## Supplement

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

|                                  | Intervention |                  | Control          |      |                  |                  |         |
|----------------------------------|--------------|------------------|------------------|------|------------------|------------------|---------|
|                                  | - x          | 25 <sup>th</sup> | 75 <sup>th</sup> |      | 25 <sup>th</sup> | 75 <sup>th</sup> | p Value |
| 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) <sup>a</sup>             | 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                     |              | n = 107          |                  |      | n = 82           |                  |         |
| 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, <sup>a</sup>*t*-test, data are presented as  $\tilde{x}$  = Median, 25th and 75th percentiles, level of significance was set to  $p \le 0.05$ .

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

|                       | Study Arm <sup>a</sup> |                   | Categorie <sup>b</sup> |          |  |
|-----------------------|------------------------|-------------------|------------------------|----------|--|
| •                     | Intervention (n = 136) | Control (n = 114) | Water<br>in mL         | % of TWI |  |
| Switch Task           |                        |                   |                        |          |  |
| Switch costs          | 0.61                   | .3                | 0.176                  | 0.618    |  |
| Visual search letters | 0.53                   | 34                | 0.311                  | 0.908    |  |
| Visual search numbers | 0.89                   | 06                | 0.590                  | 0.924    |  |
| Visual search switch  | 0.20                   | 00                | 0.540                  | 0.522    |  |
| Flanker Task          |                        |                   |                        |          |  |
| RT slowing (ms)       | 0.40                   | 3                 | 0.909                  | 0.802    |  |
| Difference error rate | 0.22                   | 23                | 0.573                  | 0.494    |  |
| Count of false alarms | 0.72                   | 20                | 0.134                  | 0.155    |  |

<sup>a</sup>Mann-Whitney U test; <sup>b</sup>Kruskal-Wallis test; data are presented as a p value;  $p \le 0.05$ ; TWI = total water intake.

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

|  |         | Tl     | Thirst <sup>a</sup> |  |
|--|---------|--------|---------------------|--|
|  | Ucolb   | yes    | no                  |  |
| Switch task                            | n = 223 | n = 81 | n = 142             |  |
| Switch costs (s) <sup>b</sup>          | 0.917   | 0.205  |                     |  |
| Visual search letters (s) <sup>c</sup> | 0.583   | 0.029  |                     |  |
| Visual search numbers (s)              | 0.909   | 0.171  |                     |  |
| Visual search switch (s)               | 0.822   | 0.017  |                     |  |
| Corsi block-tapping task               | n = 248 | n = 88 | n = 160             |  |
| Longest Path (n)                       | 0.816   | 0.647  |                     |  |
| Correct immediate block span (n)       | 0.956   | 0.480  |                     |  |
| Score                                  | 0.966   | 0.409  |                     |  |
| 2-back task                            | n = 246 | n = 87 | n = 159             |  |
| Ratio of missings (%)                  | 0.530   | 0      | .437                |  |
| Ratio of false alarms (%)              | 0.413   | 0.154  |                     |  |
| RT (ms)                                | 0.884   | 0.173  |                     |  |
| Count of correct events (n)            | 0.323   | 0.225  |                     |  |
| Flanker task                           | n = 189 | n = 73 | n = 115             |  |
| RT slowing (ms)                        | 0.069   | 0.817  |                     |  |
| Difference error rate (%)              | 0.685   | 0.738  |                     |  |
| Count of false alarms (n)              | 0.925   | 0.853  |                     |  |

<sup>a</sup>Mann–Whitney U-test, <sup>b</sup> Spearman's correlation, level of significance was set to  $p \le 0.05$ .