**Hypothesis ideas?**

Behavioral Hypotheses:

1. Association Between Parental and Self-Reports:
   * Hypothesis: Parental reports of adolescent anxiety symptoms will be moderately associated with self-reports, indicating some degree of agreement but not complete concordance (Sourander et al., 1999).
     1. Association over 4 measurements?
2. Externalizing Psychopathologies Reporting:
   * Hypothesis: Parental reports will closely align with adolescent reports for externalizing psychopathologies (e.g., behavioral issues), as these behaviors are more observable and may expose the family to apparent legal consequences (Youngstrom et al., 2003).
3. Internalizing Behavior Reporting:
   * Hypothesis: Parental reports will differ significantly from adolescent self-reports for internalizing behaviors (e.g., feelings of anxiety or depression), due to the less observable nature of these symptoms (Sourander et al., 1999; Youngstrom et al., 2003).

Brain Hypothesis:

1. Anxiety and Grey Matter Volume:
   * Hypothesis: Higher anxiety severity in individuals with GAD will be linked to greater reductions in grey matter volume (GMV) in certain brain regions (Ou et al., 2024; Serra-Blasco et al., 2021; Shang et al., 2014).
   * Hypothesis: Compared to healthy individuals, those with anxiety will exhibit GMV differences in the frontoparietal and ventral attention networks, especially in the ventrolateral prefrontal cortex (PFC) and temporoparietal junction (Sylvester et al., 2012).
2. Cortical Thickness and Reporting Source:
   * Hypothesis: Cortical thickness topography in the left caudal anterior cingulate and pericalcarine cortex will not be associated with generalized anxiety symptoms when parent-reported scores are used, but will be associated when self-reported scores are used (Yoo & Kim, 2023).

Following in the footsteps of other large “population neuroscience” studies, the Adolescent Brain Cognitive DevelopmentSM (ABCD) study is the largest in the U.S. assessing brain development. The study is examining approximately 11,875 youth from 21 sites from age 9 to 10 for approximately ten years into young adulthood. The ABCD Study® has completed recruitment for the baseline sample generally using a multi-stage probability sample including a stratified random sample of schools. The dataset has a wealth of measured attributes of youths and their environment, including neuroimaging, cognitive, biospecimen, behavioral, youth selfreport and parent self-report metrics, and environmental measures. A large longitudinal study beginning in early adolescence could help us understand the normal variability in adolescent brain and cognitive development and tease apart the many factors that influence it.

Adolescence is a time of dramatic changes in brain structure and function, and the adolescent brain is highly susceptible to being altered by experiences like substance use. However, there is much we have yet to learn about how these experiences influence brain development, how they promote or interfere with later health outcomes, or even what healthy brain development looks like. A large longitudinal study beginning in early adolescence could help us understand the normal variability in adolescent brain and cognitive development and tease apart the many factors that influence it. Recent advances in neuroimaging, informatics, and genetics technologies have made it feasible to conduct a study of sufficient size and scope to answer many outstanding questions. At the same time, several Institutes across the NIH recognized the value of collaborating in such a project because of its ability to address the role of biological, environmental, and behavioral factors like gender, pubertal hormones, sports participation, and social/economic disparities on brain development as well as their association with the emergence and progression of substance use and mental illness including suicide risk. Thus, the Adolescent Brain Cognitive Development study was created to answer the most pressing [public health](https://www.sciencedirect.com/topics/psychology/public-health) questions of our day.

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The outcome was the presence of significantly distressing PE (second-year follow-up). These were reported by youth in the Prodromal Questionnaire-Brief Child Version in accordance with prior research [3].

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