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FLUID INTELLIGENCE AND EXECUTIVE FUNCTIONING: PARTIAL OVERLAP IN PATIENTS WITH PSYCHIATRIC DISORDERS

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Introduction: For decades, the fundamental ability known as intelligence, has been interpreted as a unitary concept: g. The distinction between crystallized intelligence (Gc) and fluid intelligence (Gf), introduced by Horn and Catell in 1966, is corroborated by recent neuropsychological research. Since Gf is sensitive to frontal lobe lesions, studies have focussed on its relation with executive functioning (EF). The most widely used intellegence test (WAIS), measures predominantly Gc, even with its subtasks for performal intelligence.

Objectives: The study of the relation between Gf and EF with the Kaufman Adolescent and Adult Intelligence Test (KAIT), a test specifially designed for the measurement of the Gf-Gc distinction.

Aims: While WAIS-research on the Gf-EF association may lead to unreliable conclusions, both KAIT and selected CANTAB tasks were used to re-investigated this relationship.

Methods: The relation between Gf, Gc and EF was studied in a latent variable analysis using both a group of patients with an array of psychiatric diagnoses and a group of healthy controls, comprising a total of 66 subjects. For EF, the model of Miyake was used by differentiating EF in the three subprocesses: updating, shifting and inhibition.

Results: A high correlation between Gf and EF was found, indicating significant but incomplete overlap between the Gf and EF constructs.

Conclusions: KAIT constructs adequatly reflect Gf, Gc and the three executive processes as defined by Miyake. Deviant scores on KAIT-Gf, however, do not fully capture the actual executive funtioning of patients. In such cases, detailed examination of EF is warranted.

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