## Supplementary materials

**Table S1.**

The nodewise regression matrix for MNMs in wave 1.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 　 | ODD\_1 | ODD\_2 | ODD\_3 | ODD\_4 | ODD\_5 | ODD\_6 | ODD\_7 | ODD\_8 | SC | ER | EL |
| ODD\_1 | 0  |  |  |  |  |  |  |  |  |  |  |
| ODD\_2 | 0.086  | 0  |  |  |  |  |  |  |  |  |  |
| ODD\_3 | 0.172  | 0.202  | 0  |  |  |  |  |  |  |  |  |
| ODD\_4 | 0.087  | 0.000  | 0.271  | 0  |  |  |  |  |  |  |  |
| ODD\_5 | 0.000  | 0.647  | -0.065  | 0.064  | 0  |  |  |  |  |  |  |
| ODD\_6 | 0.312  | 0.000  | 0.000  | 0.081  | 0.202  | 0  |  |  |  |  |  |
| ODD\_7 | 0.166  | 0.074  | 0.122  | 0.000  | 0.195  | 0.266  | 0  |  |  |  |  |
| ODD\_8 | 0.000  | 0.076  | 0.183  | 0.113  | 0.166  | 0.000  | 0.106  | 0  |  |  |  |
| SC | -0.181  | 0.000  | -0.083  | -0.068  | -0.054  | -0.127  | 0.000  | 0.000  | 0  |  |  |
| ER | 0.000  | 0.109  | -0.330  | 0.000  | -0.083  | 0.000  | 0.000  | 0.000  | 0.000  | 0  |  |
| EL | 0.116  | 0.053  | 0.016  | 0.278  | 0.000  | 0.000  | 0.059  | 0.000  | -0.458  | -0.289  | 0  |

***Note.*** The coefficients have been aggregated using the AND rule. ODD\_1, Temper; ODD\_2, Argues; ODD\_3, Defies; ODD\_4, Annoys; ODD\_5, Blames; ODD\_6, Touchy; ODD\_7, Angry; ODD\_8, Spiteful; SC, Self-control; EL, Emotion lability/negativity; ER, Emotion regulation.

**Table S2.**

The nodewise regression matrix for MNMs in wave 2.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 　 | ODD\_1 | ODD\_2 | ODD\_3 | ODD\_4 | ODD\_5 | ODD\_6 | ODD\_7 | ODD\_8 | SC | ER | EL |
| ODD\_1 | 0  |  |  |  |  |  |  |  |  |  |  |
| ODD\_2 | 0.096  | 0  |  |  |  |  |  |  |  |  |  |
| ODD\_3 | 0.214  | 0.165  | 0  |  |  |  |  |  |  |  |  |
| ODD\_4 | 0.059  | 0.050  | 0.285  | 0  |  |  |  |  |  |  |  |
| ODD\_5 | 0.000  | 0.416  | 0.041  | 0.134  | 0  |  |  |  |  |  |  |
| ODD\_6 | 0.304  | 0.000  | 0.000  | 0.067  | 0.201  | 0  |  |  |  |  |  |
| ODD\_7 | 0.203  | 0.063  | 0.155  | 0.000  | 0.282  | 0.287  | 0  |  |  |  |  |
| ODD\_8 | 0.000  | 0.058  | 0.162  | 0.150  | 0.118  | 0.045  | 0.113  | 0  |  |  |  |
| SC | -0.164  | 0.000  | 0.040  | -0.096  | -0.025  | -0.066  | 0.000  | 0.000  | 0  |  |  |
| ER | 0.000  | 0.000  | -0.139  | 0.000  | -0.053  | 0.000  | 0.000  | 0.000  | 0.000  | 0  |  |
| EL | 0.121  | 0.032  | 0.017  | 0.241  | 0.012  | 0.000  | 0.045  | 0.000  | -0.465  | -0.328  | 0  |

***Note.*** The coefficients have been aggregated using the AND rule. ODD\_1, Temper; ODD\_2, Argues; ODD\_3, Defies; ODD\_4, Annoys; ODD\_5, Blames; ODD\_6, Touchy; ODD\_7, Angry; ODD\_8, Spiteful; SC, Self-control; EL, Emotion lability/negativity; ER, Emotion regulation.

**Table S3.**

The matrix of interaction terms associated for MNMs in wave 1.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 　 | ODD\_1:gender | ODD\_2:gender | ODD\_3:gender | ODD\_4:gender | ODD\_5:gender | ODD\_6:gender | ODD\_7:gender | ODD\_8:gender | SC:gender | ER:gender | EL:gender |
| ODD\_1:gender | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| ODD\_2:gender | 0.000  | 0.000  | 0.000  | 0.000  | **-0.422**  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| ODD\_3:gender | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | **0.199**  | 0.000  |
| ODD\_4:gender | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | -**0.211**  |
| ODD\_5:gender | 0.000  | **-0.278**  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| ODD\_6:gender | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| ODD\_7:gender | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| ODD\_8:gender | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| SC:gender | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| ER:gender | 0.000  | 0.000  | **0.177**  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| EL:gender | 0.000  | 0.000  | 0.000  | **-0.158**  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |

***Note.*** The coefficients have been aggregated using the AND rule. ODD\_1, Temper; ODD\_2, Argues; ODD\_3, Defies; ODD\_4, Annoys; ODD\_5, Blames; ODD\_6, Touchy; ODD\_7, Angry; ODD\_8, Spiteful; SC, Self-control; EL, Emotion lability/negativity; ER, Emotion regulation.

**Table S4.**

The matrix of interaction terms associated for MNMs in wave 1.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 　 | ODD\_1:gender | ODD\_2:gender | ODD\_3:gender | ODD\_4:gender | ODD\_5:gender | ODD\_6:gender | ODD\_7:gender | ODD\_8:gender | SC:gender | ER:gender | EL:gender |
| ODD\_1:gender | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| ODD\_2:gender | 0.000  | 0.000  | 0.000  | 0.000  | **-0.182**  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| ODD\_3:gender | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| ODD\_4:gender | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | **-0.183**  |
| ODD\_5:gender | 0.000  | **-0.193**  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| ODD\_6:gender | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| ODD\_7:gender | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| ODD\_8:gender | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| SC:gender | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| ER:gender | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |
| EL:gender | 0.000  | 0.000  | 0.000  | **-0.152**  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  | 0.000  |

***Note.*** The coefficients have been aggregated using the AND rule. ODD\_1, Temper; ODD\_2, Argues; ODD\_3, Defies; ODD\_4, Annoys; ODD\_5, Blames; ODD\_6, Touchy; ODD\_7, Angry; ODD\_8, Spiteful; SC, Self-control; EL, Emotion lability/negativity; ER, Emotion regulation.



**Fig. S1. The Expected Influence centrality of z-scores in waves 1 (A) and 2 (B).**

ODD\_1, Temper; ODD\_2, Argues; ODD\_3, Defies; ODD\_4, Annoys; ODD\_5, Blames; ODD\_6, Touchy; ODD\_7, Angry; ODD\_8, Spiteful; SC, Self-control; EL, Emotion lability/negativity; ER, Emotion regulation.

**Fig. S2. Average correlations were plotted with** **95% coverage intervals for each subsample size (number of bootstrapped samples = 1000) in wave 1.**



**Fig. S3. Average correlations were plotted with 95% coverage intervals for each subsample size (number of bootstrapped samples = 1000) in wave 2.**