

reasons for dropping out of an intervention and consider how this can be avoided in planning future interventions. 3) Examine the effect of behaviour change techniques used on completion rates. 4) Explore the effect of adverse outcomes on completion rates.

Methods: A systematic review of the literature was carried out in February 2018. Inclusion criteria were: detailed intervention information, completion rates reported, published between 1998-2018 and published in English. Included papers were assessed using the Cochrane risk of bias tool by two assessors. The relevant data was then extracted, compared and conclusions were drawn.

Results: Nine studies with varying levels of quality were included in this review. Reasons for not completing an intervention could be divided into modifiable and non-modifiable factors; modifiable factors include the FITT principle, the behaviour change component and controlling for adverse outcomes. Non-modifiable factors included the environment, illness/flare-up and accidents. The results found that when people with RA had an individualised PA program that started at a low-moderate intensity they had higher participation rates than those who followed a generalised program, with no behaviour change component. Altering the intervention in response to patient's pain levels improved completion rates of the intervention.

Conclusion: When designing PA programs for people with RA, the EULAR PA guidelines for people who have inflammatory arthritis [3] should be followed. However, it should be noted that engagement and participation in PA interventions is increased when the intervention is of low impact PA and starts at a low-moderate intensity. Individualising the activity to the person and applying behaviour change techniques have also been found to improve participation.

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FRI0717-HPR A COMPARISON OF THE EFFECTIVENESS OF CORE STABILIZATION EXERCISE AND COMBINED EXERCISE ON PAIN, FATIGUE, SLEEP PROBLEM AND HEALTH STATUS IN WOMEN WITH FIBROMYALGIA

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Background: Fibromyalgia (FM) is a syndrome characterized mainly by chronic widespread pain, fatigue, sleep disorders and decrease in health status. Exercise, one of the non-pharmacological approach, has favorable effects on clinic findings in FM, but studies investigating which types of the exercise are more effective in FM are limited.

Objectives: This study aimed to compare the effectiveness of core stabilization exercise (CSE) and combined exercise (CE) on pain, fatigue, sleep problem and health status in women with FM.

Methods: A total of 34 women with FM were included, allocated into the CSE (n:18, age: 43.05±9.23 years, body mass index (BMI): 27.25±5.23 kg/m²) and the CE (n:16, age: 38.43±9.55 years, BMI: 25.62±3.68 kg/m²) groups. Both the CSE and the CE programs were carried out 2 days a week for 6 weeks under the supervision of a physiotherapist. Pain, fatigue and sleep problems with Visual Analog Scale and health status with Fibromyalgia Impact Questionnaire were evaluated at baseline and after 6-weeks program.

Results: Physical characteristics of the groups were similar ($p_{age}=0.162$, $p_{bmi}=0.313$). After the program, it was found that pain ($p=0.001$; $p=0.014$), fatigue ($p=0.002$; $p=0.011$), and sleep problem ($p=0.007$; $p=0.039$) decreased, health status ($p=0.001$; $p=0.001$) improved in both the CE and the CSE groups, respectively. Moreover, sleep problem decreased in the CE group in comparison to the CSE group ($p=0.038$); but pain ($p=0.240$), fatigue ($p=0.178$), and health status ($p=0.098$) did not differ between groups.

Conclusion: In this study, it was observed that both the CSE and the CE programs were effective in decreasing pain, fatigue, sleep problem and improving health status of women with FM. In addition, the study suggested that the CE was superior in decreasing sleep problem in comparison to the CSE in women with FM. In clinics, both the CSE and the CE programs may be preferred to improve the symptoms of FM; however, the CE should be taken into account for the sleep problems in FM.

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FRI0718-HPR THE EFFECT OF THE BIOPSYCHOSOCIAL EXERCISE PROGRAM ON PAIN COPING SKILL AND FATIGUE IN RHEUMATIC DISEASES

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Background: Although the trend towards biopsychosocial approaches is increasing today, studies on psychosocial effects of exercise are limited in the literature. There is a need for framed exercise programs to assess the clinical effectiveness of biopsychosocial approaches. The reason why biopsychosocial programs are important may be due to multidimensional features of symptoms such as pain, fatigue.

Objectives: The purpose of this study is to investigate the effectiveness of the biopsychosocial exercise program on pain coping skill and fatigue in rheumatic patients.

Methods: Ninety-one patients with the rheumatic disease were included in this study. The patients were divided into two groups based on a prospective cohort (BETY group, n = 56; and control group, n = 35). BETY is a biopsychosocial exercise approach (1). It was performed in a period of one hour, 3 times a week for 12 weeks and included clinical pilates exercises, dance therapy-authentic movement and pain management information. The control group did not take any exercise treatment. The BETY-Biopsychosocial Questionnaire (BETY-BQ) was used to evaluate the pain coping skill and fatigue as well as assessing whole biopsychosocial status of individuals (2). The answers were given to the 5th question (I don't know how to control my pain.) and the 11th question (I feel tired.) of the BETY-BQ were recorded as a 5-point Likert at ranging from 'yes, always' to 'no, never. Also, the total score of BETY-BQ was recorded. Demographic data were given as mean ± standard deviation (X ± SD), and answers given to the questionnaire were expressed in frequency tables.

Results: The mean ages of BETY group and control group were 49.63 ± 11 and 39.74 ± 10 years and body mass indexes were 26.93 ± 3 kg/m² and 26.54 ± 4 kg/m², respectively. The frequency of answers to the 5th and 11th question and the total score of the BETY-BQ on the first assessment (pre-treatment) and the second assessment (post-treatment) were shown in Table 1.

FRI0718HPR Table 1. Comparison of assessment results

	BETY exercise group		p	Control Group		p
	Pre-treatment	Post-treatment		Pre-treatment	Post-treatment	
BETY-BQ (0-120)	54.60±27	38.55±25	<0,001	56.51±24	53.63±28	0.221
5th question						
Yes always	24.1	7.4	<0,001	28.6	28.6	0.734
(%)						
Yes often (%)	7.4	3.7		20	14.3	
Yes	25.9	22.2		8.6	17.1	
sometimes						
(%)						
Yes rarely (%)	25.9	20.4		17.1	8.6	
No never (%)	16.7	46.3		25.7	31.4	

11th question						
Yes always (%)	33.3	14.8	<0,001	51.4	42.9	0.198
Yes often (%)	25.9	18.5		25.7	22.9	
Yes sometimes (%)	25.9	37		11.4	20	
Yes rarely (%)	9.3	20.4		5.7	8.6	
No never (%)	5.6	9.3		5.7	5.7	

Conclusion: It was concluded that BETY as a biopsychosocial exercise approach is effective in reducing fatigue and improving the pain coping skill as well as the biopsychosocial status of rheumatic patients. BETY should be kept in mind for further studies in terms of biopsychosocial aspects of pain coping, fatigue, etc.

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FRI0719-HPR AN EVALUATION OF A FIBROMYALGIA EXERCISE PROGRAMME DELIVERED IN THE UNITED KINGDOM NATIONAL HEALTH SERVICE

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Background: Fibromyalgia (FM) is a complex long-term condition affecting up to 5.4% of the UK population¹. It is associated with chronic widespread pain, fatigue, stiffness, sleep problems, memory and concentration difficulties, and irritable bowel syndrome². FM guidelines recommend exercise as a core treatment for the management of FM symptoms³. Evidence shows exercise interventions are effective for people with FM, reducing pain and improving function and muscle strength⁴.

Objectives: This study aimed to evaluate the effectiveness of introducing a FM exercise group programme within a United Kingdom National Health Service hospital setting.

Methods: A pre and post evaluation was conducted. People with FM attending a rheumatology therapy department were invited to take part in a FM group exercise programme (60 minutes, once per week, seven weeks). To improve adherence, the exercise programmes were individualised based upon patients' preferences for aerobic or resistance exercise or both. Pre and post Revised Fibromyalgia Impact Questionnaire (FIQR), self-efficacy scale and sit-to-stand in 30 seconds outcome data were collected. Data were analysed using parametric paired samples t-tests and standardised effect size (Cohen's d).

Results: A total of n=20 patients completed the exercise programme (n=3 non-completers had higher baseline FIQR scores). Of the 20 completers the mean age was 49.9 years; n=19 were women; n=2 had a concomitant diagnosis of Joint Hypermobility Syndrome and n=1 had Inflammatory Arthritis. The results demonstrated statistically significant improvements across all outcome measures. There were large standardised effect sizes: self-efficacy d=0.93 (95% Confidence Interval (CI) 1.56, 0.26), FIQR d=1.00 (-0.32, -1.64), sit to stand in 30 seconds d=0.76 (0.07, 0.75).

Conclusion: An exercise programme for patients affect by FM can be successfully delivered in a hospital setting. Those who completed the programme saw large improvements in pain, self-efficacy and sit to stand. However, further research is needed to confirm the findings of this uncontrolled study.

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FRI0720-HPR DEVELOPMENT AND VALIDATION OF A SELF-ADMINISTRATED QUESTIONNAIRE MEASURING ESSENTIAL KNOWLEDGE FOR PATIENTS WITH RHEUMATOID ARTHRITIS: THE RHEUMATOID ARTHRITIS ASSESSMENT KNOWLEDGE QUESTIONNAIRE (RAKE)

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Background: Improving knowledge and skills is recommended for patients with rheumatoid arthritis (RA) to enhance self-management. Measuring knowledge is also part of the educative approach. However, the available Knowledge questionnaires (KQs) (ref 1,2) needed to be updated according to recent recommendations for RA management and the patients' needs (ref 3).

Objectives: To develop and validate a new KQ in RA.

Methods: 4 steps. Step1. Selection of knowledge considered essential for patients with RA through Delphi rounds by a working group of rheumatologists, health professionals (HPs) and patients leading to a list of consensual items (ref3). Step2. Two rheumatologists and a rheumatology nurse constructed the first version of the KQ, each question of the KQ referring to a selected item on the list. The formulation was then amended by the working group. A new version was elaborated during a face-to-face meeting of 3 HPs and one patient. Step 3. The KQ was submitted to ten patients for cognitive debriefing, comments were analysed and a the final version was elaborated. Step 4. Multicentric validation in 11 rheumatology departments: acceptability was measured by the rates of missing data per item, reproducibility and sensitivity to change were assessed respectively by test/retest at a 2 weeks interval (Lin's concordance correlation coefficient) and by testing the KQ before and after patient education sessions. The sample size estimation and statistical analyses were conducted according to COSMIN recommendations, especially concerning thresholds of metrological indexes.

Results: Step1 obtained 45 knowledge items, 32 considered essential and 13 considered useful, selected respectively by more than 2/3 and more than 50% of participants to the Delphi rounds, leading to the RAKE: a 45-items questionnaire, with a 32-items short form. The RAKE contains 6 knowledge domains: disease knowledge (10 items), pharmacological treatment (14), non-pharmacological treatment (7), comorbidities (1), self-care for pain and fatigue (5), adaptative skills to psychosocial and professional issues and health care system (8). The validation included 130 patients, 108 (83%) women, mean age 56.4±12.10 years, median disease duration 9 years [4; 23]. The missing data rate per item was <0,05. The RAKE's internal validity (Kuder-Richardson) was 0.90. Reproducibility (in 72 patients) was 0.86 [0.80; 0.92]. Sensitivity to change was measured in 54 patients. A statistically significant difference in total knowledge score was observed between the two assessment times: 30.1±7.4 vs. 37.7±5.7 (p<0.001), representing an effect size >1.1 [0.7; 1.6]. The RAKE's