

Impairments of Working Memory in Schizophrenia and Bipolar Disorder: the Effect of History of Psychotic Symptoms and Different Aspects of Cognitive Task Demands

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Introduction: comparisons of cognitive impairments between schizophrenia (SZ) and bipolar disorder (BPD) have produced mixed results.

Objectives: this is the only study to assess different aspects of WM with respect to psychosis dimension in these patient populations.

Aim: to determine whether these groups of patients can be classified on the basis of WM performance.

Methods: we applied different working memory (WM) measures (Digit Span Forward and Backward, Short-delay and Long-delay CPT-AX, N-back) to patients with SZ(n=23), psychotic BPD(n=19) and non-psychotic BPD(n=24), as well as to healthy controls (HC) (n=18) in order to compare the level of WM impairments across the groups.

Results: with respect to the less demanding WM measures (Digit Span Forward and Backward, Short-delay CPT-AX), there were no between group differences in cognitive performance; however, with respect to the more demanding WM measures (Long-delay CPT-AX, N-back), we observed that the groups with psychosis (SZ, psychotic BPD) did not differ from one another, but performed poorer than the group without a history of psychosis (non-psychotic BPD). A history of psychotic symptoms may influence cognitive performance with respect to WM delay and load effects as measured by Long-delay CPT-AX and N-back tests, respectively. We observed a positive correlation of WM performance with antipsychotic treatment and a negative correlation with depressive symptoms in BPD and with negative symptoms in SZ subgroup.

Conclusions: our study suggests that WM dysfunctions are more closely related to a history of psychosis than to the diagnostic categories of SZ and BPD described by psychiatric classification systems.