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.