

Assessing the impact of race, psychosocial stress and resiliency indicators on neurocognitive impairment: A cross-sectional study of older Americans enrolled in the Health and Retirement Survey

Supplementary Tables

Supplementary Table 1: Demographic characteristics of older American adults enrolled in the HRS 2012-14 sample by Race.

	All (N=6317)	White/ Caucasian (N=5217)	Black / African American (N=815)	Other (N=285)	
Characteristic	N (%)	N (%)	N (%)	N (%)	p-value
Age: mean(SD)	73.9 (6.7)	74.2 (6.7)	72.6 (6.3)	72.2 (6.0)	
Age categories (years)					< 0.0001
<=70	2076 (32.9)	1615 (31.0)	332 (40.7)	129 (45.3)	
71-79	3055 (48.4)	2555 (49.0)	382 (46.9)	118 (41.4)	
>80	1186 (18.8)	1047 (20.1)	101 (12.4)	38 (13.3)	
Sex					0.003
Female	3764 (59.6)	3077 (59.0)	528 (64.8)	159 (55.8)	
Marital Status					< 0.0001
Never married	177 (2.8)	113 (2.2)	48 (5.9)	16 (5.6)	
Married/ partnered	3910 (61.9)	3381 (64.8)	355 (43.6)	174 (61.0)	
Separated/Divorced	672 (10.6)	475 (9.1)	159 (19.5)	38 (13.3)	
Widowed	1558 (24.7)	1248 (23.9)	253 (31.0)	57 (20.0)	
Education					< 0.0001
Less than High School/GED	1326 (21.0)	961 (18.4)	255 (31.3)	110 (38.6)	
High-school graduate	2062 (32.6)	1751 (33.6)	255 (31.3)	56 (19.6)	
Some college and above	2927 (46.4)	2504 (48.0)	304 (37.4)	119 (41.8)	
Health Insurance					0.0003
Yes	6081 (98.1)	5033 (98.3)	783 (97.6)	265 (95.0)	
Ever smoked					0.6196
Yes	3459 (54.8)	2851 (54.6)	457 (56.1)	151 (53.0)	
Current alcohol use					< 0.0001
Yes	3209 (50.8)	2802 (53.7)	296 (36.3)	111 (38.9)	
No. of comorbidities ever had					< 0.0001
None	424 (6.7)	360 (6.9)	35 (4.3)	29 (10.2)	
One	1096 (17.3)	939 (18.0)	105 (12.9)	52 (18.2)	
Two	1719 (27.2)	1415 (27.1)	241 (29.6)	63 (22.1)	
Three or more	3077 (48.7)	2502 (48.0)	434 (53.2)	141 (49.5)	
Diagnosis of HD, T2DM or Stroke					< 0.0006
Yes	3177 (50.2)	2566 (49.2)	454 (55.7)	157 (55.1)	
Ever had High blood pressure					< 0.0001
Yes	4317 (68.5)	3443 (66.1)	678 (83.3)	196 (69.0)	
BMI					< 0.0001
BMI < 18.5 kg/m ² (Underweight)	101 (1.6)	85 (1.6)	10 (1.2)	6 (2.1)	
BMI 18.5-24 kg/m ² (Normal weight)	1736 (27.5)	1508 (28.9)	145 (17.8)	83 (29.1)	
BMI 25-29 kg/m ² (Overweight)	2390 (37.8)	1976 (37.9)	305 (37.4)	109 (38.3)	
BMI ≥30 kg/m ² (Obese)	2090 (33.1)	1648 (31.6)	355 (43.6)	87 (30.5)	

SD=Standard Deviation

Note: 02 missing education; 116 missing health insurance; 46 missing smoking status; 1 missing alcohol consumption; 14 missing High blood pressure.

Supplementary Table 2: Other factors in relation to risk for Neurocognitive impairment among older adults from HRS 2012-14.

Variable	n/N	Model 1 (Crude)*	Model 2 [‡]	Model 3 ^α	Model 4 [†]
Age categories (years)		OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
71-79 vs <=70	113/3055	1.36 (0.86, 2.16)	1.20 (0.76, 1.89)	1.25 (0.81, 1.95)	1.22 (0.78, 1.93)
>80 vs <=70	134/1186	4.73 (3.01, 7.43)	4.0 (2.50, 6.50)	4.34 (2.74, 6.87)	3.82 (2.35, 6.21)
Education					
Less than High School vs College and above	123/1326	3.08 (2.22, 4.26)	2.07 (1.55, 2.78)	1.94 (1.43, 2.64)	2.04 (1.51, 2.75)
High School vs College and above	83/2062	1.08 (0.75, 1.56)	0.86 (0.59, 1.24)	0.84 (0.58, 1.22)	0.85 (0.58, 1.24)
Marital Status					
Never married vs Married	10/177	1.81 (0.72, 4.54)	1.79 (0.71, 4.50)	1.64 (0.66, 4.05)	1.75 (0.69, 4.44)
Separated/divorced vs Married	39/672	1.62 (1.10, 2.39)	1.65 (1.09, 2.49)	1.63 (1.09, 2.43)	1.67 (1.11, 2.51)
Widowed vs Married	100/1558	2.03 (1.42, 2.92)	1.23 (0.81, 1.87)	1.23 (0.82, 1.84)	1.21 (0.80, 1.83)
Sex					
Male vs Female	135/2553	1.17 (0.91, 1.50)	1.48 (1.13, 1.93)	1.44 (1.11, 1.87)	1.51 (1.17, 1.95)
Body Mass Index					
Underweight vs normal	7/101	1.77 (0.81, 3.86)	1.59 (0.62, 4.07)	1.35 (0.42, 4.28)	1.48 (0.56, 3.93)
Overweight vs normal	106/2333	0.83 (0.58, 1.18)	0.86 (0.60, 1.22)	0.86 (0.61, 1.21)	0.85 (0.60, 1.21)
Obese vs normal	89/2098	0.87 (0.59, 1.28)	0.89 (0.62, 1.29)	0.87 (0.60, 1.27)	0.88 (0.61, 1.27)
Alcohol consumption					
No vs Yes	209/3111	2.59 (1.88, 3.57)	1.98 (1.43, 2.75)	1.97 (1.44, 2.69)	1.94 (1.40, 2.68)
Cigarette smoking					
Yes vs No	161/3473	0.96 (0.76, 1.22)	0.96 (0.73, 1.27)	0.97 (0.73, 1.31)	0.94 (0.71, 1.25)
Health conditions					
Comorbid HD, Diabetes or Stroke					
Yes vs No	205/3183	2.63 (1.84, 3.76)	2.04 (1.40, 2.98)	1.99 (1.37, 2.89)	1.98 (1.37, 2.86)
<p>Notes: Odds Ratios (95% Confidence Intervals); Bold indicates p-value<0.05.*Model 1 are crude models. Models 2-4 are adjusted models. [‡] Model 2 adjusts for demographic factors; age, sex, race, education, alcohol consumption, smoking, BMI and comorbidity due to Diabetes, Heart diseases and Stroke. ^α Model 3 adjusts for demographic factors; age, sex, race, education, alcohol consumption, smoking, BMI and comorbidity due to Diabetes, Heart diseases and Stroke plus Toxic stress measures. [†] Model 4 adjusts for demographic factors- age, sex, race, education, alcohol consumption, smoking, BMI and comorbidity due to Diabetes, Heart diseases plus Stroke and indicators of resilience.</p>					

Supplementary Table 3: The relationship between Race and Neurocognitive Impairment with or without adjustment for Toxic Stress or Resilience promoting factors.

Characteristic	Adjusted for	Association	Model 1 (Crude)*	Model 5 [‡]	p-value (Interaction)
			OR (95% CI)	OR (95% CI)	
Race*Discrimination					
Race	Discrimination	Black (AA) vs Caucasian	1.76 (1.21, 2.56)	1.33 (0.74, 2.40)	0.3653
		Other vs Caucasian	2.09 (1.18, 3.72)	1.78 (0.89, 3.56)	
		Black (AA) vs Other	0.84 (0.42, 1.68)	0.75 (0.33, 1.69)	
Race*Mastery					
Race	Mastery	Black (AA) vs Caucasian	1.76 (1.21, 2.56)	1.20 (0.79, 1.82)	0.0272
		Other vs Caucasian	2.09 (1.18, 3.72)	1.38 (0.77, 2.47)	
		Black (AA) vs Other	0.84 (0.42, 1.68)	0.87 (0.44, 1.72)	
Other predictors					
Discrimination*Mastery					
Discrimination	Mastery	One or more experiences vs None	4.05 (2.61, 6.30)	3.25 (2.14, 4.92)	0.0297
Mastery*Age					
Mastery	Age	Low vs High global mastery	2.38 (1.78, 3.20)	1.73 (1.28, 2.34)	0.5851
Discrimination*Age					
Discrimination	Age	One or more experiences vs None	4.05 (2.61, 6.30)	2.76 (1.87, 4.08)	0.1379
Chronic stress*Age					
Chronic stress	Age	High vs low chronic stress	1.88 (1.43, 2.49)	1.75 (1.28, 2.41)	0.0218
<p>Notes: OR (95%CI): Odds Ratios (95% Confidence Intervals); Bold indicates p-value<0.05; *Model 1 are crude models. [‡]Models 5 adjust for race and demographic factors- age, sex, education, alcohol consumption, smoking, BMI and comorbidity due to Diabetes, Heart diseases plus Stroke and resilience indicators. Interaction terms have been added as well.</p>					