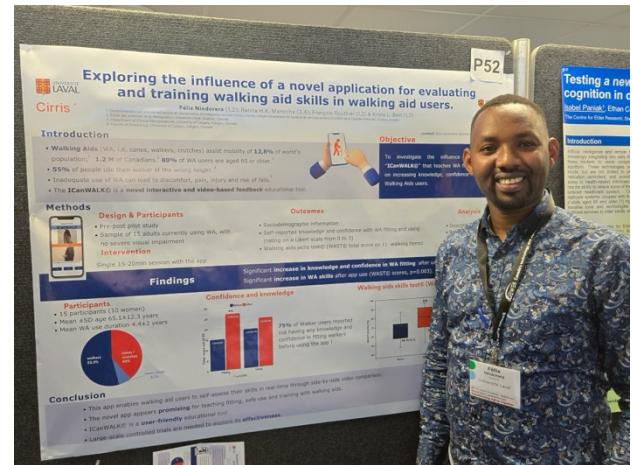


**Title:** Preventing musculoskeletal injuries through digital education

**Research question:** Does the novel mobile app improve knowledge, confidence and walking skills among walking aids users?

### Context & problem:

Over **12%** of the world's population,<sup>1</sup> and over **one million** Canadians<sup>2</sup> use walking aids "WA" (canes, walkers, crutches...) to assist mobility. **80%** of WA users are aged 65 or older.<sup>3</sup> Unsafe use of WA may lead to musculoskeletal problems (soreness or discomfort, shoulder or wrist pain, and fall's related injuries). Incorrect fitting and inappropriate WA use due to lack of training were found to be associated with a greater risk of falls.<sup>4,5</sup> A novel video-based feedback mobile app called "ICanWALK©" offers an educational and training solution targeting this challenge.



### What we did

We recruited 15 adults currently using WA from community. They were assessed two-times, before and after using the app. Outcomes included sociodemographic information, self-reported knowledge and confidence of WA fitting and use and walking aids skills test (WAST© test). After collecting baseline data, participants completed a 15-min session using the ICanWALK© program. Descriptive and parametric t-test statistics were used for analysis.

### Key Findings:

- **Improved knowledge and confidence:** All participants improved knowledge and confidence in WA fitting after using the app.
- **Increased walking aids skills:** Participants enhanced walking performance after learning correct fitting and safe use of WA.

### Conclusion

The ICanWALK app appears promising for teaching fitting and training of WA. Large-scale controlled trials are needed to explore its effectiveness.

### How to use the app:

The ICanWALK© app (android or apple) can be downloaded on app store, google play. Visit <https://icanwalk.info>

**Caution:** Due to the small sample size, the absence of control group and high heterogeneity among included participants (age, level of education, type of WA use and previous experience) results may be not therefore be generalizable to the entire population of WA users.

**References:** <sup>1</sup>WHO's World Report on Disability (2011); <sup>2</sup>Charette et al. Phys Ther. (2018); <sup>3</sup>Canadian Survey on Disability, CSD (2012); <sup>4</sup>Bateni H. (2012); <sup>5</sup>Manocha RHK et al. (2021)

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