

ADHD Endophenotypes in Caribbean Families.

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Abstract

OBJECTIVE:

The aim of this study is to contrast the genetics of neuropsychological tasks in individuals from nuclear families clustering ADHD in a Caribbean community.

METHOD:

We recruited and clinically characterized 408 individuals using an extensive battery of neuropsychological tasks. The genetic variance underpinning these tasks was estimated by heritability. A predictive framework for ADHD diagnosis was derived using these tasks.

RESULTS:

We found that individuals with ADHD differed from controls in tasks of mental control, visuospatial ability, visuoverbal memory, phonological and verbal fluency, verbal and semantic fluency, cognitive flexibility, and cognitive ability. Among them, tasks of mental control, visuoverbal memory, phonological fluency, semantic verbal fluency, and intelligence had a significant heritability. A predictive model of ADHD diagnosis using these endophenotypes yields remarkable classification rate, sensitivity, specificity, and precision values (above 80%).

CONCLUSION:

We have dissected new cognitive endophenotypes in ADHD that can be suitable to assess the neurobiological and genetic basis of ADHD.