Trajetória profissional dos egressos da pós-graduação em Odontologia do Brasil: uma revisão da literatura

Professional trajectory of postgraduate egress in Dentistry in Brazil: a literature review Trayectoria profesional de egresos de la pós-graduacion en Odontología en Brasil: una revisión de la literatura

Recebido: 21/06/2020 | Revisado: 30/06/2020 | Aceito: 03/07/2020 | Publicado: 15/07/2020

Éber Coelho Paraguassu

ORCID: https://orcid.org/0000-0001-9322-8001

São Leopoldo Mandic Dental Research Center, Brazil

E-mail: paraguassutans@gmail.com

Gabriela Victorelli

ORCID: https://orcid.org/0000-0002-4762-3972

São Leopoldo Mandic College, Brazil

E-mail: gabrielavictorelli@gmail.com

Maria Carolina Pelayo Teixeira

ORCID: https://orcid.org/0000-0002-1323-192X

São Leopoldo Mandic College, Brazil

E-mail: carol_pelayo@hotmail.com

Almenara de Souza Fonseca Silva

ORCID: https://orcid.org/0000-0002-0958-3391

São Leopoldo Mandic College, Brazil

almenara.silva@slmandic.edu.br

Flávia Martão Flório

ORCID: https://orcid.org/0000-0001-7742-0255

São Leopoldo Mandic College, Brazil

E-mail: flavia.florio@slmandic.edu.br

Resumo

Introdução: Muitas perspectivas de carreira estão disponíveis dentro das ciências odontológicas e com o quadro contínuo de crescimento e consolidação da pós-graduação no Brasil estas perspectivas ficam ainda maiores. Objetivos: Este artigo tem como objetivos

revisar a literatura atual sobre a trajetória profissional de mestres e doutores egressos da pósgraduação brasileira em odontologia. Metodologia: Foi realizada uma busca nas bases de indexação com maior prestigio dentro da avaliação CAPES, que atualmente é a Scopus, Web of Sciences e Google Scholar. Apenas 5 artigos estavam dentro do escopo desta pesquisa e se tonaram elegíveis para compor esta revisão. Conclusão: A literatura médica atual mostra-se muito pobre quanto a trajetória profissional de mestres e doutores egressos da pós-graduação brasileira em odontologia. Outros estudos devem ser realizados para que haja um parâmetro mais confiável de coleta e comparação entre diferentes estudos e só assim poder estabelecer uma conclusão mais consistente sobre este tema.

Palavras Chave: Odontologia, Egressos, Pós-graduação, Brasil, Trajetória profissional; Ensino.

Abstract

Introduction: Many career perspectives are available within the dental sciences and with the continued growth and consolidation of postgraduate in Brazil these perspectives are even greater. Objectives: This article aims to review the current literature on the professional trajectory of masters and PhDs egress from brazilian postgraduate in dentistry. Methodology: A search was carried out on the most prestigious indexing bases within the CAPES assessment, which is currently Scopus, Web of Sciences and Google Scholar. Only 5 articles were within the scope of this research and were eligible to compose this review. Conclusion: The current medical literature is very poor in terms of the professional trajectory of masters and PhDs egress from Brazilian postgraduate studies in dentistry. Other studies must be carried out so that there is a more reliable parameter for collection and comparison between different studies and only in this way can a more consistent conclusion on this topic be established.

Keywords: Dentistry; Egress; Postgraduate; Brazil; Professional trajectory; Teaching.

Resumen

Introducción: muchas perspectivas profesionales están disponibles dentro de las ciencias dentales y con el continuo crecimiento y consolidación de los estudios de posgrado en Brasil, estas perspectivas son aún mayores. Objetivos: Este artículo tiene como objetivo revisar la literatura actual sobre la trayectoria profesional de los maestros y médicos que se gradúan de los estudios de posgrado brasileños en odontología. Metodología: Se realizó una búsqueda en las bases de indexación más prestigiosas dentro de la evaluación CAPES, que actualmente es

Scopus, Web of Sciences y Google Scholar. Solo 5 artículos estaban dentro del alcance de esta investigación y fueron elegibles para componer esta revisión. Conclusión: La literatura médica actual es muy pobre en términos de la trayectoria profesional de los maestros y médicos que se gradúan de los estudios de posgrado brasileños en odontología. Se deben realizar más estudios para que haya un parámetro más confiable para la recopilación y comparación entre los diferentes estudios y solo de esta manera se puede establecer una conclusión más consistente sobre este tema.

Palabras clave: Odontología, Graduados, Postgrado, Brasil, Trayectoria professional; Enseñanza.

1. Introduction

Postgraduate studies in Brazil were regulated just over fifty years ago, with technical advice n° 977/65 of the Federal Council of Education (CFE), better known as "Parecer Sucupira". Today, it constitutes a solid and internationally recognized system, whose purpose is linked to the development of higher education and scientific research (*Sanches et al.*, 2019).

In the 1930s, universities were able to attract a large number of foreign professors, some on academic missions and many seeking to escape the turbulent post-war period in Europe. When they arrived in Brazil, these foreign professors brought an idea or a postgraduate model that, in most cases, consisted of a tutorial project between a full professor and a small group of students who would become the future professors of the institutions (*Balbachevski*, 2005).

It was in the 1940s that the term "postgraduate" was used for the first time in Brazil, in a legal text. The text was Article 71 of the Statute of the University of Brazil, based in Rio de Janeiro. In the following decade, agreements between the United States and Brazil began to be signed, which implied a series of agreements between North American and Brazilian schools and universities through the exchange of students, researchers and professors. However, the great impetus for postgraduate courses in Brazil took place only in the 1960s, when studies began to be made in the direction of its implementation and regulation (*Ribeiro & das Graças*, 2013).

With the 1968 reform, postgraduate education became a semi-autonomous activity linked to newly organized departments. Then, studies at this level acquired new characteristics that represented a compromise between the old model and the requirements of the new legislation. In the new format, the tutorial relationship between the student and his

supervisor was preserved, but post-graduate councils were also created that tended to become stronger over time. As postgraduate studies became institutionalized, the dominant model became one that requires the candidate to complete a minimum number of specialized disciplines, qualify with a faculty board and publicly defend a thesis before a board in that it is normal to have at least one professor external to the department, in the case of the master's degree, and two, in the case of the doctorate (*Balbachevsky & Marques*, 2009).

Based on the new curricular guidelines proposed by the Law of Directives and Bases of Education (LDB), it was defined for the dental area that the graduate course in Dentistry should have the profile of the graduate, a generalist, humanist, critical and reflective training, to act at all levels of health care. However, the increasingly fragmented training contributes to the training of professionals who are increasingly unprepared for the job market, also influencing postgraduate courses (*Vargas & Vasconcelos*, 1998).

The postgraduate programs continue the undergraduate courses in Dentistry, in which graduates from undergraduate courses from all over the country seek Brazilian universities for the realization of courses *lato sensu* and *stricto sensu* (*Morita et al.*, 2010).

According to the *da Silva*, 2020, assessment, a foundation belonging to the Ministry of Education that plays a fundamental role in the consolidation and expansion of the Brazilian *stricto sensu* postgraduate program, until 2007, the master's and doctoral programs in Dentistry in the country were in number of 84. Of these, 12 represented professional master's courses, 25 of academic master's degrees, 46 of master's and doctorate degrees and one program offered only the doctorate. According to CAPES, the professional master's is the designation of the master's that emphasizes studies and techniques directly focused on the performance of a high level of professional qualification. Such an approach is the only difference between the professional and academic masters (*CAPES*, 2010).

This panorama has undergone changes. According to more recent figures offered by CAPES, in 2009 there was a significant increase in the training of PhDs across the country with the existence of 52 programs with a doctorate level and only 18 professional master's courses (*CAPES*, 2010). On the other hand, the national labor market does not seem to follow this increase in the qualification of human resources trained in Dentistry. Thus, the lack of vacancies can make teaching activity competitive and poorly paid, leaving many masters and doctors to dedicate themselves to clinical activity (*Parizotto*, *Imparato & Novaes*, 2015).

The evaluation process of postgraduate programs established by Capes has emphasized the importance of analyzing the insertion of egress in the job market, in order to see if they are using the knowledge obtained in their training to promote some benefit for

society or eradicate problems through new ideas, leadership profiles and new policies, in addition to making it possible to identify the contributions that the course played in the education of the student (*Cequeira et al., 2009*). Among the means of evaluating a postgraduate course, monitoring the professional or academic activities of egress has been highly valued (*Ibid et al., 2009*). In their daily work, graduates face complex situations, which lead them to confront the skills developed during the course with those required in professional practice. From there, it is possible to evaluate the adequacy of the pedagogical structure of the course that was experienced, as well as intervening aspects in the academic formation process (*Meira & Kucgant, 2009*). The insertion of Egress in the labor market is an important indicator for higher education managers to analyze the deficit areas and others with a large contingent of professionals (*Moimaz, Santos, Garbin & Saliba, 2017*).

Based on the above, this article aims to survey the current medical literature on the professional trajectory of egress of the postgraduate program at the *stricto sensu* level in dentistry.

2. Methodology

This study is a narrative review of the current medical literature on the professional trajectory of egress postgraduate students in dentistry at master and doctoral level. Based on the CAPES methodology, which currently honors the Impact Factor, Cit Score and H Index to classify the notes of the journals within the Sucupira Platform (CAPES, 2019), a scan was carried out on the Scopus, Google Scholar and Web of Sciences indexing portals, with the terms postgraduate, Brazil, dentistry, master's, PhD's and egress. A huge number of articles were found, but in the preliminary analysis, it was found that very little really fit the scope of the research. There are several studies on former graduate students and specialization in dentistry, but the literature is extremely poor when it comes to masters and PhDs in dentistry in Brazil. To the surprise of the authors of this review, there are only 5 articles in the entire medical literature worldwide that report a professional trajectory of master's and doctorate in dentistry in Brazil.

After the identification of these 5 articles, they were studied and certified with good quality by the authors of this review, and later these articles were summarized and inserted in this review.

Study of egress of postgraduates at master's and PhDs level in Dentistry in Brazil.

Postgraduate studies in Brazil acquired great importance in the Brazilian higher education system, having undergone a remarkable growth in the 1990s. To obtain a more accurate knowledge about the relationships between the training received at this level and the professional destiny of masters and PhDs trained in the country, the Coordination for the Improvement of Higher Education Personnel - Capes -, with the support of the United Nations Educational, Scientific and Cultural Organization - Unesco -, sponsored extensive research, aiming to provide subsidies for the improvement of postgraduate courses and sector policies. The purpose of the study was to offer answers to questions such as: Who are the masters and PhDs with degrees in the country? What did you do before and what did you do after the degree? What contributions did the courses contribute to your professional performance? (Veloso, 2002).

According to *Ibid*, 2004, former postgraduate students in dentistry have a very different profile than those who graduated from other groups, since most of them are professionals and civil servants not linked to an academic career. 64.4% of masters in dentistry work only in dental offices against 29.3% of PhDs in dentistry. Only the group of Lawyers has media close to doctors working in offices or offices, when compared to dentists.

Cavalcante, Barbos, Ferreti Bonan, Pires & Martelli-Júnior, 2008, in a study with Brazilian researchers egress from postgraduate studies determined that scientific production has shown an increase associated with the publication of works in current literature. The aim of this study was to understand the profile of Brazilian researchers focused on dentistry with productivity grants from the National Research Council (CNPq). To reveal the profile, 132 researchers' Lattes curricula, from 2003 to 2005, were carefully analyzed, and variables such as gender, classification in CNPq (1A to 1D, 2), institution of origin, doctorate time, articles published with the respective Qualis, books and book chapters, master's and doctorate guidelines and areas of expertise were cataloged. The general profile was formed by men (64.39%), class 2 classification (42.42%), concentrated in institutions of the State of São Paulo (85.6%), with 10 to 15 years of doctorate (32.57%), publishing in journals Qualis A Internacional and Qualis B Nacional. The production of books or book chapters, guidance from masters or doctorates were heterogeneous. The overview revealed a consistent production associated with groups of consolidated researchers.

Parizotto, Imparato & Novaes, 2015 published an article referring to the professional profile of the postgraduate student in the pediatric dentistry program at the USP dental school

- São Paulo. The objective of this work was to evaluate the current place and type of professional performance of the ex-student of the postgraduate program in Dental Sciences with an area of concentration in Pediatric Dentistry, Faculty of Dentistry, University of São Paulo (São Paulo campus) - FOUSP. For that, the list of former students of the master's and doctoral courses in the area of concentration in Pediatric Dentistry at FOUSP was requested from the coordinator of the institution's graduate program. Since then, the place and type of professional practice performed by each of the former students has been evaluated through the Lattes Platform (Curriculum Lattes - CL) since the conclusion of the postgraduate course by each of them, considering the updates made until September 2012. In order to evaluate the results, the participant's gender was considered, the date of enrollment in the post-graduate course, the date of defense of the dissertation and / or thesis, date of CL update, place and type of professional activity currently exercised (teaching or clinic). Out of a total of 65 former students (54 female and 11 male), 44 are teaching-related, most of whom work in São Paulo and update the CL frequently. Clinical activities were rarely reported in the CL.

Barbosa et al., 2016 in his research, aimed at an investigative study on the training profile and the job market in which the egress of the post-graduate program in dental sciences of the faculty of Araçatuba are inserted. 109 effective egress were selected, whose inclusion criterion was to obtain the title of Master and / or PhD by the postgraduate program. After contacting them by e-mail, telephone, or through the data collected by the Lattes Curriculum, the egress were classified as: inserted in the job market, in training, recently graduated, do not work in the area, or were not located. It was observed that 86% of the egress started the postgraduate course with a master's degree, 70% continued with the doctorate, and 15% of these continued with post-doctorate. Of the master's egress, only 18% work in the labor market, where: - 35% followed the teaching career, 33% in public institutions; - 65% work as dentists (CDs), 45% in public networks. 3% of master's egress were not found, and 17% are pursuing doctorates. Of the PhD graduates, 6% are taking post-doctoral studies, 9% have not been located, and 79% have gone to the job market, where: - 83% have followed the teaching career, 51% in public institutions; 13% work as CDs, 86% on public networks; 4% work as researchers linked to research institutions without teaching contracts. Considering all, 18% of egress are in training, and 64% are in the labor market, where 71% work as teachers, and 51% in public institutions. The authors concluded that the egress with a PhD had a greater insertion in the teaching career, and the majority with a Master's degree act as CDs. In addition, most of the graduates are inserted in the job market, the majority being as a teacher or on public networks.

Dos Santos et al., 2017, reports that stricto sensu graduate studies in Brazil have been increasingly consolidated. In recent times, several strategies have been implemented in order to improve the quality assessment process. Among the means of evaluating a postgraduate course, the monitoring of the professional or academic activities of the graduates has been highly valued. The objective of this work was to learn about the professional and academic activities of graduates from the Graduate Program in the area of Dentistry in Public Health at the State University Júlio de Mesquita Filho, Campus of Araçatuba. The curricular data available on the Lattes platform of 91 program graduates were analyzed, which are distributed in all macro-regions of Brazil, but the Southeast concentrates the largest amount. A large part (80.23%) works or has worked in the academic environment, with a predominant professional link in public universities. Work in public health services was also frequent (32.56%), with occupations of positions in health coordinators, health care network, municipal and state health departments, as well as in the Ministry of Health.

The Lattes Platform as the main research tool for the study of Egress.

Studies on data from scientific and technical productions have received attention from researchers, from different areas, who aim to gain knowledge about the evolution of research in general. Such studies allow the analysis of scientific production for different purposes and one of the challenges in this type of analysis is the diversity of repositories containing data in different formats and structures. Lattes Platform curricula are currently characterized as an important tool for researchers, academics and students to record their data, being widely used, being characterized as one of the largest repositories of data on scientific, technical, artistic and professional production, containing millions of researchers registered (*Dias, Moita & Dias, 2016*).

The curricula that make up the Lattes Platform have become a national standard used in the individual evaluation of scientific, academic and professional activities, aggregating data from researchers from all areas of knowledge, making the Platform an extremely rich source for investigating and understanding the behavior of diverse research groups (*Digiampietri et al.*, 2012).

In Lane (2010) it is highlighted that measuring and evaluating academic and professional performance becomes a crucial factor for scientific life. Several factors to make this assessment and measurement are linked to the calculation of metrics, however, the current measurement systems are insufficient to determine reliable responses. The work

describes the various problems in the adoption of the metrics normally used to, for example, classify groups or research institutions and the challenges in proposing effective metrics, however the author certifies the Lattes Platform as a reliable facilitator in this process.

In the work of *Mena-Chalco*, *Cesar-Junior* & Marcondes (2009), reasons are described that make the Lattes Platform an interesting case study: The registered curricula have become a national standard and have been used in the individual evaluation of scientific activities, academic and professional. National researchers from different areas of knowledge are registered on the platform; driven by S&T policies in recent years, Brazilian science has been showing great growth in academic production that can be accompanied by the analysis of the curricula registered within the Lattes system.

The choice of the Lattes Platform for extraction is related to the fact that it has a vast amount of data, as it deals with the integration of scientific data from curricula and institutions in the area of Science and Technology (S&T), recording academic, technical data and scientific productions, allowing the individual data to be updated by the researchers themselves. Currently the Lattes Platform has approximately 4.4 million registered resumes, these resumes have information on academic background, research areas, professional performance and academic guidance. Several studies for the analysis of scientific data have used the Lattes Platform as the main source of information (Farias et al., 2012).

However, works found in the literature often focus on specific groups for analysis, especially when carrying out analyzes based on collaboration networks, since the frequently used techniques have a high computational cost (*Dias, Moita & Dias, 2016*).

The Lattes platform is undoubtedly a precious resource that Brazilian researchers can easily access to their public data. Due to its great prestige and enormous data base, it becomes an invaluable tool to evaluate the professional and academic trajectory of students, professionals and researchers.

3. Discussion

The current medical literature is quite restricted as to the trajectory of post-graduate students in dentistry at the master's and PhD level. Even with 84 postgraduate courses approved by CAPES at the strict sense level (*CAPES*, 2010), only 5 articles that specifically reported the trajectory of egress masters and or egress Phd's in dentistry were found. The vast majority of studies provide information on the trajectory of undergraduate or graduate students at a specialization level (*Lato Sensu*).

Articles about researchers linked or not to CAPES were also quite frequent, with only one of these articles having a scope that approached this review. Another very frequent theme is expectations about the job market for undergraduate students, socioeconomic profiles of graduates in dentistry from the most diverse places in the world.

Veloso, 2004, explains a large portion of postgraduate courses in Brazil, including dentistry. According to the author, the work of the masters with degrees in the country is quite diverse. In the Basic Areas, the majority work in academia (universities and research institutions), which covers about half of the post-graduates, but other occupational segments also employ significant contingents of masters: almost 20% in administration and public services, and as much in companies public and private. At universities, sociologists are the most striking presence, closely followed by physicists; in research institutes, agronomists (Brazilian Agricultural Research Corporation - Embrapa -, for example) and chemists have a greater participation.

Freelancers in offices and offices are expressive, reaching about 20%. Similarly, and still comparing with the masters of other groups, work in administration and public services gains importance, reaching a quarter of the group. The biggest differences, however, lie in work in offices and offices and in administration and public services. In liberal activity, the highest percentage is that of masters in dentistry, reaching more than 60% of masters who work in a dental office, well ahead of those with degrees in clinical medicine; in public administration, that of postgraduates of Law courses, which are in second place. In short, the performance in a wide diversity of occupational segments is, without a doubt, the expression that best summarizes the professional destiny of qualified masters in the country (*Ibid*, 2004).

Unlike masters, among PhD's there is a strong predominance of academic activities. In the group of groups in large areas, almost 85% of these graduates work in universities and research institutions. Doctors of Basic Education are somewhat similar to those of Technological, since in both the proportion of university professors is around 72% and that of those working in research institutions, around 10%. In the Professional areas, the situation is different: work in universities involves only 62% of doctors and work in offices and offices, which in the other two groups was irrelevant, is already approaching 15%. In addition, participation in administration and public services, which almost reaches one fifth of the employed, is another trait that differentiates Professionals from the other two groups, particularly in relation to Technological (*Veloso*, 2004).

Similar to the masters, but on a much smaller scale, dentists, doctors and lawyers continue to be the groups of professionals with PhDs who least act in the teaching area, with

offices, hospitals and public jobs in general as other important and significant sources of work. In this regard, lawyers and dentists have 29% of professionals who do not work within universities or research institutions (*Ibid*, 2004).

Cavalcante, et al., 2008, based on the results of the study by Veloso, 2004, in which he reports that 71% of PhDs in Dentistry working only in the academic area, carried out a study with egress of dentistry postgraduate, graduated in PhD level and who work as CNPq researchers. The present study had 132 active fellows, 85 (64.39%) of whom were male and 47 (35.61%) of female, distributed among the six possible classes of CNPq fellows. There were no scholarship researchers in the senior class. The highest concentration of fellows is in class 2 (42.42%), that is, those researchers, with at least 2 years of obtaining the title of doctor. Even when analyzing gender in relation to the category of the fellow, it appears that in all five classes of researchers found, there was a predominance of the male gender.

The scholarship researchers were distributed in 11 different states of the federation, with 113 scholarship holders (85.6%) in the Southeast region alone, 101 from the State of São Paulo. Then, there are 10 scholarship holders in the Southern States, respectively, in Santa Catarina, Rio Grande do Sul and Paraná. These data can be attributed to the higher concentration of undergraduate and postgraduate courses in dentistry in these states of the federation. Particularly in the State of São Paulo, the courses of major concepts in Brazilian dental postgraduate courses are concentrated (*CAPES*, 2006).

Analyzing the concentration of Scholarship holders in São Paulo, in the study by Cavalcante, et al., 2008, it appears that of the 101 scholarship holders in the State of São Paulo, 100 are distributed in the three State Public Institutions. Except UNICAMP, which has only one dentistry course, located in the city of Piracicaba (FOP-UNICAMP), USP and UNESP together have 6 dentistry courses, 3 from USP (Bauru, São Paulo and Ribeirão Preto) and 3 from UNESP (Araçatuba, Araraquara and São José dos Campos). The three São Paulo State Institutions also concentrate the largest number of graduate programs in the country (CAPES, 2019). Of the 132 scholarship researchers, 126 (95.45%) are linked to Public Higher Education Institutions, with 103 scholarship holders from State Public Institutions and 23 from Federal Public Institutions (*Cavalcante et al.*, 2008).

Regarding the area of expertise in dentistry of scholarship researchers and taking into account that the Lattes curriculum allows the insertion of more than one option for each researcher, the specialty of biomaterials or dental materials, which is inserted in practically all dentistry specialties, it stands out, followed by the area of dental clinic, which is also quite extensive, as it includes several specialties, such as endodontics, periodontics, prostheses and

pediatrics. The pathology area includes, among others, the citations of oral pathology, stomatology and semiology (*Ibid*, et al., 2008).

Parizotto, Imparato and Novaes, 2015 report that there is a much higher number of female egress than male. According to Nunes et al., 2010, female professionals in dentistry have been the majority in Brazil since the 1980s. Currently, women correspond to 56% of the total of Brazilian Dental Surgeons. After analyzing the Curriculum Lattes of the egress of the postgraduate program in the field of pediatric dentistry at FOUSP, the authors found that most of them do not specify details of their performance, which made it especially difficult to analyze the number of graduates who also work in the area clinic. Another justification for this difficulty may be related to the fact that graduate students are scholarship holders during graduate school and, therefore, dedicating themselves exclusively to the fulfillment of course activities according to norms established in the acceptance and granting of scholarships, remains away from clinical activities that, consequently, are no longer reported in the Curriculum Lattes.

During the evaluated period of the study, 23 master's dissertations and 42 doctoral theses were defended. Clinical activities have not been reported clearly in the CL. The most frequently reported place of activity was the state of São Paulo (*Parizotto, Imparato & Novaes, 2015*).

The development of projects, studies, articles and other professional activities can be summarized in the publication of the Curriculum Lattes. Thus, the authors observed a great concern with the updating of this instrument made by most graduates of the master's and doctorate courses belonging to the sample, especially those linked to the academic area. Such fact is related to the need to present constant scientific production during their hiring and career progression or even participation in public tenders since the Curriculum Lattes is a nationally known platform to summarize publications and activities performed (*Ibid*, 2015).

In the study by *Dos Santos*, *2017*, in the data obtained, it is noted that the majority of egress are female. This finding reinforces what other studies have also shown. In a survey carried out by *Saliba et al.*, *2002*, they found an increase in the number of women in Dentistry, a fact that may also be associated with the reason why most of the program's egress belong to the female gender. The vast majority of egress of the Postgraduate Program in Preventive and Social Dentistry at FOA-UNESP are working professionally, especially in the academic career, in the Southeast, followed by the South. According to data from 2013 from MEC, there are at country 2365 Higher Education Institutions (HEIs), with 1157 of them in the southeast region. 2. Due to this situation, it is assumed that the demand for states or

regions where there is a high number of HEIs is higher on the part of the egress.

According to Capes, when looking at the distribution map of postgraduate programs (recognized by the institution itself) in Brazil, an asymmetry is perceived. The South and Southeast regions have the highest concentrations of programs, an inverse picture noted in the North, Northeast and Center-West regions.

According to the *Federal Council of Dentistry*, 2016, 73% of dental schools in Brazil are private. It is also known that, in such institutions, it is more common for them to hire masters in comparison with public ones, where generally the selection process is more competitive and, therefore, higher academic levels and degrees are required from competitors. For these reasons, it is assumed that a greater number of masters and doctors work academically in private institutions, however in the study by *dos Santos 2017*, it was found that the egress of the Postgraduate Program in Preventive and Social Dentistry at FOA-UNESP had or have had a greater performance in public universities.

As for scientific production, 53.49% of the egress of the study by dos Santos, 2017, published at least one complete article in scientific journals after the degree, observing the average of 5.82 articles published during the course and 14.01 after. This finding does not necessarily mean that most graduates published a greater number of articles after completing the course and that this phenomenon is a trend (*Dos Santos*, 2017)

4. Final Considerations

The scenario about the study of dentistry egress at the master's and doctoral level is still not very widespread in the current medical literature, other studies must be carried out so that the subject can have a greater scientific scope. The Lattes curriculum is the most used and reliable instrument for collecting data on egress. There has been an inversion over the decades as to the predominant gender of the egress, with the majority of men in the early 2000s and nowadays a majority of women.

New studies are being carried out at the São Leopoldo Mandic Dental Research Center on the professional trajectory of egress postgraduate students in dentistry at a *stricto sensu* level. The results of this new study will help us to interpret the current scenario in which these graduates are and will be another ally to support the current medical literature.

References

Balbachevsky, E. (2005). A pós-graduação no Brasil: novos desafios para uma política bemsucedida. Os desafios da educação no Brasil. Rio de Janeiro: Nova Fronteira, 1, 285-314.

Balbachevsky, E., & Marques, F. (2009). Fuga de cérebros no Brasil: os custos públicos de una falsa compreensão da realidade acadêmica. *Seminario internacional Fuga de cerebros, movilidad académica y redes científicas, CINVESTAV/IRD*, 2-4.

Barbosa, J. G., Benetti, F., Zagatto, V. D. Q. M., Matos, C. R. L., & Cintra, L. T. A. (2016). GradO-o29 Inserção no mercado de trabalho de egressos do Programa de Pós-Graduação em Ciência Odontológica da Faculdade de Odontologia—Araçatuba. *Archives of Health Investigation*, 5.

Brasil, O. I. T. (2011). Plano Nacional de Prevenção e Erradicação do Trabalho Infantil e Proteção do Adolescente Trabalhador. Plano Nacional de Prevenção e Erradicação do Trabalho Infantil e Proteção do Adolescente Trabalhador/Comissão Nacional de Erradicação do Trabalho Infantil.—.Disponível em:

https://www.capes.gov.br/images/stories/download/Livros-PNPG-Volume-I-Mont.Pdf

Cerqueira, M. B. R., Silva, M. P., Crispim, Z. Â. M. D. P., Garibalde, É., Castro, E. A. D., Almeida, D. R., & Maynart, F. R. (2009). O egresso da Escola Técnica de Saúde da Unimontes: conhecendo sua realidade no mundo do trabalho. *Trabalho, Educação e Saúde*, 7(2), 305-328.

Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES). (2006). Brasília, DF. Disponível em: www.capes.gov.br

Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES). (2010). Brasília, DF. Disponível em: www.capes.gov.br

Silva, A. W. G. (2020). A consolidação da pesquisa em Odontologia no estado do Amapá. *Brazilian Journal of Implantology and Health Sciences*, 2(4), 79-80.

de Odontologia, C. F. (2015). Conselho Federal de Odontologia. Disponível em: http://cfo.org.br/servicos-e-consultas/faculdades/

Dias, T. M. R., Moita, G. F., & Dias, P. M. (2016). Adoção da plataforma lattes como fonte de dados para caracterização de redes científicas. *Encontros Bibli: revista eletrônica de biblioteconomia e ciência da informação*, 21(47), 16-26.

Digiampietri, L. A., Mena-Chalco, J. P., Pérez-Alcázar, J. J., Tuesta, E. F., Delgado, K. V., Mugnaini, R., & Silva, G. S. (2012, August). Minerando e caracterizando dados de currículos Lattes. In *Anais do I Brazilian Workshop on Social Network Analysis and Mining*. SBC.

dos Santos, L. F. P., Moimaz, S. A. S., Garbin, C. A. S., Saliba, T. A., Saliba, N. A., & Saliba, O. (2017). As atividades profissionais dos egressos da Pós-Graduação em Odontologia na área de Saúde Coletiva. *Revista da ABENO*, *17*(3), 56-66.

de FARIAS, L. R., Vargas, A. P., Borges, E. N., & Grande–RS–Brazil, R. (2012). Um sistema para análise de redes de pesquisa baseado na Plataforma Lattes. *Anais da VIII Escola Regional de Banco de Dados, Curitiba, PR, Brasil*.

Lane, J. (2010). Let's make science metrics more scientific. Nature, 464(7288):488–489.

Mena-Chalco, J. P., & Junior, R. M. C. (2009). ScriptLattes: an open-source knowledge extraction system from the Lattes platform. *Journal of the Brazilian Computer Society*, *15*(4), 31-39.

Morita, M. C., Haddad, A. E., Araújo, M. E. D., Nobre, M. Á. S., Cecchetto, S. J., Campos, L. R. C., & Barreto, L. M. S. (2010). Perfil atual e tendências do cirurgião-dentista brasileiro.

Meira, M. D. D., & Kurcgant, P. (2009). Avaliação de curso de graduação segundo egressos. *Revista da Escola de Enfermagem da USP*, 43(2), 481-485.

Nunes, M. F., Leles, C. R., & Gonçalves, M. M. (2010). Gênero e escolha por especialidades odontológicas: estudo com egressos de uma universidade pública federal. *Revista Odontológica do Brasil Central*, 19(49).

Parizotto, J. D. O. L., Imparato, J. C. P., & Novaes, T. F. (2015). Perfil profissional do egresso do Programa de Pós-Graduação em Odontopediatria da Faculdade de Odontologia da USP-São Paulo. *Revista da ABENO*, *15*(1), 48-54.

Pereira, A. S., et al (2018). *Methodology of cientific research*. [e-Book]. Santa Maria City. UAB / NTE / UFSM Editors. Available at:

https://repositorio.ufsm.br/bitstream/handle/1/15824/Lic_Computacao_Metodologia-Pesquisa-Cientifica.pdf?sequence=1.

Ribeiro, M., & das Graças, M. (2013). Educação superior e cooperação internacional: o caso da UREMG (1948-1969). *InterMeio: Revista do Programa de Pós-Graduação em Educação-UFMS*, 13(25), 52-65.

Saliba Moimaz, S. A., Bordin, D., Berger Fadel, C., dos Santos, C. B., Saliba Garbin, C. A., & Adas Saliba, N. (2017). Qualificação do acolhimento nos serviços de saúde bucal. *Cadernos Saúde Coletiva*, 25(1).

Saliba, N. A., Moimaz, S. A. S., Vilela, R. M., & Blanco, M. B. (2002). Mulher na odontologia: uma análise quantitativa. *Rev. bras. odontol*, 400-402.

Sanchez, I. (2019). Trajetórias acadêmica e profissional dos egressos do Programa de Pós-Graduação em Educação da Unicamp.

Vargas, A. M. D., & Vasconcelos, M. (1998). A construção da clínica integrada de atenção primária da Faculdade de Odontologia da Universidade Federal de Minas Gerais: a experiência da Clínica Integrada I. *Arq. odontol*, 71-81.

Velloso, J. (2002) A pós-graduação no Brasil: formação e trabalho de mestres e doutores no país. Direito, Economia, Engenharia Mecânica, Geociências, Odontologia e Psicologia, Brasília: Capes; Ministério da Educação; *Unesco*, 2.

Velloso, J. (2004). Mestres e doutores no país: destinos profissionais e políticas de pósgraduação. *Cadernos de Pesquisa*, *34*(123), 583-611.

Percentage of contribution of each author in the manuscript

Éber Coelho Paraguassu— 35%

Gabriela Victorelli— 10%

Maria Carolina Pelayo Teixeira— 10%

Almenara de Souza Fonseca Silva— 10%

Flávia Martão Flório— 35%