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SCHIZOPHRENIA Factsheet

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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 found poor perceptual problem-solving in people with schizophrenia. Those taking olanzapine showed improvement after treatment, while people taking clozapine or risperidone showed no improvement in visuospatial ability.

Moderate to low quality evidence suggests people with schizophrenia who were using cannabis have a small to medium-sized effect of better visuospatial ability compared to people with schizophrenia who do not use cannabis. There were no differences in visuospatial ability between tobacco smokers with schizophrenia and non-smokers with schizophrenia.

Moderate to high quality evidence found a small to medium-sized effect of poorer visuospatial ability in people at clinical high-risk of psychosis compared to controls. High quality evidence found people at clinical high risk were more impaired on visuospatial working memory than those at familial high-risk of psychosis (first-degree relative with the disorder).

For more information see the technical table

NeuRA
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NeuRA (Neuroscience Research Australia) is one of the largest independent medical and clinical research institutes in Australia and an international leader in neurological research.

Diseases of the brain and nervous system pose the greatest health, economic and social burden of any disease group because they are chronic, debilitating and have no known cures.

Medical research is the cornerstone of efforts to advance the health and wellbeing of families and the community. Our dedicated scientists are focussed on transforming their research into significant and practical benefits for all patients.

While we hope you find this information useful, it is always important to discuss any questions about schizophrenia or its treatment with your doctor or other health care provider.

HOW YOUR SUPPORT HELPS

We are able to make significant advances due to the generosity of countless people. Your donation allows us to continue to work towards transforming lives. For information on how you can support our research, phone **1300 888 019** or make a secure donation at **neura.edu.au/donate.**

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