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1 *****
2 ***SYNTAX FOR "Value of the Short Physical Performance Battery (SPPB) for predicting adverse health
3 outcomes in older adults: A 14-year follow-up from the English Longitudinal Study of Ageing (ELSA)"***
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): 01/06/2022
14
15 * Project ID: 224672
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 sampsta finstat w2nssec8 w2nssec5 w2nssec3 couple DhSex dhager indager diagr DiSex indsex
  fqethnr Hehelf Heill Helim HeActa HeActb HeActc DiMar wpdes wpdesc CfMetM CfMetMT CfDatD CfDatM
  CfDatY CfDay CfWrds CfDScr CfTest CfLisEn CfAni CfMem CfMemS CfPAScr CfLisD CfLitSK cflitoc CfLitB
  CfLitC CfLitD CfLitE CfImp CfWhZ1 CfWhZ2 CfWhZ3 nncorre nnmisse nnrow nnc1m nrowc1 PScedA PScedB
  PScedC PScedD PScedE PScedF PScedG PScedH HHTot HeSmk HESka HeSkd HeSke HeSkf Hestop hestopc HECig
  HeSkb HeTba HETbb HeSkc HeTbc HETbd Hecgstp Hecgsta Hecgnic Henictk scako scal7a scal7b MmSchs
  MmAlone MmHSS MmWill MmSaf MmAvsp MmWala MmTrya MMWlkA MmTryb MMWlkB MmPain MmRecR mmrecrc MmAid
  mmaidc MMcomZ1 MMcomZ2 MMcomZ3 heada01 heada02 heada03 heada04 heada05 heada06 heada07 heada08
  heada09 heada10 headb01 headb02 headb03 headb04 headb05 headb06 headb07 headb08 headb09 headb10
  headb11 headb12 headb13 HeFla HeFlb HeFlc HeFld HeFle HeFlf w2wgt scw2wgt 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 DhSex dhsex
34 rename DiSex disex
35 rename Hehelf hehelf
36 rename Heill heill
37 rename Helim helim
38 rename HeActa heacta

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39  rename HeActb heactb
40  rename HeActc heactc
41  rename DiMar dimar
42  rename CfMetM cfmets
43  rename CfMetMT cfmetsmt
44  rename CfDatD cfdatd
45  rename CfDatM cfdatm
46  rename CfDatY cfdaty
47  rename CfDay cfday
48  rename CfWrds cfwrds
49  rename CfDScr cfdscr
50  rename CfTest cftest
51  rename CfLisEn cflisen
52  rename CfAni cfani
53  rename CfMem cfmem
54  rename CfMemS cfmems
55  rename CfPAScr cfpascr
56  rename CfLisD cflisd
57  rename CfLitSK cflitsk
58  rename CfLitB cflitb
59  rename CfLitC cflitc
60  rename CfLitD cflitd
61  rename CfLitE cflite
62  rename CfImp cfimp
63  rename CfWhZ1 cfwhz1
64  rename CfWhZ2 cfwhz2
65  rename CfWhZ3 cfwhz3
66  rename PScedA psceda
67  rename PScedB pscedb
68  rename PScedC pscedc
69  rename PScedD pscedd
70  rename PScedE pscede
71  rename PScedF pscedf
72  rename PScedG pscedg
73  rename PScedH pscedh
74  rename HHTot hhtot
75  rename HeSmk hesmk
76  rename HESka heska
77  rename HeSkd heskd
78  rename HeSke heske
79  rename HeSkf heskf
80  rename Hestop hestop
81  rename HECig hecig
82  rename HeSkb heskb
83  rename HeTba hetba
84  rename HETbb hetbb
85  rename HeSkc heskc
86  rename HeTbc hetbc
87  rename HETbd hetbd
88  rename Hecgstp hecgstp
89  rename Hecgsta hecgsta
90  rename Hecgnic hecgnic
91  rename Henictk henictk
92  rename MmSchs mmschs
93  rename MmAlone mmalone
94  rename MmHSS mmhss
95  rename MmWill mmwill
96  rename MmSaf mmsaf
97  rename MmAvsp mmavsp
98  rename MmWala mmwala
99  rename MmTrya mmtrya
100 rename MMWlka mmwlka
101 rename MmTryb mmtryb

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102 rename MMWlkb mmwlbk
103 rename MmPain mmpain
104 rename MmRecR mmrecr
105 rename MmAid mmaid
106 rename MMcomZ1 mmcomz1
107 rename MMcomZ2 mmcomz2
108 rename MMcomZ3 mmcomz3
109 rename HeFla hefla
110 rename HeFlb heflb
111 rename HeFlc heflc
112 rename HeFld hefld
113 rename HeFle hefle
114 rename HeFlf heflf
115 * Generate a new variable called wave and assign the number 2 to each observation (to designate Wave
116 2)
117 gen wave = 2
118 * Save Wave 2 core dataset
119 save wave2.dta
120
121 * Variables Wave 2 Derived
122 use idauniq w2edqual using wave_2_derived_variables.dta
123 * Describe dataset
124 describe
125 * Sort from lowest to highest participant ID
126 sort idauniq
127 * Save Wave 2 derived dataset
128 save wave2derived.dta
129
130 * Variables Wave 2 Financial Derived
131 use idauniq totwq5_bu_s using wave_2_financial_derived_variables.dta
132 * Describe dataset
133 describe
134 * Sort from lowest to highest participant ID
135 sort idauniq
136 * Save Wave 2 financial derived dataset
137 save wave2financial.dta
138
139 * Variables Wave 2 Nurse
140 use idauniq mmbcsc mmsssc mms sre mmssti mms sna mmstsc mmstre mmstti mmstna mmftsc mmftre2 mmftti
141 mmftna mmcrav mmcrsc mmcrre mmcrna mmrrsc mmrrre mmrrfti mmrrtti mmrroc mmrrna height ehtm estht
142 htval htok relhite hinrel weight ewtkg estwt wtval wtok relwait bmi bmival bmiok bmiobe using
143 wave_2_nurse_data_v2.dta
144 * Describe dataset
145 describe
146 * Sort from lowest to highest participant ID
147 sort idauniq
148 * Save Wave 2 nurse dataset
149 save wave2nurse.dta
150
151 * Wave 2 complete data
152 * Merge core, derived, financial, and nurse datasets for Wave 2 using the participant ID
153 * Use Wave 2 core dataset
154 use wave2.dta
155 * One-to-one merge of data in memory with wave2derived.dta on participant ID
156 merge 1:1 idauniq using wave2derived.dta, generate (merge_derived2)
157 * Overwrite Wave 2 dataset, by replacing the previously saved file
158 save wave2.dta, replace
159 * Use the newly saved file for Wave 2
160 use wave2.dta
161 * One-to-one merge of data in memory with wave2financial.dta on participant ID
162 merge 1:1 idauniq using wave2financial.dta, generate (merge_financial2)
163 * Overwrite Wave 2 dataset, by replacing the previously saved file
164 save wave2.dta, replace

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161 * Use the newly saved file for Wave 2
162 use wave2.dta
163 * One-to-one merge of data in memory with wave2nurse.dta on participant ID
164 merge 1:1 idauniq using wave2nurse.dta, generate (merge_nurse2)
165 * Sort from lowest to highest participant ID
166 sort idauniq
167 * Overwrite Wave 2 dataset, by replacing the previously saved file
168 save wave2.dta, replace
169
170 * Variables Wave 3
171 use idauniq 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 hefla heflb heflc using wave_3_elsa_data_v4.dta
172 * Describe dataset
173 describe
174 * Sort from lowest to highest participant ID
175 sort idauniq
176 * Generate a new variable called wave and assign the number 3 to each observation (to designate Wave
3)
177 gen wave = 3
178 * Save Wave 3 core dataset
179 save wave3.dta
180
181 * Variables Wave 4
182 use idauniq hemobwa hemobsi hemobch hemobcs hemobcl hemobst hemobre hemobpu hemobli hemobpi hemob96
headldr headlwa headlba headlea headlbe headlwc headlma headlda headlpr headlsh headlte headlco
headlme headlho headlmo headl96 hefla heflb heflc hefld hefle heflf using wave_4_elsa_data_v3.dta
183 * Rename variables to ensure consistency across waves
184 rename headlte headlph
185 rename headlco headlsp
186 * Describe dataset
187 describe
188 * Sort from lowest to highest participant ID
189 sort idauniq
190 * Generate a new variable called wave and assign the number 4 to each observation (to designate Wave
4)
191 gen wave = 4
192 * Save Wave 4 core dataset
193 save wave4.dta
194
195 * Variables Wave 5
196 use idauniq hemobwa hemobsi hemobch hemobcs hemobcl hemobst hemobre hemobpu hemobli hemobpi hemob96
headldr headlwa headlba headlea headlbe headlwc headlma headlda headlpr headlsh headlte headlco
headlme headlho headlmo headl96 hefla heflb heflc using wave_5_elsa_data_v4.dta
197 * Rename variables to ensure consistency across waves
198 rename headlte headlph
199 rename headlco headlsp
200 * Describe dataset
201 describe
202 * Sort from lowest to highest participant ID
203 sort idauniq
204 * Generate a new variable called wave and assign the number 5 to each observation (to designate Wave
5)
205 gen wave = 5
206 * Save Wave 5 core dataset
207 save wave5.dta
208
209 * Variables Wave 6
210 use idauniq hemobwa hemobsi hemobch hemobcs hemobcl hemobst hemobre hemobpu hemobli hemobpi hemob96
headldr headlwa headlba headlea headlbe headlwc headlma HeADLda headlpr headlsh headlph headlco
headlme headlho headlmo headl96 HeFla HeFlb HeFlc using wave_6_elsa_data_v2.dta
211 * Rename variables to ensure consistency across waves
212 rename HeADLda headlda

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213 rename headlco headlsp
214 rename HeFla hefla
215 rename HeFlb heflb
216 rename HeFlc heflc
217 * Describe dataset
218 describe
219 * Sort from lowest to highest participant ID
220 sort idauniq
221 * Generate a new variable called wave and assign the number 6 to each observation (to designate Wave
222 6)
223 gen wave = 6
224 * Save Wave 6 core dataset
225 save wave6.dta
226
227 * Variables Wave 7
228 use idauniq hemobwa hemobsi hemobch hemobcs hemobcl hemobst hemobre hemobpu hemobli hemobpi hemob96
229 headldr headlwa headlba headlea headlbe headlwc headlma HeADLda headlpr headlsh headlph HeADLsp
230 headlme headlho headlmo headl96 HeFla HeFlb HeFlc using wave_7_elsa_data.dta
231 * Rename variables to ensure consistency across waves
232 rename HeADLda headlda
233 rename HeADLsp headlsp
234 rename HeFla hefla
235 rename HeFlb heflb
236 rename HeFlc heflc
237 * Describe dataset
238 describe
239 * Sort from lowest to highest participant ID
240 sort idauniq
241 * Generate a new variable called wave and assign the number 7 to each observation (to designate Wave
242 7)
243 gen wave = 7
244 * Save Wave 7 core dataset
245 save wave7.dta
246
247 * Variables Wave 8
248 use idauniq hemobwa hemobsi hemobch hemobcs hemobcl hemobst hemobre hemobpu hemobli hemobpi hemob96
249 headldr headlwa headlba headlea headlbe headlwc headlma headlda headlpr headlsh headlph headlsp
250 headlme headlho headlmo headl96 hefla heflb heflc hefle heflf using wave_8_elsa_data_eul_v2.dta
251 * Describe dataset
252 describe
253 * Sort from lowest to highest participant ID
254 sort idauniq
255 * Generate a new variable called wave and assign the number 8 to each observation (to designate Wave
256 8)
257 gen wave = 8
258 * Save Wave 8 core dataset
259 save wave8.dta
260
261 * Variables Wave 9
262 use idauniq hemobwa hemobsi hemobch hemobcs hemobcl hemobst hemobre hemobpu hemobli hemobpi hemob96
263 headldr headlwa headlba headlea headlbe headlwc headlma headlda headlpr headlsh headlph headlsp
264 headlme headlho headlmo headl96 hefla heflb heflc using wave_9_elsa_data_eul_v1.dta
265 * Describe dataset
266 describe
267 * Sort from lowest to highest participant ID
268 sort idauniq
269 * Generate a new variable called wave and assign the number 9 to each observation (to designate Wave
270 9)
271 gen wave = 9
272 * Save Wave 9 core dataset
273 save wave9.dta
274
275 * Append Wave 3 dataset to Wave 2 dataset

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266 use wave2.dta
267 append using wave3.dta
268 * Sort by participant ID and wave (lowest to highest)
269 sort idauniq wave
270 * Append Wave 4 dataset
271 append using wave4.dta
272 * Sort by participant ID and wave (lowest to highest)
273 sort idauniq wave
274 * Append Wave 5 dataset
275 append using wave5.dta
276 * Sort by participant ID and wave (lowest to highest)
277 sort idauniq wave
278 * Append Wave 6 dataset
279 append using wave6.dta
280 * Sort by participant ID and wave (lowest to highest)
281 sort idauniq wave
282 * Append Wave 7 dataset
283 append using wave7.dta
284 * Sort by participant ID and wave (lowest to highest)
285 sort idauniq wave
286 * Append Wave 8 dataset
287 append using wave8.dta
288 * Sort by participant ID and wave (lowest to highest)
289 sort idauniq wave
290 * Append Wave 9 dataset
291 append using wave9.dta
292 * Sort by participant ID and wave (lowest to highest)
293 sort idauniq wave
294 * Assign a number in ascending order to each row of observations
295 gen ascnr = _n
296
297 * Organising dataset
298 * 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
299 bysort idauniq (wave): gen obsnr = _n
300 * Generate a variable that assigns the number of total observations to each row of data for a given
participant
301 bysort idauniq: gen obscount = _N
302 * 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
303 tabulate obscount if obsnr==1
304 * Generate a variable that assigns the number 1 to the row representing participants' first
observation
305 bysort idauniq (wave): gen first = 1 if _n==1
306 * Generate a variable that assigns the number 1 to the row representing participants' last observation
307 bysort idauniq (wave): gen last = 1 if _n==_N
308 * Generate a variable that assigns the number 1 to the row representing participants' first
observation if this corresponds to Wave 2 (baseline)
309 bysort idauniq (wave): gen firstwave = 1 if obsnr==1 & wave==2
310 * Carry the value of this last variable forwards to the remainder of a participant's observations
311 bysort idauniq: gen firstwave_cons = firstwave[1]
312 * Install unique command
313 ssc install unique
314 * Count total number of participants and observations
315 unique idauniq
316 * 19,807 individuals, 80,750 observations
317 * Save dataset with a new name
318 save raw.dta
319
320 * Time-constant core sample member - Wave 2
321 * Generate a new variable duplicating the sampsta variable at Wave 2
322 gen coresample = sampsta if wave==2

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323 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
324 tsset idauniq wave
325 * Install carryforward command
326 ssc install carryforward
327 * 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
328 bysort idauniq: carryforward coresample, replace
329 * Generate a new variable duplicating the finstat variable at Wave 2
330 gen status = finstat if wave==2
331 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
332 tsset idauniq wave
333 * 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
334 bysort idauniq: carryforward status, replace
335 * 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)
336 keep if status=="C1CM"
337 * Count total number of participants and observations
338 unique idauniq
339 * 8,780 individuals, 45,470 observations
340 * Replace age = 90 if participant is aged 90+ years (collapsed in ELSA and coded as 99 at Wave 2)
341 replace indager = 90 if indager==99
342 * Save dataset with a new name
343 save data.dta
344
345 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
346 tsset idauniq wave
347 * Generate a completely balanced dataset (i.e., all participants have a row for each wave from 2 to 8)
348 tsfill, full
349 * Assign the Wave 2 cross-sectional weight to all observations for a participant (completely
balanced dataset)
350 gen w2xwgt = w2wgt if wave==2
351 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
352 tsset idauniq wave
353 * 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
354 bysort idauniq: carryforward w2xwgt, replace
355 * Count total number of participants and observations
356 unique idauniq
357 * 8,780 individuals, 70,240 observations
358
359 * Occupational class - NS-SEC 8 and 3 category classification (Wave 2)
360 tab w2nssec3
361 tab w2nssec5
362 tab w2nssec8
363 * Excluded Never worked and long-term unemployed
364 * Generate a new variable
365 gen mynssec3 = .
366 * Assign the number 2 if the participant's current or most recent occupation was coded as: Higher
managerial and professional occupations; or Lower managerial and professional occupations
367 replace mynssec3 = 2 if inlist(w2nssec8,1,2)
368 * Assign the number 1 if the participant's current or most recent occupation was coded as:
Intermediate occupations; or Small employers and own account workers
369 replace mynssec3 = 1 if inlist(w2nssec8,3,4)
370 * 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
371 replace mynssec3 = 0 if inlist(w2nssec8,5,6,7)
372 * Coding of final occupational class variable:
373 * 0: Lower occupations
374 * 1: Intermediate occupations
375 * 2: Higher occupations
376
377 * Time-constant occupational class - Wave 2

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378 * Generate a new variable duplicating the mynssec3 variable at Wave 2
379 gen mynssec3_cons = mynssec3 if wave==2
380 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
381 tsset idauniq wave
382 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
383 bysort idauniq: carryforward mynssec3_cons, replace
384
385 * Biological sex (Wave 2)
386 tab dhsex
387 tab disex
388 tab indsex
389 * Generate a new variable
390 gen sex = .
391 * Assign the number 0 if the participant is male
392 replace sex = 0 if disex == 1
393 * Assign the number 1 if the participant is female
394 replace sex = 1 if disex == 2
395 * Coding of the final biological sex variable:
396 * 0: Male, 1: Female
397
398 * Time-constant biological sex - Wave 2
399 * Generate a new variable duplicating the sex variable at Wave 2
400 gen sex_cons = sex if wave==2
401 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
402 tsset idauniq wave
403 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
404 bysort idauniq: carryforward sex_cons, replace
405
406 * Age (Wave 2)
407 * Replace age = 90 if participant is aged 90+ years (collapsed in ELSA and coded as 99 at Wave 2)
408 replace dhager = 90 if dhager==99
409 replace diagr = 90 if diagr==99
410 tab dhager
411 tab indager
412 tab diagr
413
414 * Time-constant age - Wave 2
415 * Generate a new variable duplicating the indager variable at Wave 2
416 gen age_cons = indager if wave==2
417 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
418 tsset idauniq wave
419 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
420 bysort idauniq: carryforward age_cons, replace
421
422 * Ethnicity (Wave 2)
423 * Generate a new variable
424 gen ethnicity = .
425 * Assign the number 0 if the participant is White
426 replace ethnicity = 0 if fqethnr == 1
427 * Assign the number 1 if the participant is Non-White
428 replace ethnicity = 1 if fqethnr == 2
429 * Coding of the final ethnicity variable:
430 * 0: White, 1: Non-White
431
432 * Time-constant ethnicity - Wave 2
433 * Generate a new variable duplicating the ethnicity variable at Wave 2
434 gen eth_cons = ethnicity if wave==2
435 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
436 tsset idauniq wave
437 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the

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follow-up waves) by participant ID
438 bysort idauniq: carryforward eth_cons, replace
439
440 * Self-reported general health (Wave 2)
441 * Generate a new variable duplicating the self-reported general health variable
442 gen health = hehelp
443 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
444 replace health = . if health<0
445 * Reverse the self-rated health variable (this creates a new variable and adds the "rev" prefix to
the original variable name)
446 revrs health
447 * Coding of the final self-reported general health variable:
448 * 1: Poor
449 * 2: Fair
450 * 3: Good
451 * 4: Very good
452 * 5: Excellent
453
454 * Time-constant self-reported general health - Wave 2
455 * Generate a new variable duplicating the reversed (revhealth) self-reported general health variable
at Wave 2
456 gen health_cons = revhealth if wave==2
457 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
458 tsset idauniq wave
459 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
460 bysort idauniq: carryforward health_cons, replace
461
462 * Limiting long-standing illness (Wave 2)
463 * Generate a new variable and assign the number 0 for participants with no long-standing illness or
("|") a long-standing illness that is not limiting
464 gen limiting = 0 if heill == 2 | helim == 2
465 * Assign the number 1 for participants with a limiting long-standing illness
466 replace limiting = 1 if helim == 1
467 * Coding of the final limiting long-standing illness variable:
468 * 0: No long-standing illness or not limiting, 1: Limiting long-standing illness
469
470 * Time-constant limiting long-standing illness - Wave 2
471 * Generate a new variable duplicating the limiting variable at Wave 2
472 gen limiting_cons = limiting if wave==2
473 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
474 tsset idauniq wave
475 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
476 bysort idauniq: carryforward limiting_cons, replace
477
478 * Physical activity (Wave 2)
479 * Generate a new variable
480 gen activity = .
481 * Assign the number 3 if the participant partakes in vigorous activity more than once a week or once
a week
482 replace activity = 3 if heacta==1 | heacta==2
483 * 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
484 replace activity = 2 if (heactb==1 | heactb==2) & inlist(heacta,3,4)
485 * 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
486 replace activity = 1 if (heactc==1 | heactc==2) & inlist(heacta,3,4) & inlist(heactb,3,4)
487 * Assign the number 0 if the participant does not take part in activity of any intensity once a week
or more
488 replace activity = 0 if inlist(heacta,3,4) & inlist(heactb,3,4) & inlist(heactc,3,4)
489 * Replace the variable as missing for participants with missing cases on all three variables
490 replace activity = . if inlist(heacta,.) & inlist(heactb,.) & inlist(heactc,.)

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491 * Coding of final physical activity variable:
492 * 3: Vigorous activity at least once per week
493 * 2: At least moderate but no vigorous activity at least once per week
494 * 1: Only mild activity at least once per week
495 * 0: Inactive (no activity on a weekly basis)
496
497 * Time-constant physical activity - Wave 2
498 * Generate a new variable duplicating the activity variable at Wave 2
499 gen activity_cons = activity if wave==2
500 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
501 tsset idauniq wave
502 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
503 bysort idauniq: carryforward activity_cons, replace
504
505 * Marital status (Wave 2)
506 * Generate a new variable
507 gen marital = .
508 * Assign the number 0 if the participant's marital status was coded as: Single, that is never married
509 replace marital = 0 if dimar == 1
510 * Assign the number 1 if the participant's marital status was coded as: Legally separated; or
Divorced; or Widowed
511 replace marital = 1 if inlist(dimar,4,5,6)
512 * Assign the number 2 if the participant's marital status was coded as: Married, first and only
marriage; or Remarried, second or later marriage
513 replace marital = 2 if inlist(dimar,2,3)
514 * Coding of the final marital status variable:
515 * 0: Single/Never married
516 * 1: Separated/Divorced/Widowed
517 * 2: Married/Remarried
518
519 * Time-constant marital status - Wave 2
520 * Generate a new variable duplicating the marital variable at Wave 2
521 gen marital_cons = marital if wave==2
522 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
523 tsset idauniq wave
524 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
525 bysort idauniq: carryforward marital_cons, replace
526
527 * Employment status (Wave 2)
528 * Generate a new variable
529 gen employment = .
530 * Assign the number 0 if the participant's employment status was coded as: Retired; or Unemployed;
or Permanently sick or disabled; or Looking after home or family
531 replace employment = 0 if inlist(wpdes,1,4,5,6)
532 * Assign the number 1 if the participant's employment status was coded as: Employed; or
Self-employed; or SPONTANEOUS: Semi-retired
533 replace employment = 1 if inlist(wpdes,2,3,96)
534 * Coding of the final employment status variable:
535 * 0: Not working, 1: Working full- or part-time
536
537 * Time-constant employment status - Wave 2
538 * Generate a new variable duplicating the employment variable at Wave 2
539 gen employment_cons = employment if wave==2
540 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
541 tsset idauniq wave
542 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
543 bysort idauniq: carryforward employment_cons, replace
544
545 * Cognitive function (Wave 2)
546 * Orientation in time - use oribi

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547 * Generate a new variable duplicating the cfdatd variable
548 gen daymonth = cfdatd
549 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
550 replace daymonth = . if daymonth<0
551 * Assign the number 0 if the participant answered incorrectly or didn't know the answer
552 replace daymonth = 0 if daymonth==2
553 * Generate a new variable duplicating the cfday variable
554 gen day = cfday
555 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
556 replace day = . if day<0
557 * Assign the number 0 if the participant answered incorrectly or didn't know the answer
558 replace day = 0 if day==2
559 * Generate a new variable duplicating the cfday variable
560 gen year = cfday
561 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
562 replace year = . if year<0
563 * Assign the number 0 if the participant answered incorrectly or didn't know the answer
564 replace year = 0 if year==2
565 * Generate a new variable duplicating the cfdatm variable
566 gen month = cfdatm
567 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
568 replace month = . if month<0
569 * Assign the number 0 if the participant answered incorrectly or didn't know the answer
570 replace month = 0 if month==2
571 * Generate a new variable equal to the sum of the four orientation in time items to create a total
    score
572 gen orientation = daymonth + day + year + month
573 gen orientation2 = cfdscr if cfdscr>=0
574 * Generate a new variable and assign the number 0 for participants who scored 0, 1, 2, or 3 points
    on the time orientation test
575 gen oribi = 0 if inlist(orientation,0,1,2,3)
576 * Assign the number 1 for participants who answered all questions correctly (i.e., scored 4) on the
    time orientation test
577 replace oribi = 1 if orientation==4
578 * Coding of the final orientation in time variable:
579 * 0: No/some answers correct, 1: All answers correct
580 * Word-list learning (verbal learning and recall) - use wordlist
581 tab cfctest
582 tab cfwrds
583 * Generate a new variable duplicating the cflisen variable for participants with a score from 0 to 10
584 gen learning = cflisen if cflisen>=0
585 * Generate a new variable duplicating the cflisd variable for participants with a score from 0 to 10
586 gen recall = cflisd if cflisd>=0
587 * Generate a new variable equal to the sum of the verbal learning and recall items to create a total
    score
588 gen wordlist = learning + recall
589 gen learning2 = learning if wordlist!=.
590 gen recall2 = recall if wordlist!=.
591 * Prospective memory - use prosbi2
592 tab cfmem
593 tab cfmems
594 tab cfpascr
595 * Generate a new variable
596 gen prosbi2 = .
597 * Assign the number 1 for participants who performed both correct actions with no prompt given
598 replace prosbi2 = 1 if inlist(cfmems,1) & cfmem==1
599 * Assign the number 0 for participants who performed 0 or 1 correct actions with no prompt given
600 replace prosbi2 = 0 if inlist(cfmems,2,3,4,5) & cfmem==1
601 * Assign the number 0 for participants who performed 0, 1, or both correct actions with a prompt
602 replace prosbi2 = 0 if inlist(cfmems,1,2,3,4,5) & cfmem==2
603 * Word-finding (verbal fluency, # animals)
604 tab cfani
605 * Generate a new variable duplicating the cfani variable for participants with a score of 0 or more

```

```

606 gen fluency = cfani if cfani>=0
607 * Letter cancellation (accuracy and speed of mental processing) - use nrowclme2 and efficiency
608 tab nncorre
609 tab nnmisse
610 tab nnrow
611 tab nnclm
612 tab nrowcl
613 * Generate a new variable equal to the total number of letters searched
614 gen nrowclme = (30*(nnrow-1)+nnclm)
615 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
616 replace nrowclme = . if nrowclme<0
617 * Generate a new variable duplicating the nrowclme variable for participants searching more than one
  letter
618 gen nrowclme2 = nrowclme if nrowclme>1
619 * Generate a new variable duplicating the nncorre variable for participants getting 0 or more correct
620 gen correct = nncorre if nncorre>=0
621 * Generate a new variable duplicating the nnmisse variable for participants who missed 0 or more
  letters
622 gen missed = nnmisse if nnmisse>=0
623 * Generate a new variable representing the percentage of correct letters cancelled relative to the
  total number of letters to be cancelled in the rows and columns screened by the participant
624 gen efficiency = (correct/(correct+missed))*100
625 gen total = correct + missed
626
627 * Time-constant orientation in time variable - Wave 2
628 * Generate a new variable duplicating the orientation in time (oribi) variable at Wave 2
629 gen oribi_cons = oribi if wave==2
630 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
631 tsset idauniq wave
632 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
  follow-up waves) by participant ID
633 bysort idauniq: carryforward oribi_cons, replace
634
635 * Time-constant immediate and delayed recall - Wave 2
636 * Generate a new variable duplicating the immediate and delayed recall (wordlist) variable at Wave 2
637 gen wordlist_cons = wordlist if wave==2
638 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
639 tsset idauniq wave
640 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
  follow-up waves) by participant ID
641 bysort idauniq: carryforward wordlist_cons, replace
642
643 * Time-constant prospective memory - Wave 2
644 * Generate a new variable duplicating the prospective memory (prosb2) variable at Wave 2
645 gen prosbi2_cons = prosbi2 if wave==2
646 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
647 tsset idauniq wave
648 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
  follow-up waves) by participant ID
649 bysort idauniq: carryforward prosbi2_cons, replace
650
651 * Time-constant verbal fluency - Wave 2
652 * Generate a new variable duplicating the verbal fluency variable at Wave 2
653 gen fluency_cons = fluency if wave==2
654 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
655 tsset idauniq wave
656 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
  follow-up waves) by participant ID
657 bysort idauniq: carryforward fluency_cons, replace
658
659 * Time-constant processing speed - Wave 2
660 * Generate a new variable duplicating the processing speed (nrowclme2) variable at Wave 2
661 gen nrowclme2_cons = nrowclme2 if wave==2

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662 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
663 tsset idauniq wave
664 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
665 bysort idauniq: carryforward nrowlme2_cons, replace
666
667 * Time-constant processing efficiency - Wave 2
668 * Generate a new variable duplicating the processing efficiency variable at Wave 2
669 gen efficiency_cons = efficiency if wave==2
670 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
671 tsset idauniq wave
672 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
673 bysort idauniq: carryforward efficiency_cons, replace
674
675 * Save dataset with a new name
676 save data01.dta
677
678 * Depressive symptoms (Wave 2)
679 * Recode to the number 0 if participant answered "No" (items psceda-pscedc are reverse-coded)
680 replace psceda = 0 if psceda==2
681 replace pscedb = 0 if pscedb==2
682 replace pscedc = 0 if pscedc==2
683
684 * Recode to the number 0 if participant answered "Yes"
685 replace pscedd = 0 if pscedd==1
686 * Recode to the number 1 if participant answered "No"
687 replace pscedd = 1 if pscedd==2
688
689 * Recode to the number 0 if participant answered "No" (item pscede is reverse-coded)
690 replace pscede = 0 if pscede==2
691
692 * Recode to the number 0 if participant answered "Yes"
693 replace pscedf = 0 if pscedf==1
694 * Recode to the number 1 if participant answered "No"
695 replace pscedf = 1 if pscedf==2
696
697 * Recode to the number 0 if participant answered "No" (items pscedg-pscedh are reverse-coded)
698 replace pscedg = 0 if pscedg==2
699 replace pscedh = 0 if pscedh==2
700
701 * Generate new variables duplicating psceda-pscedh, but excluding missing cases (coded as negative
numbers in the ELSA dataset)
702 gen ceda = psceda if psceda>=0
703 gen cedb = pscedb if pscedb>=0
704 gen cedc = pscedc if pscedc>=0
705 gen cedd = pscedd if pscedd>=0
706 gen cede = pscede if pscede>=0
707 gen cedf = pscedf if pscedf>=0
708 gen cedg = pscedg if pscedg>=0
709 gen cedh = pscedh if pscedh>=0
710
711 * Generate a new variable equal to the sum of depressive symptoms (eight items) to create a total
depression score (range 0-8)
712 gen depression = ceda + cedb + cedc + cedd + cede + cedf + cedg + cedh
713
714 * Time-constant depressive symptoms - Wave 2
715 * Generate a new variable duplicating the depression variable at Wave 2
716 gen depression_cons = depression if wave==2
717 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
718 tsset idauniq wave
719 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID

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720 bysort idauniq: carryforward depression_cons, replace
721
722 * Living status (Wave 2)
723 * Assign the number 0 if one person lives in household
724 replace hhtot = 0 if hhtot==1
725 * Assign the number 1 if more than one person lives in household
726 replace hhtot = 1 if hhtot>1 & hhtot != .
727 * Coding of the final living status variable
728 * 0: Living alone, 1: Not living alone
729
730 * Time-constant living status - Wave 2
731 * Generate a new variable duplicating the hhtot variable at Wave 2
732 gen living_cons = hhtot if wave==2
733 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
734 tsset idauniq wave
735 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
736 bysort idauniq: carryforward living_cons, replace
737
738 * Save dataset with a new name
739 save data02.dta
740
741 * Variables Wave 1
742 use idauniq hesmk heska heala using wave_1_core_data_v3.dta
743 * Describe dataset
744 describe
745 * Sort from lowest to highest participant ID
746 sort idauniq
747 * Rename variables to distinguish them as being from Wave 1 rather than from a wave considered in
the statistical analyses
748 rename hesmk hesmkw1
749 rename heska heskaw1
750 * Generate a new variable called wave and assign the number 2 to each observation (such that the
observations fall on the same row as those from Wave 2 when merged with the full dataset)
751 gen wave = 2
752 * Save Wave 1 core dataset
753 save wave1.dta
754
755 * Use full dataset
756 use data02.dta
757 * One-to-one merge of data in memory with wave1.dta on participant ID
758 merge 1:1 idauniq wave using wave1.dta, generate (merge_behal)
759 * Drop observations that were not matched (i.e., that do not appear in both datasets)
760 drop if merge_behal==2
761 * Sort by participant ID and wave (lowest to highest)
762 sort idauniq wave
763 * Count total number of participants and observations
764 unique idauniq
765 * 8,780 individuals, 70,240 observations
766
767 * Smoking status (Wave 1 and 2)
768 tab hesmk
769 tab hesmkw1
770 * Generate a new variable and assign the number 0 if the participant reported never having smoked
cigarettes at Wave 2
771 gen smoking = 0 if hesmk==2
772 * 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 at Wave 2
773 replace smoking = 0 if hesmkw1==2 & heska==2
774 * Assign the number 1 if the participant reported having ever smoked cigarettes at Wave 1 or Wave 2
but reported that they do not smoke cigarettes at all nowadays at Wave 2
775 replace smoking = 1 if (hesmk==1 | hesmkw1==1) & heska==2
776 * Assign the number 2 if the participant reported smoking nowadays at Wave 2

```



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777 replace smoking = 2 if heska==1
778 tab heskd
779 * Assign the number 0 if the participant disputed reported smoking from Wave 1 and said they had
never smoked cigarettes, AND the participant reported that they do not smoke cigarettes at all
nowadays at Wave 2
780 replace smoking = 0 if heske==1 & heska==2
781 * Assign the number 1 if the participant disputed reported smoking from Wave 1 and said they a) were
no longer smoking cigarettes by the last wave (wave 1); or b) stopped smoking cigarettes between
waves 1 and 2; AND the participant reported that they do not smoke cigarettes at all nowadays at
Wave 2
782 replace smoking = 1 if inlist(heske,2,3) & heska==2
783 * Assign the number 1 if the participant reported they stopped smoking cigarettes between waves 1
and 2 at Wave 2
784 replace smoking = 1 if heskf==2
785 * Assign the number 2 if the participant reported they do smoke cigarettes nowadays at Wave 2
786 replace smoking = 2 if heskf==1
787 * Coding of the final smoking status variable:
788 * 0: Never smoker
789 * 1: Former smoker
790 * 2: Current smoker
791
792 * Time-constant smoking status - Wave 2
793 * Generate a new variable duplicating the smoking variable at Wave 2
794 gen smoking_cons = smoking if wave==2
795 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
796 tsset idauniq wave
797 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
798 bysort idauniq: carryforward smoking_cons, replace
799
800 * Save dataset with a new name
801 save data03.dta
802
803 * Alcohol consumption (Wave 2)
804 * Generate a new variable and assign the number 0 if the participant reported having an alcoholic
drink once a month or less during the last 12 months
805 gen alcohol = 0 if inlist(scako,5,6,7,8)
806 * 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
807 replace alcohol = 1 if inlist(scako,3,4)
808 * Assign the number 2 if the participant reported having an alcoholic drink a) almost every day; or
b) five or six days a week
809 replace alcohol = 2 if inlist(scako,1,2)
810 tab scal7a if scako<0
811 tab scal7b if scako<0
812 * Coding of the final alcohol consumption variable:
813 * 0: Less than once a week
814 * 1: One to four times per week
815 * 2: Five or more times per week
816
817 * Time-constant alcohol consumption - Wave 2
818 * Generate a new variable duplicating the alcohol variable at Wave 2
819 gen alcohol_cons = alcohol if wave==2
820 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
821 tsset idauniq wave
822 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
823 bysort idauniq: carryforward alcohol_cons, replace
824
825 * Education (Wave 2)
826 * Generate a new variable
827 gen education = .
828 * Assign the number 0 if the participant does not have any formal qualifications

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829 replace education = 0 if w2edqual==7
830 * Assign the number 1 if the participant has A level equivalent, 0 level equivalent, or other grade
    equivalent
831 replace education = 1 if inlist(w2edqual,3,4,5)
832 * Assign the number 2 if the participant has completed some higher education (below degree), or has
    a degree or equivalent
833 replace education = 2 if inlist(w2edqual,1,2)
834 * Coding of the final education variable:
835 * 0: No formal qualifications
836 * 1: School qualifications
837 * 2: Higher education
838
839 * Time-constant education - Wave 2
840 * Generate a new variable duplicating the education variable at Wave 2
841 gen education_cons = education if wave==2
842 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
843 tsset idauniq wave
844 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
    follow-up waves) by participant ID
845 bysort idauniq: carryforward education_cons, replace
846
847 * Quintiles of BU total (non-pension) wealth (Wave 2)
848 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
849 replace totwq5_bu_s = . if totwq5_bu_s<0
850 * Coding of the final wealth variable:
851 * 1: 1st quintile (lowest)
852 * 2: 2nd quintile
853 * 3: 3rd quintile
854 * 4: 4th quintile
855 * 5: 5th quintile (highest)
856
857 * Time-constant wealth - Wave 2
858 * Generate a new variable duplicating the wealth (totwq5_bu_s) variable at Wave 2
859 gen wealth_cons = totwq5_bu_s if wave==2
860 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
861 tsset idauniq wave
862 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
    follow-up waves) by participant ID
863 bysort idauniq: carryforward wealth_cons, replace
864
865 * Body-mass index (BMI; Wave 2)
866 tab height
867 tab estht
868 tab htval
869 tab htok
870 tab relhite
871 tab weight
872 tab estwt
873 tab wtval
874 tab wtok
875 tab relwait
876 sum bmi if bmi>=0
877 sum bmival if bmival>=0
878 tab bmiok
879 tab bmiobe
880 sum idauniq if htok==1 & wtok==1
881 sum idauniq if htval!=-1 & wtval!=-1 & htval!=. & wtval!=.
882 sum weight if bmiok!=1 & bmival>=0
883 sum estwt if bmiok!=1 & bmival>=0
884 gen bmiraw = (wtval/((htval/100)*(htval/100))) if htval!=-1 & wtval!=-1 & htval!=. & wtval!=.
885 * BMI (continuous)
886 * Generate a new variable duplicating BMI values if data are not missing
887 gen bmic = bmival if bmival>=0 & bmival!=.

```

```

888
889 * Time-constant BMI - Wave 2
890 * Generate a new variable duplicating the continuous BMI (bmic) variable at Wave 2
891 gen bmic_cons = bmic if wave==2
892 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
893 tsset idauniq wave
894 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
895 bysort idauniq: carryforward bmic_cons, replace
896
897 * Generate a new variable equal to height in metres if data are not missing
898 gen htvalnew = (htval/100) if htval!=-1 & htval!=.
899 * Generate a new variable equal to weight in kg if data are not missing
900 gen wtvalnew = wtval if wtval!=-1 & wtval!=.
901
902 * Time-constant height - Wave 2
903 * Generate a new variable duplicating the continuous height (htvalnew) variable at Wave 2
904 gen htvalnew_cons = htvalnew if wave==2
905 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
906 tsset idauniq wave
907 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
908 bysort idauniq: carryforward htvalnew_cons, replace
909
910 * Time-constant weight - Wave 2
911 * Generate a new variable duplicating the continuous weight (wtvalnew) variable at Wave 2
912 gen wtvalnew_cons = wtvalnew if wave==2
913 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
914 tsset idauniq wave
915 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
916 bysort idauniq: carryforward wtvalnew_cons, replace
917
918 * Overwrite dataset, by replacing the previously saved file
919 save data03.dta, replace
920
921 * SPPB domains (Wave 2)
922 * Balance
923 tab mmbcsc
924 tab mmsssc
925 tab mmsre
926 tab mmsssc if mmsre==3
927 sum mmssti if mmssti!=-1
928 tab mmsre if mmssti!=-1
929 sum mmsna if mmsna!=-1
930 tab mmsna if mmsna!=-1
931 tab mmsssc if mmsna!=-1
932
933 tab mmstsc
934 tab mmstsc if mmsna!=-1
935 tab mmsre if mmstsc==3
936 tab mmstre
937 tab mmstsc if mmstre==3
938 sum mmstti if mmstti!=-1
939 tab mmstre if mmstti!=-1
940 sum mmstna if mmstna!=-1
941 tab mmstna if mmstna!=-1
942 tab mmstsc if mmstna!=-1
943
944 tab mmftsc
945 tab mmftsc if mmstna!=-1
946 tab mmftsc if mmstti!=-1
947 tab mmftsc if mmsna!=-1 | mmssti!=-1

```

```

948 tab mmftre2
949 tab mmftsc if mmftre2==5
950 sum mmftti if mmftti!=-1
951 sum mmftti if inlist(mmftre2,2,4)
952 tab mmftre2 if mmftti!=-1
953 tab mmftre2 if inlist(mmftre2,2,4)
954 sum mmftti if mmftti >=3 & mmftti < 10
955 sum mmftti if mmftti < 3 & mmftti!=-1
956 tab mmftre2 if mmftti >=10 & mmftti!=.
957 sum mmftti if mmftti >=10 & mmftti!=.
958 sum mmftna if mmftna!=-1
959 tab mmftna if mmftna!=-1
960 tab mmftsc if mmftna!=-1
961
962 * Side-by-side stand
963 * Generate a new variable and assign the number 0 if the participant held for less than 10 seconds
or did not attempt the stand
964 gen sidebyside = 0 if inlist(mmsre,2,3)
965 * Assign the number 1 if the participant held for 10 seconds
966 replace sidebyside = 1 if mmsre==1
967
968 * Semi-tandem stand
969 * Generate a new variable and assign the number 0 if the participant scored 0 points in the
side-by-side stand
970 gen semitandem = 0 if sidebyside==0
971 * Assign the number 0 if the participant held for less than 10 seconds or did not attempt the stand
972 replace semitandem = 0 if inlist(mmstre,2,3)
973 * Assign the number 1 if the participant held for 10 seconds
974 replace semitandem = 1 if mmstre==1
975
976 * Full tandem stand
977 * 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
978 gen tandem = 0 if (mmftre2 == 5 | semitandem == 0)
979 * Assign the number 2 if the participant held for at least 10 seconds, irrespective of age
980 replace tandem = 2 if (mmftre2 == 1 | mmftre2 == 3)
981 * Assign the number 1 if the participant held for at least 3 seconds but less than 10 seconds
982 replace tandem = 1 if mmftti >=3 & mmftti < 10
983 * Assign the number 0 if the participant held for less than 3 seconds and data are not missing
984 replace tandem = 0 if mmftti < 3 & mmftti!=-1
985 * 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
986 replace tandem = 2 if mmftti >=10 & mmftti!=. & mmftre2==4
987
988 * 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)
989 gen balance = sidebyside + semitandem + tandem
990
991 gen balance2 = 0 if inlist(mmsre,2,3)
992 replace balance2 = 1 if mmsre==1 & inlist(mmstre,2,3)
993 replace balance2 = 2 if mmstre==1 & tandem==0
994 replace balance2 = 3 if mmstre==1 & tandem==1
995 replace balance2 = 4 if mmstre==1 & tandem==2
996
997 * Repeated Chair Stand Test
998 tab mmcrav
999 * Generate a new variable and assign a missing value if there was no suitable chair available
1000 gen repctest = . if mmcrav==2
1001 tab mmcrsc
1002 tab mmcrre
1003 tab mmcrre if mmcrav==2 | inlist(mmcrsc,-8,2)
1004 * 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"

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1005 replace repctest = 0 if inlist(mmcrsc,-8,2)
1006 * Assign the number 0 if the participant used their arms to stand in the single chair rise or did
not complete the test
1007 replace repctest = 0 if inlist(mmcrre,2,3)
1008 sum mmcrna if mmcrna!=-1
1009 tab mmcrna if mmcrna!=-1
1010 tab mmrrsc
1011 tab mmcrre if mmrrsc===-1
1012 tab mmrrre
1013 tab mmrrsc if mmrrre===-1
1014 tab mmrrre if inlist(mmrrsc,2,-1)
1015 * 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)
1016 replace repctest = 0 if mmrrsc==2 & mmrrre===-1
1017 * Assign the number 0 if the participant completed less than five sit-to-stands
1018 replace repctest = 0 if inlist(mmrrre,0,1,2,3,4)
1019 tab mmrrfti if mmrrfti<0
1020 sum mmrrfti if mmrrre>=5
1021 sum mmrrfti if mmrrfti>=0
1022 * 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
1023 replace repctest = . if inlist(mmrrfti,-8,-3) & mmrrre>=5
1024 tab mmrrfti if mmrrfti>=0 & mmrrfti<4
1025 * Assign a missing value if the participant completed five or more sit-to-stands but their time to
complete five rises was equal to 1 second (i.e., outlier)
1026 replace repctest = . if mmrrfti==1 & inlist(mmrrre,5,6,7,8,9,10)
1027 sum mmrrfti if mmrrfti<=11.19 & mmrrfti>=0
1028 sum mmrrfti if mmrrfti<=11.19 & mmrrfti>1
1029 * 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
1030 replace repctest = 4 if mmrrfti <= 11.19 & mmrrfti > 1 & inlist(mmrrre,5,6,7,8,9,10)
1031 sum mmrrfti if mmrrfti>=16.7 & mmrrfti<=60
1032 * Assign the number 1 if the participant completed five sit-to-stands in 16.7 seconds or more but
less than 60 seconds
1033 replace repctest = 1 if mmrrfti >= 16.7 & mmrrfti <= 60 & inlist(mmrrre,5,6,7,8,9,10)
1034 sum mmrrfti if mmrrfti>=13.7 & mmrrfti<16.7
1035 * Assign the number 2 if the participant completed five sit-to-stands in 13.7 seconds or more but
less than 16.7 seconds
1036 replace repctest = 2 if mmrrfti >= 13.7 & mmrrfti < 16.7 & inlist(mmrrre,5,6,7,8,9,10)
1037 sum mmrrfti if mmrrfti>=11.2 & mmrrfti<13.7
1038 * Assign the number 3 if the participant completed five sit-to-stands in 11.2 seconds or more but
less than 13.7 seconds
1039 replace repctest = 3 if mmrrfti >= 11.2 & mmrrfti < 13.7 & inlist(mmrrre,5,6,7,8,9,10)
1040 sum mmrrfti if mmrrfti > 60
1041 * Assign the number 0 if the participant completed five sit-to-stands in more than 60 seconds and
data are not missing
1042 replace repctest = 0 if mmrrfti > 60 & mmrrfti <= 64 & inlist(mmrrre,5,6,7,8,9,10)
1043
1044 tab mmrrre if inlist(mmrrroc,1,3)
1045 tab mmrrre if mmrrroc==2
1046 tab mmrrre if mmrrroc==4
1047 tab mmrrre if inlist(mmrrroc,1,2,3,4)
1048
1049 sum mmrrna if mmrrna!=-1
1050 tab mmrrna if mmrrna!=-1
1051 tab mmrrre if mmrrna!=-1 & inlist(mmrrroc,3,4)
1052 tab mmrrre if mmrrna!=-1 & inlist(mmrrroc,1,2)
1053 tab mmrrsc if mmrrna!=-1
1054
1055 * Overwrite dataset, by replacing the previously saved file
1056 save data03.dta, replace
1057
1058 * Gait

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1059 tab mmschs if indager>=60
1060 tab mmalone if indager>=60
1061 tab mmschs if mmalone==1 & indager>=60
1062 tab mmschs if mmalone==9 & indager>=60
1063 tab mmschs if mmalone==8 & indager>=60
1064 tab mmschs if mmalone==1 & indager>=60
1065 tab mmschs if mmalone==2 & indager>=60
1066 tab mmschs if mmalone==3 & indager>=60
1067 tab mmhss if indager>=60
1068 tab mmalone if mmhss==1 & indager>=60
1069 tab mmalone if mmhss==9 & indager>=60
1070 tab mmalone if mmhss==8 & indager>=60
1071 tab mmalone if mmhss==1 & indager>=60
1072 tab mmalone if mmhss==2 & indager>=60
1073 tab mmalone if mmhss==3 & indager>=60
1074 tab mmalone if mmhss==4 & indager>=60
1075 tab mmwill if indager>=60
1076 tab mmhss if mmwill==9 & indager>=60
1077 tab mmhss if mmwill==1 & indager>=60
1078 tab mmhss if mmwill==2 & indager>=60
1079 tab mmsaf if indager>=60
1080 tab mmwill if mmsaf==1 & indager>=60
1081 tab mmwill if mmsaf==2 & indager>=60
1082 tab mmavsp if indager>=60
1083 tab mmsaf if mmavsp==9 & indager>=60
1084 tab mmsaf if mmavsp==8 & indager>=60
1085 tab mmsaf if mmavsp==1 & indager>=60
1086 tab mmsaf if mmavsp==2 & indager>=60
1087 tab mmwala if indager>=60
1088 tab mmavsp if inlist(mmwala,1,2) & indager>=60
1089
1090 tab mmtrya if indager>=60
1091 tab mmwala if inlist(mmtrya,-9,1,2,3) & indager>=60
1092 tab mmwlka if mmwlka<0 & indager>=60
1093 sum mmwlka if mmwlka>=0 & indager>=60
1094 tab mmtrya if mmwlka!=-1 & mmwlka!=. & indager>=60
1095
1096 tab mmtryb if indager>=60
1097 tab mmtrya if inlist(mmtryb,-9,-8,1,2,3,4)
1098 tab mmwlka if inlist(mmtryb,-9,-8)
1099 tab mmwlkb if mmwlkb<0 & indager>=60
1100 sum mmwlkb if mmwlkb>=0 & indager>=60
1101 tab mmtryb if mmwlkb!=-1 & mmwlkb!=. & indager>=60
1102
1103 tab mmwlka if mmwlka>=0 & mmwlka<2
1104 tab mmwlkb if mmwlkb>=0 & mmwlkb<2
1105
1106 sum idauniq if ((mmwlka>=0 & mmwlka!=.) | (mmwlkb>=0 & mmwlkb!=.)) & indager>=60
1107 sum idauniq if mmwlka>=0 & mmwlkb>=0 & indager>=60 & mmwlka!=. & mmwlkb!=.
1108
1109 sum idauniq if mmwlka<0 & indager>=60
1110 keep if mmwlka<0 & indager>=60
1111 tab mmschs
1112 tab mmalone
1113 tab mmschs if mmalone==1
1114 tab mmschs if mmalone==3
1115 tab mmschs if mmalone==9
1116 tab mmschs if mmalone==8
1117 tab mmhss
1118 tab mmalone if mmhss==1
1119 tab mmwill
1120 tab mmhss if mmwill==1
1121 tab mmsaf

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1122 tab mmwill if mmsaf== -1
1123 tab mmavsp
1124 tab mmsaf if mmavsp== -1
1125 tab mmwala
1126 tab mmavsp if mmwala== -1
1127 tab mmtrya
1128 tab mmwala if mmtrya== -1
1129 tab mmwlka
1130 tab mmtrya if mmwlka== -1
1131
1132 clear
1133 * Use full dataset
1134 use data03.dta
1135
1136 * Generate a new variable duplicating the "time taken for first walk" variable if data are not missing
1137 gen walk1 = mmwlka if mmwlka>=0
1138 * Generate a new variable duplicating the "time taken for second walk" variable if data are not
missing
1139 gen walk2 = mmwlkb if mmwlkb>=0
1140 * 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)
1141 egen gaittime = rowmin(walk1 walk2) if (((mmwlka>=0 & mmwlka!=.) | (mmwlkb>=0 & mmwlkb!=.)) & indager
>=60)
1142 sum gaittime
1143 sum gaittime if (mmwlka>=0 & mmwlka!=.) & (mmwlkb<0|mmwlkb==.)
1144 sum mmwlka if (mmwlka>=0 & mmwlka!=.) & (mmwlkb<0|mmwlkb==.)
1145
1146 * Generate a new variable
1147 gen gaittest = .
1148 * Assign the number 1 if the participant completed the gait test in more than or equal to 5.7 seconds
1149 replace gaittest = 1 if gaittime >= 5.7 & gaittime!=.
1150 * 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
1151 replace gaittest = 2 if gaittime >= 4.1 & gaittime < 5.7
1152 * 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
1153 replace gaittest = 3 if gaittime >= 3.2 & gaittime < 4.1
1154 * Assign the number 4 if the participant completed the gait test in less than 3.2 seconds
1155 replace gaittest = 4 if gaittime < 3.2
1156 * 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
1157 replace gaittest = 0 if mmalone==3 | inlist(mmhss,2,3,4) | mmsaf==2 | mmwala==2 | inlist(mmtrya,2,3)
1158
1159 * Save dataset with a new name
1160 save data04.dta
1161
1162 tab mmcomz1
1163 tab mmcomz1 if mmcomz1!= -1
1164 tab mmcomz1 if gaittest == 0
1165 tab mmcomz2
1166 tab mmcomz2 if mmcomz2!= -1
1167 tab mmcomz2 if gaittest == 0
1168 tab mmcomz3
1169 tab mmcomz3 if mmcomz3!= -1
1170 tab mmcomz3 if gaittest == 0
1171 tab mmcomz1 if mmalone==3
1172 tab mmcomz1 if inlist(mmhss,2,3,4)
1173 tab mmcomz1 if mmsaf==2
1174 tab mmcomz1 if mmwala==2
1175 tab mmcomz1 if inlist(mmtrya,2,3)

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1176 tab mmpain
1177
1178 * Time-constant balance - Wave 2
1179 * Generate a new variable duplicating the balance variable at Wave 2
1180 gen balance_cons = balance if wave==2
1181 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
1182 tsset idauniq wave
1183 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
1184 bysort idauniq: carryforward balance_cons, replace
1185
1186 * Time-constant repeated chair stand test - Wave 2
1187 * Generate a new variable duplicating the repeated chair stand test (repctest) variable at Wave 2
1188 gen repctest_cons = repctest if wave==2
1189 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
1190 tsset idauniq wave
1191 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
1192 bysort idauniq: carryforward repctest_cons, replace
1193
1194 * Time-constant gait - Wave 2
1195 * Generate a new variable duplicating the gait (gaittest) variable at Wave 2
1196 gen gait_cons = gaittest if wave==2
1197 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
1198 tsset idauniq wave
1199 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
1200 bysort idauniq: carryforward gait_cons, replace
1201
1202 * Generate a new variable equal to the sum of the points scored on the balance, repeated chair
stand, and gait tests to create a total SPPB score (range 0-12)
1203 gen totalSPPB = balance + repctest + gaittest
1204
1205 * Time-constant total SPPB score - Wave 2
1206 * Generate a new variable duplicating the total SPPB score variable at Wave 2
1207 gen totalSPPB_cons = totalSPPB if wave==2
1208 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
1209 tsset idauniq wave
1210 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
1211 bysort idauniq: carryforward totalSPPB_cons, replace
1212
1213 * Mobility
1214 * Baseline (Wave 2)
1215 * 1
1216 * Generate a new variable and assign the number 1 if the participant reported difficulties
performing the first listed activity
1217 gen walkingw2 = 1 if heada01==1 | heada02==1 | heada03==1 | heada04==1 | heada05==1 | heada06==1 |
heada07==1 | heada08==1 | heada09==1 | heada10==1
1218 * Assign the number 0 if the participant reported any answer other than the listed activity in
heada01-heada10 and data are not missing
1219 replace walkingw2 = 0 if inlist(heada01,2,3,4,5,6,7,8,9,10,96) & walkingw2!=1
1220 replace walkingw2 = 0 if inlist(heada02,2,3,4,5,6,7,8,9,10,96) & walkingw2!=1
1221 replace walkingw2 = 0 if inlist(heada03,2,3,4,5,6,7,8,9,10,96) & walkingw2!=1
1222 replace walkingw2 = 0 if inlist(heada04,2,3,4,5,6,7,8,9,10,96) & walkingw2!=1
1223 replace walkingw2 = 0 if inlist(heada05,2,3,4,5,6,7,8,9,10,96) & walkingw2!=1
1224 replace walkingw2 = 0 if inlist(heada06,2,3,4,5,6,7,8,9,10,96) & walkingw2!=1
1225 replace walkingw2 = 0 if inlist(heada07,2,3,4,5,6,7,8,9,10,96) & walkingw2!=1
1226 replace walkingw2 = 0 if inlist(heada08,2,3,4,5,6,7,8,9,10,96) & walkingw2!=1
1227 replace walkingw2 = 0 if inlist(heada09,2,3,4,5,6,7,8,9,10,96) & walkingw2!=1
1228 replace walkingw2 = 0 if inlist(heada10,2,3,4,5,6,7,8,9,10,96) & walkingw2!=1
1229
1230 * 2

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1231 * Generate a new variable and assign the number 1 if the participant reported difficulties
1232 performing the second listed activity
1233 gen sittingw2 = 1 if heada01==2 | heada02==2 | heada03==2 | heada04==2 | heada05==2 | heada06==2 |
1234 heada07==2 | heada08==2 | heada09==2 | heada10==2
1235 * Assign the number 0 if the participant reported any answer other than the listed activity in
1236 heada01-heada10 and data are not missing
1237 replace sittingw2 = 0 if inlist(heada01,1,3,4,5,6,7,8,9,10,96) & sittingw2!=1
1238 replace sittingw2 = 0 if inlist(heada02,1,3,4,5,6,7,8,9,10,96) & sittingw2!=1
1239 replace sittingw2 = 0 if inlist(heada03,1,3,4,5,6,7,8,9,10,96) & sittingw2!=1
1240 replace sittingw2 = 0 if inlist(heada04,1,3,4,5,6,7,8,9,10,96) & sittingw2!=1
1241 replace sittingw2 = 0 if inlist(heada05,1,3,4,5,6,7,8,9,10,96) & sittingw2!=1
1242 replace sittingw2 = 0 if inlist(heada06,1,3,4,5,6,7,8,9,10,96) & sittingw2!=1
1243 replace sittingw2 = 0 if inlist(heada07,1,3,4,5,6,7,8,9,10,96) & sittingw2!=1
1244 replace sittingw2 = 0 if inlist(heada08,1,3,4,5,6,7,8,9,10,96) & sittingw2!=1
1245 replace sittingw2 = 0 if inlist(heada09,1,3,4,5,6,7,8,9,10,96) & sittingw2!=1
1246 replace sittingw2 = 0 if inlist(heada10,1,3,4,5,6,7,8,9,10,96) & sittingw2!=1
1247
1248 * 3
1249 * Generate a new variable and assign the number 1 if the participant reported difficulties
1250 performing the third listed activity
1251 gen gettingw2 = 1 if heada01==3 | heada02==3 | heada03==3 | heada04==3 | heada05==3 | heada06==3 |
1252 heada07==3 | heada08==3 | heada09==3 | heada10==3
1253 * Assign the number 0 if the participant reported any answer other than the listed activity in
1254 heada01-heada10 and data are not missing
1255 replace gettingw2 = 0 if inlist(heada01,1,2,4,5,6,7,8,9,10,96) & gettingw2!=1
1256 replace gettingw2 = 0 if inlist(heada02,1,2,4,5,6,7,8,9,10,96) & gettingw2!=1
1257 replace gettingw2 = 0 if inlist(heada03,1,2,4,5,6,7,8,9,10,96) & gettingw2!=1
1258 replace gettingw2 = 0 if inlist(heada04,1,2,4,5,6,7,8,9,10,96) & gettingw2!=1
1259 replace gettingw2 = 0 if inlist(heada05,1,2,4,5,6,7,8,9,10,96) & gettingw2!=1
1260 replace gettingw2 = 0 if inlist(heada06,1,2,4,5,6,7,8,9,10,96) & gettingw2!=1
1261 replace gettingw2 = 0 if inlist(heada07,1,2,4,5,6,7,8,9,10,96) & gettingw2!=1
1262 replace gettingw2 = 0 if inlist(heada08,1,2,4,5,6,7,8,9,10,96) & gettingw2!=1
1263 replace gettingw2 = 0 if inlist(heada09,1,2,4,5,6,7,8,9,10,96) & gettingw2!=1
1264 replace gettingw2 = 0 if inlist(heada10,1,2,4,5,6,7,8,9,10,96) & gettingw2!=1
1265
1266 * 4
1267 * Generate a new variable and assign the number 1 if the participant reported difficulties
1268 performing the fourth listed activity
1269 gen climbingcsw2 = 1 if heada01==4 | heada02==4 | heada03==4 | heada04==4 | heada05==4 | heada06==4 |
1270 heada07==4 | heada08==4 | heada09==4 | heada10==4
1271 * Assign the number 0 if the participant reported any answer other than the listed activity in
1272 heada01-heada10 and data are not missing
1273 replace climbingcsw2 = 0 if inlist(heada01,1,2,3,5,6,7,8,9,10,96) & climbingcsw2!=1
1274 replace climbingcsw2 = 0 if inlist(heada02,1,2,3,5,6,7,8,9,10,96) & climbingcsw2!=1
1275 replace climbingcsw2 = 0 if inlist(heada03,1,2,3,5,6,7,8,9,10,96) & climbingcsw2!=1
1276 replace climbingcsw2 = 0 if inlist(heada04,1,2,3,5,6,7,8,9,10,96) & climbingcsw2!=1
1277 replace climbingcsw2 = 0 if inlist(heada05,1,2,3,5,6,7,8,9,10,96) & climbingcsw2!=1
1278 replace climbingcsw2 = 0 if inlist(heada06,1,2,3,5,6,7,8,9,10,96) & climbingcsw2!=1
1279 replace climbingcsw2 = 0 if inlist(heada07,1,2,3,5,6,7,8,9,10,96) & climbingcsw2!=1
1280 replace climbingcsw2 = 0 if inlist(heada08,1,2,3,5,6,7,8,9,10,96) & climbingcsw2!=1
1281 replace climbingcsw2 = 0 if inlist(heada09,1,2,3,5,6,7,8,9,10,96) & climbingcsw2!=1
1282 replace climbingcsw2 = 0 if inlist(heada10,1,2,3,5,6,7,8,9,10,96) & climbingcsw2!=1
1283
1284 * 5
1285 * Generate a new variable and assign the number 1 if the participant reported difficulties
1286 performing the fifth listed activity
1287 gen climbingc1w2 = 1 if heada01==5 | heada02==5 | heada03==5 | heada04==5 | heada05==5 | heada06==5 |
1288 heada07==5 | heada08==5 | heada09==5 | heada10==5
1289 * Assign the number 0 if the participant reported any answer other than the listed activity in
1290 heada01-heada10 and data are not missing
1291 replace climbingc1w2 = 0 if inlist(heada01,1,2,3,4,6,7,8,9,10,96) & climbingc1w2!=1
1292 replace climbingc1w2 = 0 if inlist(heada02,1,2,3,4,6,7,8,9,10,96) & climbingc1w2!=1
1293 replace climbingc1w2 = 0 if inlist(heada03,1,2,3,4,6,7,8,9,10,96) & climbingc1w2!=1

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1282 replace climbingc1w2 = 0 if inlist(heada04,1,2,3,4,6,7,8,9,10,96) & climbingc1w2!=1
1283 replace climbingc1w2 = 0 if inlist(heada05,1,2,3,4,6,7,8,9,10,96) & climbingc1w2!=1
1284 replace climbingc1w2 = 0 if inlist(heada06,1,2,3,4,6,7,8,9,10,96) & climbingc1w2!=1
1285 replace climbingc1w2 = 0 if inlist(heada07,1,2,3,4,6,7,8,9,10,96) & climbingc1w2!=1
1286 replace climbingc1w2 = 0 if inlist(heada08,1,2,3,4,6,7,8,9,10,96) & climbingc1w2!=1
1287 replace climbingc1w2 = 0 if inlist(heada09,1,2,3,4,6,7,8,9,10,96) & climbingc1w2!=1
1288 replace climbingc1w2 = 0 if inlist(heada10,1,2,3,4,6,7,8,9,10,96) & climbingc1w2!=1
1289
1290 * 6
1291 * Generate a new variable and assign the number 1 if the participant reported difficulties
performing the sixth listed activity
1292 gen stoopingw2 = 1 if heada01==6 | heada02==6 | heada03==6 | heada04==6 | heada05==6 | heada06==6 |
heada07==6 | heada08==6 | heada09==6 | heada10==6
1293 * Assign the number 0 if the participant reported any answer other than the listed activity in
heada01-heada10 and data are not missing
1294 replace stoopingw2 = 0 if inlist(heada01,1,2,3,4,5,7,8,9,10,96) & stoopingw2!=1
1295 replace stoopingw2 = 0 if inlist(heada02,1,2,3,4,5,7,8,9,10,96) & stoopingw2!=1
1296 replace stoopingw2 = 0 if inlist(heada03,1,2,3,4,5,7,8,9,10,96) & stoopingw2!=1
1297 replace stoopingw2 = 0 if inlist(heada04,1,2,3,4,5,7,8,9,10,96) & stoopingw2!=1
1298 replace stoopingw2 = 0 if inlist(heada05,1,2,3,4,5,7,8,9,10,96) & stoopingw2!=1
1299 replace stoopingw2 = 0 if inlist(heada06,1,2,3,4,5,7,8,9,10,96) & stoopingw2!=1
1300 replace stoopingw2 = 0 if inlist(heada07,1,2,3,4,5,7,8,9,10,96) & stoopingw2!=1
1301 replace stoopingw2 = 0 if inlist(heada08,1,2,3,4,5,7,8,9,10,96) & stoopingw2!=1
1302 replace stoopingw2 = 0 if inlist(heada09,1,2,3,4,5,7,8,9,10,96) & stoopingw2!=1
1303 replace stoopingw2 = 0 if inlist(heada10,1,2,3,4,5,7,8,9,10,96) & stoopingw2!=1
1304
1305 * 7
1306 * Generate a new variable and assign the number 1 if the participant reported difficulties
performing the seventh listed activity
1307 gen reachingw2 = 1 if heada01==7 | heada02==7 | heada03==7 | heada04==7 | heada05==7 | heada06==7 |
heada07==7 | heada08==7 | heada09==7 | heada10==7
1308 * Assign the number 0 if the participant reported any answer other than the listed activity in
heada01-heada10 and data are not missing
1309 replace reachingw2 = 0 if inlist(heada01,1,2,3,4,5,6,8,9,10,96) & reachingw2!=1
1310 replace reachingw2 = 0 if inlist(heada02,1,2,3,4,5,6,8,9,10,96) & reachingw2!=1
1311 replace reachingw2 = 0 if inlist(heada03,1,2,3,4,5,6,8,9,10,96) & reachingw2!=1
1312 replace reachingw2 = 0 if inlist(heada04,1,2,3,4,5,6,8,9,10,96) & reachingw2!=1
1313 replace reachingw2 = 0 if inlist(heada05,1,2,3,4,5,6,8,9,10,96) & reachingw2!=1
1314 replace reachingw2 = 0 if inlist(heada06,1,2,3,4,5,6,8,9,10,96) & reachingw2!=1
1315 replace reachingw2 = 0 if inlist(heada07,1,2,3,4,5,6,8,9,10,96) & reachingw2!=1
1316 replace reachingw2 = 0 if inlist(heada08,1,2,3,4,5,6,8,9,10,96) & reachingw2!=1
1317 replace reachingw2 = 0 if inlist(heada09,1,2,3,4,5,6,8,9,10,96) & reachingw2!=1
1318 replace reachingw2 = 0 if inlist(heada10,1,2,3,4,5,6,8,9,10,96) & reachingw2!=1
1319
1320 * 8
1321 * Generate a new variable and assign the number 1 if the participant reported difficulties
performing the eighth listed activity
1322 gen pullingw2 = 1 if heada01==8 | heada02==8 | heada03==8 | heada04==8 | heada05==8 | heada06==8 |
heada07==8 | heada08==8 | heada09==8 | heada10==8
1323 * Assign the number 0 if the participant reported any answer other than the listed activity in
heada01-heada10 and data are not missing
1324 replace pullingw2 = 0 if inlist(heada01,1,2,3,4,5,6,7,9,10,96) & pullingw2!=1
1325 replace pullingw2 = 0 if inlist(heada02,1,2,3,4,5,6,7,9,10,96) & pullingw2!=1
1326 replace pullingw2 = 0 if inlist(heada03,1,2,3,4,5,6,7,9,10,96) & pullingw2!=1
1327 replace pullingw2 = 0 if inlist(heada04,1,2,3,4,5,6,7,9,10,96) & pullingw2!=1
1328 replace pullingw2 = 0 if inlist(heada05,1,2,3,4,5,6,7,9,10,96) & pullingw2!=1
1329 replace pullingw2 = 0 if inlist(heada06,1,2,3,4,5,6,7,9,10,96) & pullingw2!=1
1330 replace pullingw2 = 0 if inlist(heada07,1,2,3,4,5,6,7,9,10,96) & pullingw2!=1
1331 replace pullingw2 = 0 if inlist(heada08,1,2,3,4,5,6,7,9,10,96) & pullingw2!=1
1332 replace pullingw2 = 0 if inlist(heada09,1,2,3,4,5,6,7,9,10,96) & pullingw2!=1
1333 replace pullingw2 = 0 if inlist(heada10,1,2,3,4,5,6,7,9,10,96) & pullingw2!=1
1334
1335 * 9

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1336 * Generate a new variable and assign the number 1 if the participant reported difficulties
1337 performing the ninth listed activity
1337 gen liftingw2 = 1 if heada01==9 | heada02==9 | heada03==9 | heada04==9 | heada05==9 | heada06==9 |
1338 heada07==9 | heada08==9 | heada09==9 | heada10==9
1338 * Assign the number 0 if the participant reported any answer other than the listed activity in
1338 heada01-heada10 and data are not missing
1339 replace liftingw2 = 0 if inlist(heada01,1,2,3,4,5,6,7,8,10,96) & liftingw2!=1
1340 replace liftingw2 = 0 if inlist(heada02,1,2,3,4,5,6,7,8,10,96) & liftingw2!=1
1341 replace liftingw2 = 0 if inlist(heada03,1,2,3,4,5,6,7,8,10,96) & liftingw2!=1
1342 replace liftingw2 = 0 if inlist(heada04,1,2,3,4,5,6,7,8,10,96) & liftingw2!=1
1343 replace liftingw2 = 0 if inlist(heada05,1,2,3,4,5,6,7,8,10,96) & liftingw2!=1
1344 replace liftingw2 = 0 if inlist(heada06,1,2,3,4,5,6,7,8,10,96) & liftingw2!=1
1345 replace liftingw2 = 0 if inlist(heada07,1,2,3,4,5,6,7,8,10,96) & liftingw2!=1
1346 replace liftingw2 = 0 if inlist(heada08,1,2,3,4,5,6,7,8,10,96) & liftingw2!=1
1347 replace liftingw2 = 0 if inlist(heada09,1,2,3,4,5,6,7,8,10,96) & liftingw2!=1
1348 replace liftingw2 = 0 if inlist(heada10,1,2,3,4,5,6,7,8,10,96) & liftingw2!=1
1349
1350 * 10
1351 * Generate a new variable and assign the number 1 if the participant reported difficulties
1351 performing the tenth listed activity
1352 gen pickingw2 = 1 if heada01==10 | heada02==10 | heada03==10 | heada04==10 | heada05==10 | heada06==
1353 10 | heada07==10 | heada08==10 | heada09==10 | heada10==10
1353 * Assign the number 0 if the participant reported any answer other than the listed activity in
1353 heada01-heada10 and data are not missing
1354 replace pickingw2 = 0 if inlist(heada01,1,2,3,4,5,6,7,8,9,96) & pickingw2!=1
1355 replace pickingw2 = 0 if inlist(heada02,1,2,3,4,5,6,7,8,9,96) & pickingw2!=1
1356 replace pickingw2 = 0 if inlist(heada03,1,2,3,4,5,6,7,8,9,96) & pickingw2!=1
1357 replace pickingw2 = 0 if inlist(heada04,1,2,3,4,5,6,7,8,9,96) & pickingw2!=1
1358 replace pickingw2 = 0 if inlist(heada05,1,2,3,4,5,6,7,8,9,96) & pickingw2!=1
1359 replace pickingw2 = 0 if inlist(heada06,1,2,3,4,5,6,7,8,9,96) & pickingw2!=1
1360 replace pickingw2 = 0 if inlist(heada07,1,2,3,4,5,6,7,8,9,96) & pickingw2!=1
1361 replace pickingw2 = 0 if inlist(heada08,1,2,3,4,5,6,7,8,9,96) & pickingw2!=1
1362 replace pickingw2 = 0 if inlist(heada09,1,2,3,4,5,6,7,8,9,96) & pickingw2!=1
1363 replace pickingw2 = 0 if inlist(heada10,1,2,3,4,5,6,7,8,9,96) & pickingw2!=1
1364
1365 * Generate a new variable equal to the sum of reported difficulties at Wave 2 (range 0-10)
1366 gen mobilityw2 = walkingw2 + sittingw2 + gettingw2 + climbingcsw2 + climbingc1w2 + stoopingw2 +
1366 reachingw2 + pullingw2 + liftingw2 + pickingw2
1367 * Generate a new variable duplicating the Wave 2 mobility variable
1368 gen mobilitybiw2 = mobilityw2
1369 * Dichotomise the variable by assigning the number 1 to any participants who reported at least one
1369 difficulty
1370 replace mobilitybiw2 = 1 if inlist(mobilitybiw2,2,3,4,5,6,7,8,9,10)
1371
1372 * Follow-up (Wave 3-9)
1373 * Generate a new variable for each listed activity and replace it with a missing value if data are
1373 missing (coded as negative numbers in the ELSA dataset)
1374 gen walking = hemobwa
1375 replace walking = . if walking < 0
1376 gen sitting = hemobsi
1377 replace sitting = . if sitting < 0
1378 gen getting = hemobch
1379 replace getting = . if getting < 0
1380 gen climbingcs = hemobcs
1381 replace climbingcs = . if climbingcs < 0
1382 gen climbingc1 = hemobcl
1383 replace climbingc1 = . if climbingc1 < 0
1384 gen stooping = hemobst
1385 replace stooping = . if stooping < 0
1386 gen reaching = hemobre
1387 replace reaching = . if reaching < 0
1388 gen pulling = hemobpu
1389 replace pulling = . if pulling < 0

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1390 gen lifting = hemobli
1391 replace lifting = . if lifting<0
1392 gen picking = hemobpi
1393 replace picking = . if picking<0
1394 gen nomobility = hemob96
1395 replace nomobility = . if nomobility<0
1396 replace nomobility = 2 if nomobility==0
1397 replace nomobility = 0 if nomobility==1
1398 replace nomobility = 1 if nomobility==2
1399
1400 * Generate a new variable equal to the sum of reported difficulties at Wave 3-9 (range 0-10)
1401 gen mobility = walking + sitting + getting + climbingcs + climbingc1 + stooping + reaching + pulling
+ lifting + picking
1402 * Generate a new variable duplicating the Wave 3-9 mobility variable
1403 gen mobilitybi = mobility
1404 * Dichotomise the variable by assigning the number 1 to any participants who reported at least one
difficulty
1405 replace mobilitybi = 1 if inlist(mobilitybi,2,3,4,5,6,7,8,9,10)
1406
1407 * ADL
1408 * Baseline (Wave 2)
1409 * 1
1410 * Generate a new variable and assign the number 1 if the participant reported difficulties
performing the first listed activity
1411 gen ADLdressingw2 = 1 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
1412 * Assign the number 0 if the participant reported any answer other than the listed activity in
headb01-headb13 and data are not missing
1413 replace ADLdressingw2 = 0 if inlist(headb01,2,3,4,5,6,7,8,9,10,11,12,13,96) & ADLdressingw2!=1
1414 replace ADLdressingw2 = 0 if inlist(headb02,2,3,4,5,6,7,8,9,10,11,12,13,96) & ADLdressingw2!=1
1415 replace ADLdressingw2 = 0 if inlist(headb03,2,3,4,5,6,7,8,9,10,11,12,13,96) & ADLdressingw2!=1
1416 replace ADLdressingw2 = 0 if inlist(headb04,2,3,4,5,6,7,8,9,10,11,12,13,96) & ADLdressingw2!=1
1417 replace ADLdressingw2 = 0 if inlist(headb05,2,3,4,5,6,7,8,9,10,11,12,13,96) & ADLdressingw2!=1
1418 replace ADLdressingw2 = 0 if inlist(headb06,2,3,4,5,6,7,8,9,10,11,12,13,96) & ADLdressingw2!=1
1419 replace ADLdressingw2 = 0 if inlist(headb07,2,3,4,5,6,7,8,9,10,11,12,13,96) & ADLdressingw2!=1
1420 replace ADLdressingw2 = 0 if inlist(headb08,2,3,4,5,6,7,8,9,10,11,12,13,96) & ADLdressingw2!=1
1421 replace ADLdressingw2 = 0 if inlist(headb09,2,3,4,5,6,7,8,9,10,11,12,13,96) & ADLdressingw2!=1
1422 replace ADLdressingw2 = 0 if inlist(headb10,2,3,4,5,6,7,8,9,10,11,12,13,96) & ADLdressingw2!=1
1423 replace ADLdressingw2 = 0 if inlist(headb11,2,3,4,5,6,7,8,9,10,11,12,13,96) & ADLdressingw2!=1
1424 replace ADLdressingw2 = 0 if inlist(headb12,2,3,4,5,6,7,8,9,10,11,12,13,96) & ADLdressingw2!=1
1425 replace ADLdressingw2 = 0 if inlist(headb13,2,3,4,5,6,7,8,9,10,11,12,13,96) & ADLdressingw2!=1
1426
1427 * 2
1428 * Generate a new variable and assign the number 1 if the participant reported difficulties
performing the second listed activity
1429 gen ADLwalkingw2 = 1 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
1430 * Assign the number 0 if the participant reported any answer other than the listed activity in
headb01-headb13 and data are not missing
1431 replace ADLwalkingw2 = 0 if inlist(headb01,1,3,4,5,6,7,8,9,10,11,12,13,96) & ADLwalkingw2!=1
1432 replace ADLwalkingw2 = 0 if inlist(headb02,1,3,4,5,6,7,8,9,10,11,12,13,96) & ADLwalkingw2!=1
1433 replace ADLwalkingw2 = 0 if inlist(headb03,1,3,4,5,6,7,8,9,10,11,12,13,96) & ADLwalkingw2!=1
1434 replace ADLwalkingw2 = 0 if inlist(headb04,1,3,4,5,6,7,8,9,10,11,12,13,96) & ADLwalkingw2!=1
1435 replace ADLwalkingw2 = 0 if inlist(headb05,1,3,4,5,6,7,8,9,10,11,12,13,96) & ADLwalkingw2!=1
1436 replace ADLwalkingw2 = 0 if inlist(headb06,1,3,4,5,6,7,8,9,10,11,12,13,96) & ADLwalkingw2!=1
1437 replace ADLwalkingw2 = 0 if inlist(headb07,1,3,4,5,6,7,8,9,10,11,12,13,96) & ADLwalkingw2!=1
1438 replace ADLwalkingw2 = 0 if inlist(headb08,1,3,4,5,6,7,8,9,10,11,12,13,96) & ADLwalkingw2!=1
1439 replace ADLwalkingw2 = 0 if inlist(headb09,1,3,4,5,6,7,8,9,10,11,12,13,96) & ADLwalkingw2!=1
1440 replace ADLwalkingw2 = 0 if inlist(headb10,1,3,4,5,6,7,8,9,10,11,12,13,96) & ADLwalkingw2!=1
1441 replace ADLwalkingw2 = 0 if inlist(headb11,1,3,4,5,6,7,8,9,10,11,12,13,96) & ADLwalkingw2!=1
1442 replace ADLwalkingw2 = 0 if inlist(headb12,1,3,4,5,6,7,8,9,10,11,12,13,96) & ADLwalkingw2!=1
1443 replace ADLwalkingw2 = 0 if inlist(headb13,1,3,4,5,6,7,8,9,10,11,12,13,96) & ADLwalkingw2!=1
1444

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1445 * 3
1446 * Generate a new variable and assign the number 1 if the participant reported difficulties
performing the third listed activity
1447 gen ADLbathingw2 = 1 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
1448 * Assign the number 0 if the participant reported any answer other than the listed activity in
headb01-headb13 and data are not missing
1449 replace ADLbathingw2 = 0 if inlist(headb01,1,2,4,5,6,7,8,9,10,11,12,13,96) & ADLbathingw2!=1
1450 replace ADLbathingw2 = 0 if inlist(headb02,1,2,4,5,6,7,8,9,10,11,12,13,96) & ADLbathingw2!=1
1451 replace ADLbathingw2 = 0 if inlist(headb03,1,2,4,5,6,7,8,9,10,11,12,13,96) & ADLbathingw2!=1
1452 replace ADLbathingw2 = 0 if inlist(headb04,1,2,4,5,6,7,8,9,10,11,12,13,96) & ADLbathingw2!=1
1453 replace ADLbathingw2 = 0 if inlist(headb05,1,2,4,5,6,7,8,9,10,11,12,13,96) & ADLbathingw2!=1
1454 replace ADLbathingw2 = 0 if inlist(headb06,1,2,4,5,6,7,8,9,10,11,12,13,96) & ADLbathingw2!=1
1455 replace ADLbathingw2 = 0 if inlist(headb07,1,2,4,5,6,7,8,9,10,11,12,13,96) & ADLbathingw2!=1
1456 replace ADLbathingw2 = 0 if inlist(headb08,1,2,4,5,6,7,8,9,10,11,12,13,96) & ADLbathingw2!=1
1457 replace ADLbathingw2 = 0 if inlist(headb09,1,2,4,5,6,7,8,9,10,11,12,13,96) & ADLbathingw2!=1
1458 replace ADLbathingw2 = 0 if inlist(headb10,1,2,4,5,6,7,8,9,10,11,12,13,96) & ADLbathingw2!=1
1459 replace ADLbathingw2 = 0 if inlist(headb11,1,2,4,5,6,7,8,9,10,11,12,13,96) & ADLbathingw2!=1
1460 replace ADLbathingw2 = 0 if inlist(headb12,1,2,4,5,6,7,8,9,10,11,12,13,96) & ADLbathingw2!=1
1461 replace ADLbathingw2 = 0 if inlist(headb13,1,2,4,5,6,7,8,9,10,11,12,13,96) & ADLbathingw2!=1
1462
1463 * 4
1464 * Generate a new variable and assign the number 1 if the participant reported difficulties
performing the fourth listed activity
1465 gen ADLeatingw2 = 1 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
1466 * Assign the number 0 if the participant reported any answer other than the listed activity in
headb01-headb13 and data are not missing
1467 replace ADLeatingw2 = 0 if inlist(headb01,1,2,3,5,6,7,8,9,10,11,12,13,96) & ADLeatingw2!=1
1468 replace ADLeatingw2 = 0 if inlist(headb02,1,2,3,5,6,7,8,9,10,11,12,13,96) & ADLeatingw2!=1
1469 replace ADLeatingw2 = 0 if inlist(headb03,1,2,3,5,6,7,8,9,10,11,12,13,96) & ADLeatingw2!=1
1470 replace ADLeatingw2 = 0 if inlist(headb04,1,2,3,5,6,7,8,9,10,11,12,13,96) & ADLeatingw2!=1
1471 replace ADLeatingw2 = 0 if inlist(headb05,1,2,3,5,6,7,8,9,10,11,12,13,96) & ADLeatingw2!=1
1472 replace ADLeatingw2 = 0 if inlist(headb06,1,2,3,5,6,7,8,9,10,11,12,13,96) & ADLeatingw2!=1
1473 replace ADLeatingw2 = 0 if inlist(headb07,1,2,3,5,6,7,8,9,10,11,12,13,96) & ADLeatingw2!=1
1474 replace ADLeatingw2 = 0 if inlist(headb08,1,2,3,5,6,7,8,9,10,11,12,13,96) & ADLeatingw2!=1
1475 replace ADLeatingw2 = 0 if inlist(headb09,1,2,3,5,6,7,8,9,10,11,12,13,96) & ADLeatingw2!=1
1476 replace ADLeatingw2 = 0 if inlist(headb10,1,2,3,5,6,7,8,9,10,11,12,13,96) & ADLeatingw2!=1
1477 replace ADLeatingw2 = 0 if inlist(headb11,1,2,3,5,6,7,8,9,10,11,12,13,96) & ADLeatingw2!=1
1478 replace ADLeatingw2 = 0 if inlist(headb12,1,2,3,5,6,7,8,9,10,11,12,13,96) & ADLeatingw2!=1
1479 replace ADLeatingw2 = 0 if inlist(headb13,1,2,3,5,6,7,8,9,10,11,12,13,96) & ADLeatingw2!=1
1480
1481 * 5
1482 * Generate a new variable and assign the number 1 if the participant reported difficulties
performing the fifth listed activity
1483 gen ADLgettingw2 = 1 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
1484 * Assign the number 0 if the participant reported any answer other than the listed activity in
headb01-headb13 and data are not missing
1485 replace ADLgettingw2 = 0 if inlist(headb01,1,2,3,4,6,7,8,9,10,11,12,13,96) & ADLgettingw2!=1
1486 replace ADLgettingw2 = 0 if inlist(headb02,1,2,3,4,6,7,8,9,10,11,12,13,96) & ADLgettingw2!=1
1487 replace ADLgettingw2 = 0 if inlist(headb03,1,2,3,4,6,7,8,9,10,11,12,13,96) & ADLgettingw2!=1
1488 replace ADLgettingw2 = 0 if inlist(headb04,1,2,3,4,6,7,8,9,10,11,12,13,96) & ADLgettingw2!=1
1489 replace ADLgettingw2 = 0 if inlist(headb05,1,2,3,4,6,7,8,9,10,11,12,13,96) & ADLgettingw2!=1
1490 replace ADLgettingw2 = 0 if inlist(headb06,1,2,3,4,6,7,8,9,10,11,12,13,96) & ADLgettingw2!=1
1491 replace ADLgettingw2 = 0 if inlist(headb07,1,2,3,4,6,7,8,9,10,11,12,13,96) & ADLgettingw2!=1
1492 replace ADLgettingw2 = 0 if inlist(headb08,1,2,3,4,6,7,8,9,10,11,12,13,96) & ADLgettingw2!=1
1493 replace ADLgettingw2 = 0 if inlist(headb09,1,2,3,4,6,7,8,9,10,11,12,13,96) & ADLgettingw2!=1
1494 replace ADLgettingw2 = 0 if inlist(headb10,1,2,3,4,6,7,8,9,10,11,12,13,96) & ADLgettingw2!=1
1495 replace ADLgettingw2 = 0 if inlist(headb11,1,2,3,4,6,7,8,9,10,11,12,13,96) & ADLgettingw2!=1
1496 replace ADLgettingw2 = 0 if inlist(headb12,1,2,3,4,6,7,8,9,10,11,12,13,96) & ADLgettingw2!=1
1497 replace ADLgettingw2 = 0 if inlist(headb13,1,2,3,4,6,7,8,9,10,11,12,13,96) & ADLgettingw2!=1
1498

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1499 * 6
1500 * Generate a new variable and assign the number 1 if the participant reported difficulties
performing the sixth listed activity
1501 gen ADLtoiletw2 = 1 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
1502 * Assign the number 0 if the participant reported any answer other than the listed activity in
headb01-headb13 and data are not missing
1503 replace ADLtoiletw2 = 0 if inlist(headb01,1,2,3,4,5,7,8,9,10,11,12,13,96) & ADLtoiletw2!=1
1504 replace ADLtoiletw2 = 0 if inlist(headb02,1,2,3,4,5,7,8,9,10,11,12,13,96) & ADLtoiletw2!=1
1505 replace ADLtoiletw2 = 0 if inlist(headb03,1,2,3,4,5,7,8,9,10,11,12,13,96) & ADLtoiletw2!=1
1506 replace ADLtoiletw2 = 0 if inlist(headb04,1,2,3,4,5,7,8,9,10,11,12,13,96) & ADLtoiletw2!=1
1507 replace ADLtoiletw2 = 0 if inlist(headb05,1,2,3,4,5,7,8,9,10,11,12,13,96) & ADLtoiletw2!=1
1508 replace ADLtoiletw2 = 0 if inlist(headb06,1,2,3,4,5,7,8,9,10,11,12,13,96) & ADLtoiletw2!=1
1509 replace ADLtoiletw2 = 0 if inlist(headb07,1,2,3,4,5,7,8,9,10,11,12,13,96) & ADLtoiletw2!=1
1510 replace ADLtoiletw2 = 0 if inlist(headb08,1,2,3,4,5,7,8,9,10,11,12,13,96) & ADLtoiletw2!=1
1511 replace ADLtoiletw2 = 0 if inlist(headb09,1,2,3,4,5,7,8,9,10,11,12,13,96) & ADLtoiletw2!=1
1512 replace ADLtoiletw2 = 0 if inlist(headb10,1,2,3,4,5,7,8,9,10,11,12,13,96) & ADLtoiletw2!=1
1513 replace ADLtoiletw2 = 0 if inlist(headb11,1,2,3,4,5,7,8,9,10,11,12,13,96) & ADLtoiletw2!=1
1514 replace ADLtoiletw2 = 0 if inlist(headb12,1,2,3,4,5,7,8,9,10,11,12,13,96) & ADLtoiletw2!=1
1515 replace ADLtoiletw2 = 0 if inlist(headb13,1,2,3,4,5,7,8,9,10,11,12,13,96) & ADLtoiletw2!=1
1516
1517 * Generate a new variable equal to the sum of reported difficulties at Wave 2 (range 0-6)
1518 gen ADLw2 = ADLdressingw2 + ADLwalkingw2 + ADLbathingw2 + ADLeatingw2 + ADLgettingw2 + ADLtoiletw2
1519 * Generate a new variable duplicating the Wave 2 ADL variable
1520 gen ADLbiw2 = ADLw2
1521 * Dichotomise the variable by assigning the number 1 to any participants who reported at least one
difficulty
1522 replace ADLbiw2 = 1 if inlist(ADLbiw2,2,3,4,5,6)
1523
1524 * Follow-up (Wave 3-9)
1525 * Generate a new variable for each listed activity and replace it with a missing value if data are
missing (coded as negative numbers in the ELSA dataset)
1526 gen ADLdressing = headldr
1527 replace ADLdressing = . if ADLdressing<0
1528 gen ADLwalking = headlwa
1529 replace ADLwalking = . if ADLwalking<0
1530 gen ADLbathing = headlba
1531 replace ADLbathing = . if ADLbathing<0
1532 gen ADLeating = headlea
1533 replace ADLeating = . if ADLeating<0
1534 gen ADLgetting = headlbe
1535 replace ADLgetting = . if ADLgetting<0
1536 gen ADLtoilet = headlwc
1537 replace ADLtoilet = . if ADLtoilet<0
1538
1539 * Generate a new variable equal to the sum of reported difficulties at Wave 3-9 (range 0-6)
1540 gen ADL = ADLdressing + ADLwalking + ADLbathing + ADLeating + ADLgetting + ADLtoilet
1541 * Generate a new variable duplicating the Wave 3-9 ADL variable
1542 gen ADLbi = ADL
1543 * Dichotomise the variable by assigning the number 1 to any participants who reported at least one
difficulty
1544 replace ADLbi = 1 if inlist(ADLbi,2,3,4,5,6)
1545
1546 * Overwrite dataset, by replacing the previously saved file
1547 save data04.dta, replace
1548
1549 * IADL
1550 * Baseline (Wave 2)
1551 * 7
1552 * Generate a new variable and assign the number 1 if the participant reported difficulties
performing the seventh listed activity
1553 gen IADLmapw2 = 1 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

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1554 * Assign the number 0 if the participant reported any answer other than the listed activity in
      headb01-headb13 and data are not missing
1555 replace IADLmapw2 = 0 if inlist(headb01,1,2,3,4,5,6,8,9,10,11,12,13,96) & IADLmapw2!=1
1556 replace IADLmapw2 = 0 if inlist(headb02,1,2,3,4,5,6,8,9,10,11,12,13,96) & IADLmapw2!=1
1557 replace IADLmapw2 = 0 if inlist(headb03,1,2,3,4,5,6,8,9,10,11,12,13,96) & IADLmapw2!=1
1558 replace IADLmapw2 = 0 if inlist(headb04,1,2,3,4,5,6,8,9,10,11,12,13,96) & IADLmapw2!=1
1559 replace IADLmapw2 = 0 if inlist(headb05,1,2,3,4,5,6,8,9,10,11,12,13,96) & IADLmapw2!=1
1560 replace IADLmapw2 = 0 if inlist(headb06,1,2,3,4,5,6,8,9,10,11,12,13,96) & IADLmapw2!=1
1561 replace IADLmapw2 = 0 if inlist(headb07,1,2,3,4,5,6,8,9,10,11,12,13,96) & IADLmapw2!=1
1562 replace IADLmapw2 = 0 if inlist(headb08,1,2,3,4,5,6,8,9,10,11,12,13,96) & IADLmapw2!=1
1563 replace IADLmapw2 = 0 if inlist(headb09,1,2,3,4,5,6,8,9,10,11,12,13,96) & IADLmapw2!=1
1564 replace IADLmapw2 = 0 if inlist(headb10,1,2,3,4,5,6,8,9,10,11,12,13,96) & IADLmapw2!=1
1565 replace IADLmapw2 = 0 if inlist(headb11,1,2,3,4,5,6,8,9,10,11,12,13,96) & IADLmapw2!=1
1566 replace IADLmapw2 = 0 if inlist(headb12,1,2,3,4,5,6,8,9,10,11,12,13,96) & IADLmapw2!=1
1567 replace IADLmapw2 = 0 if inlist(headb13,1,2,3,4,5,6,8,9,10,11,12,13,96) & IADLmapw2!=1
1568
1569 * 8
1570 * Generate a new variable and assign the number 1 if the participant reported difficulties
      performing the eighth listed activity
1571 gen IADLmealw2 = 1 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
1572 * Assign the number 0 if the participant reported any answer other than the listed activity in
      headb01-headb13 and data are not missing
1573 replace IADLmealw2 = 0 if inlist(headb01,1,2,3,4,5,6,7,9,10,11,12,13,96) & IADLmealw2!=1
1574 replace IADLmealw2 = 0 if inlist(headb02,1,2,3,4,5,6,7,9,10,11,12,13,96) & IADLmealw2!=1
1575 replace IADLmealw2 = 0 if inlist(headb03,1,2,3,4,5,6,7,9,10,11,12,13,96) & IADLmealw2!=1
1576 replace IADLmealw2 = 0 if inlist(headb04,1,2,3,4,5,6,7,9,10,11,12,13,96) & IADLmealw2!=1
1577 replace IADLmealw2 = 0 if inlist(headb05,1,2,3,4,5,6,7,9,10,11,12,13,96) & IADLmealw2!=1
1578 replace IADLmealw2 = 0 if inlist(headb06,1,2,3,4,5,6,7,9,10,11,12,13,96) & IADLmealw2!=1
1579 replace IADLmealw2 = 0 if inlist(headb07,1,2,3,4,5,6,7,9,10,11,12,13,96) & IADLmealw2!=1
1580 replace IADLmealw2 = 0 if inlist(headb08,1,2,3,4,5,6,7,9,10,11,12,13,96) & IADLmealw2!=1
1581 replace IADLmealw2 = 0 if inlist(headb09,1,2,3,4,5,6,7,9,10,11,12,13,96) & IADLmealw2!=1
1582 replace IADLmealw2 = 0 if inlist(headb10,1,2,3,4,5,6,7,9,10,11,12,13,96) & IADLmealw2!=1
1583 replace IADLmealw2 = 0 if inlist(headb11,1,2,3,4,5,6,7,9,10,11,12,13,96) & IADLmealw2!=1
1584 replace IADLmealw2 = 0 if inlist(headb12,1,2,3,4,5,6,7,9,10,11,12,13,96) & IADLmealw2!=1
1585 replace IADLmealw2 = 0 if inlist(headb13,1,2,3,4,5,6,7,9,10,11,12,13,96) & IADLmealw2!=1
1586
1587 * 9
1588 * Generate a new variable and assign the number 1 if the participant reported difficulties
      performing the ninth listed activity
1589 gen IADLshoppingw2 = 1 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
1590 * Assign the number 0 if the participant reported any answer other than the listed activity in
      headb01-headb13 and data are not missing
1591 replace IADLshoppingw2 = 0 if inlist(headb01,1,2,3,4,5,6,7,8,10,11,12,13,96) & IADLshoppingw2!=1
1592 replace IADLshoppingw2 = 0 if inlist(headb02,1,2,3,4,5,6,7,8,10,11,12,13,96) & IADLshoppingw2!=1
1593 replace IADLshoppingw2 = 0 if inlist(headb03,1,2,3,4,5,6,7,8,10,11,12,13,96) & IADLshoppingw2!=1
1594 replace IADLshoppingw2 = 0 if inlist(headb04,1,2,3,4,5,6,7,8,10,11,12,13,96) & IADLshoppingw2!=1
1595 replace IADLshoppingw2 = 0 if inlist(headb05,1,2,3,4,5,6,7,8,10,11,12,13,96) & IADLshoppingw2!=1
1596 replace IADLshoppingw2 = 0 if inlist(headb06,1,2,3,4,5,6,7,8,10,11,12,13,96) & IADLshoppingw2!=1
1597 replace IADLshoppingw2 = 0 if inlist(headb07,1,2,3,4,5,6,7,8,10,11,12,13,96) & IADLshoppingw2!=1
1598 replace IADLshoppingw2 = 0 if inlist(headb08,1,2,3,4,5,6,7,8,10,11,12,13,96) & IADLshoppingw2!=1
1599 replace IADLshoppingw2 = 0 if inlist(headb09,1,2,3,4,5,6,7,8,10,11,12,13,96) & IADLshoppingw2!=1
1600 replace IADLshoppingw2 = 0 if inlist(headb10,1,2,3,4,5,6,7,8,10,11,12,13,96) & IADLshoppingw2!=1
1601 replace IADLshoppingw2 = 0 if inlist(headb11,1,2,3,4,5,6,7,8,10,11,12,13,96) & IADLshoppingw2!=1
1602 replace IADLshoppingw2 = 0 if inlist(headb12,1,2,3,4,5,6,7,8,10,11,12,13,96) & IADLshoppingw2!=1
1603 replace IADLshoppingw2 = 0 if inlist(headb13,1,2,3,4,5,6,7,8,10,11,12,13,96) & IADLshoppingw2!=1
1604
1605 * 10
1606 * Generate a new variable and assign the number 1 if the participant reported difficulties
      performing the tenth listed activity
1607 gen IADLphonew2 = 1 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

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1608 * Assign the number 0 if the participant reported any answer other than the listed activity in
1609 headb01-headb13 and data are not missing
1610 replace IADLphonew2 = 0 if inlist(headb01,1,2,3,4,5,6,7,8,9,11,12,13,96) & IADLphonew2!=1
1611 replace IADLphonew2 = 0 if inlist(headb02,1,2,3,4,5,6,7,8,9,11,12,13,96) & IADLphonew2!=1
1612 replace IADLphonew2 = 0 if inlist(headb03,1,2,3,4,5,6,7,8,9,11,12,13,96) & IADLphonew2!=1
1613 replace IADLphonew2 = 0 if inlist(headb04,1,2,3,4,5,6,7,8,9,11,12,13,96) & IADLphonew2!=1
1614 replace IADLphonew2 = 0 if inlist(headb05,1,2,3,4,5,6,7,8,9,11,12,13,96) & IADLphonew2!=1
1615 replace IADLphonew2 = 0 if inlist(headb06,1,2,3,4,5,6,7,8,9,11,12,13,96) & IADLphonew2!=1
1616 replace IADLphonew2 = 0 if inlist(headb07,1,2,3,4,5,6,7,8,9,11,12,13,96) & IADLphonew2!=1
1617 replace IADLphonew2 = 0 if inlist(headb08,1,2,3,4,5,6,7,8,9,11,12,13,96) & IADLphonew2!=1
1618 replace IADLphonew2 = 0 if inlist(headb09,1,2,3,4,5,6,7,8,9,11,12,13,96) & IADLphonew2!=1
1619 replace IADLphonew2 = 0 if inlist(headb10,1,2,3,4,5,6,7,8,9,11,12,13,96) & IADLphonew2!=1
1620 replace IADLphonew2 = 0 if inlist(headb11,1,2,3,4,5,6,7,8,9,11,12,13,96) & IADLphonew2!=1
1621 replace IADLphonew2 = 0 if inlist(headb12,1,2,3,4,5,6,7,8,9,11,12,13,96) & IADLphonew2!=1
1622 replace IADLphonew2 = 0 if inlist(headb13,1,2,3,4,5,6,7,8,9,11,12,13,96) & IADLphonew2!=1
1623
1624 * 11
1625 * Generate a new variable and assign the number 1 if the participant reported difficulties
1626 performing the eleventh listed activity
1627 gen IADLmediw2 = 1 if headb01==11 | headb02==11 | headb03==11 | headb04==11 | headb05==11 | headb06==
1628 11 | headb07==11 | headb08==11 | headb09==11 | headb10==11 | headb11==11 | headb12==11 | headb13==11
1629 * Assign the number 0 if the participant reported any answer other than the listed activity in
1630 headb01-headb13 and data are not missing
1631 replace IADLmediw2 = 0 if inlist(headb01,1,2,3,4,5,6,7,8,9,10,12,13,96) & IADLmediw2!=1
1632 replace IADLmediw2 = 0 if inlist(headb02,1,2,3,4,5,6,7,8,9,10,12,13,96) & IADLmediw2!=1
1633 replace IADLmediw2 = 0 if inlist(headb03,1,2,3,4,5,6,7,8,9,10,12,13,96) & IADLmediw2!=1
1634 replace IADLmediw2 = 0 if inlist(headb04,1,2,3,4,5,6,7,8,9,10,12,13,96) & IADLmediw2!=1
1635 replace IADLmediw2 = 0 if inlist(headb05,1,2,3,4,5,6,7,8,9,10,12,13,96) & IADLmediw2!=1
1636 replace IADLmediw2 = 0 if inlist(headb06,1,2,3,4,5,6,7,8,9,10,12,13,96) & IADLmediw2!=1
1637 replace IADLmediw2 = 0 if inlist(headb07,1,2,3,4,5,6,7,8,9,10,12,13,96) & IADLmediw2!=1
1638 replace IADLmediw2 = 0 if inlist(headb08,1,2,3,4,5,6,7,8,9,10,12,13,96) & IADLmediw2!=1
1639 replace IADLmediw2 = 0 if inlist(headb09,1,2,3,4,5,6,7,8,9,10,12,13,96) & IADLmediw2!=1
1640 replace IADLmediw2 = 0 if inlist(headb10,1,2,3,4,5,6,7,8,9,10,12,13,96) & IADLmediw2!=1
1641 replace IADLmediw2 = 0 if inlist(headb11,1,2,3,4,5,6,7,8,9,10,12,13,96) & IADLmediw2!=1
1642 replace IADLmediw2 = 0 if inlist(headb12,1,2,3,4,5,6,7,8,9,10,12,13,96) & IADLmediw2!=1
1643 replace IADLmediw2 = 0 if inlist(headb13,1,2,3,4,5,6,7,8,9,10,12,13,96) & IADLmediw2!=1
1644
1645 * 12
1646 * Generate a new variable and assign the number 1 if the participant reported difficulties
1647 performing the twelfth listed activity
1648 gen IADLworkw2 = 1 if headb01==12 | headb02==12 | headb03==12 | headb04==12 | headb05==12 | headb06==
1649 12 | headb07==12 | headb08==12 | headb09==12 | headb10==12 | headb11==12 | headb12==12 | headb13==12
1650 * Assign the number 0 if the participant reported any answer other than the listed activity in
1651 headb01-headb13 and data are not missing
1652 replace IADLworkw2 = 0 if inlist(headb01,1,2,3,4,5,6,7,8,9,10,11,13,96) & IADLworkw2!=1
1653 replace IADLworkw2 = 0 if inlist(headb02,1,2,3,4,5,6,7,8,9,10,11,13,96) & IADLworkw2!=1
1654 replace IADLworkw2 = 0 if inlist(headb03,1,2,3,4,5,6,7,8,9,10,11,13,96) & IADLworkw2!=1
1655 replace IADLworkw2 = 0 if inlist(headb04,1,2,3,4,5,6,7,8,9,10,11,13,96) & IADLworkw2!=1
1656 replace IADLworkw2 = 0 if inlist(headb05,1,2,3,4,5,6,7,8,9,10,11,13,96) & IADLworkw2!=1
1657 replace IADLworkw2 = 0 if inlist(headb06,1,2,3,4,5,6,7,8,9,10,11,13,96) & IADLworkw2!=1
1658 replace IADLworkw2 = 0 if inlist(headb07,1,2,3,4,5,6,7,8,9,10,11,13,96) & IADLworkw2!=1
1659 replace IADLworkw2 = 0 if inlist(headb08,1,2,3,4,5,6,7,8,9,10,11,13,96) & IADLworkw2!=1
1660 replace IADLworkw2 = 0 if inlist(headb09,1,2,3,4,5,6,7,8,9,10,11,13,96) & IADLworkw2!=1
1661 replace IADLworkw2 = 0 if inlist(headb10,1,2,3,4,5,6,7,8,9,10,11,13,96) & IADLworkw2!=1
1662 replace IADLworkw2 = 0 if inlist(headb11,1,2,3,4,5,6,7,8,9,10,11,13,96) & IADLworkw2!=1
1663 replace IADLworkw2 = 0 if inlist(headb12,1,2,3,4,5,6,7,8,9,10,11,13,96) & IADLworkw2!=1
1664 replace IADLworkw2 = 0 if inlist(headb13,1,2,3,4,5,6,7,8,9,10,11,13,96) & IADLworkw2!=1
1665
1666 * 13
1667 * Generate a new variable and assign the number 1 if the participant reported difficulties
1668 performing the thirteenth listed activity
1669 gen IADLmoneyw2 = 1 if headb01==13 | headb02==13 | headb03==13 | headb04==13 | headb05==13 | headb06
1670 ==13 | headb07==13 | headb08==13 | headb09==13 | headb10==13 | headb11==13 | headb12==13 | headb13==13

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1662 * Assign the number 0 if the participant reported any answer other than the listed activity in
1663 headb01-headb13 and data are not missing
1664 replace IADLmoneyw2 = 0 if inlist(headb01,1,2,3,4,5,6,7,8,9,10,11,12,96) & IADLmoneyw2!=1
1665 replace IADLmoneyw2 = 0 if inlist(headb02,1,2,3,4,5,6,7,8,9,10,11,12,96) & IADLmoneyw2!=1
1666 replace IADLmoneyw2 = 0 if inlist(headb03,1,2,3,4,5,6,7,8,9,10,11,12,96) & IADLmoneyw2!=1
1667 replace IADLmoneyw2 = 0 if inlist(headb04,1,2,3,4,5,6,7,8,9,10,11,12,96) & IADLmoneyw2!=1
1668 replace IADLmoneyw2 = 0 if inlist(headb05,1,2,3,4,5,6,7,8,9,10,11,12,96) & IADLmoneyw2!=1
1669 replace IADLmoneyw2 = 0 if inlist(headb06,1,2,3,4,5,6,7,8,9,10,11,12,96) & IADLmoneyw2!=1
1670 replace IADLmoneyw2 = 0 if inlist(headb07,1,2,3,4,5,6,7,8,9,10,11,12,96) & IADLmoneyw2!=1
1671 replace IADLmoneyw2 = 0 if inlist(headb08,1,2,3,4,5,6,7,8,9,10,11,12,96) & IADLmoneyw2!=1
1672 replace IADLmoneyw2 = 0 if inlist(headb09,1,2,3,4,5,6,7,8,9,10,11,12,96) & IADLmoneyw2!=1
1673 replace IADLmoneyw2 = 0 if inlist(headb10,1,2,3,4,5,6,7,8,9,10,11,12,96) & IADLmoneyw2!=1
1674 replace IADLmoneyw2 = 0 if inlist(headb11,1,2,3,4,5,6,7,8,9,10,11,12,96) & IADLmoneyw2!=1
1675 replace IADLmoneyw2 = 0 if inlist(headb12,1,2,3,4,5,6,7,8,9,10,11,12,96) & IADLmoneyw2!=1
1676 replace IADLmoneyw2 = 0 if inlist(headb13,1,2,3,4,5,6,7,8,9,10,11,12,96) & IADLmoneyw2!=1
1677
1678 * Generate a new variable equal to the sum of reported difficulties at Wave 2 (range 0-7)
1679 gen IADLw2 = IADLmapw2 + IADLmealw2 + IADLshoppingw2 + IADLphonew2 + IADLmediw2 + IADLworkw2 +
1680 IADLmoneyw2
1681 * Generate a new variable duplicating the Wave 2 IADL variable
1682 gen IADLbiw2 = IADLw2
1683
1684 * Dichotomise the variable by assigning the number 1 to any participants who reported at least one
1685 difficulty
1686 replace IADLbiw2 = 1 if inlist(IADLbiw2,2,3,4,5,6,7)
1687
1688 * Follow-up (Wave 3-9)
1689 * Generate a new variable for each listed activity and replace it with a missing value if data are
1690 missing (coded as negative numbers in the ELSA dataset)
1691 gen IADLmap = headlma
1692 replace IADLmap = . if IADLmap<0
1693 gen IADLmeal = headlpr
1694 replace IADLmeal = . if IADLmeal<0
1695 gen IADLshopping = headlsh
1696 replace IADLshopping = . if IADLshopping<0
1697 gen IADLphone = headlph
1698 replace IADLphone = . if IADLphone<0
1699 gen IADLmedi = headlme
1700 replace IADLmedi = . if IADLmedi<0
1701 gen IADLwork = headlho
1702 replace IADLwork = . if IADLwork<0
1703 gen IADLmoney = headlmo
1704 replace IADLmoney = . if IADLmoney<0
1705 gen noadliadl = headl96
1706 replace noadliadl = . if noadliadl<0
1707 replace noadliadl = 2 if noadliadl==0
1708 replace noadliadl = 0 if noadliadl==1
1709 replace noadliadl = 1 if noadliadl==2
1710
1711 * different to ADLIADLbi as includes headlda and headlsp in some waves
1712
1713 * Generate a new variable equal to the sum of reported difficulties at Wave 3-9 (range 0-7)
1714 gen IADL = IADLmap + IADLmeal + IADLshopping + IADLphone + IADLmedi + IADLwork + IADLmoney
1715
1716 * Generate a new variable duplicating the Wave 3-9 IADL variable
1717 gen IADLbi = IADL
1718
1719 * Dichotomise the variable by assigning the number 1 to any participants who reported at least one
1720 difficulty
1721 replace IADLbi = 1 if inlist(IADLbi,2,3,4,5,6,7)
1722
1723
1724 sum idauniq if headldr==0 & headlwa==0 & headlba==0 & headlea==0 & headlbe==0 & headlwc==0 & headlma
1725 ==0 & headlpr==0 & headlsh==0 & headlph==0 & headlme==0 & headlho==0 & headlmo==0
1726
1727 * Falls
1728 * Generate a new variable duplicating the hefla variable at Wave 2
1729 gen fallsw2 = hefla if wave==2

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1719 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
1720 replace fallsw2 = . if fallsw2<0
1721 * Assign the number 0 if the participant had not fallen down
1722 replace fallsw2 = 0 if fallsw2==2
1723
1724 * Generate a new variable duplicating the hefla variable at Wave 3-9
1725 gen falls = hefla if inlist(wave,3,4,5,6,7,8,9)
1726 * Replace variable as missing for any missing cases (coded as negative numbers in the ELSA dataset)
1727 replace falls = . if falls<0
1728 * Assign the number 0 if the participant had not fallen down
1729 replace falls = 0 if falls==2
1730
1731 * Overwrite dataset, by replacing the previously saved file
1732 save data04.dta, replace
1733
1734 * Time-constant mobility - Wave 2
1735 * Generate a new variable duplicating the mobilityw2 variable at Wave 2
1736 gen mobilityw2_cons = mobilityw2 if wave==2
1737 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
1738 tsset idauniq wave
1739 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
1740 bysort idauniq: carryforward mobilityw2_cons, replace
1741
1742 * Time-constant ADL - Wave 2
1743 * Generate a new variable duplicating the ADLw2 variable at Wave 2
1744 gen ADLw2_cons = ADLw2 if wave==2
1745 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
1746 tsset idauniq wave
1747 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
1748 bysort idauniq: carryforward ADLw2_cons, replace
1749
1750 * Time-constant IADL - Wave 2
1751 * Generate a new variable duplicating the IADLw2 variable at Wave 2
1752 gen IADLw2_cons = IADLw2 if wave==2
1753 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
1754 tsset idauniq wave
1755 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
1756 bysort idauniq: carryforward IADLw2_cons, replace
1757
1758 * Time-constant falls - Wave 2
1759 * Generate a new variable duplicating the falls variable at Wave 2
1760 gen fallsw2_cons = fallsw2 if wave==2
1761 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
1762 tsset idauniq wave
1763 * Carryforward observations with respect to the time variable "wave" (i.e., from Wave 2 to the
follow-up waves) by participant ID
1764 bysort idauniq: carryforward fallsw2_cons, replace
1765
1766 * Overwrite dataset, by replacing the previously saved file
1767 save data04.dta, replace
1768
1769 * Drop if participants are aged less than 60 years at baseline
1770 drop if age_cons<60
1771 * Count total number of participants and observations
1772 unique idauniq
1773 * 6,183 individuals, 49,464 observations
1774
1775 * Save dataset with a new name
1776 save data05.dta
1777

```

```

1778 * Keep if data are not missing on the total SPPB score
1779 keep if totalSPPB_cons != .
1780 * Count total number of participants and observations
1781 unique idauniq
1782 * 4,932 individuals, 39,456 observations
1783 * Save dataset with a new name
1784 save datatoimpute.dta
1785 * Keep if data are not missing on demographic covariates
1786 keep if age_cons != . & sex_cons != . & eth_cons != . & marital_cons != . & employment_cons != . &
education_cons != . & wealth_cons != .
1787 * Count total number of participants and observations
1788 unique idauniq
1789 * 4,393 individuals, 35,144 observations
1790 * Keep if data are not missing on health-related covariates
1791 keep if activity_cons != . & bmic_cons != . & oribi_cons != . & wordlist_cons != . & prosbi2_cons != .
. & fluency_cons != . & nrowclme2_cons != . & efficiency_cons != . & depression_cons != .
1792 * Count total number of participants and observations
1793 unique idauniq
1794 * 3,983 individuals, 31,864 observations
1795 * Save dataset with a new name
1796 save exposure.dta
1797 * Keep if mobility data are not missing at baseline
1798 keep if mobilityw2_cons != .
1799 * Count total number of participants and observations
1800 unique idauniq
1801 * 3,982 individuals, 31,856 observations
1802 * Save dataset with a new name
1803 save exposuremobility.dta
1804 * Use exposure.dta dataset
1805 use exposure.dta
1806 * Keep if ADL and IADL data are not missing at baseline
1807 keep if ADLw2_cons != . & IADLw2_cons != .
1808 * Count total number of participants and observations
1809 unique idauniq
1810 * 3,982 individuals, 31,856 observations
1811 * Save dataset with a new name
1812 save exposureADLIADL.dta
1813 * Use exposure.dta dataset
1814 use exposure.dta
1815 * Keep if falls data are not missing at baseline
1816 keep if fallsw2_cons != .
1817 * Count total number of participants and observations
1818 unique idauniq
1819 * 3,980 individuals, 31,840 observations
1820 * Save dataset with a new name
1821 save exposurefalls.dta
1822
1823 * Use datatoimpute.dta - contains complete data on the total SPPB score, but missing data on
covariates and outcomes
1824 use datatoimpute.dta
1825 * Generate a new variable, standardising the orientation in time variable
1826 egen z2oribi = std(oribi_cons)
1827 * Generate a new variable, standardising the immediate and delayed recall variable
1828 egen z2wordlist = std(wordlist_cons)
1829 * Generate a new variable, standardising the prospective memory variable
1830 egen z2prosbi2 = std(prosbi2_cons)
1831 * Generate a new variable, standardising the verbal fluency variable
1832 egen z2fluency = std(fluency_cons)
1833 * Generate a new variable, standardising the processing speed variable
1834 egen z2nrowclme2 = std(nrowclme2_cons)
1835 * Generate a new variable, standardising the processing efficiency variable
1836 egen z2efficiency = std(efficiency_cons)
1837 * Overwrite dataset, by replacing the previously saved file

```

```

1838 save datatoimpute.dta, replace
1839
1840 * Generate a new variable representing the interaction between age and the total SPPB score
1841 gen agesppb = age_cons * totalSPPB_cons
1842 * Generate a new variable representing the interaction between biological sex and the total SPPB score
1843 gen sexsppb = sex_cons * totalSPPB_cons
1844 * Overwrite dataset, by replacing the previously saved file
1845 save datatoimpute.dta, replace
1846
1847 * Drop data from Wave 2 (long format - so the time-constant data from Wave 2 is on the same row as
all follow-up waves used in analyses)
1848 drop if wave==2
1849 * Count total number of participants and observations
1850 unique idauniq
1851 * 4,932 individuals, 34,524 observations
1852 * Save dataset with a new name
1853 save datatoimputenew.dta
1854
1855 * Multiple imputation
1856 * Arrange the multiple datasets in "marginal and long" format
1857 mi set mlong
1858 * Generate summary of missing values (Table S4)
1859 mi misstable summarize totalSPPB_cons balance_cons repctest_cons gait_cons age_cons sex_cons
eth_cons activity_cons marital_cons employment_cons education_cons wealth_cons bmic_cons z2oribi
z2wordlist z2prosbi2 z2fluency z2nrowclme2 z2efficiency depression_cons mobility ADL IADL falls
mobilityw2_cons ADLw2_cons IADLw2_cons fallsw2_cons health_cons limiting_cons mynssec3_cons
living_cons alcohol_cons smoking_cons htvalnew_cons wtvalnew_cons agesppb sexsppb
1860 * Display patterns of missing data
1861 mi misstable patterns totalSPPB_cons balance_cons repctest_cons gait_cons age_cons sex_cons eth_cons
activity_cons marital_cons employment_cons education_cons wealth_cons bmic_cons z2oribi z2wordlist
z2prosbi2 z2fluency z2nrowclme2 z2efficiency depression_cons mobility ADL IADL falls mobilityw2_cons
ADLw2_cons IADLw2_cons fallsw2_cons health_cons limiting_cons mynssec3_cons living_cons alcohol_cons
smoking_cons htvalnew_cons wtvalnew_cons agesppb sexsppb
1862 * Limit the dataset to necessary variables
1863 keep idauniq wave w2xwgt totalSPPB_cons balance_cons repctest_cons gait_cons age_cons sex_cons
eth_cons activity_cons marital_cons employment_cons education_cons wealth_cons bmic_cons z2oribi
z2wordlist z2prosbi2 z2fluency z2nrowclme2 z2efficiency depression_cons mobility ADL IADL falls
mobilityw2_cons ADLw2_cons IADLw2_cons fallsw2_cons health_cons limiting_cons mynssec3_cons
living_cons alcohol_cons smoking_cons htvalnew_cons wtvalnew_cons agesppb sexsppb _mi_miss _mi_m
_mi_id
1864 * Generate dummy variables (with prefix miss_ added to each variable name) to be coded 0 if variable
is observed and 1 if the variable has a missing value
1865 quietly misstable summarize totalSPPB_cons balance_cons repctest_cons gait_cons age_cons sex_cons
eth_cons activity_cons marital_cons employment_cons education_cons wealth_cons bmic_cons z2oribi
z2wordlist z2prosbi2 z2fluency z2nrowclme2 z2efficiency depression_cons mobility ADL IADL falls
mobilityw2_cons ADLw2_cons IADLw2_cons fallsw2_cons health_cons limiting_cons mynssec3_cons
living_cons alcohol_cons smoking_cons htvalnew_cons wtvalnew_cons agesppb sexsppb, generate(miss_)
1866 * Review changes
1867 describe miss_*
1868
1869 * Logistic (logit), ordinal logistic (ologit), multinomial logistic (mlogit), and linear (regress)
regression models to explore whether candidate auxiliary variables predict 1) variables in the
analytic models; and 2) missing data on variables in the analytic models
1870 logit eth_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
smoking_cons
1871 logit miss_eth_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
smoking_cons
1872 ologit activity_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
smoking_cons
1873 logit miss_activity_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
smoking_cons
1874 mlogit marital_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
smoking_cons

```



```

1875  logit miss_marital_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1876  logit employment_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1877  logit miss_employment_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons
      i.smoking_cons
1878  ologit education_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1879  logit miss_education_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons
      i.smoking_cons
1880  ologit wealth_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1881  logit miss_wealth_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1882  regress bmic_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1883  logit miss_bmic_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1884  regress z2oribi i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1885  logit miss_z2oribi i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1886  regress z2wordlist i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1887  logit miss_z2wordlist i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1888  regress z2prosbi2 i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1889  logit miss_z2prosbi2 i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1890  regress z2fluency i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1891  logit miss_z2fluency i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1892  regress z2nrowclme2 i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1893  logit miss_z2nrowclme2 i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1894  regress z2efficiency i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1895  logit miss_z2efficiency i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1896  regress depression_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1897  logit miss_depression_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons
      i.smoking_cons
1898  regress mobility i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1899  logit miss_mobility i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1900  regress ADL i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.smoking_cons
1901  logit miss_ADL i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1902  regress IADL i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.smoking_cons
1903  logit miss_IADL i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1904  logit falls i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.smoking_cons
1905  logit miss_falls i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1906  regress mobilityw2_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1907  logit miss_mobilityw2_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons
      i.smoking_cons

```

```

1908 regress ADLw2_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1909 logit miss_ADLw2_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1910 regress IADLw2_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1911 logit miss_IADLw2_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1912 logit fallsw2_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1913 logit miss_fallsw2_cons i.health_cons i.limiting_cons i.mynssec3_cons i.living_cons i.alcohol_cons i.
      smoking_cons
1914
1915 * Drop unnecessary variables
1916 drop miss_*
1917 * Reshape data into wide format for observations identified by participant ID and add wave as an
      identifying time period
1918 mi reshape wide mobility ADL IADL falls, i(idauniq) j(wave)
1919 * Register all variables with missing values that need to be imputed
1920 mi register imputed eth_cons activity_cons marital_cons employment_cons education_cons wealth_cons
      bmic_cons z2oribi z2wordlist z2prosb2 z2fluency z2nrowclme2 z2efficiency depression_cons mobility3
      mobility4 mobility5 mobility6 mobility7 mobility8 mobility9 ADL3 ADL4 ADL5 ADL6 ADL7 ADL8 ADL9 IADL3
      IADL4 IADL5 IADL6 IADL7 IADL8 IADL9 falls3 falls4 falls5 falls6 falls7 falls8 falls9 mobilityw2_cons
      ADLw2_cons IADLw2_cons fallsw2_cons health_cons limiting_cons mynssec3_cons alcohol_cons smoking_cons
      htvalnew_cons wtvalnew_cons
1921 * Register all variables with no missing values and/or which do not require imputation
1922 mi register regular age_cons sex_cons agesppb sexsppb living_cons totalSPPB_cons balance_cons
      repctest_cons gait_cons
1923 * Clear panel data settings
1924 mi xtset, clear
1925
1926 * Impute variables
1927 * Imputation methods:
1928 * logit: logistic
1929 * mlogit: multinomial logistic
1930 * ologit: ordinal logistic
1931 * regress: linear
1932 * pmm: predictive mean matching
1933 * Notes: The variables on the right of the "=" sign have no missing information and are therefore
      solely considered predictors of missing values. The imputation model is weighted using the
      cross-sectional sampling weight from Wave 2. The "add(25)" command specifies the number of
      imputations to be performed; rseed() sets the seed.
1934 mi impute chained (logit) falls3 falls4 falls5 falls6 falls7 falls8 falls9 eth_cons employment_cons
      limiting_cons fallsw2_cons (mlogit) marital_cons smoking_cons (ologit) activity_cons education_cons
      wealth_cons health_cons mynssec3_cons alcohol_cons (regress) z2oribi z2wordlist z2prosb2 z2fluency
      z2nrowclme2 z2efficiency (pmm, knn(5)) depression_cons mobility3 mobility4 mobility5 mobility6
      mobility7 mobility8 mobility9 ADL3 ADL4 ADL5 ADL6 ADL7 ADL8 ADL9 IADL3 IADL4 IADL5 IADL6 IADL7 IADL8
      IADL9 mobilityw2_cons ADLw2_cons IADLw2_cons bmic_cons htvalnew_cons wtvalnew_cons = totalSPPB_cons
      balance_cons repctest_cons gait_cons sex_cons age_cons living_cons agesppb sexsppb [pweight=w2xwgt],
      add(25) rseed(54321) noisily
1935 * Save the multiple datasets in wide format
1936 save miwide4932.dta
1937
1938 * Reshape data into long format
1939 mi reshape long mobility ADL IADL falls, i(idauniq) j(wave)
1940 * Save the multiple datasets in long format
1941 save milong4932.dta
1942 * Generate a new variable and passively impute the sum of the individual domain z-scores for
      cognitive function
1943 mi passive: gen cognitiveraw = z2oribi + z2wordlist + z2prosb2 + z2fluency + z2nrowclme2 +
      z2efficiency
1944 * Generate a new variable and passively impute the global cognitive function z-score
1945 mi passive: egen zcog_cons = std(cognitiveraw)

```



```

1946 * Save dataset with a new name
1947 save milong4932zcog.dta
1948
1949 *****
1950 ***DATA ANALYSIS***
1951 *****
1952
1953 * MULTIPLE IMPUTATION MODELS
1954 * mixed: Multilevel mixed-effects linear regression command
1955 * pweight: Incorporates sampling weights at higher levels (i.e., participant level)
1956 * ##: Specifies the main effects for each variable and an interaction
1957 * i.: Denotes a factor variable
1958 * c.: Denotes a continuous variable
1959 * mi estimate: Runs the analytical model (i.e., multilevel linear regression) within each of the
imputed datasets
1960 * Display base levels of factor variables and their interactions in output tables
1961 set showbaselevels on
1962 * Mobility - Total SPPB score (Table S9)
1963 * Model 1
1964 mi estimate: mixed mobility totalSPPB_cons || idauniq: wave, pweight(w2xwgt)
1965 * Model 2
1966 mi estimate: mixed mobility totalSPPB_cons wave || idauniq: wave, pweight(w2xwgt)
1967 * Model 3
1968 mi estimate: mixed mobility totalSPPB_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)
1969 * Model 4
1970 mi estimate: mixed mobility totalSPPB_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
1971 * Model 5
1972 mi estimate: mixed mobility totalSPPB_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons || idauniq: wave, pweight(w2xwgt)
1973 * Model 6
1974 mi estimate: mixed mobility totalSPPB_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons mobilityw2_cons || idauniq: wave, pweight(w2xwgt)
1975 * Model 7
1976 mi estimate: mixed mobility c.totalSPPB_cons##c.age_cons c.wave##c.wave i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons mobilityw2_cons || idauniq: wave, pweight(w2xwgt)
1977 * Model 8
1978 mi estimate: mixed mobility c.totalSPPB_cons##i.sex_cons c.wave##c.wave age_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons mobilityw2_cons || idauniq: wave, pweight(w2xwgt)
1979 * Model 9
1980 mi estimate: mixed mobility c.totalSPPB_cons##c.wave c.wave#c.wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons mobilityw2_cons || idauniq: wave, pweight(w2xwgt)
1981 * Model 10
1982 mi estimate: mixed mobility c.totalSPPB_cons##c.wave##c.wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons mobilityw2_cons || idauniq: wave, pweight(w2xwgt)
1983 * Model 11
1984 mi estimate: mixed mobility c.totalSPPB_cons##c.wave##c.wave age_cons c.totalSPPB_cons#i.sex_cons i.
sex_cons i.eth_cons i.marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons
bmic_cons zcog_cons depression_cons mobilityw2_cons || idauniq: wave, pweight(w2xwgt)
1985
1986 * Mobility - Balance (Table S13)
1987 * Model 1
1988 mi estimate: mixed mobility i.balance_cons || idauniq: wave, pweight(w2xwgt)
1989 * Model 2
1990 mi estimate: mixed mobility i.balance_cons wave || idauniq: wave, pweight(w2xwgt)
1991 * Model 3
1992 mi estimate: mixed mobility i.balance_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)

```

```

1993 * Model 4
1994 mi estimate: mixed mobility i.balance_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
1995 * Model 5
1996 mi estimate: mixed mobility i.balance_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons || idauniq: wave, pweight(w2xwgt)
1997 * Model 6
1998 mi estimate: mixed mobility i.balance_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons mobilityw2_cons || idauniq: wave, pweight(w2xwgt)
1999
2000 * Mobility - Repeated Chair Stand (Table S13)
2001 * Model 1
2002 mi estimate: mixed mobility i.repcstest_cons || idauniq: wave, pweight(w2xwgt)
2003 * Model 2
2004 mi estimate: mixed mobility i.repcstest_cons wave || idauniq: wave, pweight(w2xwgt)
2005 * Model 3
2006 mi estimate: mixed mobility i.repcstest_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)
2007 * Model 4
2008 mi estimate: mixed mobility i.repcstest_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2009 * Model 5
2010 mi estimate: mixed mobility i.repcstest_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons || idauniq: wave, pweight(w2xwgt)
2011 * Model 6
2012 mi estimate: mixed mobility i.repcstest_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons mobilityw2_cons || idauniq: wave, pweight(w2xwgt)
2013
2014 * Mobility - Gait (Table S13)
2015 * Model 1
2016 mi estimate: mixed mobility i.gait_cons || idauniq: wave, pweight(w2xwgt)
2017 * Model 2
2018 mi estimate: mixed mobility i.gait_cons wave || idauniq: wave, pweight(w2xwgt)
2019 * Model 3
2020 mi estimate: mixed mobility i.gait_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)
2021 * Model 4
2022 mi estimate: mixed mobility i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons
i.employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2023 * Model 5
2024 mi estimate: mixed mobility i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons
i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
|| idauniq: wave, pweight(w2xwgt)
2025 * Model 6
2026 mi estimate: mixed mobility i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons
i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
mobilityw2_cons || idauniq: wave, pweight(w2xwgt)
2027
2028 * Mobility - Mutually adjusted (Table S14)
2029 * Model 1
2030 mi estimate: mixed mobility i.balance_cons i.repcstest_cons i.gait_cons || idauniq: wave, pweight(
w2xwgt)
2031 * Model 2
2032 mi estimate: mixed mobility i.balance_cons i.repcstest_cons i.gait_cons wave || idauniq: wave,
pweight(w2xwgt)
2033 * Model 3
2034 mi estimate: mixed mobility i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave || idauniq:
wave, pweight(w2xwgt)
2035 * Model 4
2036 mi estimate: mixed mobility i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave age_cons i.
sex_cons i.eth_cons i.marital_cons i.employment_cons i.education_cons i.wealth_cons || idauniq: wave,

```

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    pweight(w2xwgt)
2037 * Model 5
2038 mi estimate: mixed mobility i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave age_cons i.
sex_cons i.eth_cons i.marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons
bmic_cons zcog_cons depression_cons || idauniq: wave, pweight(w2xwgt)
2039 * Model 6
2040 mi estimate: mixed mobility i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave age_cons i.
sex_cons i.eth_cons i.marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons
bmic_cons zcog_cons depression_cons mobilityw2_cons || idauniq: wave, pweight(w2xwgt)
2041
2042 * ADL - Total SPPB score (Table S9)
2043 * Model 1
2044 mi estimate: mixed ADL totalSPPB_cons || idauniq: wave, pweight(w2xwgt)
2045 * Model 2
2046 mi estimate: mixed ADL totalSPPB_cons wave || idauniq: wave, pweight(w2xwgt)
2047 * Model 3
2048 mi estimate: mixed ADL totalSPPB_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)
2049 * Model 4
2050 mi estimate: mixed ADL totalSPPB_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2051 * Model 5
2052 mi estimate: mixed ADL totalSPPB_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons ||
idauniq: wave, pweight(w2xwgt)
2053 * Model 6
2054 mi estimate: mixed ADL totalSPPB_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
ADLw2_cons || idauniq: wave, pweight(w2xwgt)
2055 * Model 7
2056 mi estimate: mixed ADL c.totalSPPB_cons##c.age_cons c.wave##c.wave i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons ADLw2_cons || idauniq: wave, pweight(w2xwgt)
2057 * Model 8
2058 mi estimate: mixed ADL c.totalSPPB_cons##i.sex_cons c.wave##c.wave age_cons i.eth_cons i.marital_cons
i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
ADLw2_cons || idauniq: wave, pweight(w2xwgt)
2059 * Model 9
2060 mi estimate: mixed ADL c.totalSPPB_cons##c.wave c.wave#c.wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons ADLw2_cons || idauniq: wave, pweight(w2xwgt)
2061 * Model 10
2062 mi estimate: mixed ADL c.totalSPPB_cons##c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons
i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
ADLw2_cons || idauniq: wave, pweight(w2xwgt)
2063
2064 * ADL - Balance (Table S13)
2065 * Model 1
2066 mi estimate: mixed ADL i.balance_cons || idauniq: wave, pweight(w2xwgt)
2067 * Model 2
2068 mi estimate: mixed ADL i.balance_cons wave || idauniq: wave, pweight(w2xwgt)
2069 * Model 3
2070 mi estimate: mixed ADL i.balance_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)
2071 * Model 4
2072 mi estimate: mixed ADL i.balance_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2073 * Model 5
2074 mi estimate: mixed ADL i.balance_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons ||
idauniq: wave, pweight(w2xwgt)
2075 * Model 6
2076 mi estimate: mixed ADL i.balance_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
ADLw2_cons || idauniq: wave, pweight(w2xwgt)

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2077
2078 * ADL - Repeated Chair Stand (Table S13)
2079 * Model 1
2080 mi estimate: mixed ADL i.repcstest_cons || idauniq: wave, pweight(w2xwgt)
2081 * Model 2
2082 mi estimate: mixed ADL i.repcstest_cons wave || idauniq: wave, pweight(w2xwgt)
2083 * Model 3
2084 mi estimate: mixed ADL i.repcstest_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)
2085 * Model 4
2086 mi estimate: mixed ADL i.repcstest_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons
i.employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2087 * Model 5
2088 mi estimate: mixed ADL i.repcstest_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons
i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
|| idauniq: wave, pweight(w2xwgt)
2089 * Model 6
2090 mi estimate: mixed ADL i.repcstest_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons
i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
ADLw2_cons || idauniq: wave, pweight(w2xwgt)
2091
2092 * ADL - Gait (Table S13)
2093 * Model 1
2094 mi estimate: mixed ADL i.gait_cons || idauniq: wave, pweight(w2xwgt)
2095 * Model 2
2096 mi estimate: mixed ADL i.gait_cons wave || idauniq: wave, pweight(w2xwgt)
2097 * Model 3
2098 mi estimate: mixed ADL i.gait_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)
2099 * Model 4
2100 mi estimate: mixed ADL i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2101 * Model 5
2102 mi estimate: mixed ADL i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons ||
idauniq: wave, pweight(w2xwgt)
2103 * Model 6
2104 mi estimate: mixed ADL i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
ADLw2_cons || idauniq: wave, pweight(w2xwgt)
2105
2106 * ADL - Mutually adjusted (Table S14)
2107 * Model 1
2108 mi estimate: mixed ADL i.balance_cons i.repcstest_cons i.gait_cons || idauniq: wave, pweight(w2xwgt)
2109 * Model 2
2110 mi estimate: mixed ADL i.balance_cons i.repcstest_cons i.gait_cons wave || idauniq: wave, pweight(
w2xwgt)
2111 * Model 3
2112 mi estimate: mixed ADL i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave || idauniq: wave,
pweight(w2xwgt)
2113 * Model 4
2114 mi estimate: mixed ADL i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave age_cons i.sex_cons
i.eth_cons i.marital_cons i.employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight
(w2xwgt)
2115 * Model 5
2116 mi estimate: mixed ADL i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave age_cons i.sex_cons
i.eth_cons i.marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons
zcog_cons depression_cons || idauniq: wave, pweight(w2xwgt)
2117 * Model 6
2118 mi estimate: mixed ADL i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave age_cons i.sex_cons
i.eth_cons i.marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons
zcog_cons depression_cons ADLw2_cons || idauniq: wave, pweight(w2xwgt)
2119
2120 * IADL - Total SPPB score (Table S9)
2121 * Model 1

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2122 mi estimate: mixed IADL totalSPPB_cons || idauniq: wave, pweight(w2xwgt)
2123 * Model 2
2124 mi estimate: mixed IADL totalSPPB_cons wave || idauniq: wave, pweight(w2xwgt)
2125 * Model 3
2126 mi estimate: mixed IADL totalSPPB_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)
2127 * Model 4
2128 mi estimate: mixed IADL totalSPPB_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i
.employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2129 * Model 5
2130 mi estimate: mixed IADL totalSPPB_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i
.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
|| idauniq: wave, pweight(w2xwgt)
2131 * Model 6
2132 mi estimate: mixed IADL totalSPPB_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i
.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
IADLw2_cons || idauniq: wave, pweight(w2xwgt)
2133 * Model 7
2134 mi estimate: mixed IADL c.totalSPPB_cons##c.age_cons c.wave##c.wave i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons IADLw2_cons || idauniq: wave, pweight(w2xwgt)
2135 * Model 8
2136 mi estimate: mixed IADL c.totalSPPB_cons##i.sex_cons c.wave##c.wave age_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons IADLw2_cons || idauniq: wave, pweight(w2xwgt)
2137 * Model 9
2138 mi estimate: mixed IADL c.totalSPPB_cons##c.wave c.wave#c.wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons IADLw2_cons || idauniq: wave, pweight(w2xwgt)
2139 * Model 10
2140 mi estimate: mixed IADL c.totalSPPB_cons##c.wave##c.wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons IADLw2_cons || idauniq: wave, pweight(w2xwgt)
2141 * Model 11
2142 mi estimate: mixed IADL c.totalSPPB_cons##c.wave##c.wave c.totalSPPB_cons#c.age_cons age_cons i.
sex_cons i.eth_cons i.marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons
bmic_cons zcog_cons depression_cons IADLw2_cons || idauniq: wave, pweight(w2xwgt)
2143
2144 * IADL - Balance (Table S13)
2145 * Model 1
2146 mi estimate: mixed IADL i.balance_cons || idauniq: wave, pweight(w2xwgt)
2147 * Model 2
2148 mi estimate: mixed IADL i.balance_cons wave || idauniq: wave, pweight(w2xwgt)
2149 * Model 3
2150 mi estimate: mixed IADL i.balance_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)
2151 * Model 4
2152 mi estimate: mixed IADL i.balance_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i
.employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2153 * Model 5
2154 mi estimate: mixed IADL i.balance_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i
.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
|| idauniq: wave, pweight(w2xwgt)
2155 * Model 6
2156 mi estimate: mixed IADL i.balance_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i
.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
IADLw2_cons || idauniq: wave, pweight(w2xwgt)
2157
2158 * IADL - Repeated Chair Stand (Table S13)
2159 * Model 1
2160 mi estimate: mixed IADL i.repcstest_cons || idauniq: wave, pweight(w2xwgt)
2161 * Model 2
2162 mi estimate: mixed IADL i.repcstest_cons wave || idauniq: wave, pweight(w2xwgt)
2163 * Model 3
2164 mi estimate: mixed IADL i.repcstest_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)

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2165 * Model 4
2166 mi estimate: mixed IADL i.repcstest_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons
      i.employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2167 * Model 5
2168 mi estimate: mixed IADL i.repcstest_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons
      i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
      || idauniq: wave, pweight(w2xwgt)
2169 * Model 6
2170 mi estimate: mixed IADL i.repcstest_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons
      i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
      IADLw2_cons || idauniq: wave, pweight(w2xwgt)
2171
2172 * IADL - Gait (Table S13)
2173 * Model 1
2174 mi estimate: mixed IADL i.gait_cons || idauniq: wave, pweight(w2xwgt)
2175 * Model 2
2176 mi estimate: mixed IADL i.gait_cons wave || idauniq: wave, pweight(w2xwgt)
2177 * Model 3
2178 mi estimate: mixed IADL i.gait_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)
2179 * Model 4
2180 mi estimate: mixed IADL i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
      employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2181 * Model 5
2182 mi estimate: mixed IADL i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
      employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons ||
      idauniq: wave, pweight(w2xwgt)
2183 * Model 6
2184 mi estimate: mixed IADL i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
      employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
      IADLw2_cons || idauniq: wave, pweight(w2xwgt)
2185
2186 * IADL - Mutually adjusted (Table S14)
2187 * Model 1
2188 mi estimate: mixed IADL i.balance_cons i.repcstest_cons i.gait_cons || idauniq: wave, pweight(w2xwgt)
2189 * Model 2
2190 mi estimate: mixed IADL i.balance_cons i.repcstest_cons i.gait_cons wave || idauniq: wave, pweight(
      w2xwgt)
2191 * Model 3
2192 mi estimate: mixed IADL i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave || idauniq: wave,
      pweight(w2xwgt)
2193 * Model 4
2194 mi estimate: mixed IADL i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave age_cons i.
      sex_cons i.eth_cons i.marital_cons i.employment_cons i.education_cons i.wealth_cons || idauniq: wave,
      pweight(w2xwgt)
2195 * Model 5
2196 mi estimate: mixed IADL i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave age_cons i.
      sex_cons i.eth_cons i.marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons
      bmic_cons zcog_cons depression_cons || idauniq: wave, pweight(w2xwgt)
2197 * Model 6
2198 mi estimate: mixed IADL i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave age_cons i.
      sex_cons i.eth_cons i.marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons
      bmic_cons zcog_cons depression_cons IADLw2_cons || idauniq: wave, pweight(w2xwgt)
2199
2200 * melogit: Multilevel mixed-effects logistic regression command
2201 * or: Reports fixed-effects coefficients as odds ratios
2202 * cmdok: Forces the "melogit" command to run on imputed data
2203 * Falls - Total SPPB score (Table S9)
2204 * Model 1
2205 mi estimate, or cmdok: melogit falls totalSPPB_cons || idauniq:, pweight(w2xwgt)
2206 * Model 2
2207 mi estimate, or cmdok: melogit falls totalSPPB_cons wave || idauniq:, pweight(w2xwgt)
2208 * Model 3
2209 mi estimate, or cmdok: melogit falls totalSPPB_cons c.wave##c.wave || idauniq:, pweight(w2xwgt)

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2210 * Model 4
2211 mi estimate, or cmdok: melogit falls totalSPPB_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons || idauniq:, pweight(w2xwgt)
2212 * Model 5
2213 mi estimate, or cmdok: melogit falls totalSPPB_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons || idauniq:, pweight(w2xwgt)
2214 * Model 6
2215 mi estimate, or cmdok: melogit falls totalSPPB_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons i.fallsw2_cons || idauniq:, pweight(w2xwgt)
2216 * Model 7
2217 mi estimate, or cmdok: melogit falls c.totalSPPB_cons##c.age_cons wave i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons i.fallsw2_cons || idauniq:, pweight(w2xwgt)
2218 * Model 8
2219 mi estimate, or cmdok: melogit falls c.totalSPPB_cons##i.sex_cons wave age_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons i.fallsw2_cons || idauniq:, pweight(w2xwgt)
2220 * Model 9
2221 mi estimate, or cmdok: melogit falls c.totalSPPB_cons##c.wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons i.fallsw2_cons || idauniq:, pweight(w2xwgt)
2222 * Model 10
2223 mi estimate, or cmdok: melogit falls c.totalSPPB_cons#c.wave#c.wave c.totalSPPB_cons#c.wave
totalSPPB_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.education_cons
i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.fallsw2_cons || idauniq:, pweight
(w2xwgt)
2224
2225 * Falls - Balance (Table S13)
2226 * Model 1
2227 mi estimate, or cmdok: melogit falls i.balance_cons || idauniq:, pweight(w2xwgt)
2228 * Model 2
2229 mi estimate, or cmdok: melogit falls i.balance_cons wave || idauniq:, pweight(w2xwgt)
2230 * Model 3
2231 mi estimate, or cmdok: melogit falls i.balance_cons c.wave##c.wave || idauniq:, pweight(w2xwgt)
2232 * Model 4
2233 mi estimate, or cmdok: melogit falls i.balance_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons || idauniq:, pweight(w2xwgt)
2234 * Model 5
2235 mi estimate, or cmdok: melogit falls i.balance_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons || idauniq:, pweight(w2xwgt)
2236 * Model 6
2237 mi estimate, or cmdok: melogit falls i.balance_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons i.fallsw2_cons || idauniq:, pweight(w2xwgt)
2238
2239 * Falls - Repeated Chair Stand (Table S13)
2240 * Model 1
2241 mi estimate, or cmdok: melogit falls i.repcstest_cons || idauniq:, pweight(w2xwgt)
2242 * Model 2
2243 mi estimate, or cmdok: melogit falls i.repcstest_cons wave || idauniq:, pweight(w2xwgt)
2244 * Model 3
2245 mi estimate, or cmdok: melogit falls i.repcstest_cons c.wave##c.wave || idauniq:, pweight(w2xwgt)
2246 * Model 4
2247 mi estimate, or cmdok: melogit falls i.repcstest_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons || idauniq:, pweight(w2xwgt)
2248 * Model 5
2249 mi estimate, or cmdok: melogit falls i.repcstest_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons || idauniq:, pweight(w2xwgt)
2250 * Model 6

```

```

2251 mi estimate, or cmdok: melogit falls i.repcstest_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmics_cons zcog_cons
depression_cons i.fallsw2_cons || idauniq:, pweight(w2xwgt)
2252
2253 * Falls - Gait (Table S13)
2254 * Model 1
2255 mi estimate, or cmdok: melogit falls i.gait_cons || idauniq:, pweight(w2xwgt)
2256 * Model 2
2257 mi estimate, or cmdok: melogit falls i.gait_cons wave || idauniq:, pweight(w2xwgt)
2258 * Model 3
2259 mi estimate, or cmdok: melogit falls i.gait_cons c.wave##c.wave || idauniq:, pweight(w2xwgt)
2260 * Model 4
2261 mi estimate, or cmdok: melogit falls i.gait_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons || idauniq:, pweight(w2xwgt)
2262 * Model 5
2263 mi estimate, or cmdok: melogit falls i.gait_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmics_cons zcog_cons depression_cons
|| idauniq:, pweight(w2xwgt)
2264 * Model 6
2265 mi estimate, or cmdok: melogit falls i.gait_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmics_cons zcog_cons depression_cons i.
fallsw2_cons || idauniq:, pweight(w2xwgt)
2266
2267 * Falls - Mutually adjusted (Table S14)
2268 * Model 1
2269 mi estimate, or cmdok: melogit falls i.balance_cons i.repcstest_cons i.gait_cons || idauniq:, pweight
(w2xwgt)
2270 * Model 2
2271 mi estimate, or cmdok: melogit falls i.balance_cons i.repcstest_cons i.gait_cons wave || idauniq:,
pweight(w2xwgt)
2272 * Model 3
2273 mi estimate, or cmdok: melogit falls i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave ||
idauniq:, pweight(w2xwgt)
2274 * Model 4
2275 mi estimate, or cmdok: melogit falls i.balance_cons i.repcstest_cons i.gait_cons wave age_cons i.
sex_cons i.eth_cons i.marital_cons i.employment_cons i.education_cons i.wealth_cons || idauniq:,
pweight(w2xwgt)
2276 * Model 5
2277 mi estimate, or cmdok: melogit falls i.balance_cons i.repcstest_cons i.gait_cons wave age_cons i.
sex_cons i.eth_cons i.marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons
bmics_cons zcog_cons depression_cons || idauniq:, pweight(w2xwgt)
2278 * Model 6
2279 mi estimate, or cmdok: melogit falls i.balance_cons i.repcstest_cons i.gait_cons wave age_cons i.
sex_cons i.eth_cons i.marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons
bmics_cons zcog_cons depression_cons i.fallsw2_cons || idauniq:, pweight(w2xwgt)
2280
2281 * Use the dataset with no missing mobility data at baseline
2282 use exposuremobility.dta
2283 * Keep observations in Wave 3-9 with available mobility data
2284 keep if mobility != .
2285 * Count total number of participants and observations
2286 unique idauniq
2287 * 3,548 individuals, 16,934 observations
2288 * Save dataset with a new name
2289 save mobilityCC.dta
2290 * Generate a variable that assigns the number 1 to the row representing participants' first
observation
2291 bysort idauniq (wave): gen firstnew = 1 if _n==1
2292 * Generate a new variable, duplicating the orientation in time variable at the participant's first
observation
2293 gen oribiz = oribi_cons if firstnew==1
2294 * Generate a new variable, duplicating the immediate and delayed recall variable at the
participant's first observation

```

```

2295 gen wordlistz = wordlist_cons if firstnew==1
2296 * Generate a new variable, duplicating the prospective memory variable at the participant's first
      observation
2297 gen prosbi2z = prosbi2_cons if firstnew==1
2298 * Generate a new variable, duplicating the verbal fluency variable at the participant's first
      observation
2299 gen fluencyz = fluency_cons if firstnew==1
2300 * Generate a new variable, duplicating the processing speed variable at the participant's first
      observation
2301 gen nrowclme2z = nrowclme2_cons if firstnew==1
2302 * Generate a new variable, duplicating the processing efficiency variable at the participant's first
      observation
2303 gen efficiencyz = efficiency_cons if firstnew==1
2304 * Generate a new variable, standardising the orientation in time variable
2305 egen z2oribi = std(oribiz)
2306 * Generate a new variable, standardising the immediate and delayed recall variable
2307 egen z2wordlist = std(wordlistz)
2308 * Generate a new variable, standardising the prospective memory variable
2309 egen z2prosbiz = std(prosbiz)
2310 * Generate a new variable, standardising the verbal fluency variable
2311 egen z2fluency = std(fluencyz)
2312 * Generate a new variable, standardising the processing speed variable
2313 egen z2nrowclme2 = std(nrowclme2z)
2314 * Generate a new variable, standardising the processing efficiency variable
2315 egen z2efficiency = std(efficiencyz)
2316 * Generate a new variable equal to the sum of the individual domain z-scores for cognitive function
2317 gen cognitiveraw = z2oribi + z2wordlist + z2prosbiz + z2fluency + z2nrowclme2 + z2efficiency
2318 * Generate a new variable standardising the sum of the individual domain z-scores, to generate a
      global cognitive function z-score
2319 egen zcog = std(cognitiveraw)
2320
2321 * Time-constant global cognitive function
2322 * Generate a new variable duplicating the global cognitive function variable at participants' first
      observation
2323 gen zcog_cons = zcog if firstnew==1
2324 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2325 tsset idauniq wave
2326 * Carryforward observations with respect to the time variable "wave" (i.e., from participants' first
      observation to the follow-up waves) by participant ID
2327 bysort idauniq: carryforward zcog_cons, replace
2328 * Save complete case mobility dataset
2329 save mobilityCCzcog.dta
2330
2331 * Display base levels of factor variables and their interactions in output tables
2332 set showbaselevels on
2333 * Mobility - Total SPPB score (Table 2)
2334 * Model 1
2335 mixed mobility totalSPPB_cons || idauniq: wave, pweight(w2xwgt)
2336 * Model 2
2337 mixed mobility totalSPPB_cons wave || idauniq: wave, pweight(w2xwgt)
2338 * Model 3
2339 mixed mobility totalSPPB_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)
2340 * Model 4
2341 mixed mobility totalSPPB_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
      education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2342 * Model 5
2343 mixed mobility totalSPPB_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
      education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons || idauniq: wave,
      pweight(w2xwgt)
2344 * Model 6
2345 mixed mobility totalSPPB_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
      education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons mobilityw2_cons ||
      idauniq: wave, pweight(w2xwgt)

```

```

2346 * Model 7
2347 mixed mobility c.totalSPPB_cons##c.age_cons wave i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
mobilityw2_cons || idauniq: wave, pweight(w2xwgt)
2348 * Model 8
2349 mixed mobility c.totalSPPB_cons##i.sex_cons wave age_cons i.eth_cons i.marital_cons i.employment_cons
i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons mobilityw2_cons
|| idauniq: wave, pweight(w2xwgt)
2350 * Model 9
2351 mixed mobility c.totalSPPB_cons##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
mobilityw2_cons || idauniq: wave, pweight(w2xwgt)
2352 * Model 10
2353 mixed mobility c.totalSPPB_cons#c.wave#c.wave c.totalSPPB_cons#c.wave totalSPPB_cons wave age_cons i.
sex_cons i.eth_cons i.marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons
bmic_cons zcog_cons depression_cons mobilityw2_cons || idauniq: wave, pweight(w2xwgt)
2354 * Model 11
2355 mixed mobility c.totalSPPB_cons#c.wave#c.wave c.totalSPPB_cons#c.wave c.totalSPPB_cons##i.sex_cons
wave age_cons i.eth_cons i.marital_cons i.employment_cons i.education_cons i.wealth_cons i.
activity_cons bmic_cons zcog_cons depression_cons mobilityw2_cons || idauniq: wave, pweight(w2xwgt)
2356 * Simple slopes for the relationship of baseline total SPPB score on mobility impairments at
different follow-up waves (Figure 1a)
2357 margins, at(totalSPPB_cons=(0(2)12) wave=(3(1)9)) vsquish vce(unconditional)
2358 marginsplot, noci x(totalSPPB_cons) recast(line) xlabel(0(2)12)
2359 * Marginal effects of biological sex on mobility impairments at representative values of the
baseline total SPPB score (Figure S5a)
2360 margins, dydx(sex_cons) at(totalSPPB_cons=(0(2)12)) vsquish vce(unconditional)
2361 marginsplot, yline(0)
2362
2363 * Mobility - Balance (Table 3)
2364 * Model 1
2365 mixed mobility i.balance_cons || idauniq: wave, pweight(w2xwgt)
2366 * Model 2
2367 mixed mobility i.balance_cons wave || idauniq: wave, pweight(w2xwgt)
2368 * Model 3
2369 mixed mobility i.balance_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)
2370 * Model 4
2371 mixed mobility i.balance_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2372 * Model 5
2373 mixed mobility i.balance_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons ||
idauniq: wave, pweight(w2xwgt)
2374 * Model 6
2375 mixed mobility i.balance_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
mobilityw2_cons || idauniq: wave, pweight(w2xwgt)
2376
2377 * Mobility - Repeated Chair Stand (Table 3)
2378 * Model 1
2379 mixed mobility i.repcstest_cons || idauniq: wave, pweight(w2xwgt)
2380 * Model 2
2381 mixed mobility i.repcstest_cons wave || idauniq: wave, pweight(w2xwgt)
2382 * Model 3
2383 mixed mobility i.repcstest_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)
2384 * Model 4
2385 mixed mobility i.repcstest_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2386 * Model 5
2387 mixed mobility i.repcstest_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons ||
idauniq: wave, pweight(w2xwgt)
2388 * Model 6

```

```

2389 mixed mobility i.repcstest_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
mobilityw2_cons || idauniq: wave, pweight(w2xwgt)

2390
2391 * Mobility - Gait (Table 3)
2392 * Model 1
2393 mixed mobility i.gait_cons || idauniq: wave, pweight(w2xwgt)
2394 * Model 2
2395 mixed mobility i.gait_cons wave || idauniq: wave, pweight(w2xwgt)
2396 * Model 3
2397 mixed mobility i.gait_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)
2398 * Model 4
2399 mixed mobility i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2400 * Model 5
2401 mixed mobility i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons ||
idauniq: wave, pweight(w2xwgt)
2402 * Model 6
2403 mixed mobility i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
mobilityw2_cons || idauniq: wave, pweight(w2xwgt)

2404
2405 * Mobility - Mutually adjusted (Table S10)
2406 * Model 1
2407 mixed mobility i.balance_cons i.repcstest_cons i.gait_cons || idauniq: wave, pweight(w2xwgt)
2408 * Model 2
2409 mixed mobility i.balance_cons i.repcstest_cons i.gait_cons wave || idauniq: wave, pweight(w2xwgt)
2410 * Model 3
2411 mixed mobility i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave || idauniq: wave, pweight(
w2xwgt)
2412 * Model 4
2413 mixed mobility i.balance_cons i.repcstest_cons i.gait_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2414 * Model 5
2415 mixed mobility i.balance_cons i.repcstest_cons i.gait_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons || idauniq: wave, pweight(w2xwgt)
2416 * Model 6
2417 mixed mobility i.balance_cons i.repcstest_cons i.gait_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons mobilityw2_cons || idauniq: wave, pweight(w2xwgt)

2418
2419 * Mobility binary - Balance (Table S11)
2420 * Model 1
2421 melogit mobilitybi i.balance_cons || idauniq:, pweight(w2xwgt) or
2422 * Model 2
2423 melogit mobilitybi i.balance_cons wave || idauniq:, pweight(w2xwgt) or
2424 * Model 3
2425 melogit mobilitybi i.balance_cons c.wave##c.wave || idauniq:, pweight(w2xwgt) or
2426 * Model 4
2427 melogit mobilitybi i.balance_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons || idauniq:, pweight(w2xwgt) or
2428 * Model 5
2429 melogit mobilitybi i.balance_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons ||
idauniq:, pweight(w2xwgt) or
2430 * Generate a new variable and assign the number 0 to any participants who reported zero difficulties
at Wave 2
2431 gen mobilitybiw2_cons = 0 if mobilityw2_cons==0
2432 * Assign the number 1 to any participants who reported at least one difficulty at Wave 2
2433 replace mobilitybiw2_cons = 1 if inlist(mobilityw2_cons,1,2,3,4,5,6,7,8,9,10)
2434 * Save dataset with a new name

```



```

2435 save mobilitybinary.dta
2436 * Model 6
2437 melogit mobilitybi i.balance_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.
mobilitybiw2_cons || idauniq:, pweight(w2xwgt) or

2438
2439 * Mobility binary - Repeated Chair Stand (Table S11)
2440 * Model 1
2441 melogit mobilitybi i.repcstest_cons || idauniq:, pweight(w2xwgt) or
2442 * Model 2
2443 melogit mobilitybi i.repcstest_cons wave || idauniq:, pweight(w2xwgt) or
2444 * Model 3
2445 melogit mobilitybi i.repcstest_cons c.wave##c.wave || idauniq:, pweight(w2xwgt) or
2446 * Model 4
2447 melogit mobilitybi i.repcstest_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons || idauniq:, pweight(w2xwgt) or
2448 * Model 5
2449 melogit mobilitybi i.repcstest_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons ||
idauniq:, pweight(w2xwgt) or
2450 * Model 6
2451 melogit mobilitybi i.repcstest_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.
mobilitybiw2_cons || idauniq:, pweight(w2xwgt) or

2452
2453 * Mobility binary - Gait (Table S11)
2454 * Model 1
2455 melogit mobilitybi i.gait_cons || idauniq:, pweight(w2xwgt) or
2456 * Model 2
2457 melogit mobilitybi i.gait_cons wave || idauniq:, pweight(w2xwgt) or
2458 * Model 3
2459 melogit mobilitybi i.gait_cons c.wave##c.wave || idauniq:, pweight(w2xwgt) or
2460 * Model 4
2461 melogit mobilitybi i.gait_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
.education_cons i.wealth_cons || idauniq:, pweight(w2xwgt) or
2462 * Model 5
2463 melogit mobilitybi i.gait_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons || idauniq:,
pweight(w2xwgt) or
2464 * Model 6
2465 melogit mobilitybi i.gait_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.mobilitybiw2_cons
|| idauniq:, pweight(w2xwgt) or

2466
2467 * Mobility binary - Mutually adjusted (Table S12)
2468 * Model 1
2469 melogit mobilitybi i.balance_cons i.repcstest_cons i.gait_cons || idauniq:, pweight(w2xwgt) or
2470 * Model 2
2471 melogit mobilitybi i.balance_cons i.repcstest_cons i.gait_cons wave || idauniq:, pweight(w2xwgt) or
2472 * Model 3
2473 melogit mobilitybi i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave || idauniq:, pweight(
w2xwgt) or
2474 * Model 4
2475 melogit mobilitybi i.balance_cons i.repcstest_cons i.gait_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons || idauniq:, pweight(w2xwgt) or
2476 * Model 5
2477 melogit mobilitybi i.balance_cons i.repcstest_cons i.gait_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons || idauniq:, pweight(w2xwgt) or
2478 * Model 6
2479 melogit mobilitybi i.balance_cons i.repcstest_cons i.gait_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons i.mobilitybiw2_cons || idauniq:, pweight(w2xwgt) or

```

```

2480
2481 use mobilitybinary.dta
2482 * Mobility binary - Total SPPB score (Table S8)
2483 * Model 1
2484 melogit mobilitybi totalSPPB_cons || idauniq:, pweight(w2xwgt) or
2485 * Model 2
2486 melogit mobilitybi totalSPPB_cons wave || idauniq:, pweight(w2xwgt) or
2487 * Model 3
2488 melogit mobilitybi totalSPPB_cons c.wave##c.wave || idauniq:, pweight(w2xwgt) or
2489 * Model 4
2490 melogit mobilitybi totalSPPB_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons || idauniq:, pweight(w2xwgt) or
2491 * Model 5
2492 melogit mobilitybi totalSPPB_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons ||
idauniq:, pweight(w2xwgt) or
2493 * Model 6
2494 melogit mobilitybi totalSPPB_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.
mobilitybiw2_cons || idauniq:, pweight(w2xwgt) or
2495 * Model 7
2496 melogit mobilitybi c.totalSPPB_cons##c.age_cons wave i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.
mobilitybiw2_cons || idauniq:, pweight(w2xwgt) or
2497 * Model 8
2498 melogit mobilitybi c.totalSPPB_cons##i.sex_cons wave age_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.
mobilitybiw2_cons || idauniq:, pweight(w2xwgt) or
2499 * Model 9
2500 melogit mobilitybi c.totalSPPB_cons##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.
mobilitybiw2_cons || idauniq:, pweight(w2xwgt) or
2501 * Model 10
2502 melogit mobilitybi c.totalSPPB_cons#c.wave#c.wave c.totalSPPB_cons#c.wave totalSPPB_cons wave
age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.education_cons i.wealth_cons i.
activity_cons bmic_cons zcog_cons depression_cons i.mobilitybiw2_cons || idauniq:, pweight(w2xwgt) or
2503
2504 * Use the dataset with no missing ADL or IADL data at baseline
2505 use exposureADLIADL.dta
2506 * Keep observations in Wave 3-9 with available ADL and IADL data
2507 keep if ADL != .
2508 keep if IADL != .
2509 * Count total number of participants and observations
2510 unique idauniq
2511 * 3,547 individuals, 16,934 observations
2512 * Save dataset with a new name
2513 save ADLIADLCC.dta
2514 * Generate a variable that assigns the number 1 to the row representing participants' first
observation
2515 bysort idauniq (wave): gen firstnew = 1 if _n==1
2516 * Generate a new variable, duplicating the orientation in time variable at the participant's first
observation
2517 gen oribi = oribi_cons if firstnew==1
2518 * Generate a new variable, duplicating the immediate and delayed recall variable at the
participant's first observation
2519 gen wordlistz = wordlist_cons if firstnew==1
2520 * Generate a new variable, duplicating the prospective memory variable at the participant's first
observation
2521 gen prosbi2z = prosbi2_cons if firstnew==1
2522 * Generate a new variable, duplicating the verbal fluency variable at the participant's first
observation
2523 gen fluencyz = fluency_cons if firstnew==1
2524 * Generate a new variable, duplicating the processing speed variable at the participant's first

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observation
2525 gen nrowclme2z = nrowclme2_cons if firstnew==1
2526 * Generate a new variable, duplicating the processing efficiency variable at the participant's first
observation
2527 gen efficiencyz = efficiency_cons if firstnew==1
2528 * Generate a new variable, standardising the orientation in time variable
2529 egen z2oribi = std(oribiz)
2530 * Generate a new variable, standardising the immediate and delayed recall variable
2531 egen z2wordlist = std(wordlistz)
2532 * Generate a new variable, standardising the prospective memory variable
2533 egen z2prosbiz = std(prosbiz)
2534 * Generate a new variable, standardising the verbal fluency variable
2535 egen z2fluency = std(fluencyz)
2536 * Generate a new variable, standardising the processing speed variable
2537 egen z2nrowclme2 = std(nrowclme2z)
2538 * Generate a new variable, standardising the processing efficiency variable
2539 egen z2efficiency = std(efficiencyz)
2540 * Generate a new variable equal to the sum of the individual domain z-scores for cognitive function
2541 gen cognitiveraw = z2oribi + z2wordlist + z2prosbiz + z2fluency + z2nrowclme2 + z2efficiency
2542 * Generate a new variable standardising the sum of the individual domain z-scores, to generate a
global cognitive function z-score
2543 egen zcog = std(cognitiveraw)
2544
2545 * Time-constant global cognitive function
2546 * Generate a new variable duplicating the global cognitive function variable at participants' first
observation
2547 gen zcog_cons = zcog if firstnew==1
2548 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2549 tsset idauniq wave
2550 * Carryforward observations with respect to the time variable "wave" (i.e., from participants' first
observation to the follow-up waves) by participant ID
2551 bysort idauniq: carryforward zcog_cons, replace
2552 * Save complete case ADL/IADL dataset
2553 save ADLIADLCCzcog.dta
2554
2555 * ADL - Total SPPB score (Table 2)
2556 * Model 1
2557 mixed ADL totalSPPB_cons || idauniq: wave, pweight(w2xwgt)
2558 * Model 2
2559 mixed ADL totalSPPB_cons wave || idauniq: wave, pweight(w2xwgt)
2560 * Model 3
2561 mixed ADL totalSPPB_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)
2562 * Model 4
2563 mixed ADL totalSPPB_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2564 * Model 5
2565 mixed ADL totalSPPB_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons ||
idauniq: wave, pweight(w2xwgt)
2566 * Model 6
2567 mixed ADL totalSPPB_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
ADLw2_cons || idauniq: wave, pweight(w2xwgt)
2568 * Model 7
2569 mixed ADL c.totalSPPB_cons##c.age_cons c.wave##c.wave i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
ADLw2_cons || idauniq: wave, pweight(w2xwgt)
2570 * Model 8
2571 mixed ADL c.totalSPPB_cons##i.sex_cons c.wave##c.wave age_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
ADLw2_cons || idauniq: wave, pweight(w2xwgt)
2572 * Model 9
2573 mixed ADL c.totalSPPB_cons##c.wave c.wave#c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.

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employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
ADLw2_cons || idauniq: wave, pweight(w2xwgt)
2574 * Simple slopes for the relationship of baseline total SPPB score on ADL disabilities at different
follow-up waves (Figure 1b)
2575 margins, at(totalSPPB_cons=(0 12) wave=(3(1)9)) vsquish vce(unconditional)
2576 marginsplot, noci x(totalSPPB_cons) recast(line) xlabel(0(2)12)
2577 * Model 10
2578 mixed ADL c.totalSPPB_cons##c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
ADLw2_cons || idauniq: wave, pweight(w2xwgt)

2579 * ADL - Balance (Table 3)
2580 * Model 1
2581 mixed ADL i.balance_cons || idauniq: wave, pweight(w2xwgt)
2582 * Model 2
2583 mixed ADL i.balance_cons wave || idauniq: wave, pweight(w2xwgt)
2584 * Model 3
2585 mixed ADL i.balance_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)
2586 * Model 4
2587 mixed ADL i.balance_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2588 * Model 5
2589 mixed ADL i.balance_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons ||
idauniq: wave, pweight(w2xwgt)
2590 * Model 6
2591 mixed ADL i.balance_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
ADLw2_cons || idauniq: wave, pweight(w2xwgt)

2592 * ADL - Repeated Chair Stand (Table 3)
2593 * Model 1
2594 mixed ADL i.repcstest_cons || idauniq: wave, pweight(w2xwgt)
2595 * Model 2
2596 mixed ADL i.repcstest_cons wave || idauniq: wave, pweight(w2xwgt)
2597 * Model 3
2598 mixed ADL i.repcstest_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)
2599 * Model 4
2600 mixed ADL i.repcstest_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2601 * Model 5
2602 mixed ADL i.repcstest_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons ||
idauniq: wave, pweight(w2xwgt)
2603 * Model 6
2604 mixed ADL i.repcstest_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
ADLw2_cons || idauniq: wave, pweight(w2xwgt)

2605 * ADL - Gait (Table 3)
2606 * Model 1
2607 mixed ADL i.gait_cons || idauniq: wave, pweight(w2xwgt)
2608 * Model 2
2609 mixed ADL i.gait_cons wave || idauniq: wave, pweight(w2xwgt)
2610 * Model 3
2611 mixed ADL i.gait_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)
2612 * Model 4
2613 mixed ADL i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons
i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2614 * Model 5
2615 mixed ADL i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons
i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons || idauniq: wave,
pweight(w2xwgt)

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2619 * Model 6
2620 mixed ADL i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons
i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons ADLw2_cons ||
idauniq: wave, pweight(w2xwgt)

2621
2622 * ADL - Mutually adjusted (Table S10)
2623 * Model 1
2624 mixed ADL i.balance_cons i.repcstest_cons i.gait_cons || idauniq: wave, pweight(w2xwgt)
2625 * Model 2
2626 mixed ADL i.balance_cons i.repcstest_cons i.gait_cons wave || idauniq: wave, pweight(w2xwgt)
2627 * Model 3
2628 mixed ADL i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)
2629 * Model 4
2630 mixed ADL i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i
.marital_cons i.employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2631 * Model 5
2632 mixed ADL i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i
.marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons || idauniq: wave, pweight(w2xwgt)
2633 * Model 6
2634 mixed ADL i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i
.marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons ADLw2_cons || idauniq: wave, pweight(w2xwgt)

2635
2636 * ADL binary - Balance (Table S11)
2637 * Model 1
2638 melogit ADLbi i.balance_cons || idauniq:, pweight(w2xwgt) or
2639 * Model 2
2640 melogit ADLbi i.balance_cons wave || idauniq:, pweight(w2xwgt) or
2641 * Model 3
2642 melogit ADLbi i.balance_cons c.wave##c.wave || idauniq:, pweight(w2xwgt) or
2643 * Model 4
2644 melogit ADLbi i.balance_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons || idauniq:, pweight(w2xwgt) or
2645 * Model 5
2646 melogit ADLbi i.balance_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons || idauniq:, pweight
(w2xwgt) or
2647 * Generate a new variable and assign the number 0 to any participants who reported zero difficulties
at Wave 2
2648 gen ADLbiw2_cons = 0 if ADLw2_cons==0
2649 * Assign the number 1 to any participants who reported at least one difficulty at Wave 2
2650 replace ADLbiw2_cons = 1 if inlist(ADLw2_cons,1,2,3,4,5,6)
2651 * Model 6
2652 melogit ADLbi i.balance_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.ADLbiw2_cons ||
idauniq:, pweight(w2xwgt) or

2653
2654 * ADL binary - Repeated Chair Stand (Table S11)
2655 * Model 1
2656 melogit ADLbi i.repcstest_cons || idauniq:, pweight(w2xwgt) or
2657 * Model 2
2658 melogit ADLbi i.repcstest_cons wave || idauniq:, pweight(w2xwgt) or
2659 * Model 3
2660 melogit ADLbi i.repcstest_cons c.wave##c.wave || idauniq:, pweight(w2xwgt) or
2661 * Model 4
2662 melogit ADLbi i.repcstest_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i
.education_cons i.wealth_cons || idauniq:, pweight(w2xwgt) or
2663 * Model 5
2664 melogit ADLbi i.repcstest_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i
.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons || idauniq:,
pweight(w2xwgt) or
2665 * Model 6

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2666 melogit ADLbi i.repcstest_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i
.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.ADLbiw2_cons ||
idauniq:, pweight(w2xwgt) or
2667
2668 * ADL binary - Gait (Table S11)
2669 * Model 1
2670 melogit ADLbi i.gait_cons || idauniq:, pweight(w2xwgt) or
2671 * Model 2
2672 melogit ADLbi i.gait_cons wave || idauniq:, pweight(w2xwgt) or
2673 * Model 3
2674 melogit ADLbi i.gait_cons c.wave##c.wave || idauniq:, pweight(w2xwgt) or
2675 * Model 4
2676 melogit ADLbi i.gait_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons || idauniq:, pweight(w2xwgt) or
2677 * Model 5
2678 melogit ADLbi i.gait_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons || idauniq:, pweight
(w2xwgt) or
2679 * Model 6
2680 melogit ADLbi i.gait_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.ADLbiw2_cons ||
idauniq:, pweight(w2xwgt) or
2681
2682 * ADL binary - Mutually adjusted (Table S12)
2683 * Model 1
2684 melogit ADLbi i.balance_cons i.repcstest_cons i.gait_cons || idauniq:, pweight(w2xwgt) or
2685 * Model 2
2686 melogit ADLbi i.balance_cons i.repcstest_cons i.gait_cons wave || idauniq:, pweight(w2xwgt) or
2687 * Model 3
2688 melogit ADLbi i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave || idauniq:, pweight(w2xwgt)
or
2689 * Model 4
2690 melogit ADLbi i.balance_cons i.repcstest_cons i.gait_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons || idauniq:, pweight(w2xwgt) or
2691 * Model 5
2692 melogit ADLbi i.balance_cons i.repcstest_cons i.gait_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons || idauniq:, pweight(w2xwgt) or
2693 * Model 6
2694 melogit ADLbi i.balance_cons i.repcstest_cons i.gait_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons i.ADLbiw2_cons || idauniq:, pweight(w2xwgt) or
2695
2696 * IADL - Total SPPB score (Table 2)
2697 * Model 1
2698 mixed IADL totalSPPB_cons || idauniq: wave, pweight(w2xwgt)
2699 * Model 2
2700 mixed IADL totalSPPB_cons wave || idauniq: wave, pweight(w2xwgt)
2701 * Model 3
2702 mixed IADL totalSPPB_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)
2703 * Model 4
2704 mixed IADL totalSPPB_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2705 * Model 5
2706 mixed IADL totalSPPB_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons ||
idauniq: wave, pweight(w2xwgt)
2707 * Model 6
2708 mixed IADL totalSPPB_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
IADLw2_cons || idauniq: wave, pweight(w2xwgt)
2709 * Model 7
2710 mixed IADL c.totalSPPB_cons##c.age_cons c.wave##c.wave i.sex_cons i.eth_cons i.marital_cons i.

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employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
IADLw2_cons || idauniq: wave, pweight(w2xwgt)
2711 * Model 8
2712 mixed IADL c.totalSPPB_cons##i.sex_cons c.wave##c.wave age_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
IADLw2_cons || idauniq: wave, pweight(w2xwgt)
2713 * Model 9
2714 mixed IADL c.totalSPPB_cons##c.wave c.wave#c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
IADLw2_cons || idauniq: wave, pweight(w2xwgt)
2715 * Model 10
2716 mixed IADL c.totalSPPB_cons##c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
IADLw2_cons || idauniq: wave, pweight(w2xwgt)
2717 * Model 11
2718 mixed IADL c.totalSPPB_cons#c.wave c.wave##c.wave c.totalSPPB_cons##c.age_cons i.sex_cons i.eth_cons
i.marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons IADLw2_cons || idauniq: wave, pweight(w2xwgt)
2719 * Simple slopes for the relationship of baseline total SPPB score on mobility impairments at
different follow-up waves (Figure 1c)
2720 margins, at(totalSPPB_cons=(0 12) wave=(3(1)9)) vsquish vce(unconditional)
2721 marginsplot, noci x(totalSPPB_cons) recast(line) xlabel(0(2)12)
2722 * Simple slopes for the relationship of baseline total SPPB score on IADL disabilities at different
age values (Figure S5c)
2723 margins, at(totalSPPB_cons=(0 12) age=(60(5)90)) vsquish vce(unconditional)
2724 marginsplot, noci x(totalSPPB_cons) recast(line) xlabel(0(2)12)
2725
2726 * IADL - Balance (Table 3)
2727 * Model 1
2728 mixed IADL i.balance_cons || idauniq: wave, pweight(w2xwgt)
2729 * Model 2
2730 mixed IADL i.balance_cons wave || idauniq: wave, pweight(w2xwgt)
2731 * Model 3
2732 mixed IADL i.balance_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)
2733 * Model 4
2734 mixed IADL i.balance_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2735 * Model 5
2736 mixed IADL i.balance_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons ||
idauniq: wave, pweight(w2xwgt)
2737 * Model 6
2738 mixed IADL i.balance_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons
IADLw2_cons || idauniq: wave, pweight(w2xwgt)
2739
2740 * IADL - Repeated Chair Stand (Table 3)
2741 * Model 1
2742 mixed IADL i.repcstest_cons || idauniq: wave, pweight(w2xwgt)
2743 * Model 2
2744 mixed IADL i.repcstest_cons wave || idauniq: wave, pweight(w2xwgt)
2745 * Model 3
2746 mixed IADL i.repcstest_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)
2747 * Model 4
2748 mixed IADL i.repcstest_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2749 * Model 5
2750 mixed IADL i.repcstest_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons ||
idauniq: wave, pweight(w2xwgt)
2751 * Model 6
2752 mixed IADL i.repcstest_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons

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IADLw2_cons || idauniq: wave, pweight(w2xwgt)
2753
2754 * IADL - Gait (Table 3)
2755 * Model 1
2756 mixed IADL i.gait_cons || idauniq: wave, pweight(w2xwgt)
2757 * Model 2
2758 mixed IADL i.gait_cons wave || idauniq: wave, pweight(w2xwgt)
2759 * Model 3
2760 mixed IADL i.gait_cons c.wave##c.wave || idauniq: wave, pweight(w2xwgt)
2761 * Model 4
2762 mixed IADL i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons
i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2763 * Model 5
2764 mixed IADL i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons
i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons || idauniq: wave,
pweight(w2xwgt)
2765 * Model 6
2766 mixed IADL i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons
i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons IADLw2_cons ||
idauniq: wave, pweight(w2xwgt)
2767
2768 * IADL - Mutually adjusted (Table S10)
2769 * Model 1
2770 mixed IADL i.balance_cons i.repcstest_cons i.gait_cons || idauniq: wave, pweight(w2xwgt)
2771 * Model 2
2772 mixed IADL i.balance_cons i.repcstest_cons i.gait_cons wave || idauniq: wave, pweight(w2xwgt)
2773 * Model 3
2774 mixed IADL i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave || idauniq: wave, pweight(
w2xwgt)
2775 * Model 4
2776 mixed IADL i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons
i.marital_cons i.employment_cons i.education_cons i.wealth_cons || idauniq: wave, pweight(w2xwgt)
2777 * Model 5
2778 mixed IADL i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons
i.marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons || idauniq: wave, pweight(w2xwgt)
2779 * Model 6
2780 mixed IADL i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave age_cons i.sex_cons i.eth_cons
i.marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons IADLw2_cons || idauniq: wave, pweight(w2xwgt)
2781
2782 * IADL binary - Balance (Table S11)
2783 * Model 1
2784 melogit IADLbi i.balance_cons || idauniq:, pweight(w2xwgt) or
2785 * Model 2
2786 melogit IADLbi i.balance_cons wave || idauniq:, pweight(w2xwgt) or
2787 * Model 3
2788 melogit IADLbi i.balance_cons c.wave##c.wave || idauniq:, pweight(w2xwgt) or
2789 * Model 4
2790 melogit IADLbi i.balance_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons || idauniq:, pweight(w2xwgt) or
2791 * Model 5
2792 melogit IADLbi i.balance_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons || idauniq:, pweight
(w2xwgt) or
2793 * Generate a new variable and assign the number 0 to any participants who reported zero difficulties
at Wave 2
2794 gen IADLbiw2_cons = 0 if IADLw2_cons==0
2795 * Assign the number 1 to any participants who reported at least one difficulty at Wave 2
2796 replace IADLbiw2_cons = 1 if inlist(IADLw2_cons,1,2,3,4,5,6,7)
2797 * Save dataset with a new name
2798 save ADLIADLbinary.dta
2799 * Model 6

```

```

2800 melogit IADLbi i.balance_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.IADLbiw2_cons ||
idauniq:, pweight(w2xwgt) or
2801
2802 * IADL binary - Repeated Chair Stand (Table S11)
2803 * Model 1
2804 melogit IADLbi i.repcstest_cons || idauniq:, pweight(w2xwgt) or
2805 * Model 2
2806 melogit IADLbi i.repcstest_cons wave || idauniq:, pweight(w2xwgt) or
2807 * Model 3
2808 melogit IADLbi i.repcstest_cons c.wave##c.wave || idauniq:, pweight(w2xwgt) or
2809 * Model 4
2810 melogit IADLbi i.repcstest_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons
i.education_cons i.wealth_cons || idauniq:, pweight(w2xwgt) or
2811 * Model 5
2812 melogit IADLbi i.repcstest_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons
i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons || idauniq:,
pweight(w2xwgt) or
2813 * Model 6
2814 melogit IADLbi i.repcstest_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons
i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.IADLbiw2_cons ||
idauniq:, pweight(w2xwgt) or
2815
2816 * IADL binary - Gait (Table S11)
2817 * Model 1
2818 melogit IADLbi i.gait_cons || idauniq:, pweight(w2xwgt) or
2819 * Model 2
2820 melogit IADLbi i.gait_cons wave || idauniq:, pweight(w2xwgt) or
2821 * Model 3
2822 melogit IADLbi i.gait_cons c.wave##c.wave || idauniq:, pweight(w2xwgt) or
2823 * Model 4
2824 melogit IADLbi i.gait_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons || idauniq:, pweight(w2xwgt) or
2825 * Model 5
2826 melogit IADLbi i.gait_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons || idauniq:, pweight
(w2xwgt) or
2827 * Model 6
2828 melogit IADLbi i.gait_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.IADLbiw2_cons ||
idauniq:, pweight(w2xwgt) or
2829
2830 * IADL binary - Mutually adjusted (Table S12)
2831 * Model 1
2832 melogit IADLbi i.balance_cons i.repcstest_cons i.gait_cons || idauniq:, pweight(w2xwgt) or
2833 * Model 2
2834 melogit IADLbi i.balance_cons i.repcstest_cons i.gait_cons wave || idauniq:, pweight(w2xwgt) or
2835 * Model 3
2836 melogit IADLbi i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave || idauniq:, pweight(w2xwgt
) or
2837 * Model 4
2838 melogit IADLbi i.balance_cons i.repcstest_cons i.gait_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons || idauniq:, pweight(w2xwgt) or
2839 * Model 5
2840 melogit IADLbi i.balance_cons i.repcstest_cons i.gait_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons || idauniq:, pweight(w2xwgt) or
2841 * Model 6
2842 melogit IADLbi i.balance_cons i.repcstest_cons i.gait_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons i.IADLbiw2_cons || idauniq:, pweight(w2xwgt) or
2843
2844 use ADLIADLbinary.dta

```

```

2845 * ADL binary - Total SPPB score (Table S8)
2846 * Model 1
2847 melogit ADLbi totalSPPB_cons || idauniq:, pweight(w2xwgt) or
2848 * Model 2
2849 melogit ADLbi totalSPPB_cons wave || idauniq:, pweight(w2xwgt) or
2850 * Model 3
2851 melogit ADLbi totalSPPB_cons c.wave##c.wave || idauniq:, pweight(w2xwgt) or
2852 * Model 4
2853 melogit ADLbi totalSPPB_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons || idauniq:, pweight(w2xwgt) or
2854 * Model 5
2855 melogit ADLbi totalSPPB_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons || idauniq:, pweight
(w2xwgt) or
2856 * Model 6
2857 melogit ADLbi totalSPPB_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.ADLbiw2_cons ||
idauniq:, pweight(w2xwgt) or
2858 * Model 7
2859 melogit ADLbi c.totalSPPB_cons##c.age_cons wave i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.
ADLbiw2_cons || idauniq:, pweight(w2xwgt) or
2860 * Model 8
2861 melogit ADLbi c.totalSPPB_cons##i.sex_cons wave age_cons i.eth_cons i.marital_cons i.employment_cons
i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.ADLbiw2_cons ||
idauniq:, pweight(w2xwgt) or
2862 * Model 9
2863 melogit ADLbi c.totalSPPB_cons##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.
ADLbiw2_cons || idauniq:, pweight(w2xwgt) or
2864 * Model 10
2865 melogit ADLbi c.totalSPPB_cons#c.wave#c.wave c.totalSPPB_cons#c.wave totalSPPB_cons wave age_cons i.
sex_cons i.eth_cons i.marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons
bmic_cons zcog_cons depression_cons i.ADLbiw2_cons || idauniq:, pweight(w2xwgt) or
2866 * Model 11
2867 melogit ADLbi c.totalSPPB_cons##c.wave c.totalSPPB_cons#c.age_cons age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons i.ADLbiw2_cons || idauniq:, pweight(w2xwgt) or
2868
2869 * IADL binary - Total SPPB score (Table S8)
2870 * Model 1
2871 melogit IADLbi totalSPPB_cons || idauniq:, pweight(w2xwgt) or
2872 * Model 2
2873 melogit IADLbi totalSPPB_cons wave || idauniq:, pweight(w2xwgt) or
2874 * Model 3
2875 melogit IADLbi totalSPPB_cons c.wave##c.wave || idauniq:, pweight(w2xwgt) or
2876 * Model 4
2877 melogit IADLbi totalSPPB_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons || idauniq:, pweight(w2xwgt) or
2878 * Model 5
2879 melogit IADLbi totalSPPB_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons || idauniq:, pweight
(w2xwgt) or
2880 * Model 6
2881 melogit IADLbi totalSPPB_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.IADLbiw2_cons ||
idauniq:, pweight(w2xwgt) or
2882 * Model 7
2883 melogit IADLbi c.totalSPPB_cons##c.age_cons wave i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.
IADLbiw2_cons || idauniq:, pweight(w2xwgt) or
2884 * Model 8
2885 melogit IADLbi c.totalSPPB_cons##i.sex_cons wave age_cons i.eth_cons i.marital_cons i.employment_cons

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i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.IADLbiw2_cons
|| idauniq:, pweight(w2xwgt) or
2886 * Model 9
2887 melogit IADLbi c.totalSPPB_cons##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.
IADLbiw2_cons || idauniq:, pweight(w2xwgt) or
2888 * Model 10
2889 melogit IADLbi c.totalSPPB_cons#c.wave#c.wave c.totalSPPB_cons#c.wave totalSPPB_cons wave age_cons i.
sex_cons i.eth_cons i.marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons
bmic_cons zcog_cons depression_cons i.IADLbiw2_cons || idauniq:, pweight(w2xwgt) or
2890
2891 * Use the dataset with no missing falls data at baseline
2892 use exposurefalls.dta
2893 * Keep observations in Wave 3-9 with available falls data
2894 keep if falls != .
2895 * Count total number of participants and observations
2896 unique idauniq
2897 * 3,505 individuals, 16,332 observations
2898 * Save dataset with a new name
2899 save fallsCC.dta
2900 * Generate a variable that assigns the number 1 to the row representing participants' first
observation
2901 bysort idauniq (wave): gen firstnew = 1 if _n==1
2902 * Generate a new variable, duplicating the orientation in time variable at the participant's first
observation
2903 gen oribiz = oribi_cons if firstnew==1
2904 * Generate a new variable, duplicating the immediate and delayed recall variable at the
participant's first observation
2905 gen wordlistz = wordlist_cons if firstnew==1
2906 * Generate a new variable, duplicating the prospective memory variable at the participant's first
observation
2907 gen prosbi2z = prosbi2_cons if firstnew==1
2908 * Generate a new variable, duplicating the verbal fluency variable at the participant's first
observation
2909 gen fluencyz = fluency_cons if firstnew==1
2910 * Generate a new variable, duplicating the processing speed variable at the participant's first
observation
2911 gen nrowclme2z = nrowclme2_cons if firstnew==1
2912 * Generate a new variable, duplicating the processing efficiency variable at the participant's first
observation
2913 gen efficiencyz = efficiency_cons if firstnew==1
2914 * Generate a new variable, standardising the orientation in time variable
2915 egen z2oribi = std(oribiz)
2916 * Generate a new variable, standardising the immediate and delayed recall variable
2917 egen z2wordlist = std(wordlistz)
2918 * Generate a new variable, standardising the prospective memory variable
2919 egen z2prosbi2 = std(prosbi2z)
2920 * Generate a new variable, standardising the verbal fluency variable
2921 egen z2fluency = std(fluencyz)
2922 * Generate a new variable, standardising the processing speed variable
2923 egen z2nrowclme2 = std(nrowclme2z)
2924 * Generate a new variable, standardising the processing efficiency variable
2925 egen z2efficiency = std(efficiencyz)
2926 * Generate a new variable equal to the sum of the individual domain z-scores for cognitive function
2927 gen cognitiveraw = z2oribi + z2wordlist + z2prosbi2 + z2fluency + z2nrowclme2 + z2efficiency
2928 * Generate a new variable standardising the sum of the individual domain z-scores, to generate a
global cognitive function z-score
2929 egen zcog = std(cognitiveraw)
2930
2931 * Time-constant global cognitive function
2932 * Generate a new variable duplicating the global cognitive function variable at participants' first
observation
2933 gen zcog_cons = zcog if firstnew==1

```

```

2934 * Declare a panel dataset with participant ID "idauniq" and time variable "wave"
2935 tsset idauniq wave
2936 * Carryforward observations with respect to the time variable "wave" (i.e., from participants' first
observation to the follow-up waves) by participant ID
2937 bysort idauniq: carryforward zcog_cons, replace
2938 * Save complete case falls dataset
2939 save fallsCCzcog.dta
2940
2941 * Falls - Total SPPB score (Table 2)
2942 * Model 1
2943 melogit falls totalSPPB_cons || idauniq:, pweight(w2xwgt) or
2944 * Model 2
2945 melogit falls totalSPPB_cons wave || idauniq:, pweight(w2xwgt) or
2946 * Model 3
2947 melogit falls totalSPPB_cons c.wave##c.wave || idauniq:, pweight(w2xwgt) or
2948 * Model 4
2949 melogit falls totalSPPB_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons || idauniq:, pweight(w2xwgt) or
2950 * Model 5
2951 melogit falls totalSPPB_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons || idauniq:, pweight
(w2xwgt) or
2952 * Model 6
2953 melogit falls totalSPPB_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.fallsw2_cons ||
idauniq:, pweight(w2xwgt) or
2954 * Model 7
2955 melogit falls c.totalSPPB_cons##c.age_cons wave i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.
fallsw2_cons || idauniq:, pweight(w2xwgt) or
2956 * Model 8
2957 melogit falls c.totalSPPB_cons##i.sex_cons wave age_cons i.eth_cons i.marital_cons i.employment_cons
i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.fallsw2_cons ||
idauniq:, pweight(w2xwgt) or
2958 * Marginal effects of biological sex on falls at representative values of the baseline total SPPB
score (Figure S5b)
2959 margins, dydx(sex_cons) at(totalSPPB_cons=(0(2)12)) predict(mu fixedonly) vsquish vce(unconditional)
2960 marginsplot, yline(0)
2961 * Model 9
2962 melogit falls c.totalSPPB_cons##c.wave age_cons i.sex_cons i.eth_cons i.marital_cons i.
employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.
fallsw2_cons || idauniq:, pweight(w2xwgt) or
2963 * Model 10
2964 melogit falls c.totalSPPB_cons#c.wave#c.wave c.totalSPPB_cons#c.wave totalSPPB_cons wave age_cons i.
sex_cons i.eth_cons i.marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons
bmic_cons zcog_cons depression_cons i.fallsw2_cons || idauniq:, pweight(w2xwgt) or
2965
2966 * Falls - Balance (Table 3)
2967 * Model 1
2968 melogit falls i.balance_cons || idauniq:, pweight(w2xwgt) or
2969 * Model 2
2970 melogit falls i.balance_cons wave || idauniq:, pweight(w2xwgt) or
2971 * Model 3
2972 melogit falls i.balance_cons c.wave##c.wave || idauniq:, pweight(w2xwgt) or
2973 * Model 4
2974 melogit falls i.balance_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons || idauniq:, pweight(w2xwgt) or
2975 * Model 5
2976 melogit falls i.balance_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons || idauniq:, pweight
(w2xwgt) or
2977 * Model 6
2978 melogit falls i.balance_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.

```

```

education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.fallsw2_cons ||
idauniq:, pweight(w2xwgt) or
2979
2980 * Falls - Repeated Chair Stand (Table 3)
2981 * Model 1
2982 melogit falls i.repcstest_cons || idauniq:, pweight(w2xwgt) or
2983 * Model 2
2984 melogit falls i.repcstest_cons wave || idauniq:, pweight(w2xwgt) or
2985 * Model 3
2986 melogit falls i.repcstest_cons c.wave##c.wave || idauniq:, pweight(w2xwgt) or
2987 * Model 4
2988 melogit falls i.repcstest_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i
.education_cons i.wealth_cons || idauniq:, pweight(w2xwgt) or
2989 * Model 5
2990 melogit falls i.repcstest_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i
.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons || idauniq:,
pweight(w2xwgt) or
2991 * Model 6
2992 melogit falls i.repcstest_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i
.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.fallsw2_cons ||
idauniq:, pweight(w2xwgt) or
2993
2994 * Falls - Gait (Table 3)
2995 * Model 1
2996 melogit falls i.gait_cons || idauniq:, pweight(w2xwgt) or
2997 * Model 2
2998 melogit falls i.gait_cons wave || idauniq:, pweight(w2xwgt) or
2999 * Model 3
3000 melogit falls i.gait_cons c.wave##c.wave || idauniq:, pweight(w2xwgt) or
3001 * Model 4
3002 melogit falls i.gait_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons || idauniq:, pweight(w2xwgt) or
3003 * Model 5
3004 melogit falls i.gait_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons || idauniq:, pweight
(w2xwgt) or
3005 * Model 6
3006 melogit falls i.gait_cons wave age_cons i.sex_cons i.eth_cons i.marital_cons i.employment_cons i.
education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons depression_cons i.fallsw2_cons ||
idauniq:, pweight(w2xwgt) or
3007
3008 * Falls - Mutually adjusted (Table S10)
3009 * Model 1
3010 melogit falls i.balance_cons i.repcstest_cons i.gait_cons || idauniq:, pweight(w2xwgt) or
3011 * Model 2
3012 melogit falls i.balance_cons i.repcstest_cons i.gait_cons wave || idauniq:, pweight(w2xwgt) or
3013 * Model 3
3014 melogit falls i.balance_cons i.repcstest_cons i.gait_cons c.wave##c.wave || idauniq:, pweight(w2xwgt)
or
3015 * Model 4
3016 melogit falls i.balance_cons i.repcstest_cons i.gait_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons || idauniq:, pweight(w2xwgt) or
3017 * Model 5
3018 melogit falls i.balance_cons i.repcstest_cons i.gait_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons || idauniq:, pweight(w2xwgt) or
3019 * Model 6
3020 melogit falls i.balance_cons i.repcstest_cons i.gait_cons wave age_cons i.sex_cons i.eth_cons i.
marital_cons i.employment_cons i.education_cons i.wealth_cons i.activity_cons bmic_cons zcog_cons
depression_cons i.fallsw2_cons || idauniq:, pweight(w2xwgt) or
3021
3022 use data05.dta
3023 * SPPB

```

```

3024 * Balance
3025 tab mmbcsc
3026 tab mmsssc
3027 tab mmssre
3028 tab mmsssc if mmssre==3
3029 sum mmssti if mmssti!=-1
3030 tab mmssre if mmssti!=-1
3031 sum mmssna if mmssna!=-1
3032 tab mmssna if mmssna!=-1
3033 tab mmsssc if mmssna!=-1
3034
3035 tab mmstsc
3036 tab mmstsc if mmssna!=-1
3037 tab mmssre if mmstsc==1
3038 tab mmstre
3039 tab mmstsc if mmstre==3
3040 sum mmstti if mmstti!=-1
3041 tab mmstre if mmstti!=-1
3042 sum mmstna if mmstna!=-1
3043 tab mmstna if mmstna!=-1
3044 tab mmstsc if mmstna!=-1
3045
3046 tab mmftsc
3047 tab mmftsc if mmssna!=-1 | mmssti!=-1
3048 tab mmftsc if mmstti!=-1
3049 tab mmftsc if mmstna!=-1
3050 tab mmftre2
3051 tab mmftsc if mmftre2==5
3052 sum mmftti if mmftti!=-1
3053 sum mmftti if inlist(mmftre2,2,4)
3054 tab mmftre2 if mmftti!=-1
3055 tab mmftre2 if inlist(mmftre2,2,4)
3056 sum mmftti if mmftti >=3 & mmftti < 10
3057 sum mmftti if mmftti >=3 & mmftti < 10 & mmftre2==2
3058 sum mmftti if mmftti >=3 & mmftti < 10 & mmftre2==4
3059 sum mmftti if mmftti < 3 & mmftti!=-1
3060 sum mmftti if mmftti < 3 & mmftti!=-1 & mmftre2==2
3061 sum mmftti if mmftti < 3 & mmftti!=-1 & mmftre2==4
3062 tab mmftre2 if mmftti >=10 & mmftti!=.
3063 sum mmftti if mmftti >=10 & mmftti!=.
3064 sum mmftna if mmftna!=-1
3065 tab mmftna if mmftna!=-1
3066 tab mmftsc if mmftna!=-1
3067
3068 tab sidebyside
3069 tab semitandem
3070 tab tandem
3071 tab balance
3072 tab balance2
3073
3074 * Repeated Chair Stand Test
3075 tab mmcrav
3076 tab mmcrsc
3077 tab mmcrre
3078 tab mmcrre if mmcrav==2 | inlist(mmcrsc,-8,2)
3079 sum mmcrna if mmcrna!=-1
3080 tab mmcrna if mmcrna!=-1
3081 tab mmrrsc
3082 tab mmcrre if mmrrsc==1
3083 tab mmrrre
3084 tab mmrrsc if mmrrre==1
3085 tab mmrrre if inlist(mmrrsc,2,-1)
3086 tab mmrrfti if mmrrfti<0

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```

3087 sum mmrrfti if mmrrre>=5
3088 sum mmrrfti if mmrrfti>=0
3089 tab mmrrfti if mmrrfti>=0 & mmrrfti<4
3090 sum mmrrfti if mmrrfti<=11.19 & mmrrfti>=0
3091 sum mmrrfti if mmrrfti<=11.19 & mmrrfti>1
3092 sum mmrrfti if mmrrfti>=16.7 & mmrrfti<=60
3093 sum mmrrfti if mmrrfti>=13.7 & mmrrfti<16.7
3094 sum mmrrfti if mmrrfti>=11.2 & mmrrfti<13.7
3095 sum mmrrfti if mmrrfti > 60
3096
3097 tab mmrrre if inlist(mmrrroc,1,3)
3098 tab mmrrre if mmrrroc==2
3099 tab mmrrre if mmrrroc==4
3100 tab mmrrre if inlist(mmrrroc,1,2,3,4)
3101
3102 sum mmrrna if mmrrna!=-1
3103 tab mmrrna if mmrrna!=-1
3104 tab mmrrre if mmrrna!=-1 & inlist(mmrrroc,3,4)
3105 tab mmrrre if mmrrna!=-1 & inlist(mmrrroc,1,2)
3106 tab mmrrsc if mmrrna!=-1
3107
3108 tab repctest
3109
3110 * Gait
3111 tab mmschs
3112 tab mmalone
3113 tab mmschs if mmalone== -1
3114 tab mmschs if mmalone== -9
3115 tab mmschs if mmalone== -8
3116 tab mmschs if mmalone== 1
3117 tab mmschs if mmalone== 2
3118 tab mmschs if mmalone== 3
3119 tab mmhss
3120 tab mmalone if mmhss== -1
3121 tab mmalone if mmhss== -9
3122 tab mmalone if mmhss== -8
3123 tab mmalone if mmhss== 1
3124 tab mmalone if mmhss== 2
3125 tab mmalone if mmhss== 3
3126 tab mmalone if mmhss== 4
3127 tab mmwill
3128 tab mmhss if mmwill== -9
3129 tab mmhss if mmwill== 1
3130 tab mmhss if mmwill== 2
3131 tab mmsaf
3132 tab mmwill if mmsaf== 1
3133 tab mmwill if mmsaf== 2
3134 tab mmavsp
3135 tab mmsaf if mmavsp== -9
3136 tab mmsaf if mmavsp== -8
3137 tab mmsaf if mmavsp== 1
3138 tab mmsaf if mmavsp== 2
3139 tab mmwala
3140 tab mmavsp if inlist(mmwala,1,2)
3141
3142 tab mmtrya
3143 tab mmwala if inlist(mmtrya,-9,1,2,3)
3144 tab mmwlka if mmwlka<0
3145 sum mmwlka if mmwlka>=0
3146 tab mmtrya if mmwlka!=-1 & mmwlka!=.
3147
3148 tab mmtryb
3149 tab mmtrya if inlist(mmtryb,-9,-8,1,2,3,4)

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3150 tab mmwlka if inlist(mmtryb,-9,-8)
3151 tab mmwlkb if mmwlkb<0
3152 sum mmwlkb if mmwlkb>=0
3153 tab mmtryb if mmwlkb!=-1 & mmwlkb!=.
3154
3155 tab mmwlka if mmwlka>=0 & mmwlka<2
3156 tab mmwlkb if mmwlkb>=0 & mmwlkb<2
3157
3158 sum idauniq if ((mmwlka>=0 & mmwlka!=.) | (mmwlkb>=0 & mmwlkb!=.))
3159 sum idauniq if mmwlka>=0 & mmwlkb>=0 & mmwlka!=. & mmwlkb!=.
3160
3161 sum idauniq if mmwlka<0
3162 keep if mmwlka<0
3163 tab mmschs
3164 tab mmalone
3165 tab mmschs if mmalone== -1
3166 tab mmschs if mmalone== 3
3167 tab mmschs if mmalone== -9
3168 tab mmschs if mmalone== -8
3169 tab mmhss
3170 tab mmalone if mmhss== -1
3171 tab mmwill
3172 tab mmhss if mmwill== -1
3173 tab mmhss if mmwill!= -1
3174 tab mmsaf
3175 tab mmwill if mmsaf== -1
3176 tab mmwill if mmsaf!= -1
3177 tab mmavsp
3178 tab mmsaf if mmavsp== -1
3179 tab mmsaf if mmavsp!= -1
3180 tab mmwala
3181 tab mmavsp if mmwala== -1
3182 tab mmavsp if mmwala!= -1
3183 tab mmtrya
3184 tab mmwala if mmtrya== -1
3185 tab mmwala if mmtrya!= -1
3186 tab mmwlka
3187 tab mmtrya if mmwlka== -1
3188 tab mmtrya if mmwlka!= -1
3189
3190 clear
3191 use data05.dta
3192 tab gaittest
3193
3194 tab mmcomz1
3195 tab mmcomz1 if mmcomz1!= -1
3196 tab mmcomz1 if gaittest == 0
3197 tab mmcomz2
3198 tab mmcomz2 if mmcomz2!= -1
3199 tab mmcomz2 if gaittest == 0
3200 tab mmcomz3
3201 tab mmcomz3 if mmcomz3!= -1
3202 tab mmcomz3 if gaittest == 0
3203 tab mmcomz1 if mmalone== 3
3204 tab mmcomz1 if inlist(mmhss,2,3,4)
3205 tab mmcomz1 if mmsaf== 2
3206 tab mmcomz1 if mmwala== 2
3207 tab mmcomz1 if inlist(mmtrya,2,3)
3208 tab mmpain
3209
3210 * Use full dataset
3211 use data05.dta
3212 * Count total number of participants and observations

```

```

3213 unique idauniq
3214 * 6,183 individuals, 49,464 observations
3215 * Arrange the multiple datasets in "marginal and long" format
3216 mi set mlong
3217 * Keep necessary variables
3218 keep idauniq wave w2xwgt totalSPPB_cons balance_cons repctest_cons gait_cons age_cons sex_cons
eth_cons activity_cons marital_cons dimar employment_cons wpdes education_cons w2edqual wealth_cons
bmic_cons oribi_cons wordlist_cons prosbi2_cons fluency_cons nrowclme2_cons efficiency_cons
depression_cons mobility ADL IADL falls mobilityw2_cons ADLw2_cons IADLw2_cons fallsw2_cons
health_cons limiting_cons mynssec3_cons living_cons alcohol_cons smoking_cons htvalnew_cons
wtvalnew_cons _mi_miss _mi_m _mi_id
3219 * Reshape data into wide format for observations identified by participant ID and add "wave" as an
identifying time period
3220 mi reshape wide dimar wpdes w2edqual mobility ADL IADL falls, i(idauniq) j(wave)
3221 * Save dataset with a new name
3222 save descwide.dta
3223
3224 * Weighted (using the cross-sectional sampling weight from Wave 2) descriptive statistics (Table 1);
comparison of the unweighted baseline characteristics of the complete-case samples used for analyses
versus the samples excluded due to missing data, using independent t-tests and Pearson's chi-squared
tests (Table S7)
3225 * aw: analytic weights
3226 gen missing_mob = .
3227 replace missing_mob = 0 if totalSPPB_cons != . & age_cons != . & sex_cons != . & eth_cons != . &
marital_cons != . & employment_cons != . & education_cons != . & wealth_cons != . & activity_cons !=
. & bmic_cons != . & oribi_cons != . & wordlist_cons != . & prosbi2_cons != . & fluency_cons != . &
nrowclme2_cons != . & efficiency_cons != . & depression_cons != . & mobilityw2_cons != . & (mobility3
!= . | mobility4 != . | mobility5 != . | mobility6 != . | mobility7 != . | mobility8 != . |
mobility9 != .)
3228 replace missing_mob = 1 if missing_mob != 0
3229
3230 tab totalSPPB_cons [aw=w2xwgt] if missing_mob==0
3231 sum totalSPPB_cons [aw=w2xwgt] if missing_mob==0
3232 tab balance_cons [aw=w2xwgt] if missing_mob==0
3233 tab repctest_cons [aw=w2xwgt] if missing_mob==0
3234 tab gait_cons [aw=w2xwgt] if missing_mob==0
3235 sum age_cons [aw=w2xwgt] if missing_mob==0
3236 tab sex_cons [aw=w2xwgt] if missing_mob==0
3237 tab eth_cons [aw=w2xwgt] if missing_mob==0
3238 tab activity_cons [aw=w2xwgt] if missing_mob==0
3239 tab marital_cons [aw=w2xwgt] if missing_mob==0
3240 tab dimar2 [aw=w2xwgt] if missing_mob==0
3241 tab employment_cons [aw=w2xwgt] if missing_mob==0
3242 tab wpdes2 [aw=w2xwgt] if missing_mob==0
3243 tab education_cons [aw=w2xwgt] if missing_mob==0
3244 tab w2edqual2 [aw=w2xwgt] if missing_mob==0
3245 tab wealth_cons [aw=w2xwgt] if missing_mob==0
3246 sum bmic_cons [aw=w2xwgt] if missing_mob==0
3247 tab oribi_cons [aw=w2xwgt] if missing_mob==0
3248 sum wordlist_cons [aw=w2xwgt] if missing_mob==0
3249 tab prosbi2_cons [aw=w2xwgt] if missing_mob==0
3250 sum fluency_cons [aw=w2xwgt] if missing_mob==0
3251 sum nrowclme2_cons [aw=w2xwgt] if missing_mob==0
3252 sum efficiency_cons [aw=w2xwgt] if missing_mob==0
3253 tab depression_cons [aw=w2xwgt] if missing_mob==0
3254 sum depression_cons [aw=w2xwgt] if missing_mob==0
3255 tab mobilityw2_cons [aw=w2xwgt] if missing_mob==0
3256 sum mobilityw2_cons [aw=w2xwgt] if missing_mob==0
3257
3258 tab totalSPPB_cons [aw=w2xwgt] if missing_mob==1
3259 sum totalSPPB_cons [aw=w2xwgt] if missing_mob==1
3260 tab balance_cons [aw=w2xwgt] if missing_mob==1
3261 tab repctest_cons [aw=w2xwgt] if missing_mob==1

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3262 tab gait_cons [aw=w2xwgt] if missing_mob==1
3263 sum age_cons [aw=w2xwgt] if missing_mob==1
3264 tab sex_cons [aw=w2xwgt] if missing_mob==1
3265 tab eth_cons [aw=w2xwgt] if missing_mob==1
3266 tab activity_cons [aw=w2xwgt] if missing_mob==1
3267 tab marital_cons [aw=w2xwgt] if missing_mob==1
3268 tab dimar2 [aw=w2xwgt] if missing_mob==1
3269 tab employment_cons [aw=w2xwgt] if missing_mob==1
3270 tab wpdes2 [aw=w2xwgt] if missing_mob==1
3271 tab education_cons [aw=w2xwgt] if missing_mob==1
3272 tab w2edqual2 [aw=w2xwgt] if missing_mob==1
3273 tab wealth_cons [aw=w2xwgt] if missing_mob==1
3274 sum bmic_cons [aw=w2xwgt] if missing_mob==1
3275 tab oribi_cons [aw=w2xwgt] if missing_mob==1
3276 sum wordlist_cons [aw=w2xwgt] if missing_mob==1
3277 tab prosbi2_cons [aw=w2xwgt] if missing_mob==1
3278 sum fluency_cons [aw=w2xwgt] if missing_mob==1
3279 sum nrowclme2_cons [aw=w2xwgt] if missing_mob==1
3280 sum efficiency_cons [aw=w2xwgt] if missing_mob==1
3281 tab depression_cons [aw=w2xwgt] if missing_mob==1
3282 sum depression_cons [aw=w2xwgt] if missing_mob==1
3283 tab mobilityw2_cons [aw=w2xwgt] if missing_mob==1
3284 sum mobilityw2_cons [aw=w2xwgt] if missing_mob==1
3285
3286 tab totalSPPB_cons if missing_mob==0
3287 sum totalSPPB_cons if missing_mob==0
3288 tab balance_cons if missing_mob==0
3289 tab repctest_cons if missing_mob==0
3290 tab gait_cons if missing_mob==0
3291 sum age_cons if missing_mob==0
3292 tab sex_cons if missing_mob==0
3293 tab eth_cons if missing_mob==0
3294 tab activity_cons if missing_mob==0
3295 tab marital_cons if missing_mob==0
3296 tab dimar2 if missing_mob==0
3297 tab employment_cons if missing_mob==0
3298 tab wpdes2 if missing_mob==0
3299 tab education_cons if missing_mob==0
3300 tab w2edqual2 if missing_mob==0
3301 tab wealth_cons if missing_mob==0
3302 sum bmic_cons if missing_mob==0
3303 tab oribi_cons if missing_mob==0
3304 sum wordlist_cons if missing_mob==0
3305 tab prosbi2_cons if missing_mob==0
3306 sum fluency_cons if missing_mob==0
3307 sum nrowclme2_cons if missing_mob==0
3308 sum efficiency_cons if missing_mob==0
3309 tab depression_cons if missing_mob==0
3310 sum depression_cons if missing_mob==0
3311 tab mobilityw2_cons if missing_mob==0
3312 sum mobilityw2_cons if missing_mob==0
3313
3314 tab totalSPPB_cons if missing_mob==1
3315 sum totalSPPB_cons if missing_mob==1
3316 tab balance_cons if missing_mob==1
3317 tab repctest_cons if missing_mob==1
3318 tab gait_cons if missing_mob==1
3319 sum age_cons if missing_mob==1
3320 tab sex_cons if missing_mob==1
3321 tab eth_cons if missing_mob==1
3322 tab activity_cons if missing_mob==1
3323 tab marital_cons if missing_mob==1
3324 tab dimar2 if missing_mob==1

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3325 tab employment_cons if missing_mob==1
3326 tab wpdes2 if missing_mob==1
3327 tab education_cons if missing_mob==1
3328 tab w2edqual2 if missing_mob==1
3329 tab wealth_cons if missing_mob==1
3330 sum bmic_cons if missing_mob==1
3331 tab oribi_cons if missing_mob==1
3332 sum wordlist_cons if missing_mob==1
3333 tab prosbi2_cons if missing_mob==1
3334 sum fluency_cons if missing_mob==1
3335 sum nrowclme2_cons if missing_mob==1
3336 sum efficiency_cons if missing_mob==1
3337 tab depression_cons if missing_mob==1
3338 sum depression_cons if missing_mob==1
3339 tab mobilityw2_cons if missing_mob==1
3340 sum mobilityw2_cons if missing_mob==1
3341
3342 gen missing_adliadl = .
3343 replace missing_adliadl = 0 if totalSPPB_cons != . & age_cons != . & sex_cons != . & eth_cons != . &
marital_cons != . & employment_cons != . & education_cons != . & wealth_cons != . & activity_cons !=
. & bmic_cons != . & oribi_cons != . & wordlist_cons != . & prosbi2_cons != . & fluency_cons != . &
nrowclme2_cons != . & efficiency_cons != . & depression_cons != . & ADLw2_cons != . & IADLw2_cons !=
. & (ADL3 != . | ADL4 != . | ADL5 != . | ADL6 != . | ADL7 != . | ADL8 != . | ADL9 != . | IADL3 != . |
IADL4 != . | IADL5 != . | IADL6 != . | IADL7 != . | IADL8 != . | IADL9 != .)
3344 replace missing_adliadl = 1 if missing_adliadl != 0
3345
3346 tab totalSPPB_cons [aw=w2xwgt] if missing_adliadl==0
3347 sum totalSPPB_cons [aw=w2xwgt] if missing_adliadl==0
3348 tab balance_cons [aw=w2xwgt] if missing_adliadl==0
3349 tab repctest_cons [aw=w2xwgt] if missing_adliadl==0
3350 tab gait_cons [aw=w2xwgt] if missing_adliadl==0
3351 sum age_cons [aw=w2xwgt] if missing_adliadl==0
3352 tab sex_cons [aw=w2xwgt] if missing_adliadl==0
3353 tab eth_cons [aw=w2xwgt] if missing_adliadl==0
3354 tab activity_cons [aw=w2xwgt] if missing_adliadl==0
3355 tab marital_cons [aw=w2xwgt] if missing_adliadl==0
3356 tab dimar2 [aw=w2xwgt] if missing_adliadl==0
3357 tab employment_cons [aw=w2xwgt] if missing_adliadl==0
3358 tab wpdes2 [aw=w2xwgt] if missing_adliadl==0
3359 tab education_cons [aw=w2xwgt] if missing_adliadl==0
3360 tab w2edqual2 [aw=w2xwgt] if missing_adliadl==0
3361 tab wealth_cons [aw=w2xwgt] if missing_adliadl==0
3362 sum bmic_cons [aw=w2xwgt] if missing_adliadl==0
3363 tab oribi_cons [aw=w2xwgt] if missing_adliadl==0
3364 sum wordlist_cons [aw=w2xwgt] if missing_adliadl==0
3365 tab prosbi2_cons [aw=w2xwgt] if missing_adliadl==0
3366 sum fluency_cons [aw=w2xwgt] if missing_adliadl==0
3367 sum nrowclme2_cons [aw=w2xwgt] if missing_adliadl==0
3368 sum efficiency_cons [aw=w2xwgt] if missing_adliadl==0
3369 tab depression_cons [aw=w2xwgt] if missing_adliadl==0
3370 sum depression_cons [aw=w2xwgt] if missing_adliadl==0
3371 tab ADLw2_cons [aw=w2xwgt] if missing_adliadl==0
3372 sum ADLw2_cons [aw=w2xwgt] if missing_adliadl==0
3373 tab IADLw2_cons [aw=w2xwgt] if missing_adliadl==0
3374 sum IADLw2_cons [aw=w2xwgt] if missing_adliadl==0
3375
3376 tab totalSPPB_cons [aw=w2xwgt] if missing_adliadl==1
3377 sum totalSPPB_cons [aw=w2xwgt] if missing_adliadl==1
3378 tab balance_cons [aw=w2xwgt] if missing_adliadl==1
3379 tab repctest_cons [aw=w2xwgt] if missing_adliadl==1
3380 tab gait_cons [aw=w2xwgt] if missing_adliadl==1
3381 sum age_cons [aw=w2xwgt] if missing_adliadl==1
3382 tab sex_cons [aw=w2xwgt] if missing_adliadl==1

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3383 tab eth_cons [aw=w2xwgt] if missing_adliadl==1
3384 tab activity_cons [aw=w2xwgt] if missing_adliadl==1
3385 tab marital_cons [aw=w2xwgt] if missing_adliadl==1
3386 tab dimar2 [aw=w2xwgt] if missing_adliadl==1
3387 tab employment_cons [aw=w2xwgt] if missing_adliadl==1
3388 tab wpdes2 [aw=w2xwgt] if missing_adliadl==1
3389 tab education_cons [aw=w2xwgt] if missing_adliadl==1
3390 tab w2edqual2 [aw=w2xwgt] if missing_adliadl==1
3391 tab wealth_cons [aw=w2xwgt] if missing_adliadl==1
3392 sum bmic_cons [aw=w2xwgt] if missing_adliadl==1
3393 tab oribi_cons [aw=w2xwgt] if missing_adliadl==1
3394 sum wordlist_cons [aw=w2xwgt] if missing_adliadl==1
3395 tab prosbi2_cons [aw=w2xwgt] if missing_adliadl==1
3396 sum fluency_cons [aw=w2xwgt] if missing_adliadl==1
3397 sum nrowclme2_cons [aw=w2xwgt] if missing_adliadl==1
3398 sum efficiency_cons [aw=w2xwgt] if missing_adliadl==1
3399 tab depression_cons [aw=w2xwgt] if missing_adliadl==1
3400 sum depression_cons [aw=w2xwgt] if missing_adliadl==1
3401 tab ADLw2_cons [aw=w2xwgt] if missing_adliadl==1
3402 sum ADLw2_cons [aw=w2xwgt] if missing_adliadl==1
3403 tab IADLw2_cons [aw=w2xwgt] if missing_adliadl==1
3404 sum IADLw2_cons [aw=w2xwgt] if missing_adliadl==1
3405
3406 tab totalSPPB_cons if missing_adliadl==0
3407 sum totalSPPB_cons if missing_adliadl==0
3408 tab balance_cons if missing_adliadl==0
3409 tab repctest_cons if missing_adliadl==0
3410 tab gait_cons if missing_adliadl==0
3411 sum age_cons if missing_adliadl==0
3412 tab sex_cons if missing_adliadl==0
3413 tab eth_cons if missing_adliadl==0
3414 tab activity_cons if missing_adliadl==0
3415 tab marital_cons if missing_adliadl==0
3416 tab dimar2 if missing_adliadl==0
3417 tab employment_cons if missing_adliadl==0
3418 tab wpdes2 if missing_adliadl==0
3419 tab education_cons if missing_adliadl==0
3420 tab w2edqual2 if missing_adliadl==0
3421 tab wealth_cons if missing_adliadl==0
3422 sum bmic_cons if missing_adliadl==0
3423 tab oribi_cons if missing_adliadl==0
3424 sum wordlist_cons if missing_adliadl==0
3425 tab prosbi2_cons if missing_adliadl==0
3426 sum fluency_cons if missing_adliadl==0
3427 sum nrowclme2_cons if missing_adliadl==0
3428 sum efficiency_cons if missing_adliadl==0
3429 tab depression_cons if missing_adliadl==0
3430 sum depression_cons if missing_adliadl==0
3431 tab ADLw2_cons if missing_adliadl==0
3432 sum ADLw2_cons if missing_adliadl==0
3433 tab IADLw2_cons if missing_adliadl==0
3434 sum IADLw2_cons if missing_adliadl==0
3435
3436 tab totalSPPB_cons if missing_adliadl==1
3437 sum totalSPPB_cons if missing_adliadl==1
3438 tab balance_cons if missing_adliadl==1
3439 tab repctest_cons if missing_adliadl==1
3440 tab gait_cons if missing_adliadl==1
3441 sum age_cons if missing_adliadl==1
3442 tab sex_cons if missing_adliadl==1
3443 tab eth_cons if missing_adliadl==1
3444 tab activity_cons if missing_adliadl==1
3445 tab marital_cons if missing_adliadl==1

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3446 tab dimar2 if missing_adliadl==1
3447 tab employment_cons if missing_adliadl==1
3448 tab wpdes2 if missing_adliadl==1
3449 tab education_cons if missing_adliadl==1
3450 tab w2edqual2 if missing_adliadl==1
3451 tab wealth_cons if missing_adliadl==1
3452 sum bmic_cons if missing_adliadl==1
3453 tab oribi_cons if missing_adliadl==1
3454 sum wordlist_cons if missing_adliadl==1
3455 tab prosbi2_cons if missing_adliadl==1
3456 sum fluency_cons if missing_adliadl==1
3457 sum nrowclme2_cons if missing_adliadl==1
3458 sum efficiency_cons if missing_adliadl==1
3459 tab depression_cons if missing_adliadl==1
3460 sum depression_cons if missing_adliadl==1
3461 tab ADLw2_cons if missing_adliadl==1
3462 sum ADLw2_cons if missing_adliadl==1
3463 tab IADLw2_cons if missing_adliadl==1
3464 sum IADLw2_cons if missing_adliadl==1
3465
3466 gen missing_falls = .
3467 replace missing_falls = 0 if totalSPPB_cons != . & age_cons != . & sex_cons != . & eth_cons != . &
marital_cons != . & employment_cons != . & education_cons != . & wealth_cons != . & activity_cons !=
. & bmic_cons != . & oribi_cons != . & wordlist_cons != . & prosbi2_cons != . & fluency_cons != . &
nrowclme2_cons != . & efficiency_cons != . & depression_cons != . & fallsw2_cons != . & (falls3 != .
| falls4 != . | falls5 != . | falls6 != . | falls7 != . | falls8 != . | falls9 != .)
3468 replace missing_falls = 1 if missing_falls != 0
3469
3470 tab totalSPPB_cons [aw=w2xwgt] if missing_falls==0
3471 sum totalSPPB_cons [aw=w2xwgt] if missing_falls==0
3472 tab balance_cons [aw=w2xwgt] if missing_falls==0
3473 tab repctest_cons [aw=w2xwgt] if missing_falls==0
3474 tab gait_cons [aw=w2xwgt] if missing_falls==0
3475 sum age_cons [aw=w2xwgt] if missing_falls==0
3476 tab sex_cons [aw=w2xwgt] if missing_falls==0
3477 tab eth_cons [aw=w2xwgt] if missing_falls==0
3478 tab activity_cons [aw=w2xwgt] if missing_falls==0
3479 tab marital_cons [aw=w2xwgt] if missing_falls==0
3480 tab dimar2 [aw=w2xwgt] if missing_falls==0
3481 tab employment_cons [aw=w2xwgt] if missing_falls==0
3482 tab wpdes2 [aw=w2xwgt] if missing_falls==0
3483 tab education_cons [aw=w2xwgt] if missing_falls==0
3484 tab w2edqual2 [aw=w2xwgt] if missing_falls==0
3485 tab wealth_cons [aw=w2xwgt] if missing_falls==0
3486 sum bmic_cons [aw=w2xwgt] if missing_falls==0
3487 tab oribi_cons [aw=w2xwgt] if missing_falls==0
3488 sum wordlist_cons [aw=w2xwgt] if missing_falls==0
3489 tab prosbi2_cons [aw=w2xwgt] if missing_falls==0
3490 sum fluency_cons [aw=w2xwgt] if missing_falls==0
3491 sum nrowclme2_cons [aw=w2xwgt] if missing_falls==0
3492 sum efficiency_cons [aw=w2xwgt] if missing_falls==0
3493 tab depression_cons [aw=w2xwgt] if missing_falls==0
3494 sum depression_cons [aw=w2xwgt] if missing_falls==0
3495 tab fallsw2_cons [aw=w2xwgt] if missing_falls==0
3496
3497 tab totalSPPB_cons [aw=w2xwgt] if missing_falls==1
3498 sum totalSPPB_cons [aw=w2xwgt] if missing_falls==1
3499 tab balance_cons [aw=w2xwgt] if missing_falls==1
3500 tab repctest_cons [aw=w2xwgt] if missing_falls==1
3501 tab gait_cons [aw=w2xwgt] if missing_falls==1
3502 sum age_cons [aw=w2xwgt] if missing_falls==1
3503 tab sex_cons [aw=w2xwgt] if missing_falls==1
3504 tab eth_cons [aw=w2xwgt] if missing_falls==1

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3505 tab activity_cons [aw=w2xwgt] if missing_falls==1
3506 tab marital_cons [aw=w2xwgt] if missing_falls==1
3507 tab dimar2 [aw=w2xwgt] if missing_falls==1
3508 tab employment_cons [aw=w2xwgt] if missing_falls==1
3509 tab wpdes2 [aw=w2xwgt] if missing_falls==1
3510 tab education_cons [aw=w2xwgt] if missing_falls==1
3511 tab w2edqual2 [aw=w2xwgt] if missing_falls==1
3512 tab wealth_cons [aw=w2xwgt] if missing_falls==1
3513 sum bmic_cons [aw=w2xwgt] if missing_falls==1
3514 tab oribi_cons [aw=w2xwgt] if missing_falls==1
3515 sum wordlist_cons [aw=w2xwgt] if missing_falls==1
3516 tab prosbi2_cons [aw=w2xwgt] if missing_falls==1
3517 sum fluency_cons [aw=w2xwgt] if missing_falls==1
3518 sum nrowclme2_cons [aw=w2xwgt] if missing_falls==1
3519 sum efficiency_cons [aw=w2xwgt] if missing_falls==1
3520 tab depression_cons [aw=w2xwgt] if missing_falls==1
3521 sum depression_cons [aw=w2xwgt] if missing_falls==1
3522 tab fallsw2_cons [aw=w2xwgt] if missing_falls==1
3523
3524 tab totalSPPB_cons if missing_falls==0
3525 sum totalSPPB_cons if missing_falls==0
3526 tab balance_cons if missing_falls==0
3527 tab repctest_cons if missing_falls==0
3528 tab gait_cons if missing_falls==0
3529 sum age_cons if missing_falls==0
3530 tab sex_cons if missing_falls==0
3531 tab eth_cons if missing_falls==0
3532 tab activity_cons if missing_falls==0
3533 tab marital_cons if missing_falls==0
3534 tab dimar2 if missing_falls==0
3535 tab employment_cons if missing_falls==0
3536 tab wpdes2 if missing_falls==0
3537 tab education_cons if missing_falls==0
3538 tab w2edqual2 if missing_falls==0
3539 tab wealth_cons if missing_falls==0
3540 sum bmic_cons if missing_falls==0
3541 tab oribi_cons if missing_falls==0
3542 sum wordlist_cons if missing_falls==0
3543 tab prosbi2_cons if missing_falls==0
3544 sum fluency_cons if missing_falls==0
3545 sum nrowclme2_cons if missing_falls==0
3546 sum efficiency_cons if missing_falls==0
3547 tab depression_cons if missing_falls==0
3548 sum depression_cons if missing_falls==0
3549 tab fallsw2_cons if missing_falls==0
3550
3551 tab totalSPPB_cons if missing_falls==1
3552 sum totalSPPB_cons if missing_falls==1
3553 tab balance_cons if missing_falls==1
3554 tab repctest_cons if missing_falls==1
3555 tab gait_cons if missing_falls==1
3556 sum age_cons if missing_falls==1
3557 tab sex_cons if missing_falls==1
3558 tab eth_cons if missing_falls==1
3559 tab activity_cons if missing_falls==1
3560 tab marital_cons if missing_falls==1
3561 tab dimar2 if missing_falls==1
3562 tab employment_cons if missing_falls==1
3563 tab wpdes2 if missing_falls==1
3564 tab education_cons if missing_falls==1
3565 tab w2edqual2 if missing_falls==1
3566 tab wealth_cons if missing_falls==1
3567 sum bmic_cons if missing_falls==1

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3568 tab oribi_cons if missing_falls==1
3569 sum wordlist_cons if missing_falls==1
3570 tab prosbi2_cons if missing_falls==1
3571 sum fluency_cons if missing_falls==1
3572 sum nrowclme2_cons if missing_falls==1
3573 sum efficiency_cons if missing_falls==1
3574 tab depression_cons if missing_falls==1
3575 sum depression_cons if missing_falls==1
3576 tab fallsw2_cons if missing_falls==1
3577
3578 save descwide2.dta
3579
3580 use descwide2.dta
3581 tab dimar2 [aw=w2xwgt] if missing_mob==1
3582 replace dimar2 = . if dimar2<0
3583 tab dimar2 [aw=w2xwgt] if missing_mob==1
3584 tab wpdes2 [aw=w2xwgt] if missing_mob==1
3585 replace wpdes2 = . if inlist(wpdes2,85,86)
3586 tab wpdes2 [aw=w2xwgt] if missing_mob==1
3587 tab education_cons [aw=w2xwgt] if missing_mob==1
3588 tab w2edqual2 [aw=w2xwgt] if missing_mob==1
3589 replace w2edqual2 = . if inlist(w2edqual2,6,-9,-8)
3590 tab w2edqual2 [aw=w2xwgt] if missing_mob==1
3591
3592 tab dimar2 [aw=w2xwgt] if missing_adliadl==1
3593 tab wpdes2 [aw=w2xwgt] if missing_adliadl==1
3594 tab education_cons [aw=w2xwgt] if missing_adliadl==1
3595 tab w2edqual2 [aw=w2xwgt] if missing_adliadl==1
3596
3597 tab dimar2 [aw=w2xwgt] if missing_falls==1
3598 tab wpdes2 [aw=w2xwgt] if missing_falls==1
3599 tab education_cons [aw=w2xwgt] if missing_falls==1
3600 tab w2edqual2 [aw=w2xwgt] if missing_falls==1
3601 save descwide3.dta
3602
3603 use descwide3.dta
3604 ttest age_cons, by(missing_mob)
3605 ttest totalSPPB_cons, by(missing_mob)
3606 ttest bmic_cons, by(missing_mob)
3607 ttest depression_cons, by(missing_mob)
3608 ttest mobilityw2_cons, by(missing_mob)
3609
3610 ttest age_cons, by(missing_adliadl)
3611 ttest totalSPPB_cons, by(missing_adliadl)
3612 ttest bmic_cons, by(missing_adliadl)
3613 ttest depression_cons, by(missing_adliadl)
3614 ttest ADLw2_cons, by(missing_adliadl)
3615 ttest IADLw2_cons, by(missing_adliadl)
3616
3617 ttest age_cons, by(missing_falls)
3618 ttest totalSPPB_cons, by(missing_falls)
3619 ttest bmic_cons, by(missing_falls)
3620 ttest depression_cons, by(missing_falls)
3621
3622 tabulate dimar2 missing_mob, chi2
3623 tabulate dimar2 missing_adliadl, chi2
3624 tabulate dimar2 missing_falls, chi2
3625
3626 tabulate sex_cons missing_mob, chi2
3627 tabulate sex_cons missing_adliadl, chi2
3628 tabulate sex_cons missing_falls, chi2
3629
3630 tabulate eth_cons missing_mob, chi2

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3631 tabulate eth_cons missing_adliadl, chi2
3632 tabulate eth_cons missing_falls, chi2
3633
3634 tabulate wpdes2 missing_mob, chi2
3635 tabulate wpdes2 missing_adliadl, chi2
3636 tabulate wpdes2 missing_falls, chi2
3637
3638 gen educa2 = 1 if w2edqual2==7
3639 replace educa2 = 2 if education_cons==1
3640 replace educa2 = 3 if w2edqual2==2
3641 replace educa2 = 4 if w2edqual2==1
3642
3643 tabulate educa2 missing_mob, chi2
3644 tabulate educa2 missing_adliadl, chi2
3645 tabulate educa2 missing_falls, chi2
3646
3647 tabulate wealth_cons missing_mob, chi2
3648 tabulate wealth_cons missing_adliadl, chi2
3649 tabulate wealth_cons missing_falls, chi2
3650
3651 tabulate activity_cons missing_mob, chi2
3652 tabulate activity_cons missing_adliadl, chi2
3653 tabulate activity_cons missing_falls, chi2
3654
3655 tabulate balance_cons missing_mob, chi2
3656 tabulate balance_cons missing_adliadl, chi2
3657 tabulate balance_cons missing_falls, chi2
3658
3659 tabulate repctest_cons missing_mob, chi2
3660 tabulate repctest_cons missing_adliadl, chi2
3661 tabulate repctest_cons missing_falls, chi2
3662
3663 tabulate gait_cons missing_mob, chi2
3664 tabulate gait_cons missing_adliadl, chi2
3665 tabulate gait_cons missing_falls, chi2
3666
3667 tabulate fallsw2_cons missing_falls, chi2
3668 save descwide3.dta, replace
3669
3670 use descwide3.dta
3671 tab dimar2 if missing_mob==0
3672 tab wpdes2 if missing_mob==0
3673 tab education_cons if missing_mob==0
3674 tab w2edqual2 if missing_mob==0
3675
3676 tab dimar2 if missing_mob==1
3677 tab wpdes2 if missing_mob==1
3678 tab education_cons if missing_mob==1
3679 tab w2edqual2 if missing_mob==1
3680
3681 tab dimar2 if missing_adliadl==0
3682 tab wpdes2 if missing_adliadl==0
3683 tab education_cons if missing_adliadl==0
3684 tab w2edqual2 if missing_adliadl==0
3685
3686 tab dimar2 if missing_adliadl==1
3687 tab wpdes2 if missing_adliadl==1
3688 tab education_cons if missing_adliadl==1
3689 tab w2edqual2 if missing_adliadl==1
3690
3691 tab dimar2 if missing_falls==0
3692 tab wpdes2 if missing_falls==0
3693 tab education_cons if missing_falls==0

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3694 tab w2edqual2 if missing_falls==0
3695
3696 tab dimar2 if missing_falls==1
3697 tab wpdes2 if missing_falls==1
3698 tab education_cons if missing_falls==1
3699 tab w2edqual2 if missing_falls==1
3700
3701 use descwide3.dta
3702 gen oribiz = oribi_cons
3703 gen wordlistz = wordlist_cons
3704 gen prosbi2z = prosbi2_cons
3705 gen fluencyz = fluency_cons
3706 gen nrowclme2z = nrowclme2_cons
3707 gen efficiencyz = efficiency_cons
3708
3709 egen z2oribimob = std(oribiz) if inlist(missing_mob,0,1)
3710 egen z2wordlistmob = std(wordlistz) if inlist(missing_mob,0,1)
3711 egen z2prosbi2mob = std(prosbi2z) if inlist(missing_mob,0,1)
3712 egen z2fluencymob = std(fluencyz) if inlist(missing_mob,0,1)
3713 egen z2nrowclme2mob = std(nrowclme2z) if inlist(missing_mob,0,1)
3714 egen z2efficiencymob = std(efficiencyz) if inlist(missing_mob,0,1)
3715 gen cognitiverawmob = z2oribimob + z2wordlistmob + z2prosbi2mob + z2fluencymob + z2nrowclme2mob +
z2efficiencymob
3716 egen zcogmob = std(cognitiverawmob)
3717
3718 egen z2oribiadliadl = std(oribiz) if inlist(missing_adliadl,0,1)
3719 egen z2wordlistadliadl = std(wordlistz) if inlist(missing_adliadl,0,1)
3720 egen z2prosbi2adliadl = std(prosbi2z) if inlist(missing_adliadl,0,1)
3721 egen z2fluencyadliadl = std(fluencyz) if inlist(missing_adliadl,0,1)
3722 egen z2nrowclme2adliadl = std(nrowclme2z) if inlist(missing_adliadl,0,1)
3723 egen z2efficiencyadliadl = std(efficiencyz) if inlist(missing_adliadl,0,1)
3724 gen cognitiverawadliadl = z2oribiadliadl + z2wordlistadliadl + z2prosbi2adliadl + z2fluencyadliadl +
z2nrowclme2adliadl + z2efficiencyadliadl
3725 egen zcogadliadl = std(cognitiverawadliadl)
3726
3727 egen z2oribifall = std(oribiz) if inlist(missing_falls,0,1)
3728 egen z2wordlistfall = std(wordlistz) if inlist(missing_falls,0,1)
3729 egen z2prosbi2fall = std(prosbi2z) if inlist(missing_falls,0,1)
3730 egen z2fluencyfall = std(fluencyz) if inlist(missing_falls,0,1)
3731 egen z2nrowclme2fall = std(nrowclme2z) if inlist(missing_falls,0,1)
3732 egen z2efficiencyfall = std(efficiencyz) if inlist(missing_falls,0,1)
3733 gen cognitiverawfall = z2oribifall + z2wordlistfall + z2prosbi2fall + z2fluencyfall + z2nrowclme2fall
+ z2efficiencyfall
3734 egen zcogfall = std(cognitiverawfall)
3735
3736 sum zcogmob if missing_mob==0
3737 sum zcogmob if missing_mob==1
3738 sum zcogadliadl if missing_adliadl==0
3739 sum zcogadliadl if missing_adliadl==1
3740 sum zcogfall if missing_falls==0
3741 sum zcogfall if missing_falls==1
3742
3743 sum zcogmob [aw=w2xwgt] if missing_mob==0
3744 sum zcogmob [aw=w2xwgt] if missing_mob==1
3745 sum zcogadliadl [aw=w2xwgt] if missing_adliadl==0
3746 sum zcogadliadl [aw=w2xwgt] if missing_adliadl==1
3747 sum zcogfall [aw=w2xwgt] if missing_falls==0
3748 sum zcogfall [aw=w2xwgt] if missing_falls==1
3749
3750 ttest zcogmob, by(missing_mob)
3751 ttest zcogadliadl, by(missing_adliadl)
3752 ttest zcogfall, by(missing_falls)
3753 save descwide4.dta

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3754
3755 use mobilityCCzcog.dta
3756 sum zcog_cons if firstnew==1
3757 sum zcog_cons [aw=w2xwgt] if firstnew==1
3758 use ADLIADLCCzcog.dta
3759 sum zcog_cons if firstnew==1
3760 sum zcog_cons [aw=w2xwgt] if firstnew==1
3761 use fallsCCzcog.dta
3762 sum zcog_cons if firstnew==1
3763 sum zcog_cons [aw=w2xwgt] if firstnew==1
3764
3765 * Weighted (using the cross-sectional sampling weight from Wave 2) descriptive statistics for
mobility impairments, ADL disabilities, IADL disabilities, and falls at each wave of follow-up
(Table S6)
3766 use mobilityCCzcog.dta
3767 sum mobility [aw=w2xwgt] if wave==3
3768 sum mobility [aw=w2xwgt] if wave==4
3769 sum mobility [aw=w2xwgt] if wave==5
3770 sum mobility [aw=w2xwgt] if wave==6
3771 sum mobility [aw=w2xwgt] if wave==7
3772 sum mobility [aw=w2xwgt] if wave==8
3773 sum mobility [aw=w2xwgt] if wave==9
3774 use ADLIADLCCzcog.dta
3775 sum ADL [aw=w2xwgt] if wave==3
3776 sum ADL [aw=w2xwgt] if wave==4
3777 sum ADL [aw=w2xwgt] if wave==5
3778 sum ADL [aw=w2xwgt] if wave==6
3779 sum ADL [aw=w2xwgt] if wave==7
3780 sum ADL [aw=w2xwgt] if wave==8
3781 sum ADL [aw=w2xwgt] if wave==9
3782 sum IADL [aw=w2xwgt] if wave==3
3783 sum IADL [aw=w2xwgt] if wave==4
3784 sum IADL [aw=w2xwgt] if wave==5
3785 sum IADL [aw=w2xwgt] if wave==6
3786 sum IADL [aw=w2xwgt] if wave==7
3787 sum IADL [aw=w2xwgt] if wave==8
3788 sum IADL [aw=w2xwgt] if wave==9
3789 use fallsCCzcog.dta
3790 tab falls [aw=w2xwgt] if wave==3
3791 tab falls [aw=w2xwgt] if wave==4
3792 tab falls [aw=w2xwgt] if wave==5
3793 tab falls [aw=w2xwgt] if wave==6
3794 tab falls [aw=w2xwgt] if wave==7
3795 tab falls [aw=w2xwgt] if wave==8
3796 tab falls [aw=w2xwgt] if wave==9

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