

Characterisation of Cognitive Impairments in Presentations to a Community Based Specialist AOD Neuropsychology Assessment Service

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Introduction

Cognitive impairment is commonly associated with sustained substance use and is often complicated by comorbid mental health and psychosocial factors.^{1,2}

The Turning Point Statewide Neuropsychology Service within Eastern Health provides specialist neuropsychological assessments to clients with alcohol or other drug (AOD) problems who may be presenting with cognitive, mental health or behavioural difficulties.

The aim of this study was to explore the frequency and severity of cognitive impairments among clients referred to the service.

Methods

A retrospective case file audit was conducted for clients referred for assessment to the Turning Point Neuropsychology Service in Melbourne between August 2014 and May 2018.

A total of 185 client files and test data were de-identified and reviewed. Two clients were excluded for having invalid results.

Assessment protocols varied according to clinician practices but typically included combinations of measures assessing the following domains: Information processing speed, working memory, verbal and nonverbal intellectual functioning, verbal and nonverbal memory, and aspects of executive functioning including complex attention, verbal fluency and cognitive inhibition.

Impaired scores were defined as those falling 1.3 standard deviations below population norms. This was equivalent to the *Borderline* (2nd to 8th percentile) and *Extremely Low* ranges (<2nd percentile).

Results

Clients were aged between 19 to 64 ($M = 39.55$, $SD = 10.10$). 137 (74.9%) were male and 46 were female (25.1%).

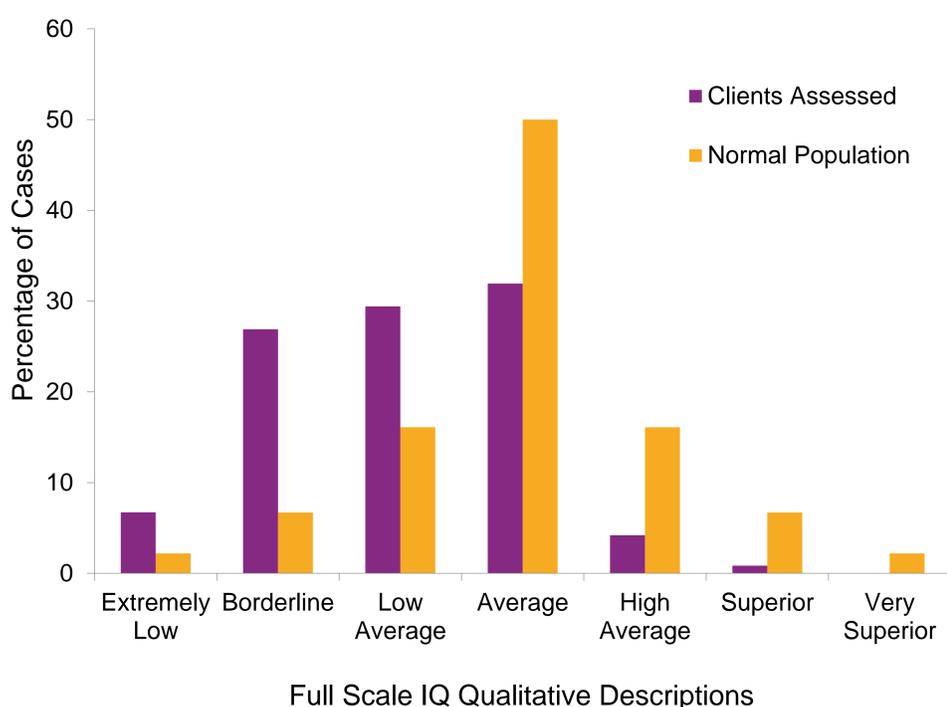


Figure 1: Distribution of WAIS-IV Full Scale IQ scores relative to normative population.

WAIS-IV Full Scale IQ scores were available for 119 clients ($M = 87.33$, $SD = 12.53$) and were significantly lower than the normative population ($M = 100$, $SD = 15$), $t(118) = -11.03$, $p = .00$, $d = 0.92$.

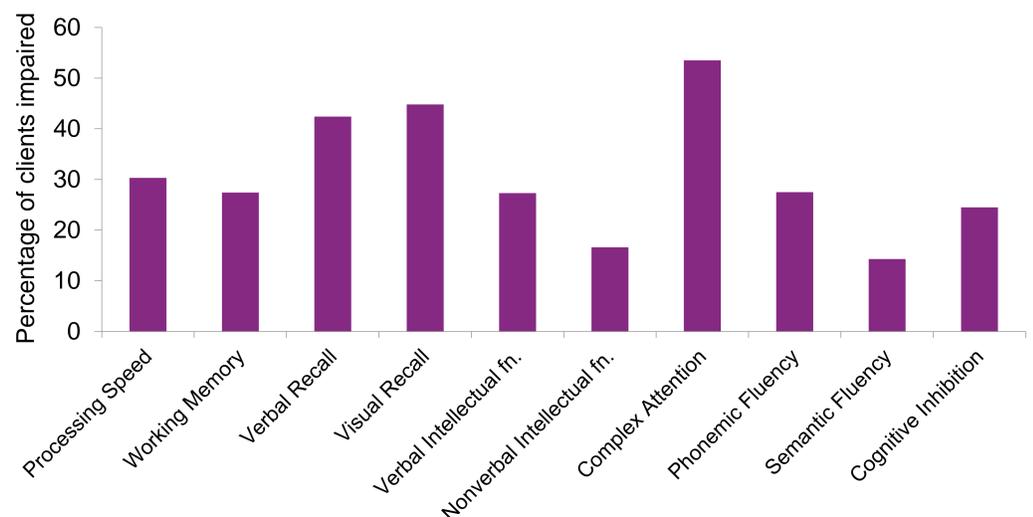


Figure 2: Percentage of clients with impairments in each cognitive domain assessed

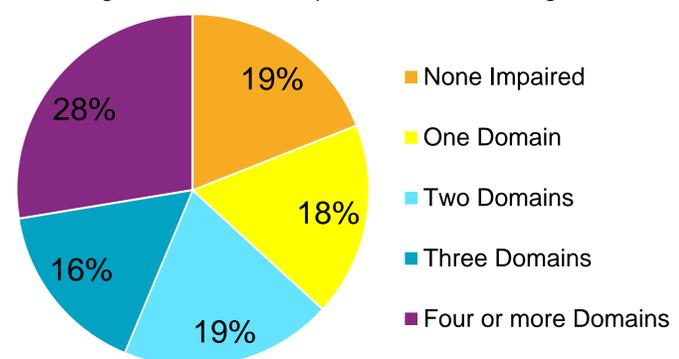


Figure 3: Percentage of clients with impairments in multiple cognitive domains

Conclusions

Overall intellectual functioning was well below population means with a wide range of cognitive impairments being observed. The most prevalent impairments were observed in complex attention and memory domains.

The presence of difficulties in multiple domains highlights the compounding and diffuse nature of cognitive impairment in this client group.

These impairments are likely to have significant implications for everyday functional demands such as reliably attending appointments, engaging in therapeutic processes and adhering to medication regimes.

Implications for Practice & Research

The findings provide further evidence of impaired cognition among people seeking treatment for AOD problems and reinforce the importance of addressing risk factors for cognitive impairment within AOD settings.

Cognitive strengths and weaknesses should be considered in the development and adaptation of treatment plans to ensure optimal engagement, retention and outcomes.

By understanding the common cognitive profiles in AOD populations, future research can develop and evaluate targeted, cognitive rehabilitation interventions that address key cognitive weaknesses to improve treatment outcomes.

References & Acknowledgements

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