

Health management teaching of dentistry courses in Parana

Najara Barbosa da Rocha*; Ieda Harumi Higarashi**

* Adjunct Professor, Department of Social and Preventive Dentistry, Faculty of Dentistry, UFMG

** Associate Professor, Department of Nursing, UEM

Received May 15, 2019. Approved July 30, 2019.

ABSTRACT

The study aimed to analyze the teaching of management in dentistry at the universities of the state of Paraná. This was a descriptive, cross-sectional research, based on secondary data, conducted in 2019. Information was collected from public and private higher education institutions that offered a dentistry course, based on the list of approved, initiated and postgraduate courses; assets of the national register of higher education courses (e-MEC register). Data were synthesized in a standardized form using Microsoft Excel and after typing, this allowed descriptive analysis by EpiInfo (Version 7.2) and presentation in absolute and relative frequencies. Bivariate analyses were performed by the program Biostat using the G and Fischer's exact tests, at a significance level of 5%. In Paraná, 29 Dentistry courses were offered, of which 5 were approved, but had not yet started their activities. Of the researched courses, 21 were of a private (private) administrative nature, seven were public and only one public course that charged the undergraduate students a monthly fee. Most courses (58.6%) had a specific management discipline, as a compulsory curriculum component (96.6%), offered predominantly in the last year of graduation (55.2%), with hour loads ranging from 21- to 60 hours (61.9%). Most (51.7%) of undergraduate dentistry courses devote only up to 1% of their workload to health management. The results showed that management education in this state has been little explored, making it necessary to include a higher workload focused on the theme in the curriculum matrices, aiming to improve the training of future dentists.

Descriptors: Education, Higher. Education, Dental. Health Management Dentistry.

1 INTRODUCTION

The profile of the dental surgeon, pointed out by the National Curriculum Guidelines (NCG) for the Dentistry courses (2002) describes

professionals with knowledge, skills and competences that make it possible for them to decide and act safely and properly in health promotion and prevention to attend social needs,

rather than a “dental worker” with a purely technical mindset. In other words, we aim for professionals who can interact with society, have leadership skills and social sensitivity, vast clinical experience, with sophisticated healing techniques supported by a solid base in basic sciences. In addition, they must be capable of practicing in the office and privately but be able to adapt to multidisciplinary teams and socialized services. One of the competencies pointed out by NCD is the ability to manage and administer both the workforce, as well as physical, material and information resources; i.e., graduates must be able to act as managers, employers or leaders in the health team¹.

In the health area, the training of new professionals has been conceived in a linear way; that is, there is not the dialogue that is necessary between the different areas of knowledge does not occur. This type of concept of training produces people with a limited view of what their area of activity is².

The management process supports the feasibility of providing patient care and involves issues related to its quality. Thus, once they graduate, these professionals will need to behave as managers, and therefore develop a consumer market vision and management skills. Bad managers harm their clients, employees and society, because they intervene incorrectly in aspects that impact the quality of life of organizational agents².

The training of health professionals should be conceived through quadrilateral teaching, management, attention and social control. This multidimensional concept enables the health area to progress qualitatively in the care of the population. Transforming the organization of services and training processes requires articulated work between the health system (in its various spheres of management) and the educational institutions. In the teaching

dimension, it is necessary to consider aspects related to the administration itself, in the context of public management, and with attention focused on care and social control, recognizing the involvement of the population in the process of the concept of health. This proposal will provide health professionals with a more integrative view of the field of action, enabling more competent action³.

The barrier in health, involving the process of formation and management of organizations, needs to be studied, so that the training of health professionals will be rethought. This is because in both the public and private sectors, dental professionals are exposed to activities that need this knowledge. Moreover, in some situations the professionals performance is compromised by the lack of this type of formation, harming not only their performance, but also the community in which they are inserted. Therefore, this study aimed to analyze the teaching of management in Dentistry courses in the State of Paraná.

2 METHODOLOGY

This was a descriptive, cross-sectional research based on secondary data on the teaching of management in dentistry in the state of Paraná, in February 2019.

Information was collected from public and private higher education institutions of the state, which offered dental courses, using as reference, the list of approved, initiated and active courses in the national register of courses and higher education institutions. The e-MEC Register, regulated by Normative Ordinance No. 21, of 12/21/2017, of the ministry of education in Brazil, is an official database of courses and Higher Education Institutions (HEI), irrespective of the Educational System. The e-MEC Register data must be kept in conformity with the legal acts that authorize the courses and the HEIs, which are edited by the Government or the

competent body of the institutions, according to the exercise of their autonomy⁴. We found 29 dentistry courses in the state of Paraná, excluding 5 courses that had not been started by 2019.

Having obtained the records and data of all HEI, a trained and calibrated researcher accessed the web site of each institution. The curricular matrices of dentistry courses and menus were analyzed, and the presence was observed of curricular components that addressed management teaching. When information was not found through this system, a Google search was performed with the following keywords: curriculum matrix, dentistry and the name of the institution.

The following variables were analyzed: administrative nature (public or private institution); if the institution had a management subject or any subject that addressed the subject, subject nomenclature, whether the workload and time of graduation of the subject was offered, nature of the curricular component (compulsory or optional); Enade grade of course, course load of Dentistry and tuition, if applicable. Some variables such as nature of HEI, Enade grade and course load were associated with the outcome variable, presence of management discipline in the course curriculum.

Data synthesis was performed in a standardized form using the Microsoft Excel program, followed by descriptive analysis, with data presentation using absolute and relative frequencies (EpiInfo 7.2)⁵. Statistical analysis was performed using the Bioestat 5.0⁶ program, with use of Fisher's exact test or G test, considering the confidence interval of 95% and significance level of 5%.

3 RESULTS

Of the total number of courses (n = 29), 21 were private, administrative in nature, seven were public and one university was a municipal

foundation that charged undergraduate students in 2019. According to table 1, the majority of HEI offered full-time courses (65.6%), paid in 5 years (41.4%), had a semiannual structure (55.3%), without evaluation by Enade (43.5 %).), with a workload of 4001 to 4500 hours (48.3%) and charged monthly fees of R\$ 2,501.00 to R\$ 3,000.00 (27.6%).

The nomenclatures of the curricular components that contemplated management contents were found to be: Entrepreneurship, Administration applied to Dentistry; Collective Health Internship - SUS Management; Management of public dental services; Management and Planning in Dentistry; Public and private management in dentistry; Professional orientation; Public policies, health planning and management; Entrepreneurial attitude. Management education was also found in non-specific subjects such as Social and Preventive Dentistry.

According to table 2, with regard to accessibility to information, the majority of dentistry courses allowed easy access through the internet (96.6%) and provided the curriculum matrix (82.8%). However, most of them did not offer access to the matrix and subject menus in detail (72.4%). Most of the courses (58.6%) had a specific management discipline, with a compulsory curricular component (96.6%). In one case it was offered as a distance learning subject and in another as an optional subject. These curriculum components were predominantly offered in the last year of graduation (55.2%), with workload ranging between 21 and 60 class hours (61.9%).

When verifying the workload for the content / management discipline, in relation to the total workload of the course, a very small number of hours was devoted to addressing this content. Most (51.7%) of the undergraduate dentistry courses devoted up to 1% of the course

workload to health management (table 2).

In the associations of the presence of specific discipline on management and workload

of the undergraduate course, administrative nature and Enade grade, none of the variables was significant, as shown in table 3.

Table 1. Percentage and numerical distribution of characteristics of Dentistry courses of the State of Paraná, 2019

Course Features	N	%
<i>Administrative nature</i>		
Private	21	72.5
Public	7	24.1
Municipal Foundation with payment	1	3.4
<i>Working shift</i>		
Daytime and night-time	9	31.0
Day only full-time	19	65.6
Night only	1	3.4
<i>Duration in years</i>		
4	9	31.0
4.5	3	10.4
5	12	41.4
Variable by shift *	5	17.2
<i>Structure / Periodization</i>		
Yearly	12	41.3
Semester	16	55.3
Annual and half-yearly	1	3.4
<i>Enade Note</i>		
No rating	10	34.5
2	6	20.7
3	5	17.2
4	6	20.7
5	2	6.9
<i>Workload (class hours)</i>		
Up to 4000	5	17.2
4001 to 4500	14	48.3
4501 to 5000	8	27.6
5000+	2	6.9
<i>Monthly fee</i>		
Free (public)	7	24.2
Not informed	3	10.3
Up to \$ 2,000	2	6.9
From R \$ 2,001 to R \$ 2,500	5	17.2
From \$ 2,501 to \$ 3,000	8	27.6
Over \$ 3,000.00	4	13.8

* 4 years for full time and 5 years for night course.

Table 2. Numerical and percentage distribution of courses, according to access to their information, curriculum matrix and menus, 2019

Variables	N	%
<i>Ease of access to the website</i>		
Yes	28	96.6
No	1	3.4
<i>Ease of Matrix Access</i>		
Yes	24	82.8
No	5	17.2
<i>Availability of detailed curriculum matrix</i>		
Yes	8	27.6
No	18	62.1
Did not display matrix at the site web	3	10.3
<i>Existence of specific management discipline</i>		
Yes	16	55.3
No	8	27.6
Did not display matrix at the site web	3	10.3
Did not present management discipline at headquarters	1	3.4
Optional discipline	1	3.4
<i>Workload devoted to management (class hours)</i>		
Up to 20	1	3.4
21 to 60	13	44.7
61 to 100	6	20.8
Over 100	3	10.3
No time or not informed	6	20.8
<i>Year of graduation in which the subject / management content is inserted</i>		
No information	4	13.8
Did not offer discipline	1	3.4
First	1	3.4
Second	5	17.2
Third	2	6.9
Last	16	55.3
<i>Ratio of management-focused course load to total course load</i>		
0	6	20.8
Up to 1%	9	31.0
1 to 2%	9	31.0
Over 2%	5	17.2

Table 3. Association between study variables and presence of specific management discipline, 2019

Variables	Had specific management discipline				p
	Yes		No		
	n	%	n	%	
<i>Number of hours on graduation</i>					
Up to 4000	4	13.8	1	3.4	0.11
4001 to 4500	7	24.1	7	24.1	
4501 to 5000	2	6.9	6	20.8	
5000+	2	6.9	0	0	
<i>Nature of the institution</i>					
Private	15	51.8	7	24.1	0.09
Public	2	6.9	5	17.2	
<i>Enade Note</i>					
No rating	5	17.3	5	17.3	1.02
Up to 2	3	10.3	3	10.3	
3 or more	4	13.8	9	31.0	

4 DISCUSSION

The register of higher education institutions of Dentistry (e-MEC) reported the existence of a total of 380 courses of Dentistry in operation in the country, excluding the uninitiated, the extinct and those in extinction. Paraná accounted for 7.6% of dentistry courses in the country (n=29).

The majority of HEIs in the state of Paraná had a specific management discipline, but the vast majority (51.7%) dedicated less than 1% of their curriculum to management education. This result was also evidenced in the study by Limeira et al. (2018)⁷ that addressed management education in the country as a whole. The authors concluded that management education was little explored in undergraduate dentistry courses in Brazil, and its inclusion in curricular matrices was necessary in order to prepare dentists to work in health management.

Ceccim and Bilibio (2002)⁸ stated that the training of human resources had a vast knowledge about the relevance of teaching-service integration, however, there was practically no record of the relevance and need for integration of teaching-service-management-social control and articulation with the undergraduate student movement in the health professions. The authors also stated that the integrated experiences between managers, trainers, users and students could be characterized as innovative, in order to qualify workers' training for the real health needs, and that it was necessary for the training institutions introduce important innovative initiatives in the area of educational planning and management.

As recently graduated professionals in dentistry entered the labor market, they would be faced with tough competition. Data from the Federal Council of Dentistry (FCD) of 2019⁹ showed that in the state of Paraná there were 19,969 registered dental surgeons, showing that

the labor market for professionals in this area was very disputed². Thus, competitiveness becomes a factor to be considered, requiring the professionals /training capable of competing for the most diverse functions, in addition to those inherent to dental care, but also involving management skills.

In this study, the majority (55.2%) of the courses were observed to offer management education in the last semesters or year of graduation. The same result was found by Limeira et al. (2018)⁷, which showed that care and management processes were not being treated or approached in an interconnected manner. Thus, students first learn to care for patients, and only later developed a notion about the management of health care. This highlighted the fragmentation of knowledge, both in the various teaching processes and in the practice of management activities, since the practice, problematization of contents and experience of health services occurred at different times⁷.

Some studies have indicated that a critical knot of health management was the lack of professional training who invariably failed due to the lack of skills and attitudes necessary for proper management of physical and human resources^{7,10,11}. The lack of professional management was also identified in the study by Lorenzetti et al. (2014)¹¹.

Another essential point, discussed by Limeira et al. (2018)⁷, was the need for research, training and innovation in teaching in the Health Area, with the purpose of enabling significant change in the models of vocational training that the population and the current Brazilian health service (Unified Health System - UHS) required and needed. From this perspective, it appears that the management of these services requires the manager to have knowledge and experience that undergraduate dentistry courses are not providing in adequate quantity and depth.

Ideally, in their curriculum matrices, the courses should include the teaching of management throughout the course, to educate appropriate human resources who have the profile recommended in the NCG. Professionals must be able to manage and administer work, physical and material resources and information; they must be able to act as managers, employers or leadership in the health team¹. In the NCG article 11, it is cited that undergraduate dentistry aims to train dentists who are capable of knowing, understanding and participating in actions, with a view to improving the indicators of quality of life, health and morbidity, which can be performed by generalist, purposeful and resolute professionals. In addition, they should know how to develop partnerships, organize contracts and build networks, thereby encouraging and broadening the rapprochement between institutions, services and other sectors involved in comprehensive care and health promotion. Moreover, they need to manage the work process of the health team in line with the expanded concept of health and the principles and guidelines of the SUS; develop management and administration of the workforce, information, physical and material resources. Furthermore, they must promote care management through the use of knowledge and devices of all technological densities, with the purpose of promoting the organization of integrated health systems for formulating and developing individual and collective therapeutic projects and organizing, handling and evaluating care resources effectively and efficiently.

A fact that drew attention during the e-MEC consultation was the number of new courses authorized and not yet started in Brazil (n = 88) and in the state of Paraná (n = 5). These courses are intended to be better suited to the NCG guidelines, providing disciplines on health management in their curricula from the beginning

to the end of the course. The study by Mathias et al. (2015)¹² showed that there were too many professionals and courses in Brazil, however, with unequal distributions and characteristics. In November 2017, the Ministry of Education requested the FCD (Federal Dental Council) to suspend new Dentistry courses (Official Letter FCD 1573/2017)¹³, but so far no action has been taken and therefore, the request was re-ordered early in 2019. According to FDC data, at present there is one dental surgeon for 645 inhabitants in Brazil. The indiscriminate growth of institutions that offer undergraduate dentistry courses could lead to a collapse in the quality of services offered to the population¹³.

The present study showed that the nomenclatures normally used in the curriculum components that deal with management seek to portray the themes addressed during the course, since these components, in general, as the foundation on which to build the managers theoretical knowledge⁷.

Some limitations of this study are worth mentioning, mainly as regards secondary data collection, with the analysis of the matrices inserted in the HEI's e-mail address, the reliability of which may have been compromised due to the lack of constant updates. Another point to be noted is that some courses did not provide the curriculum matrices on their websites, implying the need for further studies with different methodologies that could supplement the evidence presented by this research.

The results of this study showed that there was a great need to discuss management education in undergraduate dentistry courses, thus supporting the training of professionals increasingly able to contribute to the qualification of health care management.

5 CONCLUSION

The results suggested that the teaching of

management in the Dentistry courses in the state of Paraná HEI has hardly been explored, making it necessary to review approaches and to allocate more workload focused on health management in curricular matrices, with the purpose of preparing dentists to work in this area.

RESUMO

Ensino de gestão em saúde nos cursos paranaenses de Odontologia

Objetivou-se analisar o ensino da gestão na Odontologia das universidades do estado do Paraná. Trata-se de pesquisa descritiva, transversal, a partir de dados secundários, no ano de 2019. Foram coletadas informações das instituições de ensino superior, públicas e privadas, que ofereciam curso de Odontologia, tendo como referência a lista de cursos aprovados, iniciados e ativos do cadastro nacional de cursos de educação superior (Cadastro e-MEC). A síntese dos dados foi realizada em formulário padronizado no programa Microsoft Excel, que após a digitação, permitiu análise pelo programa EpiInfo (Versão 7.2) de forma descritiva, e apresentação por meio de frequências absoluta e relativa. Análises bivariadas foram realizadas pelo programa Bioestat utilizando o teste G e Exato de Fischer, ao nível de significância de 5%. No Paraná são ofertados 29 cursos de Odontologia, sendo 5 aprovados, porém ainda não iniciaram suas atividades. Dos cursos pesquisados, 21 são de natureza administrativa privada (particular), sete são públicos e apenas um é público, porém cobra mensalidade dos alunos da graduação. A maioria dos cursos (58,6%) tem disciplina específica de gestão, como componente curricular obrigatório (96,6%), ofertada predominantemente no último ano de graduação (55,2%), com carga horária variando entre 21 e 60 horas-aula (61,9%). A maioria (51,7%) dos cursos de graduação em Odontologia dedica apenas até 1% da carga horária para gestão em saúde. Os resultados mostraram que o ensino de gestão neste estado é pouco explorado, fazendo-se necessária inclusão de maior carga horária voltada para o tema nas

matrizes curriculares, objetivando melhorar a formação do futuro cirurgião-dentista.

Descritores: Educação Superior. Educação em Odontologia. Gestão em Saúde. Odontologia.

REFERENCES

1. Brasil. Ministério da Educação. Conselho Nacional de Educação. Câmara de Educação Superior. Resolução CNE/CES 3, de 19 de fevereiro de 2002. Institui as Diretrizes Curriculares Nacionais do Curso de Graduação em Odontologia. Diário Oficial da União 2002.
2. Ribas MA, Siqueira ES, Binotto E. O desafio da gestão para profissionais da Odontologia. Anais do XXX Encontro Nacional de Engenharia de Produção - ABEPRO, 2010. [Cited Feb. 14, 2019]. Available at: http://www.abepro.org.br/biblioteca/enegep2010_TN_STO_130_833_15943.pdf.
3. Ceccim RB, Feuerwerker LCM. O Quadrilátero da formação para a Área da Saúde: ensino, gestão, atenção e controle social. *Physis: Rev Saúde Col*, 2004; 14(1):41-65.
4. Brasil. Ministério da Educação. Cadastro E-MEC, regulamentado pela Portaria Normativa nº 21, de 21/12/2017.
5. Programa Epi Info. [Cited Feb. 14, 2019]. Available at: https://www.cdc.gov/epiinfo/por/pt_pc.html.
6. Ayres M, Ayres M Jr, Ayres DL.; Santos, A. S. Programa BioEstat. Versão 5.0.3. [Cited Feb. 14, 2019]. Available at: <http://www.mamiraua.org.br/download/index.php?dirpath=./BioEstat%205%20Portugues&order=0>>.
7. Limeira FIR, Rebouças PRM, Rocha EALS, Catão MHCV. O ensino de gestão nos cursos de graduação em Odontologia no Brasil. *Rev ABENO*. 2018;18(1):161-9.
8. Ceccim RB, Bilibio LFS. Observação da

- educação dos profissionais da saúde: evidências à articulação entre gestores, formadores e estudantes. In: BRASIL. Ministério da Saúde. Observatório de recursos humanos em saúde no Brasil: estudos e análises. Rio de Janeiro: Fiocruz, 2002.
9. Conselho Federal de Odontologia. [Cited Feb. 14, 2019]. Available at: <http://cfo.org.br/website/profissionais-cadastrados/>.
10. Okuyama HCHY, Aguilar-da-Silva RH. Gestão do cuidado em Odontologia: limites e potencialidades das ações na Estratégia Saúde da Família. Rev ABENO, 2017;17(4): 133-43.
11. Lorenzetti J, Lanzoni GMM, Assuiti LFC, Pires e Pires EDR, Souza FRS. Gestão em saúde no Brasil: diálogo com gestores públicos e privados. Texto Contexto Enferm. 2014; 23(2): 417-25.
12. Mathias MP, Casania E, Sagazb SM, Lucietto DA. Cirurgiões-dentistas e faculdades no Brasil: repercussões sobre a prática odontológica. J Oral Invest, 2015; 4(2):25-31.
13. Conselho Federal de Odontologia. Ofício CFO 1573/2017 que pede a proibição de abertura de novos cursos de Odontologia. 2017. [Cited Feb. 14, 2019]. Available at: <http://www.cfo.org.br>.

Correspondence to:

Najara Barbosa da Rocha
e-mail: najara.rocha@gmail.com
Departamento de Odontologia Social e Preventiva, Faculdade de Odontologia, Universidade Federal de Minas Gerais
Av. Presidente Antônio Carlos, 6627 - Pampulha
31270-901 Belo Horizonte/MG Brazil