



ORIGINAL ARTICLE

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Receipt: 06/20/2016 **Revised:** 06/24/2016

Acceptance: 07/04/2016 **Online:** 07/04/2016

Bibliometric analysis of the *Journal of Oral Research*. Period 2012-2015.

Abstract: Bibliometric studies of scientific publications are useful instruments to evaluate their performance and impact. Objective: To evaluate the scientific production of the *Journal of Oral Research* in 2012-2015. Materials and Methods: A bibliometric study of the articles and documents published in the period 2012-2015 was performed using descriptive statistics. The variables included in the study were: type and number of articles, classification according to subject and country of origin of the main author. Results: A total of 169 documents were published: 32 editorials, 20 letters to the editor, 69 original articles, 20 case reports, 25 reviews, and 3 study protocols. Countries with the largest number of publications were: Chile with 114, Mexico with 19, Peru 8, and Brazil with 7. Among the 10 most consulted documents in 2015, there were six articles by Chilean authors. Conclusions: During the period 2012-2015 the scientific production of the journal has shown a gradual increase in the number of published documents, with a predominance of original articles written mainly by Chilean and Mexican authors, as well as articles related to primary health care, teaching/bibliometrics and maxillofacial surgery.

Keywords: Journals, Bibliometric indicators, Publications, Research, Stomatology.

DOI: 10.17126/joralres.2016.042.

Cite as: Corrales IE, Reyes JJ & Fornaris Y. Bibliometric analysis of the *Journal of Oral Research*. Period 2012-2015. *J Oral Res* 2016; 5(5): 188-193.

INTRODUCTION.

The dissemination of research results that may be relevant and useful for other professionals or students¹ is the last link in the chain of scientific work. This process requires solid knowledge² and consists of the publication of the study in a scientific journal³. Scientific journals are the main channels of scientific diffusion and social institutionalization of science in most fields of knowledge⁴.

The study of scientific production of journals, people, institutions, communities or countries is the focus of study of bibliometrics or scientometrics⁵. This science with its various indexes is a recognized method for assessing the level of development of scientific activity. Quantitative analysis of scientific production⁶ is an element of statistical support that allows the mapping and generation of different indica-

tors for information management⁷.

Bibliometric analysis is used as a starting point to optimize scientific productivity as it helps to define more relevant lines of research from the correlation between objective research needs and the number and quality of papers. Given the above, using bibliometric analysis is essential for those who lead and manage scientific work in a specific group or institution⁸.

Bibliometric studies applied to scientific journals have been and will be a subject of great debate marked by the importance of demonstrating the reliability of scientific results published in them⁹. Today, specialists require scientific evidence of the highest level and updated information in all their areas of interest. Given this reality, the *Journal of Oral Research* emerged as the official publication of the School of

Dentistry at Universidad de Concepción, for dentists and the scientific community in general¹⁰.

The aim of this study is to evaluate the scientific production of the *Journal of Oral Research* in 2012-2015.

MATERIALS AND METHODS.

Design

A bibliometric study of all the scientific production of the *Journal of Oral Research* during the period 2012-2015 was performed.

Variables

The variables studied were: type and number of documents, classification according to subject and country of origin. The types of documents were: editorials, letters to the editor, original articles, case reports, review articles and study protocols. The following thematic areas were included considering the subject addressed in the workplace, specialty or discipline: maxillofacial surgery, prosthetics, periodontics, orthodontics, primary health care, cariology, endodontics, biomaterials, implantology and teaching/bibliometrics. The country of the main author was considered as the country of origin.

Procedures and data collection instruments

The 10 most popular documents of 2015 were selected taking into account the number of visitors at the Open Journal System platform of the journal since the publication of the *J Oral Res* 2015; 4 (1) to the present. To find the indicators discussed above a direct search was performed on the journal's website.

Statistical processing

The data obtained were exported to a database (MS Excel, Microsoft Corp., USA). Descriptive statistics were used. Results are presented in tables and ad hoc charts.

RESULTS.

In the period studied 169 documents were published (Chart 1), showing a gradual increase from 21 documents published in 2012 to 79 documents in 2015. An increase in the number of annual issues of the journal was also observed: two in 2012, three in 2013, four in 2014, and six in 2015.

Table 1 presents the distribution of published documents by type and country of origin, showing a predominance of documents submitted by Chilean authors (65.46%), followed in descending order by: Mexico (11.24%), Peru (4.73%), Brazil (4.14%) and Colombia

Chart 1. Distribution of articles by year of publication

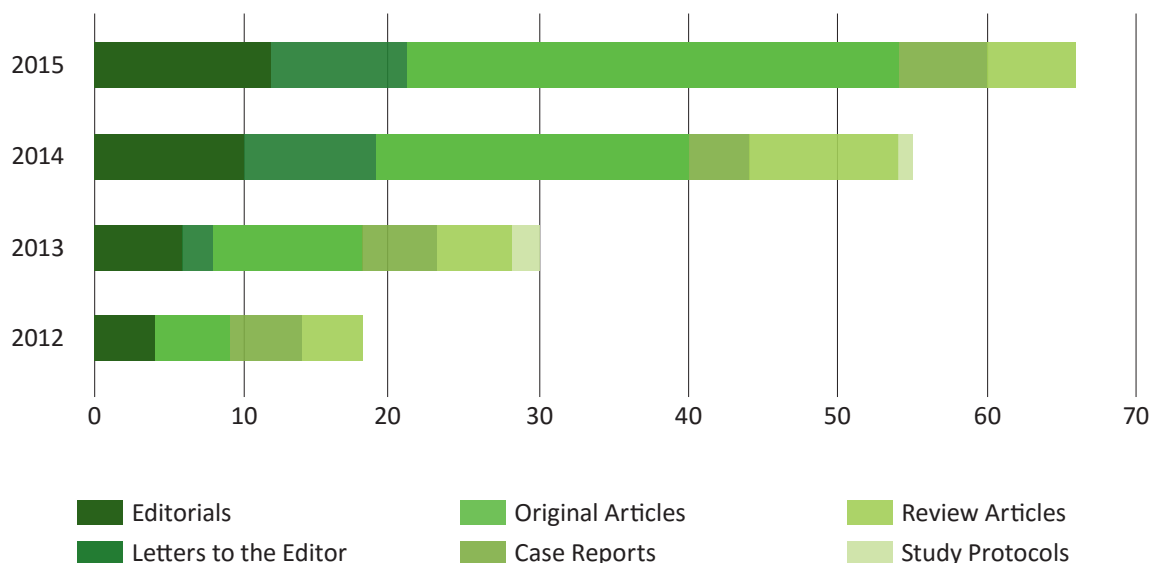


Table 1. Distribution of articles published by type and country of origin.

Countries	Types of articles												Total	
	Editorials		Letters to the Editor		Original Articles		Case Reports		Review Articles		Study Protocols		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Chile	23	20.2	17	14.9	43	37.7	11	9.6	18	15.8	2	1.8	114	67.5
Argentina	1	25.0	0	0.0	2	50.0	1	25.0	0	0.0	0	0.0	4	2.4
Brazil	2	28.6	2	28.6	3	42.9	0	0.0	0	0.0	0	0.0	7	4.1
México	1	5.3	0	0.0	9	47.4	7	36.8	2	10.5	0	0.0	19	11.2
Colombia	0	0.0	1	20.0	2	40.0	0	0.0	1	20.0	1	20.0	5	3.0
Perú	0	0.0	0	0.0	5	62.5	1	12.5	2	25.0	0	0.0	8	4.7
Uruguay	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.6
Australia	1	50.0	0	0.0	1	50.0	0	0.0	0	0.0	0	0.0	2	1.2
Inglaterra	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.6
Spain	1	25.0	0	0.0	1	25.0	0	0.0	2	50.0	0	0.0	4	2.4
Venezuela	0	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	1	0.6
Belgium	1	100	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.6
Latvia	0	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	1	0.6
Saudi Arabia	0	0.0	0	0.0	1	100	0	0.0	0	0.0	0	0.0	1	0.6
Total	32	18.9	20	11.8	69	40.8	20	11.8	25	14.8	3	1.8	169	100

(2.96%). Countries such as Uruguay, England, Venezuela, Belgium, Latvia and Saudi Arabia have published one article in the journal. With respect to the types of documents, a predominance of Original Articles (40.82%) followed by Editorials (18.93%) and Review Articles (14.79%) was observed.

Thirty-one articles were related to Primary Health

Care, nineteen to Teaching/Bibliometrics, and seventeen to Maxillofacial Surgery. The area less represented was Biomaterials with three documents. (Chart 2)

Table 2 shows the relationship of the 10 most popular articles of 2015 by type, author and country of origin. There is a predominance of Chilean authorship and Original Articles.

Chart 2. Distribution of articles by year of publication and research subjects.

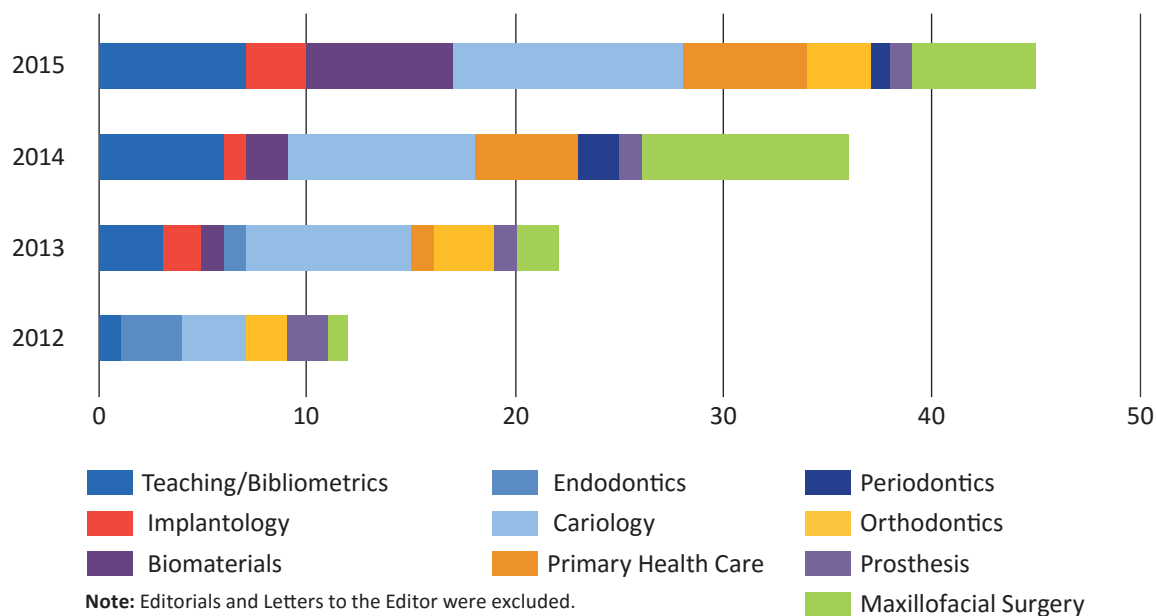


Table 2. List of the 10 most popular articles of 2015 by type, author and country of origin.

No.	Title	Type	Authors	Country	Visits
1	Effect of warming anaesthetic solutions on pain during dental injection. A randomized clinical trial.	OA	Pedro Christian Aravena, Camila Barrientos & Catalina Troncoso	Chile	3390
2	Parry-Romberg syndrome in a pediatric patient. A case report	CR	Edgar Reyes, Carmen Ayala & Lizzete Díaz	México	1448
3	Management of an internal root resorption on a permanent tooth. A case report.	CR	Alejandra Maldonado & Eugenia Muñoz	Chile	1402
4	Sonic versus ultrasonic activation for the cleaning of the root canal after post space preparation: an <i>in vitro</i> study.	OA	René Carrasco, Ricardo Román, Makarena Ojeda & Carolina Vergara	Chile	1284
5	Oral and systemic manifestations of congenital hypothyroidism in children. A case report.	CR	Carmen Ayala, Obed Lemus & Maribel Frías	México	1151
6	Prevalence of neuropathic symptoms in patients referred for temporomandibular disorder in a Chilean hospital, 2014-2015.	OA	Sebastian Miranda, Carol Gayoso, Patricio Ruiz & Diego Halabi	Chile	1066
7	Oral disorders in patients with chronic renal failure. Narrative review.	RA	Carolina Hernández	Chile	905
8	Pain detection by clinical questionnaire in patients referred for temporomandibular disorders in a Chilean hospital.	OA	Tomás Maturana, Patricio Ruiz, Cristian Rosas & Pedro Aravena	Chile	872
9	Vickers microhardness comparison of 4 composite resins with different types of filler.	OA	Rene García Contreras, Rogelio Scougall Vilchis, Laura Acosta Torres, Concepción Arenas Arroccena, Rigoberto García Garduño & Javier de la Fuente Hernández	México	868
10	Dental management of patients with microstomia. A review of the literature and update.	RA	Javier Silvestre-Rangil, Mayte Martínez-Herrera, Francisco-Javier Silvestre	Spain	833

Original Article (OA), Review Article (RA), Case Report (CR). Data updated (6/30/2016)

DISCUSSION.

In the present study it was observed that original articles accounted for more than half of the scientific production, which coincides with various bibliometric studies^{9,11-14}. It is part of the policy of any scientific journal to prioritize and disseminate the results of research, since these documents help disseminate new knowledge.

Publishing an article is very rewarding, and it is even more so in the case of an original article, as this shows the skills of the research team from problem detection

to the preparation of the manuscript for publication. All other forms of publication also require knowledge and skills, but they are always somehow less relevant than an original article. Other studies found similar frequencies of Original Articles and Letters to the Editor/Publisher, even in some of the years reviewed the latter outnumbered original articles¹⁵.

For corrections, clarifications or other disputes of scientific aspects of the manuscript once published, it is useful to have critical readers and a dynamic Letters to the

Editor/Publisher section. It may happen that the external reviewers and the editorial team accidentally overlook some errors that authors may have made in the manuscript, or that there may be some topics where scientific or subjective points of view may be different from those expressed by the authors. Journal readers have the right, if not the duty, to report all the aspects they may consider scientifically wrong or questionable or simply express different points of view regarding the subject of discussion. Letters to the Editor/Publisher are a very important part of journals, as they reflect the way in which biomedical publications began, when doctors and scientists published their experiences and experiments in them¹³.

Moreover, research has the role of uniting people in the pursuit of a common goal and strengthening coherence of the institutional mission¹⁶. While the quality of scientific journals is measured by the quality of the articles they publish, there are a number of intermediate indicators that are also associated with their quality, one of the most important: internationalization; this has been one of the main goals or missions of the *Journal of Oral Research*¹⁷.

After a rigorous evaluation process journals can enter various national and international databases, such as Scopus, DOAJ, LILACS, Latindex, IMBIOMED, DIALNET. These databases are designed to increase the visibility of publications, as well as their access and dissemination¹⁸. This results in an increase of visits and citations of articles, and more interest of researchers to publish in those journals.

Documents by authors from countries as diverse as Belgium, Peru, Argentina, Brazil, Venezuela, Mexico, Colombia, Spain and Chile were already published in the *J Oral Res*. 2014; 3 (3). About 90% of authors who send their work to the journal are from foreign countries and 70% of the visits to *www.joralres.com* are mainly from: Mexico (18.12%), Peru (11.35%), Colombia (6.07%), Venezuela (4.49%), Spain (4.16%), Brazil (3.03%), Argentina (2.81%), Ecuador (2.47%) and USA (2.28%)¹⁹.

Articles written by Chilean authors were widely prevalent; the same happens in other journals¹⁶. The largest number of articles written by foreign authors were from: Mexico, Peru and Brazil (19, 8 and 7, respectively). This

can be attributed to the fact that during the first 13 months of publication, visits to the website of the journal were mainly from Latin American countries such as Mexico, Colombia and Peru¹⁹.

According to the classification by subject, a predominance of articles related to Primary Health Care followed by Teaching/Bibliometrics, and by Maxillofacial surgery was found. Predominance of primary health care topics could be a result of the public health policies implemented by the state, which aim to study the health status of populations, *i.e.*, the profiles of collective human problems and the ways to control them^{20,21}.

This is a very valuable source of solutions to the major health problems of countries, such as diseases, risk factors and unhealthy life styles, or inefficient services²². Predominance of Teaching/Bibliometric subjects could be attributed to a marked interest in conducting studies related to educational and bibliometric aspects to assess the current state of research in order to draw relevant policies from it.

With respect to the 17 articles dealing with Maxillofacial Surgery, the authors of this study agree that this could be related to the prestige of this specialty in Latin American countries, as well as the expansion of the journal into other areas of research, such as: medicine and rehabilitation, head and neck surgery, and orofacial pain, among others²³.

By analyzing the most popular articles of 2015 it is valid to note the predominance of Original Articles dealing with interesting subjects with significant social impact. Next we find Case Reports of rare disease entities or whose clinical manifestation is atypical, the positive effect of treatment, the undescribed or rare association of two or more diseases, the usefulness of a diagnostic procedure, and the adverse or unexpected effect of a drug.

CONCLUSION.

During the period 2012-2015 the scientific production of the *Journal of Oral Research* has shown a gradual increase in the number of published documents. Original articles predominate, especially by Chilean and Mexican authors, as well as those related to primary health care, teaching/bibliometrics and maxillofacial surgery.

Análisis bibliométrico del Journal of Oral Research. Período 2012-2015.

Resumen: Los estudios bibliométricos aplicados a las revistas científicas constituyen instrumentos que permiten evaluar el desempeño e impacto de estas. **Objetivo:** Evaluar la producción científica del *Journal of Oral Research* en el período 2012-2015. **Materiales y Métodos:** Empleándose estadística descriptiva se realizó un estudio bibliométrico de los documentos publicados en el período 2012-2015. Las variables estudiadas fueron: tipo y número de documentos, clasificación temática y país de origen del autor principal. **Resultados:** Se publicaron 169 documentos: 32 editoriales, 20 cartas al editor, 69 originales, 20 presentacio-

nes de casos, 25 de revisión y 3 protocolos de estudio. Los países con mayor cantidad de artículos fueron: Chile con 114, México con 19, Perú con 8 y Brasil con 7. De los 10 documentos más populares del 2015, seis fueron de autoría chilena. **Conclusiones:** Durante el período 2012-2015 la producción científica de la revista ha mostrado un incremento paulatino en la cantidad de documentos publicados. Predominan los artículos originales, destacando los de autoría chilena y mexicana, así como los relacionados con la atención primaria de salud, docencia/bibliometría y cirugía máxilofacial.

Palabras clave: *Revistas electrónicas, Indicadores bibliométricos, Publicaciones, Investigación, Estomatología.*

REFERENCES.

1. Corrales IE, Rodríguez M, Reyes JJ, García M. ¿Cómo redactar un artículo científico? Rev 16 de Abril. 2015;54(258):4-17.
2. Chaple AM. Fotografía clínica estomatológica: consejos para la práctica diaria. Rev Cubana Estomatol. 2015;52(4).
3. Mayta-Tristán P, Cartagena-Klein R, Pereyra-Eliás R, Portillo A, Rodríguez-Morales A. Apreciación de estudiantes de Medicina latinoamericanos sobre la capacitación universitaria en investigación científica. Rev Méd Chile. 2013;141(6):716-22.
4. Corrales IE, Reyes JJ. Visibilidad científica de la Revista "16 de Abril". Actualidad y perspectivas. Rev 16 de Abril. 2015;54(259):1-3.
5. Cantín M, Aravena Y. Las Revistas Odontológicas en la Base SciELO: Una Mirada Bibliométrica. Int J Odontostomat. 2014;8(2):215-20.
6. Eghbal MJ, Davari Ardakani N, Asgary S. A Scientometric Study of PubMed-Indexed Endodontic Articles: A Comparison between Iran and Other Regional Countries. Iran Endod J. 2012;7(2):56-9.
7. Segredo-Pérez A, García-Milián A, León-Cabrera P, López-Puig P, Perdomo-Victoria I, Sansó-Soberats F. Caracterización de las publicaciones científicas sobre clima organizacional en las revistas médicas indexadas en Scielo. 2000-2013. Rev Salud Quintana Roo. 2014;7(29):6-10.
8. Clavera TJ, Chaple AM, Miranda JD, Álvarez J. Algunos indicadores bibliométricos referidos a la endodoncia, presentes en revistas médicas cubanas. Rev Cubana Estomatol. 2015;52(4).
9. Ávila M, Bermello R, Mesa ME. Estudio bibliométrico de la Revista de Ciencias Médicas de La Habana en el período 2005-2009. ACIMED. 2012;23(4):380-90.
10. Benet-Rodríguez M, Morejón-Giraldoni A. Posicionamiento de las revistas científicas de la salud en Cuba según el índice H5 obtenido del Google Scholar Metrics. MEDISUR. 2016;14(2):180-8.
11. Miranda Tarragó J, Hernández Cuétara L, Trujillo Miranda E, Rodríguez Pérez I, Alfonso Dreke L. Producción científica de la Revista Cubana de Estomatología. Años 2009-2013. Rev Cubana Estomatol. 2015;52(Suppl esp).
12. Suárez B, Santana J. Balance de la producción científica de la revista Archivo Médico de Camagüey en el período 1996-2007. ACIMED. 2008;18(4).
13. Iraola Ferrer MD, Luques Hernández L. Producción científica de la revista cubana de medicina intensiva y emergencias. Análisis bibliométrico descriptivo. Rev Cub Med Int Emerg. 2008;7(3):1172-81.
14. Espino-Hernández M, Baños-Benítez A, Vítores ME, Valdés-Roque Y. Análisis métrico de la producción científica de la revista "Panorama Cuba y Salud". Rev Cubana Infor Cienc Salud. 2013;24(3).
15. Miró O, Burillo-Putze G, Tomás Vecina S, Pacheco A, Sánchez M. Estimación del impacto bibliométrico de EMERGENCIAS durante los últimos 10 años (1997-2006). Emergencias. 2007;19(187):94.
16. Escobar F. El sentido de la investigación. J Oral Res. 2012;1(1):8-9.
17. Cartes-Velásquez R. Internacionalización del Journal of Oral Research. J Oral Res. 2014;3(3):133-4.
18. Garcia-Rivero A, Gonzalez-Argote J, Dorta-Contreras A. Indicadores científicos de la Revista 16 de Abril. Rev 16 de Abril. 2015;54(260):25-30.
19. Cartes-Velásquez R. Visibilidad y calidad del Journal of Oral Research. J Oral Res. 2013;2(2):55-6.
20. Primo NA, Gazzola VB, Primo BT, Tovo MF, Faraco IM Jr. Bibliometric analysis of scientific articles published in Brazilian and international orthodontic journals over a 10-year period. Dental Press J Orthod. 2014;19(2):56-65.
21. Fariñas AT. La presencia de la mujer en la gestión en el área de la higiene y la epidemiología en Cuba, 1959-2009. Rev Cubana Hig Epidemiol. 2011;49(2):260-75.
22. Benet M. Cuban publishing on primary health care: an inexcusable absence. MEDICC Rev. 2013;15(2):52.
23. Cartes-Velásquez R. Expanding the Journal of Oral Research to craniofacial sciences and Scopus. J Oral Res. 2016;5(3):95-6.