



Co-creation And Evaluation Of A "Sustain And Gain" Falls Prevention Maintenance Program For Community Dwelling Older Adults In Greater Sudbury







North East Specialized Geriatric Centre Centre gériatrique Spécialisé du Nord-Est

Disclosure of Affiliations, Financial and In-kind Support:

Acknowledgement Statement:

This program has received financial support from Northern Ontario Academic Medicine Association in the form of the Clinical Innovation Opportunities Fund

The following steps have been taken to mitigate bias:

- All speakers have been provided with a speaker letter outlining the certification/accreditation requirements for their presentation.
- The SPC or designate has reviewed the presentation(s) prior to their delivery.
- If a breach is detected the SPC will approach the speaker to discuss the concern and update the presentation as required.

INTRODUCTION



Falls are the leading cause of injury in Canadians over 65. Falls are highly prevalent, costly and linked to increased morbidity and mortality.



Fall prevention exercise programs are considered the most effective treatment option for community-dwelling older adults.



'Frail to Fit Falls Prevention Program' is a 12-week multifactorial program being delivered to community-dwelling older adults in the Greater Sudbury area since 2010.





WHY DID WE DEVELOP A PHYSICAL MAINTENANCE PROGRAM?



Average change in balance performance after graduating from 'Frail to Fit'



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OBJECTIVE

Test the efficacy of 'Sustain and Gain', a pilot program designed to continue the improvement in balance performance in graduates of the 'Frail to Fit' program





WHAT WE DID

An experienced based co-design approach was used to develop Sustain and Gain



A focus group with 8 'Frail to Fit' graduates and their care partners provided feedback about Frail to Fit



Participant feedback and literature review were summarized and shared at the second focus group



A semi-structured focus group with Frail to Fit graduates, their care partners and the research team was used to finalize 'Sustain and Gain'

It was decided that 'Sustain and Gain' would be offered as **two, one-hour sessions per week** for **9 months** with a ¹/₂ **hour educational component** per week.





WHAT WE DEVELOPED

15 participants were recruited

- Four dropped out, three new participants were recruited at 3 months
 - Mean (SD) age was 78.5 (5.6) years, the average Clinical Frailty Scale 3.1 (0.8)
 - 81.8% of participants were female

Each one-hour session included:

- Warm-up (e.g. marching, side-stepping, etc.)
- Strength exercises (e.g. sit to stands, contractions with bands, etc.)
- Balance Exercises (e.g. tandem walking, Tai Chi, reaching, etc.)
- Cool-Down

The program was delivered by a **Physiotherapist**, a **Kinesiologist**, and a **Physiotherapy Assistant** who all have training working with frail older adults.





WHAT WE LOOKED AT



Quantitative Analyses:

Baseline, 3-month, 6-month, 9-month measurements of:

- Timed Up & Go
- 2-minute Walk Test
- Berg Balance Scale
- Older Peoples' Quality of Life Questionnaire

Study was underpowered to perform statistical analyses



Qualitative Analyses

Semi-structured focus group sessions were conducted at the half-way point (n = 12) and at the end of the program (n = 8)





WHAT WE FOUND



Average change in balance performance and quality of life scores throughout 'Sustain and Gain'





Physical Improvement: Participants felt that they had experienced improvement with respect to their strength, balance and mobility

"I have noticed a difference in my strength."





Emotional Benefit: Participants noted that their overall mood had improved, that they were happier and that they had more energy overall because they participated in this program.

"My balance has improved a great deal, but also my mental attitude... I am more cheerful. More happy."





Social Connectedness: Participants agreed that participating in this program gave them the opportunity to meet new friends, gave them a reason to get out of the house and gave them something to look forward to.

"It's so social... usually we come 15 minutes early so we can talk together before the class starts."





Increased Quality of Life: Participants reported that since joining the study they are now able to do things that they were not able to do before.

"I can walk without a walker now." ... "Me too"





WHAT DOES THIS TELL US



Participants maintained balance performance benefits and acknowledged various **quality of life benefits**.



Other studies with similar exercise programs and greater sample sizes demonstrated **balance benefits.**



Limitations include small sample size, no fall outcomes, and the elevated dropout rate.





WHAT'S NEXT



- 'Sustain and Gain' is a novel program designed for community-dwelling older adults with frailty who have recently graduated from a fall-prevention program.
- Participants reported quality of life improvements and increased improvement in balance performance that further support the program.
- Future research should include **larger study size** and **cost-effectiveness** analyses.













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