Evidence-Based Physical Activity Methods and Interventions — Proven to Get People Movin'

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NEW Physical Activity Programs for Older Adults

Physical Activity for Life for Seniors (PALS)
  Rural
  African American

Stand Up & Move More

Walk with Ease
• Participating in regular PA is essential for healthy aging (Bouaziz et al., 2017; National Institutes of Health, 2015; Vina et al., 2016)

• PA improves physical function and health outcomes in older adults (Tappenden et al., 2012)

• Behavior change skills are necessary to help sedentary older adults initiate and maintain PA (Brawley et al., 2003)

• Improving health outcomes through self-management processes to promote behavior change is essential (Ryan & Sawin, 2010)

• Goal: To increase mobility function (Usual Gait Speed, Timed Up and Go, and 6 Minute Walk) through group exercise and a maintenance phase to keep older adults exercising once the group ends

Funded by Margaret A. Cargill Foundation 2014-17
## PALS Overview

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<th>Intervention Components</th>
<th>Mode</th>
<th>Self-Management Concepts</th>
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| **Exercise**            | **Type:** Aerobic, strength & resistance training  
                          **Intensity:** Moderate  
                          **Frequency:** Group 3 times/wk for 10 wks  
                          Individual 2 times/wk for 10 wks  
                          **Duration:** 1 hour | • Self-efficacy  
                          • Self-regulation  
                          • Outcome Expectations  
                          • Social Support |
| **10-week Lifestyle Behavior Change Class** 30 minutes, 1 day/wk | 1. Safety  
                          2. Tracking PA  
                          3. Preventing Relapse  
                          4. Eating Healthy  
                          5. Celebrating Success | 6. Setting Goals for PA  
                          7. Overcoming Barriers  
                          8. Building Motivation  
                          9. Managing Stress  
                          10. Staying Active |
| **Frequent Phone Calls for 6 months** | Conducted by PALS Leaders |
Diagonal Wall Touch
Health educators deliver intervention
Tailored to rural older adults (vs urban)
Includes a 6-month follow-up
Assesses behavior change processes
Added 2 booster sessions during 6 month maintenance
Modifications to individual exercises due to disability, obesity, arthritis, pain
Implemented in rural WI (Wood, Langlade, Marathon, Lincoln, Eau Claire & Waukesha counties)

Rural PALS: What was adapted?
PALS Participants:
> 60 years of age
<= 30 minutes of continuous PA/week
Walk >= 3 minutes without resting
Commit to 8 ½ month PALS program

• Participant Characteristics (n=61)
  • Mean age 72.34 (8.0) years
  • BMI 31.68 (6.53)
  • Females (n=57), Males (n=4)
Physical Function Outcomes
Pre-test to Post-10 Weeks (p<.05) and Post-6 Months (p<.05)

Timed Up and Go

Usual Gait Speed

6-Minute Walk
Self-Regulation & Physical Activity Outcomes
Pre-test to Post-10 Weeks (p<.05) and Post-6 Months (p<.05)

### Total Self-Regulation
- Pre-test: 1.5
- Post-10 Weeks: 2.5
- Post-6 Months: 2.5

### Total PA
- Pre-test: 1500
- Post-10 Weeks: 4000
- Post-6 Months: 4000

### Moderate PA
- Pre-test: 500
- Post-10 Weeks: 2000
- Post-6 Months: 1500

Caloric expenditure/week
Self-Regulation

p<.000

- Time Management
- Relapse
- Reinforcement
- Social Support
- Goal Setting
- Self-Monitoring

Pre-test vs. Post-test comparison
• No difficulty recruiting participants although few males
• ADRCs are good resource for delivering PALS
• Health educators were effective
• Participants maintained their PA for 6 months
• Exercises were easily transitioned to home setting
• PALS community sites were open to continuation once 10-week group exercise completed
• Difficulty recruiting PALS graduates to co-lead PALS
• High completion (only 8.5% dropped out)
• Participants graduated/enrolled into other EB programs afterwards
Testimonials

- “I am able to walk up the stairs at the Post Office without having to pull myself up with the railing.”
- “I can get out of the car without worrying about falling.”
- “Got me movin’ and groovin’ for the day.”
- “I am not out of breath as often.”
- “Took the edge off boring exercise.”
- “I enjoyed the class and wish it would go on forever!”
The “Circuit Breakers”
<25% of older AA participate in recommended levels of PA contributing to disability, obesity, diabetes, HTN and more co-morbidities compared to Caucasians

In WI, 47.3% > 65 years of age have diabetes. Of those with diabetes, 53% are obese, 71% have HTN, 69% have high cholesterol (WI BRFSS, 2010)

Older AAs rarely participate in PA because existing programs often do not incorporate cultural-specific factors that influence recruitment

Culturally tailoring interventions is recommended to improve health outcomes, enhance recruitment and participation and minimize attrition of AAs
Cultural Adaptation Process

Get feedback from 3 Community Advisory Boards
1) Madison CARDS
2) Madison CAB
3) Milwaukee CAB

Run the Program with CAB Suggestions Implemented

Post Program Focus groups:
Milwaukee- 2 participant groups and 2 leader groups
Madison- 2 participant groups and 1 leader group

Revise Program based on feedback from focus groups. Apply for further funding to test adapted program.

Funded by UW-Madison Institutional Clinical Translational Research Award 2014-2017
Community Advisory Board, PALS Leader and Participant Feedback

- Focus on improving health rather than independence
- PALS Leaders: Community members with health backgrounds
- Implement PALS in apartment complexes, churches
- Provide transportation if needed
- Add line dancing for warm up and cool down
- Revised Lifestyle Behavior Change Classes to reflect older AAs
- Provide incentives to show appreciation and recognition of contributions (no cost exercise classes, leave exercise equipment at sites, $10 for each evaluation and $25 for focus groups)
Focus Group Feedback

- No age limit
- Hold a participant orientation before program begins
- Increase variety of exercises
- Have a day off between exercise classes
- Let participants choose the music
- Pictures on the demonstration posters and PALS manuals should be culturally appropriate
- Modifications to individual exercises due to disability, obesity, arthritis, pain
- Include recipes in the PALS Participant Manuals
Mean age 67.76 years (6.41)
Gender: 75.6% female
Mean BMI 34.23 (9.20)
Comorbidities:
  o Depression 36.6%
  o Arthritis 80.5%
  o HTN 80.5%
  o Diabetes 43.9%
Overall Attrition 13%
  o 1 Milw participant due to illness (COPD)
  o 4 Madison participants due to health related problems (pneumonia, surgery, uncontrolled hypertension) all in winter months
Physical Function (p<.05)

**TUG**

- Pre-test: 12 seconds
- Post-test: 10.5 seconds

**UGS**

- Pre-test: 0.9 meters/second
- Post-test: 1.15 meters/second

**6MW**

- Pre-test: 1250 feet
- Post-test: 1300 feet
Physical Activity (p<.05)

- Total Physical Activity
- Moderate Physical Activity

Caloric expenditure/week

Pre-test
Post-test

Comparison of caloric expenditure before and after intervention.
Self-Efficacy Barriers (p<.05)

Pre-test: 4.05
Post-test: 4.15

Outcome Expectations (ns)

Pre-test: 4.1
Post-test: 4.15
Self-Regulation (0=never to 4=very often)

- Goal Setting
- Self-Monitoring
- Relapse Prevention
- Social Support
- Reinforcement
- Time Management

Pre-test vs. Post-test comparison.
- Obstacles regarding transportation
- SET Ministries is an excellent resource in Milwaukee housing complexes (need a champion)
- Strong support from community
- Phone calls were not effective in contacting participants in the 6-month follow-up period
- Participants ran their own exercise class, walked, formed groups once the program ended
- Very strong social component
- Participants took ownership of PALS
PALS: Next Steps

Rural PALS:
- Submitting funding application to Margaret A. Cargill Foundation for PALS dissemination
- Working with CAARN and WIHA to disseminate PALS across WI (within 1-2 years) and then nationally (within 3 years)

Culturally Adapted AA PALS:
- Applying for federal funding to test the culturally adapted PALS in a RCT so can become evidence based program
- Discussing philanthropic funding to offer PALS while waiting on RCT funding
- Long term goal is dissemination through WIHA

Culturally adapt for other populations
• BIG 10 Network- PALS program was chosen to be highlighted on the BIG 10 Network during commercial spots. The purpose of the highlights are to spotlight the University’s research and outreach.
THANK YOU!

PALS Participants and Leaders
SET Ministries
Gina Green-Harris
North/Eastside Senior Coalition
Milwaukee and Madison CAB members
Aging Disability Resource Centers
Community Academic Aging Research Network (CAARN): Jane Mahoney, Jill Renken, Shannon Myers
PALS Project Manager - Lucretia Sullivan-Wade
Gretebeck Research Team - Katie Mead, Carly Babino, Wan-Chin Kuo, Cheyenne Mangan, Emily Hammer, Michelle Peterson
PALS Manual Designer - Jennifer Morgan
Co-investigators - Jane Mahoney, Randall Gretebeck, Earlise Ward
Research indicates that sedentary behavior (prolonged sitting) is associated with functional loss and diminished ability to carry out activities of daily living.

Only an estimated 8% of older adults meet national physical activity guidelines.

Shifting the focus to reducing sitting time is emerging as a potential new intervention strategy.
Stand Up: program overview

Stand Up & Move More

- Four week community based workshop (plus refresher session at 8 weeks), "Stand Up & Move More"

- Delivered by 1 trained instructor.

- Based on self-regulation theory, the sessions elicit ideas from older adults regarding how they can reduce their sitting time, help them set practical goals, develop action plans to reach their goals, and refine their plans across sessions to promote behavior change.

- Sedentary behavior, physical activity levels, functional performance, and health-related quality of life are assessed before and after the intervention to examine the effectiveness of the program.

- Feasibility of implementing the program by our community partners will be assessed via interviews.
• Pilot results

We found significant decreases in sedentary behavior, increases in physical activity, and improvements in mobility and vitality in a small sample of older adults.
Walk with Ease: program overview

- The Arthritis Foundation Walk with Ease Program is an evidence-based physical activity and self-management education program.
- It can be done by individuals using the Walk With Ease guidebook on their own, or by groups led by trained leaders.
- Developed for people with arthritis who want to be more physically active but is also appropriate for people without arthritis, particularly those with diabetes, heart disease and other chronic conditions who need to be more active.
- The only pre-requisite is the ability to be on your feet for at least 10 minutes without increased pain.
Walk with Ease: structure

• Both the self-directed, individual format and the group format are structured as six-week walking programs.

• Individuals using the workbook on their own are encouraged to work up to walking at least three times a week and to use all of the resources in the workbook over a six-week period.

• The group format classes meet three times a week for six weeks (a total of 18 sessions).

• Depending on the physical capabilities of the group and the amount of time they spend socializing, the average class session length may last as little as 45 minutes in the beginning weeks of the program but may increase to an hour or more as the group improves their fitness level.

• Standardized scripts for the class sessions suggest that the walking time progresses an additional 5 minutes each week, as the group capability allows.

• Recommended class size is 12-15 participants per leader. (Groups may have more than one leader, but not required)
• While walking is the central activity, Walk With Ease is a multi-component program that also includes health education, stretching and strengthening exercises, and motivational strategies.

• All participants receive the Walk With Ease guidebook.

• Both the Guidebook and the class “lecturettes” provide information on arthritis, managing pain and stiffness, tips on proper clothing and equipment, self-monitoring, what to do when exercise hurts, and how to overcome barriers.

• Participants are encouraged to do stretching exercises when they walk and strengthening exercises twice a week.

• The program also features motivational tools including self-tests, a six week contract and walking diary forms to help participants identify their needs and interests, to set goals and rewards, and to track progress.
Walk with Ease: Outcomes

- Evaluated by the Thurston Arthritis Research Center and Institute on Aging at the University of North Carolina. A rigorous scientific trial with 462 individuals from 31 rural and urban communities found that both the self-directed and group formats were safe and effective.

- Participants experienced decreased disability; improvements in levels of pain, fatigue, stiffness and self-confidence; and better perceived control over arthritis, balance, strength and walking pace.
Individuals who are or become Walk with Ease Leaders in Wisconsin will be asked to register with the Wisconsin Institute for Healthy Aging, submit Class Notification Forms to WIHA and administer short pre- and post- downloadable surveys to participants.

Qualifications:

- Successful completion of the ON-LINE (approximately 3 hours) Arthritis Foundation WWE Program Leader training workshop through the Aerobics and Fitness Association of America (www.afaa.com). ($89)
- Agree to lead at least one class series annually and submit participant data to the Wisconsin Institute for Healthy Aging.
- Current certification in CPR is required; first aid certification is strongly recommended.
- Affiliation with a facility or organization that can provide space for the classes.
Summary of what works in physical activity programming for older adults

- They like socialization
- Baby boomers want to be active (Yoga, Tai Chi, exercise programs)
- Easy to recruit for these programs
- Little barriers seen to committing for multiple weeks, ongoing
- Provide variety of options to keep them engaged
- Doesn’t need to be complicated! Simple. Stand more. Walk. Etc.
- Great way to get folks into programming and other opportunities down the road (SO, LW, HLWD, PT, etc)
- Great continuation for after SO
- Most success when people continue in programming – accountability and socialization
Choosing the program that best fits your community and agency

- Community health need
- Target population interest & feasibility
- Program effectiveness and applicability of outcomes
- Partnerships
- Sponsoring agency feasibility (cost, time, staff)