OP0076

ISOTEMPORAL SUBSTITUTION OF SEDENTARY TIME WITH PHYSICAL ACTIVITY IN FIBROMYALGIA: ASSOCIATION WITH QUALITY OF LIFE AND DISEASE IMPACT. THE AL-ANDALUS PROJECT

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Background: There is an awareness of detrimental health effects of sedentary time (ST) in fibromyalgia.^{1,2} However, data are limited on how replacing ST with physical activities of different intensities may be related to the typically reduced quality of life of these patients. Increasing time in one behaviour requires decreasing time in another but classic regression models are not able to directly target these substitutions. Hence, the isothermal substitution paradigm (a novel model to study the estimated effects of one activity for another³), might allow us to better understand the relationship between ST, physical activity and perceived health status in fibromyalgia.

Objectives: To investigate the association of replacing ST with light physical activity (LPA) or moderate-to-vigorous physical activity (MVPA) with quality of life and disease impact in women with fibromyalgia.

Methods: In total, 407 women with fibromyalgia (51.4±7.6 years old) were included in this cross-sectional study. The time spent in ST and PA intensity levels was objectively measured with triaxial accelerometry. Quality of life and disease impact were assessed using the 36-item *Short-Form Health Survey* (SF-36) and the *Revised Fibromyalgia Impact Questionnaire* (FIQR), respectively. An isothermal substitution approach was used to estimate the associations between the substitution of 30 min of ST with an equivalent time of LPA or MVPA and the outcomes. Analyses were controlled for age, current occupational status, fat percentage, and antidepressant consumption.

Results: Substituting 30 min of ST with LPA in the isothermal model was associated with better bodily pain ($B=0.55$), vitality ($B=0.74$) and social functioning ($B=1.45$) of SF-36 and better scores at all of the domains of FIQR (function, overall impact, symptoms severity, and total impact) (B ranging from -0.95 to -0.27), all $p<0.05$. When 30 min of ST were replaced with MVPA, significantly better physical role ($B=2.30$) and social functioning ($B=4.11$) of the SF-36 and function of FIQR ($B=-0.73$) were observed (all $p<0.05$).

Conclusions: Allocating time of sedentary behaviour to either LPA or MVPA was generally associated with better quality of life and lower disease impact in women with fibromyalgia. The isothermal models suggest that LPA may be beneficial for a larger number of domains, while MVPA may establish greater changes in the outcomes. These results reinforce the importance of moving towards less sedentary lifestyle in fibromyalgia, although these findings should be investigated in longitudinal, experimental research.

REFERENCES:

- [1] Ellingson LD, et al. *J Pain* 2012 Feb;13(2):195–206.
- [2] Segura-Jiménez V, et al. *Scand J Med Sci* 2017 Jan;27(1):83–92.
- [3] Mekary RA, et al. *Am J Epidemiol* 2009 May;170(4):519–27.

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OP0077

EFFECTIVENESS OF 8-WEEKS SUPERVISED AND NON-SUPERVISED AEROBIC EXERCISE PROGRAMS ON CLINIC FINDINGS, FUNCTIONAL STATUS AND QUALITY OF LIFE IN THE PATIENTS WITH FIBROMYALGIA SYNDROME

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Background: Fibromyalgia syndrome, aerobic exercise.

Objectives: This study was planned to evaluate the effectiveness of 8 weeks supervised and non-supervised aerobic exercise programs on clinic findings, functional status and quality of life in the patients with fibromyalgia syndrome.

Methods: A total of 120 patients who received the diagnosis of fibromyalgia syndrome according to ^{ACR 2010} Fibromyalgia classification criteria were enrolled into the study. Patients were randomised into three groups; Supervised aerobic exercise group (Group 1, 40 subjects), non-supervised aerobic exercise group (Group 2, 40 subjects), and control group (Group 3, 40 subjects). Fatigue, depression,

functional status, physical function, and quality of life of patients were evaluated before and after the treatment. Visual Analogue Scale (VAS) was used to assess the fatigue level. The level of depression was evaluated by Zung Depression Scale (ZDS). The evaluation of functional status was performed using Fibromyalgia Impact Questionnaire (FIQ). The quality of life of patients was investigated by Nottingham Health Profile (NHP). 6-metre walking distance test was used for the assessment of the physical function.

Results: After the exercise program, it was observed that there was a statistically significant improvement in both exercise groups for all evaluated parameters (fatigue, depression, functional status, physical function and quality of life), compared to the baseline ($p<0.05$). When compared with control group, it was found that the improvement in both groups was statistically significant better than control group ($p<0.05$). The improvement in fatigue, depression, functional status, physical function, and the Physical mobility subgroup of the quality of life was found to be better in supervised exercise group compared to the non-supervised home-based exercise group ($p<0.05$). As for the patients in the control group, it was observed that there was no improvement in any of the evaluated parameters.

Conclusions: In this study it was demonstrated that both supervised and non-supervised aerobic exercise programs have positive effects on clinic findings, functional status and quality of life of patients with fibromyalgia. However, further studies with a larger sample size and with a longer follow-up period are needed to support the findings of our study about the positive effects of supervised and non-supervised aerobic exercises.

REFERENCES:

- [1] Bradley LA, Alarcon GS. Fibromyalgia. In: Kopman WJ (Ed.). *Arthritis and allied conditions* (14th ed.). Philadelphia: Lippincott & Williams & Wilkins 2001;1811–44.
- [2] Yılmaz H, Uğurlu H, Sallı H. Muscle performance in patients with fibromyalgia syndrome. *Rheumatism* 2007;22:43–7.
- [3] İnanıcı F. Fibromiyalji Sendromu in Beyazova M, Gökçe Kutsal Y. Editör; Fiziksel Tıp ve Rehabilitasyon. Güneş Tıp Kitapevi Ltd şti. 2011. 2365–2374.
- [4] Aytür Y.K. Fibromiyalji Sendromu in Ataman Ş, Yalçın P Editör; *Romatoloji; Nobel Tıp Kitabevleri* 2012;755–775.
- [5] Rooks DS. Fibromyalgia treatment update. *Curr Opin Rheumatol* 2007;19(2):111–7.
- [6] Şendur ÖF. Ağrılı Kas Sendromları. In: Oğuz H, Dursun E, Dursun N (Eds.). *Tıbbi Rehabilitasyon, Nobel Tıp Kitabevi, İstanbul*, 2004, 1221–1238.
- [7] Rooks DS. Fibromyalgia treatment update. *Curr Opin Rheumatol* 2007;19(2):111–7.

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OP0078

IS THE EFFICACY OF PHYSICAL THERAPY RELATED TO THE PAIN IN THE PATIENT'S MIND?

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Background: The degree of improvement in functionality and pain after physical therapy in the patients with knee osteoarthritis (OA) may be due to various peripheral factors and used modalities. Additionally, in some patients, modifiable psychological factors such as pain catastrophizing and depression may influence the therapy outcome.¹

Objectives: The aim of this study was to investigate the impact of pain catastrophizing and depression on pain and functionality in the patients with knee OA who were treated with physical therapy.

Methods: The prospective cohort study participants were 89 patients with knee OA who underwent 10 sessions of physical therapy consist of hot-pack, transcutaneous electrical nerve stimulation (TENS), and ultrasound (US). Socio-demographic and clinical data were initially recorded. At baseline, pain catastrophizing and depression were measured with the standardised questionnaires including Pain Catastrophizing Scale (PCS) and Beck Depression Inventory-II (BDI-II). The Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) and the visual analogue scale (VAS) were performed at baseline, at the end of therapy and at first month after therapy.

Results: The patients' mean age was 60.38 (0.97), 82% were women, and 58.4% were not working. At baseline, the mean VAS and WOMAC scores were 7.39 (1.07) and 43.03 (19.47), respectively. 47.20% of the patients had clinically proper catastrophizing. The baseline demographic and clinical characteristics, except BDI-II score, VAS, and WOMAC were not different among the low catastrophizing and high catastrophizing groups (table 1). The patients who had high

scores on pain catastrophizing had a lower improvement in VAS and WOMAC scores at the end of therapy and at first month after therapy (figure 1).

Abstract OP0078 – Table 1. Demographic data of all patients

	Low catastrophizing (n:47)	High catastrophizing (n:42)	Total (n:89)	p
Age, mean±SD (years)	58.93±9.68	62.00±8.54	60.38 ±0.97	0.11
Gender n (%)	37 (78.7)	36 (85.7)	73 (82)	0.39
Female	10 (21.3)	6 (14.3)	16 (18)	
Male				
BMI, mean±SD	29.18±3.62	29.51±3.72	29.34 ±0.38	0.52
BDI-II, mean±SD	9.19±5.69	16.30±8.41	12.55 ±7.91	<0.001*
Employment Status n (%)	21 (44.7)	31 (73.8)	52 (58.4)	0.096
Not working	3 (6.4)	1 (2.4)	4 (4.5)	
Labourers	6 (12.8)	3 (7.1)	9 (10.1)	
Retail trading	13 (27.7)	5 (11.9)	18 (20.2)	
Retired	4 (8.5)	2 (4.8)	6 (6.7)	
Government employee				
Initial VAS, mean ±SD	6.97 (1.01)	7.85 (0.95)	7.39 (1.07)	<0.001*
Initial WOMAC, mean±SD	31.63 (15.03)	55.78 (15.65)	43.03 (19.47)	<0.001*

PCS: Pain Catastrophizing Scale, VAS: Visual Analogue Scale, WOMAC: Western Ontario and McMaster Universities Osteoarthritis Index.

High catastrophizing was described as total PCS score ≥ 30 .

Low catastrophizing was described as total PCS score < 30 .

* Statistically significant value ($p < 0.05$)

Abstract OP0078 – Figure 1 The comparing of differences of VAS and WOMAC scores among low catastrophizing and high catastrophizing groups.

Conclusions: We suggest that high levels of initial PCS score may cause lower improvement on pain and functional levels in the patients who underwent physical therapy. Screening for pain catastrophizing and depression in the patients who receive physical therapy and taking necessary precautions may improve outcomes.

REFERENCE:

- [1] Deutscher D, Horn SD, Dickstein R, Hart DL, Smout RJ, Gutvirtz M, Ariel I. Associations between treatment processes, patient characteristics, and outcomes in outpatient physical therapy practice. *Arch Phys Med Rehabil* 2009 Aug;90(8):1349–63.

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WEDNESDAY, 13 JUNE 2018: Don't delay, connect today!

OP0079-PARE 'AWARENESS WEEK FOR RHEUMATIC DISEASES- 8–14 MAY 2017'

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Background: Among the main priorities that Bulgarian Organisation for people with rheumatic diseases follow is the dissemination of knowledge and information about RMD's.

An important initiative is the annual awareness week about RMD's which is organised since 2015. The awareness week is organised in May and the idea occurred after EULAR's Knowledge transfer program in which BOPRD took part in 2013.

Objectives: In 2017 the focus was on two of the rheumatic diseases – SLE and fibromyalgia. SLE and fibromyalgia are not well known in our country that is why we decided to spread awareness among general public and policymakers.

The main goal of the 2017 awareness week for RMD's was to:

- inform the society and policymakers about the social significance of SLE and fibromyalgia
- Spread awareness about the most common symptoms of SLE and fibromyalgia
- Inform people with SLE, fibromyalgia and other RMDs how they can manage symptoms as anxiety, depression, and tension.

Methods: The 2017 awareness week about RMDs was organised in the period 8–14 May 2017.

One of the most important accents was a seminar, organised on 8 of May. We have invited as lecturer Gergana Radovich who is one of the international T-Tapp trainers. She holds a Master degree in Cognitive science, as well as certificates for Psych-K Facilitator and EFT Practitioner.

T-Tapp is a series of movements designed to put the body in proper functional alignment, restore metabolic function and stands on its own as a complete workout. Such a seminar for people with RMDs was not organised before. The participants had the chance to learn more about EFT and T-Tapp and how these techniques can benefit their condition and help them fight fear, tension, and anxiety.

At 10-th of May – World lupus day a discussion about the problems that people with SLE face was organised.

In the evening the National Palace of Culture (a famous building in the capital of Bulgaria) was lit in purple light to support people with SLE.

Results: The 2017 awareness week for RMDs was very successful.

All publications and media interviews that were published at the organisation's website and in other websites reached more than 4000 people in total.

88 people liked the organisation's Facebook page in the period 8–14 May 2017.

We have managed to continue to offer online EFT and T-Tapp lessons to the members of the organisation

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OP0080-PARE PHOTO ALBUM OF PEOPLE WITH RHEUMATIC DISEASES UNDER THE TITLE: 'THERE ARE SOME PEOPLE... OUR PEOPLE!!!'

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Background: The impact of rheumatic diseases in the daily life of people is sometimes quite dramatic, causing abundance of everyday pleasures and activities even one's hobbies. The burden of RMDs is not adequately communicated to the public or to the state, so that this important aspect is not generally met with relevant seriousness.

Objectives: The goal of our campaign was: a. to give a clear picture of the difficulties that people with rheumatic diseases face in their everyday life and b. to prove that some people manage to overcome their serious movement problems, their pain and dysfunction and show, with dignity and strength, that the artistic part inside them is vividly alive. The message we would like to communicate here is: THE POWER OF MIND IS STRONGER THAN BODY WEARENESS AND CHRONIC PAIN.

Methods: Firstly we got in touch with members of our Association that their skills could be presented in the album and discussed our idea, which was gladly accepted by them.

10 members of the association are included in the album, all of which are people with severe inflammatory rheumatic diseases. Ignoring their obvious moving problems and putting aside their other engagements, these wonderful people follow their talents and become sculptors, icon painters, pastry chefs etc. After the nomination of the sponsor for the project, a professional photographer was selected to capture the talents, the dedication to their art and the inner feelings of those people, in a way that can only be detected through the photographer's eye.

The shooting started in March 2017 and was finished in September 2017. Each of the artists had the chance to spend time with the photographer, express their feelings and show their way of life to him. This face to face contact enabled George (the photographer) to depict on his photos the real personality of these special people.