

The University of Hong Kong
Department of Psychology

Departmental Seminar

Effects of Acute Alcohol Intoxication on Empathy:

An fMRI study

Date: September 10, 2015 (Thursday)
Time: 5:00 p.m. – 6:00 p.m.
Venue: Room 813, 8/F, The Jockey Club Tower,
Centennial Campus, HKU
Speaker: Dr. Wang Zhaoxin
School of Cognitive Science and Psychology
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Whether and how empathy for other's pain could be modulated by acute alcohol intoxication in non-dependent population remains an issue unsolved. A double-blind, placebo-controlled, within-subject design was adopted to address this question, in which healthy social drinkers was asked to perform a pain-judgment task to pictures depicting other's body parts in painful or non-painful situations during fMRI scanning, either in alcohol or placebo condition. Besides decreased blood-oxygenation-level-dependent (BOLD) signal in the attention network, empathic neural activity was reduced by alcohol only in the dorsal anterior cingulate cortex (dACC). More interestingly, we found that empathic neural activity in the rAI was significantly correlated with trait empathy only after alcohol intoxication, along with impaired functional connectivity between the rAI and the fronto-parietal attention network. Our results revealed that alcohol intoxication not only inhibited empathic responses, but also lead to trait empathy inflation by impaired top-down attentional control. These findings help to explain the neural mechanism underlying alcohol-related social problems.