

The University of Hong Kong
Department of Psychology

Departmental Seminar

Biopsychosocial Implications of Heroin Addiction

Date: September 12, 2014 (Friday)
Time: 11:30 a.m. – 12:30 p.m.
Venue: Room 813, 8/F, The Jockey Club Tower, Centennial Campus, HKU
Speaker: Mr. Cheng Lai Fung Gordon
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Heroin abuse is devastating to both the individual abusers and society. Owing to its ability to elicit rapid feelings of euphoria and transcendent relaxation, coupled with adverse withdrawal effects, it is one of the most addictive illicit drugs of abuse. Currently, scientific research into the biopsychosocial functioning of heroin abusers is limited. The current project consists of a series of three studies that sought to contribute to our understanding of how biopsychosocial functioning may be influenced by the abuse of heroin. Neurobiological, psychosocial, molecular, and neurocognitive measures were obtained from both abstinent heroin abusers and matched healthy controls. Study One aimed to identify the neurobiological deficits in relation to heroin abuse. It was revealed that heroin abuse was associated with widespread cortical atrophy, which correlated with the severity of heroin use. Study Two aimed to identify the neurobiological substrates of the heroin abusers' personality traits. It was revealed that the high sensation seeking trait of the heroin abusers was underpinned by abnormality in the meso-prefrontal network. Finally, Study Three aimed to examine an untested hypothesis that the abuse of heroin accelerates the aging process. It was revealed that heroin abuse was indeed associated with increased aging at both cellular and brain system levels. Theoretically, the current findings

support the neurobiological models that assign the prefrontal cortex as the core neuropathology of drug addiction. Clinically, the findings suggest new directions for the assessment, conceptualization and interventions for people with addictive behaviors. These implications pave the way for studies that seek to further understand and remediate the biopsychosocial sabotage caused by substance abuse.

