

Supplement Table S1 Characteristics of the study population after weighting

Cognitive Performance	Animal Fluency			Digit Symbol Substitution Test			CERAD			Global Performance		
	Normal	Low	<i>P</i> value	Normal	Low	<i>P</i> value	Normal	Low	<i>P</i> value	Normal	Low	<i>P</i> value
Number of subjects	20320377.	5313175.0		21740932.	3892620.0		19615677.	6017875.0		21437873.	4195679.0	
(%)¹	00	0		00	0		00	0		00	0	
	(79.27%)	(20.73%)		(84.81%)	(15.19%)		(76.52%)	(23.48%)		(83.63%)	(16.37%)	
Age in years at screening ²	68.88	70.84	<0.001	68.96	71.13	<0.001	68.89	70.58	0.003	68.92	71.17	<0.001
Age (%) ¹	(6.61)	(6.71)		(6.63)	(6.62)		(6.63)	(6.66)		(6.66)	(6.45)	
			0.001			0.002			0.026			0.007
	11761769.	2450781.3		12416592.	1795958.1		11339238.	2873312.5		12247011.	1965539.7	
60–70 years	53	3		67	9		31	5		11	5	
	(57.88%)	(46.13%)		(57.11%)	(46.14%)		(57.81%)	(47.75%)		(57.13%)	(46.85%)	
	5852504.3	1719377.9		6301163.3	1270719.0		5419408.2	2152474.1		6207114.9	1364767.4	
70–80 years	9	9		3	6		6	2		2	6	
	(28.80%)	(32.36%)		(28.98%)	(32.64%)		(27.63%)	(35.77%)		(28.95%)	(32.53%)	
	2706102.8	1143015.8		3023176.0	825942.62		2857030.5	992088.09		2983747.1	865371.47	
≥80 years	0	4		2	(21.22%)		4	(16.49%)		6	(20.63%)	
	(13.32%)	(21.51%)		(13.91%)			(14.57%)			(13.92%)		
Race (%) ¹			<0.001			<0.001			0.005			<0.001
Mexican American	555433.71	274866.06		415900.19	414399.58		522313.64	307986.14		484040.62	346259.15	
	(2.73%)	(5.17%)		(1.91%)	(10.65%)		(2.66%)	(5.12%)		(2.26%)	(8.25%)	
Other Hispanic	593292.15	415813.53		521746.44	487359.25		573835.95	435269.74		542337.31	466768.37	
	(2.92%)	(7.83%)		(2.40%)	(12.52%)		(2.93%)	(7.23%)		(2.53%)	(11.12%)	
	17191287.	3284767.2		18575892.	1900161.8		16133790.	4342264.4		18138218.	2337836.3	
Non-Hispanic White	56	2		98	0		36	2		40	8	
	(84.60%)	(61.82%)		(85.44%)	(48.81%)		(82.25%)	(72.16%)		(84.61%)	(55.72%)	
Non-Hispanic Black	1221535.8	942140.03		1294262.3	869413.47		1609621.4	554054.41		1360409.5	803266.27	
	0 (6.01%)	(17.73%)		6 (5.95%)	(22.33%)		2 (8.21%)	(9.21%)		6 (6.35%)	(19.15%)	

Other Race	758827.49 (3.73%)	395588.32 (7.45%)		933130.05 (4.29%)	221285.76 (5.68%)		776115.75 (3.96%)	378300.06 (6.29%)		912867.31 (4.26%)	241548.51 (5.76%)	
Ratio of family income to poverty ²	3.17 (1.58)	2.27 (1.48)	<0.001	3.21 (1.55)	1.78 (1.28)	<0.001	3.16 (1.58)	2.43 (1.54)	<0.001	3.18 (1.56)	2.04 (1.46)	<0.001
(Missing)	1226083	544724		1504131	266676		1453393	317415		1533677	237131	
Poverty–income ratio (%) ¹			<0.001			<0.001			<0.001			<0.001
≤0.99	1483854.2 0 (7.77%)	969835.02 (20.34%)		1267264.0 2 (6.26%)	1186425.2 0 (32.72%)		1361531.6 5 (7.50%)	1092157.5 7 (19.16%)		1363234.5 6 (6.85%)	1090454.6 6 (27.55%)	
≥1	17610439. 15 (92.23%)	3798616.2 9 (79.66%)		18969536. 62 (93.74%)	2439518.8 2 (67.28%)		16800752. 84 (92.50%)	4608302.6 0 (80.84%)		18540962. 11 (93.15%)	2868093.3 3 (72.45%)	
(Missing)	1226083	544724		1504131	266676		1453393	317415		1533677	237131	
Body mass index (%) ¹			0.3			0.8			0.6			0.9
< 25 kg/m ²	5787415.7 5 (28.59%)	1460882.0 4 (28.06%)		6095775.9 2 (28.10%)	1152521.8 7 (30.63%)		5613706.1 3 (28.78%)	1634591.6 5 (27.50%)		6113208.6 2 (28.68%)	1135089.1 7 (27.46%)	
25-30 kg/m ²	6833059.6 0 (33.75%)	1473368.2 6 (28.30%)		7145749.8 4 (32.95%)	1160678.0 2 (30.85%)		6486627.8 3 (33.25%)	1819800.0 3 (30.62%)		6975457.3 1 (32.72%)	1330970.5 5 (32.20%)	
≥30 kg/m ²	7625840.0 9 (37.67%)	2271751.0 5 (43.64%)		8448292.1 5 (38.95%)	1449298.9 9 (38.52%)		7408139.0 0 (37.97%)	2489452.1 4 (41.88%)		8229648.2 4 (38.60%)	1667942.9 0 (40.35%)	
(Missing)	74061	107174		51114	130121		107204	74031		119559	61676	
Body Mass Index (kg/m²) ²	28.97 (6.44)	29.63 (7.09)	0.4	29.04 (6.47)	29.49 (7.17)	0.8	29.03 (6.65)	29.35 (6.35)	0.4	29.02 (6.53)	29.57 (6.84)	0.5
(Missing)	74061	107174		51114	130121		107204	74031		119559	61676	

Diabetes (%)			0.004		<0.001		<0.001		<0.001	
	16774330.	3756613.4		17969603.	2561340.8		16383738.	4147205.5	17871106.	2659837.7
Without Diabetes	48	6		04	9		41	3	22	1
	(82.55%)	(70.81%)		(82.65%)	(65.93%)		(83.56%)	(68.91%)	(83.39%)	(63.39%)
	3546046.2	1548947.2		3771328.9	1323664.4		3224324.2	1870669.2	3559152.4	1535840.9
With Diabetes	4	2		7	9		3	4	9	7
	(17.45%)	(29.19%)		(17.35%)	(34.07%)		(16.44%)	(31.09%)	(16.61%)	(36.61%)
(Missing)	0	7614		0	7614		7614	0	7614	0
Had at least 12 alcohol drinks/year (%) ¹			0.003		<0.001		0.015		<0.001	
	7005811.3	2514912.3		7387649.6	2133074.0		6811477.5	2709246.1	7329258.8	2191464.8
No	6	3		1	8		1	7	6	3
	(34.97%)	(47.57%)		(34.31%)	(56.30%)		(35.17%)	(45.51%)	(34.57%)	(53.24%)
	13027277.	2771383.9		14142974.	1655686.6		12555029.	3243631.7	13874072.	1924588.3
Yes	16	9		52	2		44	0	79	6
	(65.03%)	(52.43%)		(65.69%)	(43.70%)		(64.83%)	(54.49%)	(65.43%)	(46.76%)
(Missing)	287288	26879		210308	103859		249170	64997	234542	79626
Hypertension (%) ¹			<0.001		<0.001		0.3		<0.001	
	8826155.8	1587208.7		9357312.9	1056051.5		8227340.2	2186024.2	9294951.2	1118413.2
Without hypertension	3	0		4	9		7	5	6	6
	(43.52%)	(29.93%)		(43.14%)	(27.13%)		(42.03%)	(36.39%)	(43.44%)	(26.72%)
	11454528.	3715751.0		12333711.	2836568.2		11348644.	3821635.0	12103229.	3067049.9
With hypertension	61	3		37	8		56	8	65	9
	(56.48%)	(70.07%)		(56.86%)	(72.87%)		(57.97%)	(63.61%)	(56.56%)	(73.28%)
(Missing)	39692	10215		49908	0		39692	10215	39692	10215
Material status (%) ¹			0.006		<0.001		0.022		0.002	

Widowed/divorced/separated/never married	8918967.6	2845521.3		9420321.5	2344167.4		8564993.1	3199495.8		9306923.3	2457565.6
	5	3		2	6		1	6		7	1
	(43.89%)	(53.63%)		(43.34%)	(60.22%)		(43.68%)	(53.17%)		(43.43%)	(58.57%)
Married/living with partner	11401409.	2460711.8		12313668.	1548452.4		11043742.	2818378.9		12124007.	1738113.0
	08	7		54	0		04	0		87	8
	(56.11%)	(46.37%)		(56.66%)	(39.78%)		(56.32%)	(46.83%)		(56.57%)	(41.43%)
(Missing)	0	6942		6942	0		6942	0		6942	0
Smoking status (%) ¹			0.7			0.075			0.7		0.7
Never	12000513.	3314114.8		12856356.	2458271.7		11796854.	3517774.3		12744622.	2570005.8
	80	0		84	6		26	3		72	8
	(59.08%)	(62.38%)		(59.15%)	(63.15%)		(60.16%)	(58.46%)		(59.47%)	(61.25%)
Former	6254705.5	1527873.0		6850740.7	931837.87		5970465.3	1812113.2		6613490.9	1169087.7
	7	4		4			9	2		1	0
	(30.79%)	(28.76%)		(31.52%)	(23.94%)		(30.45%)	(30.11%)		(30.86%)	(27.86%)
Current	2057674.3	471187.32		2026351.4	502510.24		1840874.4	687987.21		2072276.5	456585.11
	8			6			9			9	
	(10.13%)	(8.87%)		(9.32%)	(12.91%)		(9.39%)	(11.43%)		(9.67%)	(10.88%)
(Missing)	7483	0		7483	0		7483	0		7483	0
Education level (%) ¹			<0.001			<0.001			<0.001		<0.001
Below high school	2405039.1	1681008.8		2264850.5	1821197.5		2340030.0	1746018.0		2259469.3	1826578.7
	9	9		4	4		8	0		5	3
	(11.84%)	(31.64%)		(10.42%)	(46.79%)		(11.93%)	(29.01%)		(10.54%)	(43.53%)
High school	4714639.6	1418453.6		5140075.5	993017.80		4537885.4	1595207.9		4918907.4	1214185.8
	4	8		2			1	2		5	8
	(23.20%)	(26.70%)		(23.64%)	(25.51%)		(23.13%)	(26.51%)		(22.94%)	(28.94%)
Above high school	13200697.	2213712.5		14336005.	1078404.5		12737761.	2676648.8		14259496.	1154914.0
	89	9		95	2		62	6		40	8
	(64.96%)	(41.66%)		(65.94%)	(27.70%)		(64.94%)	(44.48%)		(66.52%)	(27.53%)

Total Cholesterol (mg/dL) ²	206.99 (40.44)	195.67 (42.45)	<0.001	206.39 (40.28)	194.88 (44.27)	<0.001	207.26 (40.52)	196.10 (41.91)	0.003	207.61 (40.50)	189.48 (40.90)	<0.001
Total Cholesterol (%) ¹			0.012			<0.001			0.003			<0.001
	4096418.9	1654111.3		4449397.7	1301132.5		3898269.8	1852260.4		4232852.2	1517677.9	
< 174 mg/dL	0 (20.16%)	8 (31.13%)		3 (20.47%)	5 (33.43%)		5 (19.87%)	3 (30.78%)		9 (19.74%)	9 (36.17%)	
174-201 mg/dL	5264620.8 8 (25.91%)	1378810.1 1 (25.95%)		5523581.2 2 (25.41%)	1119849.7 7 (28.77%)		4997238.8 2 (25.48%)	1646192.1 7 (27.36%)		5330610.8 5 (24.87%)	1312820.1 4 (31.29%)	
201-229 mg/dL	5303208.2 9 (26.10%)	1264566.7 9 (23.80%)		5961871.7 2 (27.42%)	605903.36 (15.57%)		5193694.0 1 (26.48%)	1374081.0 7 (22.83%)		5857104.4 1 (27.32%)	710670.67 (16.94%)	
>229 mg/dL	5656128.6 6 (27.83%)	1015686.8 7 (19.12%)		5806081.3 5 (26.71%)	865734.18 (22.24%)		5526474.4 3 (28.17%)	1145341.1 0 (19.03%)		6017305.6 5 (28.07%)	654509.88 (15.60%)	

CERAD(Consortium to Establish a Registry for Alzheimer's Disease); Data is number of subjects (percentage) or medians (interquartile ranges); ¹ Chi-square test was used to compare the percentage between participants with and without low cognitive performance; ² Wilcoxon rank sum test or Fisher's exact test was used to compare the mean±standard deviance values between participants with and without low cognitive performance.