GENETICS

Xhosa schizophrenia genetics

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Virtually all research on the genetics of schizophrenia has examined populations in Europe, North America or Asia. The continent of Africa contains greater human genetic diversity than the rest of the world combined, yet has been understudied in the context of psychiatric disorders.

In a new study, Suleyman Gulsuner and colleagues from South Africa and the U.S. performed whole-exome sequencing on 909 patients with schizophrenia recruited from hospitals in South Africa, as well as 917 matched control participants. All participants were from the Xhosa people, one of the major ethnic groups of Southern Africa.

The results showed that the people with schizophrenia were more likely to carry private damaging genetic variants, especially in genes involved in synaptic function. For instance, four individuals carried different, damaging mutations in *CNTNAP1*, whereas none of the control participants did. Other mutations in *CNTNAP1*, which is important for neurodevelopment, have been associated with severe mental illness in other populations.

These findings support the oligogenetic model of schizophrenia, in which the disorder can be caused by rare damaging variants in one or a few genes per patient, and suggest that the model is also true of an African population.

Jamie Horder

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