

Hannah R. Thomas

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EDUCATION

University of South Carolina, Columbia, SC
Bachelor of Arts, *magna cum laude*
Major: Psychology, Minor: Neuroscience
GPA: 3.9/4.0

May 2018

RESEARCH EXPERIENCE

Research Assistant

June 2018-Present

Center for Autism and the Developing Brain
Weill Cornell Medicine, White Plains, NY
PI: So Hyun “Sophy” Kim, PhD

School Readiness in Cognitively-Able Kindergarteners with Autism Spectrum Disorder (ASD)

- Manage a longitudinal study investigating predictors for academic success in kindergarteners
- Collect electroencephalogram (EEG) data using EGI 64 electrodes Hydrogel Geodesic Sensor Nets
- Process and analyze data with MATLAB to examine time-frequency decompositions and event-related potential (ERP) components associated with executive functions such as error monitoring
- Administer standardized assessments including cognitive, academic achievement, ASD symptomology, executive functioning, and language testing
- Write summary reports provided to parents at both kindergarten entry and exit describing children’s performance at evaluations and sit in for feedback sessions with parents
- Assist with general project duties including grant and manuscript preparation, data management and analyses, subject recruitment, and IRB management

Unpacking Treatment Mechanisms: Combining Evidence from 3 Early Intervention Models for ASD

- Lead as project coordinator for a multi-site R01 grant gathering data from three early intervention randomized control trials (RCTs) to investigate key contributors to successful outcomes in children
- Code parent-child interaction videos utilizing two different measures targeting symptomatic changes and caregiver Naturalistic Developmental Behavioral Intervention (NDBI) strategy implementation
- Maintain data management, collection, and sharing of over 1000 parent-child interaction videos between five different study sites across the RCTs
- Supervise and manage coding of videos across two different measures within the lab
- Coordinate weekly consensus meetings to maintain team reliability within coding schemes
- Write NIH progress reports, conduct preliminary analyses, create data sharing agreements, and update IRB protocol according to project timeline

Research Assistant

June 2016-May 2018

Neurodevelopmental Disorders Lab
University of South Carolina, Columbia, SC
PI: Jane Roberts, PhD

- Led a new project to develop an online forum for data entry consisting of 200+ items
- Trained to lab reliability on a standardized coding scheme measuring changes in core ASD symptoms
- Coded and managed data on videos of children ages 2-6 years old within varying special populations including Down syndrome, fragile X syndrome, and ASD
- Attended bi-weekly consensus meetings to maintain coding reliability between lab members
- Worked on multi-tier team by assisting in the management, organization, and tracking of data
- Established guidelines and study protocols to ensure consistency across team members

Research Assistant

June 2017-May 2018

Applied Cognitive Neuropsychology Lab
University of South Carolina, Columbia, SC
PI: Scott Decker, PhD

- Administered cognitive and academic achievement assessments on participants ages 5-18 years old within varying special populations including ADHD and specific learning disabilities such as dyslexia
- Trained in electroencephalography (EEG) cap fitting and maintenance on a 10-20 system
- Collected, managed, and processed resting state EEG data using NeuroGuide software
- Assisted in measure development for The Carolina Automated Reading Evaluation (C.A.R.E), a fully automated computerized test that assesses children's reading performance and screens for dyslexia
- Interviewed and trained new undergraduate research assistants

CLINICAL EXPERIENCE

Child Mind Institute

New York, NY

Neuronal Correlates of Autistic Traits in ADHD and ASD

August 2019-Present

Supervisor: Adriana DiMartino, MD

- Assist on a clinical team that provides comprehensive psychological evaluations for children ages 5-11 years old with concerns for ASD or ADHD
- Administer child behavioral assessments including cognitive and diagnostic testing
- Participate in post-evaluation consensus meetings with parent interviewer to present child testing results and behavioral observations to contribute to a differential diagnosis (e.g., ADHD, ASD, comorbid ASD, or other diagnoses, such as anxiety)
- Write summary reports for child evaluations detailing the results of testing and behavioral observations
- Present cases at weekly case conferences by summarizing child evaluation results, describing observed behaviors, and showing video clips from testing to support diagnostic opinion

Center for Autism and the Developing Brain

Weill Cornell Medicine, White Plains, NY

Parent Video Feedback Intervention

May 2018-Present

Supervisor: So Hyun "Sophy" Kim, PhD

- Administer blinded cognitive and diagnostic testing at entry, exit, and follow-up for preschoolers with ASD enrolled in a parent-mediated RCT within an early intervention program
- Administer semi-structured parent interviews evaluating children's adaptive skills
- Write comprehensive assessment reports summarizing evaluation findings of both parent interviews and child testing results

Project Search, NEXT for Autism

January 2019-May 2019

- Served as a mentor for an adult with ASD participating in a vocational training program
- Conducted mock interviews, provided professional feedback, and modeled appropriate coworker behavior
- Coordinated with program supervisor on mentee progress and discussed areas of focus for future lessons

Social Skills Group

September 2018-December 2018

Supervisor: Jennifer Giordano, CCC-SLP

- Co-led a social skills group of minimally-verbal preschoolers with ASD teaching pro-social behaviors including sharing, social routines, and functional play activities
- Provided behavioral management and support for children across activities
- Implemented individual supports and communication augments when necessary (e.g., Picture Exchange Communication System; PECS)
- Co-developed group lessons for weekly sessions

Psychology Services Center

University of South Carolina, Columbia, SC

Social Skills Group

August 2017-December 2017

Supervisor: Kate Flory, PhD

- Assisted in management and observation of children ages 4-10 years old with various neurodevelopmental disorders including ADHD and ASD
- Co-instructed group lessons focusing on promoting social skills development, emotional regulation skills, and appropriate classroom behaviors
- Engaged in one-on-one behavioral management during group for children with more severe behavioral support needs when required
- Observed parent lessons based on Barkley Defiant Child program
- Attended weekly supervision meetings to discuss the progression of both child and parent groups

PEER REVIEWED PUBLICATIONS

Kim, S.H., Buzzell, G., Faja, S., Choi, Y.B., **Thomas, H.R.**, Brito, N. H., Shuffrey, L.C., Fifer, W.P., Morrison, F., Lord, C., & Fox, N. (In press). Neural dynamics of executive function in cognitively-able kindergarteners with autism spectrum disorders (ASD) as predictors of concurrent academic achievement. *Autism*.

Lee., K.S., Chung, S.J., **Thomas, H.R.**, Park, J., & Kim, S.H. (2019). Exploring diagnostic validity of the Autism Diagnostic Observation Schedule-2 (ADOS-2) in South Korean toddlers and preschoolers. *Autism Research, 12*, 1356-1366.

Kim, S.H., **Thomas, H.R.**, Cohen, M., & Lord, C. (2019). *The validity of the Observation of Spontaneous Expressive Language (OSEL) in quantifying language profiles of children referred for autism spectrum disorders*. Manuscript in preparation.

ORAL PRESENTATIONS

Thomas, H. R., Buzzell, G., Choi, Y.B., Klein, C.B., Fox, N., & Kim, S.H. (2020, May). Neural and behavioral impairments in cognitive control in kindergarteners with ASD: EEG analyses of theta oscillations. Oral presentation submitted to the International Society of Autism Research (INSAR) Annual Meeting, Seattle, WA.

Swain, D., **Thomas, H.R.**, Klein, C.B., Janvier, D., Karamchandani, H., Moses, J., & Kim, S.H. (2020, May). Exploring differences, change, and the predictive role of emotion regulation in ASD and TD at kindergarten entry and exit. Oral presentation submitted to the International Society of Autism Research (INSAR) Annual Meeting, Seattle, WA.

Klein, C., Pozzuli, D., Boucher, J., **Thomas, H.R.**, Lord, C., & Kim, S.H. (2019, May). The effects of parent sentence diversity input on grammatical development in toddlers with ASD in early intervention programs. Oral presentation given at the International Society of Autism Research (INSAR) Annual Meeting, Montreal, Québec.

POSTER PRESENTATIONS

Klein, C.B., Winter, J., Vibert, B., Swain, D., Lemelman, A., Giordano, J., **Thomas, H.R.**, Lord, C., & Kim, S.H. (2020, May). Implementation of video-based feedback intervention within a community based NDBI program: Feasibility and preliminary results. Poster presentation submitted to the International Society of Autism Research (INSAR) Annual Meeting, Seattle, WA.

Thomas, H. R., Choi, Y.B., Klein, C., Gunin, G., Sheridan, E., Lord, C., & Kim, S.H. (2019, May). Language and executive function as predictors for concurrent and future academic and social outcomes in cognitively-able kindergarteners with ASD. Poster presented at the International Society of Autism Research (INSAR) Annual Meeting, Montreal, Québec.

- Choi, Y.B., **Thomas, H. R.**, Janvier, D., Lord, C., & Kim, S. H. (2019, May). Examining test-retest reliability of the Autism Diagnostic Observation Schedule (ADOS) Calibrated Severity Score (CSS). Poster presented at the International Society of Autism Research (INSAR) Annual Meeting, Montreal, Québec.
- Lee, K.S., Chung, S.J., **Thomas, H.R.**, & Kim, S.H. (2019, May). Validity of the Autism Diagnostic Observation Schedule-2 (ADOS-2) in South Korean toddlers and preschoolers with ASD from 12 to 47 months of age. Poster presented at the International Society of Autism Research (INSAR) Annual Meeting, Montreal, Québec.
- Thomas, H.R.**, Conroy, D., & Decker, S.L. (2018, April). Comparing cognitive and neurological profiles of children with and without dyslexia. Poster presented at The Southeastern School Behavioral Health Conference, Myrtle Beach, SC.
- Thomas, H. R.**, Ferraracci, J., & Decker, S.L. (2018, April). The student's perspective on educational experiences following TBI: A literature review. Poster presented at The Southeastern School Behavioral Health Conference, Myrtle Beach, SC.
- Thomas, H.R.**, Vonada, N., Caravella, K.E., & Roberts, J.E. (2018, April). Language and cognition as predictors of change in social communication in young children with fragile X syndrome. Poster presented at the University of South Carolina Discover USC Conference, Columbia, SC.
- Thomas, H.R.**, Conroy, D., Sanner, M., & Decker, S.L. (2018, April). Using tests of executive functions to account for dyslexic children's reading performance. Poster presented at the University of South Carolina Discover USC Conference, Columbia, SC. *Recipient of honorable mention.*
- Caravella, K.E., **Thomas, H.R.**, & Roberts, J.E. (2018, March). Autism symptomology and prevalence in preschool age children with fragile X syndrome. Poster presented at the Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Diego, CA.

GRANTS FUNDED

Magellan Scholarship Grant

May 2017

University of South Carolina

Language and cognition as predictors of change in social communication in young children with fragile X syndrome

Student Co-PI, Faculty PI: Jane Roberts, PhD

\$5000

Magellan Mini-Grant

December 2017

University of South Carolina

Using tests of executive functions to account for variance in dyslexic children's reading performance

Student Co-PI, Faculty PI: Scott Decker, PhD

\$1000

EDUCATION AND TRAININGS

Clinical Trainings

Autism Diagnostic Observation Schedule, 2nd Edition (ADOS-2): Research training

Center for Autism and the Developing Brain, October 2018

- Research reliable on Modules 3 & 4; Training for reliability on Modules 1, 2, & Toddler

Autism Diagnostic Observation Schedule, 2nd Edition (ADOS-2): Clinical training

Center for Autism and the Developing Brain, October 2018

Research Trainings and Advanced Coursework

Brainhack Global: NYC

Sponsor: Child Mind Institute, November 2019

Autism Neuroimaging: Advanced Topics and Nitty-Gritties: Educational Workshop

Sponsor: Montreal Neurological Institute, May 2019

Autism Neuroimaging: Advanced Topics and Nitty-Gritties: Hands-On Brain Hacking Session

Sponsor: Montreal Neurological Institute, May 2019

EEG Theory, Analysis, and Application

Sponsor: Dr. George Buzzell, University of Maryland College Park, December 2018

Philips HD-EEG Training Workshop

Sponsor: Philips EGI, Teachers College Columbia University, August 2018

Neuroimaging: From Image to Inference

Sponsor: Dr. Chris Rorden, University of South Carolina, Spring 2018

Introduction to Source Localization with Multimodal Imaging

Sponsor: Dr. John E. Richards, University of South Carolina, Fall 2017

RESEARCH ADMINISTRATION AND TECHNIQUES

Assessments and Surveys

- Autism Diagnostic Observation Schedule – Second Edition (ADOS 2)
- Comprehensive Assessment of Spoken Language, Second Edition (CASL-2)
- Differential Ability Scales Early Years, Second Edition (DAS-II)
- Differential Ability Scales School Age, Second Edition (DAS-II)
- Head Toes Knees Shoulders (HTKS)
- Mullen Scales of Early Learning (MSEL)
- NEPSY-II
- Vineland Adaptive Behavior Scales (VABS II & III)
- Woodcock-Johnson IV Tests of Cognition
- Woodcock-Johnson IV Tests of Achievement

Treatment Outcome Measures

- Brief Observation of Social Communication Change, Minimally Verbal (BOSCC)
- Brief Observation of Social Communication Change, Verbal (BOSCC)
- Measure of NDBI Strategy Implementation-Caregiver Change (MONSI-CC)

HONORS AND AWARDS

- Phi Beta Kappa Honor Society 2018
- Student Research Spotlight, University of South Carolina 2018
- Honorable Mention, Discover USC Conference 2018
- Psi Chi Honor Society 2016
- Presidents List/Dean’s List, University of South Carolina 2014-2018

PROFESSIONAL AFFILIATIONS

- International Society for Autism Research – Student Member 2018
- American Psychological Association – Student Member 2016

SKILLS

- Proficient in SPSS, R, Net Station, E-Prime, and Microsoft Office
- Experience in MATLAB, FSL, MRICROGL, MRICRON, and Neuroguide