

2018 SRA Biennial Meeting

April 12-14, 2018
Minneapolis, MN

Invited Program Session

The Adolescent Brain Cognitive Development (ABCD) Study: Overview, Emerging Data and Opportunities

Chair: **Sandra A. Brown**, University of California, San Diego

Paper 1: ***Functional neuroimaging probes of adolescent neurodevelopment: Preliminary findings from the ABCD Study***
Mary M. Heitzeg, University of Michigan

Paper 2: ***Neurocognition and premorbid risk for substance misuse in 9-10 year-olds: findings from ABCD's first year of study***
Monica Luciana, University of Minnesota; James Bjork, Virginia Commonwealth University; Wes Thompson, University of California, San Diego.

Paper 3: ***Assessing Culture and Environment in the ABCD Study: Measures and Initial Findings***
Amanda Sheffield Morris, Oklahoma State University and Laureate Institute for Brain Research

Paper 4: ***Data Sharing and ABCD***
Sandra A. Brown, University of California, San Diego

Integrative Statement. The Adolescent Brain Cognitive Development (ABCD) study is a large multi-site longitudinal study supported by the National Institutes of Health to increase our understanding of how diverse experiences during adolescence interact with changing biology to influence brain, cognitive, and social/emotional development. Children and adolescents are exposed to myriad internal and external influences that interact with their changing biology, genetic and environmental vulnerabilities to affect brain maturation, behavioral, health, and psychological outcomes. The ABCD study launched in 2015 and data collection began in the fall of 2016. The study is combining measures of developmental psychology, neuroimaging, cognitive neuroscience, genetics, and epidemiology with advanced techniques in bioassays, bioinformatics, and mobile assessment to follow ~11,500 9-10 year olds recruited at 21 sites around the country. Participants and their families complete comprehensive behavioral assessments of mental health, substance use, cognitive function, social function, and personality as well as a two-hour brain imaging protocol that includes structural, diffusion tensor, resting-state, and task-based scans. This symposium brings together representatives from the ABCD Research Consortium to present the goals of the study and its design, a description of the demographic characteristics of the emerging cohort, and a first look at baseline data on the first 6000+ children recruited, including measures of: 1) neurocognition and risk for substance abuse; 2) cultural and environmental risk and protective factors; and 3) brain imaging probes of neurodevelopment. In addition, we will highlight the open-science format of the ABCD study through data sharing and the impact of big data science.



Chair Biography. Dr. Brown is a Distinguished Professor in two UC San Diego departments: Psychology and Psychiatry. Her pioneering studies of youth addiction and adolescent development have led to 26 federally funded grants including the current National Consortium on Alcohol and Neurodevelopment in Adolescence (NCANDA) and Adolescent Brain Cognitive Development (ABCD), which is the largest longitudinal study of youth development ever funded by NIH. In addition to over 300 peer reviewed publications and one book (*Adolescent Substance Abuse*, Oxford Press), she has served as President of the Society of Addiction Psychology and on the Board of Directors of the American Psychological Association and Research Society on Alcoholism. She has received multiple national awards for research service and mentoring in addition to international engagement.

She is involved in addiction prevention and intervention at the regional, state, and national levels and helped lead NIAAA's effort to establish national screening and early intervention guidelines for youth. She has also simultaneously directed the development of clinical, education and research activities as the Chief of Psychology at the Veterans Affairs Health Services System in San Diego.

She earned her Ph.D. in clinical psychology at Wayne State University in 1981, and is licensed as a psychologist by the California Board of Psychology.