Results: Replacing 30 minutes of ST with LPA was associated with better strength in upper limb (*B*=0.19), handgrip strength (*B*=0.02) and aerobic fitness (*B*=2.29); all p<0.03 Replacing 30 minutes of ST with MPA was related to better strength and flexibility in lower and upper limb (*B* ranging from 0.43 to 1.97; all p<0.02). Finally, replacing 30 minutes of LPA with MPA was associated with better strength and flexibility in lower and upper limb, aerobic fitness and balance (*B* ranging from 0.15 to 8.54; all p<0.04). **Conclusion:** Replacing short time periods (30 min) of ST by PA (especially of moderate intensity) was related to better physical fitness. Moreover, to replace 30 min of LPA by MPA was related to better physical fitness. Our findings support the implementation of experimental research to better understand the extent to which replacing sedentary time (by LPA or MPA) or replacing LPA (by MPA) might enhance increase different components of physical fitness in fibromyalgia. Such findings would have direct clinical implications.

REFERENCES:

[1] Estévez-López, et al. Disabil Rehabil. 2018 Feb;40(3):329-337. DOI: 10.1080/09638288.2016
[2] Gavilán-Carrera B., et al. Arthritis Care Res. 2018 Jul. DOI: 10.1002/acr.23717
[3] Estévez-López, et al. Rheumatology (Oxford). 2017 Nov 1;56(11):2015-2024. DOI: 10.1093/rheumatology/kex302

Acknowledgement: This study was supported by the Universidad Politécnica de Madrid and the Spanish Ministry of Economy and Competitiveness (I+D+i DEP2010-15639; I+D+I DEP2013-40908-R, BES-2011-047133; BES-2014 067612) and of Education (FPU 15/00002, FPU 15/00002).
Disclosure of Interests: None declared
DOI: 10.1136/annrheumdis-2019-eular.3232

THU0471 THE EFFECT OF VIRTUAL REALITY EXERCISES ON PAIN, FUNCTIONALITY, CARDIOPULMONARY CAPACITY AND QUALITY OF LIFE IN FIBROMYALGIA SYNDROME: A RANDOMIZED, SINGLE-BLIND, CONTROLLED STUDY

Musa Polat[1], Abdulvahap Kahveci[2], Zafer Günendi[2], Gülçin Kaymak Karataş[2].
[1]Niğde Univercity, Niğde, Turkey; *[2]Gazi Univercity Faculty of Medicine, Ankara, Turkey*

Background: Fibromyalgia Syndrome (FMS) is a clinical condition with many symptoms such as chronic generalized pain, fatigue, sleep disorder, cognitive dysfunction and depressive mood. Management of FMS is difficult and the most important component is regular exercise.[1] In this syndrome, patients generally have compliance and motivation problems in maintenance of exercises. In recent years, exercises, with fun and game components, have been prescribed to increase patient compliance.[2] Motion-controlled video games targeting virtual reality are examples of these exercises.[3]
Objectives: To investigate the effect of motion controlled video games on pain, functionality, cardiopulmonary capacity and quality of life in fibromyalgic women.
Methods: Forty women (> 18 years) who have FMS were included in study. Patients were randomized into study and control groups. Control group performed aerobic exercise (cycling, 3 days/week, 20 minutes/day) for 4 weeks. Study group performed virtual reality exercise (Volleyball, Microsoft Xbox Kinect®, 3 days/week, 15 minutes/day) together with cycling exercise. After the four week supervised exercise program, both groups received the same home exercise program for four weeks. All patients were evaluated at baseline, 4th and 8th weeks. Primary outcome measure was Fibromyalgia Impact Questionnaire. Visual Analog Scale (VAS), Hospital Anxiety and Depression Scale, Fatigue Severity Scale (FSS), Symptom Severity Scale, EuroQol-Quality of Life/Visual Analogue Scale (EQ5D-QoL/VAS) and 6 Minute Walk Test (6MWT) were used as secondary outcome measures. Positive and Negative Affect Schedule (PANAS) was used for patient satisfaction. T-test was used to compare demographic data between two groups. Repeated measures ANOVA was used in evaluation of intra-group efficiency of treatment. Treatment group and time interaction was evaluated by two-way analysis of variance. We calculated 20 patients per group, in order to find 14% minimal clinical difference in Fibromyalgia Impact Questionnaire with 80% power and 0.05 error rate (Tip 1 error).[4]
Results: All patients completed supervised exercise program (4 weeks). 34 patients (17 study group, 17 control group) were evaluated at the 8th week. Age, body mass index, education status, comorbidities and drug use were similar in both groups (p> 0.05). After four weeks, all outcome measures improved significantly in both groups (p<0.05). However, there was no statistically significant difference in all outcome measures between 4th and 8th weeks. Group and time interactions for 6MWT (F (1.21, 46.33) = 4.04, p = 0.043), FSS (F (1.61, 61.24) = 4.21, p = 0.026), EQ5D-QoL Scale (F (2, 76) = 4.55, p = 0.014) and EQ5D-VAS Scale (F (1.4, 53.55) = 3.59, p = 0.049) were significant only for the study group. In addition, PANAS score was significantly higher in study group (p <0.001).
Conclusion: Virtual reality exercises along with aerobic exercise increase cardiopulmonary capacity and quality of life in FMS. In addition, they increase patient satisfaction and may improve patient compliance to exercise.

REFERENCES:

[1] Bidonde J et al. Aerobic exercise training for adults with fibromyalgia. The Cochrane Library, 2017.
[2] Botella C et al. Virtual reality in the treatment of pain. JCR 2008;1:93.
[3] Garcia-Palacios A et al. Integrating Virtual Reality With Activity Management for the Treatment of Fibromyalgia. The Clinical Journal of Pain, 2015, 31.6: 564-572.
[4] Bennett RM et al. Minimal clinically important difference in the fibromyalgia impact questionnaire. The Journal of Rheumatology, 2009, jrheum. 081090.

Disclosure of Interests: None declared
DOI: 10.1136/annrheumdis-2019-eular.6635

THU0472 FIBROMYALGIA SYNDROME IN WEST AFRICA: ACR 1990 IS NOT SENSITIVE FOR THE UNDER-DIAGNOSED AND WIDELY MISUNDERSTOOD DISORDER

Richard Akintayo[1], Bola Ahmed[2], Kayode Olafimihan[3], Foluke Akintayo[4].
[1]University of Ilorin Teaching Hospital, Ilorin, Rheumatology, Ilorin, Nigeria; *[2]University of Ilorin Teaching Hospital, Ilorin, Orthopaedic Surgery, Ilorin, Nigeria*; *[3]University of Ilorin Teaching Hospital, Family Medicine, Ilorin, Nigeria*; *[4]Ladoke Akintola University of Technology Teaching Hospital, Family Medicine, Ogbomoso, Nigeria*

Background: Like most poorly understood rheumatic conditions, Fibromyalgia is thought to be rare in West Africa. Many clinicians rely on the various ACR classification criteria to make a diagnosis of Fibromyalgia despite the unknown performance of these criteria among patients of sub-Saharan African origin.
Objectives: To describe the characteristics of fibromyalgia in Nigerian patients and determine the sensitivities of four ACR criteria sets.
Methods: Consecutive patients diagnosed with fibromyalgia for the first time by a rheumatologist were evaluated using ACR 1990, ACR 2010, 2011 modification of ACR 2010 (ACR 2011) and ACR 2016 classification criteria for fibromyalgia. Sleep quality was assessed with the Pittsburgh Sleep Quality Index (PSQI), fatigue with the Fatigue Severity Scale (FSS) and severity of fibromyalgia with the Revised Fibromyalgia Impact Questionnaire (FIQR). The overall characteristics and the beliefs of these patients regarding their disease were analysed.
Results: Of the one hundred and fourteen (114) patients, ninety six (96) were females; male-to-female ratio is 1:5.3. The median duration of symptoms before diagnosis is 54 months (3 to 273 months) and the mean age is 44.6±15.6 years. Mild, moderate, and severe fibromyalgia were found in 32(28.1%), 53(46.5%) and 29(25.4%) patients respectively. Sensitivities of ACR 1990, ACR 2010, ACR 2011, and ACR 2016 were 38.5%, 68.2%, 76.7% and 76.7%, respectively. Poor sleep was found in 83 (72.8%) patients. Patients in functional classes I, II, and III were 71 (62.3%), 19 (16.7%) and 24 (21.1%), respectively. There was none in class IV. There was positive history of widespread pain in at least one first degree relative of 56 (49.1%) patients. Twenty-one (18.4%) patients had changed or quit their job due to the disease and there was

Ann Rheum Dis: first published as 10.1136/annrheumdis-2019-eular.6635 on 27 June 2019. Downloaded from http://ard.bmj.com/ on December 10, 2020 at Gazi Universitesi. Protected by copyright.