conditions that are associated with a high risk of cardiovascular (CV) complications further beyond the increased prevalence of classical risk factors in this population. Consequently, the early identification of patients with MS-PSO and PsA who may benefit from primary CV prevention is essential. However, medical providers do not routinely screen or counsel their patients for CV risk factors or comorbidities. In addition, paucity of robust clinical data complicates the implementation of management protocols for primary CV prevention in MS-PSO and PsA.

Objectives: To generate expert-based recommendations on the management of CV comorbidities in patients with MS-PSO and PsA through the application of the Delphi technique.

Methods: The development of Delphi-based recommendations included four steps: (1) systematic literature review to explore current information and clinical recommendations on management of CV comorbidities in patients with PsO and PsA; (2) two subsequent meetings with project coordinators ($n = 3$) and scientific advisors ($n = 7$) from different medical specialties (rheumatology, dermatology, endocrinology, internal medicine, pneumology, rehabilitation, psychiatry and primary care) to examine the results of the review and decide which statements should be included in the final version of the questionnaire; (3) a two-round Delphi questionnaire aimed at specialists in rheumatology and dermatology to assess the degree of consensus on the different points raised; (4) finally, a face-to-face meeting with the project coordinators and scientific advisors to discuss and ratify the results of the Delphi process.

Results: As a result of the literature review and the assessment and approval of scientific advisors, the final version of the Delphi survey contains 52 statements grouped into 35 questions. The questionnaire is divided into 3 topic sections: (1) identification, diagnosis and referral of MS-PSO and/or PsA patients with CV comorbidities ($n = 12$ statements); (2) management and treatment of CV comorbidities associated with MS-PSO and/or PsA ($n = 36$); (3) influence of MS-PSO and/or PsA treatments on CV comorbidities and vice versa ($n = 4$).

Conclusion: This Delphi-based study may fill an important gap in the evidence by providing relevant information on the management of CV comorbidities in patients with MS-PSO and/or PsA.

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FRI0700-HPR LESSONS LEARNED FROM PILOT IMPLEMENTATION OF PHYSICAL ACTIVITY RECOMMENDATIONS IN AXSPA EXERCISE GROUP THERAPY – LESS MAY BE MORE

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Background: The Ankylosing Spondylitis Association of Switzerland (SVMB) offers 68 exercise groups (EG) for people with axial Spondyloarthritis (axSpA). Participants exercise weekly with focus on strength and flexibility supervised by a physiotherapist (PT). Given the EULAR physical

activity (PA) recommendations [1] and recent research [2, 3], the SVMB aims to further develop the concept of their EG by introducing: a) exercises in all dimensions, cardiorespiratory fitness, muscle strength, flexibility and neuromotor performance, according to the general PA recommendations [4]; b) individual exercise-coaching (three sessions in first six months) by the group PT, specifically trained in communication and action planning skills to support individual exercising, and c) bi-annual fitness-assessments for all exercise dimensions.

Objectives: To evaluate the new EG concept among the participating people with axSpA and PTs across four pilot groups.

Methods: After six months, a survey on the perception and satisfaction towards the new EG concept was sent to 30 people with axSpA, who rated the questions on a 0-10 numeric rating scale (0=not satisfied, 10=very satisfied). Semi-structured telephone-interviews were conducted with the PTs to explore their experiences with the new GE concept.

Results:

People with axSpA: The survey's response rate was 83% (25/30); of these, 15 (62%) participants were satisfied with the concept (mean 6.7 $\pm$ 2.23) and 20 (80%) with the exercise-coaching (mean 7.7 $\pm$ 2.92). 22 (88%) individuals defined a training goal and 15 (60%) achieved it. The exercise diary was used by 16 (64%) participants, five reported app-based. Reasons for not using the diary were the daily effort and problems with correctly allocating activities to exercise dimensions. A minority ($n=7$, 28%) reported to use a technical device for cardiovascular exercising. 17 (68%) were satisfied with the fitness-assessment (mean 7.5 $\pm$ 1.78). PTs perceived the exercise-coaching as very useful for supporting individualised exercising. However, they emphasised that the frequency of the sessions should be flexibly based on the participant's individual training goal and motivation. The PTs perceived controversial reactions to the fitness-assessments: increased but also decreased motivation towards exercising.

Conclusion: Exercise-coaching and fitness-assessments were generally appreciated; however, the frequency was perceived as too high. The GE concept will be adapted accordingly to improve feasibility for national implementation: the exercise-coachings will be reduced to two in the first six months, the first one compulsory for all participants, then bi-annually, according to individual needs and training goals. The fitness-assessments will take place annually instead of bi-annually. There is a need for easy-to-use exercise diaries, covering all exercise dimensions.

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FRI0701-HPR EFFICACY OF INTERMITTENT AEROBIC EXERCISE ON SLEEP EFFICIENCY IN PATIENTS WITH RHEUMATOID ARTHRITIS. A RANDOMIZED CONTROLLED TRIAL

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Background: Insomnia is seen in >60% of patients with rheumatoid arthritis (RA). While cross-sectional studies have shown a positive association between regular physical activity and good sleep, there is a lack of knowledge on the effect of physical activity on insomnia in patients with RA.

Objectives: To examine the efficacy of intermittent aerobic exercise on sleep efficiency as well as the effect on fatigue and depressive symptoms.

Methods: 38 patients with RA were randomly assigned to either intermittent aerobic exercise training; 3 session/week for 6 weeks; intervention group (n=17) or usual care (controls group n=21). The primary outcome was change in polysomnography (PSG) assessed sleep efficiency while secondary outcomes included sleep (Pittsburgh Sleep Quality Index), fatigue (Bristol Rheumatoid Arthritis Fatigue Multi-Dimensional Questionnaire) and depression (The Center for Epidemiological Studies-Depression).

Results: Sleep efficiency improved significantly in the intervention group from baseline 0.84 (95% CI 0.80-0.87) to end of the intervention 0.88 (95% CI 0.84-0.92) $p=0.03$, while for the control group the mean change was not significant. No between-group difference in change was observed. Fatigue was significantly reduced in the intervention group compared to the control group -16.0 (95%CI -25.1 - -7.04), including physical fatigue -4.99 (95%CI -7.25 - -2.74), cognitive fatigue -2.43 (95%CI -4.22 - -0.63) and living with fatigue -2.50 (95%CI -4.45 - -0.54).

	Baseline		Post-intervention		Within-group change			Between-group difference		
	Estimate	95%CI	Estimate	95%CI	Estimate	95%CI	P-value	Estimate	95%CI	P-value
Sleep efficiency (PSG)										
IG	0.84	0.80-0.87	0.88	0.84-0.92	0.04	0.00-0.07	0.03			
CG	0.88	0.84-0.91	0.88	0.85-0.92	0.01	-0.03-0.04	0.77	0.04	-0.02-0.08	0.16
Global PSQI score										
IG	7.40	5.57-9.23	6.72	5.01-8.42	-0.68	-2.40-1.03	0.41			
CG	7.31	5.55-9.06	7.48	5.83-9.12	0.17	-1.52-1.86	0.83	-0.85	-3.27-1.56	0.46
Physical fatigue										
IG	14.27	11.5-16.9	10.8	8.20-13.5	-3.38	-5.03-1.74	0.0002			
CG	10.95	8.53-13.3	12.5	10.1-15.0	1.60	0.06-3.15	0.04	-4.99	-7.25-2.74	0.0001
Living with fatigue										
IG	5.88	4.27-7.49	3.11	1.50-4.72	-2.76	-4.17-1.35	0.0003			
CG	4.47	3.02-5.92	4.21	2.69-5.73	-0.26	-1.61-1.08	0.69	-2.50	-4.45-0.54	0.01
Cognitive fatigue										
IG	5.41	3.92-6.89	3.58	2.10-5.07	-1.82	-3.11-0.53	0.007			
CG	4.14	2.80-5.48	4.74	3.24-6.15	0.60	-0.63-1.84	0.32	-2.43	-4.22-0.63	0.009
Emotional fatigue										
IG	3.29	2.18-4.39	2.0	0.89-3.10	-1.29	-2.20-0.38	0.006			
CG	2.52	1.53-3.51	2.3	1.25-3.33	-0.22	-1.09-0.64	0.59	-1.06	-2.32-0.19	0.09
Depression										
IG	13.7	10.0-17.4	10.7	7.2-14.3	-2.99	-6.83-0.85	0.12			
CG	8.6	5.2-12.1	12.4	8.5-16.2	3.75	-0.38-7.90	0.07	-6.75	-12.4-1.1	0.02

IG=intervention group; CG=control group

Conclusion: An intermittent aerobic exercise intervention presented no statistically significant effect on sleep efficiency in patients with RA compared with usual care. However, significant between-group differences were seen in subjectively reported fatigue including physical fatigue and cognitive fatigue and on depressive symptoms.

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FRI0702-HPR NON PHARMACOLOGICAL MANAGEMENT OF FIBROMYALGIA: A SYSTEMATIC REVIEW OF SYSTEMATIC REVIEWS

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Background: Despite the number of guidelines and available therapies, many individuals with fibromyalgia (FM) still experience significant pain and a reduced quality of life. Patient heterogeneity and clinical uncertainty can lead to delays in selecting the most appropriate management strategy. There are more than 300,000 publications surrounding the management of FM, thus affecting clinicians' ability to make informed decisions. The systematic review of randomised controlled trials is the gold standard in evaluating an intervention. However, the increase in systematic reviews

(SRs) has led to some questions regarding their quality. Therefore there is a need to synthesise the evidence with an overview of SRs.

Objectives: To evaluate the quality of the current evidence from SRs on the effects of non-pharmacological interventions for the management of FM.

Methods: A systematic search of seven databases (1990-2018) was completed to identify SRs reporting the effects of non-pharmacological interventions on the primary outcomes of pain, function and quality of life (QoL). Data was extracted according to the PICO framework in addition to intervention prescription where appropriate. Methodological quality was assessed using the Assessing the Methodological Quality of Systematic Reviews (AMSTAR-2) instrument (Shea et al 2017).

Results: Twenty-six SRs with 243 primary studies met the inclusion criteria. Reviews were classified into 6 categories (1) land-based exercise; (2) water-based exercise; (3) mind-body; (4) electrotherapy; (5) manual therapy and (6) complementary and alternative medicine (CAM). Quality of the included SRs were variable with many interventions scoring low to critically low. High quality evidence was found to support the use of land-based exercise and mind-body therapies for the improvement of pain, function and QoL (Table). In particular aerobic exercise with or without strength training and mind-body therapies demonstrated the best outcome.

Conclusion: With the exception of land-based exercise and mind-body exercise, the quality of evidence for the non-pharmacological management of FM is mostly poor, with more than half of the included reviews scoring low or critically low on the AMSTAR-2 instrument. Improved reporting of outcome data and stricter methodological quality will allow stronger recommendations in the future.

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Table: Quality of reviews surrounding interventions on FM

	Results*	Quality of evidence
Land-based exercise (3)	Pain*/function*/QoL*	High
Water-based exercise (5)	Pain*/function*	Moderate
Mind-body therapies (4)	Pain*/QoL*	High
Electrotherapies (8)	Pain*/QoL*	Low
Manual therapy (3)	Pain*	Critically Low
CAM (3)	Pain*	Low

* + = positive effects, ? = no or unclear results

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FRI0703-HPR INVESTIGATION OF THE EFFECTIVENESS OF AEROBIC EXERCISE TRAINING IN INDIVIDUALS WITH ANKYLOSING SPONDYLITIS: RANDOMIZED CONTROLLED STUDY

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Background: Aerobic capacity is a measure of the functional capacity of the oxygen system and the cardiopulmonary system. In Ankylosing spondylitis(AS) patients, aerobic capacity is lower than healthy peers, and this is due to inflammation, muscle atrophy and peripheral muscle weakness, fatigue, low physical activity level, negatively affected respiratory function, peripheral arthritis, decreasing chest expansion and respiratory muscle strength.

Objectives: The aim of the study was to investigate the effects of aerobic exercise training on functional status and aerobic capacity in individuals with AS.

Methods: Twenty-eight voluntary individuals diagnosed with AS according to Modifie New York Criteria who applied to Pamukkale University Department of Internal Medicine, Department of Rheumatology were included in the study. Individuals were randomly divided into two groups, as there would be aerobic exercise training (n=17; mean age=46.58 ±11.94years) and supervised exercises group (n=11; mean age=42.54 ±8.75years). All assessments were done before and after the training.