

THE PREVALENCE OF OROPHARYNGEAL DYSPHAGIA IN ADULTS PRESENTING WITH TEMPOROMANDIBULAR DISORDERS ASSOCIATED WITH RHEUMATOID ARTHRITIS: EXAMINING THE EVIDENCE.

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Background:

Temporomandibular disorders (TMDs) are the most commonly reported orofacial pain disorders of non-dental origin. They are characterised by pain/dysfunction of the temporomandibular joint (TMJ) and associated structures. Frequently reported signs and symptoms include TMJ pain (96.1%), audiological problems (82.4%), headaches (79.3%) and TMJ discomfort/dysfunction (75%)¹. Patients often also experience joint movement restrictions, joint sounds on movement and tooth erosion/bite changes. TMDs may be related to rheumatoid arthritis (RA). Little is known about the prevalence of RA-related TMDs. These TMDs are important to research as pain and movement restrictions may result in oropharyngeal dysphagia (OD), with a subsequent negative impact on quality of life (QOL).

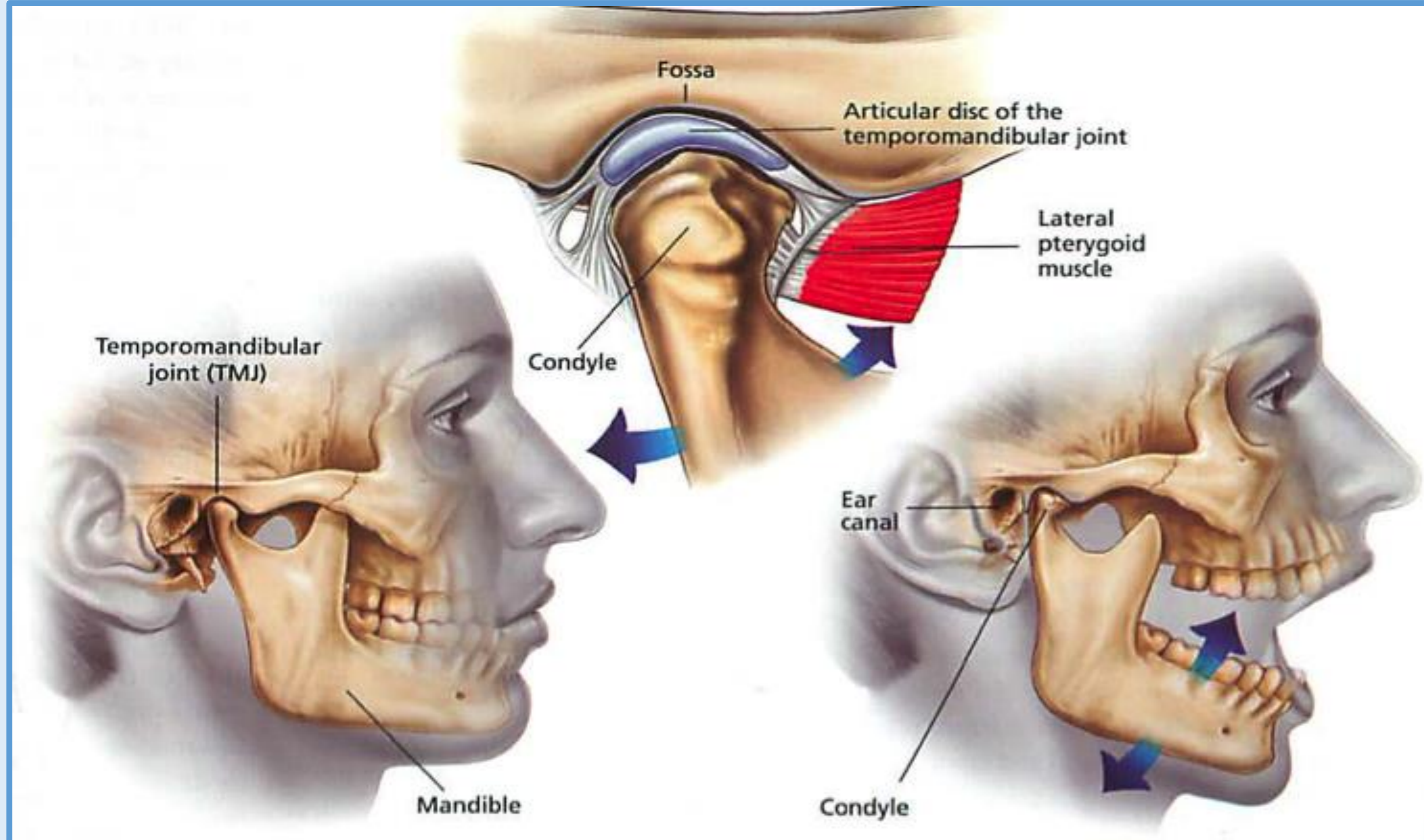


Fig. 1: The Temporomandibular Joint³

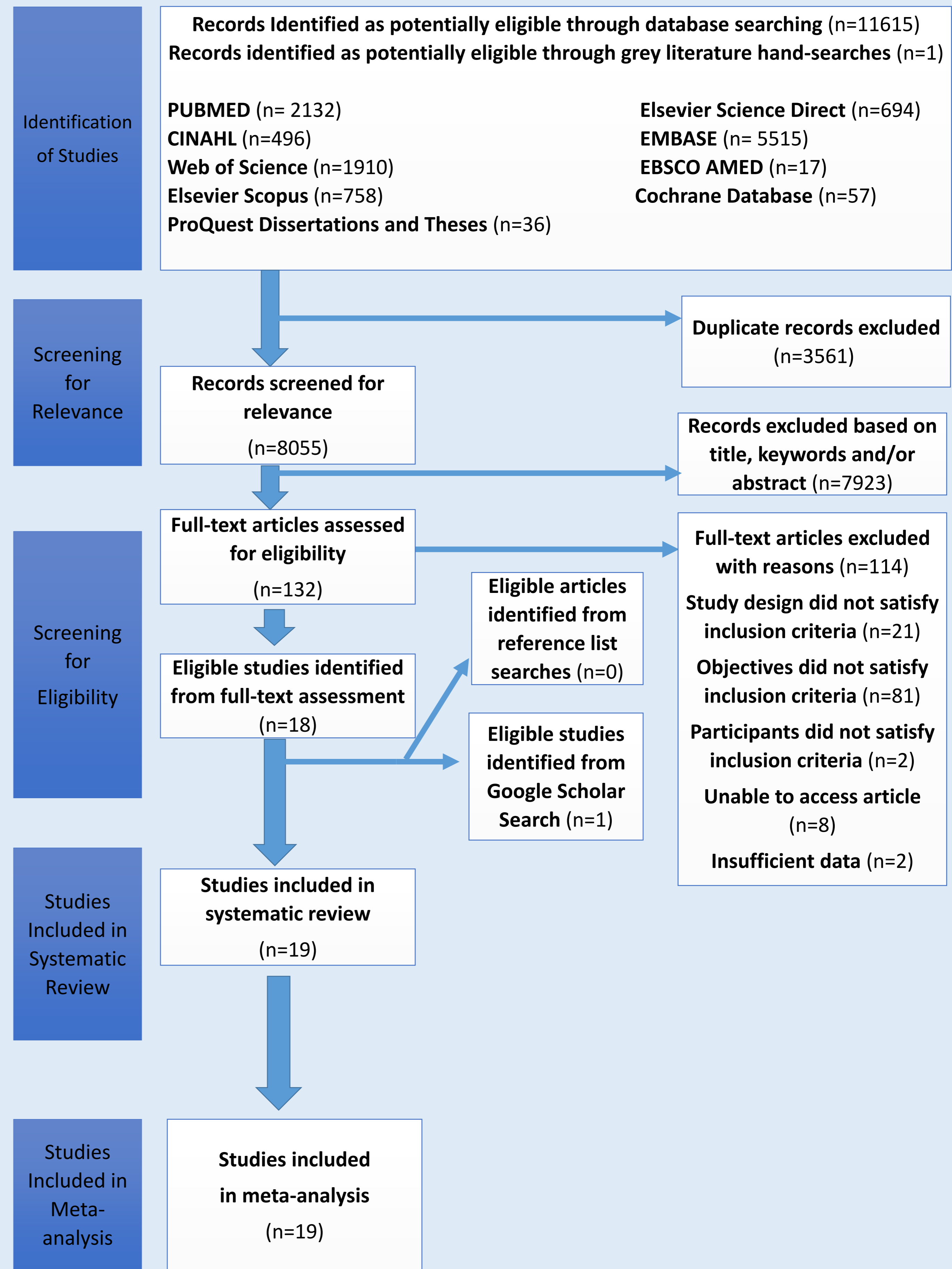


Fig. 2: PRISMA Diagram

Aims:

To examine the prevalence of the following signs and symptoms of OD within RA patients:

- Impaired swallowing ability;
- Impaired mastication;
- Masticatory pain;
- Masticatory fatigue;
- Diet modifications, and
- Weight loss.

Methods:

A systematic search of the literature was completed. Electronic databases, grey literature, and reference lists of included studies were searched from inception to February 2016, with no date or language restriction. Studies reporting the frequency of OD in adults presenting with TMD and RA were included. Study eligibility was assessed by 3 independent reviewers. Methodological quality of included studies was assessed by 2 independent reviewers primarily using The Down's and Black Tool². Meta-analysis of findings was conducted.

Results:

This search yielded a total of 19 eligible studies (Fig. 2). Typical difficulties experienced by patients with RA included:

- Dietary modifications (50.8%),
- Masticatory pain (35.58%),
- Impaired mastication (30.69%),
- Impaired swallowing (24.63%), and
- Masticatory fatigue (21.26%).

No eligible studies addressed weight loss. Study quality was typically deemed to be moderate to good (Fig. 3).

References:

1. Cooper & Kleinberg, *Cranio* **2007**; 25:114.
 2. Downs & Black, *J Epidemiol Community Health* **1998**;52(6):377.
 3. Ontario Society of Oral Maxillofacial Surgeons. (TMJ) Temporomandibular Joint; **2014**. Available from: <http://www.osoms.ca/page-1335630>.
- *References for included articles available on request from author

	Hypothesis/Aim/Objective Explicit	Main Outcomes clearly described in the Introduction or Methods Section	Characteristics of Patients included clearly described	Distributions of Principal Confounders in each group of Subjects to be compared clearly described	Main Findings clearly described	Study provides Estimates of Random Variability for Main Outcomes	Characteristics of Patients lost to Follow-up described	Actual Probability Values been reported for main outcomes except where Probability Value is less than 0.001	Subjects Representative of Entire Population	Subjects Prepared to Participate Representative of Entire Population	Staff, Places, and Facilities Representative	Any of the Results of the Study were based on "Data Dredging"	Appropriate Statistical Tests used to assess Main Outcomes	Main Outcome Measures used Accurate (Valid and Reliable)	Adequate Adjustment for Confounding in the Analyses	Patients in Different Groups or Cases and Controls Recruited from Same Population	Subjects in Different Groups or Cases and Controls Recruited over Same Time
Aceves-Avila et al., 2013																	
Ahmed et al., 2013																N/A	N/A
Ahola et al., 2015																	
Bessa-Nogueira et al., 2008																N/A	N/A
Bono et al., 2014																	
Chalmers et al., 1973																	
Ekberg et al., 1987																N/A	N/A
El-Assy et al., 1994																	
Franks, 1969																N/A	N/A
Goupille et al., 1993																	
Helenius et al., 2005																	
Hoyuela et al., 2015																	
Kallenberg et al., 1997																	
Könönen et al., 1992																	
Larheim et al., 1983																	
Ogus, 1975																	
Tegleberg, 1987																	
Voog et al., 2003																N/A	N/A
Yilmaz et al., 2012																	

Key:
 Yes: ■ No: ■ Unable to Determine: ■

Fig. 3: Down's and Black Methodological Quality Risk of Bias Table

Conclusions:

TMJ difficulties in RA frequently result in signs and symptoms of OD, with potential QOL repercussions. Research is required to address the assessment and treatment of swallowing difficulties in RA.