

## EVALUATION OF COGNITIVE FUNCTION AMONG PATIENTS RECEIVING TREATMENT FOR ALCOHOL DEPENDENCY IN WESTERN SYDNEY LOCAL HEALTH DISTRICT

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### INTRODUCTION AND AIMS

Harmful use of alcohol has been shown to cause structural and functional changes in areas of the brain involved in executive function and memory<sup>(1)</sup>. Alcohol-related dementia accounted for 1.4% of all cases of dementia in NSW hospital participants aged 50 years<sup>(2,3)</sup>. The present study aims to characterize a cohort of alcohol dependent patients for evidence of cognitive impairment to inform the design for optimal model of care.

### DESIGN AND METHODS

Consecutive patients aged 18 to 65 receiving treatment for alcohol dependence, with at least 7-days of abstinence, were screened with the Montreal Cognitive Assessment (MoCA)<sup>(4)</sup> and designated as impaired if scored < 26. Patients with dependence on substances other than alcohol, acute intoxication, withdrawal symptoms, a history of Wernicke-Korsakoff's syndrome, Alzheimer's disease, recent traumatic brain injury, brain tumour, stroke or pregnancy were excluded. Based on the above criteria, 20 out of the 65 participants were excluded. A further 6 patients did not fulfil the inclusion criteria, leaving a total of 39 subjects for analysis.

### RESULTS

Of the 39 participants, the majority were male (n=33, 84.6%) compared to female (n=6, 15.4%) of average age 45.6 and 54.5 years respectively. Most participants had greater than 12 years of formal education (62%) and this was higher on average in females compared to males. Just under half (48%) were tobacco smokers. The average quantity of alcohol consumed per week was 12.5 ± 3.6 units for the whole group while the average length of abstinence from alcohol was 17.1 ± 9.8 days. Just over half (59%) of the participants were cognitively impaired according to MoCA (Table 1). A higher proportion of men were cognitively impaired but not to statistical significance. Subscores showed that the delayed recall, naming, abstraction, language and visuospatial domains were most impaired in the study group. Orientation was the only domain where the cognitively impaired and unimpaired groups had similar performance. The mean MoCA score was not associated with age, quantity of alcohol consumed per week or average length of abstinence on regression analysis. The analyses was performed using XLSTAT Version 19.5 software.

	Total	Male	Female	P Value
Total MoCA Score				Male vs Female
≥ 26/30	27.4 ±1.4 (n=16)	27.3 ±1.4 (n=13)	27.7 ±1.5 (n=3)	0.73
<26/30	21.6 ±2.9 (n=23)	21.4 ±3.0 (n=20)	23.0 ±2.0 (n=3)	0.30
Mean sub score				
Visuospatial (5)	3.4 ± 1.2	3.3 ± 1.2	4.2 ± 1.0	0.08
Naming (5)	3.0 ± 0.2	3.0 ± 0.2	3.0 ± 0.0	0.32
Attention (6)	5.0 ±1.3	5.0 ± 1.4	5.0 ± 1.3	0.96
Language (3)	2.1 ± 8	2.0 ± 0.9	2.3 ± 0.5	0.27
Abstraction (2)	1.6 ± 0.7	1.6 ± 0.7	2.0 ± 0.6	0.18
Delayed recall (5)	2.7 ± 1.6	2.6 ± 1.6	3.2 ± 1.0	0.25
Orientation (6)	5.8 ± 0.5	5.8 ± 0.4	5.5 ± 0.8	0.36

### DISCUSSION AND IMPLICATIONS

The MoCA is a clinically useful tool in identifying cognitive impairment in patients with risky alcohol consumption at a service level. Our study demonstrated that over half of the participants are cognitively impaired. The impact of cognitive impairment on health services for this population will need to be assessed to optimise planning for future care provision for patients with alcohol dependence.

### REFERENCES

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