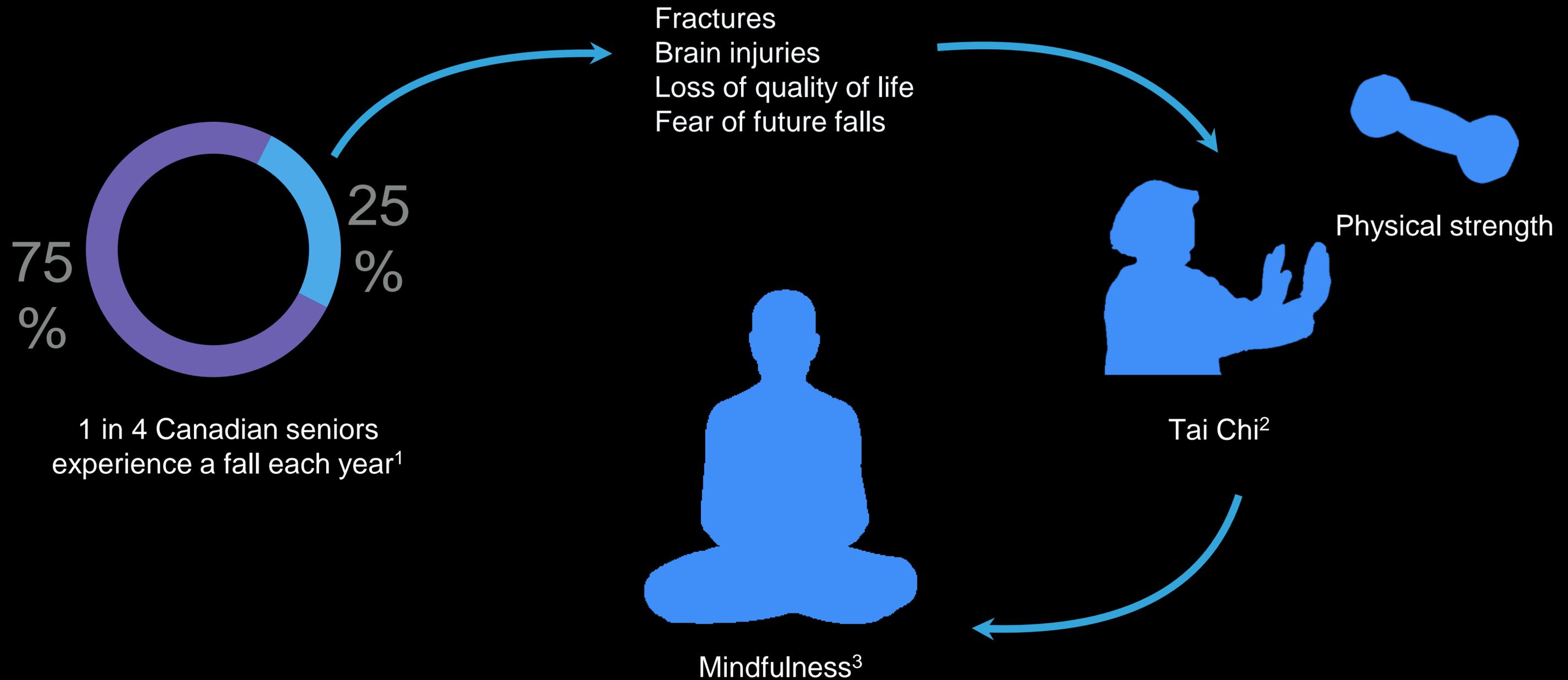


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THE UTILITY OF MINDFULNESS IN THE PREVENTION OF FALLS: A PILOT STUDY

BACKGROUND



1. Public Health Agency of Canada. Seniors' Falls in Canada: Second Report. <https://www.canada.ca/en/public-health/services/health-promotion/aging-seniors/publications/publications-general-public/seniors-falls-canada-second-report.html#s2-1-2>. Published 2014. Accessed August 20, 2017.

2. Tsang WWN, Hui-Chan CWY. Effects of Tai Chi on Joint Proprioception and Stability Limits in Elderly Subjects. *Med Sci Sports Exerc.* 2003;35(12):1962-1971. doi:10.1249/01.MSS.0000099110.17311.A2.

3. Kabat-Zinn J. An outpatient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation: Theoretical considerations and preliminary results. *Gen Hosp Psychiatry.* 1982;4(1):33-47. doi:10.1016/0163-8343(82)90026-3.

METHODS

Participants: residents of Tabor Manor (intervention) and Royal Henley (control) independent living retirement residences

Study design: non-randomized, pre-post feasibility trial

Intervention: Niagara LHIN Falls Prevention class with superimposed verbal cues, body scan, and walking exercises aimed at fostering mindfulness

Control: standard Falls Prevention class

Duration: 8 weeks

Outcome measures: Tinetti Assessment tool for balance and gait⁴; Timed Up and Go (TUG) test⁵

30 minute class



Warm up body scan: *“notice your body seated, feeling the weight of your body on the chair...as you exhale, have a sense of relaxing more deeply...”*

Exercises:

Sit-to-stand, *“as you stand, plant your feet on the solid ground below you. Feel the surface underneath your feet and the movement in your leg muscles...”*

Stepping left/right, *“begin by stepping to your right...focus on your body as it moves through space...notice how your weight shifts...”*

Walking, *“...as you step forward, feel your leg move through space. Does it feel stiff, or fluid? There is no destination...only be aware of how it feels to walk...”*

4. Tinetti ME. Performance-oriented assessment of mobility problems in elderly patients. J.Am.Geriatr.Soc. 1986;34:119–126.

5. Shumway-Cook A, Brauer S, Woollacott M. Predicting the probability for falls in community-dwelling older adults using the Timed Up & Go Test. Phys.Ther. 2000;80:896–903

RESULTS

PARTICIPANT DEMOGRAPHICS

Characteristic	Tabor Manor (n=7)	Royal Henley (n=9)
Age (years)	85.13 (SD 9.61)	86.11 (SD 5.46)
Gender (% female)	86%	56%

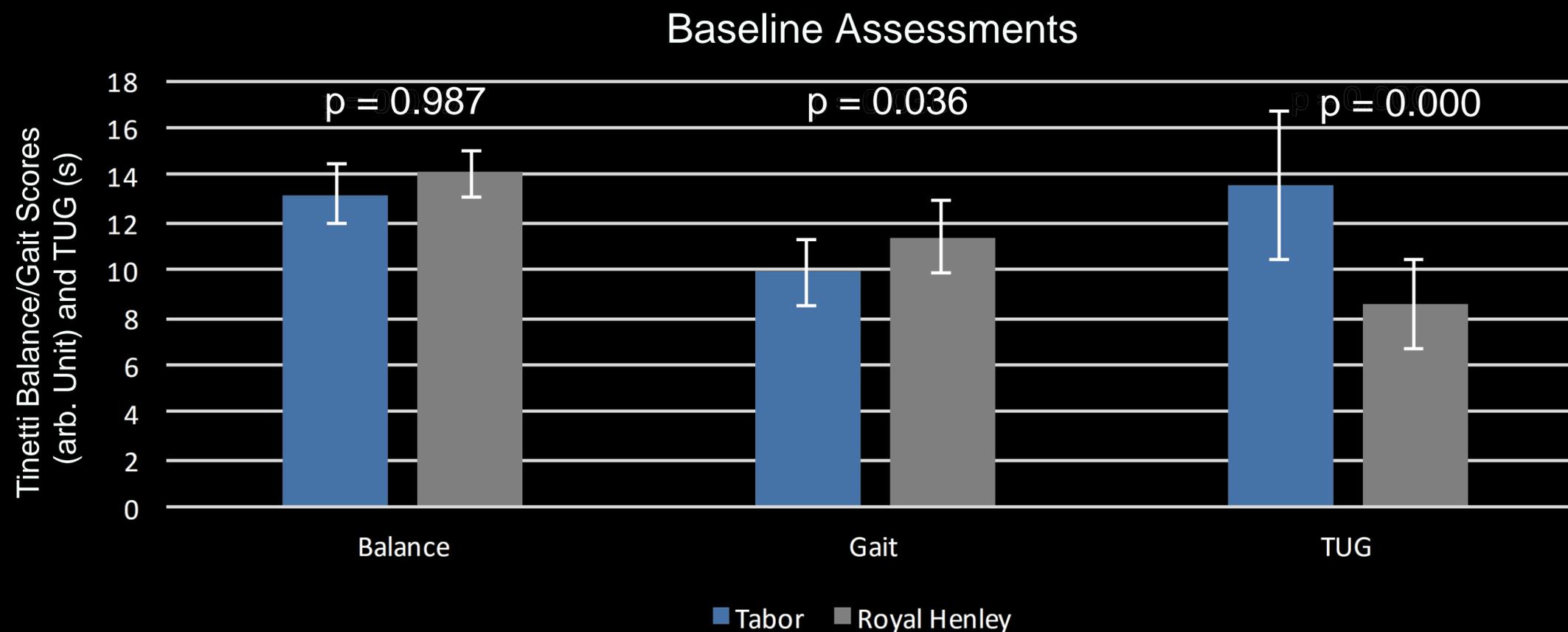
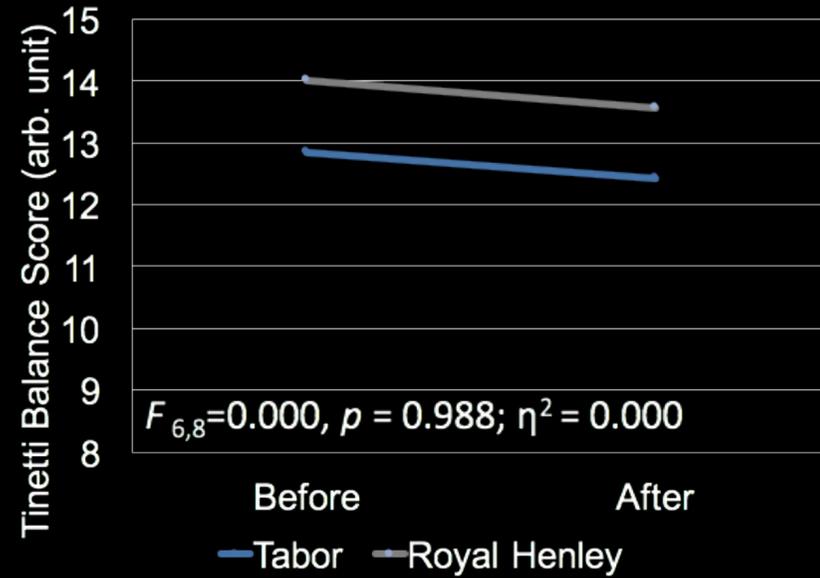


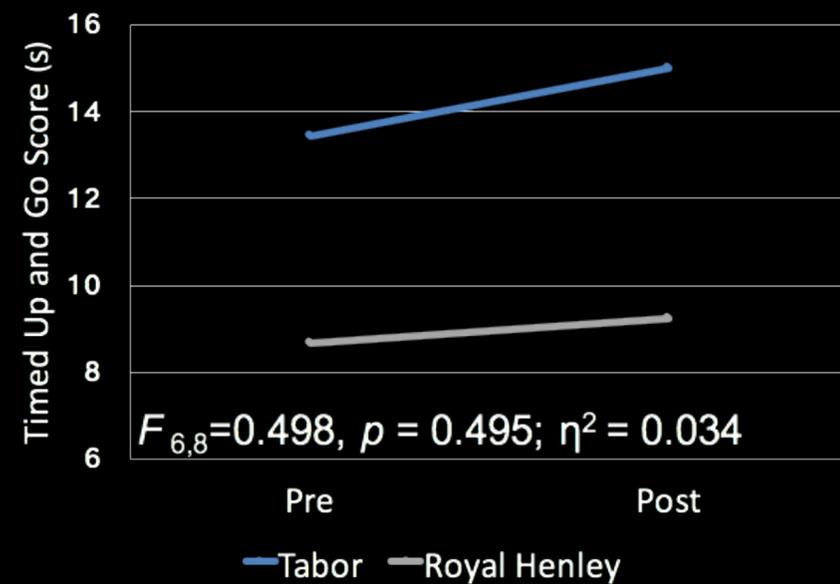
Figure 1. Comparison of baseline falls risk assessment measurements between intervention and control groups

RESULTS

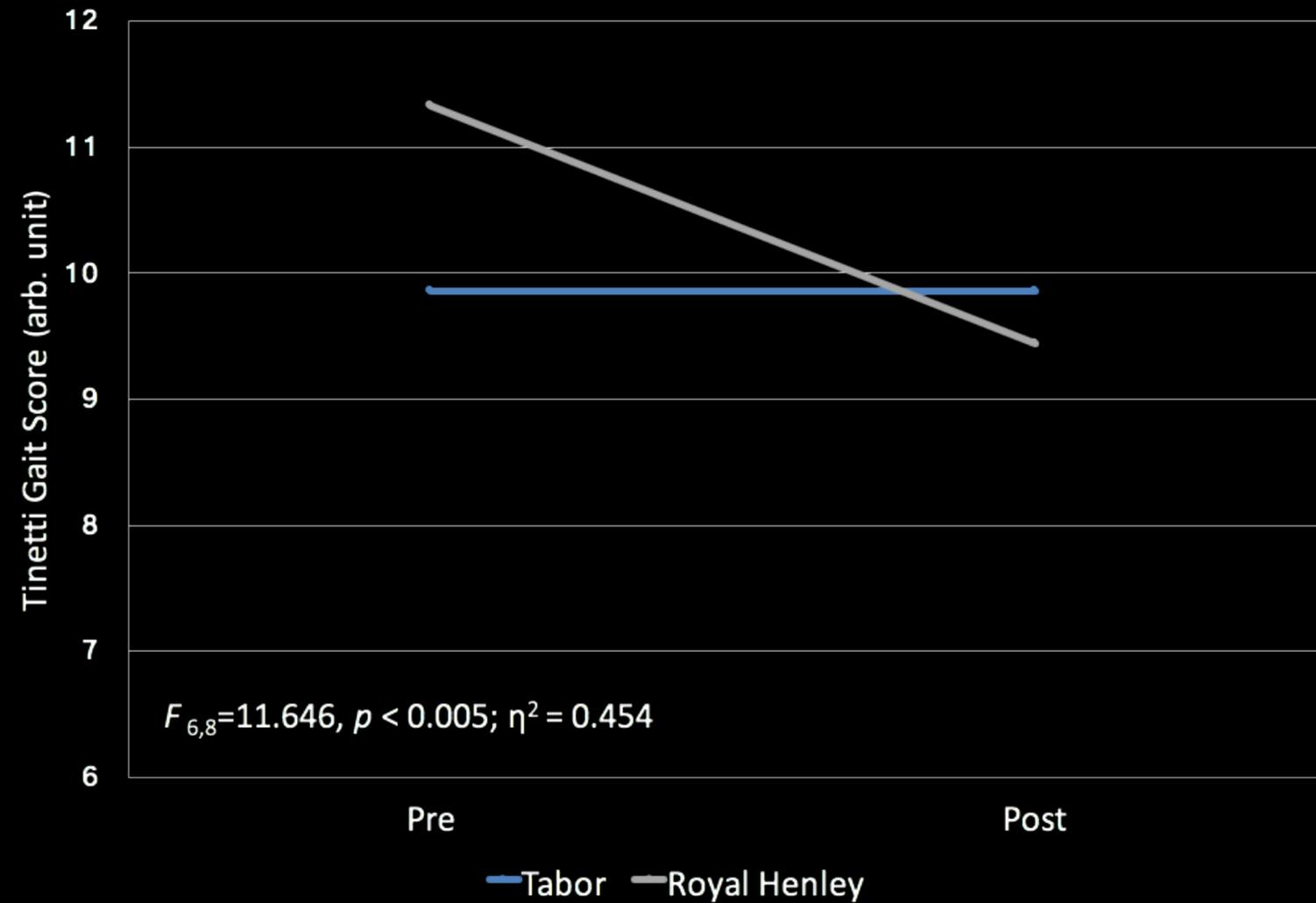
Tinetti Balance Assessment Before and After Intervention



Timed Up and Go Before and After Intervention

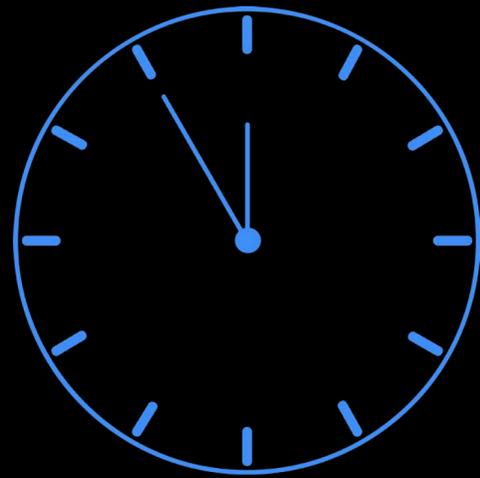
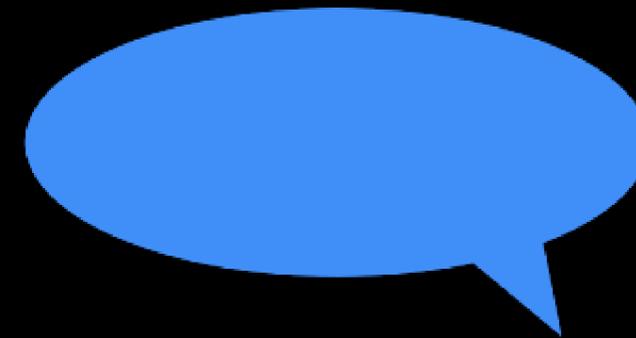


Tinetti Gait Assessment Before and After Intervention



FEASIBILITY

Mindfulness prompts are easily incorporated



Class run time unaffected

No known adverse events or increase in attrition from falls prevention classes

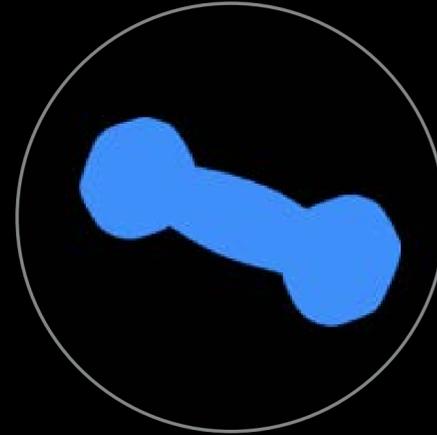


DISCUSSION

Mindfulness may have the potential to buffer age-related physical and cognitive changes that predispose individuals to falls



Mindfulness may preferentially act on dynamic processes such as gait, as opposed to static processes (e.g., balance, strength)



Mindfulness is easily implemented and can be added to the toolbox of falls prevention strategies



Future directions: adequately powered sample size, randomization, comprehensive mindfulness intervention

