

Supplementary Materials

Table e-1: description of participants aged 60-87 years. Upper rows mean age for all participants in the three survey waves. T5/T6/T7 only: people only participating in one survey wave: Tromsø 5/Tromsø 6/ Tromsø 7. Two surveys/ all surveys: People participating in two survey waves and people participating in all three survey waves. Chi2: Chi square test for categorical variables, and regression for continuous variables.

	Mean age (SD)			N		
All participants Tromsø 5	69.4 (0.1)			4297		
All participants Tromsø 6	68.2 (0.1)			4131		
All participants Tromsø 7	68.8 (0.1)			5357		

	T5 only	T6 only	T7 only	p chi2/ regress	two surveys	all surveys
n	2132	794	3109		2708	782
Age, mean (SD)	71.8 (0.1)	65.9 (0.2)	65.2 (0.1)	<0.001	69.5 (0.08)	70.9 (0.1)
Education %				<0,001		
Primary up to 10 years, 1-2 year secondary	85.7	62	30.1		65.2	66
High school min 3 year	3	6.9	27.9		10.3	11.8
College/university less than 4 years	7	13.8	18.3		13.2	12.1
College/university more than 4 years	4.4	17.32	23.7		11.3	10.1
Physical Activity %				<0,001		
low activity	20.3	23.2	12.7		17.3	14.2
moderate activity	66.3	61.8	64.2		65.4	67
high activity	12.5	14.3	21.6		16.5	18.4
vigorous activity	6	0.7	1.5		0.8	0.43
Alcohol Frequency %				<0,001		
Teetotaller	14.1	16.3	16.3		13.4	14.8
monthly or less	55.3	29.6	29.6		35.1	37.13
2-4 times/month	20	31.2	31.2		30	29.1
2-3 times/week	7.9	17.3	17.3		15.1	13.9
4 or more times/week	2.6	5.61	5.6		6.42	5.1
Alcohol units %				<0,001		
1-2.	82	71.8	68.5		79.7	83.3
3-4.	14	21.7	26.6		17.9	14.7
5-6.	3.2	4.5	4.1		2	1.8
7-9.	0.2	1.6	0.7		0.3	0.05
10-->	0.48	0.5	0.1		0.1	0.2
Hyperchol %	86.8	75.4	71.1	<0,001	76.6	73.6
high BT %	64.92	51.6	36.6	<0,001	54.6	56.5
Depressed %	3.2	3.3	2.46	0.353	2.1	1.6
heart attack %	11.9	8	4.9	<0,001	8.3	7.3
Stroke %	7.7	3.4	3.9	<0,001	4.23	4.1
Never-Smoker %	32.5	31.2	34.1	<0,001	35.3	40.8

Figure e-1: Education level by sex and birth cohort.

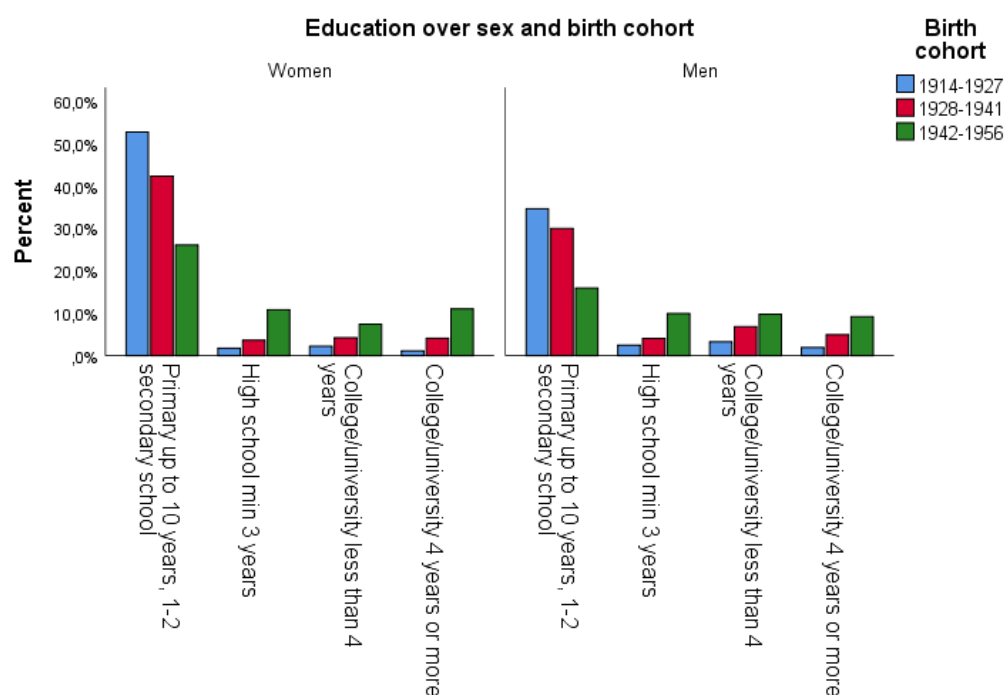


Table e-2: cognitive scores by regression models when excluded participants with Mini Mental Score below 20

	WT1		WT2		DSC		Tapping	
	β T7	% change	β T7	% change	β T7	% change	β T7	% change
Women								
Age	0,9		1,2		10,1		3,7	
Age + Education	0,5	40,2	1,0	21,1	7,8	22,8	2,7	27,1
Age + Alcohol frequency	0,7	19,9	1,1	10,2	8,8	13,2	2,9	20,8
Age + PA	0,9	3,5	1,2		9,9	2,0	3,5	6,6
Age + Alcohol frequency + Education	0,5	49,2	0,9	25,7	7,2	29,3	2,3	38,4
Full Model	0,5	45,1	0,9	25,1	7,3	27,8	2,3	37,8
Men								
Age	0,8		1,1		7,8		3,1	
Age + Education	0,4	45,4	0,8	23,2	5,0	35,6	2,0	34,1
Age + PA	0,7	3,4	1,1	0,2	7,6	1,9	2,9	4,1
Age + Alcohol frequency	0,6	14,9	1,0	6,8	6,8	12,3	2,6	15,4
Age + Alcohol frequency + Education	0,4	50,1	0,8	25,1	4,7	39,6	1,8	40,3
Full Model	0,3	62,1	0,8	29,8	4,2	46,6	1,7	46,0

Table e-3: cognitive scores when excluded participants with Mini Mental Score below 25

	WT1	WT2	DSC	Tapping
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Women	β T7	% change	β T7	% change	β T7	% change	β T7	% change
Age	1,0		1,3		10,8		4,0	
Age + Education	0,6	37,6	1,1	20,0	8,4	17,3	3,0	25,5
Age + Alcohol frequency	0,8	18,5	1,2	9,6	8,8	13,1	3,2	19,5
Age + PA	1,0	3,3	1,3	0,1	10,5	-4,0	3,8	6,0
Age + Alcohol frequency + Education	0,5	46,2	1,0	24,4	7,1	29,5	2,6	36,2
Full Model	0,6	42,8	1,0	24,2	7,3	27,8	2,6	35,7
Men								
Age	0,9		1,2		8,3		3,3	
Age + Education	0,5	42,7	0,9	21,8	5,4	30,5	2,2	32,8
Age + PA	0,8	3,1	1,2	0,3	8,1	-4,7	3,2	3,8
Age + Alcohol frequency	0,8	10,2	1,1	6,3	6,8	12,5	2,8	15,1
Age + Alcohol frequency + Education	0,5	43,1	0,9	23,6	4,7	40,0	2,0	38,9
Full Model	0,4	55,8	0,8	26,4	4,2	46,6	1,9	43,1

Table e-4: mean crude scores in cognitive tests by participants aged 60-87 years, only participating in Tromsø 5 (T5), Tromsø 6 (T6) or Tromsø 7 (T7), and those participating in 2 or all survey waves.

	T5 only	T6 only	T7 only	P	2 surveys	3 surveys
Mean WT1 (SD)	5.55 (0.04)	6.38 (0.07)	7.18 (0.03)	<0.001	6.34 (0.03)	6.38 (0.04)
Mean WT2 (SD)	20.42 (0.07)	21.62 (0.08)	22.22 (0.03)	<0.001	21.54 (0.03)	21.62 (0.05)
Mean DSC (SD)	26.08 (0.25)	37.00 (0.46)	41.58 (0.19)	<0.001	34.54 (0.17)	33.71 (0.23)
Mean FTP (SD)	45.40 (0.24)	48.59 (0.42)	53.08 (0.15)	<0.001	48.30 (0.14)	48.93 (0.19)
Mean MMSE (SD)	NA	28.09 (0.07)	27.97 (0.03)	<0.001	27.78 (0.02)	NA

Supplementary appendix e-1

Questionnaire

Participants answered the question “What is the highest level of education you have completed?” as follows: 1 = only primary/partial secondary education (up to 10 years), 2 = at least three years of upper secondary education, 3 = tertiary education, short (less than four years of college/university) or 4 = tertiary education, long (four or more years of college/university). Blood pressure was measured on site for standardization and categorized as follows: 1 = low blood pressure and no treatment, 2 = low blood pressure with treatment, 3 = high blood pressure despite treatment and 4 = high blood pressure without treatment. High blood pressure was defined as systolic blood pressure > 140 mmHg and/or diastolic blood pressure > 90 mmHg. Depression was self-reported, and symptoms were restricted to the previous week. Physical activity was self-reported in leisure time, as low (mostly sedentary activity), moderate (walking/cycling at least 4 hours/week), high (recreational sports at least 4 hours/week) or vigorous activity (hard training or sport competitions, regularly several times a week)

The question “How many units of alcohol (a beer, a glass of wine, or a drink) do you usually drink when you drink alcohol?” could be answered with one of five categories: 1–2, 3–4, 5–6, 7–9, or 10 or more. “How often do you usually drink alcohol?” could be answered with never, monthly or less, two to four times a month, two to three times a week, or four or more times a week. Smoking was answered with “Yes, now”, “Yes, previously” or “never”. Depression was restricted to the last week, and previously heart attack, stroke and diabetes was dichotomous yes/no