DREXEL UNIVERSITY
Dornsife
School of Public Health

Department of Epidemiology and Biostatistics
Doctoral Program in Epidemiology Thesis Defense

Family Neurologic and Psychiatric History and the Risk of Autism Spectrum Disorder

Sherlly Xie, ScM
PhD Candidate

Advisor: Brian Lee, PhD, MHS
Associate Professor
Drexel University
Dornsife School of Public Health
Dept. of Epidemiology and Biostatistics

Date:
Thursday, December 20, 2018
9:00 a.m.

Location:
3215 Market St, 5th flr
Room 540
Philadelphia, PA 19104

For more information, email
Mary Genevieve Carty
at: mgc24@drexel.edu

Thesis Abstract:
Autism spectrum disorders (ASD) is highly heritable, familial, and etiologically complex. How subtypes may differ in heritability and familial risk is not well-understood. In this dissertation, we determined: 1). Heritability and familial risk of ASD with and without intellectual disability (ID), and 2). Association between family history of mental and neurologic disorders and each of these ASD subtypes, using population-based register data on index persons and their first- to fourth-degree relatives in Sweden. Heritability was estimated using structural equation models. Familial risk was estimated using multivariable logistic regression. We found that ASD without ID was more heritable and familial than ASD with ID, that both subtypes involve substantial genetic and environmental components, and that their patterns of association with mental and neurologic disorders in relatives were different. These findings encourage us to pursue with examining these phenotypes separately in future ASD risk research and prediction endeavors, and extending the investigation to possible genetic and environmental factors and their potential interactions.

Biography:
Sherlly received her Sc.M. degree in Biostatistics from Johns Hopkins University School of Public Health and a B.S. in Neurobiology, Physiology and Behavior from University of California, Davis. Sherlly's areas of research interest include psychiatric and genetic epidemiology with emphasis on autism spectrum disorder, as well as quantitative methods applied in these areas. Prior to starting her doctoral program, Sherlly worked at the