## Supplementary File 1

## Control analyses: Excluding data sets based on the distraction task

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Study 1:** $N=67$ | cluster | $$x[mm]$$ | $$y[mm]$$ | $$z[ms]$$ | $$t\_{62}$$ | $$Z\_{≡}$$ | $$p\_{FWE}$$ | $$k\_{E}$$ | $tw\_{sig}$ [ms] |
| **A** standards > deviants | 1 | -13 | 2 | 172 | 15.73 | Inf | 0.000 | 8060 | 100 - 228 |
|  |  |  8 |  -3 | 180 | 15.26 |  Inf | 0.000 |  |  |
|  | 2 | 4 | 2 | 400 | 9.17 | 7.26 | 0.000 | 1181 | 364 - 400 |
|  | 3 | -8 | 50 | 276 | 6.80 | 5.85 | 0.000 | 264 | 240 - 300 |
|  |  |  -4 |  45 | 248 |  5.03 | 4.59 | 0.007 |  |  |
|  | 4 | 0 | -95 | 304 | 5.13 | 4.66 | 0.005 | 92 | 288 - 332 |
|  | 5 | -60 | -57 | 268 | 4.83 | 4.44 | 0.013 | 191 | 240 - 284 |
|  |  | -60 |  -9 | 256 |  4.75 | 4.37 | 0.016 |  |  |
|  |  | -60 | -36 | 260 |  4.74 | 4.37 | 0.017 |  |  |
| **B** deviants > standards | 1 | 17 | 72 | 156 | 13.99 | Inf | 0.000 | 1524 | 100 - 236 |
|  |  |  4 |  72 | 212 |  9.74 | 7.56 | 0.000 |  |  |
|  |  | -30 |  61 | 184 |  7.67 | 6.41 | 0.000 |  |  |
|  | 2 | -47 | -68 | 180 | 13.96 | Inf | 0.000 | 5986 | 100 - 328 |
|  |  |  64 | -62 | 200 | 13.52 |  Inf | 0.000 |  |  |
|  |  |  42 | -78 | 168 | 11.49 |  Inf | 0.000 |  |  |
|  | 3 | -51 | -30 | 400 | 6.18 | 5.44 | 0.000 | 340 | 372 - 400 |
|  | 4 | 34 | -52 | 364 | 6.12 | 5.39 | 0.000 | 418 | 352 - 400 |
|  |  |  47 | -52 | 400 |  5.60 | 5.02 | 0.001 |  |  |
|  | 5 | 64 | -62 | 100 | 4.87 | 4.46 | 0.012 | 9 | 100 - 112 |
|  | 6 | 0 | 72 | 400 | 4.67 | 4.31 | 0.021 | 8 | 400 - 400 |
|  |  | -17 |  72 | 400 |  4.49 | 4.17 | 0.035 |  |  |
| **C** mismatch: AMI > BIP | 1 | 13 | 67 | 160 | 5.26 | 4.76 | 0.003 | 70 | 148 - 168 |
| **D** stable MMN > volatile MMN | 1 | 17 | -19 | 204 | 5.25 | 4.75 | 0.004 | 407 | 180 - 216 |
|  |  | -17 | -25 | 196 |  5.20 | 4.72 | 0.005 |  |  |
|  | 2 | -8 | 45 | 256 | 4.70 | 4.33 | 0.022 | 19 | 252 - 260 |
| **E** volatile MMN > stable MMN | 1 | 42 | -78 | 196 | 5.12 | 4.66 | 0.006 | 69 | 188 - 212 |
|  |  |  30 | -89 | 204 |  4.89 | 4.48 | 0.013 |  |  |
|  |  |  55 | -68 | 196 |  4.83 | 4.43 | 0.015 |  |  |
|  | 2 | -60 | -57 | 208 | 5.00 | 4.56 | 0.009 | 15 | 200 - 216 |
|  | 3 | 4 | 72 | 212 | 4.54 | 4.20 | 0.036 | 7 | 208 - 212 |
|  | 4 | 13 | -95 | 208 | 4.49 | 4.16 | 0.041 | 2 | 208 - 212 |
| **F** stable > volatile | 1 | 4 | -62 | 284 | 5.54 | 4.98 | 0.001 | 156 | 272 - 296 |
|  | 2 | 4 | -95 | 144 | 4.88 | 4.47 | 0.013 | 35 | 140 - 152 |
|  | 3 | 0 | 61 | 148 | 4.50 | 4.17 | 0.039 | 2 | 144 - 148 |

**Table S1** Significant activations for a reduced sample size (*N*=67) in study 1. Table shows whole-volume corrected significant effects after excluding three data sets due to lack of behavioral data and one dataset based on low performance in the distraction task (hit rate<75%). The results reported for the full sample (*N*=71) in Table 1, Table 4 and Appendix 2—table 1 hold.

**Table S2** Significant activations for a reduced sample size (*N*=77) in study 2. Table shows whole-volume corrected significant effects after excluding one data set based on low performance in the distraction task (hit rate<75%). All results reported for the full sample (*N*=78) in Table 2 and Appendix 2—table 1 hold, except for the pharmacological effect (GAL > PLA) on stability ERPs reported in Appendix 2—table 1.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Study 2:** $N=77$ | cluster | $$x[mm]$$ | $$y[mm]$$ | $$z[ms]$$ | $$t\_{72}$$ | $$Z\_{≡}$$ | $$p\_{FWE}$$ | $$k\_{E}$$ | $tw\_{sig}$ [ms] |
| **A** standards > deviants | 1 | 13 | -9 | 176 | 13.99 | Inf | 0.000 | 7462 | 100 - 216 |
|  |  |  4 |  18 | 160 |  3.79 |  Inf | 0.000 |  |  |
|  |  |  42 | -19 | 124 | 10.61 |  Inf | 0.000 |  |  |
|  | 2 | 0 | -3 | 396 | 8.36 | 6.95 | 0.000 | 1317 | 364 - 400 |
|  | 3 | 4 | -95 | 296 | 7.25 | 6.25 | 0.000 | 688 | 244 - 332 |
|  |  |  30 | -89 | 280 |  6.64 | 5.83 | 0.000 |  |  |
|  |  |  51 | -68 | 256 |  5.53 | 5.02 | 0.001 |  |  |
|  | 4 | 4 | 61 | 288 | 6.07 | 5.43 | 0.000 | 290 | 256 - 304 |
|  |  |  0 |  56 | 268 |  5.92 | 5.32 | 0.000 |  |  |
|  | 5 | -47 | -68 | 256 | 5.78 | 5.21 | 0.000 | 298 | 232 - 284 |
|  |  | -60 | -57 | 260 |  5.61 | 5.09 | 0.001 |  |  |
| **B** deviants > standards | 1 | -42 | -73 | 172 | 14.11 | Inf | 0.000 | 5568 | 100 - 216 |
|  |  |  55 | -68 | 196 | 10.81 |  Inf | 0.000 |  |  |
|  |  | -38 | -73 | 124 | 10.15 |  Inf | 0.000 |  |  |
|  | 2 | -13 | -30 | 256 | 7.31 | 6.29 | 0.000 | 2724 | 232 - 328 |
|  |  | -26 | -14 | 288 |  6.85 | 5.98 | 0.000 |  |  |
|  |  |  8 |  -9 | 304 |  6.61 | 5.81 | 0.000 |  |  |
|  | 3 | 38 | -68 | 400 | 6.46 | 5.71 | 0.000 | 273 | 368 - 400 |
|  | 4 | 4 | 72 | 388 | 5.86 | 5.28 | 0.000 | 146 | 368 - 400 |
|  | 5 | 68 | 18 | 196 | 5.39 | 4.92 | 0.002 | 16 | 172 - 204 |
|  | 6 | -60 | -9 | 400 | 4.95 | 4.57 | 0.008 | 36 | 396 - 400 |
|  | 7 | -34 | -62 | 396 | 4.86 | 4.50 | 0.010 | 50 | 388 - 400 |
| **C** volatile > stable | 1 | 4 | 18 | 384 | 4.63 | 4.32 | 0.025 | 32 | 380 - 388 |
|  | 2 | 0 | 40 | 268 | 4.47 | 4.18 | 0.041 | 3 | 268 - 272 |
|  | 3 | -21 | -19 | 356 | 4.41 | 4.13 | 0.050 | 1 | 356 - 356 |
| **D** stability: PLA > LEV | 1 | -38 | -14 | 264 | 4.70 | 4.37 | 0.020 | 9 | 260 - 264 |