

Supplementary Materials

Supplementary Material 1. Literature search strategy.

Methods

We conducted searches using PubMed (U.S. National Library of Medicine database) to extract publication data for two different time periods: (1) on April 21, 2022 for the last 1 year, and (2) for the year January 1 to December 31, 2019. Two authors (KR, CH) reviewed and analyzed the last 500 records for each time period and discussed any discrepancies until consensus was achieved.

The search was limited to RMD-related publications in English. We used two groups of search terms that were connected with the AND Boolean operator: (i) RMD-related search terms that were informed by previously published systematic reviews (52–55), and European countries (**Textbox 1**). Search terms within groups were connected with the OR Boolean operator.

We then categorized the European countries that were affiliated with each scientific article. If an article's authors were affiliated with more than one country, each country was counted once. In the case that more than one author was affiliated with the same country, we counted the country once. Our target was 500 eligible papers for each time period, which we then analyzed. We determined and grouped the European countries based on their Gross Domestic Product (GDP) per capita data from 2020, as retrieved from the World Bank (12). We used the average currency exchange rate for 2020 to convert US\$ to EUR (56). We did not normalize the data for the purpose of this trend analysis due to a lack of reliable country-specific RMD-workforce data (e.g., RMD scientists, rheumatologists).

Textbox 1. The following search terms were used to search PubMed.

("axial spondyloarthritis"[tiab] OR "rheumatoid arthritis"[tiab] OR "psoriatic arthritis"[tiab] OR "spondyloarthropathy"[tiab] OR "systemic lupus erythematosus"[tiab] OR "SLE"[tiab] OR "scleroderma"[tiab] OR "systemic sclerosis"[tiab] OR "vasculitis"[tiab] OR "dermatomyositis"[tiab] OR "polymyositis"[tiab] OR "osteoarthritis"[tiab] OR "gout"[tiab] OR "osteoporosis"[tiab] OR "juvenile idiopathic arthritis"[tiab] OR "periodic fever syndromes"[tiab] OR "chronic multifocal osteomyelitis"[tiab] OR "rheumatic fever"[tiab] OR "juvenile dermatomyositis"[tiab] OR "musculoskeletal diseases"[tiab] OR "musculoskeletal disease"[tiab] OR "spondylodiscitis"[tiab] OR "osteomyelitis"[tiab] OR "spondyloarthropathies"[tiab] OR "back pain"[tiab] OR "shoulder pain"[tiab] OR "sciatic neuropathy"[tiab] OR "spondylosis"[tiab] OR "lumbago"[tiab] OR "back disorder"[tiab] OR "Sjögren"[tiab] OR "mixed connective tissue disease"[tiab] OR "undifferentiated connective tissue disease"[tiab] OR "Churg–Strauss"[tiab] OR "eosinophilic granulomatosis with polyangiitis"[tiab] OR "Wegner's granulomatosis"[tiab] OR "granulomatosis with polyangiitis"[tiab] OR "antiphospholipid"[tiab] OR "neck pain"[tiab] OR "wrist pain"[tiab] OR "elbow pain"[tiab] OR "hand pain"[tiab] OR "arm pain"[tiab] OR "musculoskeletal pain"[tiab] OR "pathogenesis of

rheumatic disease"[tiab] OR "pathogenesis of rheumatic diseases"[tiab] OR "pathogenesis of musculoskeletal disease"[tiab] OR "pathogenesis of musculoskeletal diseases"[tiab])

AND

("Albania"[Affiliation] OR "Andorra"[Affiliation] OR "Armenia"[Affiliation] OR "Austria"[Affiliation] OR "Azerbaijan"[Affiliation] OR "Belarus"[Affiliation] OR "Belgium"[Affiliation] OR "Bosnia"[Affiliation] OR "Herzegovina"[Affiliation] OR "Bulgaria"[Affiliation] OR "Croatia"[Affiliation] OR "Cyprus"[Affiliation] OR "Czech Republic"[Affiliation] OR "Denmark"[Affiliation] OR "Estonia"[Affiliation] OR "Finland"[Affiliation] OR "France"[Affiliation] OR "Georgia"[Affiliation] OR "Germany"[Affiliation] OR "Greece"[Affiliation] OR "Hungary"[Affiliation] OR "Iceland"[Affiliation] OR "Ireland"[Affiliation] OR "Italy"[Affiliation] OR "Kazakhstan"[Affiliation] OR "Kosovo"[Affiliation] OR "Latvia"[Affiliation] OR "Liechtenstein"[Affiliation] OR "Lithuania"[Affiliation] OR "Luxembourg"[Affiliation] OR "Malta"[Affiliation] OR "Moldova"[Affiliation] OR "Monaco"[Affiliation] OR "Montenegro"[Affiliation] OR "Netherlands"[Affiliation] OR "North Macedonia"[Affiliation] OR "Norway"[Affiliation] OR "Poland"[Affiliation] OR "Portugal"[Affiliation] OR "Romania"[Affiliation] OR "Russia"[Affiliation] OR "San Marino"[Affiliation] OR "Serbia"[Affiliation] OR "Slovakia"[Affiliation] OR "Slovenia"[Affiliation] OR "Spain"[Affiliation] OR "Sweden"[Affiliation] OR "Switzerland"[Affiliation] OR "Turkey"[Affiliation] OR "Ukraine"[Affiliation] OR "United Kingdom"[Affiliation] OR "Vatican City Holy See"[Affiliation] OR "UK"[Affiliation] OR "Europe"[Affiliation] OR "European"[Affiliation])

For the period April 21, 2022 for the last 1 year, we found 13,628 records, out of which we screened 551 for eligibility. Eligible records must: (i) have at least one author from a European country, (ii) be written in English, (iii) be published in the described time period, (iv) be related to an RMD. We analyzed 500 eligible papers, see Figure 1.

For the pre-pandemic control period from January 1 to December 31, 2019 (search conducted on April 29, 2022), we found 11,714 records. We screened the latest 631 papers published during this period to identify 500 eligible records for further analysis (Figure 1).