Extracurricular activities and the labor market: perception of school of dentistry in Rio de Janeiro State University (FOUERJ) undergraduates

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• Conflicts of interest: none declared.

ABSTRACT
Objective: the objective of this analysis was highlighting subjects of academic significance to undergraduate students of the Dentistry School of the State University of Rio de Janeiro, by administering surveys. Material and method: this analysis comprised of 219 undergraduate students (85.5%); responses were collected utilizing Google’s electronic framework. Results: this evaluation established fields of relevance not directly related to dental procedures: Clinic Administration (75.8%), Civil Service Exams (69.8%) as well as Odontology and Technology (69.8%). When inquired in regards to topics which require special focus at the conclusion of undergraduate courses, students expressed distinctive interest in training procedures (54.8%) in areas such as: addressing cases with special needs (9.1%) and the marketplace (8.8%). Conclusion: even though scholars pursue guidance in dental procedures, there is an unquestionable demand to address additional topics associated with the reality of the odontology market.
Keywords: Dentistry; Health education; Extracurricular activities; Questionnaires.

Introduction
A dental surgeon’s professional development is currently centered on technicalities,1,2 the premises of the Unified Health System (SUS), technological progress and national curricular guidelines (DCN), which sought to influence curriculums within the health sector to become more humanized as well as focused on social necessities, taking into account a society whose largest employer is the public health system.3,4,5 Furthermore, according to Cayetano (2018), 70% of prospective dental surgeons at the University of São Paulo exhibited a desire to become self-employed professionals, demanding knowledge beyond odontology practices.6

Technological advancements within the last decades have caused a shift in social relationships, allowing instant access to information, directly impacting the job market and consequently altering the teaching-learning process. Additionally, educational areas such as odontology has absorbed this shift and began utilizing new pedagogical tools for professional training.7 In spite of efforts from higher education institutions to adequately prepare for the job market, according to Mania (2018) undergraduates acknowledge that they are insufficiently prepared to perform specialized and management procedures.8

Within this context, in order to embrace the competence and capabilities that are well beyond the academic curriculums, both in pace and in content, universities utilize extracurricular activities as pedagogical training tool. An existing example is the “Academic Leagues”, conceived in the 1990s, through a student initiative and highlighted by Melo (2019) as an activity of positive impact on vocational training and emphasizing the importance of students’ perception in refining topics being addressed as an academic complement.9,10,11

The aim of this analysis was to highlight subjects or content, which generate reluctance, interest or are considered valuable for professional development, by means of undergraduate students’ perception of Dentistry at School of Dentistry of the State University of Rio de Janeiro (FOUERJ). This facilitated the development of a database of reference points that must be addressed in extracurricular activities, targeting the development of an exceptional professional qualified for the present market.

Materials and Method
Research subjects
This study was approved by the Research Ethics Committee (CEP) of Pedro Ernesto University Hospital (HUPE) under number (69684017.8.0000.5259). It is characterized as a simple, descriptive, quantitative cross-sectional, observational, cross-sectional survey, conducted from July to December 2018, at the School of Dentistry of the State University of Rio de Janeiro (FOUERJ).

For the study, a virtual questionnaire was applied to 256
undergraduate students enrolled in the course. Students were randomly selected and a number of at least 18 students per group quota was required, utilizing a confidence level of 95% and a margin of error of approximately 3%.

The criteria for inclusion in the research were the signing of the Free and Informed Consent Form (FICF) and enrollment at FOUERJ. The exclusion criteria’s were questionnaires which were not fully completed and foreign or exchange students.

**Questionnaire**

A virtual questionnaire was elaborated utilizing Google Forms, which is a free tool allowing the structuring of questions, agglutination and tabulation of data in real time. Through this platform, the administrator creates updated spreadsheets, without requiring the construction of a database manually.

Three e-mails with a one month spread from each other were sent welcoming participants for the study. The e-mail return rate was 11.7%. Therefore, in order to conclude the study, after a period of three months, the data collection ensued through the application of the questionnaire via a mobile device requiring participants to be present at the academic unit.

Prior to the application of the questionnaire, a pretesting of the content and its structuring was conducted with 16 students from UERJ School of Dentistry, two from each period, with the objective of creating a more reliable, cohesive final questionnaire that effectively contemplated the study proposed by the researchers.

The final questionnaire contained socio demographic data, 03 open-ended questions and 01 closed-ended question referring to teaching areas and odontological topics.

**Statistical analysis**

A descriptive statistical analysis of the results was performed using Excel 2007.

**Results**

A total of 219 students participated in the survey, which was equivalent to 85% of the response rate. Table 1 describes the socio-demographic data of FOUERJ undergraduate students. Of the subjects who participated in the study, 68% were female and 32% male. The average age of the participants was 22. The class of students from the second period had the highest number of students enrolled (n = 48).

Regarding the use of distance learning (DE) in the undergraduate course, more than half of the students (53%) believed this method would enhance their academic background (Figure 1).

Within the options offered in regards to non-odontology topics considered most relevant in dentistry, Clinic Administration was favoured by undergraduates (75.8%), followed by Civil Service Exams (69.8%), Dentistry and its Technologies (69.8%), Entrepreneurship (64.4%), Marketing (54.8%) and finally Composing Scientific Articles (52.9%) as described in Figure 2.

<table>
<thead>
<tr>
<th>Semester</th>
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<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
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<td>20</td>
<td>8</td>
</tr>
<tr>
<td>2º</td>
<td>30</td>
<td>18</td>
</tr>
<tr>
<td>3º</td>
<td>17</td>
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<td>8º</td>
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<td>8</td>
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<tr>
<td>Total</td>
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<td>70</td>
</tr>
</tbody>
</table>

Table 1. Socio-demographic data of School of Dentistry in Rio De Janeiro State University ("FOUERJ") undergraduate students.
Students’ perceptions of topics that must be addressed at the conclusion of their course according to the odontology market were also assessed through an open-ended question. The results obtained were categorized and tabulated in Table 2. It was observed that their main interest was performing extracurricular activities focused on dental procedures (54.8%). This category includes all types of clinical procedures: Surgery, Dentistry, Periodontics, Implantology, Pathology, among others. Another theme evidenced as a necessity was Clinic Administration, as reported by 11.8% of the total students enrolled in the course. Knowledge about caring for patients with special needs was also a concern (9.1%).

Regarding the categories, the answers that mentioned radiography, CT scans or image interpretation were categorized as Image Examination (2.3%). The areas of work in dentistry, career management, jobs and civil service exams were defined as job market (8.8%). Other non-procedural content that must be addressed in odontology courses were: Public Tender, Dentistry and its Technologies, Entrepreneurship, Digital Marketing and Composing Scientific Article.

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### Table 2. Undergraduate students’ perception of the topics to be addressed at the end of their course

<table>
<thead>
<tr>
<th>Topics</th>
<th>1°</th>
<th>2°</th>
<th>3°</th>
<th>4°</th>
<th>5°</th>
<th>6°</th>
<th>7°</th>
<th>8°</th>
<th>Total (n)</th>
<th>Total (%)</th>
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</thead>
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<td>Dental procedures</td>
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<td>24</td>
<td>18</td>
<td>12</td>
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<td>20</td>
<td>11</td>
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<td>3</td>
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<tr>
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<td>5</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>4</td>
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<td>20</td>
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<td>1</td>
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<td>1</td>
<td>0</td>
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<tr>
<td>Dentistry and technologies</td>
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</table>

### Discussion

The odontology market requires professionals with skills beyond technicality, demanding special emphasis on humane training, based on proposals by SUS and DCNs. In this analysis, it was observed that undergraduate students of Dentistry believe their last course period should address technical procedures in addition to, topics such as Clinic Administration, Civil Service Exams and Dentistry and its Technologies. Chehuen et al. (2013), emphasized that undergraduates seek, in addition to specific professional themes, the development of attributions such as: self-esteem, experiences, recognition, responsibility and ability to solve problems. Vieira et al. (2004), corroborated and complemented this view, pointing out desires, monitoring and support of these practices. The results revealed that subjects such as Entrepreneurship and Marketing were selected as relevant options for a dental surgeon’s routine.

Curriculum flexibility permits the implementation of compulsory and non-compulsory activities, targeting the acquisition of practical experiences by the student. Extracurricular activities favor the improvement of skills such as leadership and interpersonal relations, improving the quality of academic achievement and allowing the application of theories obtained in class. Zaroni (2015) concluded that extension projects were activities that most contributed to learning, in addition, the inclusion of students in extramural care with the Family Health Program teams generates benefits to professional training.

The applicability of this content to the curriculum can be amplified through technological innovations. Our results demonstrated that more than half of the students (53%) believed that distance education (DE) can add to their academic formation, in agreement with the results described by Sales (2012).
icipating in virtual research, given the difficulty demonstrated when applying research via e-mail messages.

Conclusions

Although the workload of undergraduate odontology courses is high, curriculums must consider technological innovations to provide knowledge regarding subjects of utmost relevance to students, as the need to address them is evident, as well as other topics related to the profession that complement the reality of the odontology market.

Acknowledgement

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References


Mini Curriculum and Author’s Contribution

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4. Maria Isabel de Castro de Souza – DDS; PhD. Contribution: effective scientific and intellectual participation for the study; critical review and final approval. ORCID: 0000-0002-0355-9673

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