## 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 |