Supplement

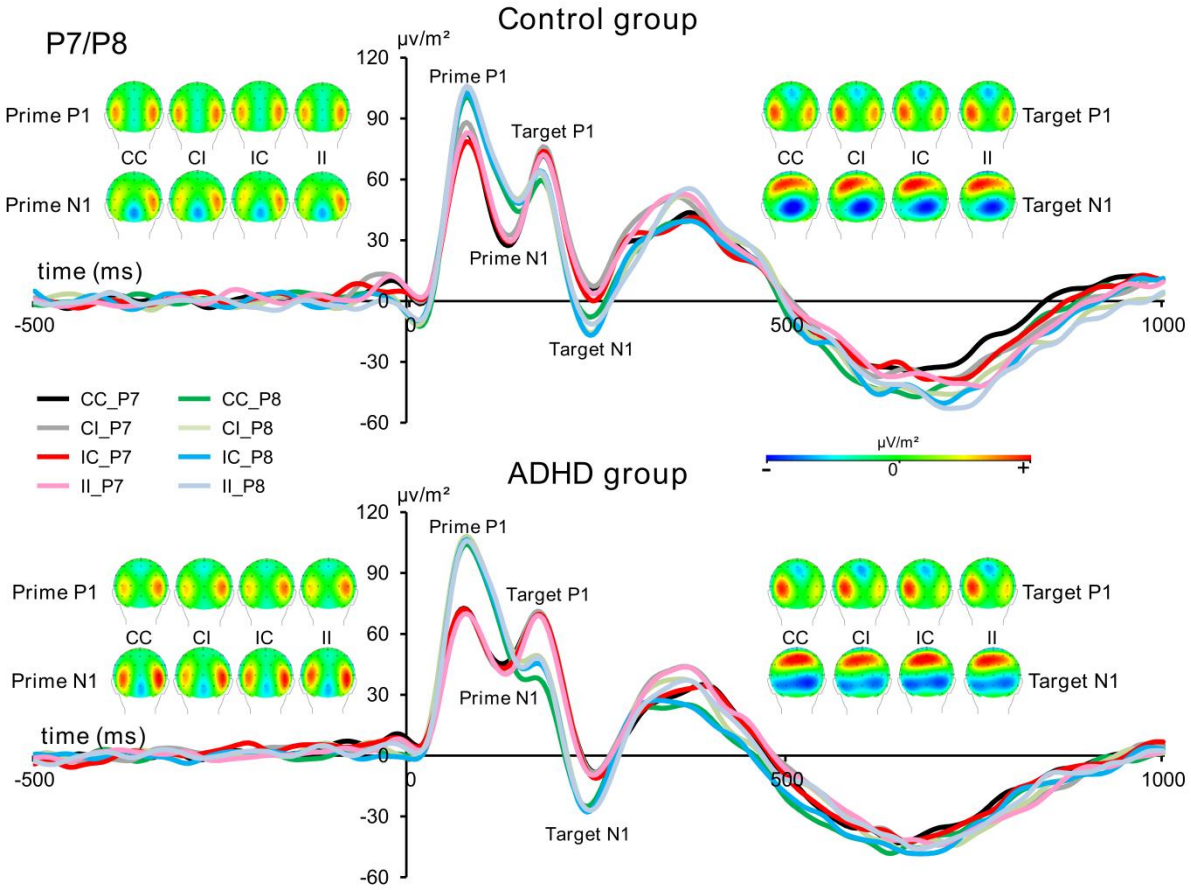
To *ADHD patients fail to maintain task goals in face of subliminally and consciously induced cognitive conflicts* by Gohil et al., 2017

Behavioral data excluding all female subjects

When excluding all female subjects from the sample (n=2 in the ADHD group and n=7 in the control group), we still obtained almost the same results. As in the groups comprising both males and females, the analysis of the percentage of hits revealed a main effect for prime compatibility ($F(1,36) = 35.988$; $p < .001$; $\eta^2 = .500$), flanker congruency ($F(1,36) = 41.775$; $p < .001$; $\eta^2 = .537$), and group ($F(1,36) = 12.215$; $p = .001$; $\eta^2 = .253$). There was also a significant interaction of flanker congruency x group ($F(1,36) = 5.124$; $p = .030$; $\eta^2 = .125$), but the previously significant interaction of prime compatibility x flanker congruency x group only showed a trend ($F(1,36) = 2.693$; $p = .109$; $\eta^2 = .070$). All other main effects and interactions were non-significant (all $F \leq 4.007$; $p \geq .053$).

The analyses of hit RTs revealed the same main effects of prime compatibility ($F(1,36) = 51.339$; $p < .001$; $\eta^2 = .588$) and flanker congruency ($F(1,36) = 110.649$; $p < .001$; $\eta^2 = .755$). Additionally, there was a main effect of group ($F(1,36) = 10.780$; $p = .002$; $\eta^2 = .230$) which had not been found when including female subjects in the sample. Here, responses were faster in patients (479.6 ms ± 13.7) than in controls (545.1 ms ± 14.5). All other main effects and interactions were non-significant (all $F \leq 1.194$; $p \geq .282$).

Prime P1 and prime N1



Supplementary figure: The top and bottom graphs separately depict the P1 and N1 elicited by the prime and target and their respective topographies at electrodes P7 / P8. Time point zero denotes the onset of the prime stimulus. CC = Compatible primes & Congruent flankers, IC = Incompatible primes & Congruent flankers, CI = Compatible primes & Incongruent flankers, II = Incompatible primes & Incongruent flankers.

The prime- and target-elicited P1 and N1 ERPs elicited at electrodes P7/P8 are illustrated in the figure below. The analysis of prime-elicited P1 amplitude revealed a main effect of electrodes ($F(1,45) = 15.946$; $p < .001$; $\eta^2 = .262$) indicating that prime-P1 amplitudes were larger at electrode P8 (99.96 $\mu V/m^2 \pm 7.48$) than at electrode P7 (70.49 $\mu V/m^2 \pm 7.11$). All other main effects and interactions were non-significant (all $F \leq 2.852$; $p \geq .098$). Similarly, there was only a main effect of electrodes for prime-elicited N1 amplitudes ($F(1,45) = 8.948$; $p = .004$; $\eta^2 = .166$) showing that again, electrode P8 had larger amplitude values (50.12 $\mu V/m^2 \pm 8.04$) than electrode P7 (29.5 $\mu V/m^2 \pm 7.09$). There were no other main effects or interactions for the prime-elicited N1 peak amplitudes (all $F \leq 3.36$; $p \geq .073$).

Target P1 and target N1

For the target-elicited P1 amplitude, there was a significant main effect of electrodes ($F(1,45) = 5.889$; $p = .019$; $\eta^2 = .116$) indicating that electrode P7 had larger amplitudes (64.02 $\mu V/m^2 \pm 6.27$) than electrode P8 (45.42 $\mu V/m^2 \pm 7.41$). There was also an interaction of electrodes x flanker ($F(1,45) = 5.318$; $p = .026$; $\eta^2 = .106$). Post-hoc paired samples t-tests revealed that this interaction was significant only for electrode P8 ($t = 2.678$; $p = .010$) but not for the P7 electrode ($t = 0.013$; $p = .990$). All other target P1 main effects and interactions were non-significant (all $F \leq 3.783$; $p \geq .058$).For the target-elicited N1 amplitude, there was a main effect of electrodes ($F(1,45) = 10.381$; $p = .002$; $\eta^2 = .187$) indicating that electrode P8 had a larger amplitude (-21.75 $\mu V/m^2 \pm 8.27$) than electrode P7 (-0.49 $\mu V/m^2 \pm 7.34$). Furthermore, there was a significant main effect of prime compatibility ($F(1,45) = 4.069$; $p = .050$; $\eta^2 = .083$) indicating that the incompatible trials yielded larger target N1 amplitudes (-12.44 $\mu V/m^2 \pm 7.21$) than compatible trials (-9.8 $\mu V/m^2 \pm 7.03$). All other target N1 main effects and interactions were non-significant (all $F \leq 3.426$; $p \geq .071$).

P3

For the parietal P3 amplitude at electrodes PO1/PO2 (see figure xx for illustration), there was a main effect of electrodes ($F(1,45) = 4.778$; $p = .034$; $\eta^2 = .096$) with larger amplitudes at electrode PO1 (25.65 $\mu V/m^2 \pm 4.55$) than at electrode PO2 (16.82$\mu V/m^2 \pm 4.88$) trials. No other main effects were significant (all $F \leq 3.812$; $p \geq .057$).