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The Effects of a Combined Intervention for Cognition in Schizophrenia On Cogstate Schizophrenia Battery

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Background Cognitive impairment in schizophrenia is a strong predictor of the functional outcome and no effective treatments are available. MATRICS Consensus Cognitive Battery (MCCB) is approved by the FDA as outcome measure for trials of cognitive-enhancing drugs in schizophrenia. CogState Schizophrenia Battery (CSB) provides a briefer cognition assessment with minimal practice effects and a strong correlation between the CSB and MCCB composite scores. We tested the sensitivity of CSB as a cognitive outcome measure in a clinical trial in schizophrenia, where a cognitive-enhancing drug and cognitive training were combined.

Methods 49 participants with schizophrenia were enrolled in a double-blind, placebo-controlled study. Participants were randomised to modafinil (200mg/day) or placebo and underwent a cognitive training program for 10 weekdays. CSB was administered twice at baseline to minimise practice effects, at the last day of the intervention and two weeks after the completion of the intervention.

Results There was a significant time effect at the end of the intervention on the CSB composite score ($p=0.042$). There was no significant treatment effect on CSB composite score at the end of the intervention ($p=0.686$) or at follow up ($p=0.120$).

Conclusions Multiple administrations of CSB were well tolerated by participants. The significant time effects on the composite score may suggest the operation of practice effects. Several factors could have contributed to the lack of treatment effects on CSB, such as the burden of multiple neuropsychological testing in a relatively brief study, the duration of modafinil treatment and also the intensive nature of cognitive training.