



Inpatient energy-management education (IEME) in groups: a feasibility study

Andrea Weise¹, Jan Kool¹, Marco Barbero², Gisela Michel³, Ruth Hersche²

Corresponding author: andrea.weise@ergotherapie-impulse.ch

¹Rehabilitation Centre Valens, Switzerland

²Rehabilitation Research Laboratory 2rLab, University of Applied Sciences and Arts of Southern Switzerland, Manno

³University of Lucerne, Department of Health Sciences and Health Policy, Switzerland

Background

- Fatigue management education for persons with MS by occupational therapists based on energy conservation strategies is effective.¹
- No treatment protocol in German and for inpatients is available.
- To meet the needs of inpatient rehabilitation, an evidence-based inpatient energy management education (IEME) for groups in German language was developed according to principles of patient education, empowerment & change management.

1) Asano et al. Mult Scler Int, 2014,1-12

Methods

- Eligible: Persons with MS-related fatigue during a 3-week inpatient rehabilitation at Rehabilitation Centre Valens (informed consent)
- Control intervention: progressive muscle relaxation (Jacobson, PMR)²
- Evaluation of recruitment & assessment procedures, drop out & follow up rates, treatment fidelity by occupational therapists (OTs), cost-effectiveness, interview with 6 IEME-participants after 12 weeks

2) Ghafari et al. J Clin Nurs 2009, 18(15), 2171-2179

Aims

- Evaluation of the feasibility of a RCT study-protocol
- Tentative exploration of the effect of IEME on self-efficacy, impact of fatigue, quality of life & cost-effectiveness

Participants

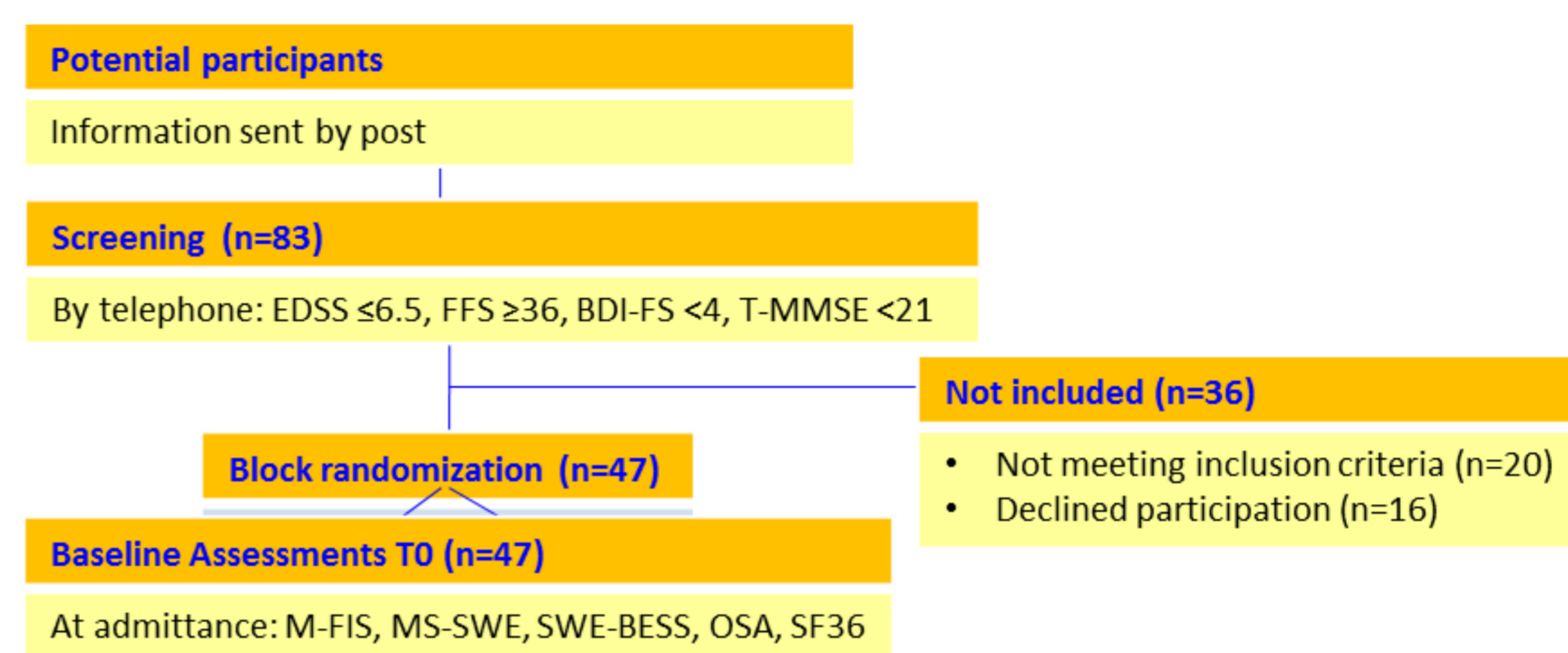
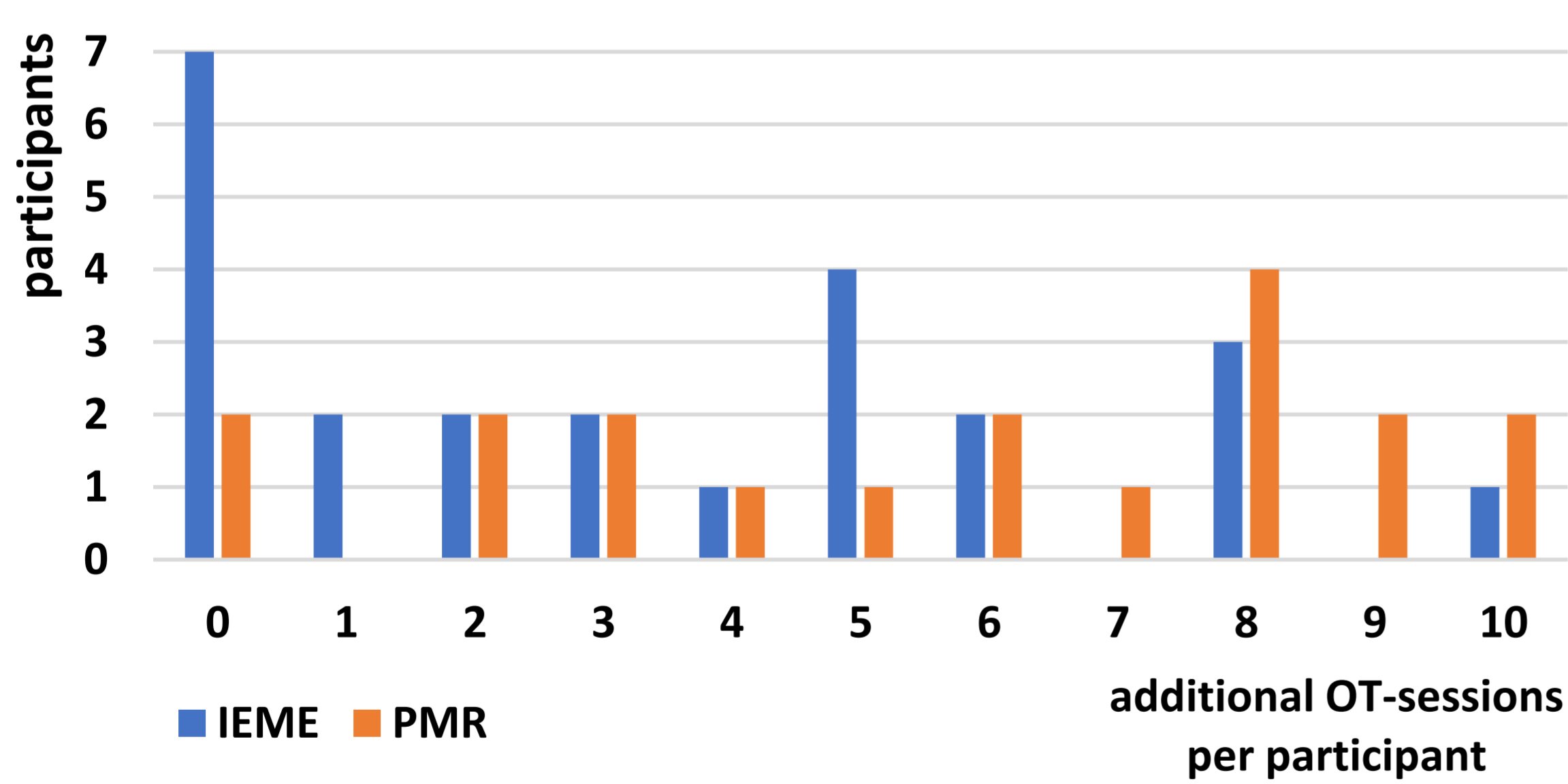
	IEME (n=24)	PMR (n=23)
Age: mean (range)	51.2 (31-68)	51.8 (33-70)
Female: n	16	15
Education: n		
Compulsory	3	3
Apprenticeship/vocational training & education	15	17
University	5	3
MS onset: years mean (r)	13.4 (1-37)	14.3 (1-33)
EDSS: mean (range)	5.2 (2.5-6.5)	4.6 (2.5-6.5)
MS-Type: n		
Relapsing-remitting	7	8
Secondary progressive	7	8
Primary progressive	6	5
Progressive relapsing	3	2
Unknown	1	0

IEME utilisation

Treatment fidelity by OTs: % (range) of tasks in workbook performed	89% (79-95)
Average group utilisation (max. 6): mean (range) participants per session	4 (2-6)

Time consumption

	Group	Additional OT (Individual)	Total
		minutes: mean	
IEME	324	103	427
PMR	303	171	474



IEME: long-term effect

6 Interviews (6 weeks after discharge, by phone)	
Participants	3 female / 3 male
Age	39 - 57
EDSS	3 - 6.5
MS onset: years	2 - 27
At discharge:	High motivation to implement changes
At home/work:	Workload reduction & ergonomic behaviour is easier to implement
	Redesign of daily structure, roles & responsibilities is more challenging
	Workbook is helpful instrument for supporting change
	Support from peer group is missing while implementing changes

Assessments

- Impact of fatigue decreased in both groups at T1&T2 (p<0.05) (M-FIS)
- Self-efficacy for performing energy conservation strategies increased in IEME-participants at T1 & T2 (p<0.05); at T2 with a between group difference to PMR-participants (p<0.05) (SWE-BESS)
- Occupational performance improved in both groups at T1 (p<0.05); only in IEME-participants also at T2 (p<0.05) (OSA)
- Quality of life improved in IEME-participants in 2 subscales (physical functioning & fatigue) at T1 & T2 (p<0.05); at T2 with a between group difference to PMR-participants (p<0.05) (SF36)
- Global self-rating of changes improved in both groups at T1 & T2 (p<0.05); at T1 with a between group difference to PMR (p<0.05)

Feasibility of RCT-study protocol

- Recruitment rate: 57%, drop out rate: 4%, follow up rate: 78%
- Recruitment by telephone time consuming & often not successful; at 1st day of admittance more participant friendly & more efficient
- Assessment procedures worked, but for good rate of return constant control is needed
- Assessments: OSA time consuming for participants, SF36 raises questions at T1 due to questions about "last 4 weeks", MS-SWE (self efficacy managing symptoms) difficult due to negating questions

Conclusions

- RCT-study protocol is feasible; valuable improvements can be made
- Real possibility for a long-term effect on self efficacy & quality of life and for cost-effectiveness of IEME