

**Methods:** A total of 74 patients, diagnosed according to the modified New York criteria for AS, were enrolled. Patients were assessed to measure disease activity using the Bath Ankylosing Spondylitis Disease Activity Index [BASDAI]. Fear of movement was assessed with the Tampa Scale for Kinesiophobia [TSK]. To calculate NSAID intake and the type of NSAID, dose, percentage of days with intake were recorded, along with DMARD therapy, age, body mass index (BMI), and disease duration. The NSAID equivalent scoring was calculated according to recommendations from longitudinal clinical studies. The drug therapy groups were compared using the Kruskal-Wallis test and the Chi-square test. Correlation analysis was evaluated by Spearman's correlation coefficient.

**Results:** Seventy-four patients (36 women, 38 men; mean age: 43.81±10.18 years; mean disease duration: 9.89±8.50 years; BMI: 28.20±5.07) treated with four types of DMARDs (adalimumab+golimumab =17; infliximab =19; etanercept =13; sulfasalazine =25) were included. There were no drug group differences in terms of age ( $p=0.179$ ), sex ( $p=0.886$ ), or BMI ( $p=0.821$ ). BASDAI scores (mean: 3.9±2.4) and NSAID intake (mean: 68.1±76.1;  $p=0.003$ ) were significantly higher in the sulfasalazine therapy (ST) group compared to other drug groups. BASDAI scores were not correlated with age ( $p=0.103$ ), disease duration ( $p=0.131$ ), BMI ( $p=0.641$ ) or the TSK scores ( $p=0.376$ ). Different NSAID intake groups ( $p=0.089$ ) had similar TSK scores.

**Conclusions:** Patients with AS had fear of movement independent of age, BMI or disease duration, even when they experienced positive results from drug therapies and concomitant therapy with a single oral dose of NSAID or oral corticosteroids in stable dosages.

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#### SAT0757-HPR SIGNIFICANT IMPROVEMENT OF RHEUMATOID ARTHRITIS (RA) OUTCOME WITH REPEATED SELF-ASSESSMENT APPLYING SMART SYSTEM OF DISEASE MANAGEMENT (SSDM) MOBILE TOOLS: A COHORT STUDY OF RA PATIENTS IN CHINA

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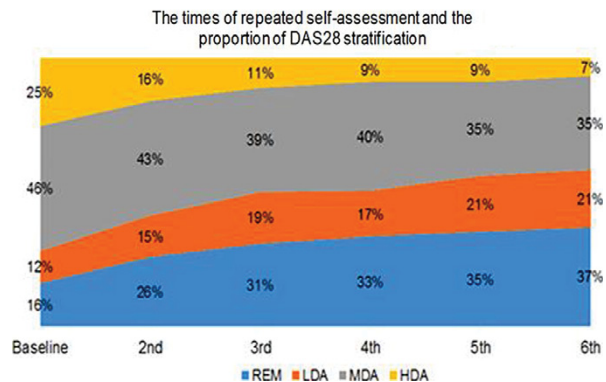
**Background:** There are more than 5 million RA patients in China, but only 5,000 rheumatologists. Treat-to-Target (T2T) strategy are critical for the treatment of RA, but the Chinese rheumatologists can hardly provide patients with a complete assessment in the clinic due to limited time. The SSDM includes interfaces of both physicians' and patients' application. After entering the data of lab test records, treatment regimens, and executing DAS28 assessment by patients themselves, all data can be synchronized automatically to the authorized physicians' mobile tool. The rheumatologists can adjust treatment regimens base on patients' profile. Our previous study showed that patients in China can master the application of SSDM for accurately evaluating DAS28 and health assessment questionnaire (HAQ) after training.

**Objectives:** The purpose of this study is to explore the effectiveness of applying

SSDM in improvement of disease activity after repeated self-assessment in Chinese RA patients.

**Methods:** Patients were educated to assess DAS28 with SSDM and asked to repeat the self-assessment once a month. Descriptive statistics were performed for patient and disease characteristics. According to DAS28 scores, disease activity was divided into four groups: remission (Rem), low disease activity (LDA), moderate disease activity (MDA) and high disease activity (HDA).

**Results:** From Aug 2014 to Jan 2017, a total of 11,867 RA patients from 459 centers in China participated in the study. The mean age was 49.27±14.35 (18 to 99) years and the median disease duration was 11.43 months. All patients performed self-assessment of DAS28, HAQ and morning stiffness time for 20,376 times. Proportion of patients in Rem, LDA, MDA and HDA was 16%, 12%, 46% and 25% respectively at baseline. Of which, 3,472 patients performed repeated assessment for 8,509 times. Proportion of patients in Rem, LDA, MDA and HDA changed into 34%, 18%, 38% and 10% at the last assessment. The proportion of T2T (DAS28 <3.2) at the last assessment was higher than that of baseline significantly ( $P<0.001$ ). According to the assessments, the rate of T2T from baseline to 6 times were 28%, 41%, 49%, 51%, 56% and 58% (see Figure 1). With the increase of the times of self-assessment, the T2T rate was significantly improved ( $p<0.001$ ).



**Conclusions:** Under repeated self-assessment of DAS28 using SSDM, RA patients can achieve better T2T result. SSDM can assist rheumatologist to rationally adjust treatment for RA patients.

**Disclosure of Interest:** None declared

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#### SAT0758-HPR DEPRESSION BUT NOT CORE SYMPTOMS PREDICT CAREGIVER STRAIN IN ADULTS SHARING A HOME WITH PRIMARY SJÖGREN'S SYNDROME PATIENTS

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**Background:** Patients with primary Sjögren's syndrome (PSS) experience a range of symptoms including dryness, fatigue, pain and low mood. The impact of these symptoms upon the people with whom they live, is unknown. The caregiver strain index (CSI) is a thirteen item questionnaire which measures strain in caregivers (Robinson 1983).

**Objectives:** To determine whether adults living in the same household as a person with PSS experience caregiver strain and to examine the relationship between caregiver strain and other factors.

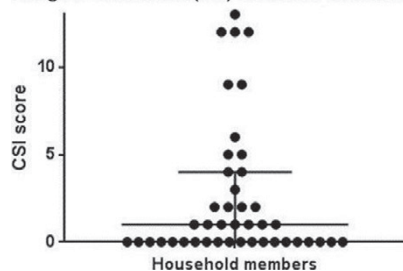
**Methods:** We collected age, Carer Strain Index (CSI) and quality of life (QOL) (SF-36) scores from 62 adults who shared a home with a PSS patient. We also collected various measures from the PSS patients that they lived with. The patient measures included; age, time since diagnosis, fatigue, dryness, pain, QOL, depression, anxiety, and physical function (Improved HAQ). We conducted Spearman correlations to compare the relationship between the carers' CSI and SF-36 scores as well as the measures from the patients they lived with. We performed multivariate analyses on factors that significantly correlated with CSI scores.

**Results:** The caregiver strain scores are shown in the Figure. Although a median CSI score of 1 demonstrates that most AHM participants experienced very little caregiver strain, 14% of AHM participants did experience high levels (indicated with a CSI score  $\geq 7$ ).

Age and PSS disease duration negatively correlated with carer strain. Increased pain, fatigue, mental fatigue, physical functioning, anxiety, depression in the patients and SF-36 physical component scores in the household members all significantly correlated with increased carer strain. There was no relationship between dryness scores and age of the PSS patient and CSI scores. Multivariate analysis suggests the main predictor of increased carer strain was depression in the PSS patient and younger age of the household member.

**Conclusions:** Caregiver strain is evident in a proportion of adults sharing a home with a person with PSS. Caregivers of patients with high depression scores are particularly susceptible and may benefit from additional support.

## Caregiver Strain Index (CSI) Scores for Household Members



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**SAT0760-HPR** PSYCHOLOGICAL VARIABLES PREDICTIVE OF DISORDERS OF SLEEP IN PATIENTS WITH SPONDYLARTHROSIS AND PSORIATIC ARTHRITIS. PRELIMINARY MULTICENTER STUDY

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**Objectives:** To study the psychological variables associated with the severity of insomnia and hypersomnia according to the Oviedo sleep questionnaire (COS) in patients with spondylarthritis (SPA) and psoriatic arthritis (PA), including the disease activity BASDAI and DAS28.

**Methods:** Design. Cross-sectional descriptive study. Patients: Patients with consecutive SPA or PA were selected by consecutive sampling in follow-up in rheumatology units of 4 Spanish hospitals. Inclusion criteria: Adults (age  $\geq 16$  years) with SPA (ASAS criteria) or PA (CASPAR criteria) capable of understanding and willing to perform questionnaires. Exclusion criteria: other rheumatic diseases, age  $< 16$  years. Protocol: Upon arriving at the consultation, he was offered to participate in the study, he was explained and the patient was given the battery of questionnaires; His physician performed the evaluation of disease activity and recorded the comorbidities and current medication. Main outcomes: the 3 dimensions of COS: (1) Subjective satisfaction with sleep, (2) Insomnia and (3) Hyperinsomnia. The COS is a semi-structured interview to aid the diagnosis of insomnia and hypersomnia according to the diagnostic criteria ICD-10 and DSM-IV. Other variables: current medication for SPA or PA, comorbidities, use of sleeping pills and/or CPAP according to COS questionnaire (insomnia was divided into mild  $< 15$  and moderate-severe  $\geq 15$ ), disease activity: AD BASDAI and APs (DAS28); Health-related quality of life (HRQL) using SF-36; Pain perception (Brief Pain Inventory BPI questionnaire), SPA (BASDAI) and PA (DAS28, BASDAI) and FACIT fatigue, TMMS emotional intelligence, Resilience with resilience questionnaire, anxiety and depression screening using HADS. Statistical analysis: descriptive, bivariate analysis using T-Student, Mann-Whitney and  $\chi^2$ ; Followed by binary logistic regression (BLR) (Vd: moderate/severe insomnia).

**Results:** A total of 126 patients participated: 65 patients with SPA (33.8% women, 49.92 $\pm$ 10.92 years) and 61 patients with PA (60.7% women, 49.4 $\pm$ 9.5 years) with an average of 8.4 $\pm$ 6.8 years of disease. They used biological therapy SPA 29 (23%) and PA 28 (45.9%). The most common comorbidity were in SPA and PA: disc disease 33 (50.8%) and 18 (29.5%). 16 (24.6%). Both patients with SPA and PA were dissatisfied with their sleep (3.42 $\pm$ 1.39). We did not find correlation of the COS variables with the HRQL, the fatigue or the pain. There were no differences in COS scale according to biological treatment and/or FAME. Logistic regression analysis demonstrated an association between insomnia and TMMS repair, resilience and anxiety in PA. Insomnia in SPA showed an association with depression and BASDAI

**Conclusions:** Insomnia is a common health problem in these diseases. Moderate-intense insomnia in patients with SPA was associated with an increase in BASDAI and depression. Also in patients with PA, the insomnia was associated with TMMS repair, resilience and anxiety. The patient assumes the sleep disorder as part of this chronic illness, this justifies the good evaluations of resilience and emotional intelligence of the evaluated patients.

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**SAT0761-HPR** IDENTIFICATION OF FACTORS THAT CONTRIBUTE TO SUCCESSFUL ONLINE MONITORING OF DISEASE ACTIVITY: EXPERIENCES FROM PATIENTS WITH RHEUMATOID ARTHRITIS

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**Background:** In order to encourage patients to take an active role in their disease management and to enhance the dialogue between patients and healthcare providers, iMonitor was developed.<sup>1</sup> iMonitor is a Software Medical Device developed and funded by Pfizer. Patients can complete patient-reported outcome measures (PROMs) in this online system. This allows for monitoring of disease activity in between visits, identification of patients who need medical attention in between visits, and it may lead to reduction of consultations for patients with stable disease activity. Moreover, completion of a PROM might help a patient to prepare for his or her consultation and might improve the communication between physician and patient.

**Objectives:** This study aims to identify factors that contribute to adequate online monitoring of disease activity, by collecting experiences from patients with RA with iMonitor.

**Methods:** Patients were recruited at Bernhoven (Uden, the Netherlands) by an announcement of the study on the hospital website, leaflets and by specific meetings. Four instruction classes were organised in which two researchers gave live instructions about the programme. Patients received log-in codes and chose their PROM-preference(s) and PROM-frequency. After nine months a focus group interview was performed and three telephone interviews were held. Questions were semi-structured using a topic list based on Flottorp<sup>2</sup>. Data will be transcribed, coded and grouped.

**Results:** Currently 33 patients with RA are using iMonitor. Of these patients 17 (52%) attended the instruction classes and six patients (18%) attended the focus group discussion. Preliminary results reveal six themes (Technological aspects, Patient factors, Need for getting feedback, Incentives and resources, Reduction of consults and Security aspects). The Flottorp domain "Patient factors" provided most rich information. Most patients said they developed more knowledge about their disease activity and that they felt more aware about their disease activity. Additionally, iMonitor supported them in taking actions such as adjustments in lifestyle and becoming more prudent when noticing a flare. Some patients felt more prepared for a consultation and less dependent from their rheumatologist. With regard to the domain "Capacity for organisational change", patients were confident that iMonitor could contribute to reduction of consultations, but contacting the outpatient clinic when feeling worried should be required.

**Conclusions:** Patients' experiences with an online remote monitoring system were mainly positive. Instruction classes helped patients to get familiar with the programme. Patients experienced to have more control over their disease and to have developed more knowledge. This may result in enhanced self-management, which is important with regard to retain control over disease.

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**SAT0762-HPR** THE ACCESSIBILITY AND USABILITY OF AN AUSTRALIAN WEB-BASED SELF-MANAGEMENT PROGRAMME (MYJOINTPAIN) FOR PEOPLE WITH LOWER HEALTH LITERACY AND JOINT PAIN IN THE UK

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**Background:** Osteoarthritis (OA) is disproportionately prevalent in people from lower socio economic groups (1). People from lower socio economic groups are also more likely to have lower health literacy. Health literacy influences people's ability to access, understand and use health information. Currently, health professionals over estimate patients' health literacy (2), potentially reducing the impact of OA self-management interventions that rely on educational approaches (3). As internet usage increases, online OA self-management resources are an option for delivering patient education. Currently, there is no evidence as to whether online education resources are suitable and accessible for people with joint pain and lower health literacy.

**Objectives:** To identify facilitators and barriers experienced by people with joint pain and low health literacy to access and utilise information available on the MyJointPain website. (<https://www.myjointpain.org.au>).