

Perception of entry into in the labor market among dental graduates from a university in southern Brazil

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ABSTRACT

This study examined the perception of entry into the labor market of graduates from a School of Dentistry in southern Brazil. An online questionnaire with eleven open and closed questions was created using Google Forms and applied to recently graduated dentists in an educational institution in southern Brazil. The questionnaire asked questions about the entry into the labor market and the professional practice of recent graduates. The data collected in the questionnaires were transferred to an Excel® spreadsheet and analyzed using absolute and relative frequency for closed questions and descriptive statistics for open questions. Most respondents felt that they were technically qualified for the labor market, considering familiarity with the materials and equipment available, and personally well prepared. Integrated clinics, Dental Specialties Centers of the Brazilian Unified Health System (SUS), extension courses and internships were listed as factors that promoted teamwork and integrated experiences in the various dental specialties.

Descriptors: Undergraduate. General Dental Practice. Counseling. Surveys and Questionnaires.

1 INTRODUCTION

The adjustment of dental graduates to the job market interests dental managers and educators. The competence of graduated dentists in their new role depends on the

opportunities that curricula provide for the development of skills and abilities in the various areas of dentistry. Contacts with the practical environment of Dentistry during learning and the chance to repeat operative

techniques seem to develop their competence and confidence as professionals.

The desires and challenges faced by recent graduates in their transition to the job market have been the subject of several studies¹⁻³. A common goal of graduates is to succeed, obtain favorable results and have a sense of accomplishment⁴.

Patel et al. (2006)⁵ conducted a survey about the practice performed by newly graduated dentists, who reported feeling well prepared for history taking, diagnosis, treatment planning, routine restorative procedures and oral pathology. The results also suggested that they felt less prepared for more complex procedures, such as molar endodontics, endodontic surgery, tooth extraction and orthodontics. Bartlett et al. (2001)⁶ found comparable results: respondents reported high confidence in performing simple procedures, but reduced confidence in more complex procedures, such as tooth extraction and molar endodontics.

The transition of newly graduated dentists to the labor market is an important and challenging stage. Managers and educators should follow up their entry into the job market and their professional practice, also evaluating and reflecting about their teaching in relation to the needs of their communities.

This study examined the perception of entry into the labor market of graduates from a School of Dentistry in southern Brazil.

2 METHODS

This study was approved by the Research Committee of the School of Dentistry where it was conducted and by its Institutional Research Ethics Committee (CAAE 44713221.0.0000.5347).

Study participants were selected using a non-probability method. All dentists who had

graduated from the School in the last two years were invited to participate by e-mail.

After reading the invitation letter and the free and informed consent form, the dentists confirmed their interest and agreement to participate in the study. Time to receive feedback from the former students was 30 days. When there was no response after that time, a new email was sent, with the same content, extending the deadline to 30 more days. All participants who sent the material within 60 days were included in the sample.

Participants answered an online questionnaire built on the Google Forms Platform and designed especially for this study. The questionnaire was prepared by the study authors, and no previously published questionnaire was applied. The questionnaire had eleven open and closed multiple-choice questions, and the variables of interest were beginning of the professional career and entry into the job market.

The data collected in the questionnaires were transferred to a spreadsheet and analyzed using absolute and relative frequency for closed questions and descriptive statistics for open questions.

3 RESULTS

Of the 57 graduates, 25 (43.85%) answered the questionnaire.

Table 1 shows the absolute and relative values of the answers to the closed questions. Most graduates (60%) had already completed a postgraduate course in the two years after graduation. The two most frequent specialties that students selected for their qualification were Public Health (24%) and Dentistry (12%). However, they reported that during their undergraduate course, the areas that they had the greatest affinity for or interest in qualifying were, in descending order: Endodontics (9), Restorative

Dentistry (7), Pediatric Dentistry (5), Oral and Maxillofacial Surgery (4), Orthodontics (2), Periodontics (2), Public Health (2), Prosthesis (2), Stomatology (1) and Dentistry for People with Disabilities (1). According to the participants, the two aspects that led them to choose the specialty were affinity for the specialty and the financial return that they would have.

Table 1. Absolute and relative values of the answers ton the closed questions of the questionnaire.

Question	n	%
Did you take any specialty course after graduating in Dentistry?		
Yes	15	60%
No	10	40%
Did you take a certificate course or a degree course?		
Only a certificate course	11	44%
Only a degree course	0	0%
Both a certificate and a degree course	4	16%
I did not take any post-graduation course	10	40%
In what specialty are you taking a post-graduation course?		
Oral and Maxillofacial Surgery	2	8%
Pediatric Dentistry	2	8%
Endodontics	1	4%
Periodontics	2	8%
Geriatric Dentistry	0	0%
Dental Prosthesis	1	4%
Implant Dentistry	0	0%
Orthodontics	1	4%
Restorative Dentistry	3	12%
Orofacial Harmony	0	0%
Stomatology	1	4%
Forensic Dentistry	0	0%
Labor Dentistry	0	0%
Oral and Maxillofacial Pathology	0	0%
Dental Radiology and Imaging	0	0%
Dentistry in Public Health	6	24%
Acupuncture	0	0%
Homeopathy	0	0%
Sports Dentistry	0	0%
Maxillary Facial Orthopedics	0	0%
Temporomandibular Disorders and Orofacial Pain	0	0%
Dentistry for People with Disabilities	0	0%
Oral and Maxillofacial Prosthesis	0	0%
No post-graduation course	10	40%
Did you feel well qualified to join the labor market?		
Yes	15	60%
No	10	40%
Places where you are working as a dental professional:		
Public Service	11	44%
Your own private practice	6	24%
Somebody else's private practice	15	60%
Academic career	2	8%
No longer working as a dental professional	0	0%

The analysis of entry into the job market revealed that 60% of the participants felt well prepared after graduation. They reported that completion of Integrated Clinic courses, training in Dental Specialties Centers, extension courses and internships facilitated their adaptation to the labor market and provided experience in teamwork and in different dental specialties. However, the areas of dental practice and office management, as well as of financial management skills, including costs of materials and treatments, should be better developed during graduation. Moreover, the practice in the academic environment should include all possibilities found in the market. All the materials and equipment that they use in their current jobs are the same as those used in graduation, with a few exceptions, such as intraoral cameras, rotary endodontic systems and nitrous oxide for conscious sedation.

4 DISCUSSION

Knowledge about how graduates enter the job market is fundamental for the planning and evaluation of teaching practices.

Most graduates felt ready to face the job market when they completed their graduation. This finding provided relevant information about the transition from being a student in the university academic environment to being a professional in the job market. Higher education has the prerogative of transforming and improving individuals for their profession of interest, so that they will be prepared to act in a dignified and ethical manner in the society in which they now work. Participants reported that completion of Integrated Clinic courses, training in Dental Specialties Centers, extension courses and internships facilitated their adaptation to the labor market. According to Skelton et al. (2001)⁷, Bernabé et al. (2006)⁸, Bernabé et al. (2006)⁹, and Razak et al. (2008)¹⁰, education should be

based on community needs, and the education of healthcare professionals should develop students' discernment and their ability to develop solutions for collective demands. According to Lampert (2003)¹¹, dentistry students should have opportunities to practice in professional environments, and not only in educational institutions, to be in touch with the actual needs of the people with whom they will work. Higher education institutions have a role in training professionals for the new healthcare model and requirements of the current public health system in Brazil. Studies in the literature confirm that educational institutions should prepare professionals that have scientific, ethical and social skills, as people are the most important resource for the production of changes in any organization¹².

In addition to the closeness of academic practices within the institutions to the reality in society, the participants also reported that the materials and equipment that they use at work are the same as those used in graduation. As new products are launched every day, professors should continue education and training to be ready for practical undergraduate teaching. The devices and techniques that the respondents used for the first time only after graduation - intraoral cameras, rotary endodontic systems, conscious sedation with nitrous oxide – should be included in the courses offered in Schools of Dentistry. These resources, however, are used in specific activities, for which professionals are trained only in postgraduate courses.

According to participants, the areas of dental practice and office management, as well as of financial management skills, including costs of materials and treatments, should be better developed during graduation. Baur et al. (2016)¹³ and Ferraz et al. (2018)¹⁴ also reported that management and marketing in Dentistry should be added to the curriculum. The findings in the

study conducted by Mania et al. (2018)¹⁵ revealed that dental graduates felt insecure in managing private practices. These findings may indicate limitations in the development of these competencies, which suggests the need to further explore contents such as workplace administration and entrepreneurship.

Most of the participants currently work in the public service or in third-party clinics/practices, in agreement with findings of other studies with graduates from Brazilian universities¹⁶⁻¹⁸. In the study by Falasco et al. (1990)¹⁹, graduates sought clinical experience immediately after graduation, working in the public sector or as an employee in private clinics. Student should have a broad view of all possible professional possibilities and of community needs during their academic training. According to the Brazilian Curricular Guidelines (DCN)²⁰, undergraduate courses in Dentistry should contribute to the understanding, interpretation and preservation of national and regional cultures and practices, respecting pluralism of conceptions and ethnic-cultural diversity.

Until the end of the 20th century, Dentistry was predominantly autonomous, based on a technical, curative and specialized approach²¹. From the 1990s onwards, entry into the healthcare market became more flexible, changing the predominantly autonomous dental scenario²².

In 2002, the Brazilian DCN for Dentistry was published as a theoretical-methodological framework for higher education reform. Currently, competences and general abilities in decision-making, communication, leadership, management and continuing education should be acquired during graduation according to the DCN. These guidelines also recommend the involvement of students in curricular activities of health promotion, prevention, rehabilitation and recovery since the beginning of the course. In

addition, the profile of graduates should be in agreement with the Brazilian healthcare policies²⁰.

Undergraduate students need time and many years of exposure to and experience in clinical practice environments to consolidate their knowledge, skills and professional attitudes²³. Over time, this will define how future professionals practice Dentistry. During their professional life, there will probably be many changes, often imposed by society. Competence in clinical practice should not be seen as an achievement only, but rather as a lifelong learning habit²⁴.

As part of their continued education in a certain area, 60% of the participants have already completed a postgraduate course in the two years after graduation. Pinheiro and Noro (2016)²⁵, Mania et al. (2018)¹⁵, and Melo Júnior et al. (2018)²⁶ also found that most graduates already had some postgraduate academic degree. This may reflect both the great demands of the market and a gap in learning during undergraduate training. Graduates, therefore, take postgraduate courses to address deficiencies in their graduation. The area of greatest demand for qualification by the participants was Collective Health. Within the field of Public Health, education is interdisciplinary; there is complexity in the object of study, which requires professionals to understand the determinants of health/disease and overcome the fragmentation of human knowledge²⁷.

According to the DCN²⁰, graduates in Dentistry should have the following general profile: generalist dentist, endowed with solid technical-scientific training and active in permanent professional development due to advances in knowledge; humanistic and ethical, attentive to human dignity and individual and collective needs, promoting integral health and transforming reality for the benefit of society;

able to work in inter- and transdisciplinary teams; proactive and enterprising, with a leadership attitude; communicative, able to express themselves clearly; critical, reflective and active in dental practice at all levels of health care; conscious and participative in the face of social, cultural, economic and environmental policies and technological innovations. The essential curricular contents of the undergraduate course in Dentistry should address the health-disease process of individuals, families and populations, in different life cycles, according to epidemiological and professional realities. The curriculum should be composed of related contents in the Biological Sciences, Health, Human and Social Sciences and Dental Sciences, which should be developed in an integrated manner to provide comprehensive care in their areas of performance.

According to the participants, the two factors that defined their choice of a specialty were affinity for the area and the financial return that they would have. Over the past few years, the number of students in higher education has grown in Brazil, and from 2008 to 2018, the numbers in undergraduate courses increased by 49% in private institutions and 32.3% in public institutions²⁸. Despite this growth also in the number of qualified professionals entering the labor market each year, there seems to be a reduction in job opportunities. Professionals are required to have a broad repertoire of skills and competences²⁹. Thus, dentists apply for entry into the public sector because of financial stability and the possibility of multidisciplinary activities, which is in agreement with findings in the study conducted by Sousa et al. (2017)³⁰.

5 CONCLUSION

Data analysis in this study revealed that most of the participants feel qualified for the labor market. Integrated Clinic courses, training

in Dental Specialties Centers, extension courses and internships are academic training activities that provide experience in teamwork and in the various specialties of Dentistry.

RESUMO

Percepção de egressos de um curso de Odontologia no sul do Brasil sobre a inserção no mercado de trabalho

O objetivo do presente estudo foi conhecer a percepção de egressos de um Curso de Odontologia no sul do Brasil sobre a inserção no mercado de trabalho. Para isso, foi aplicado um questionário *online*, por meio da Plataforma Google Forms, com onze questões abertas e fechadas aos cirurgiões-dentistas formados na instituição nos últimos dois anos. O questionário foi estruturado a fim de analisar como está sendo realizada a inserção e a prática profissional dos recém-formados no mercado de trabalho. Os dados coletados foram transferidos para uma planilha e analisados por meio de frequências absoluta e relativa nas questões fechadas e descritiva nas questões abertas. A maioria dos respondentes apontaram estar capacitados para o mercado de trabalho tanto sob ponto de vista técnico, com familiaridade em relação aos materiais e equipamentos disponíveis, quanto sob o ponto de vista de pessoal. As disciplinas de clínica integrada, os Centros de Especialidades Odontológicas do Sistema Único de Saúde, extensões e estágios extramuros foram elencados por promoverem uma vivência do trabalho em equipe e da integralidade das diversas especialidades da odontologia.

Descritores: Graduação. Prática Geral de Odontologia. Orientação. Inquéritos e Questionários.

REFERENCES

1. Baldwin PJ, Dodd M, Rennie JS. Young dentists--work, wealth, health and happiness. *Br Dent J.* 1999;186(1):30-6.
2. Ali K, Tredwin C, Kay E, Slade A. Transition of new dental graduates into practice: a qualitative study. *Eur J Dent Educ.* 2016;20(2):65-72.

3. Gilmour ASM, Welply A, Cowpe JG, Bullock AD, Jones RJ. The undergraduate preparation of dentists: Confidence levels of final year dental students at the School of Dentistry in Cardiff. *Br Dent J*. 2016;221(6):349-54.
4. Leadbeatter D, Madden J, Ross B, Russell E. Transition to dental practice: Newly graduated dentists' views of being successful in dental practice. *Eur J Dent Educ*. 2020;24(4):753-62.
5. Patel J, Fox K, Grieveson B, Youngson CC. Undergraduate training as preparation for vocational training in England: a survey of vocational dental practitioners' and their trainers' views. *Br Dent J*. 2006;Suppl:9-15.
6. Bartlett DW, Coward PY, Wilson R, Goodsman D, Darby J. Experiences and perceptions of vocational training reported by the 1999 cohort of vocational dental practitioners and their trainers in England and Wales. *Br Dent J*. 2001;191(5):265-70.
7. Skelton J, Mullins MR, Kaplan AL, West KP, Smith TA. University of Kentucky community-based field experience: program description. *J Dent Educ*. 2001;65(11):1238-42.
8. Bernabé E, Bernal JB, Beltrán-Neira RJ. A model of dental public health teaching at the undergraduate level in Peru. *J Dent Educ*. 2006;70(8):875-83.
9. Bernabé E, Ludeña MA, Beltrán-Neira RJ. Self-perceived public health competency among recent dental graduates. *J Dent Educ*. 2006;70(5):571-9.
10. Razak IA, Latifah RR, Jaafar N, Abu Hassan MI, Ab Murat N. Assessing the competence of Malaya dental graduates: employers' and graduates' perceptions. *J Dent Educ*. 2008;72(3):364-9.
11. Lampert JB. Na transição paradigmática da educação médica: o que o paradigma da integralidade atende que o paradigma flexneriano deixou de lado. *Cad. ABEM*. 2004. [Cited Nov 8, 2021]. Available from: <https://www.sumarios.org/artigo/na-transi%C3%A7%C3%A3o-paradigm%C3%A1tica-da-educa%C3%A7%C3%A3o-m%C3%A9dica-o-que-o-paradigma-da-integralidade-atende-que-o>.
12. Gil CRR. Human resources training in family health: paradoxes and perspectives. *Cad Saude Publica*. 2005;21(2):490-8.
13. Baur G, Cardoso M B, Spiger V, Amante CJ. Perfil empreendedor dos estudantes de odontologia da Universidade Federal de Santa Catarina. *Rev ABENO*. 2016;16 (2):77-82.
14. Ferraz MAAL, Nolêto MSC, Martins LLN, Bandeira SRL, Portela SGC, Pinto PHV, Freitas SAP, Leite CMC, Filho JCB, Rêgo MRS. Perfil dos egressos do curso de Odontologia da Universidade Estadual do Piauí. *Rev ABENO*. 2018;18(1):56-62.
15. Mania TV, Vargas AMD, Ferreira EF. Inserção no mundo do trabalho odontológico: percepção de graduandos em Odontologia sobre habilidades adquiridas e expectativas. *Rev ABENO*. 2018;18(3):148-58.
16. Querino JPFO, Peixoto LR, Sampaio GAM. Perfil dos concluintes de Odontologia da Universidade Estadual da Paraíba, *Rev ABENO*. 2018;18(1):170-81.
17. Silva CV, Spiger V, Amante CJ. Perfil e expectativas profissionais de concluintes do curso de graduação em Odontologia da Univerdade Federal de Santa Catarina. *Rev ABENO*. 2018;18(3):35-42.
18. Araujo JPC, Firmeza LMD, Almeida MEL, Teixeira AKM. Perfil dos egressos do curso de Odontologia da Universidade Federal do Ceará e suas percepções acerca do mercado de trabalho. *Rev ABENO*. 2021;21(1):1073.
19. Falasco RF, Robinson E, Faja BW. Problems encountered by recent graduates in establishing dental practices. *J Mich Dent Assoc*. 1990;72(1):15-9.
20. Brasil. Ministério da Educação. Conselho

- Nacional de Educação. Câmara de Educação Superior. Resolução CNE/CES 803/2018. Institui Diretrizes Curriculares Nacionais do Curso de Graduação em Odontologia. Diário Oficial da União 17 junho 2021; Edição 112, Seção 1 página 59. [Cited Nov 8, 2021]. Available from: <https://pesquisa.in.gov.br/imprensa/jsp/visualiza/index.jsp?data=17/06/2021&jornal=515&pagina=59&totalArquivos=118>.
21. Lucena EHG, Pucca Júnior GA, Sousa MF. A Política Nacional de Saúde Bucal no Brasil no contexto do Sistema Único de Saúde. *Tempus* (Brasília). 2011;5(3):53-63.
22. Cardoso AL, Vieira ALS, Machado MH. Mercado de trabalho dos odontólogos no Brasil. *Divulg Saúde Debate*. 2010;(45):71-9.
23. Chambers DW. Dental curriculum and accreditation—means, ends, and the continuum. *J Dent Educ*. 1996;60(10):816-20.
24. Leach DC. Competence is a habit. *JAMA*. 2002;287(2):243-244.
25. Pinheiro IAG, Noro LRA. Egressos de Odontologia: o sonho da profissão liberal confrontado com a realidade da saúde bucal. *Rev ABENO*. 2016;16(1):13-24.
26. Melo Júnior PC, Gurgle LGF, Guimarães RP, Souza LC, Pedrosa MS, Vicente da Silva CH. Perfil dos egressos do Curso de Odontologia da Universidade Federal de Pernambuco. *Rev ABENO*. 2018; 18(3):93-104.
27. Araújo MBS, Rocha PM. Teamwork: a challenge for family health strategy consolidation. *Cien Saude Colet*. 2007;12(2):455-64.
28. Brasil. Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira (Inep). Censo da Educação Superior 2018: notas estatísticas. Brasília, 2019. [Cited Nov 8, 2021]. Available from: https://download.inep.gov.br/educacao_superior/curso_superior/documentos/2019/censo_da_educacao_superior_2018-notas_estatisticas.pdf.
29. Teixeira MAP, Gomes WB. Estou me formando... e agora? Reflexões e perspectivas de jovens formandos universitários. *Rev ABOP*. 2014;5(1):47-62.
30. Sousa JED, Maciel LKB, Oliveira CASD, Zocratto KBF. Mercado de trabalho em Odontologia: perspectivas dos estudantes concluintes de faculdades privadas no município de Belo Horizonte, Brasil. *Rev ABENO*. 2017;17(1):74-86.

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