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* < 0.0001  β 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* < 0.0001  β 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.