



Children's Specialized Hospital Research Center Newsletter

March 2024

Volume 4 Issue 1

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.

In This Issue:

- 1 Welcome
- 2 Distinguished Lecture Series
- 2 Getting to Know CSH Video
- 3 Recent CSH Publication
- 3 Visual Abstract
- 4 Deeper Dive
- 4 Meet Our New Intern
- 5 Featured Researcher
- 6 Meet the Research Center Team
- 7 Upcoming Conferences/Grants
- 7 Contact Us

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.

Distinguished Lecture Series

Our most recent speaker, Dr. Laura Simons (Stanford University School of Medicine), presented “Innovative Approaches for the Treatment of Chronic Pain in Children” on February 29th from 12-1:30pm. To watch a recording of her talk, please [click this link](#).



Next 2024 speaker:

Be on the lookout for more information about upcoming speakers, and please contact thackett@childrens-specialized.org with any suggestions for speakers/topics. It is appreciated!

Introduction to CSH Research Center video



CSH Research Center

Our former intern Angelina Paoline created an exciting new video to introduce the Children’s Specialized Hospital Research Center! Please check out her video by [clicking here](#).



CSH Recent Publications

Dr. Manuel Jimenez, in collaboration with partners at the Boggs Center on Developmental Disabilities as well as other local organizations, recently published their article, "Stress and Infant Media Exposure During COVID-19: A Study Among Latino Families" in *Journal of Developmental and Behavioral Pediatrics*.

From the abstract:

“The COVID-19 pandemic disproportionately harmed Latino families; however, its effects on their stress and media routines remain understudied. We examined economic and parenting stress patterns during the COVID-19 pandemic and estimated associations between these forms of stress and nonadherence to American Academy of Pediatrics (AAP) infant media exposure recommendations among Latino families. We also explored how nonadherence with AAP recommendations varied with COVID-19 cases. Parent stress increased over time during the COVID-19 pandemic. After covariate adjustment, economic and parent stress were associated with increased nonadherence with AAP recommendations. Nonadherence to media exposure recommendations seemed to track with rises in the number of COVID-19 cases with a lag of 7 days. In conclusion, parent and economic stress were associated with nonadherence to infant media exposure recommendations among Latino families. These findings highlight the need for practitioners to support families from under-resourced communities and to promote healthy media routines.

Read the study [here](#). See the full list of CSH research publications [here](#).

For more excellent work by Dr. Jimenez and his team, please see this visual abstract!

Maximizing the Impact of Reach Out and Read Literacy Promotion: Anticipatory Guidance and Modeling

What are the effects of Reach Out and Read (ROR) components on the home literacy environment?

Background

ROR is an evidence-based literacy promotion intervention. Research on the effect of each component has been limited.

We examined 3 components :

1. Clinician gives 9-mo to 5-year-olds an age- and language-appropriate book
2. Clinician provides anticipatory guidance about reading
3. Clinician models reading for parent

Study Setting



3 ROR clinics that serve under-resourced Latino families in NJ

Population



440 Latino caregiver-child (6- to 11-month-olds) pairs

Outcome



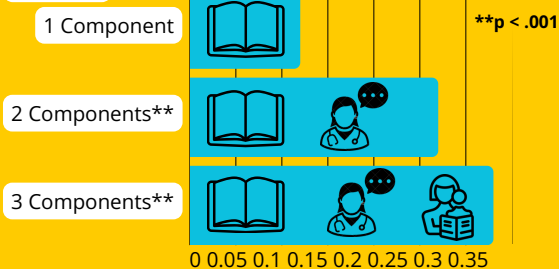
Home Literacy Environment

Quality, quantity, and diversity of books in the home

Findings



2+ ROR components was associated with enhanced home literacy environment (compared to none)



Modeling was associated with enhanced home literacy environment



p < .01

Deeper Dive

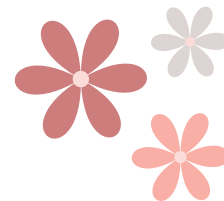
Applied behavior-analytic (ABA) interventions have a wealth of empirical support as treatment for pediatric feeding disorders. More specifically, recent studies have shown that behavior-analytic treatment can result in robust improvements in children's consumption of nutritious foods and liquids, can lead to removal of supplemental nutrition (e.g., tube feeds), and can lead to improvement in associated health conditions (e.g., reductions in constipation or dehydration; Peterson et al., 2016*; Sharp et al., 2017**). However, more research is needed to identify ways of improving the treatment experience for children and families. In a recent study, Dr. Kathryn Peterson and her research team at the CSH – Rutgers University Center for Autism Research, Education, and Services (RUCARES) measured caregiver satisfaction while also measuring indices of child happiness and unhappiness during and outside of treatment. Thus far, results indicate that child indices of happiness have varied widely across participants. Child indices of unhappiness increased temporarily at the onset of treatment for some children, but quickly decreased. Treatments that include noncontingent reinforcement (i.e., continuous provision of social interaction and engagement with preferred items) resulted in lower levels of unhappiness. Overall, caregiver acceptability remained high throughout the treatment. The current study introduces objective measures to identify child affect and emotional responding during treatment, and provides evidence that added reinforcement could serve to reduce indices of unhappiness during initial treatment stages. The research team continues to collect data and evaluate different treatments to better understand optimal treatment conditions and to improve the experience for children and families receiving care for pediatric feeding disorders.

*Peterson, K. M., Piazza, C. C., & Volkert, V. M. (2016). Comparison of a modified-Sequential Oral Sensory approach to an applied behavior-analytic approach in the treatment of food selectivity in children with autism spectrum disorders. *Journal of Applied Behavior Analysis*, 49, 485-511.

**Sharp, W., G., Volkert, V. M., Scahill, L., McCracken, C. E., & McElhanon, B. (2017). A systematic review and meta-analysis of intensive multidisciplinary intervention for pediatric feeding disorders: How standard is the standard of care? *The Journal of Pediatrics*, 181(4), 116-124. <https://doi.org/10.1016/j.jpeds.2016.10.002>

A big thank you to Dr. Peterson for this excellent write-up!

Meet our new spring intern: Heather Butler!



Heather is a senior at Rutgers University–New Brunswick and is majoring in Public Health. She is working with the Developmental and Behavioral Pediatrics research team. Her other research interests include Long COVID and environmental health. In her free time, she enjoys listening to music and solving crossword puzzles. Welcome to the team Heather!



Featured Researcher:

Dr. Kendall Hulk

2nd Year Fellow in Pediatric Rehabilitation Medicine

Kendall Hulk is a current second year fellow in pediatric rehabilitation medicine at Children's Specialized Hospital and Rutgers New Jersey Medical School. She went to medical school at the University of New England College of Osteopathic Medicine and completed her physical medicine and rehabilitation residency at the University of Texas Health San Antonio.



Please read about Dr. Hulk's current study, in her own words:

"The study we are working on currently is evaluating if there is an effect of whole body vibration therapy on children with autism spectrum disorder (ASD) who toe walk. We are hoping the vibration therapy will promote heel contact during walking in this population that may toe walk due to sensory seeking behavior. Additionally, this study aims to explore the impact of whole body vibration therapy on pain, walking speed, temporal-spatial gait parameters, and ankle range of motion in children with ASD who toe walk.

We developed this study in the hopes of gaining insight into a population we see frequently that does not have good data for current treatment options. Persistent toe walking can lead to complications of gait and the musculoskeletal system, including pain and Achilles tendon contracture. Children with ASD have a higher incidence of toe walking, are more likely to have invasive procedures and are less likely to improve compared to children with idiopathic toe walking. Children with ASD have a high recurrence rate of toe walking after treatment, likely due to the difference in underlying etiology of their toe walking. Whole body vibration therapy has been used in few studies in the idiopathic toe walking population, and there have been a few studies using it for sensory modulation in the ASD population. We are looking to see if whole body vibration therapy increases heel strike in the ASD toe walking population to see if it may be a viable, non-invasive treatment for our patients."

Recruitment is open for this study! Please see [flyer](#) for eligibility and contact information.

Selected publications:

- Nagpal AS, Brennick C, Occhialini AP, Leet JG, Clark TS, Rahimi OB, Hulk K, Bickelhaupt B, Eckmann MS. [Innervation of the posterior hip capsule: A cadaveric study](#). Pain Med. 2021 Feb 10;pnab057 DOI 10.1093/pm/pnab057. PMID: 33565591=
- Seal C, Connolly BR, Hulk K, Yu G, Nagpal A. [The use of radiofrequency ablation in the treatment of pelvic pain](#). Physical Medicine and Rehabilitation Clinics of North America, 2021, ISSN 1047-9651
- [Nelson Textbook of Pediatrics](#), 22nd Edition, Ch 731, Birth Brachial Plexus Palsy, Medical Illustration

Thank you so much Dr. Hulk, for this write-up and all of your hard work with your study!

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 outdoor recreation in all forms – especially hiking, camping, skiing and running.

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, Psychiatry



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

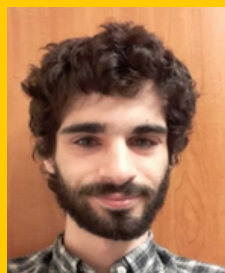


Amira enjoys reading, crocheting, traveling, and spending time with family.

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.

Tomiko Hackett, MPH

Research Engagement Coordinator

Research Focus: Mental health/substance use disorders as well as other chronic illnesses



Tomiko enjoys traveling, being in nature, reading, and spending time with friends.

DID YOU
KNOW?

Upcoming Events/Conferences/Grants

- American Academy of Ambulatory Care Nursing Annual Conference
April 2-6, 2024. Chicago, IL
- New Jersey Association for Behavior Analysis Annual Conference
April 26, 2024. New Jersey
- Pediatric Academic Societies Conference
May 2-6, 2024. Toronto, Canada
- American Psychiatric Association Conference
May 4-8, 2024. New York, NY
- International Society for Autism Research Annual Meeting
May 15-18, 2024. Melbourne, Australia





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 Marchetta, MPH** Interim Director of Research
cmarchetta@childrens-specialized.org, 732-258-7288

 **Joman Y. Natsheh, MD, PhD** Research Lead, Developmental and Behavioral Pediatrics
jnatsheh@childrens-specialized.org, 908-588-9608

 **Mayank Seth, PhD** Research Lead, Physiatry
mseth@childrens-specialized.org

 **Tomiko Hackett, MPH** Research Engagement Coordinator
thackett@childrens-specialized.org, 732-258-7296