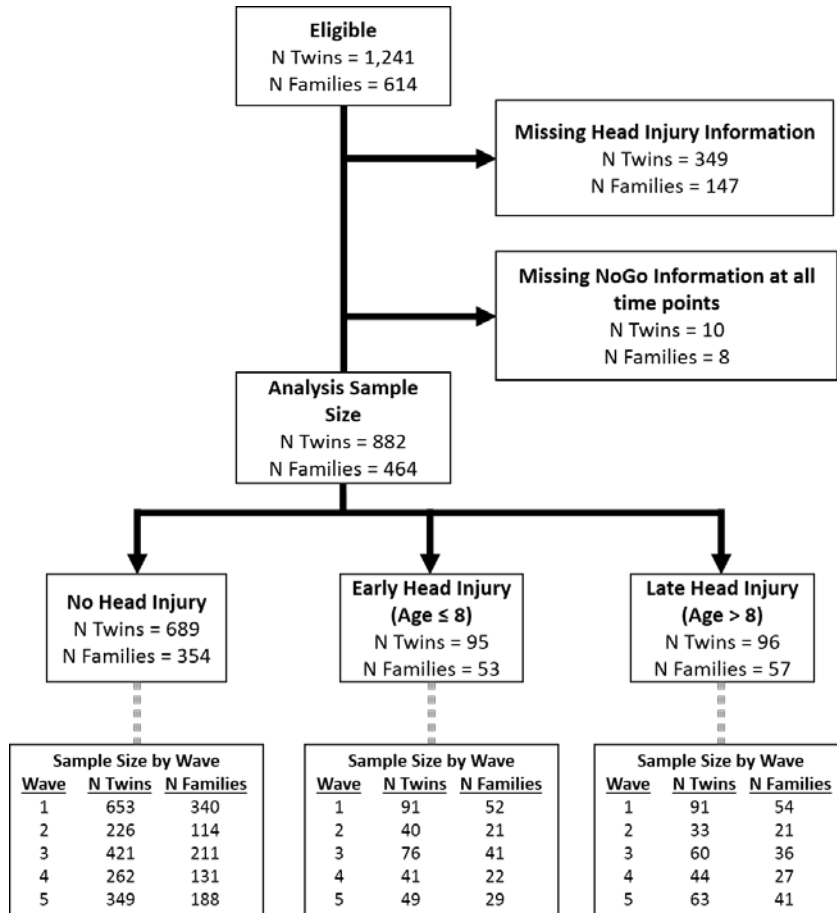**Supplementary Tables and Figures**

Supplementary Figure S1: Derivation of Analysis Sample and Head Injury Groups

Supplementary Table S1: Attrition Analyses

| Wave 1 Variables | Not Missing Head Injury or NoGo Information N=882 | Missing Head Injury or NoGo Information N=359 | p-value |
|---|---|---|---|
| **Age** | 9.6 ± 0.6 | 9.6 ± 0.6 | 0.66 |
| **Male** | 46% | 57% | <.001 |
| **Monozygotic** | 45% | 51% | 0.04 |
| **Race** | | | 0.10 |
| **White** | 29% | 22% | |
| **Hispanic** | 37% | 39% | |
| **Black** | 13% | 16 % | |
| **Asian** | 4% | 6% | |
| **Mixed/Other** | 17% | 17% | |
| **§NoGo Errors** | 45 ± 20 | 47 ± 20 | 0.08 |
| **‡Reactive Aggression** | 0.62 ± 0.32 | 0.67 ± 0.34 | 0.03 |
| **‡Proactive Aggression** | 0.06 ± 0.13 | 0.11 ± 0.19 | <.001 |

p-value from Welch's T-test or Fisher's exact
§N=837 vs 317
‡N=874 vs 342

Supplementary Table S2: Among those with Head Injury, Association of Age at First Head Injury with Change in Impulsivity and Aggression Scores over time

| | Δ(Wave 2- W1) Ages 11-13 | | Δ(Wave 3- W1) Ages 14-15 | | Δ(Wave 4- W1) Ages 16-18 | | Δ(Wave 5- W1) Ages 19-20 | |
|---|---|---|---|---|---|---|---|---|
| | b | (95% CI) | b | (95% CI) | b | (95% CI) | b | (95% CI) |
| **NoGo Errors** | | | | | | | | |
| *Age at 1st Head Injury* | -0.5 | (-1.2, 0.2) | *-1.0 | (-1.6, -0.4) | *-0.8 | (-1.5, -0.1) | -0.4 | (-1.2, 0.3) |
| | | | | | | | | |
| **Reactive Aggression** | | | | | | | | |
| *Age at 1st Head Injury* | *-0.013 | (-0.023, -0.003) | *-0.012 | (-0.021, -0.003) | -0.007 | (-0.017, 0.003) | *-0.013 | (-0.024, -0.001) |
| | | | | | | | | |
| **Proactive Aggression** | | | | | | | | |
| *Age at 1st Head Injury* | 0.001 | (-0.004, 0.005) | 0.001 | (-0.003, 0.006) | *0.005 | (0.000, 0.009) | 0.001 | (-0.004, 0.006) |

b=regression slope coefficient, CI=Confidence Interval

*p-value < 0.05 for association of Age at 1st Head Injury with change from Wave 1. Models adjusted for baseline age, sex, race, and zygosity

Negative coefficients indicate that earlier head injuries are associated with higher levels of Impulsivity or Aggression