﻿ **Supplementary Material**

**Altered brain functional connectome associated with disinhibition across 33 impulsive and compulsive behaviours**

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The Impulsive-Compulsive Behaviours Checklist (ICBC, 1) consists of a list of 33 behaviours marked by impulsive and/or compulsive traits. Subjects are asked to rate whether they/others think they have problems with the behaviours, on a 4-point Likert Scale ranging from ‘never’ to ‘always’, over the past 12 months. For each behaviour, subjects are also asked to respond to whether the behaviour/urge/desire causes them distress (yes/no). Standardised loading estimates for individual ICBC items on the disinhibition, impulsivity and compulsivity factors is presented in Supplementary Table 1.

**Supplementary Table 1.** Standardised loading of individual ICBC items of 654 participants, as reported in (2).

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| **ICBC items** | **Disinhibition** | **Impulsivity** | **Compulsivity** |
| Washing | .677 |  |  |
| Smoking | .141\* | .585 |  |
| ﻿Feeling compelled to collect free things (books, journals, sample items when shopping) or saving something you know you will never use | .519 |  |  |
| ﻿Being overly cautious with money | .295 |  | .375 |
| ﻿(Re)arranging/ordering | .626 |  | .588 |
| Shopping | .697 |  |  |
| List making | .586 |  | .496 |
| Counting (e.g. money, tiles) | .705 |  | .385 |
| Grooming | .790 |  |  |
| ﻿Idiosyncratic routines (performing a very personalised sequence of actions) | .674 |  | .366 |
| Repeating ﻿actions (performing actions over and over again) | .684 |  | .234 |
| Exercising | .629 |  |  |
| Betting/gambling | .312 | .443 |  |
| Hair picking | .427 |  |  |
| Lying | .602 | .405 |  |
| Sexual activities/behaviours | .592 | .498 |  |
| Alcohol consumption | .379 | .526 |  |
| Planning (e.g. over-organising) | .608 |  | .451 |
| Illicit drug use | .168\* | .775 |  |
| Cleaning too much | .543 |  | .422 |
| Verbal aggression | .625 | .489 |  |
| Violence towards objects/properties | .605 | .504 |  |
| Swearing | .532 | .470 |  |
| Checking (e.g. locks, light switches) | .515 |  | .388 |
| Checking (e.g. yourself in the mirror) | .751 |  |  |
| Speed driving | .363 | .201\*\* |  |
| Medication use | .655 | .214\*\* |  |
| Physical aggression | .637 | .429 |  |
| Social networking (e.g. Facebook, twitter, Google+, Myspace) | .616 |  |  |
| Applying rules | .636 |  | .257 |
| Purposeful self-injury (i.e. not accidental) | .474 | .310 |  |
| Re-writing/re-reading | .678 |  | .295 |
| Tattooing | .595 | .437 |  |

All loading estimates were significant at p < 0.001, except where indicated. \* p < 0.05; \*\*p < 0.01.

**References**

1. Guo K, Youssef GJ, Dawson A, Parkes L, Oostermeijer S, López-Solà C, et al. A psychometric validation study of the Impulsive-Compulsive Behaviours Checklist: A transdiagnostic tool for addictive and compulsive behaviours. Addict Behav. 2017;67:26–33.

2. Chamberlain SR, Tiego J, Fontenelle LF, Hook R, Parkes L, Segrave R, et al. Fractionation of impulsive and compulsive trans-diagnostic phenotypes and their longitudinal associations. Aust N Z J Psychiatry. 2019;53(9):896–907.