

## CENTRAL AUDITORY PROCESSING AND AUDIO-VOCAL PSYCHOLINGUISTIC ABILITIES IN CHILDREN WITH ATTENTION DEFICIT-HYPERACTIVITY DISORDER

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**Objective:** Central auditory processing disorders and attention deficit-hyperactivity disorders (ADHD) have become popular diagnostic entities for school-age children. P300 (P3) event-related potential (ERP) putatively reflects central auditory dysfunctions associated with ADHD.

**Hypothesis and aim:** Detection of central auditory processing (higher auditory functioning) as measured by P300 in ADHD children. Determine the role of stimulants in central auditory processing and P300 in ADHD children for a better understanding of the nature of the deficit in these children.

**Participants and methods:** Forty children with a diagnosis of ADHD according to Diagnostic and Statistical Manual of Mental Disorders, 4th ed. and 39 normal children were included in the study and were subjected to P300 ERP, audio-vocal items of Illinois test of psycholinguistic abilities.

**Results:** This study found a significant difference in P300 latency, amplitude, and most of the audio-vocal subtests between the patients and the controls. This difference was obvious in older children for the Illinois test, but was not observed in P300 results.

**Conclusion:** There was a CAPD in children with ADHD (as indicated by Illinois subtests) and higher auditory central cognitive function (indicated by decreased amplitude of P300 and prolonged latency in such children). Audio-vocal abilities are more defective in older children (8-10 years) than in younger children. Children with ADHD should be assessed for CAPD. Stimulants may decrease the P300 latency and hence improve the attentive ability and auditory process.