The association between past falls, self-rated balance and fear of falling and the setting of balance-related goals among community-dwelling older people

Presented by
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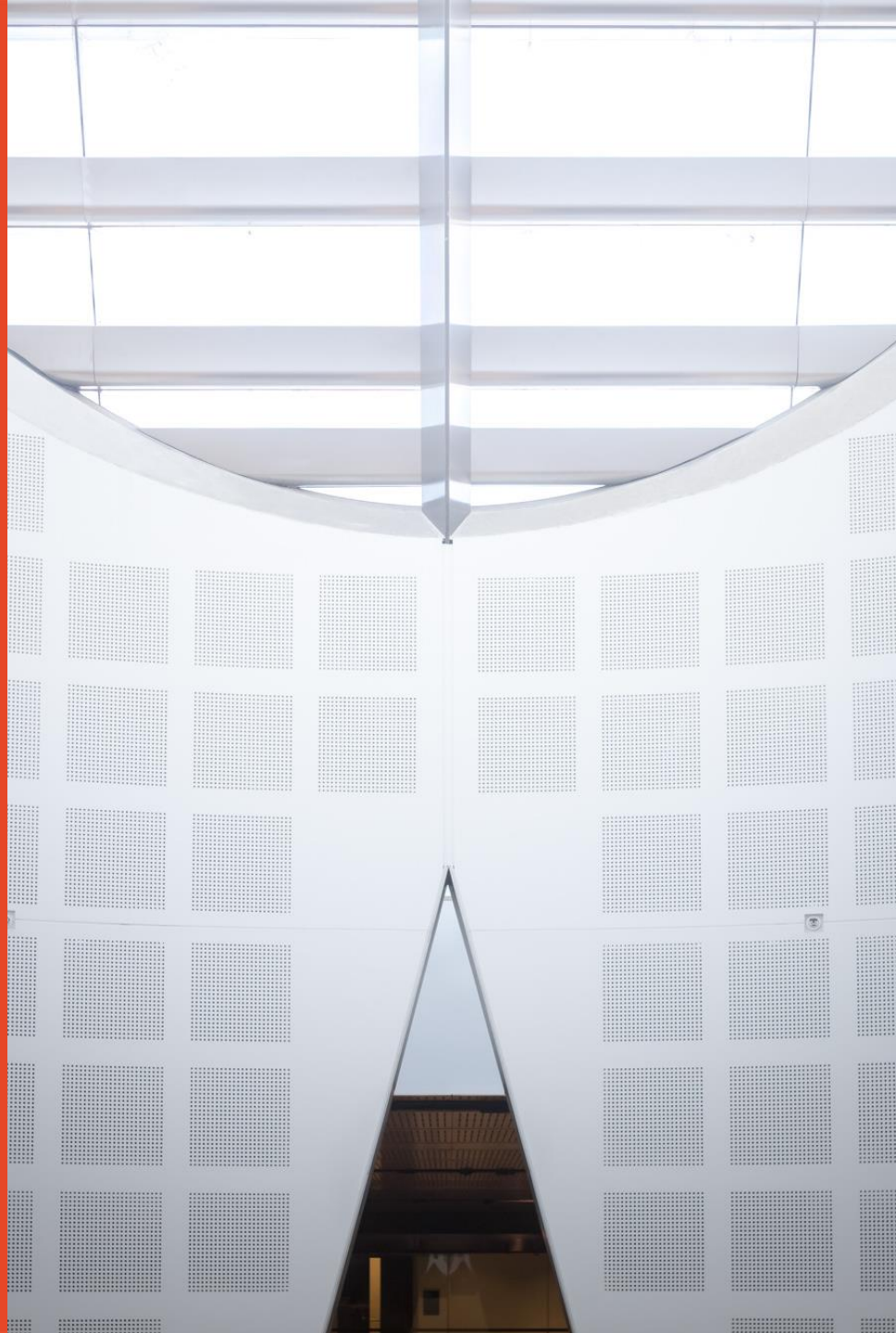
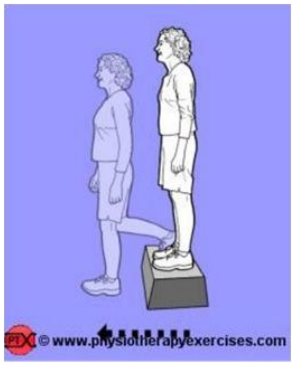


Background

- **Falls in older age**
  - Systematic reviews show that well-designed structured exercise programs can prevent falls in older people.

Background

- **Greater effects on fall rates from exercise programs which:**
  - Included a high challenge to balance



  - 3+ hours/ week of prescribed exercise

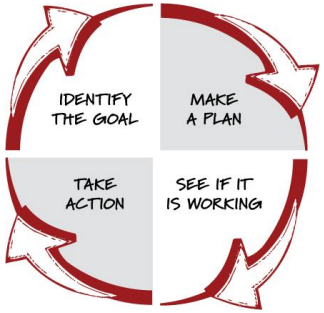
- Programs with both of these attributes resulted in a pooled effect of 39% reduction in fall rates (IRR 0.61, 95% CI 0.53 to 0.72, p<0.001).

Sherrington, C., Michaleff, Z.A., Fairhall, N., Paul, S.S., Tiedemann, A., Whitney, J., et al., 2016. Exercise to prevent falls in older adults: an updated systematic review and meta-analysis. Br J Sports Med.

Background

- **Falls in older age**
  - A NSW survey of >5600 older people showed the uptake of this type of exercise is currently very low (Merom D, et al. 2012)

Background



GOAL-SETTING

- Facilitate and motivate behaviour change

- Collaborative process

- S.M.A.R.T criteria

Background

- Psychological theory suggests that giving people an active role in setting goals increases their motivation and self-efficacy (Haas R, et al. 2014)


WHAT ARE
YOUR
GOALS?

Aim of current study

To summarise the types of health-related goals set by community-dwelling older people

To explore the association between the setting of balance-related goals and fall history, fear of falling and self-reported balance

Methods

DESIGN

- Cross sectional study
- Secondary analysis of baseline data collected as part of 2 RCTs

PARTICIPANTS

- 205 community-dwelling people
- 60 + years old

Methods

INCLUSION CRITERIA

- 60+ years old
- Living at home
- Able to leave the house without assistance

Methods

EXCLUSION CRITERIA

- House-bound
- Cognitive impairment
- Insufficient English
- Progressive neurological disease
- Medical condition precluding exercise
- Already met Australian PA guidelines

Methods


STUDY MEASURES
Questionnaire
Falls history
Self-rated balance
Self-rated fear of falling
"How many falls have you had in the past 12 months?"
"Do you feel your balance is excellent, very good, good, fair or poor?"
“Are you afraid of falling?"

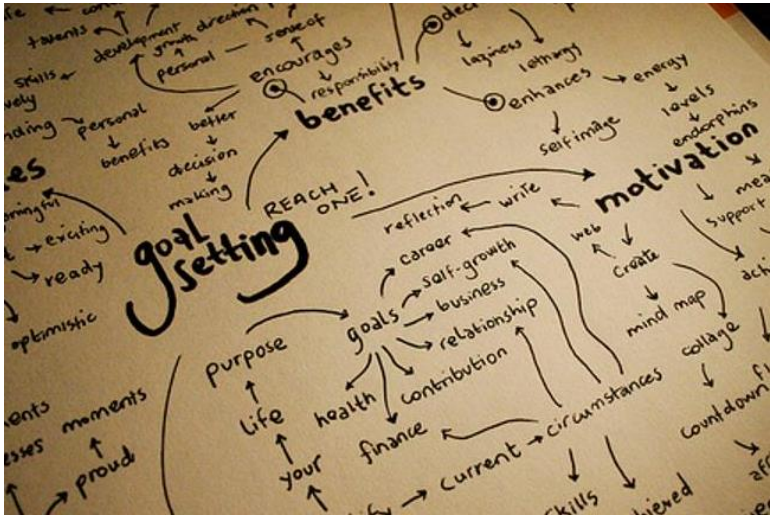
Methods

Health-related goals

Two self-selected goals

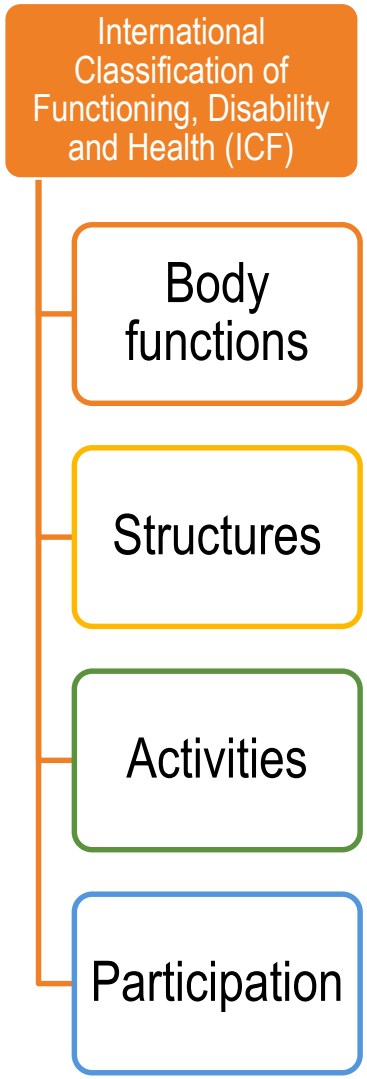
S.M.A.R.T criteria

Determined in a collaborative manner



Methods


ICF
International Classification of Functioning, Disability and Health
World Health Organization
Geneva


International Classification of Functioning, Disability and Health (ICF)
Body functions
Structures
Activities
Participation

Methods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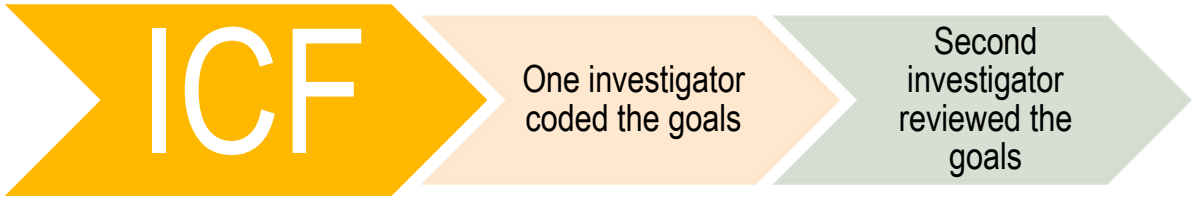

ICF
One investigator coded the goals
Second investigator reviewed the goals

Methods: Data analysis

- Chi-square analyses including odds ratios were used to assess if there were differences in the proportion of participants who set balance-related goals in terms of:

  a) Past falls;

  b) Self-rated balance;

  c) Self-rated fear of falling.

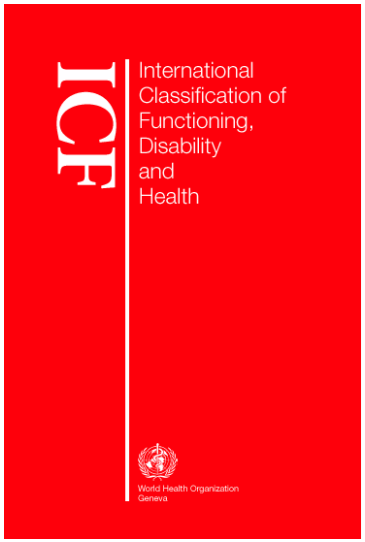
Results

Table 1. Characteristics of the study participants (n = 205)

Characteristic	
Age (yrs), mean (SD)	70.9 (8.5)
Female, n (%)	129 (63)
Total medications[a]	2.6 (2.4)
Total co-morbidities[b]	2.8 (1.9)
Fallen in the past year, n (%)	62 (30)
Self-rated balance fair/poor, n (%)	57 (28)
Self-rated fear of falling ≥ moderate, n (%)	64 (31)

Data are presented as mead (SD), unless stated otherwise. [a]Total number of prescription medications taken. [b]Possible comorbidities recorded included: arthritis, osteoporosis, asthma, COPD/emphysema, angina/ischaemic heart disease/heart attack, congestive heart disease, hypertension, Parkinson's disease, atrial fibrillation, stroke/TIA, peripheral vascular disease, diabetes mellitus, upper gastrointestinal disease, depression, cognitive impairment, anxiety/panic disorder, visual impairment, hearing impairment, cancer, and gout. CPM: Counts per minute

Results: selected goals according ICF



International Classification of Functioning, Disability and Health (ICF)

408 goals set by 205 participants

20 different ICF categories

Results: selected goals according ICF

Table 2. Frequency (%) of health-related goals (n=408) categorised according to The International Classification of Functioning, Disability and Health (ICF) and stratified by gender

ICF Components	Domain	Health-related goal	Male (n=150)	Female (n=258)	Total (n=408)
Body Functions	b455	Exercise tolerance functions	2 (1)	1 (0.4)	3 (0.7)
	b498	Functions of the cardiovascular, haematological, immunological and respiratory systems, other specified	1 (0.7)	-	1 (0.2)
	b710	Mobility of joint functions	3 (2)	-	3 (0.7)
	b740	Muscle endurance functions	-	4 (2)	4 (1)
	b730	Muscle power functions	-	1 (0.4)	1 (0.2)
	b280	Sensation of pain	1 (0.7)	-	1 (0.2)
	b134	Sleep functions	1 (0.7)	-	1 (0.2)
	b530	Weight maintenance functions	10 (7)	25 (10)	35 (9)
Activities	a410	Changing basic body position	4 (3)	5 (2)	9 (2)
	a445	Hand and arm use	1 (0.7)	2 (0.8)	3 (0.7)
	a430	Lifting and carrying objects	-	1 (0.4)	1 (0.2)
	a415	Maintaining a body position	4 (3)	13 (5)	17 (4)
	a455	Moving around	7 (5)	6 (2)	13 (3)
	a450	Walking	45 (30)	91 (35)	136 (33)
Participation	p650	Caring for household objects	3 (1)	1 (0.4)	4 (1)
	p640	Doing housework	2 (1)	-	2 (0.5)
	p540	Dressing	-	1 (0.4)	1 (0.2)
	p760	Family relationships	-	1 (0.4)	1 (0.2)
	p855	Non-remunerative employment	1 (0.7)	-	1 (0.2)
	p920	Recreation and leisure	65 (43)	106 (41)	171 (42)

Results

Balance goals

To do regular balance exercises

To improve balance

Results

68 (32%)

participants set

balance-related goals

Results

Table 3. Proportion of balance-related goals compared to other health-related goals stratified by faller category, self-rated balance category and self-reported fear of falling category

	Balance related-goal	Other health-related goal	OR (95%CI)
Fallen in the past years, n (%)			
Yes	23 (37)	39 (63)	1.32 (0.71-2.46)
No	45 (32)	98 (69)	
Self-rated balance, n (%)			
Poor/fair	25 (44)	32 (56)	1.91 (1.01-1.63)*
Good	43 (29)	105 (71)	
Self-reported fear of falling, n (%)			
Fear of falling	44 (31)	97 (69)	0.78 (0.42-1.45)
No fear of falling	24 (38)	40 (62)	

*p=0.04

Discussion

- Participants who had poor self-reported balance were significantly more likely to set a balance goal than people with good self-rated balance.
- It is possible that they are aware of the potential of balance to improve their balance confidence.

Discussion

- Participants who had fallen in the past 12 months were not more likely to set a balance-related physical activity goal than non-fallers;
- Older people who had fear of falling were not more likely to set a balance goal than those who reported no fear of falling.

Discussion

Low perceived need + **Rejection of the idea that they are at risk** = **Nonparticipation in balance exercises**

Implications for clinicians

Health professionals could ask older people how they rate their balance

Implications for clinicians

Messages that focus on immediate benefits of balance training may be more attractive than an emphasis on falls risk reduction.

Implications for clinicians

Encouraging older people to set physical activity and balance-related goals may facilitate increased adherence to physical activity interventions that can promote independence and wellbeing.

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Acknowledgements

Thank you for listening!

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