

OP0275-HPR THE EFFECTS OF EXERCISE ON DEPRESSIVE AND ANXIETY SYMPTOMS IN RHEUMATOID ARTHRITIS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background: Exercise reduces depressive and anxiety symptoms among the general population, and those with a chronic illness. Elevated depressive and anxiety symptoms are prevalent co-morbidities in Rheumatoid Arthritis (RA) therefore, addressing same through exercise may have an important impact on their health related quality of life (HQoL). Evidence does support the effect of exercise on these outcomes however, quantitative synthesis of evidence from randomised controlled trials (RCTs) of exercise effects, on these critically important symptoms in RA, has yet to be conducted.

Objectives: To quantify the overall population effect of exercise on depressive and anxiety symptoms, fatigue, and pain, derived from available RCT's, and to explore the extent to which participant and trial characteristics moderated the mean effect.

Methods: Articles published before September 2017 were located by two independent reviewers using Google Scholar, PsycINFO, PubMed, and Web of Science. Trials included both randomization to exercise and non-exercise control using validated measures of depression and anxiety, assessed at baseline and post-intervention. Hedges' *d* effect sizes (95% CI) were computed and random effects models were used for all analyses. Sources of bias were also assessed independently by two reviewers using the Cochrane bias assessment tool for RCTs and Newcastle–Ottawa Quality Assessment Scale for non-RCTs.

Results: Seventeen studies were included, with 1214 participants, of which 12 RCT's contributed to the meta-regression analysis. Participants were aged 49±9 years and 83%±14% female. Exercise training consisted on average of 3 ±1 weekly sessions, 60±17 min per session, and 11±5 weeks in duration. Interventions were diverse with a mix of aerobic and/or resistance training including, 4 different types of Yoga, 2 dance based and 1 Tai-chi. Mean reported adherence was 87%±11%. For depression, 18 of 20 effects (90%) were >0. The mean effect size Δ was 0.20 (0.10–0.31; $p<0.001$). For anxiety, seven of seven effects (100%) were >0. The mean effect size Δ was 0.50 (0.27–0.74; $p<0.001$). Seven of 16 effects reduced pain by a mean effect delta of 0.04 (95% CI: –0.14 to 0.21; $z=0.41$; $p>0.69$). Six of 11 effects (54.5%) did not reduce fatigue with the mean effect delta being –0.01 (95% CI: –0.20 to 0.19; $z=-0.09$; $p>0.93$). Depressive or anxiety symptoms were not the primary outcome in any of the included trials.

Conclusions: Pharmacologic interventions have improved the management of RA however, research indicates that exercise remains an important part of the overall treatment. This quantitative synthesis of evidence from RCTs of the effects of exercise shows significant small-to-moderate reductions in depressive and anxiety symptoms. It has been reported that the degree of depression and anxiety in people with RA is a preceding sign of physical disability that may appear later in life therefore, aiming to target both through exercise may help to improve HQoL. Future trials should focus on depression and/or anxiety as the primary outcome. Exercise prescription is a core skill for physiotherapists therefore, they should be confident in prescribing exercise to people with RA, who have depression and anxiety, as it significantly reduces their symptoms.

Disclosure of Interest: None declared

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OP0276-HPR OCCUPATIONAL BALANCE AND ITS RELATION TO PERFORMANCE OF VALUED LIFE ACTIVITIES IN PERSONS WITH RHEUMATOID ARTHRITIS IN WORKING AGE

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Background: Experience of balance in everyday activities where work is an essential part is important to health and well-being,¹ as has also been observed in previous studies in people with rheumatoid arthritis (RA).² The Valued life activity scale (VLA-swe) is a questionnaire in which patient's first report if the separate activities are valued or not to perform and secondly difficulties to perform these activities.³ Occupational Balance Questionnaire (OBQ) focuses on satisfaction with the amount and variation of occupations.⁴

Objectives: The objectives were to 1) describe the relationship between performance of valued activities and experienced occupational balance, and to 2) identify aspects associated with low occupational balance in persons with RA.

Methods: 368 persons (age 18–65 years, 77% women) with RA responded to a questionnaire measuring occupational balance (OBQ)⁴ and performance of

valued life activities (VLA-swe).³ Other aspects of interest were activity limitations measured by Health Assessment Questionnaire (HAQ), pain (measured by VAS), continuous stress (stressed continuously for more than a month during the last 12 months), children at home, education, and living situation. The relation between OBQ and performance in VLA across genders and Workers/Non-workers were analysed using non-parametric correlation analyses. To identify the impact of different aspects on the likelihood that participants would report lower occupational balance, OBQ was analysed using workers/nonworkers, stress, gender, age, pain and difficulties performing valued activities as independent variables in logistic regressions models. The study was approved by the Regional Ethics Committee (Dnr2011/452–31).

Results: The OBQ was significantly related to difficulties to perform valued activities reported by VLA ($r=-0.41$, $p<0.001$). Having more difficulties performing valued activities was the strongest predictor of lower occupation balance and increased the risk of reporting lower occupation balance with nearly five times (OR=4.54, $p 0.001$). Continuous stress increased the risk of having lower occupation balance more than three times (OR=3.27, $p<0.0001$) than those who not reported being stressed. The other variables show no significant impact on the likelihood that the participants would report lower occupational balance.

Conclusions: The results showed support for the relationship between occupation balance and performance of valued life activities and highlights to identify what's important for the individual and to assume that in the rehabilitation. The results also show the importance of ability to manage stress, in order to enable for retaining ability to work and achieve high occupational balance.

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OP0277-HPR EVALUATION OF THE EFFECTIVENESS OF A PROGRESSIVE RESISTANCE TRAINING PROGRAM FOR PATIENTS WITH FIBROMYALGIA: A RANDOMISED CONTROLLED TRIAL

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Background: Fibromyalgia (FM) is a chronic pain syndrome, not inflammatory, characterised by the presence of diffuse pain and painful points. Commonly, it is linked to other symptoms such as fatigue, sleep disorders, morning stiffness; and psychological disorders such as anxiety and depression. The medical treatment of FM brings benefits in the short term. For long-term benefits it is usually associated with non-medicated treatment, such as patient education, physical conditioning, rehabilitation and psychological therapy. In this study, we used the progressive resistance training, which is muscle strengthening performed through the gradual increase of load during the training period.

Objectives: To evaluate the impact of a global progressive resistance training program on pain, quality of life, functional capacity and muscular strength in patients with fibromyalgia

Methods: Sixty patients were randomised into 2 groups: experimental group and control group. Patients in the experimental group underwent a progressive resistance training program, performed twice a week for 12 weeks. The charge intensity was progressively increased from 40% to 80% of 1RM. The following muscle groups were worked: trunk flexors and extensors, elbow flexors and extensors, knee flexors and extensors, hip abductors and adductors and shoulder abductors. In addition to strength training, the experimental group also received a structured education program in one hour class once a week for five weeks. Patients in the control group received the same education program.

Results: After the intervention, significant improvements were observed in the experimental group in comparison with control group over time for the following parameters: pain ($p=0.004$), FIQ ($p=0.021$), quality of life (with statistically significant improvement for all the SF-36 domains), functional capacity, assessed by the 6 min walk test ($p=0.045$), and muscle strength (with statistically significant improvement for all muscle groups trained). The intergroup and intragroup comparisons were showed in table 1.