MUSCULOSKELETAL DISORDERS AND WORK CAPACITY IN PORTUGUESE NAVY

M. HENRIQUES[1,2], A. ALVES[3], J. CARRILHO[4], A. NUNES[5], F. ALBERGARIA[2,5], M. DINIZ[2,5], J. SILVA[6]

1. Navy Medical Center – Rehabilitation Unit; 2. Navy Research Center; 3. Armed Forces Hospital; 4. Navy Medical Review Board; 5. Navy Medical Center; 6. Navy Health Directorate.

Parallel session - BIG data

EUMASS Congress 2018 Maastricht
Building Bridges Between Science and Practice

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Musculoskeletal disorders (MSDs) are among the most prevalent causes of absenteeism and impose a considerable economic burden on the communities.[1]

Factors related to work activity are very relevant in the majority of MSDs aetiology, so that work-related MSDs are internationally recognised.[2]

WORK ←— INFLUENCE —→ **MSDs**

1. Moradi-Lakeh M, Forouzanfar MH, Vollset SE, Bcheraoui CE, Daoud F, Afshin A, et al. Burden of musculoskeletal disorders in the Eastern Mediterranean Region, 1990–2013: findings from the Global Burden of Disease Study 2013. Ann Rheum Dis. 2017;76(8):1365-73. doi: 10.1136/annrheumdis-2016-210146.
2. Chiwaridzo M, Makotore V, Dambi JM, Munambah N, Mhlanga M. Work-related musculoskeletal disorders among registered general nurses: a case of a large central hospital in Harare, Zimbabwe. BMC Res Notes. 2018;11:315. doi: 10.1186/s13104-018-3412-8.

Calculate the prevalence of MSDs in the Portuguese Navy population in 2016.

Calculate the prevalence of decreased working capacity due to MSDs in the Portuguese Navy population in 2016.

Observational, descriptive, cross-sectional study based on the Portuguese Navy population with access to the institutional email network.

A digital questionnaire was created based on the Portuguese version of the Nordic Musculoskeletal Questionnaire.

Answers were collected between January 8th and January 31st, 2017.

Answers were exported to a Microsoft Office Excel 2016® file and were validated ➡ alphabetic answers were recoded in numeric answers ➡ data base was imported to an IBM SPSS Statistics 24® file.

The prevalence of MSDs was calculated regardless of and by body segment; the same was done for prevalence of decreased working capacity due to MSDs.

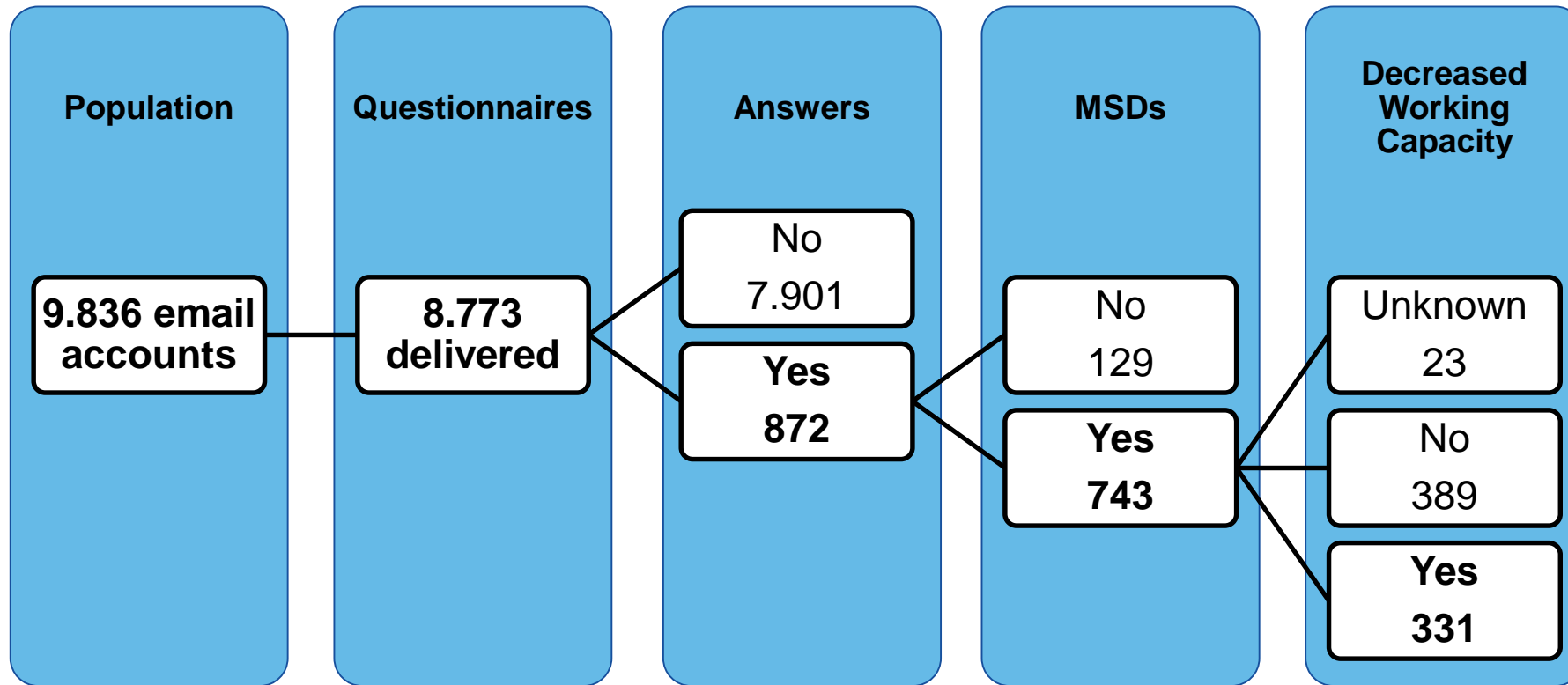http://www.posunip.com.br/assets/images/upload/capa-card/11091.jpg
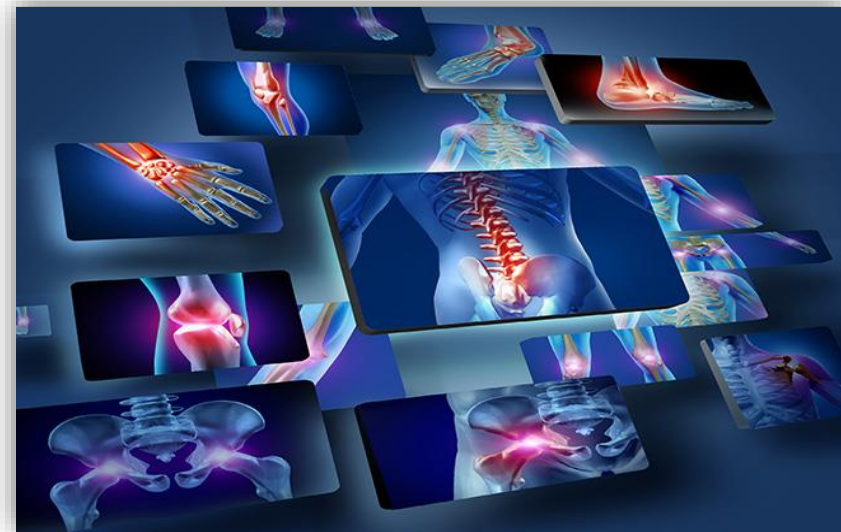
As to the statistical inference of the prevalences, it was used the 95% confidence interval corrected for the population size.

There were a total of 872 different questionnaires (8.9% of the population):

- 11.1% of the respondents were female; 73.6% had reached the age of 35 or more in 2016.

Population	Questionnaires	Answers	MSDs	Decreased Working Capacity
9.836 email accounts	**8.773 delivered**	No 7.901		
		Yes 872	No 129	Unknown 23
			Yes 743	No 389
				Yes 331

Gender	
Male	775 (88,9%)
Female	97 (11,1%)
Age group	
≤ 24 years	13 (1,5%)
25 to 34 years	217 (24,9%)
35 to 44 years	280 (32,1%)
45 to 54 years	322 (36,9%)
55 to 64 years	38 (4,4%)
≥ 65 years	2 (0,2%)
Sample representative of population according gender and age group of [35,44] years.	

The prevalence of MSDs in the Portuguese Navy population, regardless of the body segment, was 85.2% (95% CI, 83.0–87.5) in 2016.

The three body segments with the highest prevalence of MSDs in the Portuguese Navy population were:

- Lower back: 53.0% (95% CI, 49.8–56.2);

- Knees: 36.0% (95% CI, 33.0–39.0); and

- Neck: 32.6% (95% CI, 29.6–35.6).
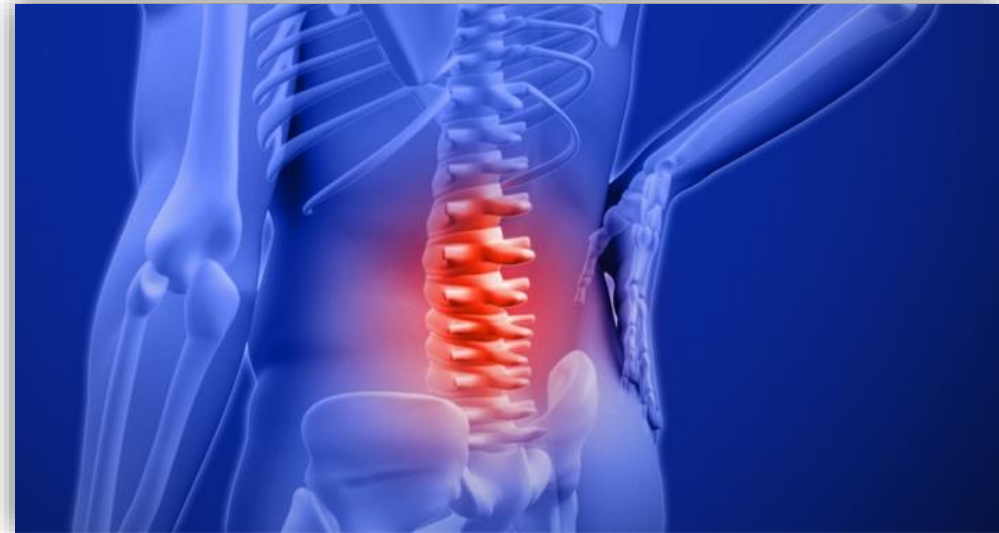
http://drrafaelbianchi.com.br/wp-content/uploads/2017/06/dor-lombar.jpg

The prevalence of decreased working capacity due to MSDs in the Portuguese Navy population, regardless of the body segment, was 38.0% (95% CI, 34.9–41.0) in 2016.

By body segment, the three highest prevalences of decreased working capacity due to MSDs in the Portuguese Navy population were:

- Lower back: 18.8% (95% CI, 16.3–21.3);

- Knees: 11.8% (95% CI, 9.8–13.9); and

- Shoulders: 10.2% (95% CI, 8.3–12.1).

http://drrafaelbianchi.com.br/wp-content/uploads/2017/06/dor-lombar.jpg
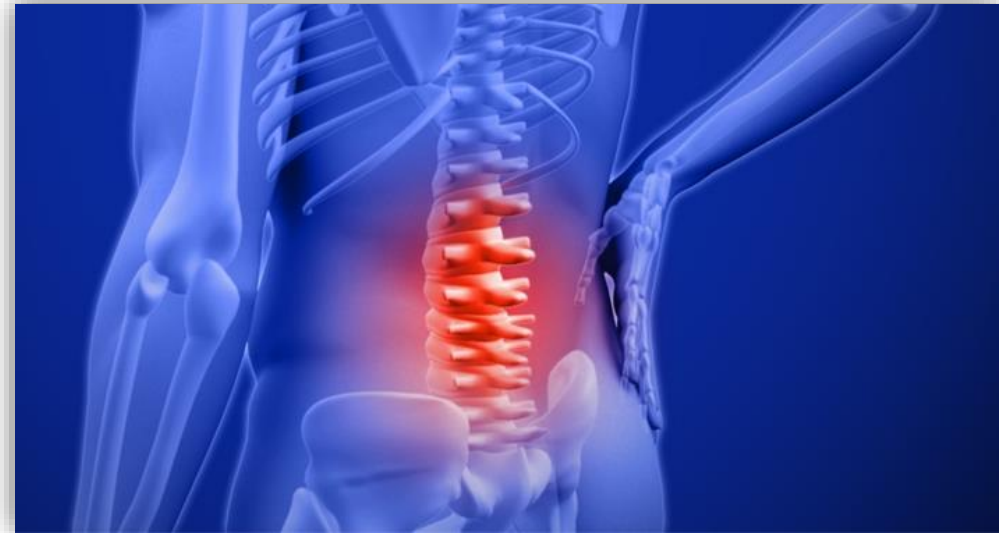
The prevalence of MSDs in the Portuguese Navy is noteworthy; nonetheless it is similar to the prevalence in the Royal Norwegian Navy (85%, 2002).[3]

The prevalence of decreased working capacity due to MSDs is also significant.

Future studies should focus on identifying the aetiology of the MSDs and measuring the real impact of MSDs on work capacity (presenteeism and/or absenteeism).

3. Morken T, Magerøy N, Moen BE. Physical activity is associated with a low prevalence of musculoskeletal disorders in the Royal Norwegian Navy: a cross sectional study. BMC Musculoskeletal Disorders. 2007;8:56. doi:10.1186/1471-2474-8-56.

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THANK YOU FOR YOUR ATTENTION!

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