



Ideomotor Apraxia Linked to Chronic Substance Abuse

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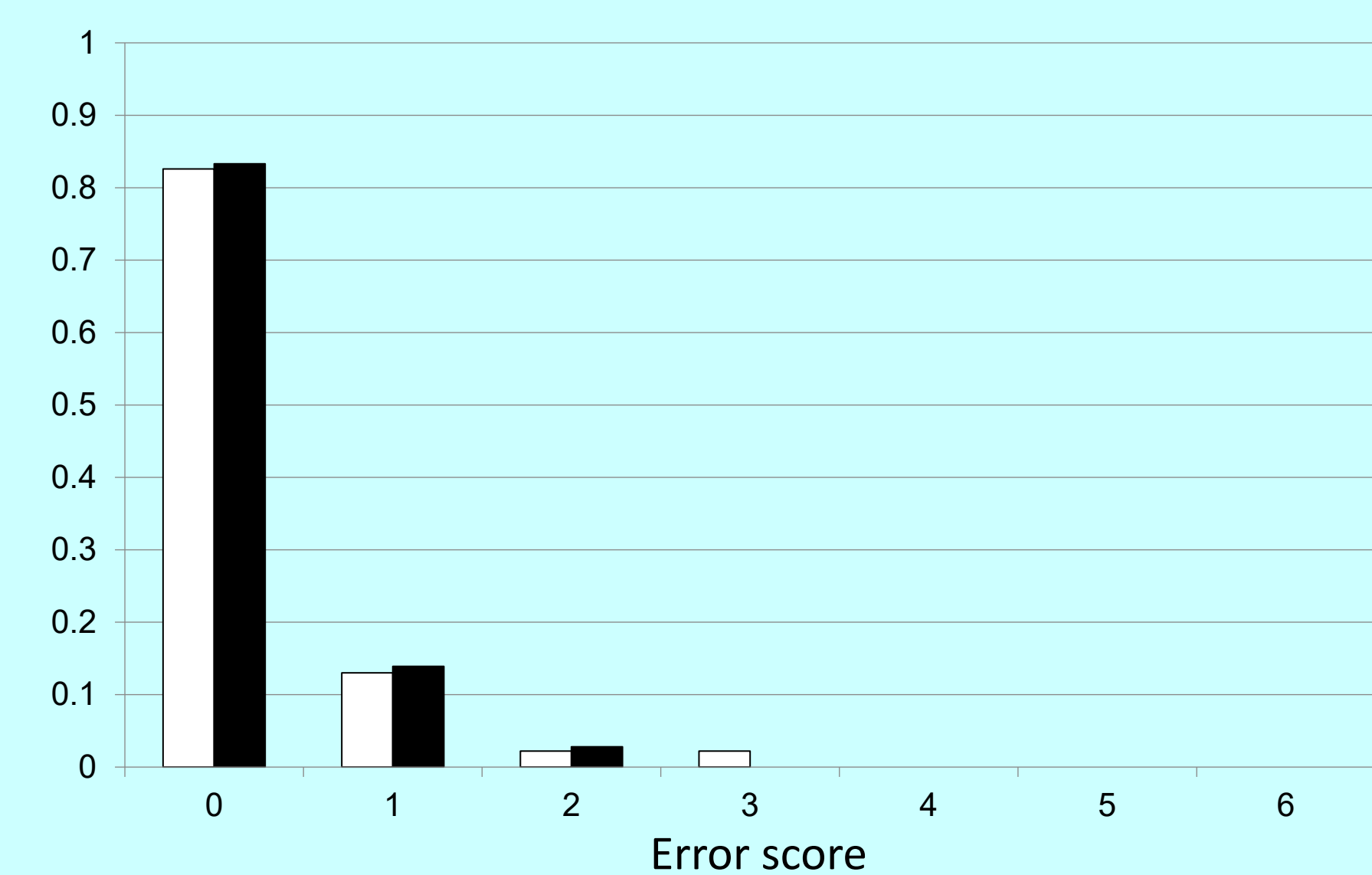
Background

Chronic substance abuse has been associated with a wide range of cognitive symptoms, such as executive impairment and reduced speed of processing. Also, adults who were identified as having developmental coordination disorder as children are at increased risk of substance dependence in adulthood. That could manifest in later life as apraxia. Ideomotor apraxia is a neuropsychological disorder of the execution of meaningful actions. It is most evident when 'pantomiming'.

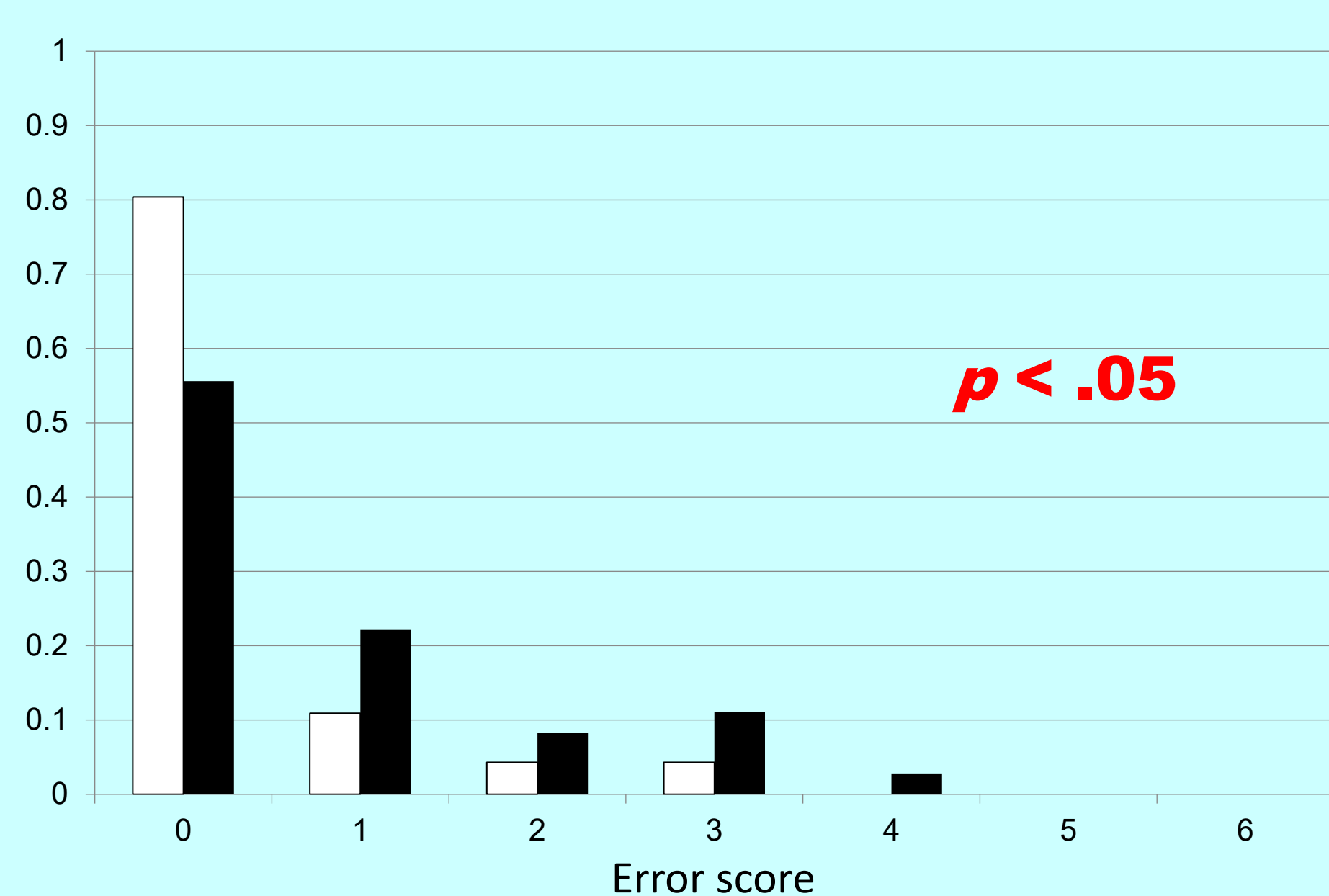
Results

Methods

Error score distributions:
intransitive actions



Error score distributions:
transitive actions



■ Substance abuse participants
□ Control group participants

Example Intransitive
Action: 'ask how much'

Example Transitive
Action: 'comb your hair'



- 36 adults with chronic substance abuse histories
- 46 age and sex-matched control participants

The substance abuse participants showed performance indistinguishable from the control participants for:

- Buccofacial actions (errors rare in both groups)
- Intransitive limb actions

But significantly more errors for

- **Transitive limb actions**

This difference could not be explained by a general comprehension or motor output problem, as intransitive actions were performed normally. Nor could the difference be explained by differences in estimated premorbid general cognitive ability.

Even when cases who tested positive for drug use with a urine screen were excluded, the result remained, suggesting it was not caused by recent intoxication.

- All assessed for apraxia:
 - Buccofacial actions (e.g., puff out cheeks)
 - Intransitive actions (e.g., beckon 'come here')
 - Transitive actions (i.e., pantomiming tool use)
- Cognitive ability was estimated with the Weschler Test of Adult Reading (a measure of premorbid intelligence)

Discussion

Ideomotor apraxia for transitive actions may be a clinically unrecognized feature of chronic substance abuse. However, the current results do not indicate whether this may be an acquired disorder, or perhaps lingering impairment associated with developmental coordination disorder.