Supplementary Table 1: Means and standard deviations of trait,

behavioural and clinical measures

|  |  |  |
| --- | --- | --- |
|  | **M** | **SD** |
| *SUPPS-P Negative Urgency* | 9.24 | 3.5 |
| *SUPPS-P Positive Urgency* | 8.81 | 4.0 |
| *SUPPS-P Lack of Premeditation* | 8.79 | 3.7 |
| *SUPPS-P Lack of Perseverence* | 8.78 | 3.5 |
| *SUPPS-P Sensation seeking* | 10.18 | 3.5 |
| *CHI-T* | 31.10 | 9.5 |
| *ICBC Impulsive behaviors* | 18.98 | 6.5 |
| *ICBC Compulsive behaviors* | 25.77 | 9.9 |
| *AUDIT* | 3.98 | 5.3 |
| *K-10* | 18.39 | 8.6 |

Supplementary Table 2: Bivariate correlations (Pearson’s) between gamified and non-gamified BART metrics

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Gamified BART Bursts | Gamified BART Mean pumps | Gamified BART Total money earned | Gamified BART CoV | Non--Gamified BART Bursts | Non-Gamified BART Mean pumps | Non-Gamified BART Total money earned | Non-Gamified BART CoV |
| Gamified BART Bursts | 1 |  |  |  |  |  |  |  |
| Gamified BART Mean pumps | .89\*\*\* | 1 |  |  |  |  |  |  |
| Gamified BART Total money earned | -.91\*\*\* | -.73\*\*\* | 1 |  |  |  |  |  |
| Gamified BART CoV | -.25\*\*\* | -.32\*\*\* | .08 | 1 |  |  |  |  |
| Non--Gamified BART Bursts | .50\*\*\* | .55\*\*\* | -.41\*\*\* | -.12 | 1 |  |  |  |
| Non-Gamified BART Mean pumps | .54\*\*\* | .58\*\*\* | .42\*\*\* | -.17\* | .88\*\*\* | 1 |  |  |
| Non-Gamified BART Total money earned | -.38\*\*\* | -.42\*\*\* | .34\*\*\* | .01 | -.89\*\*\* | -.68\*\*\* | 1 |  |
| Non-Gamified BART CoV | -.22\*\*\* | -.28\*\*\* | .09 | .63\*\*\* | -.20\*\* | -.29\*\*\* | .01 | 1 |

\**P*< .05; \*\**P*<.01; \*\*\**P*<0.001

Supplementary Table 3: Bivariate correlations (Pearson’s) between gamified and non-gamified SST metrics

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Gamified Go RT | Gamified Mean SSRT | Gamified Integration SSRT | Non-Gamified Go RT | Non-Gamified Mean SSRT | Non-Gamified Integration SSRT |
| Gamified Go RT | 1 |  |  |  |  |  |
| Gamified Mean SSRT | .49\*\*\* | 1 |  |  |  |  |
| Gamified Integration SSRT | .79\*\*\* | .72\*\*\* | 1 |  |  |  |
| Non-Gamified Go RT | .40\*\*\* | .19\* | .29\*\*\* | 1 |  |  |
| Non-Gamified Mean SSRT | .30\*\*\* | .37\*\*\* | .28\*\*\* | .66\*\*\* | 1 |  |
| Non-Gamified Integration SSRT | .36\*\*\* | .22\* | .37\*\* | .85\*\*\* | .83\*\*\* | 1 |

\**P*< .05; \*\**P*<.01; \*\*\**P*<0.001

Supplementary Table 4: Bivariate correlations (Pearson’s) between gamified and non-gamified VMAC metrics

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Gamified VMAC Training overall | Gamified VMAC Reversal overall | Gamified VMAC Total points | Non-Gamified VMAC Training overall | Non-Gamified VMAC Reversal overall | Non-Gamified VMAC Total points |
| Gamified VMAC Training overall | 1 |  |  |  |  |  |
| Gamified VMAC Reversal overall | .1 | 1 |  |  |  |  |
| Gamified VMAC Total points | -.15 | .05 | 1 |  |  |  |
| Non-Gamified VMAC Training overall | .18\* | -.01 | .05 | 1 |  |  |
| Non-Gamified VMAC Reversal overall | .13 | .12 | -.14 | .13 | 1 |  |
| Non-Gamified VMAC Total points | -.15 | -.2 | .44\*\*\* | -.20\* | -.19\* | 1 |

\**P*< .05; \*\**P*<.01; \*\*\**P*<0.001

Supplementary Table 5: Bivariate correlations (Pearson’s) between gamified SDT metrics

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | SDT Inverse temperature |  SDT Learning rate | SDT Weight parameter | SDT Total points |
| SDT Inverse temperature | 1 |  |  |  |
|  SDT Learning rate | -.85\*\*\* | 1 |  |  |
| SDT Weight parameter | -.36\*\*\* | .32\*\*\* | 1 |  |
| SDT Total points | -.32\*\*\* | .38\*\*\* | .32\*\*\* | 1 |

\**P*< .05; \*\**P*<.01; \*\*\**P*<0.001