

Professional Guidance in Brazilian dental education

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ABSTRACT

This study aimed to analyze the contents of “Professional Guidance” in the curricular structures of undergraduate dentistry courses in Brazil. The variables studied were: nomenclature, period taught, workload and class characteristics (theoretical/practical). A qualitative analysis of the contents described in the subjects' teaching plans, was also performed. The e-mail address of the Federal Council of Dentistry obtained the list with the 242 courses of Dentistry. Of these, 192 provided the teaching plan, pedagogical project or curriculum matrix. Of the total, 72.2% had some subject related to “Vocational Guidance” and 3.2% were offered as optional subjects. The average workload was 46.5 ± 26.96 hours (median = 40), being given more frequently between the 3rd and 4th semesters (33.9%). In most courses (54.4%) the contents are worked theoretically. The nomenclature presents variations, being the most used “Professional Orientation”. It is concluded that in all variables studied there is a great heterogeneity, thus highlighting the difficulty of teaching the theme in an articulated and continuous way in the courses.

Descriptors: Schools, Dental. Education, Higher. Teaching.

1 INTRODUCTION

In Brazilian dental education, the formation of a professional with a generalist, humanist, critical and reflexive view was

advocated by the National Curriculum Guidelines (NCG)¹. In contrast to the previously adopted minimum curriculum, which excessively detailed the required content,

inhibiting innovation and creativity, the NCGs provided the opportunity to elaborate pedagogical projects according to the local reality of the educational institutions².

There is a strong support for a change in the curricula of dental schools, especially focused on competency-based education³. However, the curricular organization in most Brazilian institutions is traditional, with fragmented and stanch contents, where its contents are integrated only in the last stage of dentist training, which makes such transformation in the teaching models complex⁴⁻⁷.

In a smaller number of institutions, the curricular organization is established in integrated modules, by complexity, based on problems extracted from reality⁶, where it is expected the formation of more humanized, competent and concerned professionals with taking care of the human and not just the disease⁸. This methodology suggests the breaking of the traditional model, stimulating the student to self-learning, learning to learn and autonomous pursuit of knowledge⁹.

Training a dental surgeon integrated with the professional reality is a challenge to be achieved during the graduation and must transcend the University boundary. This transition from the University to the labor market, is, sometimes, considered distressing to newly graduate.

In general, the subjects of the Dental courses are marked by individual practice, focused on learning techniques and materials, restricting themselves to the operational field, making students focus heavily on dental procedures¹⁰. There is a need to work on student learning about important curriculum components established in NCG, which will provide the same decision-making, leadership, labor market insertion, and knowledge of the real needs of the population¹¹.

In this sense, in order to assist in the formation of the future dental surgeon, the discipline of “Professional Guidance” becomes essential in undergraduate courses and can be considered a basis for future professional life, a set of standards and techniques capable of to prepare academics to face market inconsistencies and to effectively exercise the profession¹². In interface with Collective Health, Forensic Dentistry and Bioethics, the discipline can assume different nomenclatures, according to the Pedagogical Project of each Higher Education Institution (HEI).

Due to the lack of studies and articles published on the subject, this research aims to analyze the contents of “Professional Orientation” in the curricular structures of undergraduate dentistry courses in Brazil.

2 METHODOLOGY

This is a descriptive study and document analysis on the disciplines that include the "Professional Orientation" in the course of Dentistry in higher education institutions in Brazil.

The email address of the Federal Council of Dentistry¹³ obtained the list with 242 courses and their respective email addresses. Of this total, three were suspended or extinct, leaving 239 institutions in regular activity.

Consultations were made at the electronic addresses of these institutions, available for public access, and information on the teaching plan, pedagogical project or curriculum matrix of 192 courses were obtained. Exclusion criteria were institutions whose e-mail addresses were not available (n=9) and those that did not provide information on the subjects offered (n=38).

A content analysis of the subjects of the disciplines that had in their nomenclature “Professional Orientation” was performed, according to Bardin (1988)¹⁴, in order to verify

which subjects were more approached. The final categorization was made by grouping the contents.

From this analysis, a search for keywords was performed to verify the existence of related disciplines and to analyze variations in nomenclatures. Then, the related disciplines also went through the content analysis of the menus, in order to quantify the subjects addressed by them.

After careful reading of all documents, the following variables were studied: administrative nature of the institutions, semester in which the discipline is taught, total workload and characteristic of the classes (theoretical and/or

practical).

The data obtained were typed and submitted to descriptive quantitative analysis and the results were explained in the form of tables and figures.

3 RESULTS

Of the total dentistry courses analyzed (n=192), 27.6% (n=53) belong to public institutions and 72.4% (n=139) private.

Table 1 presents the content analysis made from the available menus of the “Professional Orientation” disciplines of 25 Dentistry courses, with the purpose of verifying the frequency of the most addressed subjects.

Table 1. Content analysis of the “Professional Orientation” subjects, from the available menus

Topics covered	n	%
Administration (Marketing/Advertising/Entrepreneurship/Management)	17	34.0
Ergonomics	16	32.0
Biosafety	7	14.0
Legal Dentistry and Bioethics	5	10.0
Psychology	2	4.00
Collective Health	1	2.0
Research Methodology	1	2.0
Biostatistics	1	2.0

From the content analysis, to verify the existence of related disciplines and to analyze the variations of nomenclatures, a new search was made in the curriculum, by the following keywords: Administration (Marketing, Advertising, Entrepreneurship, Management), Biosecurity and Ergonomics.

The nomenclatures of disciplines related to “Professional Orientation” found in this study were listed in Table 2. Among them, 72.9% (n=140) had in their matrix some discipline that referred to any content of “Career Orientation”; of these, 3.2% (n=6) were offered as optional subjects.

A new content analysis was made, from

the available menus, to verify the contents most addressed by the “Professional Orientation” and related disciplines. The content related to “Ergonomics” was present in 31.3% of the menus, followed by “Biosafety” (30.3%) and “Administration” (19.2%). Other subjects were found: Legal and Bioethical Dentistry (12.1%), Psychology (3.0%), Collective Health (2.0%) and Research Methodology (2.0%).

The average workload of dentistry courses analyzed was 4,449 hours (minimum of 4,000h and maximum of 5,595h). In the analysis of the workload of the subjects, an average of 46.5 ± 26.96 hours (median = 40) was observed.

The minimum observed was 15 hours and the maximum 300 hours. According to figure 1, most of courses (64.0%) devote 15 to 44 hours to the subject.

Regarding when subjects were taught,

most colleges (33.9%) made them available in the 3rd or 4th semester of the course (figure 2). In general, the discipline can be observed in all stages of the course, except the last year (11th and 12th semesters).

Table 2. Percentage distribution of the nomenclatures of the subjects related to Orientation Professional in Brazilian Dentistry courses

Nomenclature	%
Professional Orientation/ Professional Orientation Dentistry/ Dental Professional Orientation	26.1
Biosecurity/ Applied Biosecurity in Dentistry/ Biosecurity in Dentistry/ Biosecurity and Environmental Health/ Biosecurity and Dental Professional Guidance/ Environmental Education and Biosecurity	14.1
Biosecurity and Ergonomics/ Ergonomics and Biosecurity/ Biosecurity and Ergonomics Applied to Dentistry/ Biosecurity and Ergonomics in Dentistry/ Basic Principles of Ergonomics and Biosecurity/ Biosecurity and Ergonomics, Occupational Health and Occupational Diseases/ Biosecurity, Ergonomics and Occupational Health	13.2
Management and Planning in Dentistry/ Planning and Management for the Market/ Health Management and Marketing/ Entrepreneurial Management/ Business Management/ Dental Management/ Professional Management/ Health Management: Dentistry/ Management and Marketing Applied to Dentistry/ Management and Marketing in Dentistry/ Dental Management and Marketing/ Dental Service Management/ Management and the World of Work/ Leadership and Entrepreneurship/ Marketing and Entrepreneurship/ Marketing and Business Management/ Marketing and Advertising/ Dental Marketing/ Liberal Professionals/ Dental Clinic Implementation and Management/ Dental Activity Management/ Management Applied to Dentistry and Professional Orientation	13.2
Ergonomics/ Ergonomics Applied to Dentistry/ Dental Ergonomics/ Ergonomics and Occupational Dentistry	7.3
Entrepreneurship/ Applied Health Entrepreneurship/ Entrepreneurship and Management/ Entrepreneurship and Marketing in Dentistry/ Entrepreneurship and Health Business Plan/ Economics - Administration and Marketing in Dentistry/ Administration and Management	6.4
Forensic Dentistry, Bioethics and Management in Dentistry/ Bioethics and Career Counseling/ Deontology, Forensic Dentistry and Career Counseling/ Forensic Dentistry, Forensics and Professional Management / Forensic Dentistry, Forensics and Professional Guidance	4.3
Biosafety, Ergonomics and Bioethics	2.6
Professional Orientation and Entrepreneurship/ Professional Orientation and Management/ Professional Orientation and Administrative Management/ Professional Orientation and Occupational Dentistry	2.6
Bioethics and Biosafety	0.9
Social and Environmental Responsibility	0.9
Other: Infectious Agents - Immunology and Biosafety/ Anesthesiology – Ergonomics – Biosafety/ Biosafety, Bioethics, Environment and Emergency in Healthcare/ Biosafety and Nursing Fundamentals/ Personal Development and Employability/ Entrepreneurship and Sustainability/ Ergonomics and Legal Dentistry/ Supervised Internship 3, 7, 8/ Occupational Dentistry/ Preventive and Social Dentistry IV (Career Counseling and Forensic Dentistry)/ Health Work Process Organization II/ Health Policy and Management/ Preclinical I/ Applied Project: Infection Control and biosafety/ Occupational risks of dental services/ Collective Health I/ Integrated Seminars I	8.5
TOTAL	100

Figure 1. Percentage distribution of Dentistry courses according to the workload, in hours, for the Professional Orientation disciplines

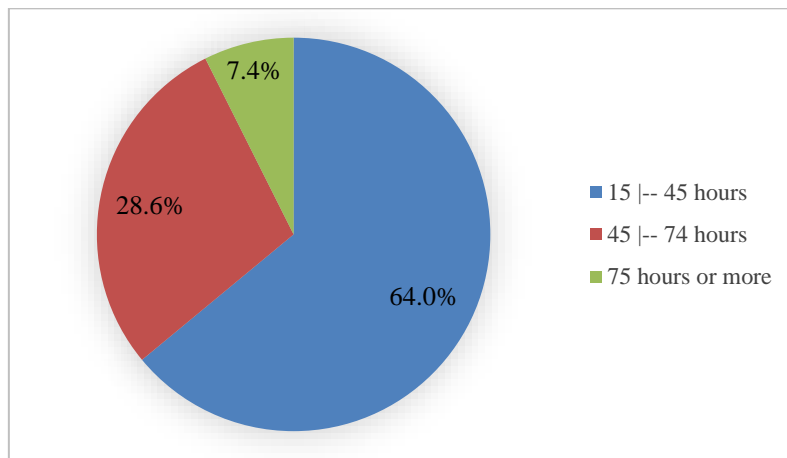
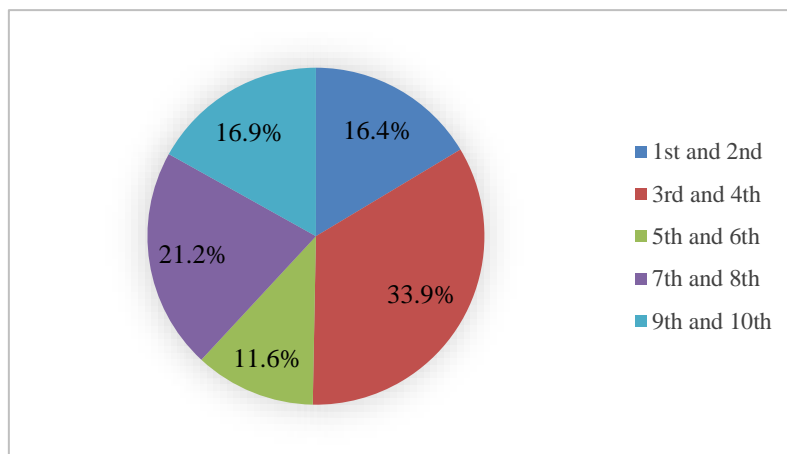


Figure 2. Percentage distribution of Dentistry courses in the semester for the Professional Orientation subjects



Most courses (60.5%) did not mention in their teaching plan the theoretical or practical character of the subject. Among those mentioned, 54.4% teach the course with theoretical content only and 45.6% teach theoretical and practical content.

4 DISCUSSION

Historically, in 1982, the Federal Education Council, through Resolution N°. 04/82 CFE, set the minimum content and duration of Dentistry course. The subjects were

divided into Basic Matters (Morphological Sciences; Physiological Sciences; Pathological Sciences; Social Sciences) and Professional Matters (Clinical Propedeutics; Dental Clinic; Pediatric Dentistry Clinic; Social Dentistry; Integrated Clinic). The discipline of Social Dentistry encompassed the contents on social, deontological, legal and professional orientation aspects.

This structure lasted until 2002 when they were deployed the new National Curriculum Guidelines (NCG)¹ for Dentistry courses and

propose essential content such as Life Sciences and Health; Humanities and Social Sciences; and Dental Sciences. Again, it is not clear how Career Orientation content should be covered.

With a large number of Dental professionals being trained each year in Brazil, the responsibility to develop skills and competences to differentiate themselves in the labor market, and to be able to meet the demand, can afflict undergraduates. Adapting the professional profile is not only necessary to meet the requirements of the guidelines¹⁵.

The “Professional Orientation” discipline can support future dental surgeons for such situations⁹. However, human and entrepreneurial training is not yet a priority in most of dentistry courses¹⁶. The focus of teaching has always been more focused on the curative character of diseases, based on the latest technology in the market¹⁷. Corroborating with this information, in this study it can be observed that many Faculties analyzed do not teach the discipline of “Professional Orientation”, nor the related contents, and in 3.2% offer as optional subjects.

The diversity regarding the nomenclatures can also be observed, evidencing the lack of consensus between the institutions. Such differences can be explained by the fact that the course addresses various contents and thus disassociates itself from the “Professional Orientation” and assumes itself as isolated content.

In 2007, through Resolution N^o2, the National Education Council¹⁸ instituted the minimum workload for undergraduate, bachelor degree courses, in presential modality. The duration for the Undergraduate Dentistry course was set at 4000 hours. In this study, the average workload of the “Professional Orientation” subjects (46.5 hours) reached 1.16% of the minimum course load required by the Resolution. Aiming at the formation of a professional able to

be entrepreneur, manager, employer or leader in the health team, contemplated in the NCG, the course load should be around 25% so that there is a correct assimilation of the contents by the undergraduates¹⁶.

Predicted by NDC¹, the division of content by subject is a configuration used by most of courses. However, to meet the assumption of integrated teaching, theory and practice, as well as basic and professional subjects should not be dissociated. It was evidenced in this study, that most of the institutions teach the discipline of “Professional Orientation” in isolation form and only with theoretical contents. This type of teaching strategy does not allow expressive learning to occur and thus is not able to achieve the undergraduate competency development goals⁶.

Still, we can observe the variation of semesters in which the discipline is taught. Continuous development throughout the course can be observed in just one educational institution. This shows that there is a segmentation and disarticulation between the other disciplines, making it a great challenge to be overcome.

Based on the idea that the student of dentistry, during his learning, devotes a significant part of his time to the improvement of technical skills¹⁹⁻²⁰ and that the integration of content only occurs in recent years in most institutions⁶, it is necessary that “Professional Orientation” is present in an integrated and continuous way throughout the course.

It is noteworthy that the great challenge of the Professional Orientation discipline is to be present in an articulated and continuous way in dentistry courses in Brazil.

5 CONCLUSION

All variables studied regarding the “Professional Orientation” discipline in dentistry

courses in Brazil have heterogeneity. The workload ranged from 15 to 300 hours, with the contents being taught more frequently in the 3rd and 4th semesters. The most commonly used nomenclatures were “Professional Orientation”, “Biosafety”, “Management and Planning” and “Ergonomics”.

ABSTRACT

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This study aimed to analyze the contents of “Professional Guidance” in the curricular structures of undergraduate dentistry courses in Brazil. The variables studied were: nomenclature, period taught, workload and class characteristics (theoretical/practical). A qualitative analysis of the contents described in the subjects' teaching plans, was also performed. The e-mail address of the Federal Council of Dentistry obtained the list with the 242 courses of Dentistry. Of these, 192 provided the teaching plan, pedagogical project or curriculum matrix. Of the total, 72.2% had some subject related to “Vocational Guidance” and 3.2% were offered as optional subjects. The average workload was 46.5 ± 26.96 hours (median = 40), being given more frequently between the 3rd and 4th semesters (33.9%). In most courses (54.4%) the contents are worked theoretically. The nomenclature presents variations, being the most used “Professional Orientation”. It is concluded that in all variables studied there is a great heterogeneity, thus highlighting the difficulty of teaching the theme in an articulated and continuous way in the courses.

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