09/2019

Psychosis (Legge, 2019)

Sophie E. Legge, et al.
JAMA Psychiatry

Behavior | Mind

STUDY SUMMARY

Identification of 4 genetic variants associated with psychotic experiences.

YOUR RESULT

0th
PERCENTILE
Very low genetic predisposition to **psychotic experiences**

STUDY DESCRIPTION

Psychosis, or psychotic experiences, typically describes a condition where an individual has an impaired relationship with reality. The most common experiences include hallucinations and *delusions*. Though these psychotic experiences can occur alongside trauma, stress, or substance abuse, they can also be a symptom of an underlying psychiatric illness. To better understand the genetic causes of psychosis and their connection to psychiatric illnesses, this study analyzed the genetic data of 127,966 individuals of European ancestry who self-reported their psychotic experiences. The 4 discovered variants indicated connections between psychotic experiences and major depressive disorder, autism spectrum disorder, ADHD, as well as schizophrenia. Collectively, these variants explained nearly 2% of the heritability of psychotic experiences.

DID YOU KNOW?

Some forms of therapy, such as cognitive behavior therapy, have proven to be effective in helping people who experience psychosis manage their episodes.

YOUR DETAILED RESULTS

To calculate your genetic predisposition to psychotic experiences we summed up the effects of genetic variants that were linked to psychotic experiences in the study that this report is based on. These variants can be found in the table below. The variants highlighted in green have **positive effect sizes** and increase your genetic predisposition to psychotic experiences. The variants highlighted in blue have **negative effects sizes** and decrease your genetic predisposition to psychotic experiences. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to psychotic experiences. By adding up the effect sizes of the highlighted variants **we calculated your polygenic score for psychotic experiences to be -1.27**. To determine whether your score is high or low, we compared it to the scores of 5,000 other Nebula Genomics users. We found that your polygenic score for psychotic experiences is in the **0th percentile**. This means that it is higher than the polygenic scores 0% of people. We consider this to be a **very low genetic predisposition to psychotic experiences**. However, please note that genetic predispositions do not account for important non-genetic factors like lifestyle. Furthermore, the genetics of most traits has not been fully understood yet and many associations between traits and genetic variants remain unknown. For additional explanations, click on the column titles in the table below and visit our Nebula Library tutorial.

VARIANT	YOUR GENOTYPE	EFFECT SIZE	VARIANT FREQUENCY	SIGNIFICANCE
rs10994278_T NEW	T / C	0.15 (↑)	89%	3.06×10^{-8}
rs549656827_G NEW	G / G	-0.49 (↓)	99%	3.30×10^{-8}
rs75459873_G NEW	G / G	-0.42 (↓)	97%	3.78×10^{-8}
rs3849810_A NEW	A / A	0.20 (↑)	78%	4.55×10^{-8}