

SUPPLEMENTARY DATA

Supplementary Table 1. Slopes of neurocognitive function by age splines and metabolic syndrome status.

| | Slope | SE | P-value |
|--------------------------------------|--------------|-----------|----------------|
| SEVLT-Sum | | | |
| Age <65 | | | |
| No MetS | -0.0122 | 0.0031 | 0.000 |
| MetS | -0.0244 | 0.0028 | 0.000 |
| Age 65+ | | | |
| No MetS | -0.0670 | 0.0156 | 0.000 |
| MetS | -0.0292 | 0.0123 | 0.018 |
| SEVLT-Recall | | | |
| Age <65 | | | |
| No MetS | -0.0126 | 0.0030 | 0.000 |
| MetS | -0.0258 | 0.0030 | 0.000 |
| Age 65+ | | | |
| No MetS | -0.0432 | 0.0152 | 0.005 |
| MetS | -0.0189 | 0.0133 | 0.156 |
| WF | | | |
| Age <65 | | | |
| No MetS | -0.0018 | 0.0033 | 0.572 |
| MetS | -0.0033 | 0.0033 | 0.306 |
| Age 65+ | | | |
| No MetS | -0.0026 | 0.0207 | 0.898 |
| MetS | -0.0196 | 0.0151 | 0.197 |
| DSS | | | |
| Age <65 | | | |
| No MetS | -0.0295 | 0.0029 | 0.000 |
| MetS | -0.0340 | 0.0026 | 0.000 |
| Age 65+ | | | |
| No MetS | -0.0301 | 0.0133 | 0.024 |
| MetS | -0.0159 | 0.0094 | 0.090 |
| Global Cognition | | | |
| Age <65 | | | |
| No MetS | -0.0150 | 0.0030 | 0.000 |
| MetS | -0.0278 | 0.0028 | 0.000 |
| Age 65+ | | | |
| No MetS | -0.0620 | 0.0152 | 0.000 |
| MetS | -0.0266 | 0.0128 | 0.039 |
| Low Mental Status (SIS<=4) | | | |
| Age <65 | | | |
| No MetS | 0.0044 | 0.0015 | 0.003 |

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| | | | | |
|----------------|----------------|--------|--------|-------|
| | MetS | 0.0044 | 0.0015 | 0.003 |
| Age 65+ | | | | |
| | No MetS | 0.0223 | 0.0079 | 0.005 |
| | MetS | 0.0035 | 0.0047 | 0.463 |

Estimates based on survey generalized linear regression models assuming a Gaussian distribution for continuous outcomes (z-scores) and logistic distribution for low mental status.

MetS: Metabolic Syndrome defined using the International Diabetes Federation specifications.

SEVLT= Spanish English Verbal Learning Test; WF=Word Fluency; DSS=Digit Symbol Substitution; SIS=Six Item Screener

Models include sex, age splines (at age 65)*MetS interaction, education, Hispanic/Latino background, and Center for Epidemiologic Studies Depression-10 scale.

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Supplementary Table 2. Association of metabolic syndrome with neurocognitive function among Hispanic/Latinos of diverse backgrounds by inflammation (High-sensitivity C-Reactive Protein) groups.

| | | CRP<3↑ | CRP 3+↑ |
|--------------------------|-----------------|-----------------------------|--------------------|
| | | b/se | b/se |
| SEVLT Sum | MetS | 0.65** [0.22] | 0.44[0.24] |
| | Age | -0.02***[0.00] | -0.02***[0.00] |
| | MetS*Age | -0.01** [0.00] | -0.01* [0.00] |
| SEVLT Recall | MetS | 0.67***[0.19] | 0.55* [0.25] |
| | Age | -0.02***[0.00] | -0.02***[0.00] |
| | MetS*Age | -0.01***[0.00] | -0.01* [0.00] |
| Word Fluency | MetS | -0.11** [0.04] | -0.03[0.04] |
| | Age | 0[0.00] | 0[0.00] |
| | MetS*Age | n/a | n/a |
| Digit Symbol Test | MetS | -0.09***[0.03] | -0.09** [0.03] |
| | Age | -0.03***[0.00] | -0.03***[0.00] |
| | MetS*Age | n/a | n/a |
| Global Cognition | MetS | 0.62** [0.20] | 0.42[0.23] |
| | Age | -0.02***[0.00] | -0.02***[0.00] |
| | MetS*Age | -0.01** [0.00] | -0.01[0.00] |
| | | OR[95%CI] | OR[95%CI] |
| SIS<=4 | MetS | 0.97[0.78;1.22] | 1.23[0.93;1.63] |
| | Age | 1.05***[1.03;1.07] | 1.05***[1.03;1.07] |
| | MetS*Age | n/a | n/a |
| | | Interaction Effect↑↑ | F-Test |
| Global Cognition | CRP*MetS*Age | F(1, 644) = 0.23 | Prob > F = 0.6302 |
| SEVLT Sum | CRP*MetS*Age | F(1, 644) = 0.15 | Prob > F = 0.6958 |
| SEVLT Recall | CRP*MetS*Age | F(1, 644) = 0.09 | Prob > F = 0.7707 |
| Word Fluency | CRP*MetS*Age | F(1, 644) = 3.09 | Prob > F = 0.0791 |
| Digit Symbol Test | CRP*MetS*Age | F(1, 644) = 0.12 | Prob > F = 0.7319 |
| SIS<=4 | CRP*MetS*Age | F(1, 644) = 0.18 | Prob > F = 0.6677 |

Estimates based on survey generalized linear regression models assuming a Gaussian distribution for continuous outcomes and logistic distribution for SIS.

MetS: Metabolic Syndrome defined using the International Diabetes Federation specifications.

CRP: High-sensitivity C-Reactive Protein.

SIS: Six Item Screener

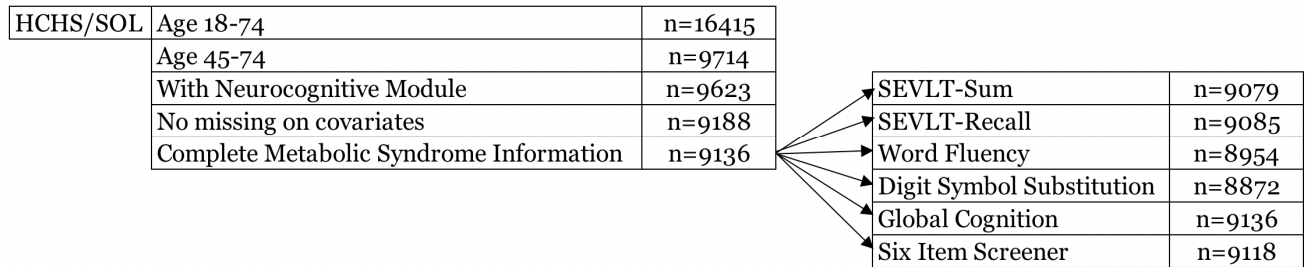
↑Adjusted for sex, age*MetS interaction, education, Hispanic/Latino background, and Center for Epidemiologic Studies Depression-10 scale.

↑↑ Tests for differential association of metabolic syndrome with neurocognitive function among Hispanic/Latinos of diverse backgrounds by inflammation (high-sensitivity C-reactive protein) groups. Based on models estimated with full interactions between CRP groups and sex, age*MetS interaction, education, Hispanic/Latino background, and Center for Epidemiologic Studies Depression-10 scale.

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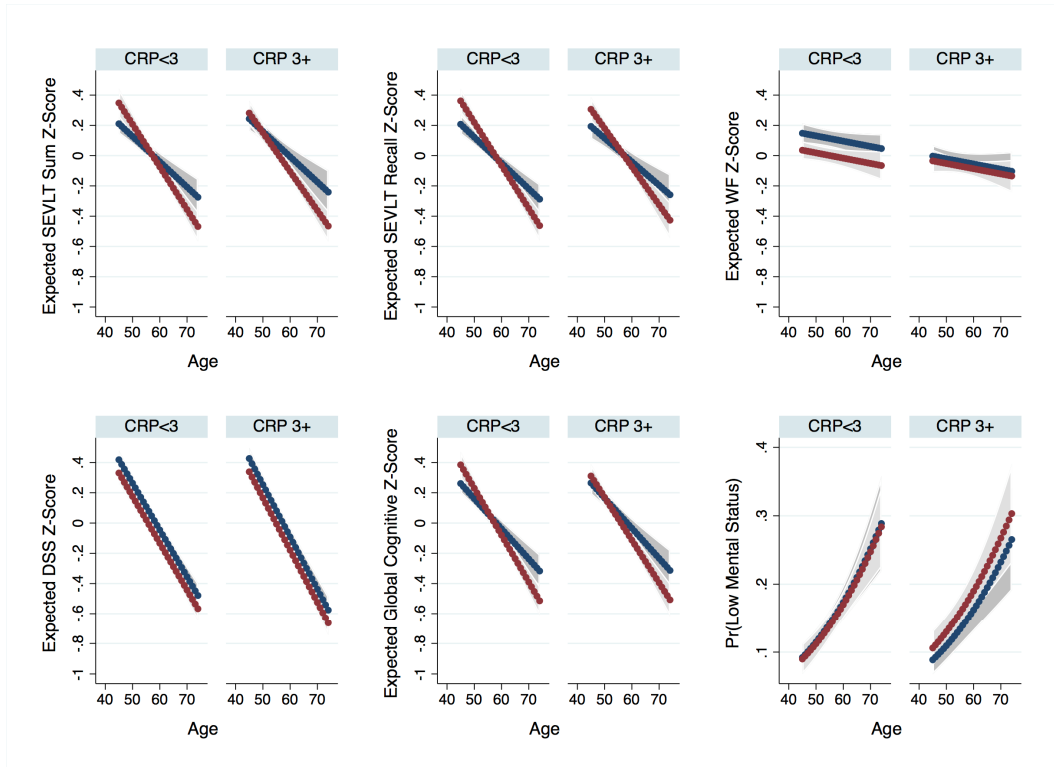
*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

Supplementary Figure 1. Inclusion criteria and analytic sample size.



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Supplementary Figure 2. Estimated marginal means (probabilities) of neurocognitive function over age by metabolic syndrome status stratified by inflammation (high sensitivity C-reactive protein). Estimates are based on survey generalized linear regression models assuming a Gaussian distribution for continuous outcomes (z-scores) and logistic distribution for low mental status.



SEVL T= Spanish English Verbal Learning Test; WF=Word Fluency; DSS=Digit Symbol Substitution; SIS=Six Item Screener

MetS: Metabolic Syndrome defined using the International Diabetes Federation (IDF) specifications.

CRP: High-sensitivity C-Reactive Protein.

Model includes sex, age*MetS interaction, education, Hispanic/Latino background, and Center for Epidemiologic Studies Depression-10 scale.