

BIOGRAPHICAL SKETCH

NAME: Edgar Ramos Vieira

eRA COMMONS USER NAME: evieira

POSITION TITLE: Doctorate in Physical Therapy Program Director and Associate Professor, Physical Therapy and Neuroscience, Florida International University

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Methodist University of Piracicaba, Piracicaba, SP, Brazil.	B.Sc.	12/1999	Physical Therapy
Federal University of Sao Carlos, Sao Carlos, SP, Brazil.	M.Sc.	04/2002	Physical Therapy
University of Alberta, Edmonton, AB, Canada.	Ph.D.	11/2006	Rehabilitation Science
International Institute for Qualitative Methodology, Edmonton, AB, Canada.	Post-Doc	07/2008	Qualitative Methods
University of Alberta, Edmonton, AB, Canada.	Post-Doc	07/2010	Health Care Safety

A. Personal Statement

I am well-suited to be the PI for the project described in this application because I have the expertise and experience to conduct and complete the proposed older adult falls prevention project. My expertise includes risk assessment and prevention of aging-related functional decline and falls. I have had external funding from multiple agencies such as the Florida Department of Health and the US Department of Health and Human Services to do work in this area. My previous work on falls prevention in hospitals, long term care facilities and in the community have placed me in a position to carry out the proposed research. I have technical expertise in both quantitative and qualitative research methods. I have built strong collaborations at Baptist Health South Florida (BHSF) in support the proposed work. The environment at Florida International University (FIU) including my strong mentor is conducive to the success of the project. The following four peer reviewed publications highlight my experience and qualifications:

1. **Vieira, E. R.**, Palmer, R., & Chaves, P. (2016). Prevention of falls in older people living in the community. *BMJ - British Medical Journal*. 353, i1419.
2. **Vieira, E. R.**, Tappen, R., Engstrom, G., & da Costa, B. (2015). Rates and factors associated with falls in older European Americans, Afro-Caribbeans, African Americans, and Hispanics. *Clinical Interventions in Aging*. 10, 1705-1710.
3. **Vieira, E. R.**, Lim, H. H., Brunt, D., Hallal, C. Z., Kinsey, L., Errington, L., & Gonçalves, M. (2015). Temporo-spatial gait parameters during street crossing conditions: a comparison between younger and older adults. *Gait & Posture*, 41(2), 510-515.
4. **Vieira, E. R.**, Berean, C., Paches, D., Caveny, P., Yuen, D., Ballash, L., & Freund-Heritage, R. (2013). Reducing falls among geriatric rehabilitation patients: A controlled clinical trial. *Clinical Rehabilitation*, 27(4), 325-335.

B. Positions and Honors

- 2007-2008 Post-Doctoral Fellow in Qualitative Methods in Health Research, International Institute for Qualitative Methodology, University of Alberta, Edmonton, Alberta, Canada.
- 2007-2009 Adjunct Professor, Faculty of Rehabilitation Medicine, University of Alberta. Edmonton, Alberta, Canada.
- 2007-2010 Adjunct Professor, M.Sc. in Rehabilitation Science Program, University Nine of July. Sao Paulo, Sao Paulo, Brazil.
- 2008-2010 Post-Doctoral Fellow in Safety in Health Care, Faculty of Nursing, University of Alberta, Edmonton, Alberta, Canada.
- 2010-2016 Assistant Professor, Department of Physical Therapy, Nicole Wertheim College of Nursing and Health Sciences, FIU, Miami, Florida, USA.
- 2014-2016 Assistant Professor. Department of Neuroscience, Herbert Wertheim College of Medicine, FIU. Miami, Florida, USA.
- 2013-present Member of the Safe Mobility for Life Coalition, Florida Department of Transportation.
- 2013-present Member of the Miami-Dade County Age Friendly Initiative Advisory Committee, Health Foundation of South Florida (HFSF), USA.
- 2014-present Member of the Older Adult Falls Prevention Team, Florida Injury Prevention Advisory Council, Florida Department of Health, USA.
- 2015-present Member of the Florida Physical Therapy Association (FPTA) Falls Prevention Task Force.
- 2016-present Associate Professor. Department of Neuroscience, Herbert Wertheim College of Medicine, FIU. Miami, Florida, USA.
- 2016-present Associate Professor, Department of Physical Therapy, Nicole Wertheim College of Nursing and Health Sciences, FIU, Miami, Florida, USA.
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C. Contribution to Science

My main contributions to science include the identification and assessment of factors associated with functional decline, physical impairments and falls, and the development, implementation and testing of interventions to reduce functional decline and falls in older adults. These contributions and are described below:

Literature reviews of factors associated with functional decline and falls in older adults:

Knowing what factors are risks for accelerated functional decline and falls is important. In addition to original studies, conducting literature reviews and systematic reviews in particular provide reliable information on what factors need to be assessed and considered in interventions (sample reviews below).

Vieira, E. R., Palmer, R., & Chaves, P. (2016). Prevention of falls in older people living in the community. *BMJ - British Medical Journal*. 353: i1419.

Vieira, E. R., Raue, P., & Brown, E. (2014). Depression in older adults: screening and referral. *Journal of Geriatric Physical Therapy*, 37(1), 24-30.

da Costa, B. R., Rutjes AW, Mendy, A., Freund-Heritage, R., & **Vieira, E. R.** (2012). Can falls risk prediction tools correctly identify fall-prone elderly rehabilitation inpatients? A systematic review and meta-analysis. *Public Library of Science - PLoS ONE*, 7(7), e41061.

Vieira, E. R., Freund-Heritage, R., & da Costa, B. R. (2011). Risk factors for geriatric patient falls in rehabilitation hospital settings: A systematic review. *Clinical Rehabilitation*, 25(9), 788-799.

Development and testing of methods to assess physical impairments in older adults:

Functional decline, physical impairments, gait alterations and mobility problems are associated with falls. Falls are the leading cause of injury and death among older adults. Assessing the root causes of falls can help us to understand the issues and plan interventions. Therefore, sensitive and valid assessments are important for evidence-based practice (sample publications below).

- Vieira, E. R.**, Lim, H. H., Brunt, D., Hallal, C. Z., Kinsey, L., Errington, L., & Gonçalves, M. (2015). Temporo-spatial gait parameters during street crossing conditions: a comparison between younger and older adults. *Gait & Posture*, *41*(2), 510-515.
- Purcell S, Thornberry R, Elliott SA, Panton L, Ormsbee MJ, **Vieira ER**, Kim J-S, Prado CM. (2015). Body composition, strength, and dietary intake of patients with hip or knee osteoarthritis. *Canadian Journal of Dietetic Practice and Research*. *77*(1), 1-5.
- da Silva Jr, R., **Vieira, E. R.**, Cabrera, M., Altimari, L. R., Aguiar, A. F., Nowotny, A. H., Carvalho, A. F., Oliveira, M. R. (2015). Back muscle fatigue of younger and older adults with and without chronic low back pain using two protocols: a case-control study. *Journal of Electromyography and Kinesiology* *25*(6), 928-936.
- Hallal, C. Z., Marques, N. R., Spinoso, D. H., **Vieira, E. R.**, & Gonçalves, M. (2013). Electromyographic patterns of lower limb muscles during apprehensive gait in younger and older female adults. *Journal of Electromyography and Kinesiology*, *23*(5), 1145-1149.

Identification of factors associated with functional decline and falls in older adults:

Knowing the risk factors for accelerated functional decline and falls among older adults is crucial to design and assess the effects of preventative interventions (sample publications below).

- Crozara, L., Morcelli, M. H., Hallal, C. Z., Marques, N. R., Spinoso, D. H., Goethel, M. F., **Vieira, E. R.**, & Gonçalves, M. (2016). Effect of age and fall status on lower-extremity muscle activation and joint torque and power in physically active women. *Isokinetics and Exercise Science*. *24*(1), 67-77.
- Vieira, E. R.**, Mendy, A., Prado, C. M., Gasana, J., & Albatineh, A. N. (2015). Falls, physical limitations, confusion and memory problems in people with type II diabetes, undiagnosed diabetes and prediabetes, and the influence of vitamins A, D and E. *Journal of Diabetes and Its Complications*. *29*(8), 1159-1164.
- Vieira, E. R.**, Tappen, R., Engstrom, G., & da Costa, B. (2015). Rates and factors associated with falls in older European Americans, Afro-Caribbeans, African Americans, and Hispanics. *Clinical Interventions in Aging*. *10*: 1705-1710.
- Vieira, E. R.**, Berean, C., Paches, D., Costa, L., Décombas-Deschamps, N., Caveny, P., Yuen D, & Ballash, L. (2011). Risks and suggestions to prevent falls in geriatric rehabilitation: A participatory approach. *BMJ Quality & Safety*, *20*(5), 440-448.

Development, implementation and testing of interventions to reduce functional decline and falls in older adults:

The previous contributions and descriptions clearly lead to actual interventions to reduce the rate of functional decline and falls among older adults. The population of older adults (age 65 and older) increased from 48 to 63 million (31%) between 2003 and 2013. By 2030, the older adult population is projected to further increase by 50% for Whites, 99% for African-Americans, 104% for American Indians and Native Alaskans, 121% for Asians, and 153% for Hispanics (United States Department of Health and Human Services, 2014). Functional decline lead to mobility issues and falls. People with mobility impairment and history of fall have decreased strength, gait alterations, and poorer balance. Falls are the leading cause of injury and death among older adults. Fall-related medical costs are increasing: 43.8 billion in 2004, 54.9 billion in 2011, and 67.7 billion in 2014 (Stevens et al, 2008; Centers for Disease Control and Prevention, 2015). Interventions to decelerate aging-related functional decline and reduce falls are of great public health importance (sample publications below).

- Vieira, E. R.**, O'Rourke, H. M., Hunter, K., & Marck, P. B. (2014). Using video-elicitation to assess risks and potential falls reduction strategies in long term care. *Disability and Rehabilitation*, *36*(10), 855-864.
- Vieira, E. R.**, Guerrero, G., Holt, D., Arreaza, M., & Brunt, D. (2014). Limits of stability and the adaptations of wearing rocker bottom shoes. *Foot & Ankle International*, *35*(6), 607-611.
- Vieira, E. R.**, Berean, C., Paches, D., Caveny, P., Yuen, D., Ballash, L., & Freund-Heritage, R. (2013). Reducing falls among geriatric rehabilitation patients: A controlled clinical trial. *Clinical Rehabilitation*, *27*(4), 325-335.
- Batra, A., Page, T., Melchior, M., Seff, L., **Vieira, E. R.**, & Palmer, R. (2013). Factors associated with the completion of falls prevention program. *Health Education Research*, *28*(6), 1067-1079.

Complete List of My Published Work (Google Scholar):

https://scholar.google.com/citations?hl=en&user=N80IXFQAAAAJ&view_op=list_works&sortby=pubdate

D. Research Support

Ongoing Research Support:

Baptist Health of South Florida, Vieira, E. R. (FIU-PI), Gonzales-Arias, S. (BHSF-PI) (2016-2017).

Falls Prevention Following Hospital Discharge

The goal of this pilot project is to test the feasibility and generate pilot data for the proposed research grant.

The research intends to improve physical health and functional capacity and reduce falls and re-hospitalization of older adults hospitalized due to fall-related injuries.

U.S. Department of Health and Human Services, Administration for Community Living and South Florida Health Foundation. Pelaez, M. (Project Director), Vieira, E. R. (Director of Research/FIU-PI) (2014-2016)
Preventing Falls through a Statewide Sustainable Network.

The goal of this project is to increase the availability of evidence-based falls prevention programs for older adults living in Florida.

Completed Research Support:

Florida Department of Health–Chronic Disease Prevention Vieira, E. R. (Co-PI), Martinez, I. (Co-PI) (2014-2015).

Assessing Social and Physical Health of Older Hispanics in South Florida.

The goal of this project was to assess physical and social aspects of the health of older Hispanics living in South Florida.

Florida Department of Transportation Vieira, E. R. (Co-PI), McCarthy, D. (Co-PI) (2011-2014)

Safe Steps Educational Program Analysis

The goal of this project was to educate older pedestrians about proper behaviors to reduce the risk of accidents.

Alberta Health Services Vieira, E. R. (PI) (2008-2014)

Falls prevention in geriatric rehabilitation: A participatory project. Glenrose Rehabilitation Hospital, Edmonton, AB, Canada

The goal of this project was to reduce the rates of falls among geriatric rehabilitation patients in a rehabilitation hospital.