6MWT distance and IPAQ score of the group with SSc were significantly lower than the healthy group ($p<0.05$).

Conclusion: This study demonstrates that women with SSc have increased arterial stiffness, decreased functional exercise capacity and physical activity. Exercise training is an important part of the comprehensive care of people with SSc. People with SSc should be included in an exercise training program to reduce arterial stiffness, increase exercise capacity and physical activity.

REFERENCES:

- [1] Cypiene A, Lauzevicius A, Venalis A, Dadoniene J, Ryliskyte L, Petrulioniene Z, Kovaite M, Gintautas J. The impact of systemic sclerosis on arterial wall stiffness parameters and endothelial function. *Clin Rheumatol*. 2008 Dec;27(12):1517-22.
- [2] Laufs U, Wassmann S, Czech T, Münzel T, Eisenhauer M, Böhm M, Nickenig G. Physical inactivity increases oxidative stress, endothelial dysfunction, and atherosclerosis. *Arterioscler Thromb Vasc Biol*. 2005 Apr;25(4):809-14.

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THU0726B-HPR THE FACTORS AFFECTING HANDWRITING SPEED IN PATIENTS WHO HAVE AN AFFECTED WRIST JOINT WITH OLIGOARTICULAR JUVENILE IDIOPATHIC ARTHRITIS

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Background: Juvenile idiopathic arthritis (JIA) encompasses a complex group of disorders with arthritis. Patients with JIA may experience significantly decreased life skills owing to muscular weakness, joint pain, contracture, and reduced mobility (1). Poor handwriting speed is an example of an affected life skill that has been observed by educators and clinicians for patients with chronic disease (2).

Objectives: The aim of this study was to investigate the factors affecting handwriting speed in patients who have an affected wrist joint with oligoarticular JIA.

Methods: 42 patients (aged 6–18 years) who have an affected wrist joint with oligoarticular JIA were included in this study. Muscular strength was estimated at maximal isometric force for the muscles of the upper extremities by using a portable handheld dynamometer. Grip and pinch strengths were evaluated by a dynamometer. Handwriting speed was evaluated with a sentence writing duration of 24 letters. All tests were performed thrice and the mean values of all were recorded. The correlation between all parameters was analyzed by the Pearson Correlation Test. Also, relations between the factors affecting handwriting speed in JIA were assessed by multiple linear regression analysis.

Results: The mean age was 12.71 ± 3.35 and the mean disease duration was 6.52 ± 3.81 years. The mean of handwriting speed was 20.53 ± 10.39 seconds. Significant relationships were found between handwriting speed and muscular strengths of shoulder and elbow ($p<0.05$). Also, significant relationships were found between handwriting speed and lateral ($r=-0.352$, $p=0.022$), tip ($r=-0.309$, $p=0.047$) and triple ($r=-0.375$, $p=0.015$) pinch strengths. According to linear regression analysis, handwriting speed was affected by only muscle strength of elbow pronation ($\beta=-0.515$, $p=0.037$).

Conclusion: Handwriting is a complex functional activity simultaneously involving motor skills, cognitive and visual perceptual processing in all chronic disease. In the current study, it was found that handwriting speed was related with shoulder and elbow muscle strengths and pinch strengths in patients with JIA. Although patients with JIA had only affected wrist joint, only muscle strength of elbow pronation was the only primary predictor of handwriting speed. We suggested that handwriting speed should be considered in patients with juvenile idiopathic arthritis. So, accurate assessment of handwriting speed is essential for developing appropriate intervention programs and evaluating performance and outcomes in patients with JIA. Besides, not only affected joint, but also all upper extremity joints should be assessed multidimensionally.

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REFERENCES:

- [1] Gowdie, P. J., & Tse, S. M. (2012). Juvenile idiopathic arthritis. *Pediatric Clinics of North America*, 59(2), 301-327.
- [2] Van Drempt, N., McCluskey, A., & Lannin, N. A. (2011). A review of factors that influence adult handwriting performance. *Australian occupational therapy journal*, 58(5), 321-328.

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THU0727-HPR FOLLOW-UP CARE AND SELF-MANAGEMENT ACTIVITIES AFTER SPECIALIZED REHABILITATION FOR PATIENTS WITH RHEUMATIC AND MUSCULOSKELETAL DISEASES

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Background: Patients with rheumatic and musculoskeletal diseases (RMDs) benefit from rehabilitation in specialized care, but the effect seems to decline over time. Implementation of healthy self-management strategies and support over an extended period may prolong the effect. Rehabilitation trajectories with planned follow-up interventions and support in primary health care are therefore recommended. Still, evidence is not clear concerning what constitutes an optimal design of supportive follow-up interventions, and to which degree such follow-up care are planned and delivered.

Objectives: To describe current follow-up care practice and self-management after specialized rehabilitation for patients with RMDs.

Methods: This is a multicentre cohort study, including 523 participants with RMDs who received rehabilitation in specialized care in Norway. Participants completed a core set of outcome measures for rehabilitation in musculoskeletal diseases covering nine aspects of health and function in a web based data collection system [1]. At rehabilitation discharge, they additionally reported needed and planned follow-up care (FU-care) from listed professions and services in primary health care and plans for self-management activities (SMA). Received FU-care and adherence to SMA were reported at 4, 8 and 12 months follow-up. A multiple logistic regression analysis was performed to explore predictors for acceptable adherence to SMA.

Results: A total of 436 participants completed all assessments at discharge, of which 429 (98%) reported a need for FU-care. A need for FU-care by primary physician was most frequently registered, followed by physiotherapist and the Norwegian Labour and Welfare Service. However, only 239 (56%) reported that FU-care was planned at discharge. Of those reporting a need for FU-care, 201 (47%) participants reported receiving such care during the follow-up year, and these participants more often had a specific follow-up plan at discharge compared to those who did not receive the FU-care they reported needing ($p=0.06$).

Hundred and sixty-four (38%) participants were adhering to their SMA throughout the follow-up year. Higher age ($OR=1.04$, [CI 95% 1.02, 1.06], $p<0.001$), lower degree of depression and anxiety ($OR=0.73$, [CI 95% 0.58, 0.94], $p=0.01$), and performing physical activity on a regular basis ($OR=3.35$, [CI 95% 2.08, 5.39], $p<0.001$) at baseline were predictors for acceptable adherence. Participants with acceptable adherence reported more often a need for FU-care ($p<0.001$), and had more frequently received the FU-care they needed ($p<0.001$) than those without acceptable adherence.

Conclusion: Participants with plans were more likely to receive the FU-care they reported needing, indicating that discussing and planning follow-up should be an integral part of rehabilitation in specialized health care. The results further indicate that having structure and routines in one's daily life enhance adherence to SMA, and that patients with anxiety and depression and a sedentary life style may need more support over a longer period to be able to implement behavioural changes for healthy self-management.

REFERENCES:

- [1] Klokkeud, M., et al., *Developing and testing a consensus-based core set of outcome measures for rehabilitation in musculoskeletal diseases*. *Scandinavian Journal of Rheumatology*, 2017: p. 1-10.

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THU0728-HPR "I AM GOOD ENOUGH AS I AM EVEN IF I AM NOT PERFECT" –A QUALITATIVE STUDY OF FIBROMYALGIA PATIENTS' EXPERIENCES FROM PARTICIPATION IN A MINDFULNESS-BASED GROUP-PROGRAMME

Heidi A. Zangi¹, Gyda Singstad²Ingrid Ruud Knutsen², Improved management of patients with fibromyalgia: Evaluation of an integrated care model. ¹*Diakonhjemmet Hospital, National Advisory Unit on Rehabilitation in Rheumatology, Oslo, Norway;* ²*Oslo Metropolitan University, Oslo, Norway*

Background: People with fibromyalgia (FM) suffer from widespread pain, non-refreshing sleep, fatigue and reduced mental wellbeing. No curative pharmacological treatment exists. Vitality Training (VTP) is a mindfulness- and acceptance-based group-programme that aims at enhancing participants' health promoting resources, strengthening their inner authority and ability to act according to own values. It combines mindfulness with creative methods and group counselling. Two RCTs have shown significant improvements in mental wellbeing, pain coping and fatigue in patients with chronic musculoskeletal pain and inflammatory arthritis. The VTP is currently being evaluated in an ongoing study for patients with newly diagnosed FM [1].

Objectives: The aim of this qualitative study was to explore FM patients' experiences from participating in the VTP, and if they perceived that it had any impact on their health and functioning.

Methods: Six qualitative in-depth interviews with participants from three VTP-courses were conducted following a semi-structured interview guide. Interviews were audio-recorded and transcribed. All three authors analysed the data by use of systematic text condensation.

Results: Three main themes were identified.

1. Understanding oneself in light of the group: Mutual understanding and acknowledgement had altered participants' self-understanding – from a feeling that "something was wrong with me" towards perceiving themselves as "a normal person with similar challenges as others".
2. Learning to accept oneself: Participants had obtained a greater understanding and acceptance for their emotions and reactions and had become kinder towards themselves. "I have realised how strict I have been towards myself... I am indeed good enough as I am even if I am not perfect".
3. Coping with everyday challenges: Becoming aware of what had provoked stress and learn how to face it had helped participants take more control. "I can do small changes that really makes it better... the illness does not decide everything. Indeed I can decide something myself".

Conclusion: Participation in the VTP had contributed to new ways of relating to oneself and the illness. The support and acknowledgement participants experienced from the group had helped them alter their self-understanding from only being ill towards also being healthy and normal. They had learnt ways to better cope with stress and everyday challenges. Although this was a small study, the findings correspond with findings in previous studies.

REFERENCES

- [1] Haugmark T. et al. Effects of a community-based multicomponent rehabilitation programme for patients with fibromyalgia: protocol for a randomised controlled trial. *BMJ open*. 2018 Jun 4; 8(6):e021004.

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HPR Professional education, training and competencies

THU0729-HPR BENEFITS OF EMPOWERING THE PATIENTS TO SELF-ADMINISTER SUBCUTANEOUS LOW DOSE METHOTREXATE (LD-MTX) INJECTIONS IN PATIENTS WITH SYSTEMIC IMMUNO-INFLAMMATORY RHEUMATIC DISEASES (SIRDs): A STUDY BY RHEUMATOLOGY NURSES COUNSELLOR

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Background: In recent years, early aggressive targeted treatment for SIRDs is recommended. LD-MTX is the "anchor drug" for these diseases. The administration of LD-MTX using subcutaneous route increases its therapeutic efficacy that ensures the maximum bioavailability and reduces gastrointestinal adverse effects. Therefore, it is preferred over the oral route. Increased use of subcutaneous self injection of medication has benefits for the patients and healthcare system. Increased use of subcutaneous self injection could alleviate pressure on medical services by reducing hospital/clinic visits. Therefore, explaining the benefits of self administration of subcutaneous injection such as early disease control, increased drug adherence, positive attitudes towards life, decreased financial burden of administration cost, decreased dependency to the others, should be an imperative part of patient's education.

Objectives: Benefits of self-administered subcutaneous LD-MTX injection in patients with SIRDs.

Methods: This retrospective study included patients who were prescribed injectable LD-MTX for their treatment. Besides the demographic information (age, gender) and disease characteristics (diagnosis, duration, prior treatment), the patients were interviewed and counselled regarding the virtues to take subcutaneous LD-MTX self-injection. The technique for self-injection of LD-MTX subcutaneously was explained and demonstrated to the patients. All the information including the follow-up details, were recorded in a pre-designed form.

Results: Three hundred (n=300) consecutive patients who were advised weekly LD-MTX injections and taught the self-injection technique were enrolled in this study. On follow-up visit it was found that among them, 177 patients (59%) learned and started to administer their own subcutaneous injection of LD-MTX and they adhered to the injection schedule, in 50 (16.7%) patients the injections was being given by the attendant (who had learnt the injection technique because the patients had deformities), while the other 73 (24.3%) were not very compliant to injections due to psychological barriers towards self-injection, worried about pain and incorrect technique, adverse effects of the incorrect injections social stigma related to self-injections, and frustration or lack of acceptance of the illness.

Conclusion: By empowering the patients to self-administer LD-MTX injections subcutaneously, a majority (59%) of them successfully continued to take the medicine appropriately. Thus this study shows the important role the nurses' play in educating patients and helping them to overcome psychological barriers to self injection. Empowering the patients to take self-administer injections would result in better long term treatment adherence, improving treatment flexibility and overall quality of life.

REFERENCES:

- [1] Hazlewood, et al. The comparative effectiveness of oral versus subcutaneous methotrexate for the treatment of early rheumatoid arthritis. *Ann Rheum Dis*. May 2015
- [2] Malaviya AN, Sharma A, Agarwal D, Kapoor S, Garg S, Sawhney S. Low-dose and high-dose methotrexate are two different drugs in practical terms. *Int J Rheum Dis*. 2010 Oct

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