

**Summary of Research Program:**

The mission of the Psychophysiology and Behavioral Systems Lab (PBS LAB) at the University of Washington and Seattle Children’s Research Institute is to conduct state-of-the-art research into the etiology, course, and treatment of developmental disabilities in an academic training environment. We utilize psychophysiological and behavioral measures for research in the domains of early development, neural processes, and phenotypes/endophenotypes.

The main strategies in our lab include the use of electroencephalography (EEG), event-related potentials (ERPs), cardiophysiology, eye tracking, and behavioral measures across the lifespan (infants – adults) and adaptive functioning spectrum.

Our goal is to better understand how children learn from their environment, and how that learning is impacted by developmental disruptions. This work currently covers several areas, primarily utilizing physiological measures of attention, perceptual and cognitive abilities in individuals with (or at risk for) developmental disabilities including autism, Fragile X, and developmental delay. To this end, we have several projects that examine: (1) early individual and familial risk markers and protective factors related to adverse psychological outcomes; (2) prediction of response to intervention; and (3) genotype – phenotype relations. These projects represent an effort to understand the neural circuits that contributing to and underlie atypical development.



**Sara Jane Webb, PhD**

[Lab Website](#)

[Faculty Profile](#)