



Neurocognition and Adaptive Functioning in a Genetic High-Risk Model of Schizophrenia

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Background: Identifying factors that influence functional outcome is an important goal in schizophrenia research. The 22q11.2 deletion syndrome (22q11DS) is a unique genetic model with high risk (20-25%) for schizophrenia. This study aimed to identify potentially targetable domains of neurocognitive functioning associated with functional outcome in adults with 22q11DS. **Methods:** Using data available from a comprehensive battery of 15 neurocognitive tests for 99 adults with 22q11DS (n=43 with schizophrenia) we derived four domains of neurocognition (Verbal Memory, Visual Memory, Motor Performance, and Executive Performance) using a principal component analysis. To investigate the association of these domains with adaptive functioning, we used Vineland Adaptive Behavior Scales (VABS) data available for 84 subjects in a linear regression model that accounted for the effects of schizophrenia status and overall intellectual level. **Results:** The regression model explained 46.8% of the variance in functional outcome ($p < 0.0001$). Executive performance was significantly associated with functional outcome ($p = 0.048$). Age and schizophrenia were also significant factors. The effects of executive performance on functioning did not significantly differ between those with and without psychotic illness. **Conclusions:** The findings provide impetus for further studies to examine the potential of directed (early) interventions targeting Executive Performance to improve long-term adaptive functional outcome in individuals with, or at high-risk for, schizophrenia. Moreover, the neurocognitive test results may benefit caregivers and clinicians by providing insight into the relative strengths and weaknesses of individuals with 22q11DS.