

The perceived safety and acceptability of a conceptually challenging exercise training program in older adults

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Introduction

- Current exercise guidelines for falls prevention programs emphasise strength training only
- Muscle power and gait efficiency have been linked to likelihood of falls and yet are not included in current guidelines
- An exercise training program is needed to address physical function limitations associated with ageing and adults at increased risk of falls

Aims

- To assess the safety and acceptability of a novel exercise training program among older adults.

Method

Participants

- 14 independently living, ambulatory adults (aged above 60) at various risk of falls recruited from a convenience sample

Procedure

Training Session

- All participants undertook 1 training session with an exercise physiologist (listed below)

Qualitative Interview

- They then completed a qualitative interview with an experience researcher

Data Analysis

- All interviews were recorded and transcribed
- The qualitative data analysis program NVivo was used to organise data and perform thematic analysis
- Key themes and concepts were identified and linked to direct quotes

Results – Emergent themes on safety and acceptability

Safety

Feeling safe due to extra equipment was seen as a major benefit to participants

"I wouldn't have reached that speed without the harness"

Modelling

Seeing others undertake the exercises first made them more confident to complete the task

"I was able to watch other people doing it so I (thought) yes I reckon I could do that"

Over-speed treadmill walking with a harness



Interval walking at 5% above maximum overground walking speed

High velocity resistance training



High velocity resistance training, 8 reps @ <1 sec CON, 3 sec ECC

Dynamic balance task with external perturbations



Walking with external force delivered by researcher to cause disruption to straight line walking

Challenging but achievable tasks

Participants felt the exercises extended their current ability and enjoyed reaching goals they didn't know they could

Value

Participants recognised the importance of the training session and this influenced participation in the program

"Helping me to stop fall(ing)... it's something I find very beneficial"

Ability

Participants were surprised at what they could achieve

"I discovered I was able to do things I didn't know I could do"

Resisted walking



Walking attached to a researcher to increase resistance to slow walking speed

Stride length development exercise



Metronome paced walking with progressive increases in stride length

Agility course



Timed agility course requiring a change in direction, multidirectional walking, bending and turning

Familiarity

Repetition of exercises or previous experience increased participants comfort with the tasks and relieved any initial anxiety

Individual tailoring

Having the opportunity to opt out or cease an exercise enhanced confidence to attempt an exercise

"Liked that you could set your own limits"

Confidence in staff

Staff helped participants feel comfortable to perform exercises through clear instructions and encouraging words

"You have confidence that somebody... is looking after you"

Conclusions

- Overall participants saw the program as a positive experience and felt more motivated due to understanding the link between exercise testing and exercise prescription (individualised)
- Participants aged above 60 years would feel sufficiently comfortable attempting an exercise program that consists of physically and conceptually challenging exercises
- Supervision and overt safety considerations essential. Exercise training under these conditions should be further investigated for outcomes compared with traditional training approaches