



Children's Specialized Hospital Research Center Newsletter

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Welcome!

The Children's Specialized Hospital (CSH) Research Center Newsletter provides an overview of research conducted at CSH. We regularly share information about CSH studies, lectures, and resources. Each issue also features CSH research news and upcoming events and activities. Please reach out with any suggestions or questions.

About the Research Center at CSH

The Research Center at Children's Specialized Hospital strives to advance pediatric rehabilitation by initiating and supporting evidence-based studies that explore innovative interventions, technologies and approaches to specialized care for children and adolescents.

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JOIN OUR STUDIES

Several research studies are actively recruiting participants. To see which studies you may be eligible to join, and to learn more about how to participate, see our [autism](#), [brain injury](#), [chronic health conditions](#), [cognition](#), and [mobility](#) studies.



Deeper Dive: Echolalia Study

Validating an Assessment Tool for Echolalia in Autism Spectrum Disorder

Authors: Uriel Richman, Amira Herstic, Sarah Elmer, Eman Al-Jayeh, Joman Y. Natsheh

Members of the CSH Developmental and Behavior Pediatrics Research team are currently working on a new project, “Validating an Assessment Tool for Echolalia in Autism Spectrum Disorder.”

Autism spectrum disorder (ASD) is characterized by social communication deficits and restrictive, repetitive behavior. Echolalia, the rote repetition of previously heard speech, is prevalent in children with ASD. Some consider echolalia a communicative, compensatory function; while others deem it purposeless or maladaptive. Echolalia is typically assessed by clinical observation or general ASD tools, as there are no quantitative measures specifically for echolalia assessment. The purpose of this study is to develop and validate a standardized parent-report assessment tool for echolalia.

The team developed an assessment tool consisting of: (1) 13 questions on patient echolalia history, and (2) 47 Likert questions measuring echolalia through six subcategories: Frequency/Utility, Emotional Dysregulation, Physical State, Time of Day, Context/Social Interaction, and ASD Symptoms. We utilized input from developmental pediatricians, speech therapists, and parents of autistic children on constructs of interest and tool clarity. The tool was piloted with 12 parents of autistic children aged 4-6 years. Parents accessed the assessment via email, and completed demographic information, the Autism Spectrum Quotient-10, and intervention and medication history.

Initial survey completion was low when it was only sent by email, but responsiveness increased when a zoom call was setup for support. Parents found the tool understandable, however, some reported that some echolalia history questions were unclear. Correlational analyses revealed strong associations between the following subcategories: Physical State, Time of Day, and Context/Social Interaction. Total echolalia severity decreased with age, and was not highly correlated with ASD Symptoms.

Our preliminary results suggest that this tool is a promising measure of echolalia. Correlational trends and parent feedback support the tool’s reliability and accessibility. Echolalia’s relationship with age but not ASD severity may indicate that echolalia is a compensatory communicative response, rather than an ASD symptom. The team plans to further refine and validate the tool which will allow for further understanding of echolalia in language development among autistic children.

Featured Researcher:

Dr. Emma Auten

Director of the Intensive Feeding Program

Dr. Emma Auten is the Director of the Intensive Feeding Program within the Pediatric Feeding Disorders Intensive Program at Children's Specialized Hospital Rutgers University Center for Autism, Research, Education, and Services (CSH-RUCARES) and a clinical assistant professor in the Department of Pediatrics at Rutgers Robert Wood Johnson Medical School. Dr. Auten is a board-certified behavior analyst at the doctoral level (BCBA-D) and specializes in the assessment and treatment of pediatric feeding disorders. Before that, Dr. Auten received her doctoral degree in Psychology with a concentration of Applied Behavior Analysis from the University of North Carolina Wilmington and worked at the Center for Pediatric Behavioral Health in the Pediatric Feeding Disorders Program. After graduating, Dr. Auten worked as a clinical manager in the Intensive Feeding Program at CSH-RUCARES for one year before beginning to direct the program in 2024.



Dr. Auten has routinely served as a guest reviewer in behavior analytic journals such as the Journal of Applied Behavior Analysis and Behavior Analysis in Practice. Dr. Auten has authored publications in numerous peer-reviewed journals and book chapters on assessing and treating feeding difficulties. Her research interests include assessment methodology for challenging mealtime behaviors and improving durability and longevity of treatment outcomes among children with feeding difficulties. In addition, Dr. Auten has research interests related to patient and caregiver choice and preference for interventions and their effects on treatment implementation. Dr. Auten and her team at CSH-RUCARES are additionally conducting research in collaboration with the Department of Nutrition and Food Studies to assess and understand more about nutrition among children with pediatric feeding difficulties and working to develop tools to aid in the early identification of problematic mealtime behaviors.

Selected publications:

Thuman, E. P., Auten, E. M., & Baxter, E. L. (2025). Further evaluation of effects of response effort on resurgence. Behavior Analysis: Research and Practice. Advance online publication. <https://dx.doi.org/10.1037/bar0000309>

Auten, E.M., Irwin Helvey, C., & Van Camp, C.M. (2025). Further translational evaluations of efficacy and preference for isolated and synthesized contingency procedures. Behavioral Interventions, 40(1), e2076. <https://doi.org/10.1002/bin.2076>

Auten, E. M., Van Camp, C., & Ferguson, A. B. (2024). A review of the concurrent-chains arrangement to assess intervention choice: 2018–2023. Journal of Applied Behavior Analysis, 57(2), 319–330. <https://doi.org/10.1002/jaba.1059>



Recent Publication



Kessler Foundation and CSH colleagues collaborated on a study and recently published “The effect of sleep fragmentation on therapeutic engagement and rehabilitation progress after brain injury in a pediatric inpatient sample” in *Brain Injury Journal*.

About the study: This study evaluated the effect of sleep fragmentation after brain injury on therapeutic engagement and rehabilitation progress in pediatric inpatients. Participants (N = 29) wore a wrist accelerometer for one week to calculate a sleep fragmentation index measuring restlessness during the sleep period. Therapists completed ratings of functional independence (using the WeeFIM) and therapeutic engagement (effort and active participation in physical therapy sessions measured using the Rehabilitation Therapy Engagement Scale). Controlling for time from injury to rehabilitation admission, sleep fragmentation is negatively associated with therapeutic engagement and rehabilitation progress (defined as improvement in WeeFIM scores from admission to discharge per day of rehabilitation). Hierarchical regression demonstrated a significant negative association between sleep fragmentation and rehabilitation progress. However, when therapeutic engagement was added to the model it accounted for a significant portion of the variance and the effect of sleep fragmentation was no longer a significant predictor of rehabilitation progress. Findings demonstrate the detrimental impact of sleep fragmentation on therapeutic engagement and rehabilitation progress and also suggest a possible mediating role for therapeutic engagement on the effect of sleep fragmentation on rehabilitation progress.

Read the full article [here](#). See all CSH publications [here](#).

Developmental and Behavioral Pediatrics Research Team Update: New Team Members!

Samantha Rosario

*Developmental and Behavioral
Pediatrics Research Intern*

Samantha is a first-year medical student at Touro College of Osteopathic Medicine.



She is working with the Developmental and Behavioral Pediatrics research team. In her free time, she enjoys watching FC Barcelona games, listening to music, and spending time with family and friends.

Sarah Elmer

*Developmental and Behavioral
Pediatrics Research Intern*

Sarah is a rising senior at Rutgers New Brunswick and is majoring in Psychology.



She is working with the Developmental and Behavioral Pediatrics research team. Her other research interests include psychotherapy and program evaluation. In her free time, she enjoys reading and working on craft projects.

DEVELOPMENTAL AND BEHAVIORAL PEDIATRICS RECRUITING NOW

Pilot Study: Feasibility, Acceptability, and Utility of The AIM Among Newly Diagnosed Autistic Children (18 months - 18 years old)

The Developmental and Behavioral Pediatrics Research Team at CSH is investigating the use of the Autism Impact Measure (AIM) in tracking treatment outcomes of newly diagnosed children with autism spectrum disorder (ASD). We are seeking children (18 months - 18 years old) newly diagnosed with ASD whose parent or guardian is fluent in English. For more information, please contact Dr. Joman Natsheh at jnatsheh@childrens-specialized.org or Amira Herstic at aherstic@childrens-specialized.org.



RECRUITING NOW!

FEATURED STUDY



**Children's
Specialized
Hospital**



Children's Specialized Hospital
seeks participants to study

20242025
#40593350.1

IRB Approved at the
Protocol Level
Oct 31, 2024

**Validating an Assessment Tool for
Echolalia in Autism Spectrum Disorder**

This research study aims to understand repetitive speech in children diagnosed with autism spectrum disorder. It involves completing online assessments by the parent/guardian.

Who's eligible?

Children Diagnosed with Autism Spectrum Disorder

Participants Requirements:

- ✓ The child should have a diagnosis of autism spectrum disorder
- ✓ Age between 2 and 21 years old
- ✓ Participant should be verbal or have some productive language
- ✓ Parent/guardian should be fluent in English

Participation in this study will be via email communication. It includes two sessions that will be scheduled 3 months apart. Each session will last for approximately 45 minutes to 1 hour. Children who complete the study will receive a completion certificate.

For more information, please contact:

- ✓ Dr. Joman Y. Natsheh, Principal Investigator, at 973-391-7858.
Email: jnatsheh@childrens-specialized.org
- ✓ Amira Herstic, Research Coordinator, at 908-705-1764.
Email: aherstic@childrens-specialized.org

MEET OUR CURRENT RESEARCH CENTER INTERNS!



SAANVI NARAVA



Saanvi is a senior at Rutgers-New Brunswick and is majoring in Biological Sciences.

She is working on projects related to research engagement. Her other research interests include binge eating and neuropathic pain. In her free time, she enjoys hiking, spending time with family and friends and baking.

LISBET GARCIA-ORTIZ



Lisbet is a Master of Public Health student at TCNJ and is specializing in Epidemiology and Health Analytics.

She is working with the Brain Injury research team. Her other research interests include chronic illnesses, environmental health, and neurodevelopmental conditions. In her free time, she enjoys hiking, reading, and spending time with family.

JULIA TRAVIS



Julia is a senior at Rutgers-New Brunswick and is majoring in Psychology.

She is working with the Physiatry research team. Her other research interests include neurodevelopmental disorders and their clinical treatments. In her free time, she enjoys thrifting and watching psychological thriller movies.

AMEYA PATEL



Ameya is a junior at Rutgers-New Brunswick and is majoring in Cell Biology & Neuroscience.

He is working with the Physiatry research team. His other research interests include neurodegenerative diseases and neurodevelopmental disorders. In his free time, he enjoys playing cricket, basketball, and watching movies.

AIDAN O'NEILL



Aidan is a junior at Loyola University Maryland and is majoring in Biology.

He is working with the Clinical Nutrition and Chronic Illness Management Program research team. His other research interests include chronic illnesses, such as diabetes and cystic fibrosis. In his free time, he enjoys playing basketball, watching movies, and finding and listening to new music.

YEBIN WON



Yebin is a Masters of Psychology student at Rutgers-Newark.

She is working with the Chronic Illness Management Program research team. Her other research interests include neurodevelopmental conditions and emotion development. In her free time, she enjoys painting and gardening.

SHANNON DESBIENS



Shannon graduated from Rutgers-New Brunswick in May 2024 with a major in Psychology and a minor in Health and Society.

She is continuing her internship with the Neurodevelopmental team. Her other research interests include understanding daily drivers of health behaviors in youth and health markers. In her free time, she enjoys hiking, weight lifting, and baking.

RIYA KARNIK



Riya is a junior at John Hopkins University and is majoring in Neuroscience and minoring in Psychology.

She is working with the Neurodevelopmental team. Her other research interests include cognitive and developmental neuroscience and neurological disorders. In her free time, she enjoys reading and dancing.

Meet the CSH Research Center Team!

Michael Dribbon, Ph.D.



Vice President of Business Development and Chief Innovation & Research Officer

Research Focus: Intervention outcomes, Social Determinants of Health

Michael likes music, travel, and time with family.

Claire Marchetta, MPH

Interim Director of Research

Research Focus: Epidemiological factors for developmental disabilities and birth defects

Claire enjoys travel, outdoor recreation, and spending time with family and friends.



Joman Y. Natsheh, M.D., Ph.D.

Research Lead, Developmental and Behavioral Pediatrics



Research Focus: Neural and behavioral correlates of action-control in children with neuro-developmental disorders

Joman enjoys reading, especially Arabic literature. She loves to travel and explore, and she can spend hours immersed in graphic design.

Mayank Seth, Ph.D.

Research Lead, Physiatry

Research focus: identification of factors underlying poor clinical outcomes, with an eye towards developing more efficacious rehab interventions

Mayank enjoys spending time with family & friends, reading, and listening to music. He also enjoys going on hikes and biking.



Amira Herstic, MS

Research Coordinator, Developmental and Behavioral Pediatrics



Research Focus: Neuroscience of language and motor development in children with ASD and ADHD

Amira enjoys reading, crocheting, traveling, and spending time with family.

Savannah Dziepak, MPH

Research Coordinator, Physiatry

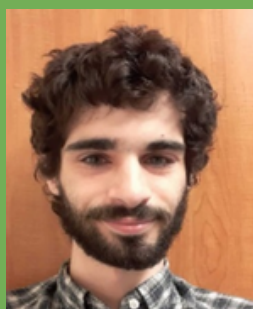
Research Focus: Improving population health outcomes for chronic illnesses, pediatric chronic pain

Savannah enjoys spending time in nature, exercising, photography, listening to audiobooks and playing video games on PC.



Uriel Richman, MA

Research Assistant, Developmental and Behavioral Pediatrics



Research Focus: Cognition and child development

Uriel enjoys hiking, camping, visual arts and playing tabletop games.

Ian Origenes, MPH

Research Assistant, Physiatry

Research Focus: Improving clinical and chronic health outcomes in pediatric populations

Ian enjoys playing piano, coaching and playing soccer, longboarding, and reading comics and manga.



DID YOU
KNOW?

Upcoming Events/Conferences/Grants

- Women in Behavior Analysis (WIBA) Annual Conference
July 23-25, 2025. Atlanta, GA
- Association of Rehabilitation Nurses (ARN) Conference
Virtual: July 24-25, 2025. In Person: July 31-August 2, 2025. Phoenix, AZ
- American Psychological Association (APA) Conference
August 7- 9, 2025. Denver, CO + Virtual
- Flux Congress for Developmental Cognitive NeuroScience
September 4-6, 2025. Dublin, Ireland
- Society for Developmental and Behavioral Pediatrics (SDBP)
September 18-22, 2025. San Diego CA
- Association of Pediatric Hematology/Oncology Nurses (APHON)
September 25-27, 2025. Providence, Rhode Island



CONTACT US



To learn more about our research, if you are interested in discussing potential collaborations, or if you have questions or comments, please contact us:

 **Claire M. Marchetta, MPH** Interim Director of Research
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 **Joman Y. Natsheh, MD, PhD** Research Lead, Developmental and Behavioral Pediatrics
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 **Mayank Seth, PhD** Research Lead, Psychiatry
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