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VISUAL BACKWARD MASKING - AN EXCELLENT ENDOPHENOTYPE FOR SCHIZOPHRENIA ?

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Due to the complexity of psychiatric diseases, endophenotypes are of primary interest in psychiatric research. They are stable markers which are assumed to be related to a small number of genes involved in the pathophysiology of the disease. Visual backward masking (BM), like other parameters measuring early information processing, was proposed to be a reliable marker for schizophrenia. Performance deficits in BM are considerably more pronounced in schizophrenic patients and their unaffected relatives compared to controls. As shown before, in the present study BM performance was significantly worse in schizophrenic patients compared to controls; healthy relatives of schizophrenic patients performed intermediately.

Several candidate genes for schizophrenia including nicotinic receptor $\alpha 7$ subunit (CHRNA7), catechol-O-methyltransferase (COMT), dystrobrevin-binding protein 1 (dysbindin, DTNBP1) and metabotropic glutamate receptor 3 gene (GRM3) were investigated for their association with schizophrenia and BM in two independent samples. A strong and reproducible association was observed for CHRNA7 with both diagnosis of schizophrenia and BM performance. In conclusion, BM is an excellent endophenotype which will likely support the search for further candidate genes and related pathophysiological pathways in schizophrenia. Moreover, CHRNA7 has further supported its important role as one of the main candidate genes for schizophrenia.