Prevalence, physical and mental health patterns of rheumatic and musculoskeletal diseases in Portugal: results from a national survey

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Background:

Rheumatic and musculoskeletal diseases (RMD) are a prevalent leading cause of disability and consume a large amount of healthcare and social resources. RMD have been associated with low levels of physical and mental health in other countries.

Objectives:

. to estimate the national prevalence in the adult Portuguese population of: **hand, knee and hip osteoarthritis (OA), low back pain (LBP), rheumatoid arthritis (RA), fibromyalgia (FM), gout, spondyloarthritis (SpA), periarticular disease (PD) systemic lupus erythematosus (SLE), polymyalgia rheumatica (PMR) and osteoporosis (OP)**

. to compare physical and mental health between participants with and without RMD

Methods:

EpiReumaPt is a **national** health survey conducted from **Sep'2011 to Dec'2013**, which involved a three-stage approach:

. **First,** 10661 adult subjects were randomly selected. Trained interviewers undertook structured face-to-face questionnaires in participant's households that included a screening for RMD, and the EQ5D and HAQ.

. **Secondly**, all participants screened positive for at least one RMD, plus 20% of individuals with no rheumatic complaints, were invited to be observed by a rheumatologist at their local Primary Care Centers for a structured evaluation.

. **Finally**, a team of 3 experienced rheumatologists revised all the clinical data and confirmed the diagnoses according to previously validated criteria.

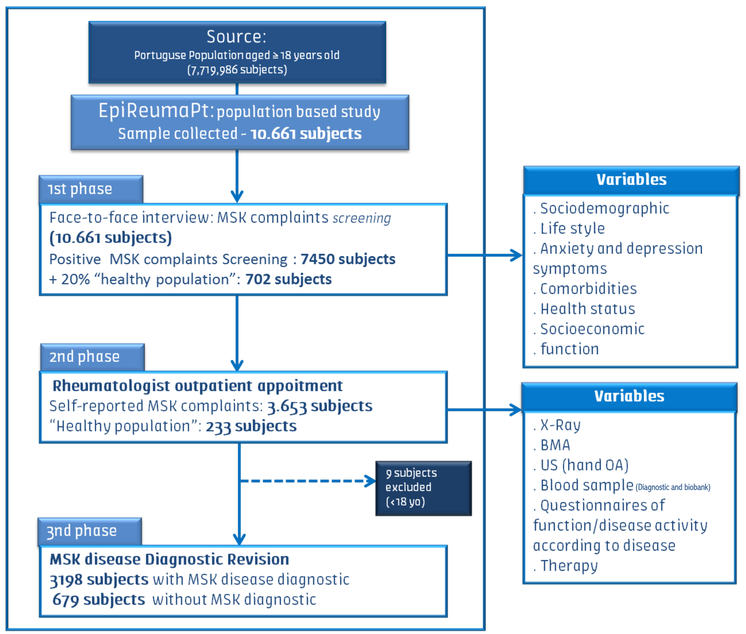

Figure 1: Study design flowchart

Patients with Rheumatic Diseases reported worse quality of life (EQ5D)

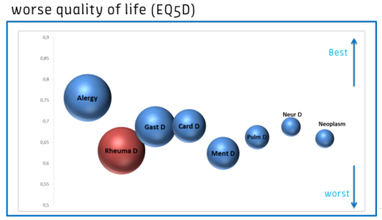

Figure 2: Quality of life of Portuguese chronic patients

Patients with Rheumatoid Arthritis had Worse functional disability (HAQ)

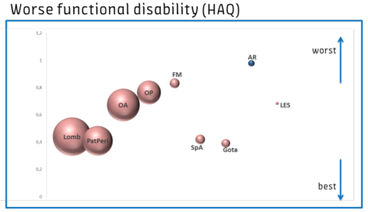

Figure 3: Quality of life of Portuguese rheumatic patients

Rheumatic disease patients
Have worse function and quality of life

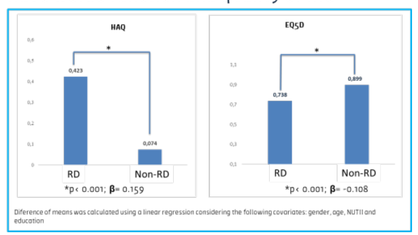

Figure 4: Quality of life of Portuguese rheumatic patients vs non-rheumatic patients

Clinical visits Costs
Comparison between RMD vs non-RMD

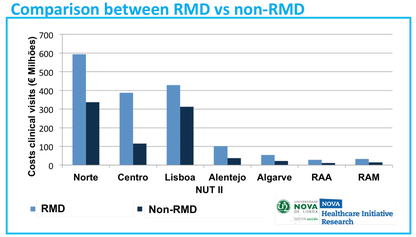

Figure 5: Comparison between RMD vs non-RMD of clinical visits costs

Results:

Prevalence of RMD in the adult Portuguese population was as follows with 95% CI (table1):

Table 1: Prevalence of RMDs in the adult Portuguese population

	Total prevalence (95% CI) n=3,877	Estimated number (Portuguese population 8,657,240)	Women (95% CI) n=2,630	Estimated number (Portuguese female population 4,585,118)	Men (95% CI) n=1,247	Estimated number (Portuguese male population 4,072,122)
Low Back Pain (n=1,393)	26.4% (23.3%;29.5%)	2,286,377 (2,018,868;2,554,752)	29.6% (25.8%;33.5%)	1,359,029 (1,182,043;1,535,556)	22.8% (17.9%;27.8%)	930,480 (728,503;1,132,864)
Periarticular Disease (n=929)	15.8% (13.5%;18.0%)	1,364,381 (1,166,130;1,561,766)	19.1% (16.2%;22.0%)	876,675 (742,331;1,011,019)	12.0% (8.4%;15.6%)	490,284 (343,688;636,473)
Knee Osteoarthritis (n=981)	12.4% (11.0%;13.8%)	1,073,498 (952,297;1,195,565)	15.8% (13.7%;18.0%)	725,825 (627,703;819,361)	8.6% (6.9%;10.3%)	350,610 (279,755;421,465)
Osteoporosis (n=858)	10.2% (9.00%;11.3%)	879,576 (777,421;980,866)	17.0% (14.7%;19.2%)	778,095 (675,847;880,343)	2.6% (1.9%;3.4%)	106,690 (76,556;136,824)
Hand Osteoarthritis (n=625)	8.7% (7.5%;9.9%)	755,778 (651,891;859,664)	13.8% (11.6%;15.9%)	630,913 (532,791;728,576)	3.2% (2.2%;4.1%)	129,087 (90,402;167,772)
Hip Osteoarthritis (n=199)	2.9% (2.3%;3.6%)	255,389 (196,520;313,393)	3.0% (2.3%;3.7%)	137,554 (104,083;171,025)	2.9% (1.7%;4.1%)	117,685 (70,041;164,921)
Fibromyalgia (n=149)	1.7% (1.3%;2.1%)	147,174 (114,276;180,071)	3.1% (2.4%;3.9%)	143,973 (110,502;177,903)	0.0% (-0.0%;0.2%)	4,073† (0;10,181)
Spondyloarthritis (n=92)	1.6% (1.2%;2.1%)	141,113 (103,022;180,071)	2.0% (1.3%;2.7%)	91,244 (59,607;122,423)	1.2% (0.7%;1.8%)	50,495 (28,505;72,484)
Gout (n=92)	1.3% (1.0%;1.6%)	110,813 (83,110;138,516)	0.1% (-0.0%;0.2%)	3,669† (0;7,795)	2.6% (1.9%;3.3%)	106,283 (77,778;135,195)
Rheumatoid Arthritis (n=61)	0.7% (0.5%;0.9%)	63,198 (45,018;82,244)	1.2% (0.8%;1.5%)	53,188 (36,223;70,611)	0.3% (0.1%;0.4%)	10,588† (2,851;17,918)
SLE (n=13)	0.1% (0.1%;0.2%)	12,986† (5,195;21,644)	0.2% (0.1%;0.4%)	11,463† (4,127;19,258)	0.0% (-0.0%;0.1%)	1,629† (0;4,480)
Polymyalgia Rheumatica (n=8)	0.1% (0.0%;0.2%)	8,658† (1,732;15,584)	0.13% (0.0%;0.2%)	5,961† (0;9,171)	0.1% (-0.0%;0.2%)	2,444† (0;8,145)

‡ The number of subjects with rheumatic diseases was estimated using data from Census 2011.
†The sample was calculated considering a minimum prevalence of 0.5%. For rare diseases the estimated number of Portuguese with the disease could be overestimated.

After adjustment, subjects with RMD had significantly lower EQ5D scores (β=-0.09; p<0.001) and higher HAQ scores (β=0.12; p<0.001) than subjects with no RMD. Some RMD were significantly and independently associated with worse EQ5D scores:
PMR (β=-0.334), RA (β=-0.132), FM (β=-0.100), LBP (β=-0.07), Knee OA (β=-0.06) and PD (β=-0.04).

Proportion of anxiety and depression symptoms among the RMD Portuguese patients was 16.7% and 8.3%, respectively; the prevalence of anxiety symptoms was significantly higher when compared with subjects without RMD (OR= 3.4; p=0.003). Moreover, FM (OR=3.12; p<0.001), SpA (OR=2.82; p=0.012) and LBP (OR=1.84; p=0.007) were significantly and independently associated with the presence of anxiety symptoms; PMR (OR=18.81; p=0.006), FM (OR=3.73; p=0.001) and LBP (OR=1.55; p=0.030) were significantly and independently associated with the presence of depression symptoms.

In Portugal RMDs are under diagnosed
(new diagnostics performed during EpiReumaPt study)

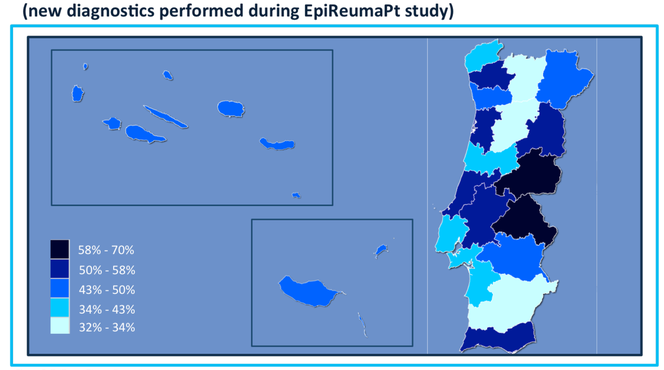

Figure 5: EpiReumaPt new diagnostics

Conclusion

Rheumatic and musculoskeletal diseases are highly prevalent in Portugal and are associated with significant impairment of physical and mental health.

The authors declare that they have no conflict of interest.

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