

**BIOGRAPHICAL SKETCH**

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NAME: Mihalko, Shannon Lara

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

POSITION TITLE: Associate Professor

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
Wake Forest University, Winston-Salem, NC	B.S.	05/92	Health & Exercise Science
University of Illinois at Champaign-Urbana, IL	M.S.	05/94	Kinesiology
University of Illinois at Champaign-Urbana, IL	Ph.D.	05/97	Kinesiology/Behavioral Psychology
University of Illinois at Champaign-Urbana, IL	M.S.	05/98	Public Health/Epidemiology

**A. Personal Statement**

I am the lead behavioral scientist for the multi-center Weight-loss and Exercise in Communities with Arthritis in North Carolina (WE-CAN), as well as the recently completed Strength Training and Arthritis Trial (START). I chair the Adherence and Retention Committee for both WE-CAN and the Understanding and Predicting Breast Cancer Events After Treatment (UPBEAT) studies. I was one of the three-person team that comprised the Lifestyle Resources Core (LRC) of the multi-center Physical Exercise to Prevent Disability (LIFE) Study funded by NIA; many of these participants were diagnosed with arthritis and as part of the LRC, I focused on participant adherence and interventionist training across 10 field centers. My research interests in weight loss, physical function, and social cognitive interventions, as well as my expertise in adherence and retention and supervisory role make me well qualified to train study staff in exercise and diet interventions and their underpinnings in social cognitive theory. I am involved in a number of NIH and DOD funded physical activity/weight management interventions with an emphasis on chronic conditions, including knee osteoarthritis and cancer, where my focus has been on the development of interventions grounded in a social cognitive framework, interventionist and tester training, as well as on assessments of both physical and psychological function and adherence.

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

1992-1997 Research and Teaching Assistant, Department of Kinesiology, University of Illinois, Champaign-Urbana, IL

1993-1997 Director of Lifetime Fitness Program for Seniors, University of Illinois at Champaign-Urbana, IL

1997-1999 Assistant Professor, Department of Kinesiology, The Pennsylvania State University, State College, PA

1999-present Associate Professor, Department of Health and Exercise Science, Wake Forest University, Winston-Salem, NC

2000-present Associate Professor, Division of Public Health Sciences, Department of Social Sciences and Health Policy, Wake Forest University School of Medicine, Winston-Salem, NC

2008-present Co-Director, Undergraduate Research and Creative Activities Center, Wake Forest University

## **Other Experience and Professional Memberships**

1. Member, Society of Behavioral Medicine; Topic Area Chair, Quality of Life
2. Member, Southeast American College of Sports Medicine
3. Member, Gerontological Society of America

## **Honors**

1994	Paul D. Doolen Graduate Fellowship Award for the Study of Aging, University of Illinois
1997	Student Award in Sport and Exercise Psychology, NASPSPA
1997	Laura J. Heulster Scholarship Award, Kinesiology Department, University of Illinois
2003	Dunn-Riley Professorship, Wake Forest University

## **C. Contributions to Science**

1. Adherence is a complex phenomenon involving interactions among the individual, the environment and the community. Guided by a social cognitive theoretical framework for understanding and promoting adherence, I have participated in large clinical trials for more than 15 years that have examined predictors of adherence and implemented these strategies to exceed adherence and retention goals. In the majority of these studies, I have served as the lead behavioral scientist, working with our research team across multiple study sites to oversee quality control, train study staff, and develop state of the art protocols to impact self-efficacy for successful behavior change. Listed are publications that document this work.
  - a. Mihalko SL, Cox P, Beavers DP, Miller GD, Nicklas BJ, Lyles M, Hunter DJ, Eckstein F, Guermazi A, Loeser RF, DeVita P, Messier SP. Effect of intensive diet and exercise on self-efficacy in overweight and obese adults with knee osteoarthritis: The IDEA randomized clinical trial. *Translational Behavioral Medicine* 2019; 9(2): 227-235. PMID: 29635402.
  - b. Rejeski, W. J., Mihalko, S. L., Ambrosius, W. T., Bearon, L. B., & McClelland, J. W. Weight loss and self-regulatory eating efficacy in older adults: the cooperative lifestyle intervention program. *The journals of gerontology. Series B, Psychological sciences and social sciences* 2011; 66(3), 279-86. PMID: 3078758.
  - c. Mihalko SL, Brenes GA, Farmer DF, Katula JA, Balkrishnan R, Bowen DJ. Challenges and innovations in enhancing adherence. *Control Clin Trials* 2004; 25:447-457. PMID: 15465615.
  - d. Mihalko SL, Wickley KL, Sharpe BL. Promoting physical activity in independent living communities. *Med Sci Sports Exerc* 2006; 38:112-115. PMID: 16394962.
2. Quality of life is a critical component of public health. In recent years there has been increasing evidence to support the role that physical activity has for increasing quality of life in adults with chronic disease. To move this research beyond basic associations between activity and the many descriptors of quality living, our team has examined quality of life from a theoretical perspective to examine potential mechanisms that may underlie this relationship with a specific focus on self-efficacy. Specific to older adults with knee osteoarthritis, we have demonstrated that physical activity significantly impacts self-efficacy; in turn self-efficacy acts as a significant mediator in the relationship between weight intervention and physical function, weight loss, and quality of life. It is important to consider what this may mean for the process of weight loss and ultimately, promoting weight loss maintenance.
  - a. Mihalko SL, Cox P, Beavers DP, Miller GD, Nicklas BJ, Lyles M, Hunter DJ, Eckstein F, Guermazi A, Loeser RF, DeVita P, Messier SP. Effect of intensive diet and exercise on self-efficacy in overweight and obese adults with knee osteoarthritis: The IDEA randomized clinical trial. *Translational Behavioral Medicine* 2019; 9(2): 227-235. PMID: 29635402.
  - b. McAuley E, Blissmer B, Katula J, Duncan TE, Mihalko SL. Physical activity, self-esteem, and self-efficacy relationships in older adults: A randomized controlled trial, , *Annals of Behavioral Medicine*, Volume 22, Issue 2, 1 June 2000, Pages 131–139. PMID: 10962706.
  - c. McAuley E, Katula J, Mihalko SL, Blissmer B, Duncan TE, Pena M, & Dunn E. Mode of physical activity and self-efficacy in older adults: a latent growth curve analysis. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences*, 54(5), 1999, P283–P292. PMID: 10542821.
  - d. Mihalko SL, Dobrosielski DA, Brubaker PH, Rejeski WJ. Do changes in functional capacity influence quality of life? *AJMS* 2003;5:357-362.

## **Complete List of Published Work in MyBibliography**

## **D. Research Support**

### **Ongoing Research Support**

5R01CA199167-02 (PI: Hundley) 09/01/2015-09/31/2020  
NCI  
Understanding and Predicting Fatigue, CV Decline & Events After Breast CA Treatment (UPBEAT)  
This multi-center study will be the first to define and fully characterize the time course of Adj-C cardiotoxicity and factors (with and without radiation treatment) that influence the development of subclinical CV dysfunction, exercise intolerance, fatigue, and CV events among women of different ages and races/ethnicities, ultimately informing future development of therapies and risk factor prediction models that can be used to prevent CV events and thereby improve overall breast cancer-related survival.  
Role: Co-Investigator; PI of Sub-contract to WFU-Reynolda Campus

5U01AR068658-03 (PIs: Messier, Callahan) 09/01/2015 – 08/31/2020  
NIH/NIAMS  
Weight loss and exercise for communities with arthritis in North Carolina (WE-CAN)  
This study is a pragmatic community based trial designed to determine whether an 18-month diet-induced weight loss with exercise intervention significantly decreases pain in overweight and obese adults with knee OA relative to an attention control group.  
Role: Co-Investigator

1R21CA226960-01A1 (Hundley) 12/01/2018 – 11/30/2019  
NIH/NCI  
Improving exercise capacity with a tailored physical activity intervention in lymphoma patients undergoing treatment (PALS)  
The purpose of this study is to assess the utility of a patient-centric, individually tailored physical activity intervention implemented throughout chemotherapy in lymphoma patients to attenuate physical inactivity, reduce fatigue, and preserve exercise capacity, cardiac and cognitive function, strength, and health-related quality of life: all metrics that associate with or reduce cardiovascular risk.  
Role: Co-Investigator

### **Completed Research Support**

W81XWH-14-16-2001 (PI: Messier) 12/15/2015 – 12/14/2018  
USAMRAA (U.S. Army Medical Research Acquisition Activity)  
The strength training and runners study (STARS)  
The primary aim of this randomized clinical trial is to compare the effects of a 9-month strength training program to a control group on the incidence of overuse, lower extremity, running injuries in female adult recreational and competitive runners during and 9 months subsequent to the training period.  
Role: Co-Investigator

5R01AR059105-05 (PI: Messier) 09/01/2011– 08/31/2018  
NIH/NIAMS  
Strength Training and Arthritis Trial (START)  
This study examined the effect of long term intensive resistance training on function, knee joint loads, inflammation, and disease progression in 372 older adults with knee osteoarthritis.  
Role: Co-Investigator

W81XWH-12-1-0360 (PI: Messier) 8/15/2012 – 8/14/2016

USAMRAA (U.S. Army Medical Research Acquisition Activity)

The runners and injury longitudinal study: Injury recovery supplement

This study identified the mechanistic underpinnings of recovery from overuse soft tissue running injuries. It informed whether a return to pre-injury activity is appropriate, if further treatment is required, and whether an injured runner exhibits chronic biomechanical and strength deficits that increase the risk of lower extremity OA, and disability later in life.

Role: Co-Investigator

U01AG022376 (PI: Pahor)

09/1/2009-08/31/2015

NIH

Physical Exercise to Prevent Disability Main Trial (LIFE)

The major goal of this project was to conduct a definitive phase 3 RCT to determine whether a long-term structured physical activity program can prevent mobility disability in older persons, defined as the incapacity to walk 400 meters.

Role: Co-Investigator

W81NLC00243001 (PI: Messier)

06/01/2010 – 03/31/2013

United States Army Research Office (ARO)

Towards the Reduction of Knee Injuries in the Military (TRAILS)

The purpose of this project was to quantify a discrete set of biomechanical, physiological, and behavioral risk factors that will distinguish runners who sustain an anterior knee pain overuse running injury from runners who remain injury free.

Role: Co-Investigator

DAMD17-01-1-0734 (PI: Avis)

10/01/01 - 09/30/07

DOD

A treatment stage-specific approach to improving quality of life for women with ovarian cancer

To identify appropriate interventions for women at different treatment stages of ovarian cancer, the first goal of this project was to determine the specific problems women face at each stage and the kinds of interventions they would want to improve their quality of life. Second, the project examined characteristics of women related to improved QOL.

Role: Co-Investigator

RG0572 (PI: Mihalko)

04/01/04 - 03/31/07

Piedmont Alliance for Cancer Research and Education

Research on Optimal Recovery Practices: A Pilot Study in Women with Ductal Carcinoma in Situ (DCIS)

The aim of this study was to describe the physical functioning and health-related quality of life (HRQL) of women recently treated for DCIS and to determine if a moderate, tailored exercise intervention, as compared to enhanced usual care, significantly improved physical outcomes, including cardiorespiratory endurance, muscular strength and flexibility, and HRQL in women with DCIS. In addition, this study made possible a comparison of DCIS participants with women diagnosed with stage I-III breast cancer who had been recruited for our larger prospective trial to describe differences in outcome measures by severity of diagnosis, as well as differential effect of the exercise intervention.

Role: Principal Investigator

BC004060 (PIs: Anderson, Mihalko)

10/01/01 - 09/30/06

DOD

DOD Breast Cancer Research Program Behavior Centers of Excellence Award: Quality of life and functional status across the life course. Substudy: Research on Optimal Recovery Practices in Breast Cancer

The aim of this project was to examine the influence of an exercise intervention on physical and psychosocial health outcomes. Specifically, intervention effects on self-efficacy, quality of life and functional outcomes were determined. Additionally, adherence to the physical activity program was examined at 18-months of follow-up.

Role: Co-Principal Investigator