Table S1 Categories of Evidence for included studies. We used the grading system described by Bandelow et al. (2008).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Study** | **Medication** | ***N*** | **Category of Evidence** | **Reason for Category** |
| Grant et al. (2003) | Paroxetine | 76 | E | Negative study for paroxetine. No positive studies exist. |
| Grant and Potenza (2006) | Escitalopram | 13 | C1 | Open-label study. Severity of gambling symptoms reduced.  |
| Grant et al. (2007) | N-acetylcysteine | 36 | C1 | Open-label study. Evidence for reduced gambling symptom severity. |
| Grant et al. (2008a) | Naltrexone | 77 | B | Randomised study against placebo showing benefit for naltrexone |
| Grant et al. (2010a) | Memantine | 29 | C1 | Open-label study. Severity of gambling symptoms reduced. |
| Grant et al. (2014) | N-acetylcysteine | 28 | B | Randomised study with some evidence for superiority of N-acetylcysteine over placebo |

Table S2 Results of multiple linear regression models calculated to predict treatment response (change in G-SAS). These models included patients with mild symptoms (G-SAS < 20).

|  | All patients | Active medication | Placebo |
| --- | --- | --- | --- |
| Predictor | β coeff. | 95% CI | β coeff. | 95% CI | β coeff. | 95% CI |
| Age |  0.02 | -0.14, 0.18 |  0.07 | -0.13, 0.26 | -0.09 | -0.40, 0.23 |
| Gender |  0.13 | -0.18, 0.44 |  0.14 | -0.23, 0.51 | -0.24 | -0.92, 0.45 |
| Ethnicity |  0.13 | -0.32, 0.58 | -0.11 | -0.72, 0.50 |  **0.96** |  **0.18, 1.73a** |
| Weeks completed |  **0.20** |  **0.05, 0.35a** |  **0.30** |  **0.12, 0.47b** | -0.14 | -0.48, 0.20 |
| Previous gambling treatment | -0.04 | -0.34, 0.26 | -0.03 | -0.38, 0.32 |  0.12 | -0.56, 0.80 |
| Baseline G-SAS |  **0.45** |  **0.29, 0.61d** |  **0.48** |  **0.28, 0.67d** |  **0.50** |  **0.17, 0.84b** |
| Baseline HAM-A | **-0.52** | **-0.80, -0.23c** | **-0.37** | **-0.71, -0.02a** | **-0.83** | **-1.36, -0.30b** |
| Baseline HAM-D |  **0.37** |  **0.08, 0.66a** |  0.27 | -0.07, 0.62 |  0.44 | -0.08, 0.96 |
| Psychiatric comorbidity | -0.00 | -0.31, 0.31 | -0.01 | -0.37, 0.36 |  0.25 | -0.41, 0.91 |
| Strategic or non-strategic gambling | -0.45 | -0.97, 0.08 | -0.43 | -1.01, 0.15 | -0.03 | -1.39, 1.34 |
| a *p* < 0.05, b *p* < 0.01, c *p* < 0.001, d *p* < 0.0001β refers to standardised regression coefficients. |

Table S3 Results of multiple linear regression models calculated to predict treatment response (percentage reduction in G-SAS).

|  | All patients | Active medication | Placebo |
| --- | --- | --- | --- |
| Predictor | β coeff. | 95% CI | β coeff. | 95% CI | β coeff. | 95% CI |
| Age |  0.02 | -0.16, 0.20 |  0.08 | -0.13, 0.30 | -0.16 | -0.49, 0.17 |
| Gender |  0.23 | -0.11, 0.58 |  0.26 | -0.15, 0.68 | -0.19 | -0.90, 0.51 |
| Ethnicity |  0.15 | -0.34, 0.65 | -0.08 | -0.73, 0.58 |  **1.00** |  **0.19, 1.82a** |
| Weeks completed |  **0.22** |  **0.05, 0.39a** |  **0.35** |  **0.15, 0.54c** | -0.21 | -0.56, 0.15 |
| Previous gambling treatment | -0.03 | -0.37, 0.31 |  0.03 | -0.37, 0.42 |  0.08 | -0.63, 0.78 |
| Baseline G-SAS |  0.17 | -0.01, 0.35 |  **0.25** |  **0.03, 0.47a** |  0.00 | -0.35, 0.36 |
| Baseline HAM-A | **-0.55** | **-0.88, -0.23c** | -0.38 | -0.77, 0.01 | **-1.04** | **-1.60, -0.48c** |
| Baseline HAM-D |  **0.38** |  **0.05, 0.70a** |  0.26 | -0.13, 0.65 |  **0.59** |  **0.03, 1.15a** |
| Psychiatric comorbidity | -0.04 | -0.39, 0.31 | -0.04 | -0.45, 0.36 |  0.35 | -0.36, 1.06 |
| Strategic or non-strategic gambling | -0.44 | -1.01, 0.13 | -0.36 | -0.99, 0.26 |  0.06 | -1.35, 1.47 |
| a *p* < 0.05, b *p* < 0.01, c *p* < 0.001, d *p* < 0.0001β refers to standardised regression coefficients. |

**Supplementary References**

1. Bandelow, B., Zohar, J., Kasper, S., Moller, H.J., 2008. How to grade categories of evidence. World J. Biol. Psychiatry 9(4), 242-247.