NeuRA
Discover. Conquer. Cure.

SCHIZOPHRENIA LIBRARY

SCHIZOPHRENIA Factsheet

March 2022

What is IQ and global cognition?

Intelligence quotient (IQ) is derived from standardised tests used to measure general cognitive functioning. IQ is most commonly measured using the Wechsler Adult Intelligence Scale (WAIS). The WAIS is designed to measure all aspects of cognitive functioning, and is divided into subtests measuring verbal IQ (verbal comprehension and working memory) and non-verbal IQ (perceptual organisation and processing speed). Other tests used to assess IQ include the Mini-Mental State Examination (MMSE), which assesses cognitive impairment; the National Adult Reading Test (NART), which assesses premorbid intelligence; the Wide Range Achievement Test (WRAT), which assesses both verbal and mathematic ability; and the Raven's Progressive Matrices, which assesses general intelligence.

What is the evidence for IQ and global cognition?

Compared to people without schizophrenia, moderate to high quality evidence found a large effect of lower IQ in people with schizophrenia, including people with first-episode, youth-onset, or late-onset schizophrenia, with late-onset samples showing the greatest impairment.

There was a small to medium-sized effect of lower current IQ, but not premorbid IQ (measured prior to the onset of the disorder), in people with schizophrenia compared to people with affective psychoses (including bipolar disorder and schizoaffective disorder). Premorbid IQ was lower only in people with first-episode schizophrenia when compared to people with first-episode bipolar disorder.

High quality evidence shows greater improvements in global cognition with second-generation antipsychotics compared to first-generation antipsychotics. Specifically, moderate to high quality evidence finds improvements in global cognition with quetiapine, olanzapine, clozapine, risperidone and low-dose haloperidol, but not with high-dose haloperidol.

High quality evidence finds a small effect of lower current IQ, and a medium-sized effect of lower premorbid IQ in people with psychosis and current cannabis use compared to people with psychosis and no cannabis use. However, there was a small effect of better global cognition in people with psychosis and any substance use disorder compared to people with psychosis with no substance use disorder.

Moderate to high quality evidence finds small effects of lower current and premorbid IQ in people at high-risk for psychosis. Those at familial high-risk (having a first-degree relative with psychosis) were more impaired than those at clinical high-risk (showing subclinical symptoms). There was a small effect of lower IQ in people at clinical high-risk of psychosis who made the transition to psychosis compared to people at clinical high-risk of psychosis who did not make the transition to psychosis. There was also a small effect of lower IQ in people with first-episode psychosis compared to people at clinical high-risk.

For further information see the technical table

NeuRA
Discover. Conquer. Cure.

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**.

NeuRA (Neuroscience Research Australia) Foundation
T 1300 888 019 **F** +61 2 9399 1082
ABN 57 008 429 961

Margarete Ainsworth Building
Barker Street, Randwick NSW 2031
PO Box 1165 Randwick Sydney NSW 2031 Australia

neura.edu.au