Table S1. Factors contribution to executive functional performance differences based on race/ethnicity, age, and sex

	Model 1		Model 2		Model 3		Model 4		Model 5	
Intercept	**10.64±0.70**	**<0.001**	**7.82±0.83**	**<0.001**	**5.70±1.19**	**<0.001**	**11.16±0.74**	**<0.001**	**4.34±1.27**	**<0.001**
Whites	0		0		0		0		0	
Blacks	**-1.96±0.49**	**<0.001**	**-1.51±0.48**	**0.002**	**-1.14±0.50**	**0.024**	**-1.92±0.48**	**<0.001**	-0.84±0.49	0.084
Hispanics	**-2.30±0.39**	**<0.001**	**-1.37±0.41**	**0.001**	**-2.04±0.38**	**<0.001**	**-2.32±0.40**	**<0.001**	**-1.55±0.40**	**<0.001**
Age < 67	0		0		0		0		0	
Age 67-74	-0.55±0.41	0.187	-0.57±0.40	0.156	-0.33±0.40	0.406	-0.63±0.42	0.132	-0.53±0.39	0.169
Age ≥74	**-1.09±0.41**	**0.009**	**-1.03±0.40**	**0.011**	-0.16±0.44	0.707	**-1.33±0.42**	**0.002**	-0.58±0.43	0.181
Sex	0.55±0.39	0.158	0.68±0.37	0.071	0.71±0.38	0.059	0.51±0.38	0.185	**0.73±0.37**	**0.047**
Low SES	-		**0**		-		-		**0**	
Medium SES	-		**2.17±0.46**	**<0.001**	-		-		**1.79±0.49**	**<0.001**
High SES	-		**3.15±0.53**	**<0.001**	-		-		**2.59±0.55**	**<0.001**
Physical functionality	-		-		**0.35±0.07**	**<0.001**	-		**0.29±0.07**	**<0.001**
Depression	-		-		-		-0.06±0.04	0.219	0.01±0.04	0.788
R^2	0.123		0.219		0.195		0.150		0.279	

Notes: significant relationships are highlighted. All models are adjusted for race and ethnicity, age, and gender.

Table S2. Baron and Kenny mediation analysis (outcome: executive function)

Racial/ethnic and age differences in **executive function**			C path effect	A path effect	B path effect	C' path effect	Indirect (ab) effect (95% CI)	ab/c^ɕ
Racial differences	SES influences	Hispanic vs White	-2.28±0.39***	-0.64±0.08***	-	-1.36±0.41**	-0.92 (-1.31; -0.53)	0.40***
		Black vs White	-1.89±0.49***	-0.30±0.11**	-	-1.36±0.48**	-0.53 (-0.88; -0.18)	0.28*
		SES	-	-	1.48±0.26***	-	-	-
	Physical functionality influences	Hispanic vs White	-2.28±0.39***	-0.48±0.33		-2.08±0.38***	-0.20 (-0.42; 0.02)	0.09
		Black vs White	-1.89±0.49***	-2.31±0.41***		-1.17±0.49*	-0.72 (-1.13; -0.31)	0.38***
		Physical functionality	-	-	0.32±0.07***	-	-	-
Age differences	Physical functionality influences	Age 67-74 vs <64	-0.58±0.41	-0.82±0.37*	-	-0.33±0.39	-0.25 (-0.52; 0.02)	0.43
		Age ≥74 vs Age < 64	-1.13±0.41**	-2.67±0.38***	-	-0.16±0.44	-0.97 (-1.38; -0.56)	0.86***
		Physical functionality	-	-	0.35±0.06***	-	-	-

Notes: All models are adjusted for race and ethnicity, age, and sex; c path (total effect)=effect of predictor on outcome; a path=effect of predictor on mediator; b path=effect of mediator on outcome controlling for predictor; c' path (direct effect)=effect of predictor on outcome controlling for mediator; ab path (indirect effect)=effect of predictor on outcome through mediator; Significance of the indirect effect was tested with the Sobel test ; 95% confidence intervals not including 0 indicate a significant; ^{ɕ} Indirect effect as proportion of total effect; highlighted are factors that explain at least 20% of variance in outcomes (e.g. racial disparities in global cognitive performance).

Table S3. Factors contributing to memory performance differences based on race/ethnicity, age, and sex

	Model 1		Model 2		Model 3		Model 4		Model 5	
Intercept	**1.67±0.40**	**<0.001**	0.94±0.49	0.060	-0.79±0.69	0.289	**1.67±0.43**	**<0.001**	-1.10±0.79	0.165
Whites	0		0		0		0		0	
Blacks	**-0.86±0.28**	**0.003**	**-0.74±0.29**	**0.011**	-0.45±0.29	0.130	**-0.86±0.28**	**0.003**	-0.39±0.30	0.191
Hispanics	**-0.67±0.23**	**0.003**	-0.43±0.25	0.084	**-0.55±0.22**	**0.016**	**-0.56±0.23**	**0.019**	-0.40±0.25	0.110
Age < 67	0		0		0		0		0	
Age 67-74	-0.34±0.24	0.160	-0.35±0.24	0.146	-0.19±0.24	0.424	-0.30±0.25	0.217	-0.24±0.24	0.325
Age ≥74	**-0.53±0.24**	**0.028**	**-0.48±0.24**	**0.048**	-0.02±0.26	0.952	**-0.50±0.25**	**0.043**	-0.01±0.27	0.969
Sex	**0.80±0.22**	**<0.001**	**0.83±0.22**	**<0.001**	**0.84±0.22**	**<0.001**	**0.83±0.23**	**<0.001**	**0.87±0.23**	**<0.001**
Low SES	-		**0**		-		-		**0**	
Medium SES	-		**0.55±0.28**	**0.049**	-		-		0.29±0.30	0.349
High SES	-		**0.79±0.32**	**0.015**	-		-		0.41±0.35	0.236
Physical functionality	-		-		**0.18±0.04**	**<0.001**	-		**0.16±0.04**	**<0.001**
Depression	-		-		-		-0.02±0.03	0.557	0.02±0.03	0.557
R^2	0.078		0.095		0.130		0.083		0.132	

Notes: Significant relationships are highlighted. All models are adjusted for race and ethnicity, age, and gender.

Table S4. Baron and Kenny mediation analysis (outcome: memory)

Racial/ethnic and age differences in **memory**			C path (total) effect	A path effect	B path effect	C' path (direct) effect	AB path (indirect) effect	ab/c$^{\varsigma}$
Racial differences	SES influences	Hispanic vs White	-0.67±0.22**	-0.64±0.08***	-	-0.44±0.25	-0.23 (-0.45; -0.01)	0.34*
		Black vs White	-0.82±0.28**	-0.30±0.11**	-	-0.70±0.29*	-0.12 (-0.26; 0.02)	0.15
		SES	-	-	0.36±0.16*	-	-	-
	Physical functionality influences	Hispanic vs White	-0.67±0.22**	-0.48±0.33		-0.57±0.22*	-0.10 (-0.22; 0.02)	0.15
		Black vs White	-0.82±0.28**	-2.31±0.41***		-0.47±0.29	-0.35 (-0.57; -0.13)	0.43**
		Physical functionality	-	-	0.16±0.04***	-	-	-
Age differences	Physical functionality influences	Age 67-74 vs <64	-0.36±0.24	-0.82±0.37*	-	-0.19±0.23	-0.17 (-0.31; -0.03)	0.47*
		Age ≥74 vs Age < 64	-0.56±0.24*	-2.67±0.37***	-	-0.01±0.26	-0.55 (-0.80; -0.30)	0.98***
		Physical functionality	-	-	0.18±0.04***	-	-	-

Notes: All models are adjusted for race and ethnicity, age, and sex; c path (total effect)=effect of predictor on outcome; a path=effect of predictor on mediator; b path=effect of mediator on outcome controlling for predictor; c' path (direct effect)=effect of predictor on outcome controlling for mediator; ab path (indirect effect)=effect of predictor on outcome through mediator; Significance of the indirect effect was tested with the Sobel test ; 95% confidence intervals not including 0 indicate a significant; $^{\varsigma}$ Indirect effect as proportion of total effect; highlighted are factors that explain at least 20% of variance in outcomes (e.g. racial disparities in global cognitive performance).

Table S5. Factors contributing to attention differences based on race/ethnicity, age, and sex

	Model 1		Model 2		Model 3		Model 4		Model 5	
Intercept	**6.89±0.44**	**<0.001**	**5.12±0.53**	**<0.001**	**4.51±0.78**	**<0.001**	**7.18±0.47**	**<0.001**	**3.66±0.84**	**<0.001**
Whites	0		0		0		0		0	
Blacks	**-1.00±0.31**	**0.002**	**-0.80±0.31**	**0.010**	-0.62±0.33	0.060	**-0.98±0.31**	**0.002**	-0.53±0.32	0.104
Hispanics	**-1.66±0.25**	**<0.001**	**-1.15±0.26**	**<0.001**	**-1.57±0.25**	**<0.001**	**-1.65±0.26**	**<0.001**	**-1.25±0.27**	**<0.001**
Age < 67	0		0		0		0		0	
Age 67-74	-0.25±0.26	0.348	-0.30±0.26	0.240	-0.15±0.26	0.574	-0.34±0.27	0.204	-0.34±0.26	0.192
Age ≥74	-0.49±0.26	0.061	-0.48±0.26	0.062	-0.11±0.29	0.706	**-0.59±0.27**	**0.028**	-0.38±0.29	0.183
Sex	0.03±0.25	0.917	0.14±0.24	0.565	0.17±0.25	0.504	0.01±0.25	0.955	0.24±0.24	0.327
Low SES	-		**0**		-		-		**0**	
Medium SES	-		**1.46±0.30**	**<0.001**	-		-		**1.41±0.33**	**<0.001**
High SES	-		**1.88±0.34**	**<0.001**	-		-		**1.74±0.37**	**<0.001**
Physical functionality	-		-		**0.16±0.04**	**<0.001**	-		**0.11±0.05**	**0.011**
Depression	-		-		-		-0.04±0.03	0.138	-0.01±0.03	0.646
R^2	0.141		0.232		0.175		0.162		0.260	

Notes: Significant relationships are highlighted. All models are adjusted for race and ethnicity, age, and sex.

Table S6. Baron and Kenny mediation analysis (outcome: attention)

Racial/ethnic and age differences in **attention**			C path (total) effect	A path effect	B path effect	C' path (direct) effect	AB path (indirect) effect (95% CI)	ab/c*
Racial differences	SES influences	Hispanic vs White	-1.65±0.25***	-0.64±0.08***	-	-1.15±0.27***	-0.50 (-0.75; -0.25)	0.30***
		Black vs White	-0.98±0.31**	-0.30±0.11**	-	-0.71±0.31*	-0.27 (-0.49; -0.05)	0.28*
		SES	-	-	0.86±0.17***	-	-	-
	Physical functionality influences	Hispanic vs White	-1.65±0.25***	-0.48±0.33		-1.58±0.25***	-0.07 (-0.17; 0.03)	0.04
		Black vs White	-0.98±0.31***	-2.31±0.41***		-0.63±0.33	-0.35 (-0.57; -0.13)	0.36**
		Physical functionality	-	-	0.15±0.04***	-	-	-
Age differences		Age 67-74 vs <64	-0.26±0.26	-0.82±0.37*	-	-0.15±0.26	-0.11 (-0.23; 0.01)	0.42
		Age ≥74 vs Age < 64	-0.50±0.26*	-2.67±0.38***	-	-0.12±0.29	-0.38 (-0.62; -0.14)	0.76***
		Physical functionality	-	-	0.15±0.04***	-	-	-

Notes: All models are adjusted for age and sex; c path (total effect)=effect of predictor on outcome; a path=effect of predictor on mediator; b path=effect of mediator on outcome controlling for predictor; c' path (direct effect)=effect of predictor on outcome controlling for mediator; ab path (indirect effect)=effect of predictor on outcome through mediator; Significance of the indirect effect was tested with the Sobel test ; 95% confidence intervals not including 0 indicate a significant; * Indirect effect as proportion of total effect; highlighted are factors that explain at least 20% of variance in outcomes (e.g. racial disparities in global cognitive performance).

Table S7. Factors contributing to processing speed differences based on race/ethnicity, age, and sex

	Model 1		Model 2		Model 3		Model 4		Model 5	
Intercept	**47.69±8.35**	**<0.001**	**76.25±9.82**	**<0.001**	**105.24±15.42**	**<0.001**	**43.78±8.75**	**<0.001**	**120.31±15.83**	**<0.001**
Whites	0		0		0		0		0	
Blacks	**20.05±5.91**	**<0.001**	**15.21±5.68**	**0.008**	8.76±6.24	0.162	**19.32±5.88**	**0.002**	5.64±5.95	0.345
Hispanics	**12.97±74.87**	**0.010**	7.15±4.97	0.152	**10.81±4.84**	**0.027**	**11.28±5.03**	**0.026**	6.10±4.85	0.210
Age < 67	0		0		0		0		0	
Age 67-74	-3.25±5.08	0.523	-1.86±4.78	0.698	-5.43±4.92	0.272	-3.19±5.07	0.529	-3.80±4.67	0.416
Age ≥74	**13.24±5.21**	**0.012**	**13.45±4.92**	**0.007**	3.89±5.46	0.477	**13.01±5.21**	**0.013**	4.74±5.21	0.364
Sex	-7.28±4.79	0.130	**-8.76±4.52**	**0.054**	**-8.46±4.62**	**0.068**	-7.24±4.76	0.129	**-9.84±4.39**	**0.026**
Low SES	-		**0**		**-**		**-**		**0**	
Medium SES	-		**-25.74±6.10**	**<0.001**	**-**		-		**-21.47±6.08**	**<0.001**
High SES	-		**-30.15±6.83**	**<0.001**	**-**		-		**-23.21±6.88**	**<0.001**
Physical functionality	-		-		**-3.99±0.91**	**<0.001**	-		**-3.50±0.89**	**<0.001**
Depression	-		-		-		0.83±0.57	0.158	0.31±0.56	0.585
R^2	0.100		0.175		0.175		0.111		0.236	

Notes: Significant relationships are highlighted. All models are adjusted for race and ethnicity, age, and sex.

Table S8. Barron and Kenny mediation analysis (outcome: processing speed)

Racial/ethnic and age differences in **TMA**			C path (total) effect	A path effect	B path effect	C' path (direct) effect	AB path (indirect) effect (95% CI)	ab/c[c]
Racial differences	SES influences	Hispanic vs White	12.70±4.98*	-0.64±0.08***	-	6.44±5.03	6.26 (1.61; 10.91)	0.49***
		Black vs White	19.16±5.92**	-0.30±0.11**	-	13.77±5.76*	5.39 (2.06; 8.72)	0.28*
		SES	-	-	12.49±3.35***	-	-	-
	Physical functionality influences	Hispanic vs White	12.70±4.98*	-0.48±0.33		10.68±4.84*	2.02 (-0.67; 4.71)	0.16
		Black vs White	19.16±5.92**	-2.31±0.41***		8.69±6.23	10.5 (5.23; 15.77)	0.55***
		Physical functionality	-	-	-3.93±0.93***	-	-	-
Age differences	Physical functionality influences	Age 67-74 vs <64	-3.19±5.14	-0.82±0.37*	-	-5.54±4.91	2.35 (-0.98; 5.68)	0.74
		Age ≥74 vs Age < 64	14.59±5.26**	-2.67±0.38***	-	3.62±5.43	10.97 (5.60; 16.34)	0.75***
		Physical functionality	-	-	-4.22±0.83***	-	-	-

Notes: All models are adjusted for race and ethnicity, age, and sex; c path (total effect)=effect of predictor on outcome; a path=effect of predictor on mediator; b path=effect of mediator on outcome controlling for predictor; c' path (direct effect)=effect of predictor on outcome controlling for mediator; ab path (indirect effect)=effect of predictor on outcome through mediator; Significance of the indirect effect was tested with the Sobel test ; 95% confidence intervals not including 0 indicate a significant; [c] Indirect effect as proportion of total effect; highlighted are factors that explain at least 20% of variance in outcomes (e.g. racial disparities in global cognitive performance).

Table S9. Factors contributing to semantic verbal fluency differences based on race/ethnicity, age, and sex

	Model 1		Model 2		Model 3		Model 4		Model 5	
Intercept	**18.48±1.49**	**<0.001**	**16.13±1.84**	**<0.001**	**10..29±2.53**	**<0.001**	**19.84±1.57**	**<0.001**	**10.66±2.82**	**<0.001**
Whites	0		0		0		0		0	
Blacks	**-3.40±1.07**	**0.002**	**-2.95±1.08**	**0.007**	-2.03±1.10	0.067	**-3.48±1.056**	**0.001**	-1.84±1.13	0.103
Hispanics	**-3.62±0.88**	**<0.001**	**-2.84±0.94**	**0.003**	**-3.40±0.88**	**<0.001**	**-3.42±0.88**	**<0.001**	**-2.85±0.93**	**0.002**
Age < 67	0		0		0		0		0	
Age 67-74	**-2.23±0.91**	**0.015**	**-2.29±0.91**	**0.012**	**-1.91±0.89**	**0.033**	**-2.15±0.90**	**0.017**	**-1.94±0.90**	**0.032**
Age ≥74	**-4.26±0.89**	**<0.001**	**-4.19±0.90**	**<0.001**	**-2.72±0.96**	**0.005**	**-4.14±0.88**	**<0.001**	**-2.72±0.98**	**0.006**
Sex	1.50±0.83	0.072	1.62±0.84	0.054	**1.73±0.83**	**0.039**	1.41±0.82	0.088	**1.72±0.84**	**0.042**
Low SES	-		**0**		-		-		**0**	
Medium SES	-		1.58±1.05	0.132	-		-		0.91±1.08	0.401
High SES	-		**3.05±1.22**	**0.013**	-		-		1.83±1.26	0.147
Physical functionality	-		-		**0.59±0.14**	**<0.001**	-		**0.51±0.15**	**<0.001**
Depression	-		-		-		**-0.23±0.09**	**0.013**	-0.14±0.10	0.160
R^2	0.137		0.152		0.186		0.159		0.198	

Notes: Significant relationships are highlighted. All models are adjusted for race and ethnicity, age, and sex.

Table S10. Barron and Kenny mediation analysis (outcome: semantic verbal fluency)

Racial/ethnic and age differences in **semantic verbal fluency**			C path (total) effect	A path effect	B path effect	C' path (direct) effect	AB path (indirect) effect (95% CI)	ab/c^{ς}
Racial differences	SES influences	Hispanic vs White	-3.49±0.87***	-0.64±0.08***	-	-2.77±0.93**	-0.72 (-1.50; 0.06)	0.21
		Black vs White	-3.16±1.06**	-0.30±0.11**	-	-2.77±1.07*	-0.39 (-0.86; 0.08)	0.12
		SES	-	-	1.41±0.60*	-	-	-
	Physical functionality influences	Hispanic vs White	-3.49±0.87***	-0.48±0.33	-	-3.38±0.87***	-0.11 (-0.50; 0.28)	0.03
		Black vs White	-3.16±1.06**	-2.31±0.41***	-	-1.97±1.10	-1.19 (-1.99; -0.39)	0.38**
		Physical functionality	-	-	0.55±0.15***	-	-	-
Age differences	Physical functionality influences	Age 67-74 vs <64	-2.27±0.91*	-0.82±0.37*	-	-1.90±0.89*	-0.37 (-0.86; 0.12)	0.16
		Age ≥74 vs Age < 64	-4.36±0.89***	-2.67±0.38***	-	-2.70±0.95**	-1.66 (-2.52; -0.80)	0.38***
		Physical functionality	-	-	0.60±0.14***	-	-	-

Notes: All models are adjusted for race and ethnicity, age, and sex; c path (total effect)=effect of predictor on outcome; a path=effect of predictor on mediator; b path=effect of mediator on outcome controlling for predictor; c' path (direct effect)=effect of predictor on outcome controlling for mediator; ab path (indirect effect)=effect of predictor on outcome through mediator; Significance of the indirect effect was tested with the Sobel test ; 95% confidence intervals not including 0 indicate a significant; ^{ς} Indirect effect as proportion of total effect; highlighted are factors that explain at least 20% of variance in outcomes (e.g. racial disparities in global cognitive performance).