## Supplement

Table 1. Results of the cognitive tasks by study arm.

|  | Intervention |  |  | Control |  |  | $p$ Value |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\tilde{\mathbf{x}}$ | $25^{\text {th }}$ | $75^{\text {th }}$ | $\tilde{\boldsymbol{x}}$ | $25^{\text {th }}$ | $75^{\text {th }}$ |  |
| Switch Task |  | $n=120$ |  |  | $n=105$ |  |  |
| Switch costs (s) | 29.5 | 19.4 | 44.6 | 26.4 | 14.6 | 46.1 | 0.276 |
| Visual search letters (s) | 36.4 | 31.2 | 45.2 | 34.0 | 30.0 | 41.2 | 0.085 |
| Visual search numbers (s) | 53.1 | 46.1 | 61.2 | 51.9 | 45.6 | 61.1 | 0.700 |
| Visual search switch (s) | 93.0 | 76.0 | 115.9 | 86.4 | 70.3 | 103.8 | 0.109 |
| Corsi Block |  | $n=136$ |  |  | $n=114$ |  |  |
| Longest Path (n) | 5.0 | 4.0 | 6.0 | 5.0 | 4.3 | 6.0 | 0.734 |
| Correct immediate block span (n) | 6.0 | 4.0 | 8.0 | 6.0 | 4.0 | 8.0 | 0.671 |
| Score | 10.5 | 7.0 | 16.3 | 11.5 | 7.0 | 15.0 | 0.849 |
| 2-back |  | $n=135$ |  |  | $n=113$ |  |  |
| Ratio of missings (\%) | 33.3 | 19.0 | 42.9 | 33.3 | 23.8 | 47.6 | 0.491 |
| Ratio of false alarms (\%) | 11.2 | 7.1 | 25.9 | 12.9 | 7.1 | 23.5 | 0.328 |
| RT (ms) ${ }^{\text {a }}$ | 466 | 403 | 550 | 465 | 382 | 551 | 0.601 |
| Count of correct events (n) | 88.5 | 76.0 | 94.0 | 86.0 | 77.0 | 92.0 | 0.349 |
| Flanker Task |  | $\boldsymbol{n}=107$ |  |  | $\boldsymbol{n}=\mathbf{8 2}$ |  |  |
| RT slowing (ms) | 79.7 | 56.5 | 98.8 | 72.6 | 51.9 | 100.0 | 0.532 |
| Difference error rate (\%) | 17.1 | 8.6 | 28.6 | 17.1 | 10.7 | 28.6 | 0.648 |
| Count of false alarms (n) | 8.0 | 3.0 | 15.0 | 7.0 | 3.0 | 19.0 | 0.378 |

Mann-Whitney $U$-test, at-test, data are presented as $\tilde{x}=$ Median, 25 th and 75th percentiles, level of significance was set to $p \leq 0.05$.

Table 2. Results of the switch and flanker task including all participants.

|  | Study Arm ${ }^{\text {a }}$ |  |  | Categorie ${ }^{\text {b }}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Intervention $(n=136)$ |  | Control $(n=114)$ | Water in mL | \% of TWI |
| Switch Task $\quad$ |  |  |  |  |  |
| Switch costs |  | 0.613 |  | 0.176 | 0.618 |
| Visual search letters |  | 0.534 |  | 0.311 | 0.908 |
| Visual search numbers |  | 0.896 |  | 0.590 | 0.924 |
| Visual search switch |  | 0.200 |  | 0.540 | 0.522 |
| Flanker Task |  |  |  |  |  |
| RT slowing (ms) |  | 0.403 |  | 0.909 | 0.802 |
| Difference error rate |  | 0.223 |  | 0.573 | 0.494 |
| Count of false alarms |  | 0.720 |  | 0.134 | 0.155 |

${ }^{\text {a }}$ Mann-Whitney U test; ${ }^{\mathrm{b}}$ Kruskal-Wallis test; data are presented as a $p$ value; $p \leq 0.05$; TWI $=$ total water intake.

Table 3. Relationship between urine color, thirst and cognitive performance.

|  | Thirst ${ }^{\text {a }}$ |  |  |
| :---: | :---: | :---: | :---: |
|  | Ucol ${ }^{\text {b }}$ | yes | no |
| Switch task | $n=223$ | $n=81$ | $n=142$ |
| Switch costs (s) ${ }^{\text {b }}$ | 0.917 |  |  |
| Visual search letters (s) ${ }^{\text {c }}$ | 0.583 |  |  |
| Visual search numbers (s) | 0.909 |  |  |
| Visual search switch (s) | 0.822 |  |  |
| Corsi block-tapping task | $\boldsymbol{n}=\mathbf{2 4 8}$ | $n=88$ | $n=160$ |
| Longest Path (n) | 0.816 |  |  |
| Correct immediate block span (n) | 0.956 |  |  |
| Score | 0.966 |  |  |
| 2-back task | $\boldsymbol{n}=246$ | $n=87$ | $n=159$ |
| Ratio of missings (\%) | 0.530 |  |  |
| Ratio of false alarms (\%) | 0.413 |  |  |
| RT (ms) | 0.884 |  |  |
| Count of correct events (n) | 0.323 |  |  |
| Flanker task | $n=189$ | $n=73$ | $n=115$ |
| RT slowing (ms) | 0.069 |  |  |
| Difference error rate (\%) | 0.685 |  |  |
| Count of false alarms (n) | 0.925 |  |  |

${ }^{\mathrm{a}}$ Mann-Whitney U-test, ${ }^{\mathrm{b}}$ Spearman's correlation, level of significance was set to $p \leq 0.05$.

