Supplementary Table 1.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Summary measure name** | **Test** | **Construct** | **Outcome measures** | **Test description** | **Tests assessing equivalent construct** |
| Working memory | Digit span | Working memory | Accuracy (total recall, maximum recall span) | Repeat a series of digits in forward and backward order; assessing working memory | Digit span |
| Cognitive flexibility | Verbal interference (colour-word Stroop) | Cognitive control | Accuracy (errors), RT | Respond to the name of colour word (ignore colour) and then colour word presented (ignore name); assessing suppression of automatic responses. | Stroop |
| Response inhibition | Go/No-Go | Response inhibition | Accuracy (total, false positive, false negative errors), RT, variability of RT. | Press response pad as quickly as possible to ‘Go’ (green) trials, and withhold to ‘No-Go’ (red) trials. Assessing impulsivity vs inhibition. |  |
| Information processing speed | Switching of attention | Information processing speed–executive function | Accuracy (switching errors), completion time, connection time | Connect a sequence of alternating numbers and letters; assesses information processing efficiency | Trails A and B (paper and pencil) |
| Executive function– maze navigation | Executive maze | Executive function | Accuracy (total, overrun errors), completion time | Discover (by trial and error) a maze path; reflecting planning, monitoring feedback, and error correction | Austin maze |

*IntegNeuro Cognitive Tests. Abbreviations: CPT, continuous performance test; RT, reaction time; TOVA, test of variables of attention.*

*Note.* Table adapted from Etkin et al. (2015).

Supplementary Figure 1.

*Comparison of methods determining the number of factors to retain according to the Kaiser criterion, parallel analysis, optimal coordinates, and the acceleration factor before removing items.*

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Supplementary Figure 2.

*Comparison of methods determining the number of factors to retain according to the Kaiser criterion, parallel analysis, optimal coordinates, and the acceleration factor after removing items1.*



Supplementary Table 2.

*Correlations between factors and BMI.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Factors** | ***r*** | **95% CI****(Lower, Upper)** | ***p*** | ***q*** |
| Stress | 0.01 | -0.06, 0.07 | 0.876 | 0.913 |
| Cognitive Anxiety | -0.07 | -0.13, -0.01 | 0.033 | 0.077 |
| Somatic Anxiety | -0.04 | -0.10, 0.03 | 0.241 | 0.386 |

Supplementary Table 3.

*Interactions between factor scores and antidepressant treatment in predicting HRSD17 or QIDS-SR16 symptom change and remission/response. Abbreviations: HRSD, Hamilton’s Rating Scale for Depression; QIDS-SR, Quick Inventory for Depressive Symptomatology-Self Report; CI, Confidence Interval; XR, Extended Release; Sx Change, Symptom Change.*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | **Stress** |  |  | **Cognitive Anxiety** |  | **Somatic Anxiety** |  |
|  |  |  | ***β***  | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |  | ***β***  | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |  | ***β*** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |
| HRSD17 | Sx Change | \*Sertraline | -0.10 | -1.20, 1.01 | 0.866 | 0.917 |  | -0.17 | -1.23, 0.89 | 0.755 | 0.824 |  | -0.49 | -1.56, 0.58 | 0.374 | 0.515 |
|  | Sx Change | \*Venlafaxine-XR | 1.06 | 0.35, 3.21 | 0.913 | 0.938 |  | 1.34 | 0.45, 3.99 | 0.602 | 0.723 |  | 0.80 | 0.27, 2.38 | 0.685 | 0.767 |
|  |  |  | **Odds****Ratio** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |  | **Odds****Ratio** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |  | **Odds Ratio** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |
| HRSD17 | Remission | \*Sertraline | 0.99 | 0.70, 1.39 | 0.935 | 0.950 |  | 1.12 | 0.80, 1.56 | 0.509 | 0.641 |  | 1.11 | 0.79, 1.57 | 0.550 | 0.682 |
|  |  | \*Venlafaxine-XR | 0.15 | -0.20, 0.49 | 0.409 | 0.549 |  | -0.06 | -0.42, 0.29 | 0.730 | 0.810 |  | 0.08 | -0.28, 0.43 | 0.679 | 0.764 |
|  | Response | \*Sertraline | 1.20 | 0.84, 1.72 | 0.307 | 0.449 |  | 1.00 | 0.71, 1.41 | 0.997 | 0.997 |  | 1.06 | 0.75, 1.50 | 0.739 | 0.812 |
|  |  | \*Venlafaxine-XR | 1.21 | 0.85, 1.72 | 0.288 | 0.426 |  | 1.00 | 0.71, 1.41 | 0.989 | 0.993 |  | 1.08 | 0.77, 1.53 | 0.655 | 0.757 |
|  |  |  | ***β*** | **CI 95%****(Lower, Upper)** | ***p*** | *q* |  | ***β*** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |  | ***β*** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |
| QIDS-SR16 | Sx Change | \*Sertraline | -0.40 | -1.27, 0.46 | 0.362 | 0.501 |  | 0.05 | -0.80, 0.90 | 0.910 | 0.938 |  | -0.98 | -1.85, -0.11 | 0.027 | 0.072 |
|  | Sx Change | \*Venlafaxine-XR | -0.41 | -1.29, 0.47 | 0.359 | 0.500 |  | -0.63 | -1.52, 0.26 | 0.165 | 0.273 |  | -0.79 | -1.69, 0.11 | 0.086 | 0.169 |
|  |  |  | **Odds****Ratio** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |  | **Odds****Ratio** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |  | **Odds Ratio** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |
| QIDS-SR16 | Remission | \*Sertraline | 0.24 | -0.11, 0.60 | 0.175 | 0.284 |  | -0.08 | -0.43, 0.27 | 0.655 | 0.757 |  | 0.41 | 0.03, 0.80 | 0.035 | 0.089 |
|  |  | \*Venlafaxine-XR | 0.21 | -0.16, 0.57 | 0.269 | 0.407 |  | 0.29 | -0.07, 0.65 | 0.116 | 0.210 |  | 0.15 | -0.27, 0.57 | 0.480 | 0.619 |
|  | Response | \*Sertraline | 0.19 | -0.15, 0.54 | 0.279 | 0.415 |  | -0.02 | -0.36, 0.31 | 0.897 | 0.935 |  | 0.32 | -0.02, 0.67 | 0.072 | 0.148 |
|  |  | \*Venlafaxine-XR | 0.12 | -0.23, 0.47 | 0.488 | 0.623 |  | 0.17 | -0.18, 0.53 | 0.334 | 0.472 |  | 0.28 | -0.08, 0.64 | 0.128 | 0.226 |

*Note.* Escitalopram was used as the reference for interaction terms.

Supplementary Table 4.

|  |  |  |
| --- | --- | --- |
|  |  | **Unadjusted** |
|  |  | **HRSD17 Anxiety/Somatisation Factor** |  | **DASS Stress Scale** |  | **DASS Anxiety Scale** |
|  |  | ***β*** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |  | ***β*** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |  | ***β*** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |
| HRSD17 | Sx change | -0.67 | -0.91, -0.43 | < 0.001 | 0.001 |  | -0.06 | -0.11, 0.00 | 0.058 | 0.119 |  | -0.08 | -0.15, -0.01 | 0.027 | 0.061 |
| QIDS-SR16 | Sx change | -0.27 | -0.47, -0.07 | 0.009 | 0.024 |  | -0.13 | -0.18, -0.09 | < 0.001 | < 0.001 |  | -0.14 | -0.2, -0.08 | < 0.001 | < 0.001 |
|  |  | **Odds Ratio** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |  | **Odds Ratio** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |  | **Odds Ratio** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |
| HRSD17 | Remission | 0.88 | 0.81, 0.95 | 0.001 | 0.003 |  | 0.99 | 0.97, 1.00 | 0.147 | 0.232 |  | 0.97 | 0.95, 0.99 | 0.008 | 0.021 |
|  | Response | 0.98 | 0.91, 1.06 | 0.650 | 0.716 |  | 0.99 | 0.98, 1.01 | 0.538 | 0.641 |  | 0.99 | 0.97, 1.01 | 0.359 | 0.484 |
| QIDS-SR16 | Remission | 0.96 | 0.89, 1.04 | 0.328 | 0.450 |  | 0.99 | 0.97, 1.00 | 0.118 | 0.206 |  | 0.97 | 0.94, 0.99 | 0.009 | 0.024 |
|  | Response | 1.07 | 0.99, 1.16 | 0.091 | 0.167 |  | 1.01 | 1.00, 1.03 | 0.135 | 0.223 |  | 1.01 | 0.99, 1.03 | 0.371 | 0.499 |
|  |  | **Adjusted** |
|  |  | **HRSD17 Anxiety/Somatisation Factor** |  | **DASS Stress Scale** |  | **DASS Anxiety Scale** |
|  |  | ***β*** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |  | ***β*** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |  | ***β*** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |
| HRSD17 | Sx change | 0.70 | -0.95, -0.46 | < 0.001 | < 0.001 |  | 0.00 | -0.06, 0.06 | 0.972 | 0.989 |  | 0.00 | -0.07, 0.08 | 0.981 | 0.993 |
| QIDS-SR16 | Sx change | -0.21 | -0.42, -0.01 | 0.042 | 0.092 |  | -0.09 | -0.14, -0.05 | < 0.001 | < 0.001 |  | -0.10 | -0.16, -0.04 | 0.002 | 0.006 |
|  |  | **Odds Ratio** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |  | **Odds Ratio** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |  | **Odds Ratio** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |
| HRSD17 | Remission | 0.93 | 0.85, 1.02 | 0.120 | 0.207 |  | 0.99 | 0.97, 1.01 | 0.253 | 0.363 |  | 0.97 | 0.94, 0.99 | 0.018 | 0.043 |
|  | Response | 1.04 | 0.95, 1.13 | 0.388 | 0.520 |  | 0.99 | 0.97, 1.01 | 0.535 | 0.640 |  | 0.99 | 0.96, 1.01 | 0.329 | 0.454 |
| QIDS-SR16 | Remission | 0.98 | 0.89, 1.06 | 0.585 | 0.683 |  | 0.98 | 0.96, 1.00 | 0.141 | 0.232 |  | 0.97 | 0.94, 0.99 | 0.020 | 0.048 |
|  | Response | 1.07 | 0.98, 1.17 | 0.120 | 0.207 |  | 1.01 | 0.99, 1.03 | 0.495 | 0.599 |  | 1.00 | 0.98, 1.03 | 0.776 | 0.833 |

*Results from unadjusted and covariate adjusted linear and logistic regression models testing whether raw anxiety scales predicted HRSD17 or QIDS-SR16 symptom change and remission/response. Abbreviations: HRSD17, 17-item Hamilton Rating Scale for Depression; QIDS-SR16, 16-item Quick Inventory of Depressive Symptomatology; Sx change, Symptom change.*

Supplementary Figure 3.

*Comparison of methods determining the number of factors to retain according to the Kaiser criterion, parallel analysis, optimal coordinates, and the acceleration factor when only using DASS42 stress and anxiety subscale items.*



Supplementary Table 5.

*Factor loadings and psychometric properties of factors when only using DASS42 stress and anxiety subscale items.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Measure** | **Item** | **Item Description** | **Stress** | **Cognitive Anxiety** | **Somatic Anxiety** |
| DASS42 Stress | 1 | I found myself getting upset by quite trivial things | 0.679 |  |  |
| DASS42 Stress | 6 | I tended to over-react to situations | 0.612 |  |  |
| DASS42 Stress | 11 | I found myself getting upset rather easily | 0.791 |  |  |
| DASS42 Stress | 14 | I found myself getting impatient when I was delayed in any way (e.g. lifts, traffic lights, being kept waiting) | 0.688 |  |  |
| DASS42 Stress | 18 | I felt that I was rather touchy | 0.711 |  |  |
| DASS42 Stress | 27 | I found that I was very irritable | 0.909 |  |  |
| DASS42 Stress | 29 | I found it hard to calm down after something upset me | 0.576 |  |  |
| DASS42 Stress | 32 | I found it difficult to tolerate interruptions to what I was doing | 0.524 |  |  |
| DASS42 Stress | 35 | I was intolerant of anything that kept me from getting on with things | 0.514 |  |  |
| DASS42 Stress | 39 | I found myself getting agitated | 0.734 |  |  |
| DASS42 Stress | 8 | I found it difficult to relax |  | 0.391 |  |
| DASS42 Stress | 12 | I felt that I was using a lot of nervous energy |  | 0.612 |  |
| DASS42 Stress | 22 | I found it hard to wind down |  | 0.336 |  |
| DASS42 Stress | 33 | I was in a state of nervous tension |  | 0.667 |  |
| DASS42 Anxiety | 40 | I was worried about situations in which I might panic and make a fool of myself |  | 0.642 |  |
| DASS42 Anxiety | 28 | I felt I was close to panic |  | 0.582 |  |
| DASS42 Anxiety | 20 | I felt scared without any good reason |  | 0.688 |  |
| DASS42 Anxiety | 9 | I found myself in situations that made me so anxious I was most relieved when they ended |  | 0.649 |  |
| DASS42 Anxiety | 30 | I feared that I would be "thrown" by some trivial but unfamiliar task |  | 0.607 |  |
| DASS42 Anxiety | 36 | I felt terrified |  | 0.663 |  |
| DASS42 Anxiety | 2 | I was aware of dryness of my mouth |  |  | 0.393 |
| DASS42 Anxiety | 4 | I experienced breathing difficulty (e.g. excessive rapid breathing, breathlessness in the absence of physical exertion) |  |  | 0.543 |
| DASS42 Anxiety | 41 | I experienced trembling (e.g. in the hands) |  |  | 0.641 |
| DASS42 Anxiety | 25 | I was aware of the action of my heart in the absence of physical exertion |  |  | 0.452 |
| DASS42 Anxiety | 7 | I had a feeling of shakiness (e.g. legs going to give way) |  |  | 0.686 |
| DASS42 Anxiety | 15 | I had a feeling of faintness |  |  | 0.595 |
| DASS42 Anxiety | 23 | I had difficulty in swallowing |  |  | 0.550 |
| DASS42 Anxiety | 19 | I perspired noticeably (e.g. hands sweaty) in the absence of high temperatures or physical exertion |  |  | 0.450 |
|  |  |  |  |  |  |
|  |  | Eigenvalue  | 4.86 | 3.74 | 2.52 |
|  |  | Percent Variance Explained  | 17% | 13% | 9% |
|  |  | Cumulative Variance Explained | 17% | 30% | 39% |
|  |  | Coefficient Alpha  | 0.90 | 0.87 | 0.80 |

*Note:* Items with factor loadings below 0.32 are hidden.

Supplementary Table 6.

*Results from unadjusted and covariate adjusted logistic regression models testing whether factor scores predicted HRSD17 or QIDS-SR16 symptom change and remission/response when only using DASS42 stress and anxiety subscale items. Abbreviations: HRSD17, 17-item Hamilton Rating Scale for Depression; QIDS-SR16, 16-item Quick Inventory of Depressive Symptomatology; Sx change, Symptom change.*

|  |  |  |
| --- | --- | --- |
|  |  | **Unadjusted** |
|  |  | **Stress** |  | **Cognitive Anxiety** |  | **Somatic Anxiety** |
|  |  | ***β*** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |  | ***β*** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |  | ***β*** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |
| HRSD17 | Sx change | -0.33 | -0.79, 0.12 | 0.148 | 0.229 |  | -0.56 | -0.99, -0.12 | 0.012 | 0.030 |  | -0.32 | -0.75, 0.11 | 0.150 | 0.230 |
| QIDS-SR16 | Sx change | -0.99 | -1.35, -0.63 | < 0.001 | < 0.001 |  | -0.93 | -1.28, -0.59 | < 0.001 | < 0.001 |  | -0.43 | -0.79, -0.08 | 0.016 | 0.038 |
|  |  | ***OR*** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |  | ***OR*** | **95% CI** | ***p*** | ***q*** |  | ***OR*** | **95% CI** | ***p*** | ***q*** |
| HRSD17 | Remission | 0.90 | 0.78, 1.04 | 0.159 | 0.242 |  | 0.84 | 0.73, 0.97 | 0.016 | 0.038 |  | 0.86 | 0.75, 0.99 | 0.037 | 0.081 |
|  | Response | 0.95 | 0.82, 1.10 | 0.476 | 0.571 |  | 0.95 | 0.82, 1.09 | 0.433 | 0.541 |  | 0.97 | 0.85, 1.12 | 0.699 | 0.756 |
| QIDS-SR16 | Remission | 0.89 | 0.77, 1.02 | 0.106 | 0.184 |  | 0.88 | 0.76, 1.01 | 0.075 | 0.141 |  | 0.82 | 0.7, 0.95 | 0.009 | 0.023 |
|  | Response | 1.09 | 0.95, 1.26 | 0.228 | 0.334 |  | 1.09 | 0.95, 1.25 | 0.235 | 0.341 |  | 1.03 | 0.9, 1.18 | 0.680 | 0.737 |
|  |  | **Adjusted** |
|  |  | **Stress** |  | **Cognitive Anxiety** |  | **Somatic Anxiety** |
|  |  | ***β*** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |  | ***β*** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |  | ***β*** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |
| HRSD17 | Sx change | 0.08 | -0.38, 0.53 | 0.744 | 0.793 |  | -0.09 | -0.53, 0.36 | 0.706 | 0.761 |  | 0.04 | -0.39, 0.47 | 0.855 | 0.876 |
| QIDS-SR16 | Sx change | -0.65 | -1.02, -0.29 | < 0.001 | < 0.001 |  | -0.69 | -1.05, -0.32 | < 0.001 | < 0.001 |  | -0.21 | -0.57, 0.14 | 0.244 | 0.351 |
|  |  | ***OR*** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |  | ***OR*** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |  | ***OR*** | **CI 95%****(Lower, Upper)** | ***p*** | ***q*** |
| HRSD17 | Remission | 0.91 | 0.77, 1.07 | 0.256 | 0.360 |  | 0.86 | 0.73, 1.01 | 0.059 | 0.117 |  | 0.85 | 0.72, 0.99 | 0.045 | 0.096 |
|  | Response | 0.95 | 0.81, 1.11 | 0.505 | 0.600 |  | 0.95 | 0.81, 1.11 | 0.535 | 0.633 |  | 0.96 | 0.83, 1.12 | 0.613 | 0.690 |
| QIDS-SR16 | Remission | 0.88 | 0.75, 1.03 | 0.120 | 0.203 |  | 0.89 | 0.75, 1.04 | 0.134 | 0.218 |  | 0.83 | 0.70, 0.97 | 0.021 | 0.048 |
|  | Response | 1.03 | 0.88, 1.21 | 0.671 | 0.732 |  | 1.04 | 0.89, 1.21 | 0.660 | 0.722 |  | 1.00 | 0.86, 1.17 | 0.981 | 0.984 |

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