

Oropharyngeal dysphagia in Portugal in the last decade: A mixed-methods systematic review

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INTRODUCTION

- Deglutition combines fast, sequenced and coordinated neuromuscular actions, to conduct food and fluids from mouth to stomach.
- **Oropharyngeal dysphagia (OD) is a symptom that reflects one or more disorders in deglutition.**
- The disorders can be anatomical or physiological and its origin can be neurological or structural.
- Oropharyngeal dysphagia can occur from early childhood to old age¹.

OBJECTIVE

- To characterise the state of the art of national research on OD, through a systematic literature review of original studies conducted in Portugal during the last decade.

METHODS

- The search was performed in four databases: MEDLINE (PubMed), Scopus, Web of Science and Repositórios Científicos de Acesso Aberto de Portugal (RCAAP).
- Inclusion criteria: Original randomised controlled trials (RCTs), non-randomised experimental studies, cohort studies, control-case studies, observational studies and case series, conducted in Portugal, between January 2011 and January 2021.
- The Mixed Methods Appraisal Tool (MMAT) was used to assess the methodological quality of the included studies.

RESULTS

- The process of study selection is presented in Figure 1.
- A total of 692 articles were found.
- Fifteen articles met the selection criteria and were included for review.
- **The overall evaluation shows that most experimental studies presented small samples, with no randomisation processes, and poor descriptive statistical analysis.**

DISCUSSION

- Lack of studies with focus on OD in paediatric and oncologic population;
- High prevalence of OD in studies with older population living in nursing homes and stroke survivors;
- Portuguese hospitals recognise OD as a factor of poor patient prognosis;
- Some authors highlighted the lack of knowledge of patients, families and health professionals on OD and its consequences.

REFERENCES

1. Clavé P, Shaker R. Dysphagia: current reality and scope of the problem. *Nat Rev Gastroenterol Hepatol*. 2015;12:259-270. doi:10.1038/nrgastro.2015.49
2. Kalf JG, de Swart BJ, Bloem BR, Munneke M. Prevalence of oropharyngeal dysphagia in Parkinson's disease: a meta-analysis. *Park Relat Disord*. 2012;18:311-315. doi:10.1016/j.parkreldis.2011.11.006
3. Langmore SE, Olney RK, Lomen-Hoerth C, Miller BL. Dysphagia in patients with frontotemporal lobar dementia. *Arch Neurol*. 2007;64:58-62. doi:10.1001/archneur.64.1.58
4. Horner J, Alberts MJ, Dawson D V, Cook GM. Swallowing in Alzheimer's disease. *Alzheimer Dis Assoc Disord*. 1994;8:177-189. <https://www.ncbi.nlm.nih.gov/pubmed/7986487>
5. Calcagno P, Ruoppolo G, Grasso MG, De Vincentiis M, Paolucci S. Dysphagia in multiple sclerosis - prevalence and prognostic factors. *Acta Neurol Scand*. 2002;105:40-43. <https://www.ncbi.nlm.nih.gov/pubmed/11903107>
6. Chen A, Garrett CG. Otolaryngologic presentations of amyotrophic lateralsclerosis. *Otolaryngol Head Neck Surg*. 2005;132:500-504. doi:10.1016/j.ototns.2004.09.092
7. Ruoppolo G, Schettino I, Frasca V, Giacomelli E, Prosperini L, Cambieri C, et al. Dysphagia in amyotrophic lateral sclerosis: prevalence and clinical findings. *Acta Neurol Scand*. 2013;128:397-401. doi:10.1111/ane.12136
8. Martino R, Foley N, Bhogal S, Diamant N, Speechley M, Teasell R. Dysphagia after stroke: Incidence, diagnosis, and pulmonary complications. *Stroke*. 2005;36:2756-2763. doi:10.1161/01.STR.0000190056.76543.eb

Condition	Prevalence of OD
Parkinson's disease	35-82% ²
Alzheimer's disease	57-84% ^{3,4}
Multiple sclerosis	34% ⁵
Amyotrophic lateral sclerosis	47-86% ^{6,7}
Stroke (acute phase)	64-78% ⁸
Stroke (chronic phase)	40-81% ⁸

Table 1. Prevalence of oropharyngeal dysphagia in neurological conditions.

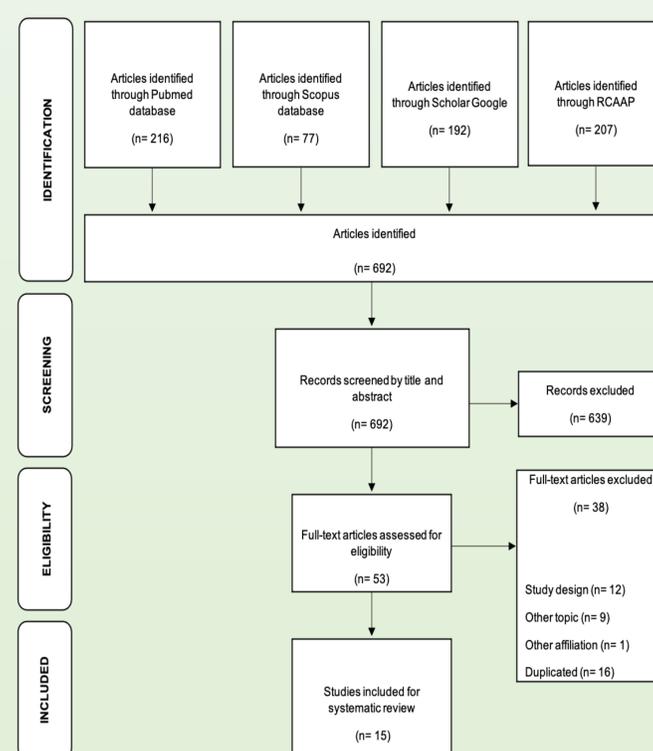


Fig. 1 - Flow diagram describing the study selection process, adapted from PRISMA

