



Long Term Exercise Adherence in Community Dwelling Older Americans with Knee Osteoarthritis



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▸ Osteoarthritis (OA)

- Chronic, slowly progressive, non-systemic disease that has no effective cure
- Highly prevalent condition that is the primary cause of pain and disability in older adults worldwide
- Primarily affects weight-bearing joints: **knee**, hip, back, hand, foot
- OA sufferers are at higher risk for co-morbidities, e.g. diabetes, heart disease, insomnia, and depression

Exercise for OA

- Recommended as a first-line intervention approach for OA
- Optimal type has not been determined
- Poor exercise adherence is a major issue especially among older adults



▸ Purpose

- Compare adherence between Hatha yoga (HY) and aerobic/strengthening exercises (ASE) 12 months after an intervention program in community-dwelling older Americans
- Describe the characteristics of home HY and ASE practices
- Identify motivators and barriers to HY and ASE adherence
 - *Adherence defined as following the prescribed HY/ASE program independently at home*

Methods

- 44 participants who completed the original trial were invited
- Five semi-structured focus group interviews
- Sessions held in community centers in the Twin Cities
- Transcript-based qualitative content analysis approach was used



Methods

- N=29 participants from both HY and ASE groups were present:
 - Group 1: HY (n=3); ASE (n=2)
 - Group 2: HY (n=2); ASE (n=3)
 - Group 3: HY (n=3); ASE (n=3)
 - Group 4: HY (n=2); ASE (n=3)
 - Group 5: HY (n=3); ASE (n=5)

Exercise Intervention Programs

- Weekly 45 minutes HY program specially designed for knee OA and 30 minutes of home HY practice 4 days a week for 8 weeks
- Weekly 45 minutes AS program recommended by the Arthritis Foundation and 30 minutes of home AS program 2 – 4 days a week for 8 weeks



Results - Adherence

- N = 29 (70% response rate), mean age: 71 years; 28 females
- Adherence rate during 8-week intervention period was $\geq 50\%$
- Adherence to the prescribed level of HY or ASE regimen during the 1-year follow-up was poor and episodic
- Majority of participants incorporated only selected HY poses/ASE learned in class into their exercise habits
- Only a few signed up for either HY or ASE classes

Results - Motivators

HY Group

- Reduced knee pain/swelling
- Improved muscle tone
- Increased flexibility
- Better stress coping
- More relaxation
- Having family support

ASE Group

- Pain avoidance
- Improving muscle strengths
- Weight loss
- Stress reduction
- Having a routine

Results - Barriers

HY Group

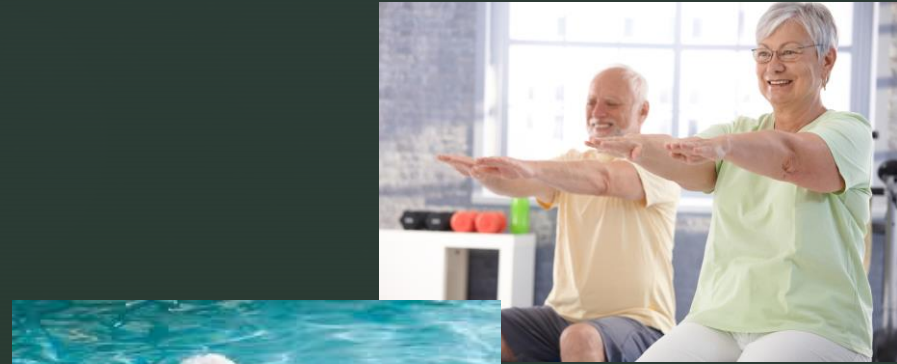
- Caretaker responsibility
- Lack of structure
- Unsure of accuracy of poses
- Time constraints
- Health issues

ASE Group

- Competing interests on time from family
- Life events
- Injuries and health issues
- Depressed moods

Results

- Strategies used for increasing exercise adherence in both groups:
 - Engaging in activities that are enjoyable and easy to do
 - Keeping track of the amount of activities



Conclusions

- Most participants understood the importance of exercise for managing their OA and attempted to do so
- Long-term exercise adherence was poor
- Participants incorporated some elements of the intervention into their own exercise regimens
- Exercise preference and individual's ability played an important role in exercising independently among OA sufferers
- Information on exercise barriers and strategies for long-term adherence can inform future OA exercise intervention strategies and studies

Future Research

- Need more tailored exercise interventions for OA
- Tailored interventions to group members close in proximity to give support to each other
- Provide videotapes or audiotapes so participants can view or listen for accuracy of exercise
- Schedule times in the morning for exercise prior to daily fatigue
- Provide times for group exercise with support for caregiving responsibilities