Myopia for the Future? Decision-Making in Alcohol and Amphetamine Dependence

By

Lechi Vo

This thesis is presented in partial fulfilment of the requirements for the degree of Bachelor of Psychology (Honours), Murdoch University

2010
I declare that this thesis is my own account of my research and contains as its main content work which has not previously been submitted for a degree at any tertiary educational institution.

Lechi Vo
COPYRIGHT ACKNOWLEDGEMENT

I acknowledge that a copy of this thesis will be held at the Murdoch University Library.

I understand that, under the provisions of s51.2 of the Copyright Act 1968, all or part of this thesis may be copied without infringement of copyright where such a reproduction is for the purposes of study and research.

This statement does not signal any transfer of copyright away from the author.

Signed: ………………………………………………………………………

Full Name of Degree: Bachelor of Psychology with Honours

Thesis Title: *Myopia for the Future?* Decision-Making in Alcohol and Amphetamine Dependence

Author: Lechi Vo

Year: 2010
Abstract

Decision-making has been found to be a predictor for substance-dependence treatment outcomes (Bowden-Jones et al., 2005). Further understanding on decision-making and underlying factors may help tailoring treatment intervention for substance dependence. This study compared decision-making performance of a substance-dependent group after 56 days of abstinence with a control group using the Iowa Gambling Task (Bechara, Tranel & Damasio, 1997). Substance-dependent group were forty abstinent alcohol and amphetamine dependent individuals attending a residential substance dependent treatment program facility. Control group were forty four non-drug using volunteers. The Iowa Gambling Task is a decision-making test that emulates real-life scenarios involving risk, uncertainty, rewards and punishments, and is often used to examine decision-making performance of substance-dependent and other clinical populations. Consistent with past research, this study found that substance-dependent group performed significantly poorer relative to control group. This study also found the difference in the proportion of substance-dependent group relative to the control group who performed within the range of patients with ventromedial prefrontal cortices lesions statistically significant.

Together these findings indicated that a subgroup of abstinent substance-dependent individuals attending substance dependence treatment programs may still experience difficulties in decision-making domain after a protracted period of abstinence. The findings suggest the tendency for myopia for the future or being oversensitive to reward and insensitive to punishment associated with substance dependence may underlie the decision-making deficits in some substance-dependent individuals. Intensive cognitive and behavioural training were recommended to improve substance dependence treatment efficacy.
Acknowledgements

I would like to thank Dr Marjorie Collins for her guidance and supervision. Her knowledge on the subject matter made it easier to complete this study.

Thanks to my peers Matt and Bec who worked alongside with me in recruiting participants and gathering data for this study.

A special thank you goes to my husband Mike who persevered with me and acted as my sounding board for ideas, and who reluctantly learnt about psychology along the way. Also thanks to my family for their moral support throughout my study, and my two girls, Sandy and Eyeris, who continue to love me even though I ignored them over the past few months.