## Supplementary file

***Results for all variables***

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | ***F*(df), *p*-value** | **Mean difference (95% CI), *p*-value** | | **Estimated marginal means: change score (CI)** | | | | | **Baseline median values** | | |
| **Chiro** | | **Control** | | | **Chiro** | | **Control** |
| **Egocentric localization** |  |  | |  | |  | | |  | |  |
| Horizontal error (mm) | 0.72 (1, 1), .395 | 2.47 (-3.222, 8.161), .395 | | 0.23 (-3.798, 4.251) | | -2.24 (-6.268, 1.781) | | | -0.97 | | 3.79 |
| Vertical error (mm) | **52.30 (1, 1), <.001** | **-14.61 (-18.566, -10.647), <.001** | | -8.61 (-11.351, -5.86) | | 6.00 (3.255, 8.746) | | | -37.69 | | 13.55 |
| **Fixation Stability** |  |  | |  | |  | | |  | |  |
| BCEA (log10 minarc2) | **8.17 (1, 1), .005** | **-0.17 (-0.291, -0.054), .005** | | -0.14 (-0.228, -0.062) | | 0.03 (-0.056, 0.111) | | | 3.26 | | 2.94 |
| Horizontal error (deg) | **9.35 (1, 1), .003** | **-0.18 (-0.3, -0.065), .003** | | -0.14 (-0.218, -0.056) | | 0.04 (-0.039, 0.129) | | | 0.11 | | 0.07 |
| Vertical error (deg) | **0.19 (1, 1), .659** | -0.02 (-0.093, 0.059), .659 | | -0.1 (-0.153, -0.046) | | -0.08 (-0.136, -0.029) | | | 0.35 | | 0.20 |
| **Pursuit** |  |  | |  | |  | | |  | |  |
| Total error (deg) | **43.14 (1, 1), <.001** | **0.12 (0.082, 0.152), <.001** | | 0.11 (0.087, 0.136) | | -0.01 (-0.03, 0.019) | | | 0.20 | | 0.11 |
| Horizontal error (deg) | 0.44 (1, 1), .505 | 0.01 (-0.028, 0.056), .505 | | 0.01 (-0.016, 0.043) | | -0.0004 (-0.03, 0.029) | | | 0.18 | | 0.14 |
| Vertical error (deg) | 1.32 (1, 1), .251 | -0.03 (-0.082, 0.021), .251 | | -0.07 (-0.107, -0.034) | | -0.04 (-0.077, -0.004) | | | 0.52 | | 0.25 |
| Total gain | **54.97 (1, 1), <.001** | **0.01 (0.01, 0.018), <.001** | | 0.01 (0.011, 0.016) | | -0.0008 (-0.003, 0.002) | | | 1.02 | | 1.01 |
| Horizontal gain | **21.02 (1, 1), <.001** | **0.04 (0.022, 0.056), <.001** | | -0.004 (-0.016, 0.008) | | -0.04 (-0.055, -0.031) | | | 1.09 | | 1.09 |
| Vertical gain | **27.91 (1, 1), <.001** | **0.04 (0.022, 0.049), <.001** | | 0.01 (-0.0003, 0.018) | | -0.03 (-0.036, -0.017) | | | 1.02 | | 0.99 |
| Number of saccades | 1.13 (1, 1), .288 | 0.12 (-0.097, 0.328), .288 | | -0.15 (-0.305, -0.005) | | -0.27 (-0.42, -0.12) | | | 0 | | 0 |
| **Pro-saccade** |  |  | |  | |  | | |  | |  |
| Latency (ms) | **14.94 (1, 1), <.001** | **-31.2 (-47.0, -15.4), <.001** | | -75.4 (-86.6, -64.2) | | -44.2 (-55.4, -33.1) | | | 366.8 | | 366.9 |
| **Anti-saccade** |  |  | |  | |  | | |  | |  |
| Latency (ms) | **36.13 (1, 1), <.001** | **-51.7 (-68.5, -34.8), <.001** | | -74.3 (-86.1, -62.5) | | -22.6 (-34.7, -10.6) | | | 350.3 | | 367.0 |
| **Stroop part 1** |  |  | |  | |  | | |  | |  |
| Decision making latency (ms) | **60.99 (1, 1), <.001** | **-0.03 (-0.03, -0.02), <.001** | | 0.1 (0.1, 0.1) | | 0.1 (0.1, 0.1) | | | 716.9 | | 733.5 |
| Trial time (ms) | **68.00 (1, 1), <.001** | **-0.03 (-0.035, -0.022), <.001** | | 0.04 (0.032, 0.041) | | 0.06 (0.06, 0.07) | | | 900.0 | | 917.0 |
| **Stroop part 2** |  |  | |  | |  | | |  | |  |
| Decision making latency (ms) | 2.49 (1, 1), .114 | -0.01 (-0.01, 0.001), .114 | | -0.02 (-0.02, -0.01) | | -0.01 (-0.02, -0.01) | | | 783.5 | | 816.3 |
| Trial time (ms) | 0.13 (1, 1), .721 | -0.001 (-0.01, 0.01), .721 | | -0.02 (-0.03, -0.02) | | -0.02 (-0.03, -0.02) | | | 1000.0 | | 1000.0 |
| **Vestibulo-ocular reflex** |  |  | |  | |  | | |  | |  |
| BCEA (log10 minarc2) | **41.41 (1, 1), <.001** | **-0.08 (-0.108, -0.058), <.001** | | -0.10 (-0.12, -0.084) | | -0.02 (-0.036, -0.001) | | | 4.00 | | 3.94 |
| Horizontal error (deg) | 2.00 (1, 1), .157 | -0.03 (-0.063, 0.01), .157 | | 0.08 (0.049, 0.102) | | 0.10 (0.077, 0.127) | | | -0.17 | | -0.14 |
| Vertical error (deg) | **28.68 (1, 1), <.001** | **-0.1 (-0.14, -0.065), <.001** | | -0.15 (-0.185, -0.123) | | -0.05 (-0.072, -0.03) | | | -0.46 | | -0.24 |
| Gain | Model residuals not normally distributed and resisted transformation. | | | | | | | | 0.98 | | 0.99 |
| Time to max gain (ms) | **57.43 (1, 1), <.001** | **-8.8 (-11.1, -6.6), <.001** | | -25.1 (-26. 7, -23.4) | | | -16.2 (-17.8, -14.7) | | 83.4 | | 83.3 |
| Number of saccades | **42.92 (1, 1), <.001** | **0.07 (0.047, 0.087), <.001** | | 0.06 (0.044, 0.073) | | | -0.01 (-0.022, 0.006) | | 0 | | 0 |
| **Binomial mixed effects regression model: (number of correctly performed trials, χ2(degrees of freedom, n), *p*-value)** | | | | | | | | | | | | |
|  | **Time (pre or post intervention)** | | **As trial number increased\*\*** | | **Time/trial number interaction** | | | **Total number of correct trials** | | | |
| **Saccades** |  | |  | |  | | |  | |  | |
| Pro-saccades control | χ2(1, N=40) =0.02, .895 | | χ2(1, N=40) =1.05, .305 | | χ2(1, N=40) =0.001, .970 | | |  | | 12 | |
| Pro-saccades chiro | χ2(1, N=40) =0.64, .423 | | χ2(1, N=40) =1.00, .317 | | χ2(1, N=40) =0.32, .569 | | | 11 | |  | |
| Anti-saccades control | χ2(1, N=40) =1.19, .276 | | χ2(1, N=40) =0.17, .684 | | χ2(1, N=40) =1.64, .201 | | |  | | 12 | |
| Anti-saccades chiro | χ2(1, N=40) =0.46, .500 | | χ2(1, N=40) =0.232, .630 | | **χ2(1, N=40) =5.81, .016** | | | 12 | |  | |
| **Stroop** |  | |  | |  | | |  | |  | |
| P1 Stroop control | χ2(1, N=40) =3.01, .082 | | χ2(1, N=40) =1.58, .201 | | χ2(1, N=40) =0.10, .758 | | |  | | 15 | |
| P1 Stroop chiro | **χ2(1, N=40) =35783.89, <.001** | | **χ2(1, N=40) =5333.47, <.001** | | **χ2(1, N=40) =3508.64, <.001** | | | 14 | |  | |
| P2 Stroop control | χ2(1, N=40) =2.42, .120 | | **χ2(1, N=40) =8.82, .001** | | χ2(1, N=40) =2.92, .087 | | |  | | 14 | |
| P2 Stroop chiro | χ2(1, N=40) =2.30, .129 | | **χ2(1, N=40) = 8.19, <.001** | | χ2(1, N=40) =0.17, .678 | | | 14 | |  | |
|  |  | |  | |  | | | **Chiro** | | **Control** | |
| **RPQ score (total mean±SD)** |  | |  | |  | | | 30.3±11.4 | | 30.1±12.7 | |