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

1 in 4 Canadian seniors experience a fall each year. \(^1\)

Fractures
Brain injuries
Loss of quality of life
Fear of future falls

Mindfulness \(^3\)

Physical strength

Tai Chi \(^2\)

---

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 gait\(^4\); Timed Up and Go (TUG) test\(^5\)

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…”

---

## RESULTS

### PARTICIPANT DEMOGRAPHICS

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Tabor Manor (n=7)</th>
<th>Royal Henley (n=9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>85.13 (SD 9.61)</td>
<td>86.11 (SD 5.46)</td>
</tr>
<tr>
<td>Gender (% female)</td>
<td>86%</td>
<td>56%</td>
</tr>
</tbody>
</table>

![Baseline Assessments](image)

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

Tinetti Balance Assessment Before and After Intervention

Before and After Intervention

$F_{6,8} = 0.000, \ p = 0.988; \ \eta^2 = 0.000$

Timed Up and Go Before and After Intervention

$F_{6,8} = 0.498, \ p = 0.495; \ \eta^2 = 0.034$

Tinetti Gait Assessment Before and After Intervention

$F_{6,8} = 11.646, \ p < 0.005; \ \eta^2 = 0.454$
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.