

Supplementary Material 2 for Relationships between Executive Functioning and Level of Competition in Ice Hockey SJSEP, 2026:8

Table S1. Results from all hierarchical regression models, including standardized and unstandardized estimates for the associations between level of competition and cognitive performance, along with R-square change, 95% confidence interval, and p-values.

| Inhibition | | Stop signal - Total accuracy | | | | | | |
|---------------------|--------------------------------|--|----------------------|---------|--------|--------|-------|-------------|
| | | ΔR^2 | Total R ² | β | B | 95% CI | | p |
| | | | | | | LL | UL | |
| Step 1 ^a | Age | .093 | | .120 | 0.176 | -0.358 | 0.710 | .507 |
| | Years Education | | | .236 | 0.878 | -0.481 | 2.237 | .198 |
| Step 2 ^b | Level of competition (highest) | .138 | .231 | .377 | 2.030 | 0.333 | 3.727 | .021 |
| | Level of competition (current) | .171 | .265 | .420 | 2.358 | 0.628 | 4.087 | .009 |
| | | Stop Signal - Total Accuracy/Reaction time | | | | | | |
| | | ΔR^2 | Total R ² | β | B | 95% CI | | p |
| | | | | | | LL | UL | |
| Step 1 ^a | Age | .121 | | .325 | .085 | -.009 | .178 | .075 |
| | Years Education | | | .049 | .032 | -.206 | .270 | .785 |
| Step 2 ^b | Level of competition (highest) | .201 | .321 | .455 | .436 | .152 | .719 | .004 |
| | Level of competition (current) | .151 | .272 | .395 | .394 | .088 | .700 | .013 |
| | | (H) Stop signal - Total accuracy | | | | | | |
| | | ΔR^2 | Total R ² | β | B | 95% CI | | p |
| | | | | | | LL | UL | |
| Step 1 ^a | Age | .164 | | .426 | 1.134 | 0.202 | 2.065 | .019 |
| | Years Education | | | -.060 | -0.408 | -2.779 | 1.962 | .729 |
| Step 2 ^b | Level of competition (highest) | .106 | .270 | .331 | 3.239 | 0.235 | 6.243 | .035 |
| | Level of competition (current) | .090 | .254 | .304 | 3.100 | -0.066 | 6.266 | .055 |
| | | Stop Signal - Total Accuracy/Reaction time | | | | | | |
| | | ΔR^2 | Total R ² | β | B | 95% CI | | p |
| | | | | | | LL | UL | |
| Step 1 ^a | Age | .161 | | .405 | .105 | .014 | .196 | .025 |
| | Years Education | | | -.010 | -.007 | -.239 | .225 | .953 |
| Step 2 ^b | Level of competition (highest) | .121 | .282 | .352 | .337 | .046 | .628 | .025 |
| | Level of competition (current) | .058 | .219 | .245 | .244 | -.072 | .560 | .126 |

| Switching | | | | | | | | |
|-------------------------------------|--------------------------------|--------------|----------------------|---------|--------|-----------|-----------|----------|
| Color Shape – Total accuracy | | | | | | | | |
| | | ΔR^2 | Total R ² | β | B | 95% CI | | <i>p</i> |
| | | | | | | <i>LL</i> | <i>UL</i> | |
| Step 1 ^a | Age | .054 | | .084 | 0.121 | -0.454 | 0.695 | .671 |
| | Years Education | | | .185 | 0.649 | -0.745 | 2.044 | .349 |
| Step 2 ^b | Level of competition (highest) | .019 | .073 | .141 | 0.714 | -1.199 | 2.627 | .452 |
| | Level of competition (current) | .014 | .068 | .122 | 0.638 | -1.332 | 2.608 | .513 |
| Color Shape - Switch cost (ACC) | | | | | | | | |
| | | ΔR^2 | Total R ² | β | B | 95% CI | | <i>p</i> |
| | | | | | | <i>LL</i> | <i>UL</i> | |
| Step 1 ^a | Age | .083 | | -.255 | -0.289 | -0.705 | 0.126 | .166 |
| | Years Education | | | -.065 | -0.188 | -1.246 | 0.869 | .720 |
| Step 2 ^b | Level of competition (highest) | .014 | .097 | .119 | 0.495 | -0.928 | 1.919 | .484 |
| | Level of competition (current) | .001 | .084 | -.035 | -0.152 | -1.646 | 1.342 | .837 |
| Color Shape - Switch cost (RT) | | | | | | | | |
| | | ΔR^2 | Total R ² | β | B | 95% CI | | <i>p</i> |
| | | | | | | <i>LL</i> | <i>UL</i> | |
| Step 1 ^a | Age | .006 | | -.060 | -1.515 | -11.204 | 8.175 | .753 |
| | Years Education | | | -.031 | -2.012 | -26.673 | 22.649 | .869 |
| Step 2 ^b | Level of competition (highest) | .006 | .012 | -.077 | -7.226 | -40.584 | 26.131 | .662 |
| | Level of competition (current) | .000 | .006 | -.015 | -1.500 | -36.357 | 33.356 | .931 |
| (H) Color Shape - Accuracy | | | | | | | | |
| | | ΔR^2 | Total R ² | β | B | 95% CI | | <i>p</i> |
| | | | | | | <i>LL</i> | <i>UL</i> | |
| Step 1 ^a | Age | .067 | | .244 | 0.302 | -0.157 | 0.762 | .189 |
| | Years Education | | | .033 | 0.102 | -1.045 | 1.249 | .857 |
| Step 2 ^b | Level of competition (highest) | .007 | .074 | -.088 | 0.392 | -1.971 | 1.188 | .617 |
| | Level of competition (current) | .005 | .072 | -.074 | -0.340 | -1.972 | 1.292 | .674 |
| (H) Color Shape - Switch cost (ACC) | | | | | | | | |
| | | ΔR^2 | Total R ² | β | B | 95% CI | | <i>p</i> |
| | | | | | | <i>LL</i> | <i>UL</i> | |
| Step 1 ^a | Age | .001 | | -.003 | -0.033 | -0.301 | 0.296 | .986 |
| | Years Education | | | -.027 | -0.054 | -0.813 | 0.704 | .885 |
| Step 2 ^b | Level of competition (highest) | .001 | .002 | -.032 | -0.092 | -1.121 | 0.937 | .856 |
| | Level of competition (current) | .001 | .002 | .032 | 0.094 | -0.978 | 1.166 | .859 |
| (H) Color Shape - Switch cost (RT) | | | | | | | | |
| | | ΔR^2 | Total R ² | β | B | 95% CI | | <i>p</i> |
| | | | | | | <i>LL</i> | <i>UL</i> | |
| Step 1 ^a | Age | .056 | | -.249 | -3.547 | -8.926 | 1.832 | .189 |
| | Years Education | | | .034 | 1.242 | -12.474 | 14.958 | .855 |
| Step 2 ^b | Level of competition (highest) | .016 | .072 | -.127 | -6.669 | -25.095 | 11.758 | .466 |
| | Level of competition (current) | .013 | .069 | -.114 | -6.253 | -25.604 | 13.098 | .515 |

Updating

| | | Visual 2-back - Accuracy | | | | | | |
|---------------------|--------------------------------|------------------------------|----------------------|---------|--------|-----------|-----------|-------------|
| | | ΔR^2 | Total R ² | β | B | 95% CI | | <i>p</i> |
| | | | | | | <i>LL</i> | <i>UL</i> | |
| Step 1 ^a | Age | .033 | | .141 | 0.191 | -0.336 | 0.718 | .466 |
| | Years Education | | | -.187 | -0.645 | -1.992 | 0.701 | .336 |
| Step 2 ^b | Level of competition (highest) | .048 | .081 | .222 | 1.120 | -0.674 | 2.914 | .213 |
| | Level of competition (current) | .056 | .088 | .239 | 1.245 | -0.602 | 3.092 | .179 |
| | | (H) Visual 2-back - Accuracy | | | | | | |
| | | ΔR^2 | Total R ² | β | B | 95% CI | | <i>p</i> |
| | | | | | | <i>LL</i> | <i>UL</i> | |
| Step 1 ^a | Age | .037 | | .063 | 0.091 | -0.477 | 0.659 | .747 |
| | Years Education | | | .158 | 0.559 | -0.845 | 1.962 | .423 |
| Step 2 ^b | Level of competition (highest) | .130 | .167 | .371 | 2.031 | 0.111 | 3.951 | .039 |
| | Level of competition (current) | .109 | .146 | .342 | 1.899 | -0.084 | 3.882 | .060 |

^aStep 1 (Model 1), adjusted for age and years of education

^bStep 2 (Model 2), measures of level of competition were included, and investigated in separate models

H = Hockey stimuli

ΔR^2 = R square change

R = total R square

β = Standardized beta

B = Unstandardized beta

CI = confidence interval

LL = lower limit

UL = upper limit

Bold values denote statistical significance.