

Supplementary Table 2. Explanation of cognitive tests on CANTAB.

| Task (Abbreviation) | Description |
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| <i>Intra-Extra Dimensional Set Shift (IED)</i> | The IED is a test of rule acquisition and reversal. It features visual discrimination and attentional set formation, as well as maintenance, shifting and flexibility of attention. The test uses two artificial dimensions: color-filled shapes and white lines. Simple stimuli are made up of just one of these dimensions, whereas compound stimuli are made up of both, namely white lines overlying color-filled shapes. The subject starts by seeing two simple color-filled shapes, and must learn which one is correct by touching it. Feedback teaches the subject which stimulus is correct, and after six correct responses, the stimuli and/or rules are changed. These shifts are initially intra-dimensional (e.g. color filled shapes remain the only relevant dimension), then later extra-dimensional (white lines become the only relevant dimension). Subjects progress through the test by satisfying a set criterion of learning at each stage (6 consecutive correct responses). If at any stage the subject fails to reach this criterion after 50 trials, the test terminates. |
| <i>Spatial Span (SSP)</i> | This task assesses working memory capacity, and is a visuospatial analogue of the Digit Span test. During the SSP, white squares are shown, some of which briefly change color in a variable sequence. The subject must then touch the boxes which changed color in the same order that they were displayed by the computer. |
| <i>Stop-Signal Reaction Test (SST)</i> | The SST is a classic stop signal response inhibition test, which uses staircase functions to generate an estimate of stop signal reaction time. This test gives a measure of an individual's ability to inhibit a prepotent response and consists of two parts. In the first part, the subject is introduced to the press pad, and told to press the left hand button when they see a left-pointing arrow, and the right hand button when they see a right-pointing arrow. In the second part, the subject is told to continue pressing the buttons on the press pad when they see the arrows, as before, but, if they hear an auditory signal (a beep), they should withhold their response and not press the button. |
| <i>Spatial Working Memory (SWM)</i> | The SWM is a test of the subject's ability to manipulate remembered items in working memory and to retain spatial information. It begins with the demonstration of colored boxes on a screen, and by touching these boxes, the subject should find a blue 'token'. Using their spatial working memory, participants locate and collect the blue tokens to fill up an empty column on the right hand side of the screen. The working memory load is then increased by increasing the number of boxes on the screen. |
| <i>Verbal Recognition Memory (VRM)</i> | The VRM test assesses immediate and delayed memory of verbal information under free recall and forced choice recognition conditions, should provide comparable results. In the VRM test, the subject is shown a list of 12 words, one at a time, and then asked to produce as many of the words as possible immediately following the presentation, recognize the words they have seen before from a list of 24 words containing the original 12 words and 12 distracters and following a delay of 20 minutes, recognize the words they have seen before from another list of 24 words containing the original list and 12 new distracters. |