

Supplementary tables [posted as supplied by author]

Table A. Cross-sectional association between cognitive function and age-cohort at baseline.* †

		Reasoning (range 0-65) Mean (SD)	Memory (range 0-20) Mean (SD)	Phonemic fluency (range 0-35) Mean (SD)	Semantic fluency (range 0-35) Mean (SD)	Vocabulary (range 0-33) Mean (SD)
MEN						
45-49 yrs	931	50.29 (9.38)	7.53 (2.25)	17.83 (4.27)	17.59 (4.02)	25.49 (3.74)
50-54 yrs	1246	50.10 (9.11)	7.14 (2.19)	17.50 (4.10)	17.14 (3.80)	25.84 (3.34)
55-59 yrs	852	48.21 (9.93)	6.81 (2.28)	16.79 (4.21)	16.39 (3.93)	25.80 (3.94)
60-64 yrs	837	46.34 (10.95)	6.21 (2.20)	15.88 (3.96)	15.73 (3.89)	25.63 (4.32)
65-70 yrs	304	46.38 (10.39)	5.79 (2.21)	15.38 (3.67)	15.13 (3.97)	26.11 (3.86)
<i>P* for trend</i>		<0.001	<0.001	<0.001	<0.001	=0.13
WOMEN						
45-49 yrs	340	47.98 (10.53)	7.91 (2.63)	18.43 (4.45)	18.17 (4.61)	25.17 (4.63)
50-54 yrs	448	43.90 (11.61)	7.35 (2.59)	17.22 (4.54)	16.58 (4.53)	23.59 (5.37)
55-59 yrs	382	40.16 (11.93)	6.55 (2.38)	16.04 (4.50)	15.22 (4.33)	22.46 (5.68)
60-64 yrs	381	36.92 (11.79)	6.43 (2.76)	15.28 (4.50)	14.24 (4.28)	21.83 (5.74)
65-70 yrs	128	34.76 (10.90)	5.74 (2.36)	14.17 (4.23)	13.55 (3.65)	21.65 (5.09)
<i>P* for trend</i>		<0.001	<0.001	<0.001	<0.001	<0.001

*P values denote test for linear trend across the age-categories, derived by entering them as a continuous variable.

† Based on 5849 participants (from the 7390 participants included in the longitudinal analysis) who had complete data on the 5 cognitive tests at baseline.

Table B. Estimates of 10-year cognitive decline in cognitive function by baseline age-categories in men and women, shown using the original scale of the five cognitive tests.

	MEN			WOMEN		
	N	10-year decline (95% CI)	Difference in decline	N	10-year decline (95% CI)	Difference in decline
Reasoning						
45-49 yrs	1113	-2.31 (-2.65 to -1.97)	Ref	413	-2.36 (-2.96 to -1.76)	Ref
50-54 yrs	1578	-2.77 (-3.07 to -2.47)	-0.46*	582	-3.19 (-3.72 to -2.65)	-0.83*
55-59 yrs	1083	-3.52 (-3.88 to -3.15)	-1.21***	497	-3.88 (-4.48 to -3.29)	-1.52***
60-64 yrs	1049	-4.67 (-5.04 to -4.30)	-2.36***	515	-4.64 (-5.25 to -4.04)	-2.28***
65-70 yrs	375	-6.22 (-6.87 to -5.58)	-3.91***	185	-4.82 (-5.92 to -3.71)	-2.46***
<i>P for trend*</i>			<0.001			<0.001
Memory						
45-49 yrs	1113	-0.58 (-0.72 to -0.44)	Ref	413	-0.54 (-0.81 to -0.27)	Ref
50-54 yrs	1578	-0.70 (-0.82 to -0.57)	-0.12	582	-0.64 (-0.87 to -0.40)	-0.10
55-59 yrs	1083	-0.75 (-0.90 to -0.60)	-0.17	497	-0.39 (-0.65 to -0.13)	0.15
60-64 yrs	1049	-0.86 (-1.02 to -0.71)	-0.28**	515	-1.02 (-1.28 to -0.75)	-0.47*
65-70 yrs	375	-0.63 (-0.89 to -0.37)	-0.05	185	-0.65 (-1.12 to -0.17)	-0.11
<i>P for trend*</i>			0.06			0.56
Phonemic fluency						
45-49 yrs	1113	-1.37 (-1.57 to -1.17)	Ref	413	-1.46 (-1.81 to -1.11)	Ref
50-54 yrs	1578	-1.61 (-1.78 to -1.43)	-0.23	582	-1.15 (-1.46 to -0.83)	0.31
55-59 yrs	1083	-1.58 (-1.79 to -1.36)	-0.20	497	-1.57 (-1.92 to -1.23)	-0.11
60-64 yrs	1049	-1.54 (-1.76 to -1.32)	-0.17	515	-1.72 (-2.06 to -1.37)	-0.26
65-70 yrs	375	-1.79 (-2.17 to -1.41)	-0.42*	185	-1.72 (-2.35 to -1.09)	-0.26
<i>P for trend*</i>			0.09			0.30
Semantic fluency						
45-49 yrs	1113	-1.20 (-1.39 to -1.01)	Ref	413	-1.14 (-1.47 to -0.81)	Ref
50-54 yrs	1578	-1.15 (-1.31 to -0.98)	0.05	582	-1.15 (-1.45 to -0.86)	-0.01
55-59 yrs	1083	-1.39 (-1.59 to -1.18)	-0.19	497	-0.92 (-1.24 to -0.59)	0.22
60-64 yrs	1049	-1.65 (-1.85 to -1.44)	-0.45**	515	-1.22 (-1.55 to -0.90)	-0.09
65-70 yrs	375	-1.78 (-2.14 to -1.42)	-0.58**	185	-1.79 (-2.38 to -1.20)	-0.65
<i>P for trend*</i>			<0.001			0.87
Vocabulary						
45-49 yrs	1113	0.24 (0.11 to 0.36)	Ref	413	0.26 (0.03 to 0.49)	Ref
50-54 yrs	1578	0.17 (0.06 to 0.28)	-0.07	582	0.32 (0.11 to 0.52)	0.06
55-59 yrs	1083	0.04 (-0.09 to 0.17)	-0.20*	497	0.27 (0.05 to 0.50)	0.01
60-64 yrs	1049	-0.17 (-0.30 to -0.03)	-0.40***	515	0.04 (-0.19 to 0.27)	-0.22
65-70 yrs	375	-0.27 (-0.50 to -0.03)	-0.50***	185	-0.21 (-0.62 to 0.21)	-0.46
<i>P for trend*</i>			<0.001			0.13

*p<0.05. **p<0.01. *** p<0.001

*P values denote test for linear trend across the age-categories, derived by entering them as a continuous variable.

Table C. Ageing: comparison of “cognitive decline” from longitudinal and cross-sectional effects in a sub sample.*†

	Longitudinal analysis		Cross-sectional analysis	
	Participants aged 45-49 at baseline followed up for 10 years		Difference in score between those aged 45-49 years and 55-59 years at baseline	
	10-y decline (95% CI)	10-y decline (95% CI) adjusted for education	Difference (95% CI)	10-y decline (95% CI) adjusted for education
MEN				
Reasoning (AH4-I)	-2.33 (-2.65 to -2.00)	-2.34 (-2.67 to -2.02)	-2.05 (-2.95 to -1.15)	-1.25 (-2.10 to -0.40)
Memory	-0.58 (-0.72 to -0.44)	-0.58 (-0.72 to -0.43)	-0.72 (-0.93 to -0.50)	-0.61 (-0.83 to -0.40)
Phonemic fluency	-1.36 (-1.57 to -1.15)	-1.35 (-1.56 to -1.14)	-1.02 (-1.42 to -0.62)	-0.80 (-1.19 to -0.41)
Semantic fluency	-1.20 (-1.41 to -0.99)	-1.21 (-1.42 to -1.00)	-1.18 (-1.55 to -0.80)	-0.97 (-1.33 to -0.60)
Vocabulary	0.24 (0.12 to 0.36)	0.25 (0.12 to 0.37)	0.34 (-0.02 to 0.70)	0.70 (0.36 to 1.03)
WOMEN				
Reasoning (AH4-I)	-2.36 (-2.92 to -1.80)	-2.36 (-2.92 to -1.79)	-7.42 (-9.08 to -5.77)	-4.66 (-6.21 to -3.10)
Memory	-0.53 (-0.79 to -0.27)	-0.49 (-0.76 to -0.22)	-1.29 (-1.66 to -0.92)	-1.00 (-1.38 to -0.62)
Phonemic fluency	-1.47 (-1.81 to -1.12)	-1.51 (-1.86 to -1.16)	-2.27 (-2.94 to -1.60)	-1.54 (-2.21 to -0.87)
Semantic fluency	-1.07 (-1.42 to -0.71)	-1.01 (-1.36 to -0.65)	-2.77 (-3.42 to -2.11)	-1.80 (-2.44 to -1.16)
Vocabulary	0.27 (0.05 to 0.48)	0.27 (0.06 to 0.49)	-2.43 (-3.20 to -1.67)	-1.15 (-1.86 to -0.44)

*Longitudinal analysis based on 1076 men and 396 women; cross-sectional analysis based on 918 men aged 45-49 years and 836 aged 55-59 years, in women the corresponding numbers were 329 and 364.

† In men (women) aged 45-49 years at baseline 30%(34%) had less than a high school education, 28%(26%) had a high school education and 42% (40%) had a university degree. For men (women) aged 55-59 years at baseline the corresponding figures were 38%(58%), 33%(25%) and 29% (17%).