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

Jaimie Branco 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11; Nélia Gonçalves 1, 2, 3; Leonor Pereira da Costa 1, 2; Mónica Eusebió 1, 2; Sofia Ramiro 1, 2, 3, 4, 5, 11; Pedro Machado 1, 2, 12, 11; Ana Filipa Moura 1, 2, 3, 4, 5, 11; Inês Silva 1, 2, 3, 4, 5, 11; Pedro Laires 1, 2, 3, 4, 5, 11; Alexandre Sepriano 1, 2, 3, 4, 5, 11; Filipe Araújo 1, 2, 3, 4, 5, 11; Sónia Branco 1, 2, 3, 4, 5, 11; Pedro Simões Coelho 1; Viviana Tavares 1; Jorge Cerof 1; Jorge Mendes 1; Loreto Carmona 1; Helena Canhão 1; 1 EpiReumaPt - Universidade de Lisboa; 2 Instituto de Medicina Molecular, Lisboa, Portugal; 3 Centro de Estudos de Doenças Crónicas (CEDOC) do Hospital de Egas Moniz, Lisboa, Portugal; 4 Instituto de Medicina Preventiva e Saúde Pública da Faculdade de Medicina da Universidade de Lisboa, Lisboa, Portugal; 5 NOVA Medical School, NOVA University of Lisbon, Lisboa, Portugal; 6 Instituto de Medicina Molecular, Universidade de Lisboa; 7 Instituto Piaget, Lisboa; 8 Liga Portuguesa Contra o Cancer, Lisboa, Portugal; 9 Unidade de Investigação em Reumatologia, Faculdade de Medicina da Universidade de Lisboa; 10 Hospital Garcia de Orta, Almada, Portugal; 11 Instituto de Investigação e Ensino Médico de Lisboa, Universidade Nova de Lisboa, Lisboa, Portugal; 12 Amsterdam Clinical Immunology & Rheumatology Center, University of Amsterdam, Amsterdam, The Netherlands.

Acknowledgement: The authors declare that they have no conflict of interest. The number of subjects with rheumatic diseases was estimated using Data Enrichment 2011. The sample was weighted considering a minority presence of 0.5% for the diseases with the estimated number of Portuguese with the disease could be outnumbered.

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 and knee hip osteoarthritis (OA), low back pain (LBP), rheumatoid arthritis (RA), fibromyalgia (FM), gout, spondyloarthritis (SpA), particular disease (PD) systemic lupus erythematosus (SLE), polyarthritis 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, 10,661 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.
- Second, 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 reviewed all the clinical data and confirmed the diagnoses according to previously validated criteria.

Results:
Prevalence of RMD in the adult Portuguese population was as follows with 95% CI (table 1):

<table>
<thead>
<tr>
<th>Disease</th>
<th>Prevalence</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rheumatoid arthritis</td>
<td>1.1% (0.8-1.4)</td>
<td></td>
</tr>
<tr>
<td>Fibromyalgia</td>
<td>3.2% (2.4-4.2)</td>
<td></td>
</tr>
<tr>
<td>Spondyloarthritis</td>
<td>2.3% (1.6-3.2)</td>
<td></td>
</tr>
<tr>
<td>Systemic Lupus</td>
<td>0.2% (0.1-0.3)</td>
<td></td>
</tr>
<tr>
<td>Periarteritis</td>
<td>0.1% (0.0-0.2)</td>
<td></td>
</tr>
</tbody>
</table>

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=0.37), OA (β=0.356), and 8.3%, respectively; the prevalence of anxiety symptoms was 16.7% among the RMD Portuguese patients was 16.7%.

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<0.001). Moreover, FM (OR=3.12; p<0.001), OA (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=1.73; p=0.003) and LBP (OR=1.55; p=0.030) were significantly and independently associated with the presence of depression symptoms.

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.