

BIOGRAPHICAL SKETCH

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NAME: Loring, Whitney

eRA COMMONS USER NAME (credential, e.g., agency login): loringwa

POSITION TITLE: Assistant Professor of Pediatrics and Psychiatry

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	MM/YY	FIELD OF STUDY
The University of Florida, Gainesville, FL	BS	12/02	Psychology; Education; Business Administration
The Georgia School of Professional Psychology at Argosy University, Atlanta, GA	MA	10/05	Clinical Psychology
The Georgia School of Professional Psychology at Argosy University, Atlanta, GA	PsyD	10/08	Clinical Psychology
The Kennedy Krieger Institute, Johns Hopkins School of Medicine, Baltimore, MD	Pre-Doc	2007-2008	Behavioral Psychology
The Kennedy Krieger Institute, Johns Hopkins School of Medicine, Baltimore, MD	Post-Doc	2009-2010	Behavioral Psychology
Vanderbilt University Medical Center, Nashville, TN	Fellowship	2010-2011	Psychology

A. Personal Statement

I have a broad background in clinical psychology, with specific training and expertise in the assessment and treatment of individuals with neurodevelopmental disabilities. As a predoctoral intern and postdoctoral fellow, I received specialized training and experience in the provision of behavioral services for individuals with neurodevelopmental disabilities and additional training in my specific interest in behavioral approaches to pediatric concerns. In my current research role, I provide services through the Autism Treatment Network (ATN) to address behavioral pediatric concerns. I am also the site investigator for a multi-site study comparing the use of standard behavioral intervention to a wireless moisture pager intervention in toilet training for children with autism spectrum disorders (ASD) and the co-investigator for a study examining the effectiveness of training community providers in providing sleep education for children with ASD and insomnia. I recently completed a study as the Lead Principal Investigator examining a brief behavioral intervention for sleep for adolescents with ASD and insomnia. As an educational consultant for TRIAD's Professional Development and Training team, I develop and conduct trainings and consultation for school-based personnel and community providers regarding evidence-based assessment and treatment strategies for children with ASD. I am also program coordinator and a primary educator for our Families First program, which is a free workshop series for parents and providers for young children with ASD. Finally, I provide training and supervision to doctoral level practicum students, postdoctoral fellows, research assistants, and study coordinators regarding the provision of training, consultation, and direct behavioral services. These roles have provided me not only with a context to directly deliver behavioral services in a variety of contexts, but also to evaluate various means of providing training, support and supervision to parents and community personnel in implementing these strategies amidst the challenges of their unique settings.

B. Positions and Honors**Positions**

2007-2008 Predoctoral Intern, Kennedy Krieger Institute/Johns Hopkins School of Medicine, Baltimore, MD
2008-2009 Postdoctoral Position, Pediatric Associates of Franklin/ Waves Early Learning Center, Franklin, TN

2009 – 2010 Postdoctoral Fellow, Kennedy Krieger Institute/Johns Hopkins School of Medicine, Baltimore, MD
2010 – 2011 Postdoctoral Fellow, Vanderbilt Kennedy Center's Treatment Research Institute for Autism Spectrum Disorders/ Vanderbilt University Medical Center, Nashville, TN
2011 – Pres Assistant Professor of Pediatrics and Psychiatry, Families First Program Coordinator, Vanderbilt University Medical Center, Nashville, TN

Honors

2003-2004 Leader's Scholarship, Georgia School of Professional Psychology/Argosy University
2004-2006 Faculty Commendations, Georgia School of Professional Psychology/Argosy University
2006 Commendation of passing Clinical Competency Examination in category "With Distinction," Georgia School of Professional Psychology/Argosy University
2006-2007 Academic Merit Scholarship, Georgia School of Professional Psychology/Argosy University
2014 Coston Award for Community Service, Autism Tennessee

Other Experience and Professional Memberships

2005-2007 Georgia Psychological Association
2006-2014 American Psychological Association
2009-2010 Maryland Association for Behavior Analysis
2012-2014 International Society for Autism Research
2013-2014 Association for Behavior and Cognitive Therapies

C. Contribution to Science

1. Up to 66% of children and adolescents with ASD have sleep problems and some research has indicated that up to 35% of children with ASD have not reached urinary incontinence by the age of 5 years old. These and many other medically related barriers can impact the quality of life for individuals with ASD and other neurodevelopmental disabilities. My primary contribution to science is examining the efficacy of various models of focal behavioral interventions to address these pediatric concerns, as well as how to best train parents, teachers, and community providers in the provision of these services to children and adolescents with neurodevelopmental disorders. Within this research, I have played the roles of Primary Principal Investigator, Site Principal Investigator, Co-Investigator, Community Trainer, and Educator.

- a) **Loring, W.A.**, MacDonald, L.L, Gray, L., Johnston, R. L., Goldman, S.E., & Malow, B.A. (2014, May) Can a Brief Behavioral Intervention Improve Sleep Hygiene in Adolescents and Young Adults with Autism Spectrum Disorders? Poster presented at the International Meeting for Autism Research, Atlanta, Georgia.
- b) **Loring, W.**, Johnston, R., Gray, L. and Malow, B. (2015, May) A Brief Behavioral Sleep Intervention Improves Sleep and Irritability in Adolescents with Autism Spectrum Disorders. Poster presented at the International Meeting for Autism Research, Atlanta, Georgia.
- c) Mruzek, D., McAleavey, S., **Loring, W.**, Butter, E., Smith, T. (2014, May). A Manualized Alarm Intervention for Teaching Toileting in Children with Autism. Poster presented during the Innovative Technologies Demonstration Session at the International Meeting for Autism Research, Atlanta, Georgia.
- d) Mruzek, D., McAleavey, S., **Loring, W.**, Butter, E., Smith, T. (2015, May) Pilot Randomized Clinical Trial of a Wireless Moisture Pager for Toileting Training Children with Autism Spectrum Disorder. Poster presented at the International Meeting for Autism Research, Atlanta, Georgia.
- e) **Loring, W.A.**, MacDonald, L.L, Gray, L., Johnston, R. L., Goldman, S.E., & Malow, B.A. (2014, May) Can a Brief Behavioral Intervention Improve Sleep Hygiene in Adolescents and Young Adults with Autism Spectrum Disorders? Poster presented at the International Meeting for Autism Research, Atlanta, Georgia.
- f) Mruzek, D., McAleavey, S., **Loring, W.**, Butter, E., Smith, T. (2014, May). A Manualized Alarm Intervention for Teaching Toileting in Children with Autism. Poster presented during the Innovative

Technologies Demonstration Session at the International Meeting for Autism Research, Atlanta, Georgia.

- g) **Loring, W.**, Johnston, R., Gray, L. and Malow, B. (2015, May) A Brief Behavioral Sleep Intervention Improves Sleep and Irritability in Adolescents with Autism Spectrum Disorders. Poster presented at the International Meeting for Autism Research, Salt Lake City, Utah.
- h) Mruzek, D., McAleavey, S., **Loring, W.**, Butter, E., Smith, T. (2015, May) Pilot Randomized Clinical Trial of a Wireless Moisture Pager for Toileting Training Children with Autism Spectrum Disorder. Poster presented at the International Meeting for Autism Research, Salt Lake City, Utah.
- i) **Loring, W.**, Johnston, R., Gray, L. and Malow, B. (2016, May) A Brief Behavioral Sleep Intervention Improves Sleep Onset Delay and Sleep Efficiency in Adolescents with Autism Spectrum Disorders. Poster presented at the International Meeting for Autism Research, Baltimore, Maryland.
- j) **Loring, W.**, Johnston, R., Gray, L. and Malow, B. (2016, May) A Brief Behavioral Sleep Intervention Improves Sleep Onset Delay and Sleep Efficiency in Adolescents with Autism Spectrum Disorders. Poster presented at the annual Association for Behavior Analysis International, Chicago, Illinois.
- k) Levato, L.E., Aponte, C.A., Wilkins, J., Travis, R., Aiello, R., Zanibbi, K., **Loring, W.A.**, Butter, E., Smith, T., Mruzek, D.W. (2016). Use of urine alarms in toilet training children with intellectual and developmental disabilities: A review, *Research in Developmental Disabilities*, 53, 232-241.
- l) **Loring, W.**, Johnston, B., Gray, L., Goldman, S., Malow, A. (2016). A Brief Behavioral Intervention for Insomnia in Adolescents with Autism Spectrum Disorders, *Clinical Practice in Pediatric Psychology*, 4(2), 112-124.

2. With 1 in 68 children being diagnosed with an ASD, there is an urgent need to identify structures for disseminating information regarding best practices for identification, assessment, and treatment for these individuals. This contribution to science has focused on evaluating mechanisms for providing training to school based personnel in evidence-based practices for students with ASD, the provision of these trainings to school based personnel and other community agencies nationally, directing a parent workshop structure for parents of children newly diagnosed with a neurodevelopmental disability that has reached 3,000 individuals since its inception, coordinating annual trainings by nationally certified trainers of the Autism Diagnostic Observation Schedule (ADOS) and the creation of a variety of educational materials and resources to be available to various populations serving individuals with ASD and other neurodevelopmental disabilities.

- a) **Loring, W.**, Morton, M. (2011). Visual Supports and Autism Spectrum Disorders. [Brochure]. Sponsored by Autism Treatment Network, Autism Speaks, Maternal and Child Health Bureau, and Vanderbilt LEND.
- b) **Loring, W.**, Reeslund, K., Dove, D., Reising, M., McDaniel, M. Lee, E.B., Newsom, C.R. (2011). Taking the Work Out of Blood Work: Helping Your Child with ASD. [Brochure]. Sponsored by Autism Treatment Network, Autism Speaks, Maternal and Child Health Bureau, and Vanderbilt LEND.
- c) **Loring, W.**, Reeslund, K., Dove, D., Reising, M., McDaniel, M. Lee, E.B., Newsom, C.R. (2011). Taking the Work Out of Blood Work: Helping Your Patient with ASD. [Brochure]. Sponsored by Autism Treatment Network, Autism Speaks, Maternal and Child Health Bureau, and Vanderbilt LEND.
- d) **Loring, W.**, Reeslund, K., Dove, D., Reising, M., McDaniel, M. Lee, E.B., Newsom, C.R. (2011). Taking the Work Out of Blood Work for Kids with ASD: A Toolkit for Parents and Providers . Sponsored by Autism Treatment Network, Autism Speaks, Maternal and Child Health Bureau, and Vanderbilt LEND. Website: <http://www.kc.vanderbilt.edu/asdbloodwork/>
- e) **Loring, W.**, Morton, M. (2012). Visual Supports [Brochure]. Sponsored by Autism Treatment Network, Autism Speaks, Maternal and Child Health Bureau, and Vanderbilt LEND.
- f) Loring, W., Frank, K. (2012). Faith Community Visual Supports: For Children and Adolescents with Autism and Other Developmental Disabilities [Brochure]. Sponsored by Vanderbilt Kennedy Center UCEDD.
- g) Juárez, A. P., **Loring, W.**, Whitaker, T., Reed, C., Frank, K., Murphy, L., Gassner, D. (2013). Best-Practice Guidelines for Children and Adolescents with Autism Spectrum Disorder. Tennessee

Department of Mental Health and Substance Abuse Services. Website:

http://www.tn.gov/mental/policy/best_pract/Pages%20from%20CY_BPGs_117-131.pdf

- h) Lee, E., **Loring, W.** (2014). A Brief Parent Guide on Autism: Information for Parents of Toddlers and Preschoolers [Brochure]. Sponsored by Vanderbilt Kennedy Center UCEDD.
- i) Juárez, A. P., Taylor, C., Garrett, L., Loring, W., Frank, K., Carter, E., Brock, M., Huber, H., Wallace, E., Stainbrook, A., Blumberg, S., Warren, Z. (2013, January). Training for educators of students with autism spectrum disorders. Poster presented at the annual Vanderbilt Kennedy Center Science Day, Nashville, TN.
- j) Juárez, A. P., Taylor, C., Garrett, L., **Loring, W.**, Frank, K., Carter, E., Brock, M., Huber, H., Wallace, E., Stainbrook, A., Blumberg, S., Warren, Z. (2013, March). Training for educators of students with autism spectrum disorders. Poster presented at the Annual Gatlinburg Conference, San Antonio, TX.
- k) Juárez, A. P., Taylor, C., Brock, M., Huber, H., Carter, E., Garrett, L., **Loring, W.**, Frank, K., Wallace, E., Stainbrook, A., Blumberg, S., Warren, Z. (2013, May). Training for educators of students with autism spectrum disorders. Poster presented at the annual International Meeting For Autism Research, San Sebastián, Spain.
- l) **Loring, W. A.**, Blumberg, S. E., Huber, H., Kuntz, E. M., Knight, V. F., Weaver, L. A., Garrett, L. J., & Juárez, A. P. (2016, May). Statewide Assessment of Teachers' Perceptions Related to Educating Students with Autism Spectrum Disorder. Poster presented at the annual International Meeting for Autism Research, Baltimore, Maryland.
- m) Blumberg, S. E., **Loring, W. A.**, Huber, H., Kuntz, E. M., Knight, V. F., Weaver, L. A., Garrett, L. J., & Juárez, A. P. (2016, May). Statewide Assessment of Teachers' Perceptions Related to Educating Students with Autism Spectrum Disorder. Poster presented at the annual Association for Behavior Analysis International, Chicago, Illinois.
- n) Blumberg, S.E., **Loring, W.A.**, Rodrigues, F., Newsom, C., Kuntz, E.M., Conley, E., & Juarez, A.P. (2017, April). Statewide Assessment of School Psychologists' Perceptions of the Educational Classification Process with Students with Autism Spectrum Disorder. Poster presented at the annual Council for Exceptional Children Special Education Convention and Expo, Boston, Massachusetts.

3. When conducting high quality research, it is imperative that researchers well-characterize the sample in which they are examining to ensure a pure analysis of the population being examined, as well as the variables being considered. I am a clinical psychologist with specialized training in a variety of cognitive, adaptive, and behavioral measures, as well as diagnostic interviewing and becoming internally research-reliable on the Autism Diagnostic Observation Schedule (ADOS). So, this contribution to science has involved playing the lead role on multiple studies in phenotyping the sample being researched, resulting in studies that have been published in peer-reviewed journals.

- a) Cascio C., Foss-Feig, J., Heacock, J., Schauder, K., **Loring, W.**, Rogers, B., Pryweller, J., Newsom, C., Cockhren, J., Cao, A. Affective Neural Response to Restricted Interests in Autism Spectrum Disorders, *Journal of Child Psychology and Psychiatry*, October 2013.
- b) Pryweller, J., Schauder, K., Anderson, A., Heacock, J., Foss-Feig, J., Newsom, C., **Loring, W.**, Cascio, C. White matter correlates of sensory processing in Autism Spectrum Disorders, *NeuroImage: Clinical*, 2014 (6), 379–387.
- c) Cascio, C., Schauder, K., & **Loring, W.** (2013, May). Superior interoception in children with autism spectrum disorders. Abstract presented within the panel entitled "The insula and anterior cingulate cortex: salience, interoception, and autism symptoms" at the annual International Meeting For Autism Research, San Sebastián, Spain
- d) Taylor, C.M., Vehorn, A.C., Noble, H.E., Crittendon, J.A., **Loring, W.A.**, Newsom, C.R., Nicholson, A.G., & Warren, Z.E. (2013, May). Implications of adding validity questions to ASD screeners. Poster presented at the annual International Meeting For Autism Research, San Sebastián, Spain.

D. Research Support

Ongoing Research Support

R40 HRSA Mruzek (PI, Univ of Rochester) 09/01/2014-08/31/17

Investigation of Teacher-Mediated Toilet Training Using a Manualized Moisture Alarm Intervention

This study is being conducted in collaboration with the University of Rochester (lead institution) and Nationwide Children's Hospital. The purpose is to develop and assess the effectiveness of a teacher mediated standardized toilet training protocol involving a novel wireless moisture alarm and a step-by-step manual for teachers that includes a randomized comparison with a control group receiving traditional behavioral recommendations for toilet training.

Role: Site Principal Investigator

Autism Speaks Malow and Warren (Site PI's) 01/01/11-Present

Autism Treatment Network

The major purpose of this project is to establish an Autism Treatment Network site at Vanderbilt to develop standards of care for the medical management of children with autism spectrum disorders and to establish a registry database.

Role: Clinical Psychologist

Meharry-Vanderbilt Community Engaged Research Core Malow (PI)

Parent-Based Sleep Education in Autism: A Community-Academic Research Partnership

The purpose of this study is to examine the effectiveness of training community providers in parent-based sleep education that has been validated in academic medical settings and includes a randomized comparison with a control group receiving only written materials.

Role: Co-Investigator

1U53DD001170-01 Warren (PI) 01/01/2015- Present

Centers for Disease Control and Prevention (CDC), Autism and Developmental Disabilities Monitoring Network (ADDM) Vanderbilt University Site15

This epidemiological multi-site national study aims at defining the prevalence and community understanding of ASD across national regions, statewide localities, and various demographic variables

Role: Education and Community Liaison

Completed Research Support

5R01 HD057284 Stone (PI, Univ of Washington) 09/30/08 – 07/31/13

NIH/NICHHD

Social-Emotional Development of Infants At-Risk for Autism Spectrum Disorders

This longitudinal cross-site project with University of Miami examines the early development of attentional and affective mechanisms, their impact on positive joint attention competencies, and their relation to later autism symptomatology. (University of Washington subcontract to Vanderbilt, Warren, PI.)

Role: Clinical Psychologist

5R01 HD039961 Fein (PI, Univ of Connecticut) 04/01/09 – 03/31/14

NIH/NICHHD

Early Detection of Developmental Disorders

This study is being conducted in collaboration with the University of Connecticut (lead institution), the University of Washington, and Georgia State University. The purpose is to assess the effectiveness of an autism screening instrument, the Modified Checklist for Autism in Toddlers-Revised (M-CHAT-R), in detecting autism in the younger siblings of children with autism. (University of Washington subcontract to Vanderbilt, Warren, PI.)

Role: Clinical Psychologist

5K01 MH090232-03 Cascio (PI) 03/01/11 – 12/31/14

NIH/NIMH

Neurobehavioral Investigation of Tactile Features in Autism Spectrum Disorders

This project undertakes the examination of affective tactile perception in ASD using converging behavioral, neurophysiological, and neuroanatomical techniques.

Role: Clinical Psychologist

Autism Speaks Autism Treatment Network Reynolds (PI, Univ of Colorado) 09/01/12-08/31/15

Iron Treatment of Sleep Disorders in Children with Autism Spectrum Disorder

The primary goal of this project is to determine the effects of iron supplementation on sleep in children with autism and the role of restless legs syndrome/periodic limb movements of sleep.

Role: Sleep Educator

Health Resources and Services Administration Perrin (PI)

06/01/13-05/31/14

Autism Intervention Research Network on Physical Health (AIR-P) ATN-AIR-12-04

Subcontract for Development of a Manualized Wireless Moisture Alarm Intervention for Teach Toileting in Children with Autism (Mruzek, PI)

This study is being conducted in collaboration with the University of Rochester (lead institution) and Nationwide Children's Hospital. The purpose is to develop and assess the effectiveness of a standardized toilet training protocol involving a novel wireless moisture alarm and step-by-step manuals for clinicians and parents that includes a randomized comparison with a control group receiving traditional behavioral recommendations for toilet training.

Role: Site Principal Investigator

Organization for Autism Research (OAR) Loring (PI)

01/01/13-12/31/14

Sleep Education Program for Adolescents and Young Adults with Autism Spectrum Disorders

The purpose of this study is to assess the efficacy of a sleep education program for adolescents and young adults with autism spectrum disorders and insomnia in improving their sleep and subsequent daytime behaviors.

Role: Principal Investigator