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Submitting author: Dr W C AU

Post title: Senior Occupational Therapist, United Christian Hospital, KEC

Cognitive and functional profile of people with stimulant use in Hong Kong: A controlled study

Raymond AU(1), Helen SEZTO(1), Sylvia LO(1), Jimmy LEUNG(2), David MAN(3), Maurice WAN(1)

(1) Occupational Therapy Department, United Christian Hospital (2) Department of Psychiatry, United Christian Hospital (3) Department of Rehabilitation Science, Hong Kong Polytechnic University

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Introduction

The literature indicates that there are cognitive impairments in persons with long-term use of stimulants, amphetamine, and cocaine. The deficits include attention, memory, and frontal-executive functioning. However, the cognitive and daily functional abilities of individuals with brief use of substance remain unclear.

Objectives

The objective of the study is to compare persons who have briefly abused substance with healthy individuals in terms of cognitive and daily functioning.

Methodology

A cohort of 16 individuals who have brief use of cocaine or methamphetamine (mean history of use = 5.6 years and mean abstinence of use = 5.5 years) and were being followed up in the Substance Abuse Clinic in the United Christian Hospital was compared to 15 healthy individuals. Apart from sociodemographic information, all of the participants were assessed using the Addenbrooke's Cognitive Examination – Revised (C-ACER), the Chinese version of the Cambridge Prospective Memory Test (CAMPRMPT-C), the Assessment of Prospective Memory, the Life Skills Profile, and the Social and Occupational Functioning Assessment Scale (SOFAS). The clinical participants were additionally measured with the Positive and Negative Syndrome Scale (PANSS) and the Hospital and Negative Symptoms Scale (HADS).

Result

There was no significant difference between the two groups in terms of socio-demographic. The clinical cohort has significantly lower ACER-Total ($p = 0.01$; Cohen's $d = 0.97$), ACER-Memory ($p = 0.01$; Cohen's $d = 0.91$), ACER-Language ($p < 0.01$; Cohen's $d = 1.08$), SOFAS ($p < 0.01$; Cohen's $d = 4.37$), and LSP-Self Care ($p < 0.01$; Cohen's $d = 1.36$), LSP-Non-Turbulence ($p < 0.01$; Cohen's $d = 1.03$), LSP-Social Contact ($p < 0.01$; Cohen's $d = 2.01$), LSP-Communication ($p = 0.01$;

Cohen's $d = 0.77$), and LSP-Responsibility ($p = 0.02$; Cohen's $d = 1.33$). The clinical group had also worse time-based prospective memory performance with Cohen's d of 0.68 though with p -value of 0.06. This study highlights the cognitive and daily functional deficits of persons who have brief use of cocaine and methamphetamine and call for the need of rehabilitative effort.