The Minnesota Psychological Association

DISTINGUISHED SCHOLAR LECTURE

Wednesday, June 16, 2021

Impacts of Substance Use on Adolescent Brain and Behavioral Development

Monica Luciana, Ph.D.

Program:

This virtual session runs from 5:30 p.m. until 7:00 p.m.

This presentation is designed for psychologists, other mental health professionals, and students and faculty.

Intermediate: Assumes post-doctoral education status and general familiarity with topic.

Location:

Online via Zoom, attendees will be sent a link one day prior to the session from the MPA office.

Attendees are encouraged to join the webinar five to ten minutes prior to the start.

About the Program:

This program qualifies for 1.5 continuing education credits.

The adolescent brain is in an active state of change as neural circuitry is refined in anticipation of adulthood. A developing brain may be more vulnerable such that environmental experiences, if sufficiently intense, can alter maturational trajectories. One such experience is substance use. As indicated by a number of recent meta-analyses, executive control processes, which include working memory, cognitive flexibility and numerous aspects of attentional, behavioral and emotional control, are impaired in the context of active substance use disorder. Neural circuitry is also impacted. Many of these recent studies focus on outcomes associated with clinically-significant levels of alcohol and/or cannabis use. But whether these impairments consistently emerge as a consequence of sub-clinical levels of use, or use that begins at early ages, is debated. This talk will review recent findings, including those recently gleaned from large-scale longitudinal studies such as the Adolescent Brain Cognitive Development (ABCD) study, to address these questions. Findings will be discussed in relation to adolescence as a sensitive period of neurodevelopment.

Participants will be able to:

1. Describe mechanisms of neurodevelopment in typically developing adolescents.

- 2. Apply knowledge of these mechanisms to alterations observed in the context of substance misuse, with an emphasis on the impacts of alcohol and cannabis.
- Compare what is known about substance-related impacts in adolescents at the neural versus behavioral level.
- Explain limitations in the literature with respect to whether adolescence can be viewed as a sensitive period for substanceuse-related pathology.
- 5. Explain current findings regarding adolescence as a sensitive period for substance-use-related neurotoxicity.

About the Presenter:

Monica Luciana, Ph.D., is a Distinguished McKnight University Professor at the University of Minnesota in the Department of Psychology and a founding member of the UMN Center for Neurobehavioral Development and received her Ph.D. in Clinical Psychology from the University Minnesota. She conducts longitudinal studies of brain and behavioral development in adolescents using personality measures, cognitive tests, and brain imaging techniques. Funded by the National Institute on Drug Abuse, she co-directs the Twin Hub of the NIH-funded ABCD Consortium as well as the consortium's workgroup on neurocognition.

The speaker has indicated no conflicts of interest.

Please note: Participants must attend full session to receive Continuing Education credit.

About Distinguished Scholar Lectures:

The Minnesota Psychological Association is approved by the American Psychological Association to sponsor continuing education for psychologists. The Minnesota Psychological Association maintains responsibility for this program and its content.

CONFIRMATION/CANCELLATION: You will receive an emailed confirmation of your registration. You will be notified by mail, e-mail or telephone if your selection is filled or cancelled.

REFUND POLICY: A 100% refund will be made if the event is cancelled. Refunds, less a \$5 handling fee, will be given if a written cancellation is received at least two working days before the scheduled program begins. No refund or transfer is given the day of the program.



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