Behaviour planning and problem solving deficiencies in children with symptoms of attention deficit hyperactivity disorder from the Balobedu culture, Limpopo province, South Africa.

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Abstract

OBJECTIVE:
To compare planning behaviour (frontal lobe functioning) in children with and without symptoms of attention deficit hyperactivity disorder (ADHD).

METHOD:
A total of 90 children (45 with symptoms of ADHD and 45 matched controls without ADHD symptoms) of both genders, who were medication naïve, from the Balobedu culture (Limpopo province, South Africa), aged 7-13 years, participated in the study. The performance of the two groups was compared on a test of planning and problem solving, the Tower of London (ToL) task. The results were analysed as a function of gender and ADHD subtype. The Finger Tapping test (testing fine motor skills) was used as a control test to verify that the expected differences were not due to poor motor skills.

RESULTS:
The children with ADHD symptoms scored significantly lower than the non-ADHD comparison group which indicated deficiency in frontal lobe functioning (p = 0.00). The difference in performance was not due to poor motor control (p = 0.70).

CONCLUSION:
Children with ADHD symptoms show deficits in behavioural planning which indicates impairment of functions of the frontal areas supplied by the mesocortical dopamine branch. More so than others, the ADHD Inattentive and Combined subtypes showed poor performance in the Tower of London task, indicating poor organisational and planning skills in these groups. The results also did show that the difference was not due to problems with motor control and that the ToL task is a culture-fair instrument for testing planning behaviour.