11th question					
Yes always (%)	33.3	14.8	<0.001	51.4	42.9
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

external validity was confirmed by correlation with the RAID score of 0.16 ($p=0.08$).

Conclusion: This study enabled the development and the validation of the RAKE, a Knowledge questionnaire for patients with RA, with a good acceptability, reproducibility and sensitivity to change. This KQ will be helpful to assess the process of knowledge acquisition in patient education approaches.

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FRI0721-HPR EFFECTIVENESS OF NON-PHARMACOLOGICAL AND NON-SURGICAL INTERVENTIONS ON THE IMPACT OF RHEUMATOID ARTHRITIS: AN OVERVIEW OF REVIEWS

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Background: Impact of disease persists in many patients with rheumatoid arthritis (RA) even after inflammatory remission is achieved, requiring the need for adjunctive interventions targeting the uncontrolled domains of disease impact. Several systematic reviews have addressed nonpharmacologic interventions, but there is still uncertainty due to scarce or conflicting results or significant methodological flaws.

Objectives: To determine the effectiveness of non-pharmacological and non-surgical interventions upon the impact of RA.

Methods: A comprehensive search strategy for 13 databases and grey literature was developed. This review included quantitative systematic reviews that examined the effectiveness of non-pharmacological and non-surgical interventions of any form, duration, frequency and intensity, alone or in combination with other interventions designed to reduce the impact of disease in adult patients with RA. The outcomes were pain, functional disability, fatigue, emotional well-being, sleep, coping, physical well-being and global impact of disease. Critical appraisal and data extraction were performed independently by two reviewers and summarized using a narrative synthesis approach.

Results: Eight systematic reviews were included (Figure 1), with a total of 91 RCT's and nine observational studies (6740 participants). Four systematic reviews examined the effects of multicomponent or single exercise/physical activity interventions, two examined the effects of hydrotherapy/balneotherapy, two evaluated the effects of psychosocial interventions and one assessed the effects of custom orthoses for the foot and ankle. Multicomponent or single exercise/physical activity interventions, psychosocial interventions and custom orthoses appeared to be effective in improving pain and functional disability. Fatigue also improved with the implementation of multicomponent or single exercise/physical activity interventions and psychosocial interventions. Only exercise/physical activity interventions appeared to be the effective in improving the global impact of disease. None of the included systematic reviews reported on emotional well-being, sleep, coping or physical well-being as an outcome

measure. Other types of interventions were not sufficiently studied and their effectiveness is not yet established.

Figure 1: Flowchart of the study selection and inclusion process

Conclusion: Only multicomponent or single exercise/physical activity interventions, psychosocial interventions and custom orthoses seems to be capable of reducing the impact of rheumatoid arthritis. Future evidence should be created and synthesized in the fields identified as knowledge gaps, namely emotional well-being, sleep, coping and physical well-being. Further investigation should be encouraged on the effects of interventions that have not been assessed at all or sufficiently to established their effectiveness, so that robust decisions and recommendations can be made.

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FRI0722-HPR THE INVESTIGATION OF THE RELATIONSHIP BETWEEN PSYCHOSOCIAL AND FUNCTIONAL STATUS OF CHILDREN WITH JIA

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Background: JIA is the most common rheumatic disease in children and may result in significant morbidity with joint deformity, growth disorder, and persistence of active arthritis to adulthood (1). According to the model of biopsychosocial pain, emotions affect the degree of functional impairment (2).

Objectives: The aim of this study is to investigate the relationship between the psychosocial and functional status of children with juvenile idiopathic arthritis (JIA).

Methods: 382 children with JIA were included in the study. Individuals were assessed with the Juvenile Arthritis Biopsychosocial Questionnaire (JAB-Q) (3) and Children Health Assessment Questionnaire (CHAQ) was applied for functional status (4).

Results: The mean age of the subjects included in the study ($n = 386$) was 12.48 ± 3.81 years. The median value of the JAB-Q functional status was 2 (min: 0 max: 34), psychosocial status was 10 (min: 0 max: 38). And the median value of the CHAQ was 0.25 (min: 0 max: 3). Correlation coefficients and statistical significance were calculated by using Pearson's test. There was a low positive correlation between BETY-BQ functional status and BETY-BQ psychosocial status ($r = 0.347$, $p < 0.001$), a low positive correlation between CHAQ and BETY-BQ psychosocial status ($r = 0.395$, $p < 0.001$). There was a good positive correlation between BETY-BQ functional status and CHAQ ($r = 0.678$, $p < 0.001$) (Table 1).