The Effect of Core Cognitive Dysfunction on Memory in People with Mood Disorders

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Abstract

Objective: Research suggests that 'core' cognitive functions such as processing speed (PS), sustained attention (SA), and executive function (EF) are impaired in people with mood disorders and may play a role in wider cognitive dysfunction in this group. However, the extent to which impairments in these core cognitive functions influence wider cognitive functioning (i.e. the presence of a 'cognitive hierarchy') is not fully understood.

Participants and Methods: We used data from three different mood disorder samples (Bipolar Disorder euthymic [N=63], Bipolar Disorder depressed [N=58], and Major Depressive Disorder depressed [N=44] and matched healthy controls [N=159]) to investigate whether core cognitive dysfunction can explain impairments in verbal memory (VM) and visuo-spatial memory (VS) in patients. Each sample completed a neuropsychological battery and composite scores were created to represent cognitive domains (PS, SA, EF, VM, and VS). Hierarchical regression models were used to investigate the role of PS, SA, and EF, on memory performance in the patient groups, controlling for age and premorbid IQ.

Results: Patients performed worse than controls on all cognitive domains, except depressed patients did not significantly differ from controls on EF. In euthymic Bipolar Disorder, EF and, to some extent, PS, explained the group difference in VM and some of the variance in VS. In depressed groups, EF and SA explained the group difference in memory.

Conclusions: Results suggests the presence of a hierarchy of cognitive impairment in mood disorders, where impairments in EF, PS and SA may lead to poorer performance on tests of memory. The specific core cognitive functions involved appear to vary depending on mood state. The results have implications for our understanding of cognitive impairment in mood disorder groups and, with further research, could inform cognitive therapies. Future research should investigate the effect of using different neuropsychological tests to measure nature of the cognitive hierarchy in mood disorders.

Submission Categories

Schizophrenia/Bipolar

Keywords

Cognitive functioning, Depression, Bipolar