

Hearing 'messages' embedded in noise could be early sign of schizophrenia

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A tendency to extract messages from meaningless noise could be an early sign of schizophrenia, according to a study by Yale School of Medicine researchers.

The study this month in the *British Journal of Psychiatry* reported on 43 participants diagnosed with “prodromal symptoms”— meaning they exhibited early warning signs of psychosis such as social withdrawal, mild perceptual alterations, or misinterpretation of social cues.

Participants in the study were randomly assigned to take the anti-psychotic medication olanzapine or a placebo, and then symptoms and neuropsychological function were assessed for up to two years.

During the “babble task,” participants listened with headphones to overlapping recordings of six speakers reading neutral texts, which made the words virtually incomprehensible. The participants were asked to repeat any words or phrases that they heard. Only four words—“increase,” “children,” “A-OK,” and “Republican”—were consistently reproduced.

Eighty percent of the participants who “heard” phrases of four or more words in length went on to develop a schizophrenia-related illness during times that they were not taking olanzapine, said the lead author, Ralph Hoffman, M.D., associate professor of psychiatry. In contrast, only six percent of those in the study converted to schizophrenia-related illness if the phrases “heard” were less than three words in length.

“A tendency to extract message-like meaning from meaningless sensory information can, over time, produce a ‘matrix of unreality’ that triggers the initial psychotic phase of schizophrenia-spectrum disorders,” Hoffman said.

He said further research is needed because of the small size of this study. However, if these findings are verified, Hoffman added, they could provide an inexpensive tool for identifying those individuals with early warning signs of schizophrenia who would most likely benefit from preventive drug therapy.

Source: Yale University

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