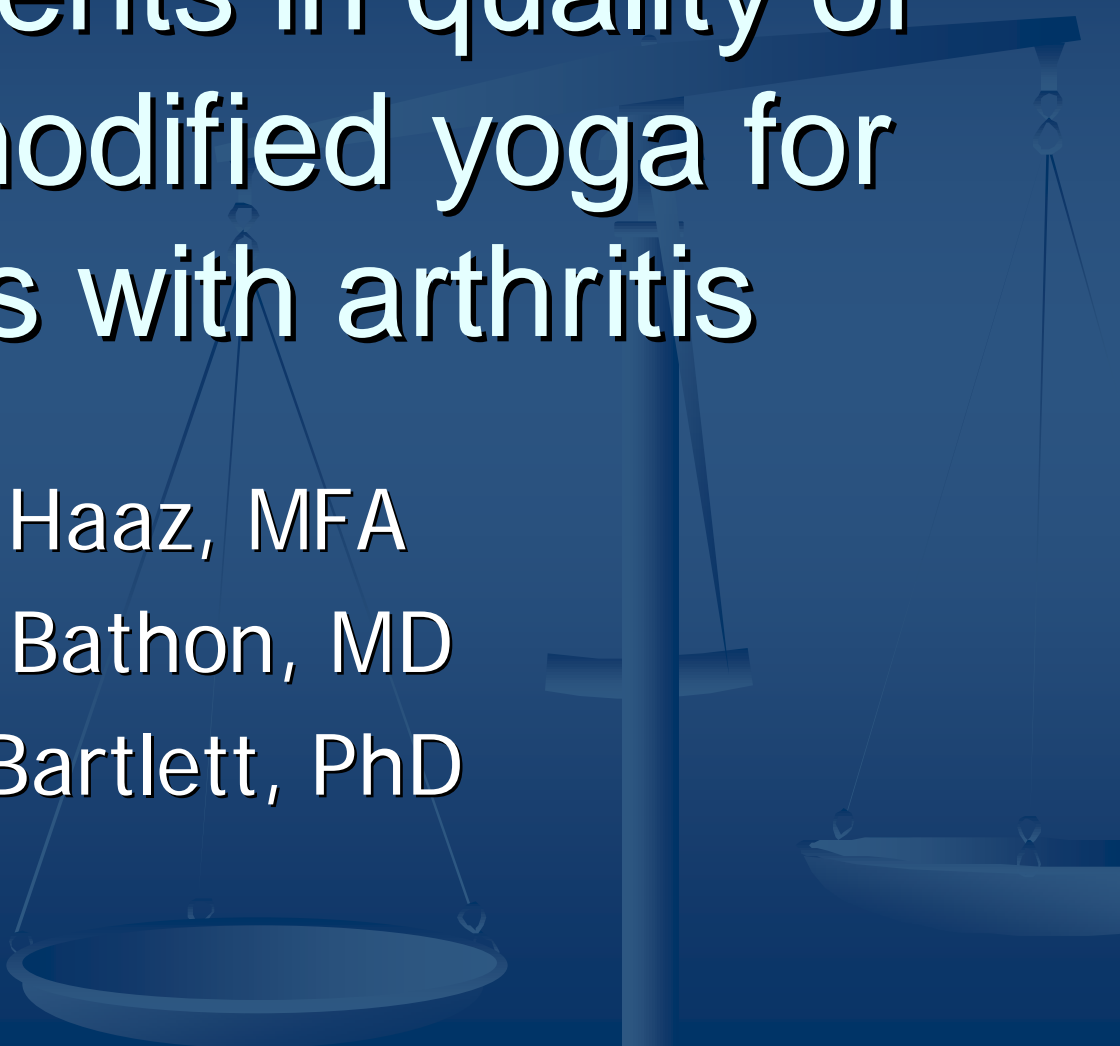


Improvements in quality of life with modified yoga for persons with arthritis



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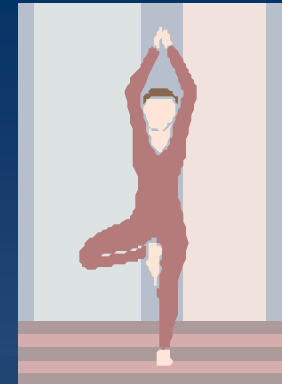
Background- Arthritis

- Chronic, painful joint disease
- Autoimmune or degenerative
- Affects 70 million Americans
- Leading cause of disability in US
- Annual cost of 128 billion
- Some treatments have been withdrawn from market or have serious side effects
- None are curative



Background- Yoga

- Origins in ancient India
- Way of living
- Preparation for meditation
- Variety of health benefits
- Means "union"
- Focus on balance, unification, acceptance
- Includes moving sequences, isometric poses, breathing techniques, relaxation, chanting, meditation



CAM for Arthritis

- Back pain, joint pain, arthritis are common conditions for use of CAM (Barnes et al 2002)
- Most use along with conventional tx.
- Yoga among most commonly used therapies
- 2/3 of rheumatology patients used CAM (Rao et al 1999)
- 12.2% of OA patients tried yoga (Bartlett et al)

Why Yoga for Arthritis?

- Maintain joint mobility
- Prevent/slow muscle loss
- Reduce instability
- Stress reduction (PNI)
- Emphasis on body awareness
- Acceptance of limitations
- Non-competitive
- Low impact
- Popular and accessible

Current Literature

- Improved pain, tenderness, ROM for patients with hand OA (Garfinkel et al, 1994)
- Improved hand grip strength for patients with RA (Haslock and Ellis, 1994; Dash and Telles, 2001)
- Decreased pain and disability for obese patients with knee OA (Kolasinski et al, 2005)

Hypothesis

- We hypothesize that individuals with arthritis will have impaired QOL at baseline, compared to age and gender-matched controls
- We further hypothesize that engaging in a modified yoga program will be associated with improvements in QOL, as measured by the Physical Component Summary of the SF-36

Study Design

- RCT to assess effect of 8-week gentle yoga program on QOL for patients with arthritis
- 2 hour-long classes per week plus 1 hour of structured home practice
- Modifications for individual limitations
- Comparison of yoga to usual care waitlist control

Examples of Modifications



What is QOL?

- Subjective measure of overall wellbeing
- Includes physical, social, emotional
- General and specific measures
- Most utilized general measure is SF-36
- 2 summary scores: physical, mental
 - 8 domains: physical function, physical roles, pain, general health, vitality, social function, emotional roles, mental health

Participants

Inclusion Criteria	Exclusion Criteria
Age 18-65	Unstable RA, other inflammatory disease, fibromyalgia
Arthritis diagnosis	Requires assistance to ambulate
Sedentary	Medical contraindication to exercise program
Able to attend classes	

Participants

64 Participants Enrolled and Randomized



Participants (N=64)

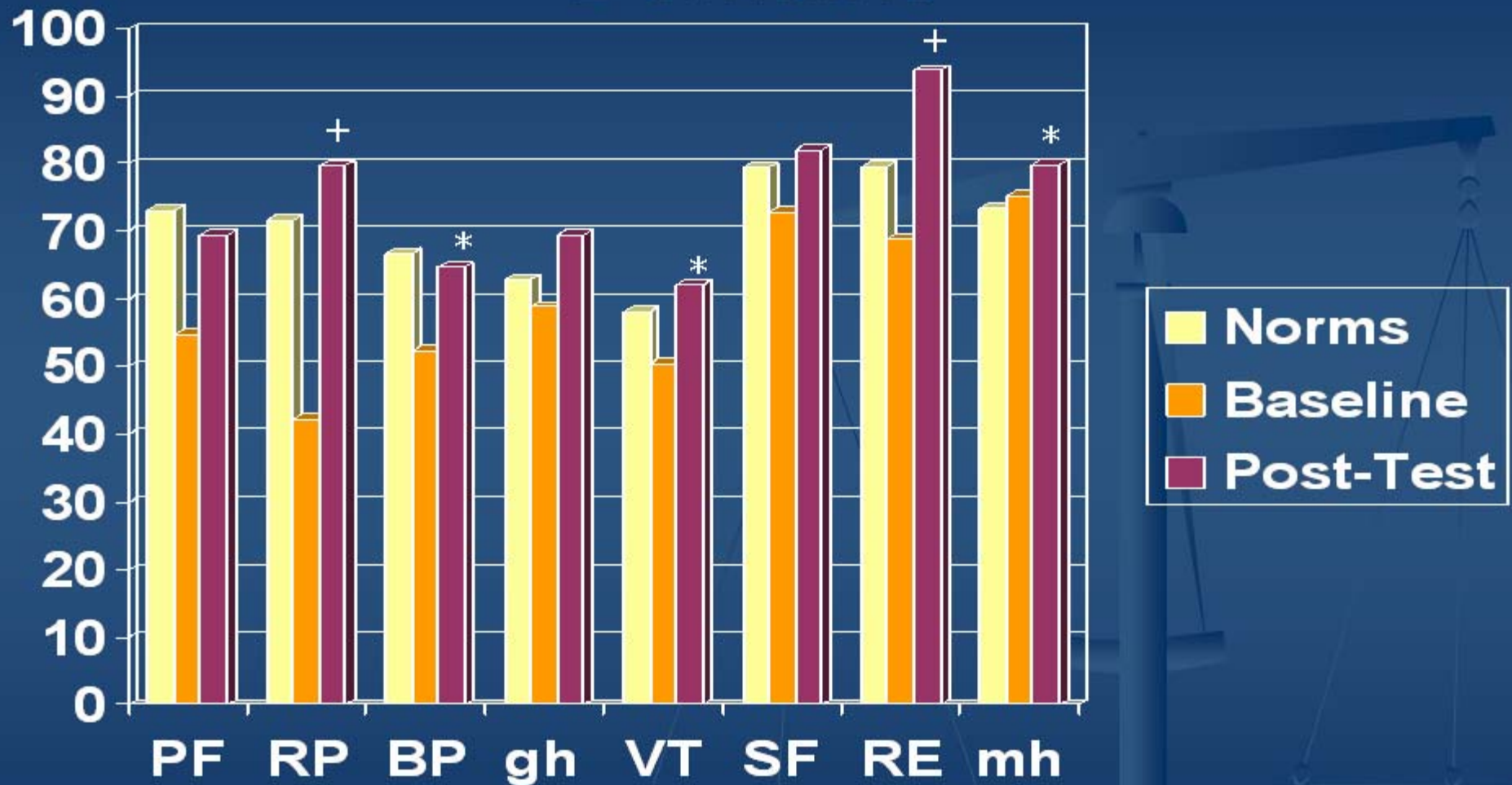
Age	52.3 ± 11.5 yrs*
Race	56.3% Caucasian
Sex	95% female
Education	50.8% completed college
Diagnosis	47% RA
Duration	9.2 ± 8.8 yrs

*RA= 44.9±2.0 vs OA= 58.7±1.3, p=.00

PCS

	Baseline	Post-test	P-value
Intervention	36.7 ± 2.1	43.9 ± 9.3	.02
Control	35.1 ± 1.8	35.6 ± 2.8	.38
P-value	.56	.03	

Domains



UPPERCASE impaired at baseline, none impaired at post-test

+ $p < .05$ (statistical significance), compared to baseline

* $.05 < p < .09$ (trend toward significance), compared to baseline

Limitations

- Small sample size
- Attrition
- Generalizability
- Waitlist control design



Future Directions



- 6-month follow-up
- Explore mechanisms
- Second site with multiple instructors
- Attrition analysis
- Comparison to other activities

Conclusion

- Arthritis patients suffer from impaired QOL in many aspect of daily life
- Participation in a modified yoga program is associated with significant improvements in QOL for arthritis patients
- After participation in a modified yoga program, arthritis patients were no longer impaired for QOL, compared to age and gender-matched norms
- A carefully constructed yoga program appears to be safe and beneficial for arthritis patients

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