

**Methods:** We enrolled patients attending UCLA rheumatology clinics. After informed consent, patients completed a questionnaire to collect demographics, Am-E FLARE, RAPID3, patient global visual analog scale (VAS), and self-reported flare at time of visit or between visits (yes/no). Questionnaires were provided to patients without specific instruction. From the electronic medical records, we extracted MD global VAS, MD-reported flare, seropositivity, disease duration, swollen/tender joint counts (SJC/TJC), and calculated the clinical disease activity index (CDAI). Analyses included Wilcoxon rank sum tests and Spearman correlations to assess criterion and concurrent construct validity.

**Results:** Eighty-five RA patients diagnosed by the 1987 American College of Rheumatology (ACR) criteria enrolled in our study. For the study population as a whole, mean age was about 50 years and most were female. Mean disease duration was about 10 years and about 65% were seropositive. (see Table). Am-E FLARE scores were significantly higher in patients' self-reporting flare compared to patients who reported no flare ( $p=0.005$ ), and also for patients with MD-reported flare compared to those without flare ( $p=0.008$ ) (see Table). Interestingly, there were no significant differences in SJC ( $p=0.82$ ) and physician global ( $p=0.19$ ) between patients who self-reported flare versus those who reported no flare. In addition, the Am-E FLARE scores correlated moderately with both CDAI ( $\text{corr}=0.46$ ) and RAPID3 ( $\text{corr}=0.57$ ).

**Table 1. Patient and MD Assessment of Flare**

	Patient-reported FLARE			MD-reported FLARE		
	No Flare Mean (SD)/ N (%) n=51	Flare Mean (SD)/ N (%) n=34	*p-value	No Flare Mean (SD)/ N (%) n=67	Flare Mean (SD)/ N (%) n=18	*p-value
Age	52.37(15.62)	47.15(16.29)	0.15	51.73(16.09)	44.89(14.87)	0.08
Female	46(90.20)	31(91.18)	0.88	60(89.55)	17(94.44)	0.53
Race*						
Asian	11(21.57)	5(14.71)		16(23.88)	0(0.00)	
Black	5(9.80)	5(14.71)		8(11.94)	2(11.11)	
Pac Island	1(1.96)	1(2.94)	0.79	1(1.49)	1(5.56)	0.22
Caucasian	32(62.75)	23(67.65)		40(59.70)	15(83.33)	
Other	2(3.92)	0(0.00)		2(2.98)	0(0.00)	
Seropositivity*	32(62.75)	23(67.65)	0.64	42(62.69)	13(72.22)	0.45
Disease duration	9.63(9.07)	11.88(10.98)	0.41	11.06(10.21)	8.56(8.50)	0.32
RAPID3	9.24(6.23)	14.64(5.79)	0.0001	9.67(6.03)	17.63(4.38)	<0.0001
CDAI	17.49(13.48)	22.88(13.03)	0.03	16.74(11.54)	30.11(15.19)	0.0003
TJC	6.29(6.67)	8.91(7.24)	0.04	6.25(6.36)	11.39(7.85)	0.005
SJC	4.67(4.94)	4.56(3.96)	0.82	3.96(3.88)	7.11(5.94)	0.005
Patient Global	3.33(2.39)	5.15(2.33)	0.001	3.45(2.32)	6.22(2.02)	<0.0001
Physician Global	3.20(2.08)	3.85(2.24)	0.19	2.94(1.92)	5.39(1.91)	<0.0001
FLARE Total	4.80(3.32)	6.88(2.01)	0.005	5.18(3.07)	7.31(2.27)	0.008
FLARE Physical	5.11(3.47)	7.28(2.02)	0.008	5.49(3.21)	7.81(2.10)	0.005
FLARE Emotional	4.48(3.47)	6.49(2.61)	0.007	4.88(3.33)	6.81(2.71)	0.03

CDAI = Clinical Disease Activity Index; RAPID3 = Routine Assessment of Patient Index Data; TJC = Tender Joint Count; SJC = Swollen Joint Count; Seropositivity = either CCP+ or RF+; \*Wilcoxon rank sum test; #Race and Seropositivity are presented as frequencies and present and p-values are calculated using Chi-square test

**Conclusions:** The Am-E FLARE is feasible for use in clinic, and shows good criterion validity, with scores significantly higher in patients who self-report flare. In addition, Am-E FLARE shows good discriminant validity, distinguishing patients who are flaring according to MD or patient self-report from those who are not. Finally, Am-E FLARE demonstrates construct validity comparable to that of the original French version of FLARE.

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#### SAT0766-HPR THE FACTORS AFFECTING FUNCTIONAL ABILITIES IN PATIENTS WITH JUVENILE IDIOPATHIC ARTHRITIS

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**Background:** Juvenile idiopathic arthritis (JIA) is the most common rheumatic disease in pediatric population and is characterized by a heterogeneous group of diseases that include chronic arthritis of unknown origin, which begins before 16 years of age (1). Patients with JIA commonly experience acute and chronic pain, decreased mobility, and joint stiffness leading to restrictions on functional ability and isolation from their peers (2).

**Objectives:** The aim of this study was to assess relationship between clinical features and functional ability and determine the factors affecting functional abilities in patients with JIA.

**Methods:** 172 (aged 5-18 years) with JIA were included in this study. Socio-demographic data, clinical features (duration of disease, subtype of JIA, and number of involved joint) and functional ability were assessed with Childhood Health Assessment Questionnaire (CHAQ). Pain and overall well-being were measured using a Visual Analog Scale (VAS). Relations between the factors

affecting functional abilities in JIA were assessed by multiple linear regression analysis

**Results:** The mean age was 10.71±3.47 and the mean disease duration was 5.41±3.53 years. Score of CHAQ was affected by number of involved joint ( $\beta=0.18$ ,  $p<0.05$ ), subtypes of JIA ( $\beta=-2.75$ ,  $p<0.01$ ) and pain ( $\beta=0.15$ ,  $p<0.05$ ), but were not affected by age ( $\beta=-0.03$ ,  $p>0.05$ ), gender ( $\beta=-0.03$ ,  $p>0.05$ ) and disease duration ( $\beta=0.03$ ,  $p>0.05$ ). In addition to, significant difference was found between all CHAQ subscores (except of "walking") of polyarticular and oligoarticular JIA ( $p<0.001$ ). Functional abilities of patients with polyarticular JIA were lower than functional abilities of patients with oligoarticular JIA.

**Conclusions:** In the literature, it reported that functional activities were adversely affected in patients with JIA, when they compared with healthy subjects. In our study, we found that functional abilities were affected by subtypes of JIA, number of involved joint, and pain. But, these were not affected by age, gender, and disease duration in JIA. We suggest that subtypes of JIA, number of involved joint, and pain should be considered, when patients with JIA are directed to physical therapy program to encourage functional abilities.

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#### SAT0767-HPR PHYSICAL ACTIVITY MAINTENANCE AND DIGITAL HEALTH INTERVENTIONS IN PEOPLE WITH RHEUMATOID ARTHRITIS: PATIENT AND HEALTHCARE PROFESSIONALS' PERSPECTIVES

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**Background:** Physical Activity (PA) improves health and function in people with Rheumatoid Arthritis (RA) but people with RA commonly fail to meet recommended PA levels. Digital Health Interventions (DHIs) are delivered through digital media to facilitate behaviour change, such as maintaining PA. To date, little is known about the perceptions of people who have RA or their healthcare professionals (HCPs) about the factors that influence PA and the desirability and perceived suitability of using DHI to support PA maintenance.

**Objectives:** To explore RA patients' and HCPs' perceptions of the factors that influence PA maintenance as well as their views on the use of DHIs to support sustained PA.

**Methods:** Adults aged >18 years with established RA were recruited from two inner-city NHS hospitals. Semi-structured interviews, using a topic guide developed a priori, were conducted by one researcher either face-to-face or by telephone until data saturation of themes was reached. HCPs working at one NHS inner-city hospital, who self-reported >3 months experience managing RA patients attended one semi-structured focus group, facilitated by two researchers and informed by a topic guide.

The interviews and focus group were audio-recorded, transcribed verbatim and the data analysed thematically. Themes were corroborated by a sample of participants and an independent researcher.

**Results:** 11 patients were recruited between January-May 2016 (five females; mean age 58 years [standard deviation 17 years]). Five themes were identified from the interviews: 1) Balancing the benefits of activity with the costs; 2) Gaining knowledge about safe and effective PA; 3) Disease control; 4) The environment matters; and 5) Interaction of person, disease and DHI.

Patient participants were largely aware of the benefits of PA but wanted more information about safe PA. Ongoing PA was informed by participants balancing the benefits of PA with concerns about aggravating symptoms. Good symptoms control facilitated PA but severe and unpredictable symptoms and unsuitability of exercise facilities were perceived as barriers to PA maintenance. Patient participants mostly stated that DHIs were a desirable and acceptable adjunct to supporting PA maintenance.

The focus group was conducted with six HCPs (two physiotherapists, two rheumatologists, one podiatrist and one medical student). Two themes were identified 1) Inactivity demands a proactive response by HCPs and 2) DHIs have potential to support PA, but "there is no panacea".

HCP participants universally agreed that PA was beneficial and that it was important to support ongoing PA through education and multimodal interventions, including DHIs.

**Conclusions:** Disease control, knowledge and environmental factors influence PA maintenance in people with RA, who balance the perceived benefits with the potential costs of PA. HCPs recognise the need to proactively support PA maintenance. DHIs offer a potentially useful and acceptable tool to support PA maintenance.

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**SAT0768-HPR SUBJECTIVE COGNITIVE DYSFUNCTION AND COMPUTERIZED NEUROPSYCHOLOGICAL PERFORMANCE IN KOREAN ADULTS WITH RHEUMATOID ARTHRITIS**

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**Background:** There is an increased appreciation of the burden of cognitive impairment in persons with rheumatoid arthritis (RA). Research shows a gap between subjective and objective measures of cognitive impairment in persons with chronic diseases.

**Objectives:** This study explored the relationship between subjective cognitive dysfunction and computerized neuropsychological performance in Korean older adults with RA.

**Methods:** Individuals with RA were recruited by their rheumatologists during follow-up visits at one university hospital in Korea. After getting signed consents, a trained research nurse assessed participants with a range of physical, psychosocial, and biological metrics. Subjective cognitive dysfunction was assessed using the Perceived Deficits Questionnaire (PDQ; range 0–20, higher score=greater impairment). Objective cognitive impairment was assessed using a set of 6 computerized neurocognitive tests yielding 18 indices covering a range of cognitive domains. Subjects were classified as “impaired” if they performed 1 SD below age-based population norms on each test [1]. A total cognitive impairment score was calculated by summing the transformed scores (range: 0–18, higher score=greater impairment). Multiple regression analysis controlling for education, disease severity, and depression was conducted to identify the relationship between objective and subjective cognitive measures.

**Results:** Fifty four subjects with a mean ( $\pm$ SD) age of 63.6 ( $\pm$ 10.5) years were included in the final analyses. 85% were female and 87% were married. Mean educational level was 10.2 ( $\pm$ 4.9) years and mean disease duration was 8.9 ( $\pm$ 8.5) years. 25.9% had depression and 55.6% had sleep problem. Mean PDQ score was 11.8 ( $\pm$ 4.5, range 5–25) and mean total cognitive impairment score was 11.0 ( $\pm$ 4.1, range=2–18). 92% were classified as cognitively impaired on five or more test indices. There was no significant correlation between PDQ score and total cognitive function score ( $r=.260$ ,  $p=.068$ ). However, psychological factors including depression ( $r=.621$ ,  $p<.001$ ) and sleep problem ( $r=.577$ ,  $p<.001$ ) were significantly correlated with PDQ score. In the multivariate analysis, there was no significant relationship between PDQ score and total cognitive impairment score. However, functional limitations and depression ( $\beta=0.317$ ,  $p=0.048$ ;  $\beta=-0.334$ ,  $p=0.019$ ) were significantly associated with the PDQ score.

**Conclusions:** There was no significant relationship between subjective cognitive dysfunction and computerized neuropsychological performance in this cohort. Functional limitations and depression were significantly associated with perceived cognitive dysfunction. Findings emphasize the gap between subjective and objective measures of cognitive impairment and the importance of considering psychological factors in the context of cognitive complaints in clinical settings.

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**SAT0769-HPR DO PATIENTS RECALL PHYSICAL ACTIVITY ADVICE? INTERVIEWS WITH UK INFLAMMATORY ARTHRITIS PATIENTS TO EXPLORE EXPERIENCES OF PHYSICAL ACTIVITY COMMUNICATION**

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**Background:** Guidelines for managing inflammatory arthritis (IA) indicate that patients should be encouraged to be physically active. Patient perceptions of physical activity (PA) communication during routine rheumatology consultations, or whether they recall or understand PA information, are not known.

**Objectives:** 1. To explore patients' short-term recollection and interpretation of communication relating to PA during consultation with a rheumatology doctor or nurse

2. To explore patients' needs for effective PA communication

**Methods:** Adults with IA took part in semi-structured telephone interviews 2 to 3 days after their consultation with a rheumatology doctor or nurse. Transcripts were analysed using thematic analysis.

**Results:** 26 patients took part (18 female; age 35–83 years; disease duration 0.25–40 years). Preliminary analysis suggests five themes:

*Patients recall little communication about PA:* Few patients recalled PA commu-

nication during their appointment, although some discussed general lifestyle and some recalled discussions about PA or exercise in previous consultations.

*Appointments focus on medical management:* Patients mainly recalled discussing medical management of IA. Some were asked about general health and support needs, but assumed health professionals were interested in disease status and medication rather than lifestyle and wellbeing.

*Patients are uncertain as to what constitutes PA:* Some patients seemed confused by what constituted discussion about PA. Different interpretations were reported, with many participants referring to condition specific exercises rather than lifestyle PA. Few patients described PA as general movement or everyday activity.

*Patients would like to discuss PA:* Few patients initiated conversation about PA, but many would welcome PA communication from any health professional with appropriate knowledge. Several patients felt most comfortable discussing PA with a member of their rheumatology team rather than a non-specialist. A small number felt the rheumatologist's role related to medical management rather than lifestyle advice. Preferences for communication style included a direct, honest approach using lay language. It was felt that health professionals could do more to ask about and encourage PA, reassure about PA safety, and offer individualized support to enable appropriate PA.

*Perceived barriers to undertaking PA must be considered:* Some patients perceived barriers to PA, such as lack of knowledge and skills for PA, lack of time, work commitments and IA flares. It was felt important to acknowledge that it can be difficult to apply lifestyle changes in practice.

**Conclusions:** IA patients recalled little discussion about PA in routine rheumatology consultations. Patients may interpret questions about general health and exercise as relating to their disease status and joint function rather than to lifestyle or PA. Health professionals should ask direct questions about lifestyle PA and offer non-didactic, individualized advice and support. Further research is needed to understand PA communication from the perspective of rheumatology health professionals, including identification of opportunities and challenges for implementing effective communication.

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**SAT0770-HPR IS THE DUAL – TASK TRAINING BENEFICIAL ON THE CLINICAL OUTCOMES OF ELDERLY?**

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**Background:** The difficulties of elderly in performing two different tasks have been well documented (1). It has been reported that aging is associated with a decline in attention abilities and dual-task performances. Improving the ability to perform two different tasks simultaneously could therefore have significant impacts in the prevention of adverse outcomes associated with aging (2).

**Objectives:** Regarding specific dual-task training, recent studies have demonstrated its efficacy in various populations such as the elderly and individuals with neurological diseases, with the most notable improvements in gait. However, there is no evidence in the literature on the effects of this training on balance and clinical outcomes evaluated independently among elderly. Thus, considering the positive results of specific dual-task training obtained in other populations, we conducted a randomized trial to study the efficacy of an eight – week dual-task training program adjunct to conventional physiotherapy compared to a conventional physiotherapy program on balance, mobility, functional independence, fear of falling, functional capacity in elder individuals.

We hypothesized that, dual-task training is more effective at improving balance and clinical outcomes than conventional physiotherapy in elder individuals.

**Methods:** Fifty-five elderly were participated in our study. Balance, mobility, functional independence, fear of falling was measured with Berg Balance Scale, Rivermead Mobility Index, Functional Independence Measurement, and Fall Efficacy Scale-International, respectively. Functional capacity was assessed with Timed Up&Go, Chair Sit&Stand. Cases were divided into two different groups. Conventional Physiotherapy was applied in control group, and besides the same protocol, dual-task training was applied 5 days for 8 weeks in the intervention group. The dual-task training consisting of the cognitive activities included digit span, spelling words, stroop test, image description, counting, description of daily activities and routines was applied during the gait exercises. All of the assessments procedures were performed again after the treatment.

**Results:** There were statistically significant improvements in measures of balance, mobility, functional independence, fear of falling, and functional capacity between pre- and post – treatment in both groups ( $p<0.05$ ). A significant difference was found in balance and mobility in favour of the intervention group ( $p=0.028$ ).

**Conclusions:** Based on our findings, we found that dual-task training applied as an adjunct to conventional physiotherapy was superior to conventional physiotherapy on balance and mobility parameters. From this point of view, dual-task training should be considered as part of the rehabilitation process of elderly, although until now no guidelines have been defined for this type of intervention.

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