striatum whereas high ALC scores were predicted by altered sensitivity to incentive valence in the thalamus and putamen. Another dissociation between predicting the two outcomes was that MAST scores were predicted by neurobehavioral responses in both the anticipatory and consummatory phases, but ALC scores were predicted only by anticipatory responses. **Conclusion:** Given the role of the caudate in habit-forming and automatized behaviors and its association with MAST scores in the present study, these results indicate that altered fMRI sensitivity to incentive value in different phases of the MID task may serve as a potential early indicator of substance abuse trajectories.

## PA 13: EXPLAINING ALCOHOL DEPENDENCE - CRITICAL REVIEW OF THE DIFFERENT EXPLANATORY MODELS

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**Introduction:** Explanatory models are theories that answer to the question about the nature of alcohol dependence and what kind of condition should it be thought. This topic has been under discussion for centuries. I will present the main explanatory models of alcohol dependence and make a critical review of their central claims. **Methods:** Philosophical methodology was employed in this study. **Results:** Explanatory models of alcohol dependence can be divided into four different theories: the moral, the disease, the Economic and the liberal model. The moral model is the oldest explanatory model and it dates back to over 2000 years ago. This model is a multifaceted theory that has many different formulations. Despite theoretical variance this theory has three central claims. Firstly it claims that alcohol dependent individual is solely responsible for his/her condition. Secondly, this theory argues that alcohol dependent individual is weak-willed. Thirdly, this theory implies that drinking alcohol is somehow morally wrong and deprave. The disease model states that alcohol dependence is indisputably a disease and therefore alcohol dependent individual should not be classified as weak-willed and morally insufficient. The first formulations of the disease model are over 200 years old but the theory has developed significantly due to the influence of neuroscientific research. The economic model of alcohol dependence utilizes economical modelling and terminology in its explanatory process. Economic model does not hold alcohol dependent individual morally insufficient or diseased. Instead, economic model of alcohol dependence claims that alcohol dependent individual is a rational consumer who wants to maximize his/her pleasure. Liberal model is a relatively new theory. Liberal model argues that addictive desires are just strong, regular appetitive desires. **Conclusion:** Alcohol dependence is explained in very different ways. In this study, a critical overview is drawn on how different explanatory models have been evolved and how they interact and affect our society.

## PA 16: USING EEG FOR ALCOHOL USE SCREENING

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Many researchers have investigated about the differences in brain activities between alcohol users and normal healthy people. These differences provided ability of alcohol consumption detection that could be utilized in alcohol screening test. This study examined the effectiveness of EEG in alcohol user classification. For this purpose, 17 alcohol users (mean 55.41 ą 13.86 years) and 15 non-alcohol subjects (mean 42.53 ą 15.91 years) were recruited for EEG recording (eyes-closed and eyes-open). EEG

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power (absolute power and relative power), clinical data and other EEG features were assessed in all participants to see their ability for the discrimination between two groups. All those features were then applied to classification separately as well as combined together to get the best combination. Different classification algorithms were used and compared to each other including random forest, discriminant analysis and decision tree. Classification algorithms when applied to quantitative EEG data clearly showed differences between alcohol users and non-alcohol users. Correct classification of alcohol users was achieved with correct rate, sensitivity and specificity of 83%, 81% and 87% respectively. These outperformed results confirmed once more about the neurophysiology differences between alcohol users and normal healthy people. It also approved the effectiveness of EEG in alcohol screening

## PA 19: THE PSYCHIATRIC COMORBIDITIES AND SOCIAL BACKGROUND AMONG THE HOSPITALIZED PATIENTS WITH ALCOHOL DEPENDENCE

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We have investigated the 183 inpatients, who were admitted to our psychiatric hospital in the six months from 1st November 2011 to 30th April 2012. In 183, there were 91 inpatients to receive alcohol rehabilitation program. We diagnosed them with ICD-10 criterion, using their symptoms and their medical records, at 4 to 6 weeks after admission. 40.6% of the inpatients with alcohol dependence (37/91) had psychiatric comorbidities. The most frequent psychiatric comorbidity was bipolar disorder (13/37). In comparison between presence of psychiatric comorbidities and absence of them, the value of serum ?-GTP at hospitalization showed no significant difference. Although the patients with both alcohol dependence and schizophrenia showed the lower value of ?-GTP compared with other groups, we could not conclude that the results had only small numbers of case. These results suggested that we could not predict whether the patients with alcohol dependence complicated psychiatric comorbidities based on the value of ?-GTP. In the social background at the time of admission, the patients with both alcohol dependence and dementia were older than other patients. Alcoholic patients with dementia showed lower rate of voluntary hospitalization than total average, and with bipolar disorder and Schizophrenia did slightly lower. Regarding income, although we speculated that the patients with both alcohol dependence and psychiatric comorbidities showed high rate of receiving welfare than alcohol dependence patients. The treatment outcomes over 6 months after admission showed that the patients with alcohol dependence complicated bipolar disorder or dementia tended to be lower rate of hospital visit compared with other groups, including alcoholic patients without psychiatric comorbidities. As expected, the patients with both alcohol dependence and dementia tended to have a prolonged hospitalization.

## THEME: ILLICIT DRUGS ADDICTION

## PB 02: DRUG -DRUG INTERACTION AND INTOLERABLE METHADONE SIDE EFFECT: A CASE REPORT

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**Introduction:** Malaysia has started giving free Medical Assisted Therapy (MAT) to patients coming to government health facilities since 2005. The harm reduction steps were found to be successful in term of expansion of MAT service and reduction in HIV transmission among intravenous drug users in this country. Methadone has been used as a useful treatment for opiate dependent patients since then. It is