Dentistry course monograph: a profile analysis

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ABSTRACT
This study analyzed the academic research profile of the Dentistry Course at Uninovafapi University Centre through the analysis of all monographs presented in the period from 2014.1 to 2019.1. This is an exploratory research carried out in institution's monograph repository. The collected data were tabulated and analyzed with Microsoft Excel® software. Of the 267 monographs, 262 were included. The results showed that mean grade was 9.3 ± 0.9 points. It was observed that the area most chosen by students is Orthodontics (17.2%). Only 19 were published in scientific journals. We conclude that Orthodontics is the specialty with the greatest interest. In addition, it is important for teaching staff and students to think about achieving scientific publications during the undergraduate course.


1 INTRODUCTION
The Brazil’s undergraduate dental course includes a monograph as a curriculum component, according to the National Curriculum Guidelines (DCNs)¹. The monograph should address a specific topic in dentistry and be guided by a professor.

In addition, according to the curriculum, the practice of research should be encouraged to motivate students and professors to contribute to Brazil’s scientific production². The study of a dentistry topic through research and/or a monograph is also an active teaching and learning methodology and, therefore,
constitutes academic training. After all, research practice improves clinical practice and figures as a differential in the insertion in the labor market\textsuperscript{3,4,5}.

Moreover, students want to increase their practical skills in particular dental areas prior to graduation. Thus, some of them choose the professors and/or subjects of their monographs to further these goals\textsuperscript{6,7}.

Identifying dental students’ perspectives and motivations concerning their monographs is a strategy for finding out what measures can be adopted to improve this excellent teaching and learning methodology. However, it remains unknown which areas are of most interest for monograph construction, as well as how many such monographs are actually published as scientific articles. Therefore, this study is aimed at providing basic information about the academic research profile of the undergraduate dental course at Uninovafapi University Centre.

2 METHODOLOGY

Uninovafapi University Centre, an institution located in the city of Teresina, has offered an undergraduate course in dentistry since 2008. The institution’s Resolution 05/2009 standardizes the monographs and states that their construction begins during the sixth semester of the course and that the student chooses the guiding teacher\textsuperscript{9}.

First, monographs prepared by regularly enrolled students during the last semester of the dentistry course from January 2014 to June 2019 were listed. Then, they were accessed in the institution’s repository, as were the grades assigned to them by the defense board. Monographs for which the full text was available were included. Those with unavailable or incomplete text and/or absent, zero or disapproved grades were excluded from the study.

Two examiners read each monograph’s text individually. The studies were then classified according to the following criteria: a) knowledge area (anesthesiology and therapeutics, bioethics and legal dentistry, biosafety and microbiology, surgery and traumatology, dentistry and dental materials, temporomandibular disorders and orofacial pain, endodontics, dentistry for special patients, pediatric dentistry, orthodontics, pathology, periodontics and implantology, prosthesis and geriatric dentistry, radiology, public health and others), b) methodology employed (systematic review, literature review, integrative review, clinical study, laboratory study, cross-sectional study and case report) and c) publication in scientific journals.

The verification of the monographs’ publication in scientific journals was conducted by searching for the titles in the SciELO, PubMed and Google Scholar databases and/or directly in the curricula vitae listed on the Lattes platform for the professors and students involved.

The collected data were tabulated and analyzed descriptively using Microsoft Excel\textregistered software (Microsoft Corporation, Redmond, USA). Tables and graphs were created using the same software.

3 RESULTS

Of the 267 monographs, 262 were included. Full text was not found for four, and one received a score of zero. The average grade of the monographs was 9.3 ± 0.9 points.

Table 1 shows the classification of the monographs according to knowledge area. The area most chosen by the students was orthodontics, followed by periodontics and implantology, dentistry and dental materials. The areas of anesthesiology and therapeutics, temporomandibular disorders and orofacial pain and radiology presented the smallest number of studies.

The methodological analysis showed that most of the analyzed productions were literature reviews (figure 1). In addition, only 7.3\% of monographs were published in scientific journals. Among those that were published, low-ranking journals predominated, mainly those of Qualis Capes grades B3 and B4 (figure 2).
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Table 1. Monographs included according to the area of knowledge of Dentistry.

<table>
<thead>
<tr>
<th>AREA</th>
<th>n (%)</th>
</tr>
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<tbody>
<tr>
<td>Orthodontics</td>
<td>45 (17,2)</td>
</tr>
<tr>
<td>Periodontics and implantology</td>
<td>41 (15,7)</td>
</tr>
<tr>
<td>Dentistry and dental materials</td>
<td>39 (14,9)</td>
</tr>
<tr>
<td>Pediatric dentistry</td>
<td>17 (6,5)</td>
</tr>
<tr>
<td>Endodontics</td>
<td>16 (6,1)</td>
</tr>
<tr>
<td>Surgery and traumatology</td>
<td>16 (6,1)</td>
</tr>
<tr>
<td>Pathology</td>
<td>15 (5,7)</td>
</tr>
<tr>
<td>Dentistry for special patients</td>
<td>13 (5,0)</td>
</tr>
<tr>
<td>Biosafety and microbiology</td>
<td>12 (4,6)</td>
</tr>
<tr>
<td>Public health</td>
<td>11 (4,2)</td>
</tr>
<tr>
<td>Prosthesis and geriatric dentistry</td>
<td>9 (3,6)</td>
</tr>
<tr>
<td>Others</td>
<td>9 (3,6)</td>
</tr>
<tr>
<td>Bioethics and legal dentistry</td>
<td>8 (3,1)</td>
</tr>
<tr>
<td>Radiology</td>
<td>4 (1,5)</td>
</tr>
<tr>
<td>Anesthesiology and therapeutics</td>
<td>4 (1,5)</td>
</tr>
<tr>
<td>Temporomandibular disorders and orofacial pain</td>
<td>3 (1,1)</td>
</tr>
</tbody>
</table>

Figure 1. Included monographs regarding the type of study.

Figure 2. Qualis Capes classification of the journals in which the monographs were published.

4 DISCUSSION

In the present study, orthodontics had the highest number of studies. The literature indicates that academics from other countries have a similar preference. This could be due to two factors. First, the small orthodontics
workload in undergraduate curricula allows only basic knowledge of the area to be addressed. Given this, the specialty arouses the curiosity and interest of the students, who choose it as a monograph theme to have more contact with it. Second, the specialty is associated with dentists who are professionally and financially successful, as well as clinical cases with clinical resolutions with great and positive visual impact.

The preference of students for certain areas of knowledge reflects a postgraduate claim, affinity and/or ease of working with professors in these specialties. In fact, in Brazil, orthodontics is the specialty with the most dental surgeons registered with the Federal Council of Dentistry (CFO)\(^\text{12}\). This area is associated with higher income, so it provides status and financial benefits that increase its attractiveness for students\(^\text{13}\). At Uninovafapi University Centre, only two specialties are offered as \textit{lato sensu} postgraduate courses: orthodontics and implantodontics. These areas are also the most chosen by the students for the monograph. A similar pattern was found with students at the Federal University of Pelotas\(^\text{11}\).

Regarding periodontics and dentistry, they stand out among the students’ choices because they are areas of knowledge with which dentistry students work during the entire course. In other words, they are curricular units that, in the second year of the course, are taught in a theoretical-laboratory manner and continue to be worked on clinically until graduation. The situation is similar in other countries\(^\text{4}\).

The most common type of study among monographs was the literature review, which gathers the published scientific literature on a given topic in a non-systematic and sometimes even partial way. Some students affirm that they dedicate little time to the elaboration of the monograph, so they favor this methodology, which is simpler. Indeed, systematic review studies and randomized clinical studies, which are more relevant to science, are seldom performed undergraduate students\(^\text{14}\). Disseminating undergraduate students’ manuscripts to the scientific community is an important way to start a research career. In addition, the dynamics of writing and submitting articles for journals is a way of actively inserting students into science. This fact does not depend on the quality and relevance of the chosen journals. A recent report showed that, in Brazil, there was significant growth in the number of works published between 2013 and 2018 and that the undergraduate courses of higher education institutions were fundamental to this result\(^\text{15}\).

The small publication rate in scientific journals among the analyzed monographs occurred because their layout is institutional. That is, they are intended to be filed in the institution’s repository. They are not necessarily studies of inferior quality, as the grades awarded by the defense board were high.

However, because the defense occurs during the last semester of the course, most students do not adapt their monographs to the format of a scientific article and, consequently, do not submit them for publication. Therefore, most of the studies developed at the institution are kept in its repository and are not submitted to scientific publications. It is interesting, therefore, to rethink the defense format of the institution’s monographs so they can be submitted as scientific articles for publication during the course.

Among the positive characteristics of academics who participate in scientific projects are increased autonomy, problem solving and performance in their professional careers\(^\text{16}\). However, the present study did not analyze the facilities and difficulties in preparing the monographs for the undergraduate dental course, an important topic for future research.
5 CONCLUSION

Orthodontics was the specialty that aroused the greatest interest in dental students researched for writing the monograph. In addition, few monographs are actually published in scientific journals.

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