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Title:

Characterisation of cognitive impairments in presentations to a community based specialist AOD neuropsychology assessment service:

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Introduction and Aims:

Cognitive impairment is a common feature of heavy substance use and is often complicated by comorbid mental health and medical conditions. The aim of this study was to explore the frequency and severity of cognitive impairments among clients referred to a specialised alcohol and/or other drug (AOD) neuropsychology assessment service.

Design and Methods:

This study was a retrospective audit of clients referred to the Turning Point Neuropsychology Service in Melbourne, Australia between 2014 and 2017. Neuropsychological assessment reports and test data were de-identified and extracted. Cognitive domains assessed included attention, processing speed, working memory, intellectual functioning, memory and executive functioning.

Results:

Preliminary analyses of 120 clients aged between 20-64 (M=39.29, SD=10.20) demonstrated a higher proportion of clients performing in the *Borderline Impaired to Extremely Low* ranges ($\leq 8^{\text{th}}$ percentile) relative to age matched peers in the domains of complex attention (50%), working memory (30.1%), speed of information processing (30%) and verbal (42.3%) and nonverbal (47.5%) memory recall domains. Deficits in verbal and nonverbal intellectual domains were less common with 26.6% and 17.8% having significant impairments respectively.

Discussions and Conclusions:

A wide range of cognitive impairments were observed, most notably in complex attention and memory domains. These impairments have significant implications for everyday functional demands such as reliably attending appointments, engaging in therapeutic processes and adhering to medication regimes.

Implications for Practice or Policy:

The findings provide further evidence of impaired cognition among people with AOD problems. Cognitive strengths and weaknesses should be considered in the development and adaption of treatment plans to ensure optimal engagement, retention and outcomes.

Implications for Translational Research:

By understanding the common cognitive profiles in AOD populations, future research can develop and evaluate targeted, evidence based interventions that compensate for key cognitive weaknesses.

Disclosure of Interest Statement:

The authors declare no conflicts of interest. No funding was received to complete the current study.