

Stanford



Rajpreet Chahal

Postdoctoral Scholar, Psychology

Bio

BIO

Raj received her Ph.D. in Human Development and Designated Emphasis in Translational Research from the University of California, Davis in 2019, where she was a TL1 Pre-Doctoral Clinical Research Training Scholar and supported by the UC Davis School of Medicine and the NIH National Center for Advancing Translational Sciences. In her graduate work, Raj assessed how inter-individual differences in key developmental aspects of adolescence (i.e., puberty, psychopathology, and the brain) inform one another to contribute to our understanding of heterogeneous risk mechanisms and opportunities for targeted interventions. Specifically, Raj characterized associations between pubertal timing, structural and functional network properties in the brain, and internalizing symptoms. Raj also examined topographical signatures in white matter tracts as they reflect the history of depressive symptoms in adolescent girls, and patterns of functional connectivity, revealed by neural biotyping, as they forecast future internalizing symptoms in at-risk adolescents. As a post-doctoral researcher in the SNAP lab, Raj is extending her work by studying the effects of early life stress on the development of large-scale structural and functional brain circuits to understand when and in whom neurobiological alterations arise and confer risk for depression and suicidal ideation. The goal of this research is to guide person-centered approaches to detect vulnerability for, and predict the course of depression.

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Early Career Director, Association for Clinical and Translational Science (2019 - present)

PROFESSIONAL EDUCATION

- Doctor of Philosophy, University of California Davis (2019)
- Bachelor of Science, University of California Davis (2012)
- Ph.D., University of California, Davis , Human Development - Designated Emphasis in Translational Research (2019)
- B.S., University of California, Davis , Psychology (Emphasis: Biology) (2012)

STANFORD ADVISORS

- Ian Gotlib, Postdoctoral Faculty Sponsor
- Ian Gotlib, Postdoctoral Research Mentor

Research & Scholarship

LAB AFFILIATIONS

- Ian Gotlib, SNAP Lab (9/3/2019)

Publications

PUBLICATIONS

- **Neural Responses to Implicit Forms of Peer Influence in Young Adults.** *Social neuroscience*
Venticinque, J. S., Chahal, R., Beard, S. J., Schriber, R. A., Hastings, P. D., Guyer, A. E.
2021
- **Heart rate variability moderates the effects of COVID-19-related stress and family adversity on emotional problems in adolescents: Testing models of differential susceptibility and diathesis stress.** *Development and psychopathology*
Miller, J. G., Chahal, R., Kirshenbaum, J. S., Ho, T. C., Gifuni, A. J., Gotlib, I. H.
2021: 1-12
- **Higher Executive Control Network Coherence Buffers Against Puberty-Related Increases in Internalizing Symptoms During the COVID-19 Pandemic.** *Biological psychiatry. Cognitive neuroscience and neuroimaging*
Chahal, R. n., Kirshenbaum, J. S., Miller, J. G., Ho, T. C., Gotlib, I. H.
2020
- **Neural connectivity biotypes: Associations with internalizing problems throughout adolescence** *Psychological Medicine*
Chahal, R., Weissman, D. G., Hallquist, M. N., Robins, R. W., Hastings, P. D., Guyer, A. E.
2020
- **Brain network connectivity and the heterogeneity of depression in adolescence: A precision mental health perspective** *Journal of Child Psychology and Psychiatry*
Chahal, R., Gotlib, I. H., Guyer, A. E.
2020
- **Sex Differences in Pubertal Associations with Fronto-accumbal White Matter Morphometry: Implications for Understanding Sensitivity to Reward and Punishment** *NeuroImage*
Chahal, R., Delevich, K., Kirshenbaum, J. S., Borchers, L. R., Ho, T. C., Gotlib, I. H.
2020
- **Greater age-related changes in white matter morphometry following early life stress: Associations with internalizing problems in adolescence.** *Developmental cognitive neuroscience*
Chahal, R. n., Kirshenbaum, J. S., Ho, T. C., Mastrovito, D. n., Gotlib, I. H.
2020; 47: 100899
- **Girls' brain structural connectivity in late adolescence relates to history of depression symptoms** *JOURNAL OF CHILD PSYCHOLOGY AND PSYCHIATRY*
Chahal, R., Weissman, D. G., Marek, S., Rhoads, S. A., Hipwell, A. E., Forbes, E. E., Keenan, K., Guyer, A. E.
2019
- **Girls' pubertal development is associated with white matter microstructure in late adolescence** *NEUROIMAGE*
Chahal, R., Vilgis, V., Grimm, K. J., Hipwell, A. E., Forbes, E. E., Keenan, K., Guyer, A. E.
2018; 181: 659-69
- **Associations of Irritability With Functional Connectivity of Amygdala and Nucleus Accumbens in Adolescents and Young Adults With ADHD.** *Journal of attention disorders*
Mukherjee, P., Vilgis, V., Rhoads, S., Chahal, R., Fassbender, C., Leibenluft, E., Dixon, J. F., Pakyurek, M., van den Bos, W., Hinshaw, S. P., Guyer, A. E., Schweitzer, J. B.
2021: 10870547211057074
- **Correlates and predictors of the severity of suicidal ideation in adolescence: an examination of brain connectomics and psychosocial characteristics.** *Journal of child psychology and psychiatry, and allied disciplines*
Kirshenbaum, J. S., Chahal, R., Ho, T. C., King, L. S., Gifuni, A. J., Mastrovito, D., Coury, S. M., Weisenburger, R. L., Gotlib, I. H.
2021
- **White Matter Microstructural Properties of the Cerebellar Peduncles Predict Change in Symptoms of Psychopathology in Adolescent Girls.** *Cerebellum (London, England)*
Borchers, L. R., Bruckert, L., Chahal, R., Mastrovito, D., Ho, T. C., Gotlib, I. H.
2021

- **Reward-Related Brain Activation, Resting-State Functional Connectivity, and White Matter Morphology Link Early Life Stress and Internalizing Symptoms in Adolescence**
Chahal, R., Borchers, L., Kirshenbaum, J., Ryua, J.
ELSEVIER SCIENCE INC.2021: S28
- **Early Life Stress Predicts Depressive Symptoms in Adolescents During the COVID-19 Pandemic: The Mediating Role of Perceived Stress** *Frontiers in Psychology*
Gotlib, I. H., Borchers, L., Chahal, R., Gifuni, A., Teresi, G., Ho, T.
2021
- **EARLY-LIFE STRESS DIFFERENTIALLY AFFECTS WHITE MATTER TRACTS IN MALES AND FEMALES DURING EARLY PUBERTY: ASSOCIATIONS WITH INTERNALIZING AND EXTERNALIZING PROBLEMS**
Chahal, R., Kirshenbaum, J., Mastrovito, D., Gotlib, I.
ELSEVIER SCIENCE INC.2020: S320
- **Modulation of reward-related neural activation on sensation seeking across development** *NEUROIMAGE*
Hawes, S. W., Chahal, R., Hallquist, M. N., Paulsen, D. J., Geier, C. F., Luna, B.
2017; 147: 763–71
- **An Integrative Model of the Maturation of Cognitive Control** *ANNUAL REVIEW OF NEUROSCIENCE, VOL 38*
Luna, B., Marek, S., Larsen, B., Tervo-Clemmens, B., Chahal, R., Hyman, S. E.
2015; 38: 151–70