

Reduction in volume in hippocampus region of brain seen in psychotic disorders

May 14 2014

Reduction in brain volume in the hippocampus (a region related to memory) was seen in patients with the psychotic disorders schizophrenia (SZ), schizoaffective disorder (SZA) and psychotic bipolar disorder (BPP).

The pathophysiology of psychotic disorders remains unclear, especially SZ. Changes in volume in the hippocampus are a hallmark of SZ. Advances in image processing allow for the precise parceling of specific hippocampal areas.

The authors conducted a neuroimaging study in [patients](#) with psychotic disorders and healthy volunteers as part of the multisite Bipolar-Schizophrenia Network on Intermediate Phenotypes (Wayne State University, Harvard University, Maryland Psychiatric Research Center, University of Chicago/University of Illinois at Chicago, University of Texas Southwestern Medical Center at Dallas and the Institute of Living/Yale University). The study included patients with SZ (n=219), SZA (n=142) or BPP (n=188), along with 337 healthy volunteers.

Volume reductions in the hippocampus were seen in all three groups of patients with psychotic disorders when compared with [healthy volunteers](#). Smaller volumes also were seen across specific hippocampal areas in all three [psychotic disorders](#) groups. Hippocampal volumes were associated with the severity of psychosis, declarative memory and overall cognitive performance.

"This study firmly establishes the [hippocampus](#) as one of the key nodes in the pathway to psychosis. Understanding the functional consequences and etiological underpinnings of these alterations will likely facilitate better prediction and targeted intervention in psychoses," Ian Mathew, B.A., of Harvard Medical School, Boston, and colleagues wrote in their JAMA Psychiatry paper.

More information: *JAMA Psychiatry*. Published online May 14, 2014.
[DOI: 10.1001/jamapsychiatry.2014.453](https://doi.org/10.1001/jamapsychiatry.2014.453)

Provided by The JAMA Network Journals

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