

BIOGRAPHICAL SKETCH

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NAME: Walker, Lynn S.

eRA COMMONS USER NAME: walkerls

POSITION TITLE: Professor of Pediatrics; Director, Division of Adolescent and Young Adult Health

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Oberlin College, Oberlin, OH	B.A.	06/1973	Latin American Studies
George Peabody College, Nashville, TN	M.S.	06/1978	Psychology
Vanderbilt University, Nashville, TN	Ph.D.	06/1981	Clinical Psychology

A. Personal Statement

Since 1987, I have conducted an NIH-supported program of research to identify biopsychosocial processes in the development and maintenance of pediatric pain, with the ultimate goal of informing interventions to reduce and prevent chronic pain. I have focused on functional abdominal pain (including irritable bowel syndrome) as a prototypic pediatric pain condition without significant organic pathology. Guided by theories of stress appraisal and coping as well as social learning, my investigative team has identified patterns of children's pain appraisal and coping and parents' responding to their children's pain that impact the severity and persistence of children's pain and associated disability. We have developed and validated measures of children's symptoms, pain beliefs, and pain behavior that have been widely adopted in pediatric pain research and clinical trials. I have directed studies employing a range of methodologies including patient self-report, observation of parent-child interactions, psychiatric diagnostic interviewing, diary studies of pain and coping, and laboratory assessment of experimental pain in children and adolescents. I am currently PI on an NIH-funded study (R01 HD76983) of online cognitive behavior therapy for adolescents with chronic abdominal pain.

1. Walker LS, Dengler-Crish CM, Rippel S, Bruehl S (2010). Functional abdominal pain in childhood and adolescence increases risk for chronic pain in adulthood. *Pain* 150(3):568-572. [PMCID: PMC3040563](#).
2. Dengler-Crish CM, Bruehl S, Walker LS (2011). Increased wind-up to heat pain in women with a childhood history of functional abdominal pain. *Pain* 152(4):802-808. [PMCID: PMC3065651](#).
3. Walker LS, Sherman AL, Bruehl S, Garber J, Smith CA (2012). Functional abdominal pain patient subtypes in childhood predict functional gastrointestinal disorders with chronic pain and psychiatric comorbidities in adolescence and adulthood. *Pain* 153(9):1798-1806. [PMCID: PMC3413740](#).
4. Shirkey KC, Sherman AL, Beck JE, Haman K, Shears AR, Horst SN, Smith CA, Garber J, Walker LS (2013). Functional abdominal pain in childhood and long-term vulnerability to anxiety disorders. *Pediatrics* 132(3):475-482. [PMCID: PMC3876748](#).

B. Positions and Honors**Positions and Employment****Academic Positions**

1986-1992	Assistant Professor, Division of Adolescent Medicine, Department of Pediatrics, Vanderbilt University School of Medicine, Nashville, TN
1992-1998	Associate Professor, Division of Adolescent Medicine, Department of Pediatrics, Vanderbilt University School of Medicine, Nashville, TN
1999-Present	Professor, Division of Adolescent Medicine, Department of Pediatrics, Vanderbilt University School of Medicine, Nashville, TN. Secondary appointments in Department of

Psychology and Human Development (Peabody College) and Department of Psychology (College of Arts and Sciences), Nashville, TN

Non-academic Positions

1980-1981	Internship, Clinical Psychology, University of California at Los Angeles, Center for Health Services, Neuropsychiatric Institute, Los Angeles, CA
1981-1983	Psychologist, Student Health Service, Vanderbilt University, Nashville, TN
1982-1985	Research Instructor (1982-83), Consultant (1983-85), Division of Adolescent Medicine, Department of Pediatrics, Vanderbilt University School of Medicine, Nashville, TN
1983-1985	Postdoctoral Research Fellow, Center for the Study of Families and Children, Vanderbilt Institute for Public Policy Studies, Vanderbilt University, Nashville, TN
1985-1986	Instructor, Division of Adolescent Medicine, Dept of Pediatrics, Vanderbilt University School of Medicine, Nashville, TN
1997-2001	Interim Director, Division of Adolescent Medicine, Department of Pediatrics, Vanderbilt University School of Medicine, Nashville, TN
1999-Present	Senior Fellow and Investigator, John F. Kennedy Center for Research on Education and Human Development, Vanderbilt University, Nashville, TN
2002-Present	Director, Division of Adolescent and Young Adult Health (prior to 2011, the "Division of Adolescent Medicine and Behavioral Science"), Department of Pediatrics, Vanderbilt University School of Medicine, Nashville, TN

Other Experience and Professional Memberships

1982-Present	American Psychological Association: Health Psychology (Division 38); Clinical Child and Adolescent Psychology (Division 53); Society of Pediatric Psychology (Division 54, elected Fellow in 2011)
1990-Present	Member, Society for Adolescent Medicine
2000-2003	Member, Risk Prevention and Health Behavior Integrated Review Group (RPHB#3) (National Institutes of Health)
2002-2005	Member, Committee for the Development of Abdominal Pain Practice Guidelines, American Academy of Pediatrics and North American Society for Pediatric Gastroenterology, Hepatology and Nutrition.
2004-2007	Member, Behavioral Medicine Interventions and Outcomes Study Section (National Institutes of Health).
2006-Present	Research Compliance Expert, Vanderbilt University Medical Center
2006-Present	Member, International Association for the Study of Pain

C. Contribution to Science

1. Development and Validation of Measures for Assessing Pediatric Pain

My team developed and validated measures of psychosocial aspects of pediatric chronic pain that are widely used today and have been translated into several languages. When I began my career in 1982, pain intensity was the only self-report measure in the field. We expanded opportunities for systematic research on pediatric chronic pain with the development of the Functional Disability Inventory, Children's Somatization Inventory, Pain Beliefs Inventory, Pain Response Inventory, Adult Responses to Children's Pain Scales, and Questionnaire on Pediatric Gastrointestinal Symptoms. We also developed the first (and currently only) experimental paradigm for the induction of visceral pain in children, the Water Load Symptom Provocation Test, now used in several labs.

- Walker LS, Greene JW (1991). The Functional Disability Inventory: Measuring a neglected dimension of child health status. *Journal of Pediatric Psychology* 16(1):39-58. (Reprinted in Stevenson J (Ed.) (1997), *Child psychology portfolio: Health and illness in childhood*, (pp.13-17). Windsor, United Kingdom: Nfer-Nelson). [PMID: 1826329](#).
- Walker LS, Smith CA, Garber J, Van Slyke DA (1997). Development and validation of the Pain Response Inventory for children. *Psychological Assessment* 9(4):392-405.
- Walker LS, Williams SE, Smith CA, Garber J, Van Slyke DA, Lipani T, Greene JW, Mertz H, Naliboff BD (2006). Validation of a symptom provocation test for laboratory studies of abdominal pain and discomfort in children and adolescents. *Journal of Pediatric Psychology* 31(7):703-713. [PMCID: PMC3147020](#).

d. Walker LS, Levy RL, Whitehead WE (2006). Validation of a measure of protective parent responses to children's pain. *Clinical Journal of Pain* 22(8):712-716. [PMCID: PMC3140827](#).

2. Longitudinal Trajectories and Adult Outcomes of Childhood-Onset Functional Abdominal Pain

My team has followed a cohort of several hundred pediatric patients with functional abdominal pain (FAP) as well as youth without FAP for more than 10 years. Prior to this work, prospective studies of FAP were rare and were based on small samples, typically lacking comparison groups without FAP and using unvalidated measures for data collection. Our work contributed important knowledge about the long-term course of FAP including, for example, that FAP persists into adolescence and young adulthood in approximately 40% of pediatric patients and is a precursor of other types of chronic pain, psychiatric disorder, and disability later in life. This work is significant as it underscores the importance of effective treatment of FAP in childhood.

a. Walker LS, Dengler-Crish CM, Rippel S, Bruehl S (2010). Functional abdominal pain in childhood and adolescence increases risk for chronic pain in adulthood. *Pain* 150(3):568-572. [PMCID: PMC3040563](#).

b. Dengler-Crish CM, Horst S, Walker LS (2011). Somatic complaints in childhood functional abdominal pain are associated with functional gastrointestinal disorders in adolescence and adulthood. *Journal of Pediatric Gastroenterology and Nutrition* 52(2):162-165. [PMCID: PMC3040560](#).

c. Walker LS, Sherman AL, Bruehl S, Garber J, Smith CA (2012). Functional abdominal pain patient subtypes in childhood predict functional gastrointestinal disorders with chronic pain and psychiatric comorbidities in adolescence and adulthood. *Pain* 153(9):1798-1806. [PMCID: PMC3413740](#).

d. Horst S, Shelby G, Anderson J, Acra S, Polk DB, Saville BR, Walker LS (2014). Predicting persistence of functional abdominal pain from childhood into young adulthood. *Clinical Gastroenterology and Hepatology* 12(12):2026-2032. [PMCID: PMC4195814](#).

3. Experimental Pain Studies Focusing on Childhood-Onset Functional Abdominal Pain

My team demonstrated, for the first time, that a subgroup of patients with FAP exhibit temporal summation and impaired conditioned pain modulation in response to induced pain. This work is significant as it suggests that central sensitization of pain may be a mechanism contributing to pain in some FAP patients.

a. Walker LS, Sherman AL, Bruehl S, Garber J, Smith CA (2012). Functional abdominal pain patient subtypes in childhood predict functional gastrointestinal disorders with chronic pain and psychiatric comorbidities in adolescence and adulthood. *Pain* 153(9):1798-1806. [PMCID: PMC3413740](#).

b. Sherman AL, Morris MC, Bruehl S, Westbrook BA, Walker LS (2015). Heightened temporal summation of pain in patients with functional gastrointestinal disorders and history of trauma. *Annals of Behavioral Medicine* 49(6):785-792. [PMCID: PMC4636446](#) [Available on 2016-12-01].

c. Morris M, Walker LS, Bruehl S, Stone A, Mielock A, Rao U (2016). Impaired conditioned pain modulation in youth with functional abdominal pain. *Pain*, in press. [PMCID – Journal in Process](#)

4. Family-Contextual Factors Associated with Childhood-Onset Pain Conditions

My team also pioneered research on the relation of parenting styles to children's pain behavior. Prior work on the influence of parenting behavior on children's pain complaints and disability had been unsystematic and descriptive. We developed a questionnaire measure of parental responding to children's pain and an experimental paradigm for assessment of the influence of parent behavior on children's pain. This work demonstrated that solicitous parental attention was associated with increased symptom complaints in FAP patients following induction of visceral discomfort. Our work has informed family-focused behavioral interventions for youth with FAP.

a. Walker LS, Williams SE, Smith CA, Garber J, Van Slyke DA, Lipani TA (2006). Parent attention versus distraction: Impact on symptom complaints by children with and without chronic functional abdominal pain. *Pain* 122(1-2):43-52. [PMCID: PMC3232036](#).

b. Williams SE, Blount R., Walker LS (2011). Children's pain threat appraisal and catastrophizing moderate the impact of parent verbal behavior on children's symptom complaints. *Journal of Pediatric Psychology* 36(1):55-63. [PMCID: PMC3021805](#).

Complete List of Published Work in MyBibliography:

<http://www.ncbi.nlm.nih.gov/sites/myncbi/lynn.walker.2/bibliography/49260857/public/?sort=date&direction=descending>

D. Research Support

Ongoing Research Support

R01HD076983 Walker (PI) 05/01/2014 – 03/31/2019

Predicting Treatment Response in Pediatric Functional Abdominal Pain

Major goal of this project aims to identify child and family characteristics that predict differential responses to a Cognitive Behavior Therapy intervention administered online to patients with functional abdominal pain (FAP) and their parents. The goal is to acquire scientific knowledge to guide individualized treatment of patients with FAP.

Role: Principal Investigator

Completed Research Support

R01HD023264 Walker (PI) 04/01/2007– 03/31/2013

Developmental Outcomes of Pediatric Chronic Abdominal Pain.

Major goal of this prospective study entailed a comprehensive evaluation of chronic pain conditions and response to experimental pain in adolescents and young adults with a childhood history of functional abdominal pain.

Role: Principal Investigator