

COST OF EARLY RETIREMENT CAUSED BY RHEUMATIC DISEASES IN PORTUGAL

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INTRODUCTION

- Rheumatic diseases (RD) cause physical disability that may lead to early retirement, generating high indirect costs to society.
- We aim to estimate indirect costs of early retirement caused by RD in Portugal.

METHODS

- We used individual level data from the national, cross-sectional, population-based EpiReumaPt study (Sep2011-Dec2013).
- 10,661 inhabitants were randomly surveyed in order to capture and characterize all cases of RD within a representative sample of the Portuguese population.
- In this analysis we used all participants aged between 50 and 65 years old (yo), near the official retirement age.
- An official national database was used to calculate productivity values by gender, age and region, using the human capital approach. All results were based on weighted data.

RESULTS

- 29.9% of the Portuguese population with ages between 50 and 64 yo were officially retired.
- Among these, 13.1% were retired due to RD (3.9% of overall population).
- The estimated annual indirect cost following premature retirement caused by RD was €910 million (€555 per capita; €1,625 per self-reported RD patient and €13,592 per early retiree due to RD).
- Females contributed with 84% for these costs (€766 million; €882 per capita versus €187 from males).
- The mean retirement age for early retirees due to RD was 54.8 yo.
- Thus, we estimate an average indirect cost of €138,635 per early retiree due to RD until official retirement age (assuming 65 yo and fixed annual productivity values).

Self-Reported Rates of Early Retirement by Gender and Presence of Rheumatic Diseases

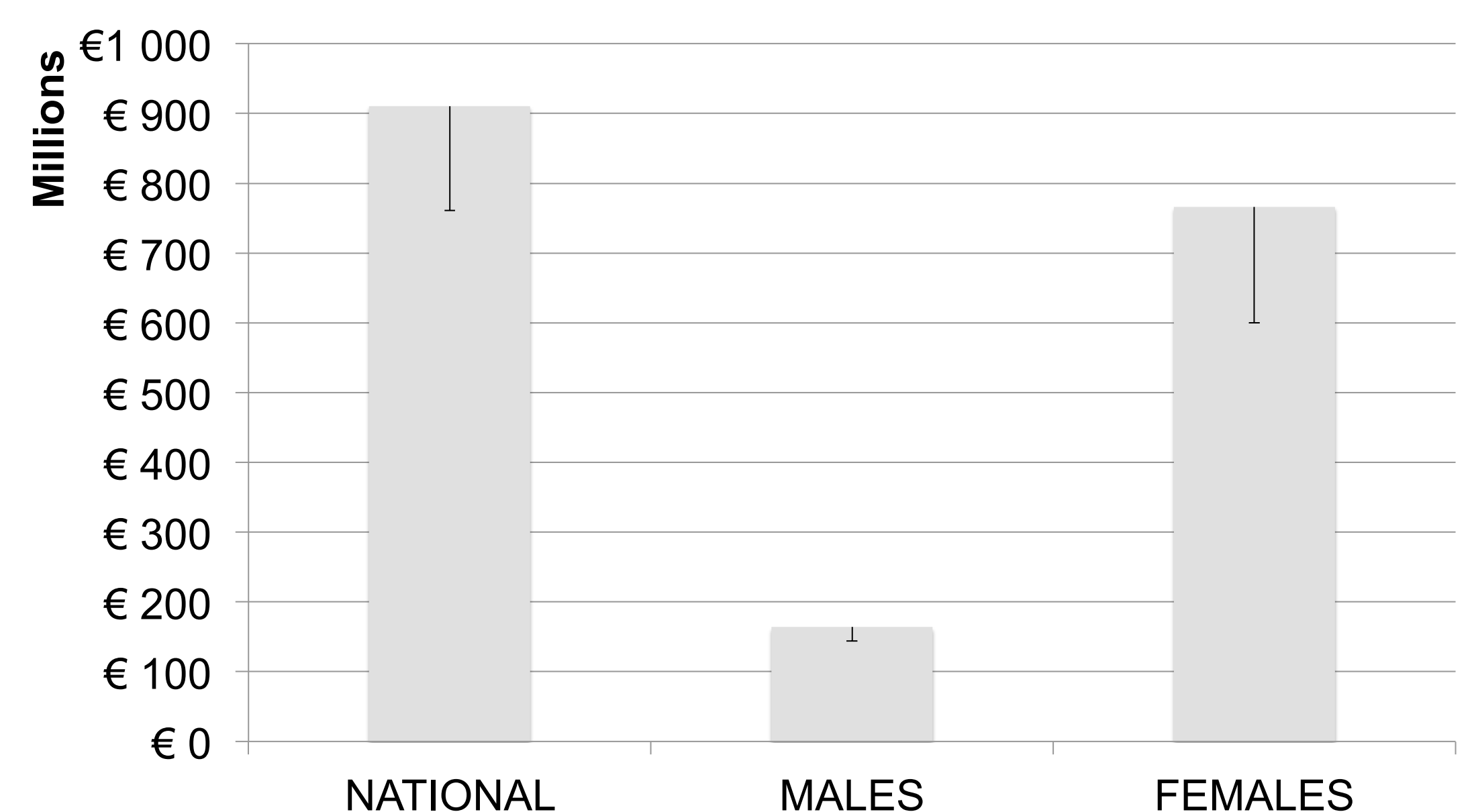
RHEUMATIC DISEASES	GENDER	EARLY RETIREMENT	EARLY RETIREMENT CAUSED BY RD
YES	Male	36.4%	4.3%
	Female	34.7%	11.9%
	M+F	35.2%	9.7%
NO	Male	33.3%	0.8%
	Female	19.3%	1.0%
	M+F	27.2%	0.9%
ALL	Male	33.9%	1.5%
	Female	26.4%	6.0%
	M+F	29.9%	3.9%

Prevalences of early retirement were computed as weighted proportions, in order to keep into account the sampling design of the I EpiReumaPt study (N = 1,706,749)

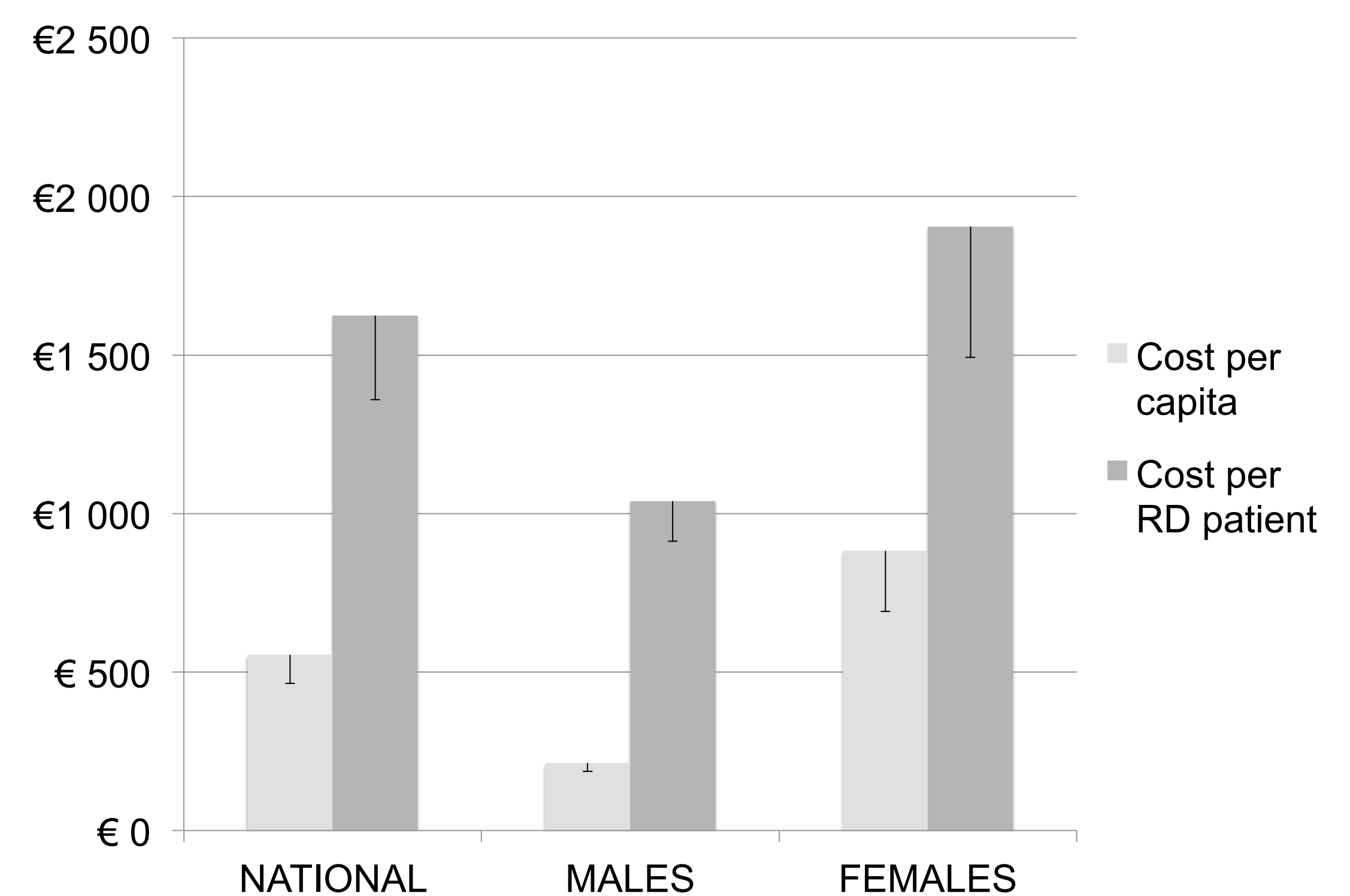
RESULTS II

- Moreover, RD may underlie early retirement even when RD is not self-reported to be its cause, since we also found an independent association between all registered early retirement and self-reported RD (adjusted OR: 1.41; CI: 1.03-1.95; p=0.031), meaning that RD might further contribute for this sort of indirect costs.

Annual Estimated Early Retirement Indirect Costs due to Rheumatic Diseases in Portugal, by Gender



Annual Estimated Early Retirement Indirect Costs per capita due to Rheumatic Diseases in Portugal, by Gender



*Line inside bars refers to the lowest estimate. This estimate was obtained by deploying population attributable fractions, therefore considering additional retirement risk imposed by other factors. PAF were calculated as the resulting proportional change in the probability of early retirement due to RD (using logistic multivariable models) after a counterfactual exercise where the presence of RD is artificially eliminated from the sample.

CONCLUSIONS

- Annual early retirement indirect costs due to RD are considerable, particularly in females.
- Early retirement caused by RD amounts to approximately 0.5% of the national GDP 2013.
- The public health concern and the economic impact highlight the need to prioritize investments in health and social protection policies targeting patients with rheumatic conditions.