



Department of Psychology  
The University of Hong Kong

香港大學心理學系

## Departmental Seminar

# Adolescent Brain Development: Patterns, Plasticity and Psychopathology

11:00 a.m. – 12:00 noon | March 9, 2016 (Wednesday)

Social Sciences Chamber | 11/F The Jockey Club Tower | Centennial Campus  
The University of Hong Kong



## Professor Nicholas Allen

Ann Swindells Professor of Clinical Psychology

Department of Psychology

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### Abstract

Adolescence is a period of dramatic brain growth and reorganization, often thought to be second only to infancy in terms of the extent and significance of the neurodevelopmental changes that occur. Adolescence is also a critical period of the lifespan for the emergence of mental and substance use disorders, with a majority of those who experience such disorders across their lifespan, experiencing the first incidence during adolescence. As a result there has been considerable interest in the relationship between adolescent brain development and risk for psychopathology. In this presentation I will describe a series of recent studies from a large longitudinal study of brain development and mental health between the ages of 12 to 19 years old. Our findings, which are based on a prospective, multi-wave, and within-participants design, have generated new insights into patterns of brain development across adolescence, the predictors of individual differences in these patterns, and the environmental factors that might modify them. Specifically, I will present data on cortical development that shows that the cortex does not uniformly thin across adolescence, as previously thought, and moreover that the pattern of cortical development is sensitive to environmental influences such as parenting. Moreover, the pattern of cortical development is related to the emergence of psychological capacities, especially executive control and self regulation, which in turn confer risk or protection for psychopathology. Finally I will present some recent findings on developmental changes in functional brain connectivity during adolescence, and explore how these relate to both vulnerability to, and emergence of, mental disorders. These findings demonstrate the dynamic relationship between environmental and neurodevelopment processes and their role in risk for mental health problems during this stage of life, and suggest important new directions for both research in developmental psychopathology and early intervention/prevention.

### About the Speaker

Nick Allen is the Ann Swindells Professor of Clinical Psychology at the University of Oregon, USA. Professor Allen's research focusses on the relationship between biological, psychological and interpersonal aspects of adolescent development and risk for the emergence of mental health and substance use disorders. His recent work focuses on identifying potent, modifiable and developmentally specific risk factors for poor health during adolescence, and developing and testing preventative interventions that target these. He has published over 200 scientific papers and 5 books addressing vulnerability to, and treatment of, depression and substance use during adolescence, as well as adolescent brain development, affect, sleep and interpersonal processes. He currently holds major research grants from the National Institute of Mental Health (USA), the National Institute of Child Health and Development (USA), The National Health and Medical Research Council (Australia), and the Australian Research Council.

~All are Welcome~

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