**Supplementary Materials**

**Description of Posit Science cognitive training modules**

The first three months of cognitive training involved a series of BrainHQ modules that focus on neurocognitive skills ranging from auditory discrimination to verbal sequencing to working memory and use of stored information to complete cognitive tasks. Basic exercises, such as “Time Order Judgment”, involve forced-choice tasks during which the participant listens to and indicates the direction of fluctuating auditory pitch sweeps. The “Phoneme Discrimination Judgment” exercise requires participants to identify and discriminate phoneme pairs. “Sequence Reconstruction” is an auditory matching task using sounds and syllables commonly used in speech. In “Spatial Match” participants learn to reconstruct sequences of syllables. In “Narrative Memory” participants are required to listen to complex conversations containing specific information and recall the details of the learned verbal material. “Instruction Sequence” is a higher-level auditory task in which the participant listens to a list of verbal instructions and then completes the steps, with the number of critical components and complexity level increasing over trials.

To supplement the BrainHQ training, we used SocialVille, an internet-based computer program designed to specifically address social cognitive deficits in individuals with schizophrenia (Miley et al., 2020; Nahum et al., 2021). The 27 different exercises of SocialVille collectively aim to address five key social cognitive domains, i.e., visual and vocal affect perception, social cue perception, Theory of Mind, self-referential style, and empathy (Rose et al., 2015). The participant is required to make speeded, accurate, and increasingly more challenging discriminations of socially relevant information, e.g., emotional faces, eye gazes, prosody, social situations. The participant is systematically exposed to visual and auditory socially relevant stimuli, starting from very basic stimuli and gradually involving more complex, multi-modal, and ecologically valid stimuli. For examples, in“Name That Feeling” the participant selects the label which correctly describes the target facial affect (stills). In “Match that Feeling”the task is to match the facial effect of the target face with one in an array of different faces. “Gaze Match” involves selecting the target gaze direction from an array of gazes (irrespective of face identity). In “Face Facts”, the participant memorizes visually presented social facts about individuals presented in sequence. “In the Know” involves memorizing aurally presented social facts about individuals. Just as with BrainHQ, for each trial the difficulty level is adaptively set using computer algorithms maintaining the participant at an 70-80% success level while progressing through the social cognitive exercises. Findings from Nahum et al (2021) provide support for the efficacy of such an internet based social cognitive training program for improving social cognition and social functioning in schizophrenia.

**References**

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