triglyceride level ≤2 mmol/L
2194 replace triglyceride = 1 if triglyceride <= 2
2195 * Assign the number 0 for participants with a triglyceride level >2 mmol/L
2196 replace triglyceride = 0 if triglyceride > 2 & triglyceride != .
2197
2198 * (1 omitted) Blood LDL level (mmol/L)
2199 tab ldl if ldl<0
2200 * Generate a new variable duplicating the ldl variable
2201 gen lowdensity = ldl
2202 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
2203 replace lowdensity = . if lowdensity < 0
2204 replace lowdensity = . if lowdensity > 9000
2205 sum lowdensity
2206 * Assign the number 1 for participants with a LDL level ≤4 mmol/L
2207 replace lowdensity = 1 if lowdensity <= 4
2208 * Assign the number 0 for participants with a LDL level >4 mmol/L
2209 replace lowdensity = 0 if lowdensity > 4 & lowdensity != .
2210
2211 * [b51] Blood CRP level (mg/L)
2212 tab hscrp if hscrp<0
2213 * Generate a new variable duplicating the hscrp variable
2214 gen CRP = hscrp
2215 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
2216 replace CRP = . if CRP < 0
2217 replace CRP = . if CRP > 9000
2218 sum CRP
2219 * Replace variable as missing for CRP values >20 mg/L
2220 replace CRP = . if CRP > 20
2221 * Assign the number 1 for participants with a CRP level ≤3 mg/L
2222 replace CRP = 1 if CRP <= 3
2223 * Assign the number 0 for participants with a CRP level >3 mg/L
2224 replace CRP = 0 if CRP > 3 & CRP != .
2225
2226 * (1 omitted) Blood glyated haemoglobin level (%)
2227 * Wave 2, 4 = %, Wave 6, 8, 9 = mmol/mol
2228 tab hba1c if hba1c<0
2229 * Generate a new variable duplicating the hba1c variable
2230 gen glyated = hba1c
2231 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
2232 replace glyated = . if glyated < 0
2233 replace glyated = . if glyated > 9000
2234 sum glyated if wave==2
2235 sum glyated if wave==4
2236 sum glyated if wave==6
2237 sum glyated if wave==8
2238 sum glyated if wave==9
2239 * Transform HbA1c levels (mmol/mol) in Wave 6, 8, and 9 into % to match data in Wave 2 and 4
2240 replace glyated = ((glyated/10.929)+2.15) if inlist(wave,6,8,9)
2241 sum glyated if wave==2

```

```

2242 sum glycated if wave==4
2243 sum glycated if wave==6
2244 sum glycated if wave==8
2245 sum glycated if wave==9
2246 * Assign the number 1 for participants with a HbA1c level <6.5 %
2247 replace glycated = 1 if glycated < 6.5
2248 * Assign the number 0 for participants with a HbA1c level ≥6.5 %
2249 replace glycated = 0 if glycated >= 6.5 & glycated != .
2250
2251 * Save dataset with a new name
2252 save alldataefa.dta
2253
2254 *****
2255 ***DATA ANALYSIS***
2256 *****
2257
2258 * Keep variables required for analyses
2259 keep idauniq wave revscacta revscactb revscactc revscactd scpt04 scpt05 headldr headlwa headlba
headlea headlbe headlwc headlma headlpr headlsh headlph headlme headlho headlmo hemobwa hemobsi
hemobch hemobcs hemobcl hemobst hemobre hemobpu hemobli hemobpi limiting scorg01 scorg02 scorg03
scorg04 scorg05 scorg06 scorg07 scorg08 balance repctest gaittest revhehelf psceda pscedb pscedc
pscedd pscede pscedf pscedg pscedh revscfeela revscfeelb revscfeelc oribi learning recall fluency
maxgrip fibrinogen highdensity triglyceride lowdensity CRP glycated
2260 * Rename variables to more convenient forms
2261 rename revscacta scactarev
2262 rename revscactb scactbrev
2263 rename revscactc scactcrev
2264 rename revscactd scactdrev
2265 rename revhehelf hehelfrev
2266 rename revscfeela scfeelarev
2267 rename revscfeelb scfeelbrev
2268 rename revscfeelc scfeelcrev
2269 * Save dataset with a new name
2270 save efanew.dta
2271 * Keep data from Wave 2 only
2272 keep if wave==2
2273 * Drop unnecessary variable
2274 drop wave
2275 * Count total number of participants
2276 unique idauniq
2277 * 15,022 individuals
2278 * Save dataset with a new name
2279 save baseline.dta
2280 * Generate a new variable equal to the sum of variables with available "non-missing" data for each
observation
2281 egen nmcount = rownonmiss(_all), strok
2282 tab nmcount
2283 * Drop observation if >25 % missing values across the 64 variables of interest (idauniq data are
complete for all observations)
2284 drop if nmcount<49
2285 * Drop unnecessary variable
2286 drop nmcount
2287 * Count total number of participants
2288 unique idauniq
2289 * 7,660 individuals
2290 * Generate a new variable equal to the sum of variables with missing data for each observation
2291 egen nmcount = rowmiss(_all)
2292 tab nmcount
2293 * Drop unnecessary variable
2294 drop nmcount
2295 * Set the seed
2296 set seed 1234
2297 * Generate random numbers

```



```

2298 gen random = uniform()
2299 sort random
2300 * Assign 30 % of the total sample to the validation sub-sample
2301 gen byte validation = _n <= 2298
2302 * Save dataset with a new name
2303 save efatotal.dta
2304 * Keep participants assigned to the developmental sub-sample
2305 keep if validation == 0
2306 * Count total number of participants
2307 unique idauniq
2308 * 5,362 individuals
2309 * Save developmental dataset
2310 save developmentalnew.dta
2311 * Use efatotal.dta dataset
2312 use efatotal.dta
2313 * Keep participants assigned to the validation sub-sample
2314 keep if validation == 1
2315 * Count total number of participants
2316 unique idauniq
2317 * 2,298 individuals
2318 * Save validation dataset
2319 save validationnew.dta
2320
2321 * Use developmental dataset
2322 use developmentalnew.dta
2323 * Convert Stata data into a data file and Mplus input file
2324 stata2mplus using developmentalfinal.dta
2325
2326 * Use validation dataset
2327 use validationnew.dta
2328 * Convert Stata data into a data file and Mplus input file
2329 stata2mplus using validationfinal.dta
2330
2331 * Use efanew.dta dataset
2332 use efanew.dta
2333 * Drop variables omitted from final metric
2334 drop pscedb pscedh headlmo scfeelarev scfeelbrev scfeelcrev balance headlme triglyceride lowdensity
highdensity glycated scorg06
2335 * Save dataset with a new name
2336 save MLIRT.dta
2337 * Count total number of participants and observations
2338 unique idauniq
2339 * 15,022 individuals, 120,176 observations
2340 * Generate a new variable equal to the sum of variables with available "non-missing" data for each
observation
2341 egen nmcount = rownonmiss(_all), strok
2342 tab nmcount
2343 * Drop observation if >50 % missing values across the 51 variables of interest (idauniq and wave
data are complete for all observations)
2344 keep if nmcount>=27.5
2345 * Drop unnecessary variable
2346 drop nmcount
2347 * Count total number of participants and observations
2348 unique idauniq
2349 * 14,755 individuals, 66,133 observations
2350 * Generate a new variable equal to the sum of variables with missing data for each observation
2351 egen nmcount = rowmiss(_all)
2352 tab nmcount
2353 * Drop unnecessary variable
2354 drop nmcount
2355 * Save dataset with a new name
2356 save MLIRTtouse.dta
2357 * Export Stata data to .csv file

```

```

2358 export delimited using "", nolabel replace
2359
2360 * Use alldataefa.dta dataset
2361 use alldataefa.dta
2362
2363 * WAVE 2, 3, 4, 5, 6, 8, 9
2364 * Socio-economic covariate - Occupational class
2365 * Excluded Never worked and long-term unemployed
2366 * Replace variable as missing for any missing cases (coded as negative numbers or 99 in the ELSA
dataset)
2367 replace nssec8 = . if nssec8<0
2368 replace nssec8 = . if nssec8 == 99
2369 * Generate a new variable
2370 gen mynssec3 = .
2371 * Assign the number 2 if the participant's current or most recent occupation was coded as: Higher
managerial, administrative and professional occupations; or Lower managerial, administrative and
professional occupations
2372 replace mynssec3 = 2 if inlist(nssec8,1,2)
2373 * Assign the number 1 if the participant's current or most recent occupation was coded as:
Intermediate occupation; or Small employers and own account workers
2374 replace mynssec3 = 1 if inlist(nssec8,3,4)
2375 * Assign the number 0 if the participant's current or most recent occupation was coded as: Lower
supervisory and technical occupations; or Semi-routine occupations; or Routine occupations
2376 replace mynssec3 = 0 if inlist(nssec8,5,6,7)
2377 * Overwrite dataset, by replacing the previously saved file
2378 save alldataefa.dta, replace
2379
2380 * Keep variables required for analyses
2381 keep idauniq wave indager fqethnr education totwq5_bu_s disex scako smoking activity2 mynssec3 QoL
2382 * Save dataset with a new name
2383 save MLIRTGMM.dta
2384 * One-to-one merge of data in memory with MLIRTdata.dta (exported from RStudio following MLIRT
analyses) on participant ID
2385 merge 1:1 idauniq wave using MLIRTdata.dta
2386 * Sort from lowest to highest participant ID
2387 sort idauniq
2388 * Save dataset with a new name
2389 save MLIRTdatafull.dta
2390 tab AHA
2391 * Drop observations with missing AHA scores
2392 drop if AHA==.
2393 * Count total number of participants and observations
2394 unique idauniq
2395 * 14,755 individuals, 66,133 observations
2396 * Save dataset with a new name
2397 save MLIRTfullAHA.dta
2398 sum indager, d
2399 sum indager if wave==2, d
2400 * Keep necessary variables
2401 keep idauniq wave indager fqethnr education totwq5_bu_s disex scako smoking activity2 mynssec3 QoL AHA
2402
2403 * Generate a new variable duplicating the biological sex variable at Wave 2
2404 gen sex = disex if wave==2
2405 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2406 tsset idauniq wave
2407 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves available for that participant) by participant ID
2408 bysort idauniq: carryforward sex, replace
2409
2410 * Generate a new variable duplicating the education variable at Wave 2
2411 gen qualifications = education if wave==2
2412 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2413 tsset idauniq wave

```

```

2414 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
2415 follow-up waves available for that participant) by participant ID
2416 bysort idauniq: carryforward qualifications, replace
2417
2418 * Generate a new variable duplicating the wealth variable at Wave 2
2419 gen wealth = totwq5_bu_s if wave==2
2420 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2421 tsset idauniq wave
2422 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
2423 follow-up waves available for that participant) by participant ID
2424 bysort idauniq: carryforward wealth, replace
2425
2426 * Generate a new variable duplicating the age variable at Wave 2
2427 gen age = indager if wave==2
2428 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2429 tsset idauniq wave
2430 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
2431 follow-up waves available for that participant) by participant ID
2432 bysort idauniq: carryforward age, replace
2433
2434 * Generate a new variable duplicating the ethnicity variable at Wave 2
2435 gen ethnicity = fqethnr if wave==2
2436 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2437 tsset idauniq wave
2438 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
2439 follow-up waves available for that participant) by participant ID
2440 bysort idauniq: carryforward ethnicity, replace
2441
2442 * Generate a new variable duplicating the occupational class variable at Wave 2
2443 gen nssec3 = mynssec3 if wave==2
2444 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2445 tsset idauniq wave
2446 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
2447 follow-up waves available for that participant) by participant ID
2448 bysort idauniq: carryforward nssec3, replace
2449
2450 * Save dataset with a new name
2451 save GMMcovdataSES0317.dta
2452 * One-to-one merge of data in memory with data.dta on participant ID and wave
2453 merge 1:1 idauniq wave using data.dta, generate (merge_finstat)
2454 * Keep if matched
2455 keep if merge_finstat==3
2456
2457 tab sex if finstatw3=="C3CM"
2458 tab disex if finstatw3=="C3CM"
2459 * Generate a new variable duplicating the sex variable for the Wave 3 refreshment sample
2460 gen sex3 = disex if finstatw3=="C3CM"
2461 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2462 tsset idauniq wave
2463 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 3 to the
2464 follow-up waves available for that participant) by participant ID
2465 bysort idauniq: carryforward sex3, replace
2466
2467 tab sex if finstatw4=="C4CM"
2468 tab disex if finstatw4=="C4CM"
2469 * Generate a new variable duplicating the sex variable for the Wave 4 refreshment sample
2470 gen sex4 = disex if finstatw4=="C4CM"
2471 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2472 tsset idauniq wave
2473 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 4 to the
2474 follow-up waves available for that participant) by participant ID
2475 bysort idauniq: carryforward sex4, replace

```

```

2470 tab sex if finstatw6==25
2471 tab disex if finstatw6==25
2472 * Generate a new variable duplicating the sex variable for the Wave 6 refreshment sample
2473 gen sex6 = disex if finstatw6==25
2474 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2475 tsset idauniq wave
2476 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 6 to the
follow-up waves available for that participant) by participant ID
2477 bysort idauniq: carryforward sex6, replace
2478
2479 tab sex if finstatw7==33
2480 tab disex if finstatw7==33
2481 * Generate a new variable duplicating the sex variable for the Wave 7 refreshment sample
2482 gen sex7 = disex if finstatw7==33
2483 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2484 tsset idauniq wave
2485 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 7 to the
follow-up waves available for that participant) by participant ID
2486 bysort idauniq: carryforward sex7, replace
2487
2488 tab sex if finstatw9==48
2489 tab indsex if finstatw9==48
2490 * Assign the number 0 if the participant is male at Wave 9
2491 gen indsex9 = 0 if indsex==1 & wave==9
2492 * Assign the number 1 if the participant is female at Wave 9
2493 replace indsex9 = 1 if indsex==2 & wave==9
2494 * Generate a new variable duplicating the sex variable for the Wave 9 refreshment sample
2495 gen sex9 = indsex9 if finstatw9==48
2496
2497 * Generate a new variable duplicating the time-constant sex variable (assessed at Wave 2)
2498 gen sexcons = sex
2499 * Replace the sex variable with values from the first wave of data collection for the refreshment
samples
2500 replace sexcons = sex3 if sexcons==. & sex3!=.
2501 replace sexcons = sex4 if sexcons==. & sex4!=.
2502 replace sexcons = sex6 if sexcons==. & sex6!=.
2503 replace sexcons = sex7 if sexcons==. & sex7!=.
2504 replace sexcons = sex9 if sexcons==. & sex9!=.
2505
2506 tab ethnicity if finstatw3=="C3CM"
2507 tab fqethnr if finstatw3=="C3CM"
2508 * Generate a new variable duplicating the ethnicity variable for the Wave 3 refreshment sample
2509 gen eth3 = fqethnr if finstatw3=="C3CM"
2510 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2511 tsset idauniq wave
2512 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 3 to the
follow-up waves available for that participant) by participant ID
2513 bysort idauniq: carryforward eth3, replace
2514
2515 tab ethnicity if finstatw4=="C4CM"
2516 tab fqethnr if finstatw4=="C4CM"
2517 * Generate a new variable duplicating the ethnicity variable for the Wave 4 refreshment sample
2518 gen eth4 = fqethnr if finstatw4=="C4CM"
2519 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2520 tsset idauniq wave
2521 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 4 to the
follow-up waves available for that participant) by participant ID
2522 bysort idauniq: carryforward eth4, replace
2523
2524 tab ethnicity if finstatw6==25
2525 tab fqethnr if finstatw6==25
2526 * Generate a new variable duplicating the ethnicity variable for the Wave 6 refreshment sample
2527 gen eth6 = fqethnr if finstatw6==25

```

```

2528 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2529 tsset idauniq wave
2530 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 6 to the
follow-up waves available for that participant) by participant ID
2531 bysort idauniq: carryforward eth6, replace
2532
2533 tab ethnicity if finstatw7==33
2534 tab fqethnr if finstatw7==33
2535 * Generate a new variable duplicating the ethnicity variable for the Wave 7 refreshment sample
2536 gen eth7 = fqethnr if finstatw7==33
2537 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2538 tsset idauniq wave
2539 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 7 to the
follow-up waves available for that participant) by participant ID
2540 bysort idauniq: carryforward eth7, replace
2541
2542 tab ethnicity if finstatw9==48
2543 tab fqethnr if finstatw9==48
2544 * Generate a new variable duplicating the ethnicity variable for the Wave 9 refreshment sample
2545 gen eth9 = fqethnr if finstatw9==48
2546
2547 * Generate a new variable duplicating the time-constant ethnicity variable (assessed at Wave 2)
2548 gen ethcons = ethnicity
2549 * Replace the ethnicity variable with values from the first wave of data collection for the
refreshment samples
2550 replace ethcons = eth3 if ethcons==. & eth3!=.
2551 replace ethcons = eth4 if ethcons==. & eth4!=.
2552 replace ethcons = eth6 if ethcons==. & eth6!=.
2553 replace ethcons = eth7 if ethcons==. & eth7!=.
2554 replace ethcons = eth9 if ethcons==. & eth9!=.
2555
2556 tab qualifications if finstatw3=="C3CM"
2557 tab education if finstatw3=="C3CM"
2558 * Generate a new variable duplicating the education variable for the Wave 3 refreshment sample
2559 gen edu3 = education if finstatw3=="C3CM"
2560 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2561 tsset idauniq wave
2562 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 3 to the
follow-up waves available for that participant) by participant ID
2563 bysort idauniq: carryforward edu3, replace
2564
2565 tab qualifications if finstatw4=="C4CM"
2566 tab education if finstatw4=="C4CM"
2567 * Generate a new variable duplicating the education variable for the Wave 4 refreshment sample
2568 gen edu4 = education if finstatw4=="C4CM"
2569 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2570 tsset idauniq wave
2571 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 4 to the
follow-up waves available for that participant) by participant ID
2572 bysort idauniq: carryforward edu4, replace
2573
2574 tab qualifications if finstatw6==25
2575 tab education if finstatw6==25
2576 * Generate a new variable duplicating the education variable for the Wave 6 refreshment sample
2577 gen edu6 = education if finstatw6==25
2578 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2579 tsset idauniq wave
2580 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 6 to the
follow-up waves available for that participant) by participant ID
2581 bysort idauniq: carryforward edu6, replace
2582
2583 tab qualifications if finstatw7==33
2584 tab education if finstatw7==33

```



```

2585 * Generate a new variable duplicating the education variable for the Wave 7 refreshment sample
2586 gen edu7 = education if finstatw7==33
2587 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2588 tsset idauniq wave
2589 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 7 to the
follow-up waves available for that participant) by participant ID
2590 bysort idauniq: carryforward edu7, replace
2591
2592 tab qualifications if finstatw9==48
2593 tab education if finstatw9==48
2594 * Generate a new variable duplicating the education variable for the Wave 9 refreshment sample
2595 gen edu9 = education if finstatw9==48
2596
2597 * Generate a new variable duplicating the time-constant education variable (assessed at Wave 2)
2598 gen educons = qualifications
2599 * Replace the education variable with values from the first wave of data collection for the
refreshment samples
2600 replace educons = edu3 if educons==. & edu3!=.
2601 replace educons = edu4 if educons==. & edu4!=.
2602 replace educons = edu6 if educons==. & edu6!=.
2603 replace educons = edu7 if educons==. & edu7!=.
2604 replace educons = edu9 if educons==. & edu9!=.
2605
2606 tab nssec3 if finstatw3=="C3CM"
2607 tab mynssec3 if finstatw3=="C3CM"
2608 * Generate a new variable duplicating the occupational class variable for the Wave 3 refreshment
sample
2609 gen occ3 = mynssec3 if finstatw3=="C3CM"
2610 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2611 tsset idauniq wave
2612 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 3 to the
follow-up waves available for that participant) by participant ID
2613 bysort idauniq: carryforward occ3, replace
2614
2615 tab nssec3 if finstatw4=="C4CM"
2616 tab mynssec3 if finstatw4=="C4CM"
2617 * Generate a new variable duplicating the occupational class variable for the Wave 4 refreshment
sample
2618 gen occ4 = mynssec3 if finstatw4=="C4CM"
2619 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2620 tsset idauniq wave
2621 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 4 to the
follow-up waves available for that participant) by participant ID
2622 bysort idauniq: carryforward occ4, replace
2623
2624 tab nssec3 if finstatw6==25
2625 tab mynssec3 if finstatw6==25
2626 * Generate a new variable duplicating the occupational class variable for the Wave 6 refreshment
sample
2627 gen occ6 = mynssec3 if finstatw6==25
2628 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2629 tsset idauniq wave
2630 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 6 to the
follow-up waves available for that participant) by participant ID
2631 bysort idauniq: carryforward occ6, replace
2632 * Save dataset with a new name
2633 save intermediate.dta
2634 clear
2635
2636 * Recode the long form occupational class variable at Wave 7 into the three-class classification
2637 use idauniq NSSEC using wave_7_elsa_data.dta
2638 * Generate a new variable called wave and assign the number 7 to each observation (to designate Wave
7)

```

```

2639 gen wave = 7
2640 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
2641 replace NSSEC = . if NSSEC== -1
2642 * Replace variable with the number 0 if the participant's current or most recent occupation was
coded as: Lower supervisory and technical occupations; or Semi-routine occupations; or Routine
occupations
2643 replace NSSEC = 0 if inlist(NSSEC,10,11.1,11.2,12.1,12.2,12.3,12.4,12.5,12.6,12.7,13.1,13.2,13.3,13.4
,13.5)
2644 * Replace variable with the number 1 if the participant's current or most recent occupation was
coded as: Intermediate occupation; or Small employers and own account workers
2645 replace NSSEC = 1 if inlist(NSSEC,9.1,9.2,8.1,8.2,7.1,7.2,7.3,7.4)
2646 * Replace variable with the number 2 if the participant's current or most recent occupation was
coded as: Higher managerial, administrative and professional occupations; or Lower managerial,
administrative and professional occupations
2647 replace NSSEC = 2 if inlist(NSSEC,3.1,3.2,3.3,3.4,4.1,4.2,4.3,4.4,6,5)
2648 * Save dataset with a new name
2649 save wave7nssec.dta
2650
2651 * Use dataset for creating the time-constant variables
2652 use intermediate.dta
2653 * Drop the long form occupational class variable
2654 drop NSSEC
2655 * One-to-one merge of data in memory with wave7nssec.dta on participant ID and wave
2656 merge 1:1 idauniq wave using wave7nssec.dta, generate (merge_nssec)
2657 * Restore sample size
2658 keep if AHA!=.
2659
2660 tab nssec3 if finstatw7==33
2661 tab NSSEC if finstatw7==33 & wave==7
2662 * Generate a new variable duplicating the occupational class variable for the Wave 7 refreshment
sample
2663 gen occ7 = NSSEC if finstatw7==33
2664 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2665 tsset idauniq wave
2666 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 7 to the
follow-up waves available for that participant) by participant ID
2667 bysort idauniq: carryforward occ7, replace
2668
2669 tab nssec3 if finstatw9==48
2670 tab mynssec3 if finstatw9==48
2671 * Generate a new variable duplicating the occupational class variable for the Wave 9 refreshment
sample
2672 gen occ9 = mynssec3 if finstatw9==48
2673
2674 * Generate a new variable duplicating the time-constant occupational class variable (assessed at
Wave 2)
2675 gen occcons = nssec3
2676 * Replace the occupational class variable with values from the first wave of data collection for the
refreshment samples
2677 replace occcons = occ3 if occcons==. & occ3!=.
2678 replace occcons = occ4 if occcons==. & occ4!=.
2679 replace occcons = occ6 if occcons==. & occ6!=.
2680 replace occcons = occ7 if occcons==. & occ7!=.
2681 replace occcons = occ9 if occcons==. & occ9!=.
2682
2683 tab wealth if finstatw3=="C3CM"
2684 tab totwq5_bu_s if finstatw3=="C3CM"
2685 * Generate a new variable duplicating the wealth variable for the Wave 3 refreshment sample
2686 gen wealth3 = totwq5_bu_s if finstatw3=="C3CM"
2687 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2688 tsset idauniq wave
2689 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 3 to the
follow-up waves available for that participant) by participant ID

```

```

2690 bysort idauniq: carryforward wealth3, replace
2691
2692 tab wealth if finstatw4=="C4CM"
2693 tab totwq5_bu_s if finstatw4=="C4CM"
2694 * Generate a new variable duplicating the wealth variable for the Wave 4 refreshment sample
2695 gen wealth4 = totwq5_bu_s if finstatw4=="C4CM"
2696 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2697 tsset idauniq wave
2698 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 4 to the
follow-up waves available for that participant) by participant ID
2699 bysort idauniq: carryforward wealth4, replace
2700
2701 tab wealth if finstatw6==25
2702 tab totwq5_bu_s if finstatw6==25
2703 * Generate a new variable duplicating the wealth variable for the Wave 6 refreshment sample
2704 gen wealth6 = totwq5_bu_s if finstatw6==25
2705 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2706 tsset idauniq wave
2707 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 6 to the
follow-up waves available for that participant) by participant ID
2708 bysort idauniq: carryforward wealth6, replace
2709
2710 tab wealth if finstatw7==33
2711 tab totwq5_bu_s if finstatw7==33
2712 * Generate a new variable duplicating the wealth variable for the Wave 7 refreshment sample
2713 gen wealth7 = totwq5_bu_s if finstatw7==33
2714 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2715 tsset idauniq wave
2716 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 7 to the
follow-up waves available for that participant) by participant ID
2717 bysort idauniq: carryforward wealth7, replace
2718
2719 tab wealth if finstatw9==48
2720 tab totwq5_bu_s if finstatw9==48
2721 * Generate a new variable duplicating the wealth variable for the Wave 9 refreshment sample
2722 gen wealth9 = totwq5_bu_s if finstatw9==48
2723
2724 * Generate a new variable duplicating the time-constant wealth variable (assessed at Wave 2)
2725 gen wealthcons = wealth
2726 * Replace the wealth variable with values from the first wave of data collection for the refreshment
samples
2727 replace wealthcons = wealth3 if wealthcons==. & wealth3!=.
2728 replace wealthcons = wealth4 if wealthcons==. & wealth4!=.
2729 replace wealthcons = wealth6 if wealthcons==. & wealth6!=.
2730 replace wealthcons = wealth7 if wealthcons==. & wealth7!=.
2731 replace wealthcons = wealth9 if wealthcons==. & wealth9!=.
2732
2733 tab age if finstatw3=="C3CM"
2734 tab indager if finstatw3=="C3CM"
2735 * Generate a new variable duplicating the age variable for the Wave 3 refreshment sample
2736 gen agew3 = indager if finstatw3=="C3CM" & wave==3
2737
2738 tab age if finstatw4=="C4CM"
2739 tab indager if finstatw4=="C4CM"
2740 * Generate a new variable duplicating the age variable for the Wave 4 refreshment sample
2741 gen agew4 = indager if finstatw4=="C4CM" & wave==4
2742
2743 tab age if finstatw6==25
2744 tab indager if finstatw6==25
2745 * Generate a new variable duplicating the age variable for the Wave 6 refreshment sample
2746 gen agew6 = indager if finstatw6==25 & wave==6
2747
2748 tab age if finstatw7==33

```

```

2749 tab indager if finstatw7==33
2750 * Generate a new variable duplicating the age variable for the Wave 7 refreshment sample
2751 gen agew7 = indager if finstatw7==33 & wave==7
2752
2753 tab age if finstatw9==48
2754 tab indager if finstatw9==48
2755 * Generate a new variable duplicating the age variable for the Wave 9 refreshment sample
2756 gen agew9 = indager if finstatw9==48 & wave==9
2757
2758 * Generate a new variable duplicating the age variable for the Wave 3 refreshment sample
2759 gen agew3cons = agew3 if wave==3
2760 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2761 tsset idauniq wave
2762 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 3 to the
follow-up waves available for that participant) by participant ID
2763 bysort idauniq: carryforward agew3cons, replace
2764
2765 * Generate a new variable duplicating the age variable for the Wave 4 refreshment sample
2766 gen agew4cons = agew4 if wave==4
2767 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2768 tsset idauniq wave
2769 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 4 to the
follow-up waves available for that participant) by participant ID
2770 bysort idauniq: carryforward agew4cons, replace
2771
2772 * Generate a new variable duplicating the age variable for the Wave 6 refreshment sample
2773 gen agew6cons = agew6 if wave==6
2774 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2775 tsset idauniq wave
2776 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 6 to the
follow-up waves available for that participant) by participant ID
2777 bysort idauniq: carryforward agew6cons, replace
2778
2779 * Generate a new variable duplicating the age variable for the Wave 7 refreshment sample
2780 gen agew7cons = agew7 if wave==7
2781 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2782 tsset idauniq wave
2783 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 7 to the
follow-up waves available for that participant) by participant ID
2784 bysort idauniq: carryforward agew7cons, replace
2785
2786 * Generate a new variable duplicating the time-constant age variable (assessed at Wave 2)
2787 gen agewcons = age
2788 * Replace the age variable with values from the first wave of data collection for the refreshment
samples
2789 replace agewcons = agew3cons if agewcons==. & agew3cons!=.
2790 replace agewcons = agew4cons if agewcons==. & agew4cons!=.
2791 replace agewcons = agew6cons if agewcons==. & agew6cons!=.
2792 replace agewcons = agew7cons if agewcons==. & agew7cons!=.
2793 replace agewcons = agew9 if agewcons==. & agew9!=.
2794
2795 * Save dataset with a new name
2796 save timeconstant.dta
2797
2798 * Keep variables required for analyses
2799 keep idauniq wave sexcons educons wealthcons agewcons ethcons occcons QoL AHA
2800 * Reshape data into wide format for observations identified by participant ID and add wave as an
identifying time period
2801 reshape wide QoL AHA, j(wave) i(idauniq)
2802 * Save dataset with a new name
2803 save GMMcovdatawideSES0323.dta
2804 sum QoL9, d
2805 * Generate a new variable and assign the number 0 if a participant's quality-of-life score is below

```

```

the sample median
2806 gen QoL9binary = 0 if QoL9<43
2807 * Assign the number 1 if a participant's quality-of-life score is above or equal to the sample median
2808 replace QoL9binary = 1 if QoL9 >=43 & QoL9!=.
2809 * Save dataset with a new name
2810 save GMMcovbinarySES0323.dta
2811
2812 * Dummy variables for conditional GMM
2813 * Education
2814 * Medium education (i.e., school qualifications) (coded as 1) versus low (i.e., no formal
qualifications) or high (i.e., higher education) education (coded as 0)
2815 gen mediuemed = 0 if inlist(educons,0,2)
2816 replace mediuemed = 1 if educons == 1
2817 * High education (coded as 1) versus low or medium education (coded as 0)
2818 gen highed = 0 if inlist(educons,0,1)
2819 replace highed = 1 if educons == 2
2820 * Occupational class
2821 * Intermediate occupations (coded as 1) versus lower or higher occupations (coded as 0)
2822 gen mediumocc = 0 if inlist(occccons,0,2)
2823 replace mediumocc = 1 if occcons == 1
2824 * Higher occupations (coded as 1) versus lower or intermediate occupations (coded as 0)
2825 gen highocc = 0 if inlist(occccons,0,1)
2826 replace highocc = 1 if occcons == 2
2827 * Wealth
2828 * 2nd quintile (coded as 1) versus 1st, 3rd, 4th, or 5th quintile (coded as 0)
2829 gen quint2 = 0 if inlist(wealthcons,1,3,4,5)
2830 replace quint2 = 1 if wealthcons == 2
2831 * 3rd quintile (coded as 1) versus 1st, 2nd, 4th, or 5th quintile (coded as 0)
2832 gen quint3 = 0 if inlist(wealthcons,1,2,4,5)
2833 replace quint3 = 1 if wealthcons == 3
2834 * 4th quintile (coded as 1) versus 1st, 2nd, 3rd, or 5th quintile (coded as 0)
2835 gen quint4 = 0 if inlist(wealthcons,1,2,3,5)
2836 replace quint4 = 1 if wealthcons == 4
2837 * 5th quintile (coded as 1) versus 1st, 2nd, 3rd, or 4th quintile (coded as 0)
2838 gen quint5 = 0 if inlist(wealthcons,1,2,3,4)
2839 replace quint5 = 1 if wealthcons == 5
2840 * Save dataset with a new name
2841 save GMMcovbinarySESdu0323.dta
2842 * Convert Stata data into a data file and Mplus input file
2843 stata2mplus using GMMcovbinarySESdu0323.dta
2844 clear
2845
2846 * Import posterior probabilities of class membership and most likely class membership following step
1 of the three-step manual GMM procedure
2847 import excel "", sheet("") firstrow
2848 * Convert Stata data into a data file and Mplus input file
2849 stata2mplus using step2c3manual0323
2850 * Save dataset with a new name
2851 save step2c3manual0323.dta
2852
2853 * Summarise the AHA scores at each wave
2854 sum AHA2, d
2855 sum AHA3, d
2856 sum AHA4, d
2857 sum AHA5, d
2858 sum AHA6, d
2859 sum AHA7, d
2860 sum AHA8, d
2861 sum AHA9, d
2862
2863 * Summarise the posterior probabilities for each latent class
2864 sum c1 if n==1
2865 sum c2 if n==2

```



```

2866 sum c3 if n==3
2867 clear
2868
2869 * Use timeconstant.dta dataset
2870 use timeconstant.dta
2871 * Count total number of participants and observations
2872 unique idauniq
2873 * 14,755 individuals, 66,133 observations
2874 * Drop unnecessary variables
2875 drop obsnr obscount
2876 * Generate a variable that assigns the observation number (i.e., 1 for first data collection
timepoint, 2 for second data collection timepoint etc.) to each row by participant ID
2877 bysort idauniq (wave): gen obsnr = _n
2878 * Generate a variable that assigns the number of total observations to each row of data for a given
participant
2879 bysort idauniq: gen obscount = _N
2880 tab wave
2881 * Summarise number of observations per participant
2882 tab obscount if obsnr==1
2883 sum obscount if obsnr==1
2884 * Keep variables required for Receiver Operating Characteristic (ROC) analyses
2885 keep idauniq wave sexcons QoL AHA
2886 * Save dataset with a new name
2887 save ROCdata0323.dta
2888 sum QoL, d
2889 * Generate a new variable and assign the number 0 if a participant's quality-of-life score is below
the sample median
2890 gen QoLbinary = 0 if QoL < 43
2891 * Assign the number 1 if a participant's quality-of-life score is above or equal to the sample median
2892 replace QoLbinary = 1 if QoL >= 43 & QoL !=.
2893 * Overwrite dataset, by replacing the previously saved file
2894 save ROCdata0323.dta, replace
2895 * Drop unnecessary variable
2896 drop QoL
2897 * Reshape data into wide format for observations identified by participant ID and add wave as an
identifying time period
2898 reshape wide AHA QoLbinary, j(wave) i (idauniq)
2899 * Save dataset with a new name
2900 save ROC92wide0323.dta
2901
2902 * ROC analyses, clustering at the participant level and adjusting the control distribution for
biological sex
2903 * Quality-of-life at Wave 3
2904 rocreg QoLbinary3 AHA2, probit ml ctrlcov(sexcons) ctrlmodel(linear) cluster(idauniq)
2905 * Quality-of-life at Wave 6
2906 rocreg QoLbinary6 AHA2, probit ml ctrlcov(sexcons) ctrlmodel(linear) cluster(idauniq)
2907 * Quality-of-life at Wave 9
2908 rocreg QoLbinary9 AHA2, probit ml ctrlcov(sexcons) ctrlmodel(linear) cluster(idauniq)
2909 clear
2910
2911 * Use timeconstant.dta dataset
2912 use timeconstant.dta
2913 * Two-level mixed-effects linear regression of AHA scores on lifestyle behaviours (adjusted for
covariates), with random intercepts by participant ID
2914 mixed AHA indager i.sexcons i.ethcons i.scako i.smoking i.activity2 || idauniq:
2915 * Store estimates for later use
2916 estimates store randint
2917 * Fit indices
2918 estimates stats
2919 * Two-level mixed-effects linear regression of AHA scores on lifestyle behaviours (adjusted for
covariates), with random intercepts by participant ID and a random slope according to wave
2920 mixed AHA indager i.sexcons i.ethcons i.scako i.smoking i.activity2 || idauniq: wave
2921 * Store estimates for later use

```

```

2922 estimates store randslope
2923 * Fit indices
2924 estimates stats
2925 * Likelihood ratio test
2926 lrtest randslope randint
2927 clear
2928
2929 * Use GMMcovbinarySES0323.dta dataset
2930 use GMMcovbinarySES0323.dta
2931 * Drop observations with missing data on socio-economic or demographic covariates
2932 drop if sexcons==. | educons==. | wealthcons==. | agewcons==. | ethcons==. | occcons ==.
2933 * Count total number of participants and observations
2934 unique idauniq
2935 * 11,566 individuals
2936 * Keep necessary variables
2937 keep idauniq sexcons educons wealthcons agewcons ethcons occcons
2938 * Save dataset with a new name
2939 save desbclassGMMcovdataSESwide0325.dta
2940 clear
2941
2942 * Import posterior probabilities of class membership and most likely class membership following step
2943 3 of the three-step manual GMM procedure
2944 import excel "", sheet("") firstrow
2945 * Save dataset with a new name
2946 save manualstep3c3.dta
2947 clear
2948
2949 * Use desbclassGMMcovdataSESwide0325.dta dataset
2950 use desbclassGMMcovdataSESwide0325.dta
2951 * One-to-one merge of data in memory with manualstep3c3.dta on participant ID
2952 merge 1:1 idauniq using manualstep3c3.dta, generate (merge_posterior)
2953 * Overwrite dataset, by replacing the previously saved file
2954 save desbclassGMMcovdataSESwide0325.dta, replace
2955
2956 * Descriptive statistics stratified by class membership
2957 sum agewcons if n==1
2958 sum agewcons if n==2
2959 sum agewcons if n==3
2960
2961 tab sexcons if n==1
2962 tab sexcons if n==2
2963 tab sexcons if n==3
2964
2965 tab ethcons if n==1
2966 tab ethcons if n==2
2967 tab ethcons if n==3
2968
2969 tab educons if n==1
2970 tab educons if n==2
2971 tab educons if n==3
2972
2973 tab occcons if n==1
2974 tab occcons if n==2
2975 tab occcons if n==3
2976
2977 tab wealthcons if n==1
2978 tab wealthcons if n==2
2979 tab wealthcons if n==3

```