Top 100 Cited Systematic Reviews and Meta-Analyses in The Major Journals of Oral and Maxillofacial Surgery: A Bibliometric Analysis

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Abstract

Background : The aim of this bibliometric research was to identify and analyze the top 100 cited systematic reviews in the field of oral and maxillofacial surgery.

Methods : Using the Web of Science-database without restrictions on publication year or language, a bibliometric analysis was performed for the five major journals of oral and maxillofacial surgery: International Journal of Oral and Maxillofacial Surgery, Journal of Oral and Maxillofacial Surgery, Journal of Cranio-maxillofacial Surgery, British Journal of Oral & Maxillofacial Surgery and Oral Surgery Oral medicine Oral pathology Oral radiology.

Discussion : The most top-cited systematic review was published in 2015 with a total of 200 citations on survival and success rates of dental implants, consistent with the finding that “pre- and peri-implant surgery and dental implantology”, and “craniomaxillofacial deformities and cosmetic surgery” were the most frequently-cited topics (22% each).

The International Journal of Oral and Maxillofacial Surgery displayed both most citations in total and in average per publication. The outcome of this article can be used as a source of information not just for researchers but also for clinicians and students, and of which areas have a large impact on the field of oral and maxillofacial surgery but cannot reflect the quality of the included systematic reviews.

Systematic review registration: not applicable

Background

Decision-making regarding all clinical decisions including choice of treatment is nowadays nationally and internationally based on evidence-based medicine in all fields of medicine such as dentistry and oral and maxillofacial surgery (OMFS) [1, 2]. Randomized controlled trials (RCTs) have been considered the best and strongest study design to answer a specific clinical question, consequently being a guide to the decision making, described as an evidence-based approach. However, in most of the RCTs, a huge sample size is warranted to reach an outcome based on reliable statistics. Performing a RCT with a big sample size is a challenge for any researcher. To solve this problem, a study design called systematic review with meta-analysis was proposed. This type of research allows the researchers to agglutinate data extracted from many RCTs, in only one statistical analysis. Thus, this kind of statistical analysis can provide a more robust and stronger outcome/result about one specific clinical question. Besides that, there are tools to evaluate the quality of RCTs, in order to be able to do recommendations about this specific clinical issue. Therefore, presently systematic reviews and meta-analysis are graded with the highest quality level study design [3].

Another type of research, used to show which impact publications have, is called “bibliometrics”. The first citation about bibliometrics was done by Pritchard in 1969 [4]. There are some publications on bibliometric analysis in the field of OMSF, but specified as facial trauma [5], oral cancer [6], and maxillofacial surgery [7]. The citation analysis is a type of bibliometrics which quantifies how many times a publication has been cited after its publication. This information can be efficient to use in order to evaluate which impact a publication has in a specific field, and therefore how important this publication is in the specific field. Thus, the more cited

the publication is, the greater ability it has to influence clinical decisions [8]. Furthermore, this analysis is an important tool to help the clinicians to identify the best publications in their field of action and to guide them in their decision making based on these publications.

After the millennial shift there was a huge increase in the number of published systematic reviews in medicine and dentistry. Specifically, in the field of OMFS the increase of published systematic reviews was observed after 2010. To our knowledge there are no studies aiming to investigate the most cited systematic reviews in the field of OMFS. Thus, after 10 years of worldwide research it is imperative to know how the systematic reviews are influencing the decision making in the field of OMFS, and to rank the most cited systematic reviews in order to provide a guidance to the clinicians acquisition of knowledge. The aim of this bibliometric research was therefore to identify and analyze the top 100 cited systematic reviews in the field of OMFS.

Methods

Using the methodology outlined in the standard systematic review methods[9], the authors performed a bibliometric analysis of the top 100 most highly cited systematic reviews in the five major journals of oral and maxillofacial surgery namely: International Journal of Oral and Maxillofacial Surgery (IJOMS), Journal of Oral and Maxillofacial Surgery (JOMS), Journal of Cranio-maxillofacial Surgery (JCMS), British Journal of Oral & Maxillofacial Surgery (BJOMS) and Oral Surgery Oral medicine Oral pathology Oral radiology (TRIPLEO). A search was performed on 29th October 2020, using the Clarivate Analytics' Web of Science database and there was no restriction on the publication year or the language of the manuscripts. The search strategy was "systematic review" OR "systematic reviews" OR "meta-analysis" OR "meta-analyses". The results were organized in descending order of citation count.

Every systematic review was stratified into the following categories: dentoalveolar surgery, pre-implant surgery and dental implantology, traumatology, craniomaxillofacial deformities and cosmetic surgery, osteonecrosis of the jaws, pathology, reconstructive surgery, temporomandibular joint (TMJ), basic science research, and emerging technologies

The most cited articles were analyzed regarding the following information: number of citations, publication year, journals, authors, number of authors, methodological design (systematic review or systematic review with meta-analysis), article topic, contributing institution and country. The country of origin and contributing institution of the article was defined by the address provided for the corresponding author. When the paper presented the same citation number the youngest was best ranked.

Number of articles and citations per article were graphed using the Statistical Package for the Social Sciences software (SPSS version 22.0).

Discussion

The initial search identified 771 articles. The 100 top-cited systematic reviews on the OMFS field are listed by rank order based on the number of citations in **Table 1**. From a total of 100 systematic reviews only 37 presented meta-analyses. The number of authors ranged between one and 16 (mean 4.12 ± 2.31).

These articles have been cited a combined total of 5107 times. The most top-cited article was published in 2015 with a total of 200 citations [10]. Based on the distribution of the 100 articles over the years and their citations per publication, the years 2000 followed by 2006 and 2007 were the most productive years (**Figure 1**). The earliest systematic review included in this bibliometric analysis was published in 2000 by Lee et al. [11], in JOMS and has been cited 98 times, while the most recently was published in 2018 by Starch-Jensen et al. [12] in the IJOMS and has been cited 33 times. **Figure 2** illustrates the distribution of the 100 articles over the years.

The topics “pre- and peri-implant surgery and dental implantology”, as well as “craniomaxillofacial deformities and cosmetic surgery” were the most frequently cited topics (22% each) in the top 1

00 list (**Figure 3**). The first topic has a total of 1334 citations while the second topic has a total of 1162 citations.

There were 25 different countries of origin and 83 institutions responsible for the highly cited systematic reviews. The leading countries were The Netherlands and Italy with 12 manuscripts each, followed by the USA with 10 articles (**Figure 4**).

Overall, IJOMS was responsible for 2481 citations, JOMS for 1684, TRIPLEO for 380 citations, JCMFS for 307, and BJOMS for 255. The mean citation rate per published review followed the same pattern with IJOMS having a mean citation rate of 57.7 citations per review, JOMS 49.5 citations per review, TRIPLEO 47.5 citations per review, JCMFS 38.4 citations per review, and BJOMS 31.9 citations per review. Most of the manuscripts were published in the IJOMS and JOMS (Figure 5).

In the field of (dental)medicine, as in the other fields of science, there is wish reach out, to affect decisions, and to guide the reader in a decision making [8]. Articles reaching more than 100 citations are considered classic, i.e. having a great impact [13]. However, to analyze and understand if the conducted research has any impact or affects decision making one has to analyze how and if the articles do reach out, and which impact they have in their research filed [13]. To do that scientometrics, which is bibliometry in the field of science, is frequently used. This study used citation analysis [14], to identify the publications that have had the greatest impact in the field of OMFS. Although the field of OMFS is very wide, with diverse conditions and treatments, the main finding of this citation analysis indicates that there were only 7 systematic reviews that reached to 100 citations in the field of OMFS, among the included journals. This is in line with previous studies indicating that less 10% of the published articles reaches up to the status of classic articles [15-17].

Among the classic articles the top cited article was an Italian systematic review on longitudinal studies about the evaluation of survival and success rates of dental implants [10], published in 2015 but already up in 200 citations. Among top-three there was one more systematic review on dental implants also from Italy focusing on different alveolar bone augmentation procedures for implant placement [18], published in 2014 and has now reached 124 citations. It is not surprising that systematic reviews upon dental treatments are top ranked since dental implant surgery is the vast most common surgical procedure next to tooth extractions, in contrast to orthognathic surgery, tumors.[19]

The second most cited was also a European (from The Netherlands) systematic review on three-dimensional image fusion processes for planning and evaluating orthodontics and orthognathic surgery, published in 2011 having 131 citations. All top-three systematic reviews were published in IJOMS, which is the top journal in the field of OMFS, being ranked in the first quartile (QR1). It has been shown that the journal impact factor answers for 59% of the variation in the number of citations [20]. Therefore, it is not at surprising finding since most authors are interested in publishing papers in journals with high impact-factors, which also is considered an indication of high quality papers [21, 22]. Just outside top-three systematic reviews this citation analysis could show that systematic reviews upon osteoradionecrosis from Hong Kong (112 citations)[23] and Malaysia (100 citations)[24], as well as osteonecrosis from Germany (104 citations)[25]. The same topics were also dominating the rest of the most highly cited systematic reviews.

It has previously been reported that the majority of the top ranked, top cited publications are produced in nations with better economic rankings [17, 26]. This was also found in this citation analysis indicating that most of the systematic reviews in the field of OMFS are produced in Europe and the US, as well as Hong Kong, with Italy as the most successful country.

One interesting factor is that the top ranked systematic reviews are all published after the year 2010, however not surprising since only 14 out of the 100 top cited were published in the decade 2000-2010. One common criticism on citation analysis reports is that the outcome is affected by the impact of time [15]. This was, however, not the case in this report on the field of OMFS. In accordance with our results, previous studies have indicated that there are just a few citations the first years, with a peak of citations just before an article-age of 10 years [27].

Another aspect to consider is that only can be used to assess the impact the specific article has on its field by quantifying its recognition, the importance, and also perhaps how common or severe a condition might be, but it cannot reflect the quality of the content in the article [21, 22]. Therefore, it is of great importance to use the outcome of this article as a source of information not just for researchers but also for clinicians and students, and which areas have a large impact on the field of OFMS.

Abbreviations

OMFS : oral and maxillofacial surgery

TMJ : temporomandibular joint

IJOMS: International Journal of Oral and Maxillofacial Surgery

JOMS: Journal of Oral and Maxillofacial Surgery

JCMS: Journal of Cranio-maxillofacial Surgery

BJOMS: British Journal of Oral & Maxillofacial Surgery

TRIPLE O: Oral Surgery Oral medicine Oral pathology Oral radiology

Declarations

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Consent for publication: not applicable

Availability of data and materials: not applicable

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Authors' information (optional)

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6. Hassona Y, Qutachi T: **A bibliometric analysis of the most cited articles about squamous cell carcinoma of the mouth, lips, and oropharynx.** *Oral Surg Oral Med Oral Pathol Oral Radiol* 2019, **128**(1):25-32 e26.
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8. Mogull SA: **Accuracy of cited "facts" in medical research articles: A review of study methodology and recalculation of quotation error rate.** *PLoS One* 2017, **12**(9):e0184727.
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11. Lee JJ, Rouhfar L, Beirne OR: **Survival of hydroxyapatite-coated implants: A meta-analytic review.** *Journal of Oral and Maxillofacial Surgery* 2000, **58**(12):1372-1379.
12. Starch-Jensen T, Aludden H, Hallman M, Dahlin C, Christensen AE, Mordenfeld A: **A systematic review and meta-analysis of long-term studies (five or more years) assessing maxillary sinus floor augmentation.** *International journal of oral and maxillofacial surgery* 2018, **47**(1):103-116.
13. Heldwein FL, Rhoden EL, Morgentaler A: **Classics of urology: a half century history of the most frequently cited articles (1955-2009).** *Urology* 2010, **75**(6):1261-1268.
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17. Lai P, Liu YH, Xue JH, He PC, Qiu YQ: **The 100 most-cited articles on aortic dissection.** *BMC Cardiovasc Disord* 2017, **17**(1):30.
18. Milinkovic I, Cordaro L: **Are there specific indications for the different alveolar bone augmentation procedures for implant placement? A systematic review.** *Int J Oral Maxillofac Surg* 2014, **43**(5):606-625.
19. Elani HW, Starr JR, Da Silva JD, Gallucci GO: **Trends in Dental Implant Use in the U.S., 1999-2016, and Projections to 2026.** *J Dent Res* 2018, **97**(13):1424-1430.
20. Royle P, Kandala NB, Barnard K, Waugh N: **Bibliometrics of systematic reviews: analysis of citation rates and journal impact factors.** *Syst Rev* 2013, **2**:74.
21. Gondivkar SM, Sarode SC, Gadbail AR, Gondivkar RS, Choudhary N, Patil S: **Citation Classics in Cone Beam Computed Tomography: The 100 Top-Cited Articles.** *Int J Dent* 2018, **2018**:9423281.
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23. Nabil S, Samman N: **Incidence and prevention of osteoradionecrosis after dental extraction in irradiated patients: a systematic review.** *Int J Oral Maxillofac Surg* 2011, **40**(3):229-243.
24. Nabil S, Samman N: **Risk factors for osteoradionecrosis after head and neck radiation: a systematic review.** *Oral Surg Oral Med Oral Pathol Oral Radiol* 2012, **113**(1):54-69.
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26. Pena-Cristobal M, Diniz-Freitas M, Monteiro L, Diz Dios P, Warnakulasuriya S: **The 100 most cited articles on oral cancer.** *J Oral Pathol Med* 2018, **47**(4):333-344.
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Tables

Table 1. The top 100 cited systematic review and meta-analyses in oral and maxillofacial surgery.

Rank	Author	Title	Publication Year	Journal	Institution	Citations
1	Moraschini V et al.	Evaluation of survival and success rates of dental implants reported in longitudinal studies with a follow-up period of at least 10 years: a systematic review	2015	IJMOS	Fluminense Federal University	200
2	Plooi J M et al.	Digital three-dimensional image fusion processes for planning and evaluating orthodontics and orthognathic surgery. A systematic review	2011	IJMOS	3D Facial Imaging Research Group Nijmegen-Bruges	131
3	Milinkovic I et al.	Are there specific indications for the different alveolar bone augmentation procedures for implant placement? A systematic review	2014	IJMOS	Eastman Dental Hospital	124
4	Milinkovic I, Cordaro L	Incidence and prevention of osteoradionecrosis after dental extraction in irradiated patients: a systematic review	2011	IJMOS	University of Hong Kong	112
5	Nabil S, Samman N	Stability After Bilateral Sagittal Split Osteotomy Advancement Surgery With Rigid Internal Fixation: A Systematic Review	2009	JOMS	University of Geneva	107
6	Joss CU, Vassalli IM	Treatment strategies and outcomes of bisphosphonate-related osteonecrosis of the jaw (BRONJ) with characterization of patients: a systematic review	2015	IJMOS	Universitat Munich	104
7	Nabil S, Samman N	Risk factors for osteoradionecrosis after head and neck	2012	TRIPLEO	National University of Malaysia	100

		radiation: a systematic review				
8	Lee JJ et al.	Survival of hydroxyapatite-coated implants: A meta-analytic review	2000	JOMS	University of Washington	98
9	Cheung LK, Chua HDP	A meta-analysis of cleft maxillary osteotomy and distraction osteogenesis	2006	IJMOS	The University of Hong Kong	97
10	Lau SL, Samman N	Recurrence related to treatment modalities of unicystic ameloblastoma: a systematic review	2006	IJMOS	The University of Hong Kong	96
11	Colella G et al.	Fine-Needle Aspiration Cytology of Salivary Gland Lesions: A Systematic Review	2010	JOMS	Second University of Naples	91
12	Clementini M et al.	Success rate of dental implants inserted in horizontal and vertical guided bone regenerated areas: a systematic review	2012	IJMOS	University Tor Vergata	90
13	Ren YF, Malmstrom HS	Effectiveness of antibiotic prophylaxis in third molar surgery: A meta-analysis of randomized controlled clinical trials	2007	JOMS	University of Rochester	89
14	Stokbro K et al.	Virtual planning in orthognathic surgery	2014	IJMOS	Odense University Hospital	88
15	Rickert D et al.	Maxillary sinus lift with solely autogenous bone compared to a combination of autogenous bone and growth factors or (solely) bone substitutes. A systematic review	2012	IJMOS	University Medical Center Groningen	78
16	Goiato MC et al.	Longevity of dental implants in type IV	2014	IJMOS	Universidade Estadual Paulista	76

		bone: a systematic review				
17	Markiewicz MR et al.	Corticosteroids reduce postoperative morbidity after third molar surgery: A systematic review and meta-analysis	2008	JOMS	Oregon Health and Science University	76
18	Merkx MAW et al.	Assessment of the value of anorganic bone additives in sinus floor augmentation: a review of clinical reports	2003	IJMOS	University of Nijmegen	71
19	Colella G et al.	Neurosensory disturbance of the inferior alveolar nerve after bilateral sagittal split osteotomy: A systematic review	2007	JOMS	Second University of Naples	68
20	Soh CL, Narayanan V	Quality of life assessment in patients with dentofacial deformity undergoing orthognathic surgery-A systematic review	2013	IJMOS	Saveetha University, Vellappanchavadi	63
21	Clementini M et al.	Systemic risk factors for peri-implant bone loss: a systematic review and meta-analysis	2014	IJMOS	Independent Researcher	60
22	Kaczmarzyk T et al.	A systematic review of the recurrence rate for keratocystic odontogenic tumour in relation to treatment modalities	2012	IJMOS	Jagiellonian University Medical College	59
23	Andreasen JO et al.	A systematic review of prophylactic antibiotics in the surgical treatment of maxillofacial fractures	2006	JOMS	University Hospital (Rigshospitalet)	59
24	Gunarajah DR, Samman N	Biomaterials for Repair of Orbital Floor Blowout	2013	JOMS	University of Hong Kong	57

		Fractures: A Systematic Review				
25	Kaipatur NR, Flores-Mir C	Accuracy of Computer Programs in Predicting Orthognathic Surgery Soft Tissue Response	2009	JOMS	University of Alberta	56
26	Dan AEB et al.	Corticosteroid Administration in Oral and Orthognathic Surgery: A Systematic Review of the Literature and Meta-Analysis	2010	JOMS	University of Copenhagen	54
27	Al-Moraissi EA, Ellis, E	Surgical Treatment of Adult Mandibular Condylar Fractures Provides Better Outcomes Than Closed Treatment: A Systematic Review and Meta-Analysis	2015	JOMS	Thamar University	53
28	Mattos CT et al.	Effects of orthognathic surgery on oropharyngeal airway: a meta-analysis	2011	IJMOS	Federal University of Rio de Janeiro	53
29	Mohlhenrich SC et al.	Heat generation and drill wear during dental implant site preparation: systematic review	2015	BJOMS	Aachen University Hospital	51
30	Boffano P et al.	Aetiology of maxillofacial fractures: a review of published studies during the last 30 years	2014	BJOMS	University of Amsterdam	51
31	Van Diermen DE et al.	Management recommendations for invasive dental treatment in patients using oral antithrombotic medication, including novel oral anticoagulants	2013	TRIPLEO	Academic Centre for Dentistry Amsterdam	51
32	Reston JT, Turkelson CM	Meta-analysis of surgical treatments for	2003	JOMS	Department of Health Technology Assessment, ECRI	51

		temporomandibular articular disorders				
33	Johnson NR et al.	Management and recurrence of keratocystic odontogenic tumor: a systematic review	2013	TRIPLEO	MBBS Maxillofacial Department	50
34	Pineiro- Aguilar A et al.	Blood Loss in Orthognathic Surgery: A Systematic Review	2011	JOMS	University of Santiago de Compostela	50
35	Markiewicz MR et al.	Morbidity associated with oral mucosa harvest for urological reconstruction: An overview	2008	JOMS	University at Buffalo	49
36	Saulacic N et al.	Alveolar distraction osteogenesis: a systematic review	2008	IJMOS	University of Bern	48
37	Chrcanovic BR et al.	Survival and Complications of Zygomatic Implants: An Updated Systematic Review	2016	JOMS	Malmö University	47
38	Joss CU, Vassalli IM	Stability after bilateral sagittal split osteotomy setback surgery with rigid internal fixation: A systematic review	2016	JOMS	University of Geneva, Geneva	47
39	Akadiri OA, Obiechina AE	Assessment of Difficulty in Third Molar Surgery-A Systematic Review	2008	JOMS	University of PortHarcourt	46
40	Nussbaum ML et al.	Closed versus open reduction of mandibular condylar fractures in adults: A meta- analysis	2009	JOMS	Virginia Commonwealth University	46
41	Saridin CP et al.	Bone scintigraphy as a diagnostic method in unilateral hyperactivity of the mandibular condyles: a review and meta-analysis of the literature	2011	IJMOS	VU University Medical	46
42	Troeltzsch	Clinical efficacy of	2016	JCMS	University of	45

	M et al.	grafting materials in alveolar ridge augmentation: A systematic review Clinical efficacy of grafting materials in alveolar ridge augmentation: A systematic review			Goettingen	
43	Kyzas PA et al.	The treatment of mandibular condyle fractures: A meta-analysis	2012	JCMS	North Manchester General Hospital	45
44	Del Fabbro M et al.	Is autologous platelet concentrate beneficial for post-extraction socket healing? A systematic review	2011	IJMOS	University of Milan	45
45	Stableforth WD et al.	A systematic review of the role of immunonutrition in patients undergoing surgery for head and neck cancer	2009	IJMOS	Derriford Hospital	45
46	Khojasteh A et al.	Effects of different growth factors and carriers on bone regeneration: a systematic review	2013	TRIPLEO	Shahid Beheshti University of Medical Sciences	44
47	Jensen T et al.	Maxillary sinus floor augmentation with Bio-Oss or Bio-Oss mixed with autogenous bone as graft in animals: a systematic review	2012	IJMOS	Aarhus University Hospital	44
48	Verstraaten J et al.	A systematic review of the effects of bone-borne surgical assisted rapid maxillary expansion	2010	JCMS	Radboud University Nijmegen Medical Centre	44
49	Atieh MA	Diagnostic Accuracy of Panoramic Radiography in Determining Relationship Between Inferior Alveolar Nerve and Mandibular Third Molar	2010	JOMS	University of Otago	43
50	Dubois L et al.	Controversies in orbital	2015	IJMOS	University of Amsterdam	42

		reconstruction-I. Defect-driven orbital reconstruction: A systematic review				
51	Agostini T et al.	Anterolateral thigh flap: Systematic literature review of specific donor-site complications and their management	2013	JCMS	CTO-AOUC, Department of Traumatology and Maxillofacial Surger	42
52	Pirklbauer K et al.	Maxillomandibular Advancement for Treatment of Obstructive Sleep Apnea Syndrome: A Systematic Review	2011	JOMS	Medical University of Vienna	41
53	Moraschini V, Barboza EDP	Success of dental implants in smokers and non-smokers: a systematic review and meta-analysis	2016	IJMOS	Fluminense Federal University	41
54	Foresta E et al.	Pleomorphic adenoma and benign parotid tumors: extracapsular dissection vs superficial parotidectomy- review of literature and meta-analysis	2014	TRIPLEO	Catholic University Medical School	41
55	Pluijmers et al.	Mandibular reconstruction in the growing patient with unilateral craniofacial microsomia: a systematic review	2014	IJMOS	Erasmus University Medical Center	40
56	Guarda-Nardini L et al.	Synovial chondromatosis of the temporomandibular joint: a case description with systematic literature review	2010	IJMOS	University of Padova	40
57	Kelly MP et al.	Systematic Review and Meta-Analysis of Recombinant Human Bone Morphogenetic Protein-2 in Localized Alveolar Ridge and Maxillary Sinus Augmentation	2016	JOMS	University of Wisconsin School of Medicine and Public Health	39

58	Brignardello-Petersen R et al.	Is Adjuvant Laser Therapy Effective for Preventing Pain, Swelling, and Trismus After Surgical Removal of Impacted Mandibular Third Molars? A Systematic Review and Meta-Analysis	2012	JOMS	University of Toronto, Toronto	39
59	Dubois L et al.	Controversies in orbital reconstruction-II. Timing of post-traumatic orbital reconstruction: A systematic review	2015	IJMOS	University of Amsterdam	39
60	Goiato MC et al.	Implants in the zygomatic bone for maxillary prosthetic rehabilitation: a systematic review	2014	IJMOS	Araçatuba Dental School UNESP	39
61	Ata-Ali J et al.	Do antibiotics decrease implant failure and postoperative infections? A systematic review and meta-analysis	2014	IJMOS	Valencia University	39
62	Brown JS et al.	Systematic review of the current evidence in the use of postoperative radiotherapy for oral squamous cell carcinoma	2012	BJOMS	University Hospital AintreeLowerLane	39
63	Klug C et al.	Preoperative chemoradiotherapy in the management of oral cancer: A review	2008	JCMS	Medical University of Vienna	39
64	Katsnelson A et al.	Operative Management of Temporomandibular Joint Ankylosis: A Systematic Review and Meta-Analysis	2012	JOMS	Harvard School of Dental Medicine	36
65	Kyzas PA	Use of Antibiotics in the Treatment of Mandible Fractures: A Systematic Review	2011	JOMS	Blackburn Royal Infirmary	36
66	Patterson	Corticotomies and	2016	JOMS	University of	35

	BM et al.	Orthodontic Tooth Movement: A Systematic Review			Sydney	
67	Moraschini V et al.	Implant survival rates, marginal bone level changes, and complications in full-mouth rehabilitation with flapless computer-guided surgery: a systematic review and meta-analysis	2015	IJMOS	Fluminense Federal University	35
68	Chrcanovic BR et al.	Immediately loaded non-submerged versus delayed loaded submerged dental implants: A meta-analysis	2015	IJMOS	Malmö University	35
69	Tsui WK et al.	Bone anchor systems for orthodontic application: a systematic review	2012	IJMOS	University of Hong Kong	35
70	Azarmehr I et al.	Surgical Navigation: A Systematic Review of Indications, Treatments, and Outcomes in Oral and Maxillofacial Surgery	2017	JOMS	Odense University Hospital	34
71	Aliko A et al.	World Workshop on Oral Medicine VI: clinical implications of medication-induced salivary gland dysfunction	2015	TRIPLEO	Tel-Aviv Sourasky Medical Center and Saliwell	34
72	Raijmakers PG et al.	Female Predominance and Effect of Gender on Unilateral Condylar Hyperplasia: A Review and Meta-Analysis	2012	JOMS	VU University Medical Centre, de Boelelaan	33
73	Rachidi S; et al.	Melanotic Neuroectodermal Tumor of Infancy: A Systematic Review	2015	JOMS	Medical University of South Carolina	33
74	Starch-Jensen T; et al.	A systematic review and meta-analysis of long-term studies (five or more years) assessing maxillary	2018	IJMOS	Aalborg University Hospital	33

		sinus floor augmentation				
75	Pocaterra A. et al.	Effectiveness of platelet-rich plasma as an adjunctive material to bone graft: a systematic review and meta-analysis of randomized controlled clinical trials	2016	IJMOS	University of L'Aquila	33
76	Al-Moraissi EA et al.	A systematic review and meta-analysis of the clinical outcomes for various surgical modalities in the management of temporomandibular joint ankylosis	2015	IJMOS	Thamar University	33
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79	Saltaji H et al.	Maxillary Advancement With Conventional Orthognathic Surgery in Patients With Cleft Lip and Palate: Is It a Stable Technique?	2012	JOMS	University of Alberta	32
80	Tarsitano A et al.	Mandibular reconstructions using computer-aided design/computer-aided manufacturing: A systematic review of a defect-based reconstructive algorithm	2015	JCMS	University of Bologna	32

81	Adeyemo WL, Akadiri OA	A systematic review of the diagnostic role of ultrasonography in maxillofacial fractures	2011	IJMOS	University of Lagos	32
82	Agbaje JO et al.	Systematic review of the incidence of inferior alveolar nerve injury in bilateral sagittal split osteotomy and the assessment of neurosensory disturbances	2015	IJMOS	Catholic University Leuven	31
83	Hsieh YJ, Liao YF	Effects of maxillomandibular advancement on the upper airway and surrounding structures in patients with obstructive sleep apnoea: a systematic review	2013	BJOMS	Chang Gung Memorial Hospital	31
84	Molina-Solana R et al.	Current concepts on the effect of environmental factors on cleft lip and palate	2013	IJMOS	University of Seville	31
85	Al-Moraissi EA, Ellis E	What Method for Management of Unilateral Mandibular Angle Fractures Has the Lowest Rate of Postoperative Complications? A Systematic Review and Meta-Analysis	2014	JOMS	Thamar University	30
86	Al-Moraissi EA et al.	What surgical treatment has the lowest recurrence rate following the management of keratocystic odontogenic tumor?: A large systematic review and meta-analysis	2017	JCMS	Thamar University	30
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88	Shah KSV, Ethunandan M	Tumour seeding after fine-needle aspiration and core biopsy of the head and neck - a systematic review	2016	BJOMS	University Hospitals Southampton	29
89	Breik O et al.	Mandibular distraction osteogenesis for the management of upper airway obstruction in children with micrognathia: a systematic review	2016	IJMOS	Royal Melbourne Hospital	29
90	Clementini M et al.	Immediate versus delayed positioning of dental implants in guided bone regeneration or onlay graft regenerated areas: a systematic review	2013	IJMOS	University "Tor Vergata"	29
91	Saltaji H et al.	Le Fort III Distraction Osteogenesis Versus Conventional Le Fort III Osteotomy in Correction of Syndromic Midfacial Hypoplasia: A Systematic Review	2014	JOMS	University of Alberta	28
92	Moraschini V et al.	Effect of autologous platelet concentrates for alveolar socket preservation: a systematic review	2015	IJMOS	Fluminense Federal University	28
93	Almeida RDC; et al.	Recurrence rate following treatment for primary multicystic ameloblastoma: systematic review and meta-analysis	2016	IJMOS	University of Pernambuco	27
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95	Atienza G, Lopez-Cedrun JL	Management of obstructive salivary disorders by sialendoscopy: a systematic review	2015	BJOMS	Galician Agency for Health Technology Assessment	27
96	Taylor J et al.	World Workshop on Oral Medicine VI: a systematic review of the treatment of mucous membrane pemphigoid	2015	TRIPLEO	New York University College of Dentistry	27
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98	Li CJ et al.	Ultrasonography for Detection of Disc Displacement of Temporomandibular Joint: A Systematic Review and Meta-Analysis	2012	JOMS	Sichuan University	27
99	Leung YY et al.	Treatment Modalities of Neurosensory Deficit After Lower Third Molar Surgery: A Systematic Review	2012	JOMS	Prince Philip Dental Hospital	27
100	Joss CU et al.	Soft Tissue Profile Changes After Bilateral Sagittal Split Osteotomy for Mandibular Setback: A Systematic Review	2010	JOMS	Radboud University	27

Figures

Figure 1

Number of citations per systematic review by year in OMFS

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Number of citations per systematic review by year in OMFS

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Figure 2

Time-pattern distribution of the 100 most cited systematic reviews on oral and maxillofacial surgery

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Figure 3

Topics covered among the 100 most cited systematic reviews on oral and maxillofacial surgery

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Figure 4

Country of author's institute for 100 most cited systematic reviews

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Figure 4

Country of author's institute for 100 most cited systematic reviews

Figure 5

Most frequently cited journal

Figure 5

Most frequently cited journal

Figure 5

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