



Do's and don'ts in physical activity research among chronically ill older persons

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TNO | Knowledge for practice



Topics

- Dementia,
- Mild cognitive impairment,
- Osteoarthritis of the hip and/or knee
- Incontinence (urine)

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Psychomotor Activation Programme (PAP) for demented elderly
(Hopman-Rock et al, Int J Geriatr. Psych, 1999; Book by dr. Rose Marie Droë's)

Beneficial for negative group behaviour in people with mild dementia

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Do's

- Use measurement by observation as much as possible;
- Intensive training of caregivers is required;
- Involve family in informed consent;
- Multicenter studies may avoid blinding and contamination problems;
- Actigraphs may be used in these populations (known from other studies that we performed).

Dont's and learning points

- Avoid hurries (tests take time);
- Be aware of different regimes in homes for the elderly: communicate with all operational levels (takes also a lot of time).



Mild Cognitive Impairment
(Van Uffelen et al., Br. J Sport Med, 2008)



Sportive Walking program
Duration: 12 months
Location: Outside
Frequency: 2x 60 min p. week
Intensity: Aerobic and gradually increasing

Placebo Activity
12 months
Inside
2x 60 min p. week
Low intensity, non-aerobic



Results:

In participants who participated regularly, walking had a promising beneficial effect on memory in men and on memory and complex processing in women

Problems:

Study power low due to dropout!
Contrast experimental and control too low



Possible improvements

	Most important barriers		Improvement
Getting started	Practical aspects	Time (of day), location	Adjustable to participants wishes
During program	Dropout/'bad' Lapses	Program contents (intensity) Physical limitations	Adjustable to participants levels and limitations
	'Good' lapses	Holiday, illness	
Maintenance	Physical	Health/injury	Adjustable to participants limitations
	Practical aspects	Time (of day), location	Adjustable to participants wishes
	Quality aspects	instructor, contents & intensity of program, effects noted	Good qualitative instructor, adjustable intensity, feedback on progress

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Health education and exercises for older people with osteoarthritis (Hopman-Rock & Westhoff, J of Rheumatol 2000) Ingredients: Health education by peers and professionals and exercises by physiotherapists



Both programmes had positive results on pain and behaviour

Hop with the Hip (Tak et al. J Rheumatol, 2005) 8-weeks exercise programme Ingredients: strength training using apparatus and lifestyle advice by physiotherapists

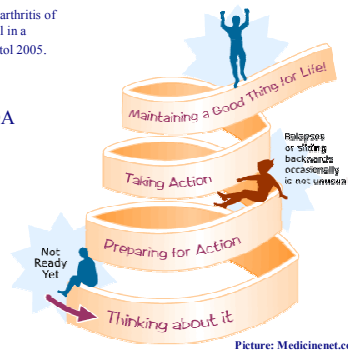


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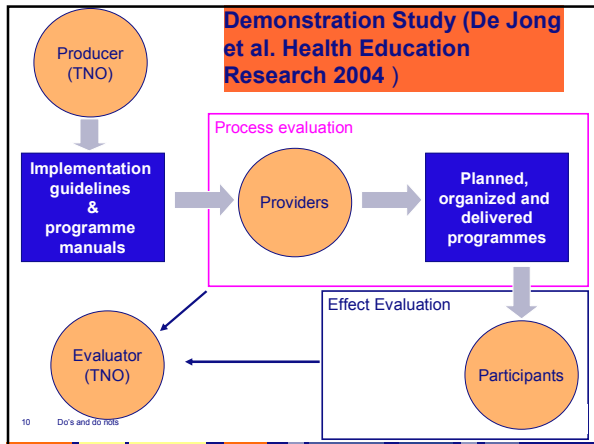
Heuts et al. Self-management in osteoarthritis of hip or knee: a randomized clinical trial in a primary health care setting. J Rheumatol 2005.

Serious problems with recruitment of younger OA patients in GP practices:
Stage of change??



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- Do's**
- Recruit patients that are in the right phase of behavioural change. Do not ask the GPs, ask patients directly.
 - Learn people how to cope with their doctor!
 - Check if programmes are feasible and well delivered in practice.
 - Compare RCT and implementation study: ecological validity?
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- Learning points**
- Dilemma: programmes proved to be feasible and well delivered in practice as long as project was paid;
 - Cooperation between occupational groups difficult without project payment;
 - Flexibility facilitates local providers, but re-invention may frustrate the dissemination process if the core components are changed;
 - From development to dissemination takes a long time (15 yrs), funds (> 2 million euro), a lot of effort and patience
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INCOndition: a programme to prevent and treat urine incontinence in homes for the elderly (Tak et al, to be submitted)



Duration 22 weeks
 Frequency: once a week one hour
 Education and physical training
 RCT (experimental and control homes)

Results:
 Small positive effect on PPT
 High decreased urine loss
 and use of materials in both groups!

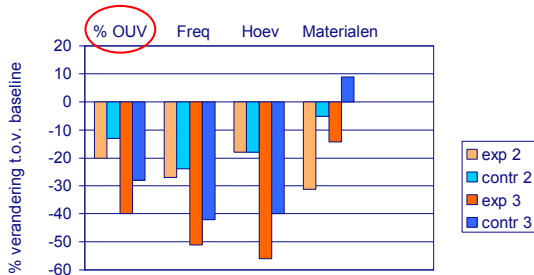
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Results INCO study



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Learning points but HOW TO SOLVE???

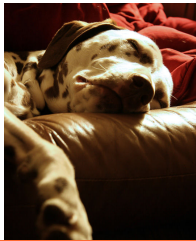
- Practical
 - Low response participants
 - Low capability participants AND caregivers
- Methodological
 - High dropout/ missing values
 - Validity and reliability of measurement instruments (urine loss diary, QOL)
 - Hawthorn effect
- Fysiological
 - No insights into origins of incontinence
 - No prove that participants correctly exercised
- Statistics
 - Low power
 - Imputation missing values
 - 'Regression to the mean'

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Do's and do nots

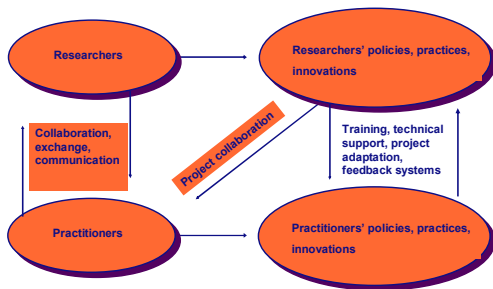
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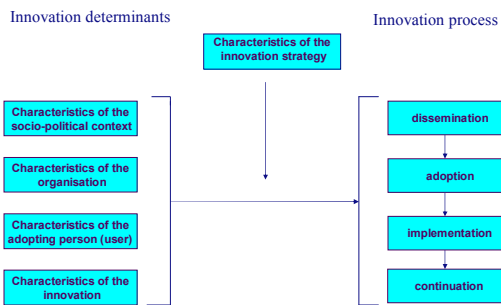
Last points:
Cooperation between researchers and practitioners
Foreseeing Implementation

Linkage system
research and practice (Orlandi et al. 1990)



Theoretical framework

Fleuren et al, Int J Qual Health Care, 2004



Take Home Messages

- RCTs in chronically ill older populations are possible
- But require much time and efforts (and budget!)
- Blinding is sometimes difficult
- Power problems by drop out (vulnerable population)
- Cooperation with practitioners necessary but time consuming
- Adjust to peoples wishes and capabilities
- Implementation challenge exists

Thanks for your attention

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