

## **Evaluation of perceived self-efficacy, learned helplessness and functional capacity in patients with rheumatoid arthritis.**

**Background:** Rheumatoid Arthritis (RA) is an inflammatory chronic disease that involves cognitive and emotional aspects of patients, from the beginning of diagnosis. An important cognitive factor is perceived self-efficacy (SE), which is defined as individual skills to cope with the disease. Another important cognitive factor in the perception of RA control is the learned helplessness (LH). We could define it as an inadequate perception of the disease, generating feeling of defenselessness, behaviors of passivity, loss of self-esteem and belief that nothing you do can improve your situation. It has been reported that patients with high level of SE have less pain, LH and functional disability. On the other hand, patients with higher LH, have more pain and functional disability.

Our objective was to assess the association between perceived SE and LH with disease activity, functional disability, and educational level.

**Methods:** Consecutive patients, older than 18 years, with definite diagnosis of RA according to 2010 ACR/EULAR criteria, seen at the outpatient rheumatology unit between March and April 2014, were included. During the inclusion visit the following data were collected: Demographics; socio-economic status (Graffar scale); educational level; disease duration; swollen and tender joint counts (28 joints); CDAI (Clinical Disease Activity Index); HAQ-A (Health Auto Questionnaire-simplified Argentinean validation); pain by visual analogue scale (VAS); fatigue (VAS); patient and physician global assessment of disease activity (VAS); morning stiffness (VAS), depression screening measured by CES D-7; perceived SE measured by Arthritis Self-auto-efficacy Scale; LH measured from Rheumatology Attitudes Index (RAI) (spanish validation).

Descriptive statistics were calculated. Correlations were calculated using Pearson test. SE and LH were compared between patients in remission and with active disease.

**Results:** One hundred and two patients were included. Patient's characteristics are shown in table 1. There was a significant positive correlation between LH and pain ( $r=0.67$ ;  $p<0.001$ ); HAQ ( $r=0.64$ ;  $p<0.001$ ), and CDAI ( $r=0.41$ ;  $p<0.001$ ); and a negative correlation between SE and pain ( $r= - 0.43$ ;  $p<0.001$ ); HAQ ( $r= - 0.41$ ;  $p<0.001$ ); and CDAI ( $r= -0.34$ ;  $p<0.001$ ). Patients on remission ( $n=30$ ) according to CDAI, had significantly higher SE (70.3 vs. 56.8;  $p<0.001$ ) and lower LH (7.2 vs. 11.6;  $p<0.001$ ) than patients not in remission. There was a poor correlation between LH and SE with educational level (years of education) ( $r= 0.39$  and  $- 0.19$ , respectively).

**Conclusion:** LH and SE are potentially modifiable cognitive factors that correlate with functional disability and disease activity. This might have potential clinical implications.

**Table 1:** Demographic and clinical features of RA patients.

<b>Features</b>	
<b>Female , n (%)</b>	85 (83,3)
<b>Age, media (DS)</b>	59 (12,7)
<b>Years from diagnosis, media (DS)</b>	12,7 (10,7)
<b>Nacionality (n=100)</b>	
Argentine, n (%)	94 (94)
Foreign, n (%)	6 (6)
<b>Education level (n=102)</b>	
Incompleted elementary school, n (%)	6 (5, 9)
Completed elementary school, n (%)	20 (19,6)
Incompleted high school, n (%)	11 (10,8)
Completed high school, n (%)	30 (29,4)
Tertiary, n (%)	16 (15,7)
University, n (%)	19 (18,6)
<b>Marital status (n= 100)</b>	
Unmarried	20 (20)
Married	55 (55)
Divorced	13 (13)
Widowed	12 (12)
<b>Positive RF, n (%)</b>	66 (70,2)
<b>Positive Anti-CCP, n (%)</b>	57/70 (81,4)
<b>Methotrexate, n (%)</b>	80 (78,4)
<b>Biologic agents, n (%)</b>	37 (36,3)
<b>Corticosteroids, n (%)</b>	21 (20,6)
<b>Socio-economic level (Graffar)(n= 99)</b>	
I, n (%)	5 (5)
II, n (%)	31(31)
III, n (%)	42 (42)
IV, n (%)	21 (21)
<b>CDAI, Median (IQR)</b>	5,2 (2,1-12,5)
<b>HAQ, Median (IQR)</b>	0,5 (0-1,25)
<b>PGA (VAS), Median (IQR)</b>	20 (10-30)
<b>PaGA (VAS), Median (IQR)</b>	19,5 (5-47)
<b>Pain (VAS), Median (IQR)</b>	22 (5-50)
<b>Stiffness (VAS), Median (IQR)</b>	7 (0-30,5)
<b>Fatigue (VAS), Median (IQR)</b>	12,5 (1-45)
<b>LH, Median (IQR)</b>	9 (6-14)
<b>SE, Median (IQR)</b>	62 (53-73)
<b>CES-D7, Median (IQR)</b>	3 (1-7)