

Supplemental Material

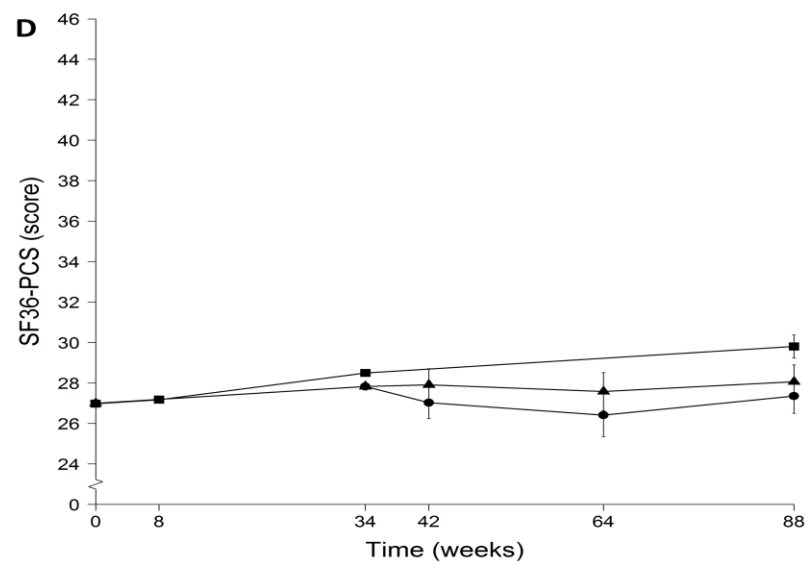
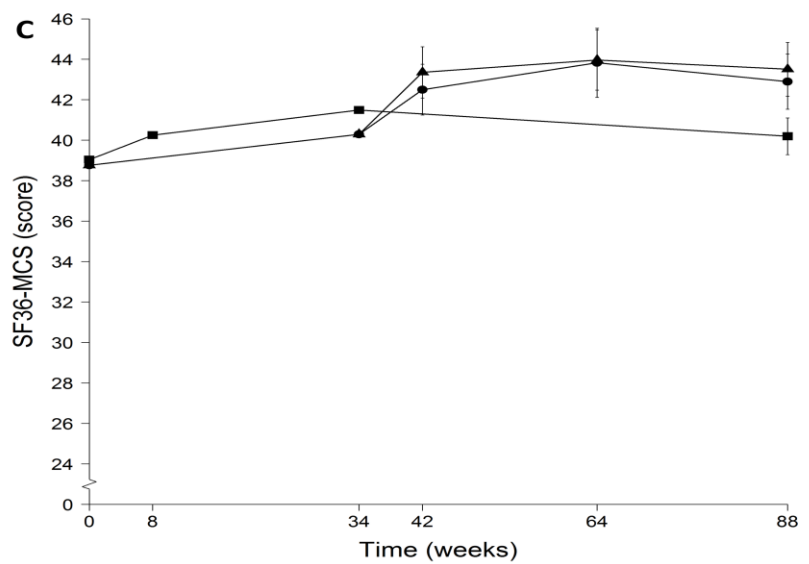
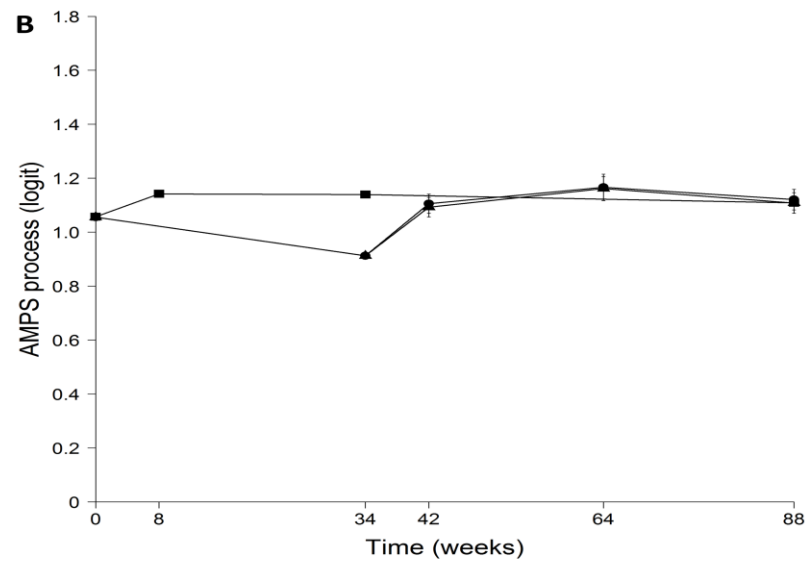
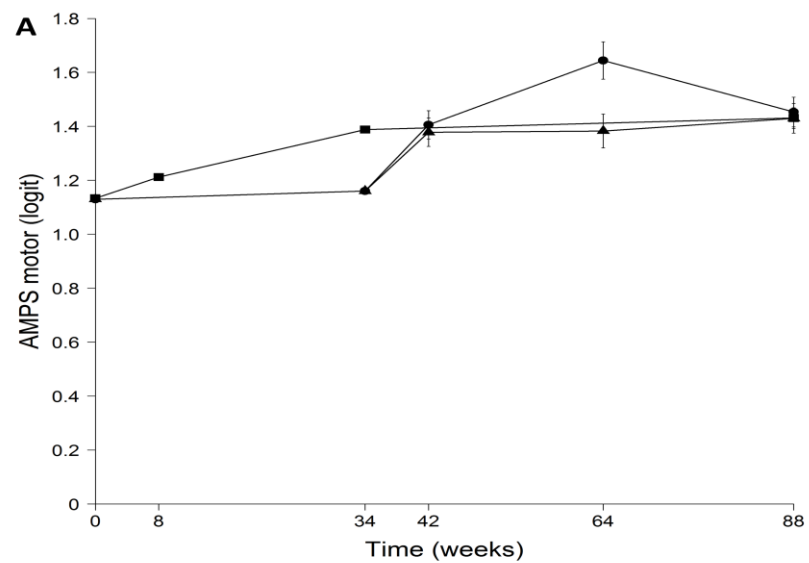


Figure S1. AMPS motor and process ability measures and SF-36 mental and physical component summary scores during follow-up for Group A, Group B_{OT} and Group B_{PT}.

Least squares mean values for AMPS motor (panel A), AMPS process (panel B), SF-36 MCS (panel C) and SF-36 PCS (panel D) during follow-up for Group A (squares), Group B_{OT} (circles) and Group B_{PT} (triangles). Note, that the participants were allocated to Group A and B at week 0, and Group B were split into B_{OT} and B_{PT} at week 34. The error bars indicate standard errors.

Abbreviations: AMPS, Assessment of Motor and Process Skills; OT, occupational therapy; PT, physiotherapy; SF-36 MCS, SF-36 Mental Component Summary score; SF-36 PCS, Physical Component Summary score

Table S1. Change in primary and secondary outcomes in the as-observed-population (N=145) assessed 88 weeks from baseline and presented according to allocated study groups

Variable	Group A	Group B: Occupational therapy	Group B: Physiotherapy	P-value ¹
AMPS ADL motor, logits	0.015 (-0.222 to 0.251)	0.108 (-0.140 to 0.356)	-0.014 (-0.271 to 0.244)	0.430
AMPS ADL process, logits	0.094 (-0.032 to 0.219)	0.090 (-0.041 to 0.221)	0.077 (-0.061 to 0.215)	0.919
SF-36 MCS	6.15 (-1.12 to 13.42)	8.08 (0.53 to 15.63)	10.58 (2.64 to 18.53)	0.130
AMPS ADL motor responder, no. (%)	37/75 (49%)	18/35 (51%)	15/35 (43%)	0.891
AMPS ADL process responder, no. (%)	18/75 (24%)	10/35 (29%)	10/35 (29%)	0.919
SF-36 MCS responder, no. (%)	18/75 (24%)	17/33 (52%)	15/35 (43%)	0.037
SF-36 PCS	2.08 (-2.85 to 7.00)	1.14 (-3.99 to 6.27)	-1.19 (-6.61 to 4.23)	0.118
SF-36 PCS responder, no. (%)	29/75 (39%)	10/33 (30%)	8/35 (23%)	0.359
SF-36 physical function	9.63 (-1.42 to 20.68)	9.48 (-2.03 to 20.97)	4.56 (-7.58 to 16.70)	0.385
FIQ total	-6.97 (-17.07 to 3.13)	-3.71 (-14.27 to 6.84)	-8.44 (-19.53 to 2.65)	0.560
FIQ VAS pain	-0.53 (-2.02 to 0.96)	-0.31 (-1.86 to 1.23)	0.40 (-1.25 to 2.05)	0.165
GAD-10 anxiety score	0.59 (-4.10 to 5.29)	0.59 (-4.31 to 5.50)	0.81 (-4.37 to 5.10)	0.990
MDI depression score	-1.32	-0.92	-2.93	0.659

	(-6.68 to 4.05)	(-6.53 to 4.70)	(-8.85 to 2.99)	
CSQ pain catastrophizing score	5.71 (1.11 to 10.31)	4.59 (-0.17 to 9.35)	6.74 (1.68 to 11.81)	0.604
PSEQ pain self-efficacy score	6.62 (-0.37 to 13.61)	5.40 (-1.80 to 12.61)	7.90 (0.28 to 15.52)	0.741

Values are Mean changes (95% CI) unless otherwise noted. ¹Continuous outcomes analysed using analysis of covariance (Difference between means); Dichotomous outcomes analysed using Chi-square tests comparing proportions responding (Risk Difference).

AMPS, Assessment of Motor and Process Skills; SF-36, The MOS 36-item Short Form; SF-36 MCS, Mental Component Summary Score; SF-36 PCS, Physical Component Summary Score; FIQ, Fibromyalgia Impact Questionnaire; GAD-10, Generalized Anxiety Disorder; MDI, Major Depression Inventory; CSQ, Coping Strategies Questionnaire; PSEQ, Pain Self-Efficacy Questionnaire

Table S2. Change in primary and secondary outcomes in the intention-to-treat-population assessed 88 weeks from baseline with Group B_{OT} and Group B_{PT} collapsed (N=191)

Variable	Group A	Group B	P-value ¹	difference between means
AMPS ADL motor, logits	-0.015 (-0.245 to 0.215)	-0.023 (-0.247 to 0.201)	0.863	0.008 (-0.083 to 0.099)
AMPS ADL process, logits	0.073 (-0.066 to 0.211)	0.082 (-0.052 to 0.217)	0.735	-0.010 (-0.065 to 0.046)
SF-36 MCS	5.52 (-0.83 to 11.88)	7.26 (1.11 to 13.42)	0.179	-1.74 (-4.29 to 0.81)
AMPS ADL motor responder, no. (%)	37/96 (39%)	33/95 (35%)	0.585	
AMPS ADL process responder, no. (%)	18/96 (19%)	20/95 (21%)	0.690	
SF-36 MCS responder, no. (%)	18/96 (19%)	32/95 (34%)	0.019	
SF-36 PCS	1.30 (-2.97 to 5.57)	-0.20 (-4.35 to 3.96)	0.086	1.50 (-0.22 to 3.22)
SF-36 PCS responder, no. (%)	29/96 (30%)	18/95 (19%)	0.071	
SF-36 physical function	8.40 (-1.05 to 17.85)	6.51 (-2.68 to 15.71)	0.329	1.89 (-1.92 to 5.69)
FIQ total	-5.72 (-14.43 to 2.99)	-4.28 (-12.74 to 4.18)	0.421	-1.44 (-4.97 to 2.09)
FIQ VAS- pain	-0.52 (-1.82 to 0.78)	-0.08 (-1.34 to 1.18)	0.102	-0.44 (-0.97 to 0.09)

GAD-10 anxiety score	0.68 (-3.27 to 4.62)	0.99 (-2.85 to 4.83)	0.703	-0.31 (-1.92 to 1.30)
MDI depression score	-0.90 (-5.65 to 3.85)	-0.57 (-5.19 to 4.05)	0.742	-0.32 (-2.26 to 1.61)
CSQ pain catastrophizing score	6.12 (1.32 to 10.92)	6.18 (1.53 to 10.84)	0.950	-0.06 (-2.02 to 1.89)
PSEQ pain self-efficacy score	5.14 (-1.13 to 11.42)	4.47 (-1.59 to 10.54)	0.601	0.67 (-1.85 to 3.19)

Values are Mean changes (95% CI) unless otherwise noted. ¹Continuous outcomes analysed using analysis of covariance (Difference between means); Dichotomous outcomes analysed using Chi-square tests comparing proportions responding (Risk Difference).

AMPS, Assessment of Motor and Process Skills; SF-36, The MOS 36-item Short Form; SF-36 MCS, Mental Component Summary Score; SF-36 PCS, Physical Component Summary Score; FIQ, Fibromyalgia Impact Questionnaire; GAD-10, Generalized Anxiety Disorder; MDI, Major Depression Inventory; CSQ, Coping Strategies Questionnaire; PSEQ, Pain Self-Efficacy Questionnaire. OT, occupational therapy; PT, physiotherapy.

Table S3. Baseline characteristics in participants with (responders) and without (non-responders) a clinically relevant improvement in the ability measures of the ‘Assessment of Motor and Process Skills’ at the end of the study period presented according to allocated study group

Variables	Group A (N=96)						Group B (N=95)					
	AMPS ADL motor			AMPS ADL process			AMPS ADL motor			AMPS ADL process		
	Responders	Non-responders	Group diff (CI) <i>P-value*</i>	Responders	Non-responders	Group diff (CI) <i>P-value*</i>	Responders	Non-responders	Group diff (CI) <i>P-value*</i>	Responders	Non-responders	Group diff (CI) <i>P-value*</i>
Number (%)	39 (40.6)	57 (59.4)		20 (20.8)	76 (79.2)		35 (36.8)	60 (63.2)		21 (22.1)	74 (77.9)	
AMPS ADL motor**	0.85 (0.50)	1.33 (0.35)	0.48 (0.30 to 0.66) <i>P<0.0001</i>	1.19 (0.48)	1.13 (0.48)	-0.06 (-0.31 to 0.18) <i>P=0.607</i>	0.95 (0.49)	1.24 (0.42)	0.29 (0.09 to 0.48) <i>P=0.005</i>	0.98 (0.62)	1.17 (0.40)	0.19 (-0.10 to 0.48) <i>P=0.195</i>
AMPS ADL process**	1.09 (0.30)	1.04 (0.32)	-0.05 (-0.18 to 0.08) <i>P=0.439</i>	0.75 (0.25)	1.14 (0.28)	0.39 (0.25 to 0.51) <i>P<0.0001</i>	1.05 (0.27)	1.06 (0.28)	0.005 (-0.11 to 0.12) <i>P=0.935</i>	0.80 (0.16)	1.13 (0.26)	0.33 (0.23 to 0.42) <i>P<0.0001</i>
SF-36 MCS**	40.15 (13.45)	38.91 (11.30)	-1.23 (-6.46 to 4.01) <i>P=0.642</i>	37.30 (15.13)	39.99 (11.31)	2.68 (-4.79 to 10.15) <i>P=0.466</i>	39.73 (7.81)	36.50 (10.85)	-3.23 (-7.06 to 0.59) <i>P=0.097</i>	38.87 (9.06)	37.36 (10.20)	-1.51 (-6.19 to 3.17) <i>P=0.516</i>
SF-36 PCS**	26.44 (7.83)	27.08 (6.53)	0.65 (-2.40 to 3.70) <i>P=0.672</i>	27.50 (9.96)	26.64 (6.14)	-0.87 (-5.70 to 3.97) <i>P=0.714</i>	25.79 (6.13)	27.60 (7.64)	1.80 (-1.04 to 4.65) <i>P=0.211</i>	24.90 (7.38)	27.51 (7.02)	2.62 (-1.06 to 6.30) <i>P=0.157</i>
SF36 Physical function **	38.59 (18.77)	42.14 (20.31)	3.55 (-4.50 to 11.61) <i>P=0.382</i>	37.00 (22.32)	41.67 (18.95)	-4.67 (-6.52 to 15.86) <i>P=0.400</i>	39.71 (19.85)	40.17 (19.76)	0.45 (-7.95 to 8.6) <i>P=0.915</i>	32.62 (16.10)	42.09 (20.20)	9.48 (0.93 to 18.02) <i>P=0.031</i>
FIQ total***	64 (58;77)	64.8 (63;72)	<i>P=0.556</i>	66.0 (59;78)	64.2 (54;72)	<i>P=0.360</i>	66.4 (56;71)	63.4 (57;77)	<i>P=0.857</i>	63.6 (51;70)	65.2 (57;74)	<i>P=0.119</i>
FIQ VAS pain***	7.4 (6.3;8.4)	7.2 (5.9;8.5)	<i>P=0.691</i>	7.6 (5.4;9.6)	7.3 (6.2;8.4)	<i>P=0.941</i>	7.7 (7.0;8.7)	7.6 (6.4;8.8)	<i>P=0.394</i>	7.5 (6.4;7.9)	7.8 (6.5;8.9)	<i>P=0.253</i>
GAD-10 anxiety***	18 (12;30)	17 (13;25)	<i>P=0.942</i>	18 (12;33)	17 (13;22)	<i>P=0.540</i>	16.0 (12;22)	17 (13;23)	<i>P=0.575</i>	16 (12;22)	17 (13;22)	<i>P=0.645</i>
MDI Depression ***	18 (11;34)	19 (13;25)	<i>P=0.915</i>	20 (12;31)	18 (13;25)	<i>P=0.343</i>	18.5 (14;25)	22 (15;28)	<i>P=0.177</i>	19 (14;25)	20.5 (15;27)	<i>P=0.655</i>
CSQ catastrophizing***	14 (8;20)	14 (10;21)	<i>P=0.424</i>	15 (11;19)	13.5 (9;20)	<i>P=0.736</i>	17 (13;20)	16.5 (12;21)	<i>P=0.550</i>	17 (11;21)	16.5 (13;20)	<i>P=0.945</i>
PSEQ***	25 (13;35)	26 (16;30)	<i>P=0.860</i>	20 (10;34)	25 (18;33)	<i>P=0.507</i>	22 (18;29)	20 (17;32)	<i>P=0.675</i>	20 (18;23)	21 (17;32)	<i>P=0.663</i>

Statistically significant differences between groups marked in bold. *Data with a normal distribution were analysed using un-paired *t* tests; data without normal distribution were analysed using Wilcoxon Two-sample test. ** Mean (SD). *** Median (Q1;Q3).

AMPS, Assessment of Motor and Process Skills; SF-36, The MOS 36-item Short Form; SF-36 MCS, Mental Component Summary Score; SF-36 PCS, Physical Component Summary Score; FIQ, Fibromyalgia Impact Questionnaire; GAD-10, [Generalized Anxiety Disorder](#); MDI, Major Depression Inventory; CSQ, Coping Strategies Questionnaire; PSEQ, Pain Self-Efficacy Questionnaire.

Appendix A: A summary of the occupational therapy program

Objective	»To teach and support the participants in developing efficient adaptation strategies to improve ADL ability
Key elements	»Identify ADL task performance problems (sessions 1-6) »Implement adaptation strategies to compensate for task performance problems (sessions 7-14) »Re-evaluate for enhanced and satisfying ADL task performance (sessions 15-16)
Session 1	»Introduction, the beginning of something new Presentation, group contract, clarify roles and expectations
Session 2	»Prioritise roles and meaningful ADL tasks How roles are related to ADL tasks; identify important life roles and tasks perceived as crucial to that role
Session 3	»Analyse ADL task performance How to analyse ADL task performance; observe participants perform ADL tasks and identify ineffective ADL skills (e.g. decreased ability to move or lift objects and/or decreased ability to organise and adapt performance); discuss which adaptation strategies that may compensate for ineffective ADL skills
Session 4	»Analyse ADL task performance (continued from session 3) Observe ADL task performance and identify ineffective ADL skills and relevant adaptation strategies
Session 5	»Clarify the causes to ADL task performance problems How ADL task performance problems are influenced by the task, the person performing the task and the environment in which the task is performed
Session 6	»Set goals and make a plan How to define a goal related to ADL task performance; identify factors that may promote or limit the achievements of goals
Session 7	»Use energy conservation principles to decrease effort during ADL task performance Introduce energy conservation principles; how does energy conservation principles influence ADL task performance?
Session 8	»Plan efficient ADL task performance Introduction to assistive devices; plan and perform ADL tasks using adaptation strategies

Session 9	»Plan efficient ADL task performance (continued from session 8) Plan and perform ADL tasks using adaptation strategies
Session 10	»Apply for assistive devices How to apply for assistive devices in home community
Session 11	»Does motivation influence ADL task performance? How does motivation influence ADL task performance and how may motivation for performing ADL tasks that are necessary to perform be enhanced?
Session 12	»Use ADL tasks to increase physical activity and improve body functions Can ADL task performance be categorized as physical activity? Observe ADL task performance and identify ADL skills (e.g. walk and lifts) that may improve body functions (e.g. endurance and strengths)
Session 13	»Performance of ADL tasks when having pain How may pain influence ADL task performance? Is there a linear correlation between the level of pain and the ability to perform ADL tasks?
Session 14	»Adapt ADL task performance to fluctuations in ADL ability Specify how to perform ADL tasks on a day with less disease severity and how to perform ADL tasks on a day with high disease severity and identify tasks that may not need to be performed
Session 15	»Looking back, what did we do, and what did you learn? Create a group concept-map to organise and structure learning outcomes; which adaptation strategies have been implemented in ADL task performances and how have ADL task performance changed?
Session 16	»Evaluation, celebrating and looking forward Discuss future goals and plans

Appendix B: A summary of the physiotherapy program

Objective	»To teach and support the participants in increasing the level of physical activity in everyday life to improve ADL ability
Key elements	<ul style="list-style-type: none"> »Identify individual training barriers »Individual goal-setting »Pacing principles
Session 1	<ul style="list-style-type: none"> »Introduction, the beginning of something new Presentation, group contract, clarify roles and expectations
Session 2	<ul style="list-style-type: none"> »Define a goal and reach it Define realistic and meaningful goals; pacing principles i.e. how to evaluate present level of physical ability prior to being active in order to reduce pain exacerbations and exercise intolerance(20)
Session 3	<ul style="list-style-type: none"> »Physical activity in practice How to minimise pain exacerbation and exercise intolerance during physical activity; try out different exercises with resistance bands, gym balls and exercise on mats as inspiration
Session 4	<ul style="list-style-type: none"> »Barriers for being physically active The need to change habits when wanting to become more physically active; what are the barriers to being physically active and which strategies may be used to overcome these barriers?
Session 5	<ul style="list-style-type: none"> »Pain, physical activity and managing pain Central sensitization and the difference between acute and chronic pain; how to manage pain when being physically active
Session 6	<ul style="list-style-type: none"> »Mid-term evaluation Reflect upon the knowledge gained and the need to adjust personal goals
Session 7	<ul style="list-style-type: none"> »Motivation for physical activity in everyday life Which kind of physical activity increase level of energy and which kind decrease level of energy? What may increase motivation for being physically active in everyday life?

- Session 8 »How has chronic pain influenced your way of being physical active?
Which kind of physical activity did you enjoy in the past and which kind of physical activity do you perform now? Which kind of physical activity would you like to do in the future?
- Session 9 »Organise time, energy and physical activity
How do you match level of energy during the day to the level of physical activity?
- Session 10 »Long term goals – looking back and forward
Reflect upon knowledge gained, motivation for being physically active and how to progress towards desired goals
-