

Comparing a Comprehensive Neuropsychological Battery Diagnosis to a Diagnosis Given by a Brief Computerized Assessment Tool

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Introduction

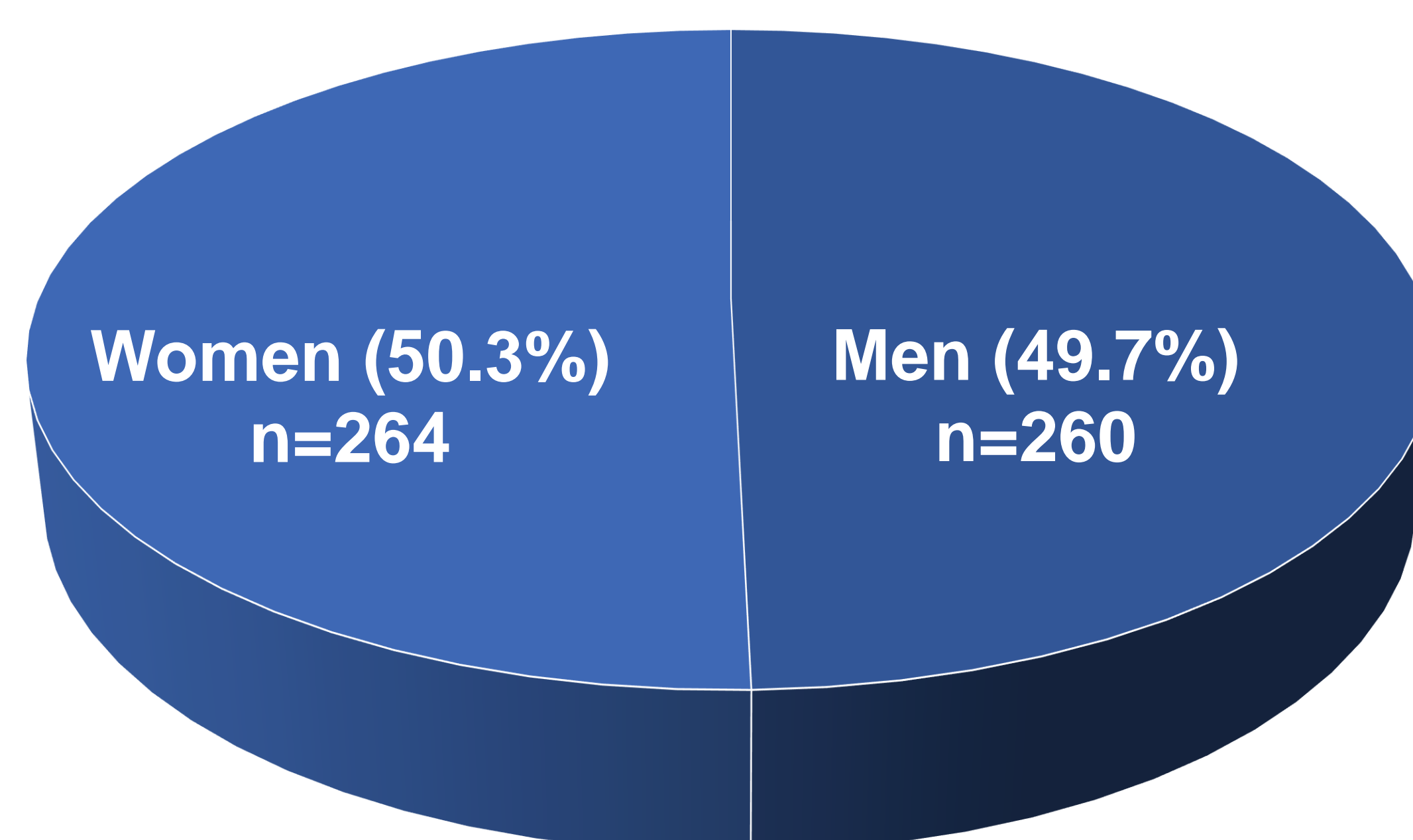
- Computerized cognitive assessments have been introduced as a quick and easy to administer alternative to traditional pencil-and-paper testing, especially for brief cognitive screening
- The Cognivue Clarity® is an FDA-approved computerized assessment tool that is utilized to assess an individual's cognitive functioning
- This tool assesses visuospatial, executive function/attention, naming/language, memory, delayed recall, and abstraction, and provides an overall score that indicates whether an individual's performance falls in the normal, mild, or moderate-severe impairment range

Objective

- The current study explored whether overall score on the Cognivue Clarity® correlated with the clinical diagnosis (e.g., no cognitive diagnosis, mild cognitive impairment, or major neurocognitive disorder) given by a neuropsychologist based on data obtained during a comprehensive, pencil-and-paper neuropsychological assessment

Participants

- The study cohort consisted of 524 individuals presenting with subjective cognitive concerns, who underwent comprehensive neuropsychological assessment, as well as the Cognivue Clarity®, in an outpatient community neurology clinic

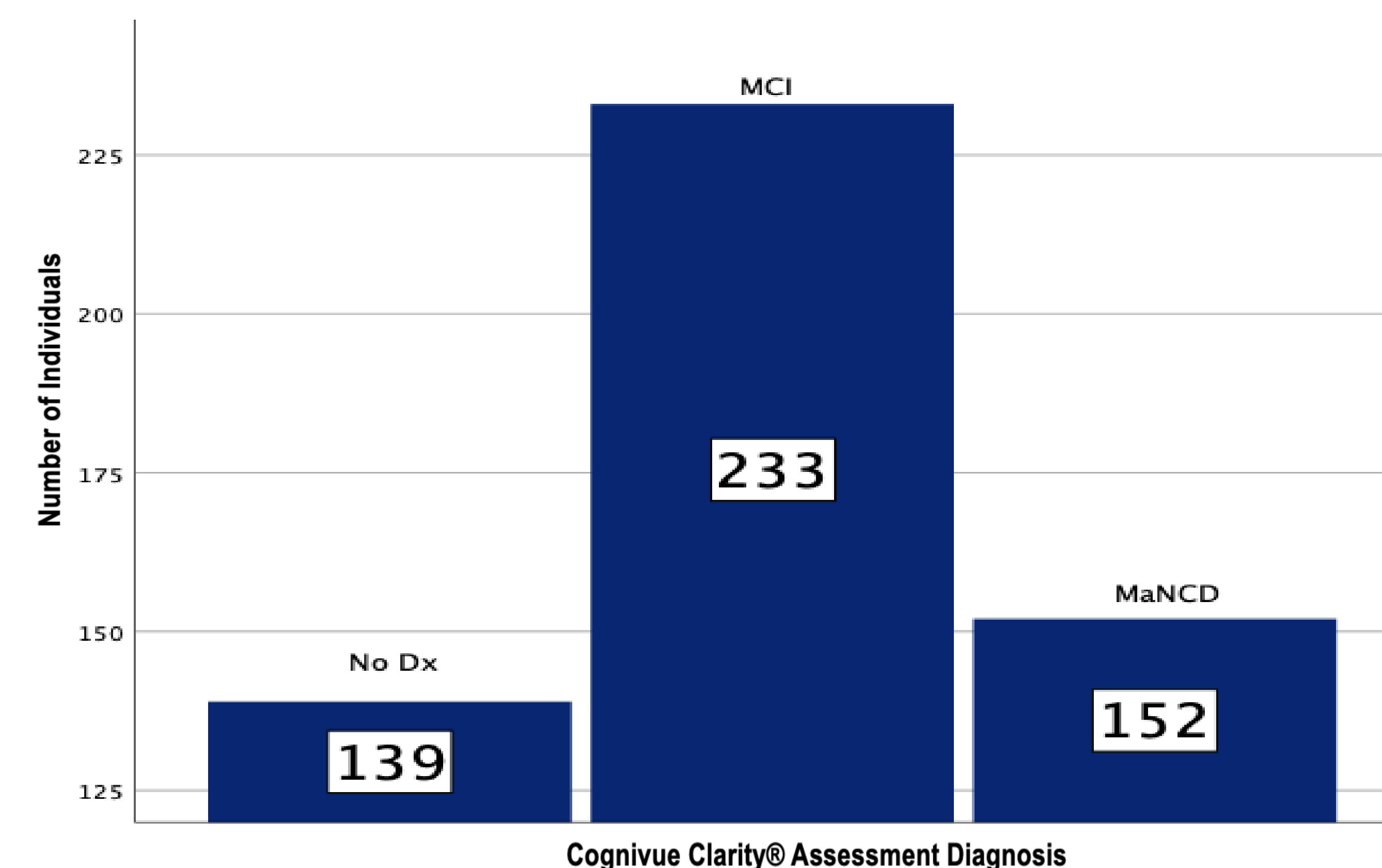


Participants ranged in age from 21 to 98 years old
Mean age: 68 years old (SD = 13.34)
Mean education: 15.52 years (SD = 2.38)

Methods

- Administration of traditional pencil-and-paper neuropsychological battery assessing domains of cognitive functioning, including verbal and nonverbal memory (learning, delayed recall, recognition), attention, working memory, processing speed, executive functioning, language, and visuospatial functioning, and the Cognivue Clarity®
- A chi-square test was performed to examine the relationship between clinical classification based on Cognivue Clarity® performance and clinical diagnosis based on traditional neuropsychological testing

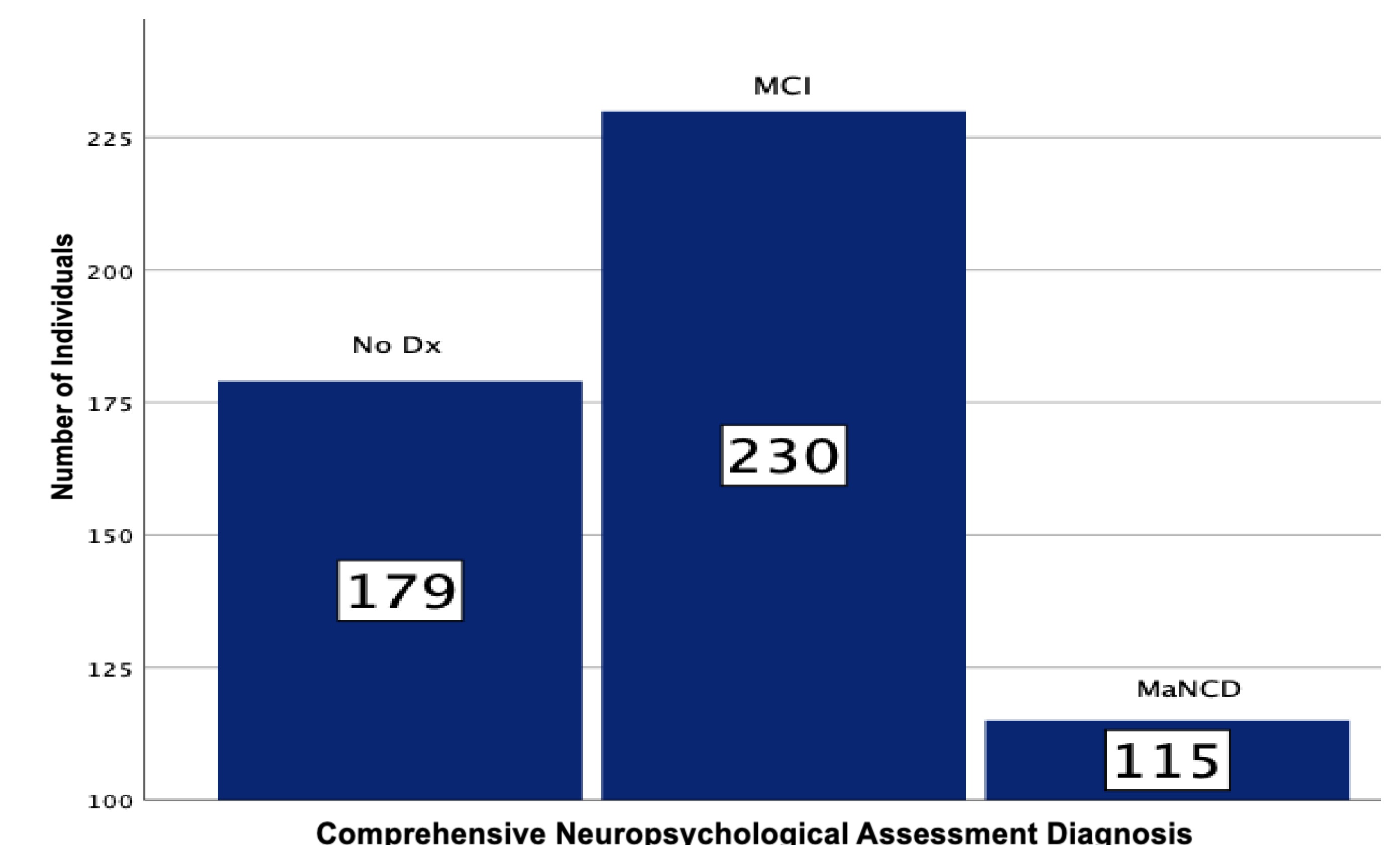
Results



Cognivue Clarity® assessment identified 139 individuals (26.5%) within normative expectation, 233 (44.5%) with mild cognitive impairment, and 152 (29.0%) with moderate to severe cognitive impairment

Main Finding:

- The relationship between clinical classification based on Cognivue Clarity® performance and clinical diagnosis based on a comprehensive neuropsychological battery was significant ($\chi^2(4) = 189.75, p < 0.0001$)



Following comprehensive neuropsychological assessment, 179 individuals (34.2%) did not meet diagnostic criteria for a cognitive disorder, 230 (43.9%) met criteria for mild cognitive impairment, and 115 (21.9%) met criteria for major neurocognitive disorder.

Conclusion and Future Directions

- Diagnosis based on Cognivue Clarity® performance was statistically similar to clinical diagnosis following comprehensive neuropsychological assessment, indicating Cognivue Clarity® may be an appropriate and effective tool to conduct broader-scale cognitive screening
- Future studies evaluating the relationship between Cognivue Clarity® subtest performance and traditional pencil-and-paper subtest performance may be beneficial

References

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