

Bibliometric evaluation of the scientific production of the *Stomatos Dental Journal*

Paula Braga Gomes
Simone Helena Ferreira
Vanessa Ceolin Poletto
Juliane Bervian
Paulo Floriani Kramer

ABSTRACT

This cross-sectional study aimed to evaluate the abstracts of all articles published in the *Stomatos Dental Journal* between 1995 and 2009 and to obtain data on the methodological design of each article, the dental specialties focused on, and the authors' institution of origin. A total of 206 abstracts were reviewed by two independent examiners. The results showed that the most frequent study designs were literature reviews (24.3%), cross-sectional studies (24.3%), laboratory in vitro studies (22.3%), and case reports (18.4%). The dental specialties with the highest number of articles were operative dentistry (16%), endodontics (15.5%), pediatric dentistry (10.7%), and oral and maxillofacial surgery and traumatology (10.2%). Most articles had Universidade Luterana do Brasil (ULBRA/Canoas) as the institution of origin (75.2%). Our findings revealed a pressing need to increase the number of studies with higher levels of evidence in all dental specialties and also to encourage the publication of articles from other institutions in order to qualify the journal.

Keywords: Bibliometrics, dental research, Brazil.

Avaliação bibliométrica da produção científica da revista *Stomatos*

RESUMO

Este estudo transversal teve como objetivo avaliar o perfil dos artigos publicados na revista *Stomatos* no período de 1995 a 2009 quanto ao tipo de delineamento metodológico, especialidade odontológica e instituição de ensino superior de procedência dos autores. Um total de 206 resumos foram revisados por dois examinadores independentes. Os resultados

Paula Braga Gomes. DDS – Course of Dentistry ULBRA/Canoas/RS.

Simone Helena Ferreira. MSC in Public Health – ULBRA/Canoas/RS, Associate Professor of Course of Dentistry – ULBRA/Canoas/RS, Brazil.

Vanessa Ceolin Poletto. MSC in Pediatric Dentistry – Course of Dentistry ULBRA/Canoas/RS.

Juliane Bervian. MSC in Pediatric Dentistry – Course of Dentistry ULBRA/Canoas/RS, Phd Student of Course of Dentistry ULBRA/Canoas/RS, Professor of Course of Fonoaudiology –UPF/RS, Brazil.

Paulo Floriani Kramer. PhD in Pediatric Dentistry – USP/SP, Brazil, Associate Professor of Course of Dentistry – ULBRA/Canoas/RS, Brazil.

Corresponding author: Juliane Bervian. Tomas Gonzaga, 625. CEP 9920-170 – Passo Fundo/RS. (54) 3317. 2409 ou (54) 9983.1864. E-mail: jbervian@upf.br

Stomatos	Canoas	Vol. 17	Nº 33	p.20-31	July/Dec. 2011
----------	--------	---------	-------	---------	----------------

mostraram que os delineamentos mais utilizados foram a revisão de literatura (24,3%), o estudo transversal (24,3%), o estudo laboratorial in vitro (22,3%) e o relato de caso (18,4%). As especialidades odontológicas com maior número de publicações foram a dentística (16%), endodontia (15,5%), odontopediatria (10,7%) e cirurgia e traumatologia bucomaxilofacial (10,2%). A maioria dos artigos tinha o Curso de Odontologia da Universidade Luterana do Brasil (ULBRA/Canoas) como instituição de ensino oficial (75,2%). Os resultados revelaram uma necessidade premente de aumentar a publicação de estudos com maior nível de evidência, em todas as especialidades, e também de reduzir a endogenia, através da participação de autores de outras instituições, para permitir a qualificação da revista.

Palavras-chave: Bibliometria, pesquisa em odontologia, Brasil.

INTRODUCTION

Studying the way knowledge is produced and promoted is extremely important, as this understanding will influence and guide the thinking process, reflections, and attitudes of investigators, and also shape their actions (1). In health sciences, the dissemination of new knowledge is made, first and foremost, through scientific journals, specialized in the publication of original information and prepared as research articles. These articles are produced and published with the ultimate aim of improving professional practice (2).

Journals are perhaps the main means of communication of scientific research, and the qualification of these publications takes place essentially through indexing, in which journals try to meet several requirements to become part of a selected list of journals in a given database (3). During the indexing process, scientific journals go through merit reviews covering aspects such as regularity of publication, quality of information, editorial line, language of publication, and authors' institution of origin. A committee of scientific editors is responsible for approving or not the inclusion of a given journal to the index (3).

The important increase observed in the number of articles and scientific journals currently published has created the need to evaluate the quality of scientific production. Paul Otlet, in 1934, in the *Traité de documentation*, for the first time used the term "bibliometrics" to refer to the application of statistical and mathematical techniques to describe aspects of the literature and other means of communication. However, the term became popular only in 1969, after publication of an article by Pritchard, in which the author defined bibliometrics as a means of quantifying, describing, and prognosticating the processes of written communication, establishing a theoretical basis for information science (4).

According to Araújo (5), the main difference between traditional bibliography and bibliometrics is that the latter uses a higher number of quantitative methods than discursive methods. In other words, bibliometrics focuses on the use of quantitative methods to conduct an objective evaluation of scientific production. Those authors

have shown the importance of having access to information such as number of authors, number of studies, countries of origin, and the journals operating in each production category and field of science, among other data.

With the objective of promoting and disseminating the exchange of information in the field of dental sciences, in 1995 the Faculty of Dentistry at Universidade Luterana do Brasil (ULBRA) created the Stomatos Dental Journal. The journal is published biannually, both in print and online (<http://www.ulbra.br/odontologia/revista.html>), and is indexed in the following databases: Latin American & Caribbean Health Sciences Literature (LILACS), Brazilian Library of Dentistry (Bibliografia Brasileira de Odontologia, BBO), Regional Cooperative Online Information System for Scholarly Journals from Latin America, the Caribbean, Spain and Portugal (LATINDEX), Network of Scientific Journals in Latin America and the Caribbean, Spain and Portugal (RED ALYC) and Brazilian Electronic Dental Journal (Rev@Odonto).

The objective of this study was to describe the profile of articles published in Stomatos regarding their methodological design, dental specialty focused on, and the authors' institution of origin.

MATERIALS AND METHODS

A cross-sectional analysis was conducted on all abstracts of articles published in Stomatos between 1995 and 2009. Abstracts were selected and reviewed using copies of the tables of contents and abstract pages of all journal issues. Print issues of Stomatos published between 1995 and 2000 were accessed from the university library, and the journal's online version was used for the analysis of issues published between 2001 and 2009. Abstracts were separated by year and subdivided into volume and issue number, then copied and archived. When any of the items under analysis could not be collected from the abstract alone, the article was printed and analyzed in full for the collection of necessary information.

Data categorization was made by manual review of the abstract of each article by two independent professors. The following criteria were analyzed: methodological design, dental specialty focused by the article, and authors' institution of origin. Data processing and categorization guidelines were revised at periodical meetings with the objective of standardizing the methods of data collection and evaluation. When no consensus was reached for the categorization of any information, that abstract was submitted to evaluation by a third examiner. Forewords, editorials, notes, and editorial comments were excluded from the analysis.

Study designs were classified based on the work of Freire and Patussi (6), into one of the following categories: systematic review/meta-analysis, randomized clinical trial, nonrandomized clinical trial, cohort study, case-control study, cross-sectional study, series of cases, case report, expert opinion, laboratory in vivo study, laboratory in vitro study, and literature review. Dental specialties were categorized according to the 19 areas regulated by the Brazilian Federal Council of Dentistry, as follows: oral and maxillofacial surgery and traumatology, operative dentistry, temporomandibular joint dysfunction and orofacial pain, endodontics, stomatology, oral and maxillofacial imaginology, dental implants, legal dentistry, occupational dentistry, dentistry for patients with special needs, geriatric dentistry, pediatric dentistry, orthodontics, functional jaw orthopedics, oral pathology, periodontics, oral and maxillofacial prosthetics, prosthodontics, and public health dentistry. Finally, the authors' institution of origin was determined based on the affiliation informed for the first author of each article.

A form specifically designed for the present study was used to record the data collected. Statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS), version 13.0. Data were analyzed using descriptive statistics analysis and expressed as frequency distributions.

RESULTS

A total of 206 articles published in *Stomatos* from 1995 to 2009 were evaluated. The frequency distribution of articles published in the different dental specialties is presented in Table 1. The area with the highest number of articles published in *Stomatos* was operative dentistry (16%), followed by endodontics (15.5%), pediatric dentistry (10.7%), and oral and maxillofacial surgery and traumatology (10.2%). Dentistry for patients with special needs, legal dentistry, functional jaw orthopedics, and occupational dentistry had only one article published per specialty. No article was published in the oral and maxillofacial prosthetics area.

The methodological designs most frequently observed were literature reviews (24.3%), cross-sectional studies (24.3%), laboratory in vitro studies (22.3%), and case reports (18.4%). No systematic reviews/meta-analyses, randomized clinical trials, and cohort studies were found (Table 2).

The institutions with the highest numbers of articles published in *Stomatos* are shown in Table 3. The great majority of studies had been conducted at Universidade Luterana do Brasil (ULBRA/Canoas), the university responsible for the publication (75.2%).

Table 1. Frequency distribution of articles published according to dental specialty, Stomatos, 1995-2009.

Dental specialty	n	%
Operative dentistry	33	16
Endodontics	32	15.5
Pediatric dentistry	22	10.7
Oral and maxillofacial surgery and traumatology	21	10.2
Periodontics	19	9.2
Stomatology	16	7.8
Prosthodontics	15	7.3
Orthodontics	14	6.8
Public health	7	3.4
Oral and maxillofacial imaginology	6	2.9
Dental implants	6	2.9
Oral pathology	5	2.4
Temporomandibular dysfunction and orofacial pain	3	1.4
Geriatric dentistry	3	1.4
Dentistry for patients with special needs	1	0.5
Legal dentistry	1	0.5
Functional jaw orthopedics	1	0.5
Occupational dentistry	1	0.5
Oral and maxillofacial prosthetics	0	0
Total	206	100

Table 2. Frequency distribution of articles published according to study design, Stomatos, 1995-2009.

Design	n	%
Literature review	50	24.3
Cross-sectional study	50	24.3
Laboratory in vitro study	46	22.3
Case report	38	18.4
Nonrandomized clinical trial	8	3.9
Expert opinion	7	3.4
Series of cases	3	1.5
Case-control study	2	1
Laboratory in vivo study	2	1
Systematic review/meta-analysis	0	0
Randomized clinical trial	0	0
Cohort study	0	0
Total	206	100

Table 3. Frequency distribution of articles published according to institution, Stomatos, 1995-2009.

Institution	n	%
ULBRA (Canoas)	155	75.2
ULBRA (Cachoeira do Sul)	15	7.3
UFRGS	9	4.3
UFPEL	4	1.9
PUCRS	3	1.5
UFSM	3	1.5
UEFS	2	1
UNESP	2	1
UNICASTELO	2	1
UPE	2	1
Others	9	4.3
Total	206	100

The frequency distribution of articles published in Stomatos according to dental specialty and year of publication is presented in Table 4. We observed a regularity of articles in the fields of operative dentistry, endodontics, pediatric dentistry, and oral and maxillofacial surgery and traumatology throughout the period assessed. However, in the last five years analyzed (2005-2009), a decrease was observed in the fields of periodontics and prosthetics, and an increase in dental implants and orthodontics.

Table 4. Frequency distribution of articles published according to dental specialty and year of publication, Stomatos, 1995-2009.

Specialty/year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Operative dentistry	2	3	5	3	2	2	1	0	2	3	2	1	2	4	1
Endodontics	1	0	0	3	3	2	2	3	2	1	3	5	3	1	3
Pediatric dentistry	0	1	0	2	1	2	1	1	0	2	2	1	2	3	4
Oral and maxillofacial surgery and traumatology	0	1	1	0	2	1	1	3	2	1	1	2	2	3	1
Periodontics	2	5	1	2	1	2	0	1	1	0	0	1	2	0	1
Stomatology	0	0	3	1	1	0	2	2	2	1	1	1	1	0	1
Prosthodontics	1	2	2	2	1	1	1	1	1	0	0	0	0	0	3
Orthodontics	0	1	1	0	0	1	0	0	2	2	2	1	0	3	1
Public health	0	0	1	1	0	0	0	1	0	2	0	1	0	0	1
Oral and maxillofacial imaginology	0	0	1	0	2	1	0	0	1	0	1	0	0	0	0
Dental implants	0	0	0	0	0	0	0	0	0	0	1	1	2	1	1
Oral pathology	0	1	0	0	2	0	1	0	0	1	0	0	0	0	0
Temporomandibular dysfunction and orofacial pain	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1
Geriatric dentistry	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0
Dentistry for patients with special needs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Legal dentistry	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Functional jaw orthopedics	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Occupational dentistry	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Oral and maxillofacial prosthetics	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Analysis of publications according to experimental design and year of publication is shown in Table 5. Literature reviews, cross-sectional studies, laboratory in vitro studies, and case reports showed stable numbers of articles published over the whole period analyzed.

Table 5. Frequency distribution of articles published according to study design and year of publication, Stomatos, 1995-2009

Design/year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Literature review	1	4	2	6	5	5	0	5	2	5	5	3	2	3	2
Cross-sectional study	2	3	2	3	3	1	2	3	6	5	3	5	2	4	6
Laboratory in vitro study	2	1	2	2	3	4	4	3	3	1	3	5	3	5	5
Case report	0	4	8	0	2	1	2	0	3	3	1	0	5	3	6
Nonrandomized clinical trial	0	1	2	1	0	1	0	1	0	0	1	0	1	0	0
Expert opinion	1	1	0	1	1	1	0	0	0	0	0	0	1	1	0
Series of cases	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0
Case-control study	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0
Laboratory in vivo study	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Systematic review/meta-analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Randomized clinical trial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cohort study	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

The distribution of articles according to institution of origin and year of publication is presented in Table 6. ULBRA (Canoas) accounted for 50 to 90% of articles per issue. Although not very expressive, there seems to be a gradual increase in the publication of articles from other institutions in the last five years analyzed.

The frequency distribution of articles published according to dental specialty and experimental design is shown in Table 7. Laboratory in vitro studies were most frequently used in operative dentistry and endodontics; case reports in oral and maxillofacial surgery and traumatology, stomatology, and dental implant; cross-sectional study was the prevalent design in pediatric dentistry, periodontics, and public health dentistry; and literature reviews were the most frequent design in the orthodontics specialty.

Table 6. Frequency distribution of articles published according to institution of origin and year of publication, Stomatos, 1995-2009

Institution/year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
ULBRA (Canoas)	5	11	12	10	14	10	7	13	12	7	9	11	11	11	12
ULBRA (Cachoeira do Sul)	0	0	0	0	0	1	0	0	1	6	2	0	0	2	3
UFRGS	1	2	2	1	2	0	0	0	0	0	0	0	0	1	0
UFPEL	0	1	1	0	0	0	1	0	0	1	0	0	0	0	0
PUC-RS	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0
UFSM	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0
UEFS	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0
UNESP	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0
UNICASTELO	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
UPE	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Others	0	1	0	0	0	1	0	1	0	0	0	1	2	0	3

Table 7. Frequency distribution of articles published according to dental specialty and study design, Stomatos, 1995-2009.

Specialty/design	Literature review	Cross-sectional study	Laboratory in vitro study	Case report	Nonrandomized clinical trial	Expert opinion	Series of cases	Case-control study	Laboratory in vivo study	Systematic review/meta-analysis	Randomized clinical trial	Cohort study
Operative dentistry	7	0	15	6	0	3	1	0	1	0	0	0
Endodontics	8	4	17	0	0	2	0	0	0	0	0	0
Pediatric dentistry	4	10	2	3	2	1	0	0	0	0	0	0
Oral and maxillofacial surgery and traumatology	5	5	2	8	0	0	0	0	1	0	0	0
Periodontics	3	8	0	2	4	1	0	1	0	0	0	0
Stomatology	1	5	2	7	0	0	1	0	0	0	0	0
Prosthodontics	5	1	5	4	0	0	0	0	0	0	0	0
Orthodontics	7	5	0	2	0	0	0	0	0	0	0	0
Public health	2	5	0	0	0	0	0	0	0	0	0	0
Oral and maxillofacial imaginology	0	4	2	0	0	0	0	0	0	0	0	0
Dental implant	1	0	1	4	0	0	0	0	0	0	0	0
Oral pathology	1	1	0	2	0	0	1	0	0	0	0	0
Temporomandibular dysfunction and orofacial pain	2	0	0	0	1	0	0	0	0	0	0	0
Geriatric dentistry	2	0	0	0	0	0	0	1	0	0	0	0
Dentistry for patients with special needs	0	1	0	0	0	0	0	0	0	0	0	0
Legal dentistry	1	0	0	0	0	0	0	0	0	0	0	0
Functional jaw orthopedics	1	0	0	0	0	0	0	0	0	0	0	0
Occupational dentistry	0	1	0	0	0	0	0	0	0	0	0	0
Oral and maxillofacial prosthetics	0	0	0	0	0	0	0	0	0	0	0	0

DISCUSSION

Science is a social process, and one of its main functions is to disseminate knowledge and assure the preservation of scientific standards (7). In the present times, science and research have become the preferred ways to obtain evidence and innovation (8). Scientific knowledge is usually made available to the scientific community through the publication of results of investigations under the form of research articles. The objective of publishing such results is to record, disseminate, and share scientific findings (7- 9).

Bibliometrics emerged in the beginning of the 21st century as a manifestation of the need to study and evaluate scientific production and communication (4). For Medeiros and Faria (10), the role of bibliometrics is to measure scientific and technological research production, thus helping in decision-making processes and research management. In this sense, the objective of this study was to assess the profile of the scientific production of *Stomatos Dental Journal* in terms of study design, dental specialty focused on the articles, and authors' institution of origin.

With regard to dental specialty, operative dentistry, endodontics, pediatric dentistry and oral and maxillofacial surgery and traumatology were responsible for more than half of the articles published in the period assessed. The predominance of these areas can probably be explained by the fact that these were the first lines of research and areas of specialization in the graduate programs of ULBRA, the institution with which the journal is affiliated. Conversely, temporomandibular dysfunction and orofacial pain, geriatric dentistry, dentistry for patients with special needs, legal dentistry, functional jaw orthopedics, and occupational dentistry had a small participation. In this case, however, it is important to highlight that several of these specialties were only recently approved by the Brazilian Federal Council of Dentistry. Moreover, the absence of these disciplines in local *lato* and *stricto sensu* graduate programs and in undergraduate courses is also probably responsible for the small number of articles in these areas.

In the last five years analyzed (2005-2009), a reduction was observed in the number of articles in the fields of periodontics and prosthetics, as well as an increase in the fields of dental implants and orthodontics. Because ULBRA was the institution with the highest number of authors publishing in the journal (characterizing an essentially local publishing process, i.e., knowledge produced locally and published for a local audience), these may reflect changes in the university's teaching staff, in research lines, in the profile of programs offered by the university, or may also be a result of market trends. Amorim et al. (11) have evaluated the scientific production of three Brazilian dental journals (*Rev ABO Nac*, *Rev APCD e Rev Bras Odontol*) between 1990 and 2004 and observed that operative dentistry and dental materials were the areas most frequently studied. According to Poletto (12), an explanation for this result is that these categories include both the description of new materials and the report of cosmetic and esthetic procedures.

The analysis of experimental designs of articles published in *Stomatos* revealed a majority of literature reviews (24.3%), cross-sectional studies (24.3%), laboratory in vitro studies (22.3%), and case reports (18.4%) – taken together, these categories accounted for almost 90% of the articles assessed. Oliveira et al. (2) conducted a similar analysis of the study designs of articles published in 28 Brazilian dental journals between 1993 and 2003. Those authors observed a predominance of laboratory in vitro studies, narrative reviews, and case reports, i.e., designs associated with low levels of evidence.

Literature reviews have the advantage of providing a summarized account of a given topic. However, reviews should always be critically evaluated, once they are subject to bias at several stages of the review process (13). In the study by Oliveira et al. (2), literature reviews were the second type of article most frequently published (23.9%). More recently, Poletto and Faraco Jr. (14) also evaluated the articles published in a Brazilian journal of pediatric dentistry (*J Bras Odontopediatr Odontol Bebê*) between 1998 and 2007 and found literature reviews ranking third among the most frequent study designs (22.6%). In the study conducted by Poletto (12), six international pediatric dentistry journals were evaluated (*Pediatr Dent, J Clin Pediatr Dent, J Indian Soc Pedod Prev Dent, Int J Paediatr Dent, J Dent Child, Eur J Paediatr Dent*) between 2001 and 2007 and literature reviews ranked tenth in terms of number of articles, accounting for 5.7% of the publications.

Descriptive cross-sectional studies are important for the collection of “real” data and for the formulation of hypotheses that will be subsequently tested in analytical studies (clinical trials, cohort studies, and case-control studies). In the study by Oliveira et al. (2), cross-sectional studies were the fourth design most frequently adopted (15.8%). Poletto (12), in turn, found this study design to be the second most common one, accounting for 29.7% of the articles published.

Laboratory in vitro studies are usually conducted to test new materials or new technical procedures under conditions that simulate real practice (15). In the study by Poletto (12), laboratory in vitro studies accounted for 11.5% of the articles assessed.

One of the most frequent study design found in *Stomatos* was the case report. This type of study has a strong potential to influence clinical practice, once it is focused on real patients and reports clinical outcomes that are usually of interest to both dental practitioners and patients. However, the low number of patients included, the absence of control subjects, and the frequent subjectivity found in the case analysis severely limit the possibility of making any inferences based on case reports (6). Poletto (12) and Poletto and Faraco Jr. (14) have also found case reports to be the most frequent study designs in their analyses, with 30.6% and 30.9% of the articles assessed, respectively. However, more and more journals have been limiting or even rejecting the submission of case reports, as a result of the low level of evidence associated with this type of study (16).

Contrasting with case reports, the number of clinical trials found in our analysis was extremely low (eight nonrandomized clinical trials only). This finding provides grounds for concern, once this is considered to be the standard design for the assessment of various interventions, with direct impacts in clinical practice in terms of treatment effectiveness, patient survival, and control of sequelae (17).

Similarly, systematic reviews/meta-analyses were not found among the articles published in *Stomatos*. Systematic reviews are considered to be the highest standard of evidence for the assessment of clinical practice. They focus on a specific topic, include the review of a wide range of other studies, have clear and rigorous criteria for the selection of articles for critical appraisal, and follow a strict protocol for data collection and synthesis (13). Again, considering that the increasing interest in high levels of evidence is a worldwide tendency in dental research, the absence of systematic reviews in *Stomatos* is worrisome. This difficulty is also shared by other journals: in the report of Poletto (12), systematic reviews/meta-analyses corresponded to less than 1% of the articles assessed, underscoring the need to improve the knowledge of designs associated with high levels of evidence among dental investigators.

In the analysis of articles published according to both dental specialty and study design, it was possible to observe some frequent associations. Operative dentistry and endodontics, for example, have widely used laboratory *in vitro* studies, whereas oral and maxillofacial surgery and traumatology, stomatology, and dental implants have predominantly adopted case reports to publish their findings. Finally, the specialties pediatric dentistry, periodontics and public health dentistry are more commonly dealt with in cross-sectional studies, and orthodontics in review studies.

Birman (18) emphasizes the strategic role of journals in disseminating scientific findings and maintaining a vigorous scientific community by fostering and validating knowledge. Our analysis focused on the scientific production of one specific journal (*Stomatos*) and revealed a scenario of predominance of some dental specialties over others and an essentially local publishing process. Moreover, revealed a pressing need to increase the number of studies with higher levels of evidence in order to qualify the journal and, ultimately, improving professional practice and oral health of the general population.

CONCLUSIONS

The analysis of the profile of articles published in *Stomatos* allowed us to draw the following conclusions: 1) Operative dentistry, endodontics, pediatric dentistry, and oral and maxillofacial surgery and traumatology were the specialties with the highest numbers of articles published. Publication of more articles in the other dental specialties should be stimulated; 2) Literature reviews, cross-sectional studies, laboratory *in vitro* studies, and case reports were the most prevalent designs. The performance of studies with designs associated with higher levels of evidence should be encouraged; 3) There is a very high frequency of authors whose institution of origin is the Faculty of Dentistry of ULBRA,

i.e., the institution with which the journal is affiliated. Publication of articles from other institutions should be stimulated to qualify the journal.

REFERENCES

1. Amorim KPC, Alves MSCF, Germano RM. A construção do conhecimento na odontologia: a produção em debate. *Acta Cir Bras.* 2005;20(55):8-11.
2. Oliveira GJ, Oliveira ES, Leles CR. Tipos de delineamento de pesquisa de estudos publicados em periódicos odontológicos brasileiros. *Rev Odonto Cienc.* 2007;22(55):42-7.
3. Campos M. Conceitos atuais em bibliometria. *Arq Bras Oftalmol.* 2003;66(4):18-22.
4. Vanti NAP. Da bibliometria à Webometria: uma exploração conceitual dos mecanismos utilizados para medir o registro da informação e a difusão do conhecimento. *Ci Inf.* 2002;31(2):152-62.
5. Araújo CA. Bibliometria: evolução histórica e questões atuais. Em *Questão*, Porto Alegre. 2006;12(1):11-32.
6. Freire MC, Patussi MP. Tipos de estudo. In: Estrela C. *Metodologia científica: ensino e pesquisa em Odontologia.* São Paulo: Artes Médicas; 2001. Cap 8, p.121-43.
7. Macias-Chapula CA. O papel da informetria e da cienciometria e sua perspectiva nacional e internacional. *Ci Inf.* 1998;27(2):134-40.
8. Cavalcanti AL, Melo TRNB, Barroso KMA, Souza FEC, Maia AMA, Silva ALO. Perfil da pesquisa científica em odontologia realizada no Brasil. *Pesq Bras Odontop Clin Integr.* 2004;4(2):99-104.
9. Dantas PEC. Indexação bibliográfica em bases de dados: o que é? Para que serve? Onde estamos? *Arq Bras Oftalmol.* 2004;67(4):569-70.
10. Medeiros APSC, Faria LIL. Análise bibliométrica da produção científica da UNESP. [SNBU – Seminário Nacional de Bibliotecas Universitárias], 2006, Salvador.
11. Amorim KPC, Alves MSCF, Germano RM, Costa ICC. A construção do saber em odontologia: a produção científica de três periódicos brasileiros de 1990 a 2004. *Interface – Comunic Saúde Educ.* 2007;11(21):9-23.
12. Poletto VC. *Odontopediatria baseada em evidências: análise bibliométrica de periódicos internacionais [dissertação].* Canoas: Universidade Luterana do Brasil; 2009.
13. Sutherland SE. An introduction to systematic reviews. *J Am Dent Assoc.* 2004;135(6):747-53
14. Poletto VC, Faraco Junior IM. Bibliometric study of articles published in a Brazilian Journal of pediatric dentistry. *Braz Oral Res.* 2010;24(1):83-8.
15. Rode SM. Editorial. *Pesq Odontol Bras.* 2000;14(supl):1.
16. Dahllöf G. Editor's report for the International Journal of Paediatric Dentistry. *Int J Paediat Dent.* 2009;19(2):71-2.
17. Antunes JLF, Peres MA. *Epidemiologia da saúde bucal.* Rio de Janeiro: Guanabara Koogan; 2006.
18. Birman EG. Rumos da pesquisa odontológica [editorial]. *Pesqui Odontol Bras.* 2002;16(4):1.