

Monograph bibliometrics of the dental course at Universidade Estadual da Paraíba Campus VIII: overview of a university in a small town

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ABSTRACT

Besides being a requirement, writing a monograph to conclude an undergraduate course places students in active contact with research methods, enabling the development of critical, questioning capacity. However, little is known regarding the profile of monographs written for Brazilian dental courses. Therefore, the aim of the present study was to identify the trend in scientific production and the bibliometric profile of monographs for the dental course at *Universidade Estadual da Paraíba* (UEPB), Campus VIII. A descriptive, observational study was conducted using the indirect documentation method through a survey of documental data in public archives of UEPB. Among a total of 150 monographs registered with the dental course, most were presented by women, especially in the year 2016. The most frequent fields were pathology and endodontics. The most prevalent type of study was the research modality, especially epidemiological. Only 9.3% of the studies were published, mainly in “Qualis B4” journals and in Portuguese. Although students of dentistry conduct research, it is not being divulged appropriately. However, a few studies were published in high-impact journals.

Descriptors: Bibliometrics. Dental Research. Education, Dental.

1 INTRODUCTION

Historically, the Brazilian university education in dentistry, which is based on the transmission of content and practices, is a self-sufficient model aligned with market interests, which defines the curricular organization of students and professors. This perspective of the supremacy of knowhow and teaching has delayed the production of knowledge and the

incorporation of research as part of the educational process for the labor world, maintaining a large part of the teaching network limited to the internal reproduction of knowledge¹.

The recent restructuring of undergraduate courses in dentistry has enabled changes in academic education on the national level. The old model was directed at educating dentists for

private practice and individualized care. In 2002, the National Curriculum Guidelines stipulated the mandatory development of a monograph advised by a professor to complete the course, enabling students to develop knowledge regarding scientific production^{2,3}. The guidelines for undergraduate courses in dentistry stipulate that students at the end of the course should understand and know how to intercede in the health/disease process on the individual and collective levels. Thus, it is indispensable for students to present a solid scientific basis as well as be able to elucidate and apply the varied scientific knowledge available in the literature⁴.

The process of understanding and valuing the monograph demonstrates the importance of scientific initiation to the honing of a critical vision and refining one's work capacity with orientation and in groups. These academic studies serve as important institutional tools for the critical, reflexive development of future healthcare providers^{5,6}. Writing a monograph places undergraduate students in direct contact with research methods, enabling the development of critical, questioning capacity. However, little is known regarding the profile of monographs conducted in dental courses in Brazil⁷ or the possible impact of these studies in the national and international realms. The purpose of bibliographic analysis is to observe how scientific research is conducted as well as identify topics of greater interest and innovations occurring over time^{4,5}.

The dental course on Campus VIII of *Universidade Estadual da Paraíba* (UEPB) requires the writing of a monograph for the obtainment of a degree, which is regulated by the UEPB General Regiment of Undergraduate Courses⁸ according to the teaching project of the Araruna dental course⁹.

The aim of the present study was to

identify the trend in scientific production and the bibliometric profile of the UEPB dental course on Campus VIII through an analysis of monographs by students.

2 METHODS

A descriptive, observational study was conducted using the indirect documentation method through a survey of documents in public archives of the university. The material investigated was monographs of the dental course of UEPB Campus VIII, encompassing presentations between 2014 and 2019. All monographs presented and deposited by the dental students were included. Monographs from other courses of Campus VIII were excluded.

The data were collected by a single researcher (undergraduate student of dentistry) through the Central Library link of the UEPB site (<http://biblioteca.uepb.edu.br/>) using rapid access (*DSspace* institutional repository sector). In the "communities" portion of the repository, "Campus 8, Araruna" and Subject "Dentistry" were selected. The field of concentration of each monograph served as the guide for the main specialty of the study when the subject covered more than one field. Abstracts were then read, with an analysis of the information contained. Data were recorded on a specific form, considering information on the student and adviser (obtained from a search of the Lattes Platform¹⁰), field of specialty of the monograph (stomatology, radiology, pathology, surgery, periodontics, endodontics, prosthetics, anatomy, orthodontics, restorative dentistry, forensic dentistry, epidemiology, collective health, implantology and laser therapy) and type of study conducted (literature review, case report/case series, case-control study, cohort study, randomized clinical trial, meta-analysis and systematic review).

The research was classified as epidemiological, epidemiological using secondary data, laboratorial and clinical. The Lattes Platform¹⁰ was also used to investigate the Lattes curriculum of the advising professor, whether the monographs were published after being presented to the examining board and the rating of the journal¹¹. The setting of the study (at UEPB - Campus VIII or Campus I or a location external to UEPB) was also recorded.

All data were tabulated and analyzed using descriptive statistics. Tests were performed with the aid of the Statistical Package for the Social Sciences version 22.0 (IBM, Armonk, NY, USA).

3 RESULTS

Among the 305 monographs registered in the repository between 2014 to 2019 related to the three courses offered by UEPB, Campus VIII (dentistry, physics and civil engineering), 150 (49.2%) pertained to the dental course. Among these monographs, 80 (53.3%) were presented by female students and 70 (46.7%) were presented by male students.

Only one monograph (0.7%) was deposited in 2014 due to the occurrence of a strike. Twenty (13.3%) were deposited in 2015, 47 (31.3%) in 2016, 36 (24%) in 2017 and 2018 each and 10 (6.7%) in 2019. The total number of graduating students corresponded to the number of monographs presented in the period.

The most frequent specialties were pathology and endodontics, accounting for 22.8% of all monographs. Periodontics and forensic dentistry together accounted for only 1.2% of the monographs (table 1). The most

frequent study modality chosen by the dental students was research, followed by literature review (table 2).

Epidemiological research was predominant in the dental course (table 3). Among the 89 studies classified as research, 31 (34.8%) were conducted at UEPB Campus VIII, three (3.4%) were conducted at UEPB, Campus I and 55 (61.8%) were external to the university (including epidemiological studies with secondary data).

Among the 150 monographs, 14 (9.3%) were published in scientific periodicals. Thirteen (8.7%) were published as complete articles and one (0.6%) was published as an abstract, according to the Lattes curriculum of the adviser. Among the 13 complete articles, three (23.1%) were published in journals rated as “Qualis A” and 10 (76.9%) were published in journal rated as “Qualis B”. Among these, one (7.7%) article was published in an A1 journal, two (15.4%) in an A2 journal, two (15.4%) in a B3 journal, seven (53.8%) in a B4 journal and one (7.7%) in a B5 journal. The abstract was published in a B3 journal. The research modality and field of restorative dentistry were those with the most studies published. Portuguese was the predominant language of the publications (table 4).

A total of 41 advisers oriented the 150 monographs. Twenty-three (56%) had a doctoral degree and 17 (41.5%) had a Master’s degree (table 5). Among the 41 advisers, 12 (29.3%) were full-time professors; four (9.8%) were transferred to another campus, with only eight (19.5%) full-time professors and 29 (70.7%) part-time professors remaining.

Table 1. Field of concentration of monographs for conclusion of dental course at UEPB Campus VIII

SPECIALTY	TYPE n (%)						Total
	Research	Literature review	Systematic review	Case report	Experience report	Case series	
Pathology	9 (6.0)	4 (2.6)	1 (0.7)	2 (1.3)	-	1 (0.7)	17 (11.3)
Stomatology	7 (4.7)	-	-	2 (1.3)	-	-	9 (6.0)
Radiology	3 (2.0)	1 (0.7)	-	-	-	-	4 (2.7)
Endodontics	6 (4.0)	7 (4.7)	1 (0.6)	3 (2.0)	-	-	17 (11.3)
Prosthetics	6 (4.0)	7 (4.7)	-	1 (0.7)	-	-	14 (9.3)
Orthodontics	10 (6.7)	3 (2.0)	-	-	-	-	13 (8.7)
Collective health	10 (6.7)	1 (0.7)	-	-	2 (1.3)	-	13 (8.7)
Pediatric dentistry	4 (2.6)	3 (2.0)	-	1 (0.7)	-	-	8 (5.3)
Restorative dentistry	4 (2.6)	4 (2.7)	-	-	-	-	8 (5.3)
SNPs*	4 (2.7)	3 (2.0)	-	-	-	-	7 (4.7)
Epidemiology	7 (4.7)	-	-	-	-	-	7 (4.7)
Microbiology	4 (2.7)	2 (1.3)	-	-	-	-	6 (4.0)
Surgery	4 (2.7)	-	-	2 (1.3)	-	-	6 (4.0)
Others#	3 (2.0)	2 (1.3)	-	-	-	-	5 (3.3)
Esthetics	4 (2.6)	1 (0.7)	-	-	-	-	5 (3.3)
Implantology	-	1 (0.7)	-	2 (1.3)	-	-	3 (2.0)
Laser therapy	2 (1.3)	1 (0.7)	-	-	-	-	3 (2.0)
Hospital dentistry	1 (0.7)	2 (1.3)	-	-	-	-	3 (2.0)
Forensic dentistry	1 (0.7)	-	-	-	-	-	1 (0.7)
Periodontics	-	1 (0.7)	-	-	-	-	1 (0.7)
TOTAL	89 (59.3)	43 (28.7)	2 (1.3)	13 (8.7)	2 (1.3)	1 (0.7)	150 (100.0)

*SNPs: Special Needs Patients #Subjects: Marketing in dentistry, patient anxiety, self-confidence of graduating students, patient satisfaction with dental clinics and knowledge on biosafety

Table 2. Type of study of monographs of dental course, UEPB Campus VIII

Type of study	n (%)
Research	89 (59.3)
Literature review	43 (28.7)
Case Report	13 (8.7)
Systematic review	2 (1.3)
Experience report	2 (1.3)
Case series	1 (0.7)
Total	150 (100.0)

Table 3. Type of research conducted in monographs presented by dental students

Type of research	n (%)
Epidemiological	47 (52.8)
Epidemiological with secondary data	28 (31.5)
Laboratorial	10 (11.2)
Clinical study	4 (4.5)
Total	89 (100.0)

Table 4. Studies published with CAPES “Qualis” rating of periodical

Field of specialty	Type of study	Qualis of periodical	Language of publication
Stomatology	Research/Complete article	A1	English
Stomatology	Research/Complete article	A2	English
Pathology	Research/Complete article	A2	English
Pathology	Research/Complete article	B3	Portuguese
Epidemiology	Research/Complete article	B3	English
Restorative Dentistry	Research/Abstract	B3	Portuguese
Restorative Dentistry	Literature review/Complete article	B4	Portuguese
Restorative Dentistry	Literature review/Complete article	B4	Portuguese
Restorative Dentistry	Literature review/Complete article	B4	Portuguese
Prosthetics	Literature review/Complete article	B4	Portuguese
Esthetics	Research/Complete article	B4	Portuguese
Endodontic	Research/Complete article	B4	Portuguese
Collective health	Research/Complete article	B4	Spanish
SNPs*	Research/Complete article	B5	Portuguese
Total		14	

*SNPs: special needs patients

Table 5. Orientations and publications according to adviser’s degree

Adviser’s highest degree	Advisers n (%)	Students (n)	Publications
Doctorate	23 (56)	85	12
(Master’s) Doctoral student	11 (26.9)	43	1
Master’s	6 (14.6)	20	1
Specialist	1 (2.5)	2	0
Total	41 (100)	150	14

4 DISCUSSION

Nearly half of the monographs of Campus VIII were presented by dental students, as this course has more students in comparison to the other courses on this campus – civil engineering and physics. Moreover, most monographs were presented by women, which is in line with the growing presence of women at universities in recent years, especially in the health field¹².

The fields with the largest quantity of monographs in the institutional repository were pathology and endodontics. Due to the greater collection of slides, pathology enables greater research options and has a full-time professor. However, endodontics never had a full-time professor on this campus. Perhaps the choice of endodontics is due to the current conservative view of dentistry, with a large demand for endodontic procedures rather than extraction, as Brazil still has a quite discouraging scenario in terms of oral health care. This reflects a growing interest on the part of the population for oral rehabilitation in search of esthetic and functional satisfaction, which was confirmed in the present study, as prosthetics was the third most chosen field. This may be one of the factors for the greater affinity on the part of students for endodontics and prosthetics with the aim of having a successful professional career¹³.

Periodontics and forensic dentistry were the fields least chosen as subjects of monographs. Despite the vast clinical practice of periodontics, the subject does not have a full-time professor at UEPB Campus VIII. Because they also work in private dental offices, part-time professors do not have enough time available to advise students. Unlike endodontics, in which a large part of the procedures can be performed in a single session, periodontal treatments require more time. The little interest in forensic dentistry may reflect greater concern on the part of students for fields closer to their own reality.

Most monographs of dental students consisted of scientific research, reflecting the considerable engagement of the professors in the quality of the teaching offered, with the initiation of students in research. However, part-time professors cannot request scientific initiation grants for their students or compete for financial resources offered by fostering agencies, which constitute a considerable incentive for professors and especially students, who may be challenged to discover novel solutions in all domains¹⁴. Student researchers who know how to use adequate instruments to encounter answers based on scientific evidence face fewer difficulties in solving professional problems, even without working in the academic field. Scientific studies influence professional practices, with the interpretation of factors and phenomena that occur within their niches, scenarios and natural living environments¹⁵.

Epidemiology was the most prevalent type of research. Epidemiological studies provide information that can assist in interventions in a small city in the countryside, such as Araruna, where Campus VIII of UEPB is located and which has residents with a low socioeconomic status and an average income less than two times the monthly minimum wage¹⁶. The advantages of epidemiological studies are the quickness, low cost, identification of cases and the detection of groups at risk¹⁷. The choice for epidemiological research may have occurred mainly due to the fact that it is more feasible and accessible in comparison to clinical and laboratorial studies, which are more burdensome and require the acquisition of sophisticated equipment, trained professionals and the purchasing of the necessary materials. This renders this type of research practically inviable at a university located in a city with less than 20 thousand residents¹⁸ with few full-time professors and many part-time professors.

The second most presented type of monograph by the dental students was a literature review, perhaps because it is the simplest and fastest to perform, without consolidated criteria or a more accurate method. However, the publication of literature reviews takes a long time and this type of study is less likely to be accepted by more renowned periodicals. A systematic review is much more discerning and has greater scientific weight and rigor, following specific norms for its publication. Only two of the monographs were systematic reviews and have not yet been published. Meta-analysis regards the use of statistical techniques in a systematic review, combining the results of the studies included.¹⁹ No meta-analysis has been presented in the dental course, likely due to its details and the depth of its analyses, with the need for greater knowledge and maturity on the part of those who undertake this type of study.

Although most monographs were research, the articles were divulged little in the scientific community, with a very small portion published in periodicals. Current editorial costs to submit a publication are burdensome and generally paid by the authors themselves for a large part of scientific periodicals. The costs of translation to English or revision of English must also be considered, which makes publishing unfeasible for most researchers at small centers with no funding offered by fostering agencies for this purpose.

According to *Coordenação de Aperfeiçoamento de Pessoal de Nível Superior* (CAPES [Coordination for the Advancement of Higher Education Personnel])¹¹, periodicals for divulging intellectual production are classified in decreasing order as Qualis A1, A2, B1 to B5 and C. In the dental course, less than one-fourth of complete productions resulting from monographs were published in “Qualis A” journals, demonstrating that, despite the

excellent quality of the work executed by the students and the efforts of the advisers, the difficulties and barriers mentioned above still impede scientific divulgation. Most studies were published in “Qualis B” journals, with a little more than half published in “B4” journals. The greater choice for a B4 journal is due to the ease of publication in the native language. Among the seven studies published in B4 journals, six were in Portuguese and one was in Spanish. No studies were published in B1 or B2 periodicals and one was published in a B5 journal. No articles were published in a “Qualis C” journal, highlighting a greater criterion for the divulgation of results and publication.

It is therefore evident that the scientific production of monographs of the dental course on Campus VIII remains incipient and under-divulged. Despite the scarce resources, publication in periodicals of importance does occur. The considerable need for incentive to research in the health field is also noteworthy, especially in small centers, as the vast majority of scientific work resulting from monographs did not receive any funding. This aspect directly affects the development of more elaborate studies of better quality that can be published in periodicals of greater impact, which is the goal of any researcher – professor or student.

5 CONCLUSIONS

A large part of the monographs in the dental course of *Universidade Estadual da Paraíba* (UEPB), Campus VIII were conducted in 2016, mainly by women and with a preference for the fields of pathology and endodontics. Most monographs were scientific research in the field of epidemiology, followed by literature reviews under the orientation of part-time professors, who constitute the majority of the teaching staff of the course. However, the scientific divulgation of the monographs continues to be embryonic,

with few studies published, most of which are published in periodicals rated “Qualis B”, especially B4.

RESUMO

Bibliometria dos trabalhos de conclusão do curso de Odontologia do Campus VIII da Universidade Estadual da Paraíba: panorama de uma faculdade interiorana

A realização do trabalho de conclusão de curso (TCC) na graduação, além de ser uma exigência, permite que o estudante tenha contato ativo com as metodologias de pesquisa, proporcionando assim o desenvolvimento de sua capacidade crítica e questionadora. No entanto, pouco se sabe sobre o perfil dos TCCs conduzidos nos cursos de Odontologia brasileiros. Desta forma, o presente estudo teve por objetivo identificar a tendência da produção científica e o perfil bibliométrico dos TCCs do curso de Odontologia da Universidade Estadual da Paraíba (UEPB) do Campus VIII. Foi realizado um estudo observacional descritivo, utilizando a técnica de documentação indireta, por meio de um levantamento de dados de documentos em arquivos públicos da UEPB. De um total de 150 TCCs cadastrados do curso de Odontologia, a maioria foi defendida por mulheres, principalmente no ano de 2016. As áreas mais frequentes dos temas foram Patologia e Endodontia. O tipo de estudo mais prevalente foi a modalidade pesquisa, principalmente epidemiológica. Apenas 9,3% dos estudos foram publicados, principalmente em revistas de qualis B4 e na língua portuguesa. Pode-se verificar que apesar da pesquisa ser bastante realizada pelos estudantes de Odontologia do Campus VIII, ela ainda não está sendo divulgada apropriadamente. Contudo, alguns poucos estudos foram publicados em periódicos de destaque.

Descritores: Bibliometria. Pesquisa em Odontologia. Educação em Odontologia.

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