
BIOGRAPHICAL SKETCH

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NAME: Ramey, Craig T.

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

POSITION TITLE: Professor and Distinguished Research Scholar

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)	Completion Date MM/YYYY	FIELD OF STUDY
West Virginia University	B.A.	1965	Psychology
West Virginia University	M.A.	1967	Psychology
University of Southern California	Research Internship	1967	Life-Span Development
West Virginia University	Ph.D.	1969	Developmental Psychology
University of California at Berkeley	Postdoc	1969	Developmental Psychology

A. Personal Statement

I am enthusiastic to be part of this application to establish a National Pediatric Rehabilitation Resource Center (*PedRehab Ctr*). I will serve as the Core Lead for Promoting Center Expertise and participate in activities under Didactic Interactions, Mentored Collaborative Opportunities, and Techniques Development. My educational and scientific history have prepared me well to engage in this endeavor. After extensive methodological and theoretical training as a life-span developmental psychologist with a specialty in causal modeling via randomized controlled trials, I have led many research teams addressing treatment of pediatric populations. My background in research design ranges from single subject analyses to multi-site RCTs. I especially enjoy helping teams of investigators from diverse disciplinary backgrounds conceptualize and conduct theory-driven complex longitudinal RCTs that expect differential response to treatments within heterogeneous samples of participants - a feature that characterizes pediatric populations needing neuromotor habituation and rehabilitation.

I bring to this proposal a strong background with pediatric populations, leadership in scientific administration, and a long history of developing scientific core facilities to undergird multidisciplinary science concerned with children's development. My graduate and postdoctoral training was in life-span developmental science with a strong grounding in innovative research methodologies with a particular emphasis on theory-driven experimental trials and the use of multivariate longitudinal data analytics including epidemiology and biostatistics. In addition to my own research, this scientific background has resulted in my serving as a frequent statistical reviewer or methodology consultant to NIH, DHHS, DOE, IES, and other federal agencies and private foundations.

During my research career, I have been the PI for 8 major multidisciplinary research and development teams that focused on the following specific conditions within pediatric populations: failure-to-thrive, intellectual disabilities, malnutrition, learning disabilities, minimal brain dysfunction, preterm birth, low birthweight, otitis media, developmental disabilities, and emotional and behavioral disorders. In these areas I have devoted considerable time and effort to place the various conditions within a comprehensive conceptualization of typical normative development using the ABCD Model that was developed in collaboration with Sharon Ramey and to describe, in detail, how therapeutic or preventive interventions are intended to ameliorate specific risk factors. These efforts have led to my current emphasis on Implementation Science in pediatric treatment which is a major part of our new NIH-funded Ph.D. program in Translational Biology, Medicine, and Health.

In conjunction with my research experience I have been actively involved in pediatric residency training and fellowship research training sponsored by the Robert Wood Johnson Foundation at 6 major research universities and the W.T. Grant Foundation at 8 universities. I have led therapeutic research teams with pediatricians and neonatologists at Stanford, Harvard, Einstein, Pennsylvania, Arkansas, Texas, Washington, Yale, North Carolina, and Johns Hopkins. I also led with Sharon Ramey a 31-university consortium that contact a longitudinal multi-site randomized trial involving more than 12,000 children, half of whom received a multicomponent intervention from entry to kindergarten through 3rd grade.

Currently, I am the Co-Director (with Stephanie DeLuca) for the Treatment Implementation Center at Virginia Tech that provides the training and clinical site monitoring for the 12 sites participating in the NIH Phase III I-ACQUIRE Trail testing two dosages of a form of Constraint-Induced Movement Therapy for infants with Perinatal Arterial Stroke.

Relevant publications include:

1. Ramey, C.T. (2018). The Abecedarian approach to social, educational, and health disparities. *Clinical Child and Family Psychology Review*, 21, 527-544. PMID:29637322
2. Ramey, C.T., Bryant, D.M., Wasik, B.H., Sparling, J.J., Fendt, K.H., & LaVange, L.M. (1992). Infant Health and Development Program for low birth weight, premature infants: Program elements, family participation, and child intelligence. *Pediatrics*, 89, 454-465. PMID 1371341
3. Ramey, C.T., Ramey, S.L., & Lanzi, R.G. (2006). Children's health and education. In I. Sigel & A. Renninger (Eds.). *The handbook of child psychology. Vol. 4* (pp. 864 – 892). Hoboken, New Jersey: Wiley & Sons.
4. Bickel, W.K., Moody, L., Quisenberry, A.J., Ramey, C.T., & Sheffer, C.E. (2014). A competing neurobehavioral decision systems model of SES-related health and behavioral disparities. *Preventive Medicine*, 68, 37-43. PMID: 25008219

B. Positions and Honors

Positions and Employment

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|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1966-1968 | NICHD Predoctoral Fellow, Department of Psychology, West Virginia University |
| 1968 | Postdoctoral Fellow, Institute on Aging, University of Southern California |
| 1968-1969 | Postdoctoral Fellow, Institute of Human Development, University of California at Berkeley |
| 1969-1971 | Assistant Professor of Psychology and Pediatrics, Wayne State University |
| 1971-1975 | Associate Professor, Department of Psychology, and Director of Infant Research, Frank Porter Graham Child Development Center, University of North Carolina at Chapel Hill |
| 1975-1989 | Director of Research, Frank Porter Graham Child Development Center, UNC at Chapel Hill |
| 1979-1990 | Professor of Psychology and Pediatrics UNC at Chapel Hill |
| 1990-2002 | Founding Director, Civitan International Research Center, and University Professor of Psychology, Pediatrics, Maternal and Child Health, and Neurobiology, University of Alabama at Birmingham (UAB) |
| 2002-2011 | Founding Director, Georgetown Center for Health and Education and Georgetown University Distinguished Professor of Health Studies, Psychiatry, and Psychology, Georgetown University |
| 2011-present | Professor and Distinguished Research Scholar, Fralin Biomedical Research Institute, Virginia Tech; Professor of Psychology, Neuroscience, and Human Development, Virginia Tech; Professor of Pediatrics, Virginia Tech Carilion School of Medicine |

Honors

NICHD Fellowship, 1966-1969; APA Outstanding Young Scholar Award, 1974; North Carolina Distinguished Educational Research Award, 1980; American Education Research Association "Best Paper" Award, 1980; Simpson-Ramsey Award for Outstanding Research, UAB, 1985; APA Award for Exemplary Prevention Programs (for the Abecedarian Project and Project CARE), 1987; Administration for Children, Youth and Families Award for Contributions to Head Start Research and Evaluation, 1991; Chautauqua Award for Outstanding Contribution to the Field of Developmental Disabilities, 1997; Gold Award, National Parenting Publication Award for *Right from Birth and Going to School*, 1991; Career Scientist Award, The Academy on Mental Retardation, 1999; Ireland Prize for Scholarly Distinction, 2000; Heflin Award for Contributions to World Health and Education, 2000; induction into the National Institute of Child Health and Human Development Hall of Honor, 2003; Society for Research in Child Development Award for Distinguished Contributions to Policy to Benefit Children, 2007; Fellow, American Psychological Society, 2006; Elected Chair, National Advisory Board, Institute for Education Science, 2009; Fordham University Excellence in Early Childhood Award 2013; United Way Community Impact Award 2015; March of Dimes Award, 2014; upcoming Multiple Sclerosis Award (2019).

C. Contribution to Science

During the past four and a half decades, I have led or co-led many different multidisciplinary teams focused on basic and clinical questions about child health and human development. I have made extensive use of randomized controlled trials of preventive and therapeutic interventions to improve developmental outcomes. Many of the interventions have been complex, multifaceted treatments with decades-long longitudinal follow-up and sometimes with multi-phasic treatment protocols. I have also pioneered methods to document and analyze for variations in protocol implementation within both single-site and multi-site RCTs.

1. Established that instrumental learning and positive transfer to new learning situations can be enhanced in human infants.
 - a. Ramey, C.T., & Ourth, L.L. (1971). Delayed reinforcement and vocalization rates of infants. *Child Development*, 42, 291-298.PMID 5549512
 - b. Ramey, C.T., & Watson, J.S. (1972). Nonsocial reinforcement of infants' vocalizations. *Developmental Psychology*, 6, 538.
 - c. Watson, J.S. & Ramey, C.T. (1972). Reactions to response-contingent stimulation in early infancy. *Merrill-Palmer Quarterly*, 18, 219-227.
 - d. Finkelstein, N. W., & Ramey, C.T. (1977). Learning to control the environment in infancy. *Child Development*, 48, 806-819.
2. Established that both improved nutrition and increased response-contingent stimulation are both positive and interdependent interventions in improving development in failure-to-thrive infants.
 - a. Ramey, C.T., Hieger, L., & Klisz, D. (1972). Synchronous reinforcement of vocal responses in failure-to-thrive infants. *Child Development*, 43, 1449-1455.PMID 4643780
 - b. Ramey, C.T., Starr, R. H., Pallas, J., Whitten, C.F., & Reed, V. (1975). Nutrition, response-contingent stimulation and the maternal deprivation syndrome: Results of an early intervention program. *Merrill-Palmer Quarterly*, 21, 45-53.
 - c. Ramey, C.T., & Finkelstein, N.W. (1978). Contingent stimulation and infant competence. *Journal of Pediatric Psychology*, 3, 89-96.
 - d. Ramey, C.T., & Smith, B.J. (1977). Assessing the intellectual consequences of early intervention with high-risk infants. *American Journal of Mental Deficiency*, 8, 318-324.PMID 836631
3. Established that responsive early childhood intervention can prevent developmental delay in high-risk infants and pre-kindergarten children.
 - a. Ramey, C.T., & Campbell, F.A. (1979). Early childhood education for psychosocially disadvantaged children: The effects on psychological processes. *American Journal of Mental Deficiency*, 83, 645-648.PMID 443282
 - b. Ramey, C.T., & Haskins, R. (1981). The modification of intelligence through early experience. *Intelligence*, 5, 21-27.
 - c. Ramey, C.T., & Campbell, F.A. (1984). Preventive education for high-risk children: Cognitive consequences of the Carolina Abecedarian Project. *American Journal of Mental Deficiency*, 88, 515-523.PMID 6731489
 - d. Ramey, C.T., Yeates, K.O., & Short, E.J. (1984). The plasticity of intellectual development: Insights from preventive intervention. *Child Development*, 55, 1913-1925.PMID 6510061
4. Led the first successful multi-site randomized clinical trial to prevent intellectual disabilities in low birth weight premature infants.
 - a. The Infant Health and Development Program. (1990). Enhancing the outcomes of low-birth-weight, premature infants. *Journal of the American Medical Association*, 263, 3035-3042.
 - b. Ramey, C.T., Bryant, D.M., Wasik, B.H., Sparling, J.J., Fendt, K.H., & LaVange, L.M. (1992). Infant Health and Development Program for low birth weight, premature infants: Program elements, family participation, and child intelligence. *Pediatrics*, 89, 454-465. PMID 1371341
 - c. Ramey, C.T., & Ramey, S.L. (1998). Prevention of intellectual disabilities: Early interventions to improve cognitive development. *Preventive Medicine*, 27, 224-232. PMID 9579000
 - d. Ramey, C.T., Campbell, F.A., & Ramey, S.L. (1999). Early intervention: Successful pathways to improving intellectual development. *Developmental Neuropsychology*, 16, 385-392.
5. Established through replicated RCTs that cognitive performance, school achievement, and adult economic, educational, and health outcomes can be positively altered through high-quality early childhood intervention.
 - a. Ramey, C.T., Campbell, F.A., Burchinal, M., Skinner, M.L., Gardner, D.M., & Ramey, S.L. (2000). Persistent effects of early childhood education on high-risk children and their mothers. *Applied Developmental Science*, 4, 2-14.
 - b. Campbell, F.A., Wasik, B.H., Pungello, E., Burchinal, M., Barbarin, O., Kainz, K., Sparling, J.J., & Ramey, C.T. (2008). Young adult outcomes from the Abecedarian and CARE early childhood educational interventions. *Early Childhood Research Quarterly*, 23, 452-466.

- c. Pungello, E.P., Kainz, K., Burchinal, M., Wasik, B.H., Sparling, J.J. Ramey, C.T., & Campbell, F.A. (2010). Early educational intervention, early cumulative risk, and the early home environment as predictors of young adult outcomes within a high-risk sample. *Child Development, 81*, 410-426. PMID 20331676
- d. Campbell, F.A., Pungello, E., Kainz, K., Burchinal, M., Yi, P, Wasik, B.H., Barbarin, O., Sparling, J.J., & Ramey, C.T. (2012). Adult outcomes as a function of an early childhood educational program: An Abecedarian project follow-up. *Developmental Psychology, 48*, 1033-1043. doi:10.1037/a0026644

These publications have been selected from more than 250 and 5 books

Partial List of Published Work in MYBibliography:

<http://www.ncbi.nlm.nih.gov/sites/myncbi/craig.ramey.1/bibliography/47592493/public/?sort=date&direction=ascending>.

D. Research Support
Ongoing Research Support

1U01NS106655-01A1, S.L. Ramey (Lead PI); Warren Lo (Multiple PI), 02/01/2019 – 01/31/2024, NINDS/NIH
Perinatal Arterial Stroke (PAS): A Multi-site RCT of Intensive Infant Rehabilitation (I-ACQUIRE)

Perinatal arterial ischemic stroke (PAS) occurs in an estimated 1 in 1150 livebirths and often leads to serious lifelong neuromotor impairment. This StrokeNet Phase III trial will provide definitive efficacy data about an intensive form of infant rehabilitation (Infant ACQUIRE) to transform rehabilitation and improve clinical outcomes. Role: Co-Director of Treatment Implementation Center

1DP7OD018428-01, M. Friedlander (PI), 09/20/2013 – 08/31/2018, NIH
(Projected No Cost Extension through 08/31/2019)

Mentorship and Development Program for Biomedical Trainees

This is a new NIH multidisciplinary program that provides early professional development and guidance, as well as networking experiences, for biomedical trainees, such that they may efficiently identify and succeed along directed career paths. Role: Program Faculty