

Team finds childhood clues to adult schizophrenia

January 21 2010

(PhysOrg.com) -- Years before adults develop schizophrenia, there is a pattern of cognitive difficulties they experience as children, including problems with verbal reasoning, working memory, attention and processing speed.

Drawing on a long-term study of more than 1,000 New Zealanders born from 1972 to 1973, a team led by Duke researchers has found a consistent pattern of developmental difficulties that first appeared when adult study subjects with [schizophrenia](#) were 7 years old.

"The proportion of kids who don't score well on these tests is big, and the number of kids who develop schizophrenia is tiny," said study co-author Terrie E. Moffitt, the Knut Schmidt Nielsen professor of psychology and neuroscience at Duke. But now that the study subjects are in their late 30s and mental illnesses have been identified, "we looked backwards to understand more about how schizophrenia may develop."

By age 32, 1 percent of the study participants met the formal criteria for schizophrenia and had been hospitalized and put on antipsychotic medication. Another 2.5 percent met the diagnostic criteria for the disorder, but hadn't received treatment.

Knowing what they know now, the researchers were able to track the progress of these cognitive deficits as the subjects went through testing at ages 3, 5, 7, 9, 11 and 13 as part of the Dunedin Multidisciplinary

Health and Development Study.

"These kids are lagging behind to begin with and they continue to fall behind," said study co-author Richard Keefe, director of Duke's Schizophrenia Research Group. Their verbal skills are initially poor, and then they develop other problems along the way, including difficulties with memory and verbal processing, key factors in learning.

For each year between the ages of 7 and 13, the children who later received a diagnosis of schizophrenia lost between 0.17 and 0.26 years in mental age when compared with the other children.

Two patterns emerged: The children who developed adult schizophrenia had early deficits in verbal and visual learning, reasoning and conceptualization that remained with them as they grew. They also showed slower development than their peers in processing speed, attention, visual-spatial problem-solving and [working memory](#). The data argues against one theory that schizophrenia stems from a deterioration of cognitive abilities. The minds of these children grew, they just didn't grow as well.

Adults with schizophrenia have been known to lag about 8 points behind the average person in IQ tests, but this study puts a finer point on where and how they might differ. The article will appear in the February issue of the *American Journal of Psychiatry* and was published online Jan. 4.

How or why schizophrenia later develops is still a mystery, but this new evidence provides some valuable clues, said co-author Avshalom Caspi, the Edward M. Arnett Professor of psychology and neuroscience at Duke. It's possible that a child who struggles to make sense of the world becomes more socially isolated or more delusional, Caspi said. "How does a brain that's ill-equipped to deal with novel sensations deal with the stresses of adolescence?"

With this new evidence in hand, it may be tempting to try to somehow prevent schizophrenia by treating younger patients with anti-psychotic medications, said Keefe. But you'd be treating 20 percent of kids to prevent the 1 percent occurrence of schizophrenia, meaning 19 patients were treated unnecessarily, risking side effects.

"Of course, eventually we hope we'd be able to intervene, maybe even without drugs," Keefe said. Knowing more about the early clues to schizophrenia could lead to better studies of possible cognitive interventions, he said.

The findings suggest that adult psychosis doesn't just emerge fully-formed. It probably comes from a developmental process. "What we think of as adult psychiatric disorders have their roots much earlier in life," Caspi said.

More information: American Journal of Psychiatry - Static and Dynamic Cognitive Deficits in Childhood Preceding Adult Schizophrenia: A 30-Year Study, Reichenberg et al. ([doi: 10.1176/appi.ajp.2009.09040574](https://doi.org/10.1176/appi.ajp.2009.09040574))

Provided by Duke University

Citation: Team finds childhood clues to adult schizophrenia (2010, January 21) retrieved 23 April 2024 from <https://medicalxpress.com/news/2010-01-team-childhood-clues-adult-schizophrenia.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.