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Helping Elders Living with Pain (HELP)

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Helping Elders Living with Pain (HELP)

Tongjian You, PhD, Principal Investigator - Department of Exercise and Health Sciences

Suzanne G. Leveille, PhD, RN, Principal Investigator - Department of Nursing

Background

Accumulating evidence supports that more pain, whether measured by number of pain sites or pain severity, is associated with poorer cognitive function and mobility, and fall risk in older persons. Mind-body exercise which holistically integrates physical and cognitive activity offers the possibility not only of alleviating pain but also improving attention and mobility in the many older adults who have chronic multisite pain.

Study

The HELP study, which is a two-year study supported by a R21 grant from National Institute on Aging, is a direct extension of our previous work examining attentional demands of chronic pain in the older population. The HELP study is designed to compare two different exercise programs - simple body exercise and mind-body exercise, in their effects on pain symptoms, cognitive function, dual-task walking ability, and levels of pain-related biomarkers in community-dwelling older adults with multisite pain who are at risk of falling.

Goal

The goal of the study is to determine which exercise program may be more effective in improving pain symptoms and functional difficulties related to chronic pain in older adults.



The Research Team

(pictured from left to right)

Tongjian You, PhD, Principal Investigator - Exercise and Health Sciences

Netsanet Tsegai, Research Assistant - Exercise and Health Sciences

Huan Zhang, Exercise Instructor - College of Nursing and Health Sciences

Lauren Tierno, Research Assistant - Exercise and Health Sciences

Elisa Ogawa, Study Coordinator - Exercise and Health Sciences

Saurja Thapa, Study Coordinator - Nursing

Suzanne G. Leveille, PhD, RN, Principal Investigator - Nursing

(Not Shown: Satoshi Nagae, Tania Godbout, Kerry Sepeck - Exercise and Health Sciences)

Project Aims

1. To assess the feasibility and acceptability of a 12-week randomized controlled mind-body exercise program in preparation for a larger trial in community-residing older adults.
2. To examine the efficacy of mind-body exercise on pain characteristics, pain-related biomarkers, cognitive function and cognitively-mediated mobility.

Broader Impacts

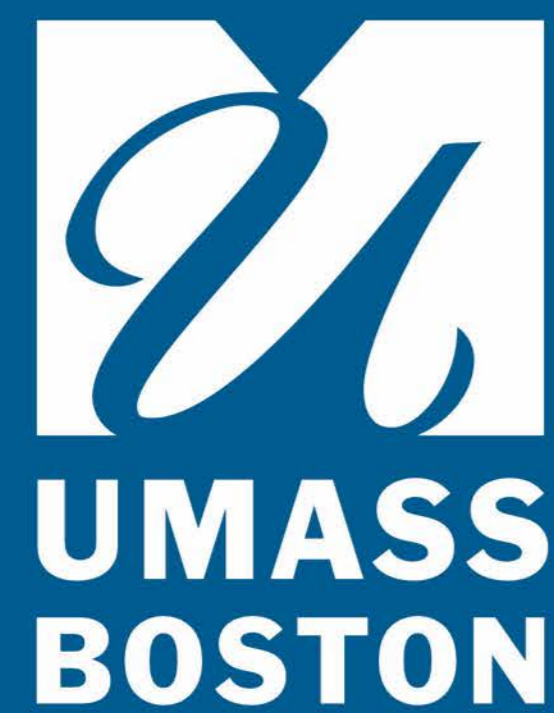
This study will provide novel insights into the effects of a non-invasive behavioral intervention on chronic multisite pain and the associated cognitive-motor functions in older adults.

The results of this exploratory study will provide critical pilot data that will guide and inform a larger randomized controlled trial designed to establish the clinical significance of mind-body exercise on chronic multisite pain in older adults and to investigate the mechanisms by which mind-body exercise may improve chronic pain and pain-related cognitive-motor functions using brain imaging and human genetic approaches.

The
Study

MOBILIZE
Boston

References



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A Tough Winter

With Boston's unexpected and exceptionally difficult winter, we delayed recruitment until mid-March. We have used the quiet time in the winter months to prepare for a more robust recruitment and enrollment to proceed as soon as the weather allows.

- Sending targeted mailings to 2000 seniors.
- Obtained approval from the Massachusetts Executive Office of Elder Affairs to recruit volunteers through senior centers
- Planning for a new intervention site in Quincy

We anticipate enrolling multiple cohorts over the next several months at both locations in a staggered enrollment process, allowing for concurrent exercise programs at the 2 sites.

Activities - Year 1

Setup our research clinic and recruiting

- During this period, we purchased equipment and supplies, set up our research clinic, conducted staff training, and obtained approval by the Institutional Review Board of the University of Massachusetts Boston

Enrolled the first group of study participants

- We recruited and randomized the first group of participants, conducted pre and post-exercise assessments.

Participant Summary - Year 1

- The first group of participants completed the 12-week exercise programs in December 2014.
- After the programs ended, they completed their post-exercise testing in the study clinic, based at UMass Boston.
- Over this 4-month period, 3 of the 4 individuals in the study successfully completed all testing and exercise classes. 1 subject withdrew.
- 3 subjects attended more than 90% of the scheduled classes and the exercise interventions were safely conducted without any adverse events.

Collaborators & Community Partners

GoKids Boston, University of Massachusetts Boston
Boston, MA

Newton Council on Aging
Newton, MA

The Bishop Mackenzie Center
Newton MA

Velocity Dance Company
Quincy, MA

UMass Medical School
Worcester, MA

Beth Israel Deaconess Medical Center
Boston, MA

Brigham and Women's Hospital
Boston, MA

Harvard Medical School
Boston, MA

Get Involved

We are still looking for participants for this important study!

If you are 65 or older, experience pain in 2 or more body locations, and live a sedentary life, you may qualify to participate.

Both exercise programs run for 12 weeks. You will be asked to attend a one hour exercise class, twice a week. You will also be encouraged to perform a home exercise program once per week.

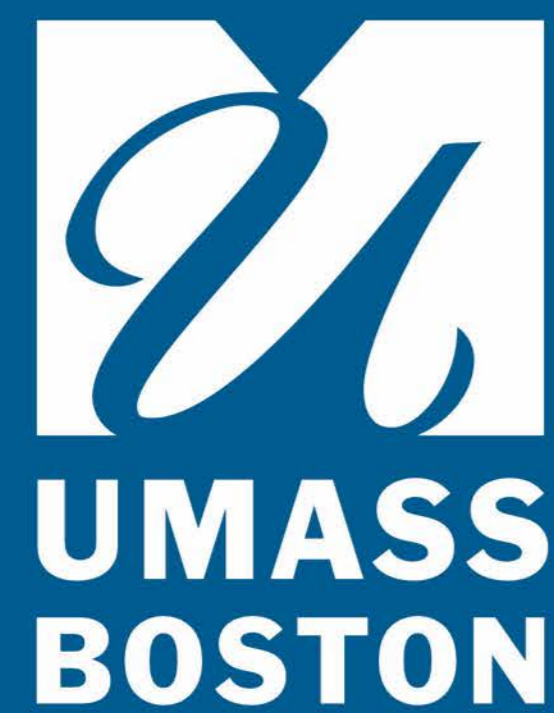
The simple body exercise group will be asked to walk and perform stretching exercises. The mind-body exercise group will engage in Tai Chi exercise.

Call: 617.287.7394

Email: thehelpstudyumb@gmail.com

Website: www.umb.edu/helpforelders

Home



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MOBILIZE Boston

In a previous study, the MOBILIZE Boston Study Pain Project, led by Dr. Suzanne Leveille and colleagues found that older adults living in the community who have persistent musculoskeletal pain were more likely to have falls and disability compared to their peers who did not have musculoskeletal pain.

Currently, in the MOBILIZE Boston Study II, we are examining the underlying mechanisms that might explain the risk for falls related to pain.

Another important step in the research is to determine whether certain types of exercises might be beneficial in reducing the risk for falls in older people living with persistent pain.

We are starting to study this question in the HELP study, where we are piloting a comparison of different types of exercises to see if they improve pain symptoms and related cognitive and mobility difficulties.

Design

The MOBILIZE Boston study is a population-based cohort study of older adults living in the urban and suburban communities within a 5-mile radius of Hebrew Senior Life in Boston. Participants aged 70 years and older (n=749) were recruited door-to-door; response rate among eligible persons was 58%. Baseline assessments took place from 2005-2007.

Eligibility

Inclusion Criteria

- Age >70 years (or >65 if living with a participant)
- Able to communicate in English
- Planned to be in area for 2 years
- Able to walk 20 feet without assistance

Exclusion Criteria

- Terminal disease
- Moderate to Severe Cognitive Impairment (MMSE <18)

Baseline Exam

Home Visit: Health interview, medication review, environmental assessment

Clinic Visit: Musculoskeletal exam, height and weight, physical performance tests, laboratory tests, vision & neuropathy tests

Measures

Pain Assessments:

- McGill Pain Map (pain locations)
- Joint and Back Pain Questionnaire (JPQ) for location and severity
- Brief Pain Inventory (BPI) Pain Subscales
- Bodily Pain Rating from SF-36

Mobility and Falls:

- Self-reported difficulty or inability to walk ¼ mile or climb stairs
- Monthly fall calendar postcards

Sociodemographics:

- Age
- Gender
- Race
- Income
- Education,

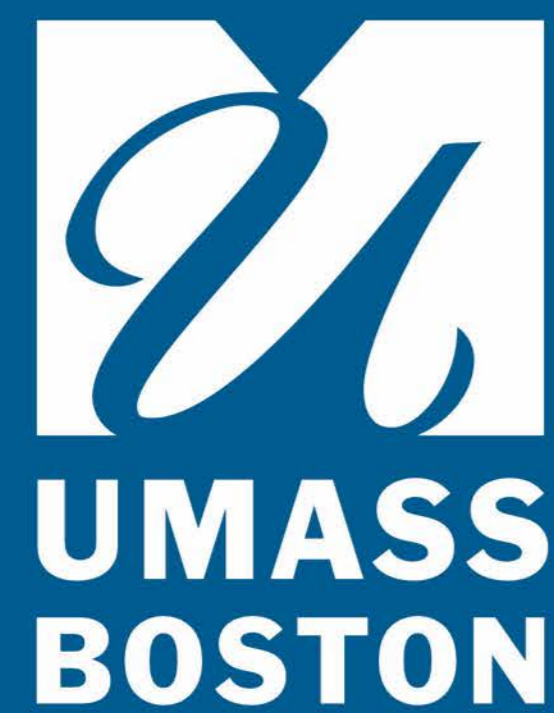
Health and Function:

- Body mass index
- MMSE
- Falls hx
- Physical activity

Findings

1. Chronic pain affects about 2/3 of the older population, whether measured by pain location, severity or burden.
2. A single item measure assessing current pain is likely to miss pain in about half of older persons who report chronic pain.
3. Persons who have pain in any one joint area are very likely to have pain affecting multiple joints, therefore pain assessment in older adults should include all joint areas.
4. Older adults who have pain in multiple sites have a 50% higher risk of falls than those who do not have persistent pain.
5. Chronic pain contributes to declining mobility over time in older adults.

Home



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[Older adults with pain fall significantly more often, study finds.](#)



[Older adults who walk out of necessity are at highest risk for outdoor falls.](#)

Home