What is visuospatial ability?

Visuospatial ability refers to a person’s capacity to identify visual and spatial relationships among objects. Visuospatial ability is measured in terms of the ability to imagine objects, to make global shapes by locating small components, or to understand the differences and similarities between objects. Several tests have been designed to assess visuospatial ability. The Weschler Adult Intelligence Scale (WAIS) block-design subtest requires subjects to use small blocks to recreate a larger block pattern. The WAIS picture arrangement subtest assesses perceptual skills and involves study participants placing pictures in a logical order. The WAIS Object Assembly subtest assesses speed and accuracy of jigsaw puzzle completion. The WAIS Picture Completion task requires participants to visually scan an image and identify what is missing. The WAIS Matrix Reasoning subtest requires participants to select the missing design in a patterned sequence. The Benton Judgement of Line Orientation Test requires participants to identify the orientation of a line in comparison to a target line; and both the Rey-Osterrieth Complex Figure Test (ROCFT) and the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) visuospatial/constructional subtest, involve replicating a complex figure from memory.

What is the evidence for visuospatial ability?

Moderate to high quality evidence shows a medium to large effect of poor visuospatial memory and a large effect of poor global visuospatial ability in people with schizophrenia compared to people without schizophrenia. Moderate quality evidence also finds poor perceptual problem-solving. People at clinical high risk of psychosis were more impaired on visuospatial working memory than those at familial high risk of psychosis.

Moderate to high quality evidence finds people taking olanzapine showed improvement after treatment, while people taking clozapine or risperidone showed no improvement.

For more information see the technical table.