**Chart

Description automatically generated**

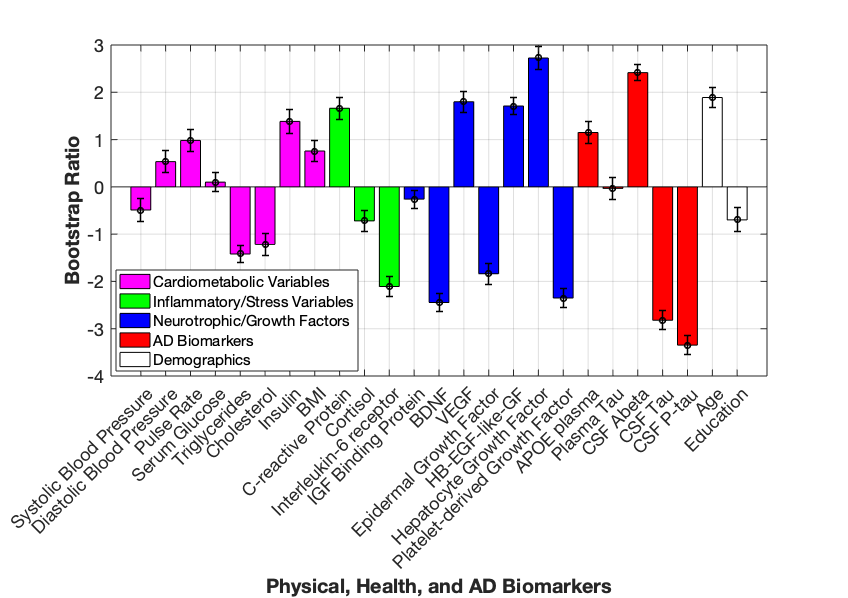
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+Higher Score = Poorer Performance

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\*Bootstrap Ratio is Significant

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**Supplemental Figure 1. Correlation profile and bootstrap ratios for Latent Variable 2. A.** The correlation between each cognitive test variable to the identified physical, health, and AD variables listed in panel B.Significant variables have 95% confidence intervals (error bars) that do not cross the x-axis (0). **B.** Each Physical, Health, and AD Variable’s contribution to LV2 represented by their bootstrap ratios, indicating directionality with significant cognitive tests represented in A (for instance, performance on logical memory delayed was positively correlated with CSF Aß1-42, and had a negative correlation with CSF tau). Error bars represent 95% confidence intervals. Variables with bootstrap ratios > |1.96| (equivalent to a p-value of < 0.05) are considered significant contributors to the LV and are indicated by \*. (**KEY PANEL A:** ADAS-COG = Alzheimer’s Disease Assessment Scale, Cognitive Subsection; ANART = American National Adult Reading Test; MMSE = Mini Mental State Examination; RAVLT = Rey Auditory Verbal Learning Test; **KEY PANEL B:** APOE = apolipoprotein E; BDNF = brain-derived neurotrophic factor; BMI = body mass index; CSF = cerebrospinal fluid; HB-EGF-like-GF = heparin-binding epidermal growth factor-like growth factor; IGF = insulin-like growth factor; P-tau = phospho-tau 181; VEGF = vascular endothelial growth factor).

**Chart, box and whisker chart

Description automatically generated**

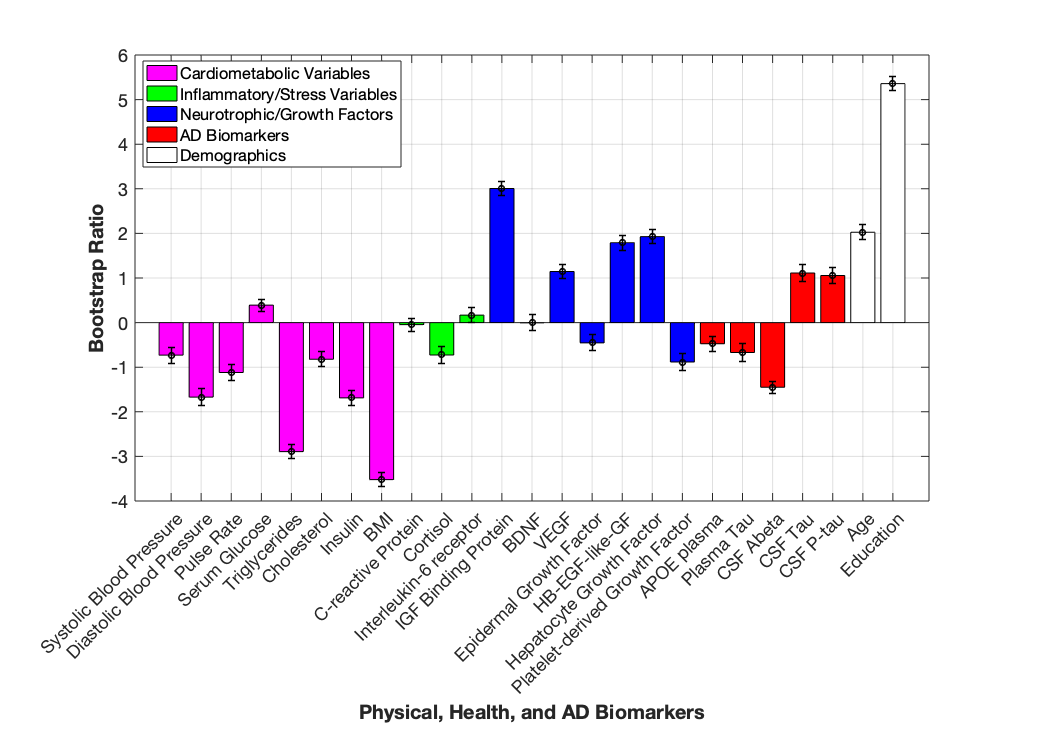
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\*Bootstrap Ratio is Significant

**Supplemental Figure 2. Correlation profile and bootstrap ratios for Latent Variable 3. A.** The correlation between each cognitive test variable to the identified physical, health, and AD variables listed in panel B.Significant variables have 95% confidence intervals (error bars) that do not cross the x-axis (0). **B.** Each Physical, Health, and AD Variable’s contribution to LV3 represented by their bootstrap ratios, indicating directionality with significant cognitive tests represented in A (for instance, performance on digit span backward was positively correlated with education, and had a negative correlation with BMI). Error bars represent 95% confidence intervals. Variables with bootstrap ratios > |1.96| (equivalent to a p-value of < 0.05) are considered significant contributors to the LV and are indicated by \*. (**KEY PANEL A:** ADAS-COG = Alzheimer’s disease Assessment Scale, Cognitive Subsection; ANART = American National Adult Reading Test; MMSE = Mini Mental State Examination; RAVLT = Rey Auditory Verbal Learning Test; **KEY PANEL B:** APOE = apolipoprotein E; BDNF = brain-derived neurotrophic factor; BMI = body mass index; CSF = cerebrospinal fluid; HB-EGF-like-GF = heparin-binding epidermal growth factor-like growth factor; IGF = insulin-like growth factor; P-tau = phospho-tau 181; VEGF = vascular endothelial growth factor).