Labor market for dentists in the State of Pará: current overview and perspectives

Danielle Tupinambá Emmi*; João Cláudio Pinheiro Pinto; Marizeli Viana de Aragão Araújo*;
Regina Fátima Feio Barroso*****

    *   PhD, Adjunct Professor, School of Dentistry, Federal University of Pará
  **   Dental surgeon graduated from the Federal University of Pará
***   PhD, Full Professor, School of Dentistry, Federal University of Pará

ABSTRACT

The objective of this research was to analyze the distribution of dentists (CD) in the State of Pará, aiming to improve the understanding of the future of the profession in the State to direct the performance of future professionals. To this end, an analytical documentary study was performed based on data from the Federal Council of Dentistry (CFO), the Regional Council of Dentistry of Pará (CRO-PA) and the Brazilian Institute of Geography and Statistics (IBGE). To evaluate the inhabitant/CD ratio per municipality, and this ratio to per capita income, to the municipal human development index (IDH-M) and dental specialties. Data were analyzed descriptively taking as a parameter the proportion inhabitant/CD. The results showed that Pará has a proportion of 1,687 inhabitants per CD. In only 13.2% municipalities there was a low proportion of inhabitants per CD, according to a recommendation established by the Federal Council of Dentistry. In turn, 23.6% municipalities had no CD. The tendency of the professionals was to settle down in the municipalities with the highest income and the highest IDH-M. As for specialties, it was observed that 72% specialists are concentrated in the capital and municipalities near the capital of the state, where Orthodontics and Endodontics are the most prevalent specialties. Thus, there is a poor distribution of professionals in the State, and it is necessary to promote a policy of internalization of dental surgeons, which will promote greater coverage and better delivery of oral health services to the population of the State.
Descriptors: Human Resources. Dentistry. Indicators. Oral Health.

1 INTRODUCTION

Brazilian dentistry has been undergoing a crisis that accompanies the current political-economic-social conjuncture of the country, causing a fierce dispute for the labor market, since a significant portion of the population, despite needing dental treatment, cannot afford it[1]. This scenario, coupled with a saturated market of dental surgeons (CD) leads to the use of negative competitive strategies, increasingly technizing dental practice, with low pay and often unhealthy working conditions. Thus, it is frequent the frustration of professionals with the reality found[2].

This scenario worsened further in the last decade when there has been a sharp growth in private dental education institutions, which offer programs and place hundreds of professionals in the market each year, without planning on the capacity of this market to absorb such an increase[3].

Brazil is responsible for 19% of the world's dental surgeons[3], with around 300,000 professionals in 2017[4]. However, this number contrasts with a still worrying oral health situation in the country of 20 million toothless persons[5].

Despite the greater insertion of professionals in public health and the advancement of the National Oral Health Policy, many Brazilians are still unattended, which is explained by the inadequate distribution of dental surgeons[3], with the lack of professionals in several municipalities and their excessive concentration in others[6], generating inequality in the access and use of dental services. This effect takes place both nationally - the South and Southeast regions concentrate 59% professionals - and within the states themselves[3].

Although the literature widely uses the indicator "population per professional" as 1 CD for every 1,500 inhabitants[7], seeking to establish the contingency of professionals in a given geographical space, this proportion shows limitations regarding the disparities between rich and poor nations[8]. Thus, the Federal Council of Dentistry (CFO) recommended as a parameter 1 CD for every 2,000 inhabitants to be adequate to check the behavior of the dental profession in the country and the higher or lower density of professionals in the states and municipalities[8,9].

Pará is the second largest State of Brazil in territorial size, being larger than the entire Southeast region, with 144 municipalities divided into six meso-regions[10]. At the time of this study, there were 9 dentistry programs in the state, being 01 public and 08 private, 07 in the capital, Belém, and 02 in the municipality of Santarém.

Thus, the goal of this study was to analyze the dental labor market in the State of Pará, evaluating the distribution of dental surgeons in the meso-regions and municipalities of Pará, relating these data to the local population, per capita income, and the municipal human development index (HDI-M) and the presence of specialist dentists, aiming to improve understanding of the future of the profession, seeking to direct the performance of future professionals in the state.

2 METHODOLOGY

This study used document analysis, which is a method of study based on analysis of documents as primary material, analyzing, organizing and interpreting them according to the objectives of the proposed investigation[11]. Thus, the documents used constitute official sources of data available on the websites of the Federal Council (CFO), Pará Regional Council of Dentistry of the State of Pará (CRO-PA)[4] and the Brazilian Institute of Geography and Statistics (IBGE)[12], collected between August and December 2017.

The estimate of the population of the municipalities for 2017 was based on data released by IBGE, while information on per capita income and HDI-M was based on the 2010 Census, being available in Atlas Brasil, published by the United Nations Development Programme (UNDP) and on the IBGE website, respectively[12,13].

The geographical meso-regions of the State of Pará, which served as the basis for this study are defined by IBGE and comprise Belém Metropolitan Meso-region; Lower Amazon; Marajó; Northeast of the State of Pará; Southeast of the State of Pará and Southwest of the State of Pará. Each meso-region has an individualized regional identity defined by the social process, natural framework and communication network[10] (figure 1).

Figure 1. Map of Meso-regions in the State of Pará. Source: Google Images, 2017

Based on these documents and information, it was possible to obtain the number of inhabitants per professional in each municipality and meso-region of the State of Pará, using as a parameter the CFO recommendation to check the behavior of the dental profession in the state and the higher or lower density of professionals in the municipalities and meso-regions[8,9].

To identify the distribution of CD in the state, the inhabitant/CD ratio was related to the 10 municipalities of Pará with the highest and lowest HDI-M, as well as the highest and lowest per capita income. Specialists were distributed by mesoregion. Data were analyzed descriptively and organized in tables.

3 RESULTS

According to the CFO data, 5,118 dentists (CD) were enrolled at the CRO-PA, thus being able to work in the state. Of this total, 4,958 had primary enrollment and 160 were professionals who had secondary enrollment, and it was not possible to identify in which state they had

primary enrollment. In general, Pará presented the ratio of 1 CD for each 1,687 inhabitants (table 1).

However, out of the 144 municipalities in the state, most (91 - 63.2%) had low CD density, while 34 (23.6%) had no CD registered in the municipality. Only 19 cities, 13.2% municipalities of Pará, had the proportion of professionals within the recommended by the CFO (table 2).

Table 1. Population, number of dentists (CD) with primary enrollment in Pará and ratio of the number of inhabitants to CD in each meso-region of the State of Pará, 2017.

Meso-region	Population	Number of CD	Inhabitants per CD
Metropolitan	2,633,281	3,208	820
Northeast	1,963,353	243	8,322
Marajó	548,634	20	27,431
Lower Amazon	790,663	253	3,125
Southwest	516,201	210	2,605
Southeast	1,914,872	1,024	1,869
Total	8,366,628	4,958	1,687

Table 2. Number and percentage of dentists (CD) in each meso-region of the State of Pará, considering the standard recommended by the Federal Council of Dentistry (CFO), 2017.

Meso-region	Municipalities with 1 CD: 2,000 inhabitants		Municipalities with more than 1 CD: 2,000 inhabitants		Municipalities without CD	
	N	%	N	%	N	%
Metropolitan	2	18.2	7	63.6	2	18.2
Northeast	0	0.0	29	59.2	20	40.8
Marajó	0	0.0	8	50.0	8	50.0
Lower Amazon	1	6.7	12	80.0	2	13.3
Southwest	2	14.3	12	85.7	0	0.0
Southeast	14	35.9	23	59.0	2	5.1
Total	19	13.2	91	63.2	34	23.6

The Metropolitan meso-region had the highest number of professionals (3,208) and the lowest proportion of inhabitants per CD (820) (table 1). The capital Belém, the most populous city in the state, had the lowest proportion, with 1 DC for 520 inhabitants, among the 144 municipalities analyzed. However, out of the 11 municipalities that comprise this meso-region, there were still 2 (18.2%) municipalities without any CD and most (63.6%) of the municipalities

with a ratio of 1 CD to more than 2,000 inhabitants (Table 2).

The Northeast meso-region, in turn, is the second in the state with the largest population, but had 1 professional to each 8,322 inhabitants (table 1). Out of the 49 municipalities that are part of this meso-region, 20 (40.8%) had no CD (table 2).

The Southeast meso-region has a population of almost 2 million, distributed in its 39 municipalities, being the third largest population in the state. It had a ratio of 1 CD to 1,869 inhabitants (table 1), and after the metropolitan meso-region, had the lowest proportion of dentists per inhabitant. This meso-region comprised the largest number of municipalities (14) with a recommended proportion of CD according to the CFO, but still had 2 municipalities without any professionals (table 2).

The Southwest meso-region showed a ratio of 1 DC to 2,605 inhabitants (table 1), however, it is the only meso-region of the state in which all its municipalities have at least one dentist. Nevertheless, of the 14 cities that compose it, only 02 have proportion as recommended by the CFO (table 2).

The meso-regions with the lowest ratio CD per inhabitant were Lower Amazon and Marajó, with 1 CD to 3,125 and 27,431 inhabitants, respectively (table 1).

Table 3 shows that among the 10 cities with the best HDI-M in the state, 08 had number of inhabitants per CD as suggested by the CFO. The municipality of Marituba, located in the metropolitan meso-region, despite presenting the 5th best HDI-M (0.676) was the one that presented the lowest ratio of CD per inhabitant. In the 10 municipalities with the worst HDI-M, there is no professional presence either, or the number of CD in the city is extremely low. It was observed that seven of these municipalities are in the Marajó meso-region and three did not have CD.

Table 4 shows that of the 10 cities with the highest per capita income, nine had the inhabitant/CD ratio as recommended by the CFO, with 5 municipalities located in the southeast meso-region. In contrast, there were no CD or when present they were below the CFO recommendation in all 10 municipalities with the lowest per capita incomes in the state.

As for the presence of the specialists (table 5), Pará had 1,862 fixed in the state. Of these, 1,354 (72.71%) were located in the metropolitan meso-region, with the Belém capital accounting for 67.50% of all Pará specialists. The Southeast meso-region housed 353 (18.95%) CD; the Lower Amazon, 78 (4.18%) professionals; the Southwest meso-region, 46 (2.47%); Northeast meso-regon had 27 (1.45%) specialists, while the Marajó meso-region had only 4 (0.21%) specialists.

The five most frequent specialties in the State of Pará were, in descending order: Orthodontics, Endodontics, Prosthesis, Pediatric Dentistry and Implantology. Only Orthodontics and Implantology have specialists in all meso-regions of the state. The new specialties of Acupuncture, Sports Dentistry and Homeopathy have no professionals registered in the state (Table 5).

4 DISCUSSION

The results of this study showed the uneven and heterogeneous distribution of CDs in the state, with a high concentration in the metropolitan and southeastern meso-regions, especially in municipalities with higher per capita income and better HDI-M.

Table 3: Municipalities, meso-regions, number of inhabitants per dentist and HDI-M, 2017.

Municipality	Meso-region	inhabitants per CD	HDI-M
Belém	Metropolitan	520	0.746
Ananindeua	Metropolitan	1932	0.718
Parauapebas	Southeast	1059	0.715
Santarém	Lower Amazon	1584	0.691
Marituba	Metropolitan	7521	0.676
Castanhal	Metropolitan	2471	0.673
Novo Progresso	Southwest	1253	0.673
Canaã dos Carajás	Southeast	667	0.673
Redenção	Southeast	916	0.672
Marabá	Southeast	1351	0.668
Nova Esperança do Piriá	Northeast	0	0.502
Curralinho	Marajó	33490	0.502
Ipixuna do Pará	Northeast	62237	0.489
Afuá	Marajó	0	0.489
Anajás	Marajó	28466	0.484
Portel	Marajó	30161	0.483
Cachoeira do Piria	Northeast	0	0.473
Bagre	Marajó	0	0.471
Chaves	Marajó	23066	0.453
Melgaço	Marajó	0	0.418

Table 4. Municipalities, meso-regions, number of inhabitants per dentist and per capita income, 2017

Municipality	Meso-region	Inhabitats per CD	Per capita income
Belém	Metropolitan	520	R$853.82
Novo Progresso	Southwest	1253	R$658.31
Parauapebas	Southeast	1059	R$627.61
Ananindeua	Metropolitan	1932	R$564.76
Ulianópolis	Southeast	11505	R$558.72
Tucuruí	Southeast	1625	R$534.02
Redenção	Southeast	916	R$529.54
Marabá	Southeast	1351	R$527.86
Xinguara	Southeast	1145	R$520.57
Tucumã	Southeast	1100	R$517.86
Limoeiro do Ajuru	Northeast	0	R$172.12
Afuá	Marajó	0	R$163.98
Sta Cruz do Arari	Marajó	0	R$161.13
Nova Esperança do Piria	Northeast	0	R$160.34
Viseu	Northeast	29867	R$160.09
Bagre	Marajó	0	R$159.41
Augusto Corrêa	Northeast	14911	R$159.05
Aveiro	Southwest	15947	R$148.71
Melgaço	Marajó	0	R$135.21
Cachoeira do Piriá	Northeast	0	R$130.40

Table 5. Distribution of dentists by specialty in the meso-regions of the State of Pará, 2017

Specialties	Total	Metropolitan	Northeast	Marajó	Lower Amazon	Southwest	Southeast
Orthodontics	413	270	11	2	16	16	98
Endodontics	283	194	3	0	14	5	67
Dental Prosthesis	204	153	4	0	8	0	39
Pediatric Dentistry	198	175	4	1	5	0	13
Implantology	185	95	1	1	14	12	62
Periodontics	157	130	1	0	5	1	20
Cosmetic Dentistry	140	122	0	0	3	2	13
Radiology	79	56	1	0	6	3	13
CTBMF	74	51	1	0	4	4	14
Collective Health	38	34	0	0	1	0	3
Work Dentistry	23	17	1	0	0	0	5
PNE	20	16	0	0	0	2	2
DTM	15	13	0	0	0	0	2
Stomatology	12	11	0	0	1	0	0
Forensic Dentistry	7	5	0	0	0	1	1
Pathology	5	5	0	0	0	0	0
Geriatric Dentistry	4	4	0	0	0	0	0
Orthopedics	3	1	0	0	1	0	1
BMF prosthesis	2	2	0	0	0	0	0
Acupuncture	0	0	0	0	0	0	0
Homeopathy	0	0	0	0	0	0	0
Sports Dentistry	0	0	0	0	0	0	0
Total	1,862	1,354	27	4	78	46	353

Although the labor market in Brazil is generally saturated, which is more evident in capitals and large urban centers[14-17], there are countless municipalities with less development and smaller population that have market potential for CD. In this study, this situation was seen in the northeast and Marajó meso-regions, which presented almost half of their municipalities without even a dentist (table 2).

Several surveys in different regions of Brazil have shown that in the state capitals, the density of professionals is less than 1 CD to every 1,500 inhabitants[14-17]. This reality was confirmed in the present study, where the metropolitan meso-region concentrates the vast majority of dentists in the state (table 1). Many authors justify this situation due to the desire of professionals to settle near the place where they studied college, the largest offer of graduate courses and where the population has higher income[3,18,19].

In fact, this reality was observed in Belém, belonging to the metropolitan meso-region, which comprises most of the state's dental programs. Likewise, the Southeast meso-region, characterized by the strength of cattle ranching and the presence of large mining projects that, together with developed public policies, enabled infrastructure growth and investments in the cities, presented the 2nd best inhabitant/CD ratio in the state, with municipalities with the best per capita incomes and CD per inhabitant ratio of less than 1: 2,000 (table 1).

The HDI-M seeks to analyze, in addition to income, the longevity and education level of the population[18]. The State of Pará only have

municipalities with medium or low HDI-M[12]. Despite not having a municipality with high HDI-M, it can be observed that there was a tendency of professionals to settle down in places with the best indices of the state, as was seen in 8 out of the 10 municipalities with higher HDI-M, which had number of professionals within CFO recommendations (table 3).

With the disputed labor market, many CDs seek professional development through lato sensu program, as a way to differentiate themselves in the market[2,20,21]. In Pará, there was a large concentration of specialists in the metropolitan (72.71%) and Southeast (18.95%) meso-regions and low in the others (8.31%). It was observed that Orthodontics, Endodontics and Implantology are specialties with the largest presence of professionals within the state, however, distributed heterogeneously among the meso-regions (table 5). The market showed scarcity, in relation to the State of Pará as a whole, of professionals specialized in Dental Prosthesis, Oral Pathology, Geriatric Dentistry, Stomatology and Patients with Special Needs, a situation similar to that observed by Paranhos *et al.*[14]. It is also worth highlighting the situation of places such as the southwest meso-region, which had 12 implantodontists, but no dental prosthesis specialist, which shows the possibility of the service not happening in the light of comprehensive care, showing a promising labor market for the CD who want to specialize in Dental Prosthesis.

It is observed that the State of Pará needs a better distribution of professionals in its meso-regions and municipalities. A proposal to achieve a better CD per inhabitant ratio is to stimulate the internalization of these professionals, aiming to improve the coverage of oral health services to the population of the State of Pará. However, increasing the supply of professionals in a given location does not necessarily mean access to dental service or quality care[8]. Thus, it is necessary to adapt a health care model to be adopted by the municipalities, as well as to invest in municipal oral health policies[18].

One possibility for a better distribution of CD is the formation of new Oral Health Teams (ESB) included in the Family Health Strategy (ESF), enabling the presence of professionals in cities where there are no dentists and/or where low income would make private care difficult for the population to access. Studies[19-22] show that although most undergraduate students want to work in private practice and in large urban centers, there is already a significant portion that want to work in the public service, including the FHS. However, students tend to opt for the public sector early in their careers and then seek to migrate to the private sector over time, even viewing this transition as a career advancement[23]. In this context, some points stand out for the non-fixation of these professionals in the long-term public service, such as the low remuneration, which often makes the professional work both in the public and private service; the high number of calls; the lack of adequate structure and the lack of interaction between the oral health and family health teams[24].

On the other hand, the liberal system of attention in dentistry is in crisis. The unbridled expansion of dentistry programs, without, however, a market study results in the formation of a larger contingent of professionals when compared to population growth, generating a private market bottleneck, leading to unfair competition and even the winning of clients[2]. It is noteworthy in this approach that the disorderly opening of new dentistry programs in the country has been the target of criticism by the CFO and the Brazilian Association of Dental Education (ABENO), as it may endanger the reliability and dignity of professionals, allied to the decrease in the quality of undergraduate programs[25].

In the State of Pará, the opening of new programs reflects the reality found in the country, with the growth of courses in private institutions[3]. Of the 09 existing courses, only one is from a public institution, the Federal University of Pará (UFPA). The Support Program for Restructuring and Expansion Plans of the Federal Universities (REUNI) in Pará resulted in an increase of ten places in the UFPA program, without implementing a night course.

It is also noteworthy that the lack of administrative[26] and marketing[27] experience faced by the CDs, whose main objective would be to win over and keep clients can make it difficult for professionals to work in the labor market. Studies show these factors as deficiencies in professional education[26,27].

The knowledge of the dental labor market is essential for understanding the new perspectives that lead to the sustainability and valuation of the profession, because the imbalance generated by professional expectations in a market that no longer supports them increases the number of unfulfilled professionals and, consequently, the dissatisfaction and abandonment of the profession[2].

Although the literature shows analysis of the labor market for the macroregions as a whole[14-17] and some states of the Federation[3,18], no references were found to analyze the labor market situation for the CD in the State of Pará. In the near future, new professionals will enter this market, coming from the six new programs located in Belém and Santarém, which have not yet formed professionals. Importantly, two of these educational institutions are located in the Lower Amazon meso-region, one of the meso-regions with CD deficiency. Thus, it is necessary that these new CDs reflect on where they want to settle down, because the state shows countless municipalities in the interior, in different meso-regions, with a shortage of dental workforce, thus emerging as a market possibility for both general practitioners and specialists.

5 CONCLUSIONS

It was observed that there was an uneven distribution of CD professionals in the State of Pará, with a large concentration in the metropolitan and southeast meso-regions, especially in municipalities with higher per capita income and better HDI-M. This demonstrates market saturation in only a few municipalities, and still many cities where the presence of the generalist or specialist CD is needed. It is necessary to promote a policy of internalization of these professionals to improve the territorial distribution of dentists away from the large urban centers, proving to be a possibility for future professionals, as well as a promising market in the newest specialties of Acupuncture, Homeopathy and Sports Dentistry, as well as specialties still poorly explored by CD in the state.

RESUMO
Mercado de trabalho para o cirurgião dentista no Pará: panorama atual e perspectivas
O objetivo desta pesquisa foi analisar a distribuição de cirurgiões-dentistas (CD) no estado do Pará, visando melhorar a compreensão dos rumos da profissão no estado para direcionar a atuação dos futuros profissionais. Para isso, utilizou-se de um estudo documental analítico, com base nos dados do Conselho Federal de Odontologia, Conselho Regional de Odontologia do Pará e do Instituto Brasileiro de Geografia e Estatística, para avaliar a relação habitante/CD por município, e essa razão à renda *per capita*, ao índice de desenvolvimento humano municipal (IDH-M) e às especialidades odontológicas. Os dados foram analisados de forma descritiva tomando-se como parâmetro, a proporção habitante por CD. Os resultados mostraram que o Pará apresentou uma proporção de 1.687

habitantes por CD. Em apenas 13,2% dos municípios do estado havia baixa proporção de habitantes por CD, de acordo com recomendação estabelecida pelo Conselho Federal de Odontologia. Já 23,6% dos municípios não apresentavam CD. A tendência dos profissionais é de se fixarem nos municípios de maior renda e de maior IDH-M. No campo das especialidades observou-se que 72% dos profissionais especialistas se concentravam na capital e municípios próximos à capital do estado, sendo Ortodontia e Endodontia as especialidades mais prevalentes. Assim, constatou-se que existe má distribuição dos profissionais no estado, sendo necessário promover uma política de interiorização dos CD, o que irá favorecer maior cobertura e melhor prestação de serviços de saúde bucal à população.

Descritores: Recursos Humanos. Odontologia. Indicadores. Saúde bucal.

REFERENCES

1. Medeiros UV, Gandarão GC. Aspectos atuais do mercado de trabalho odontológico no Brasil. Rev ABO Nac 2009; 16(6):351-55.

2. Ferreira NDP, Ferreira ADP, Freire MDCM. Mercado de trabalho na Odontologia: contextualização e perspectivas. Rev Odontol UNESP 2013; 42(4):304-9.

3. Silva EVN, Volpato LER, Moretti MF, Bortoluzzi JM, Borges AH. Distribuição dos cirurgiões-dentistas em Mato Grosso, Brasil. Rev Odontol Bras Central 2017; 26(76):32-6.

4. Conselho Federal de Odontologia. Relatórios do CFO. Distribuição dos Profissionais e Entidades pelos Municípios do CRO - Pará. [Cited Aug. 25, 2017]. Available at: https://cfo.org.br/.

5. Brasil. Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Projeto SB Brasil 2010: resultados principais. Brasília; 2011.

6. Bastos JRM, Aquilante AG, Almeida BS, Lauris JRP, Bijella VT. Análise do perfil profissional de cirurgiões-dentistas graduados na Faculdade de Odontologia de Bauru– USP entre os anos de 1996 e 2000. J Appl Oral Sci 2003; 11(4):283-9.

7. Mathias MP, Cassani E, Sagaz SM, Lucietto DA. Cirurgiões-dentistas e faculdades no Brasil: repercussões sobre a prática odontológica. J Oral Invest 2015; 4(2):25-31.

8. Lucietto DA, Amancio-Filho A, Oliveira SP. Revisão e discussão sobre indicadores para a previsão de demanda por cirurgiões-dentistas no Brasil. Rev Fac Odontol Porto Alegre 2008; 49(3):28-35.

9. Jeunon FA, Santiago MO. A Formação de Recursos Humanos e o Mercado de Trabalho em Odontologia. Rev CROMG 1999; 5(2):79-94.

10. Instituto Brasileiro de Geografia e Estatística. Divisão Regional do Brasil em Mesorregiões e Microrregiões Geográficas. 1990, 1, 26-8.

11. Pimentel A. O método da análise documental: seu uso numa pesquisa historiográfica. Cadernos de pesquisa, 2001; 114:179-95

12. Instituto Brasileiro de Geografia e Estatística. IBGE Cidades. [Cited Oct. 12, 2017]. Available at: https://www.ibge.gov.br.

13. Programa das Nações Unidas para o Desenvolvimento. Atlas do Desenvolvimento Humano no Brasil. [Cited Oct. 13, 2017]. Available at: http:///www.atlasbrasil.org. br/2013.

14. Paranhos LR, Ricci ID, Filho RPA, Castro R, Scanavini, MA. Análise do mercado de trabalho odontológico na região norte do Brasil. Odonto 2009; 17(34):27-36.

15. Paranhos LR, Ricci ID, Scanavini MA, Bérzin F, Ramos AL. Análise do mercado de trabalho odontológico na região Sul do Brasil. RFO 2010; 14(1):7-13.

16. Paranhos LR, Ricci ID, Siqueira DF,

Scanavini MA, Daruge-Júnior E. Análise do mercado de trabalho odontológico na região Nordeste do Brasil. Rev Odontol Univ São Paulo 2009; 21(2):104-18.

17. Paranhos LR, Ricci ID, Bittar TO, Scanavini MA, Ramos AL. Análise do mercado de trabalho odontológico na região Centro-Oeste do Brasil. Rev Odontol Bras Central 2010; 18(45):48-55.

18. Barros SGD, Prates A, Moura AP, Leite M, Bagdeveb T. Distribuição de Cirurgiões-dentistas pelo Território do Estado da Bahia-2007. Rev Baiana de Saúde Pública 2012; *33*(2):162-73.

19. Souza LRF, Silva GD, Oliveira CASD, Zocratto KBF. Mercado de trabalho: perspectivas dos alunos do curso de Odontologia de uma faculdade particular de Belo Horizonte. Odontol Clín-Cient 2015; 14(3):707-12.

20. Rezende FP, Nakanishi FC, Machado ACP, Quirino MRS, Anbinder AL. Perfil, motivações e expectativas dos graduandos e graduados em Odontologia. Rev Odontol Univ São Paulo 2007; *19*(2):165-72.

21. Souza FAD, Bottan ER, Neto, MU, Bueno RN. Por que escolher Odontologia? E o que esperar da profissão:Estudo com acadêmicos do curso de Odontologia da Univali. Odontol Clín-Cient 2012; 11(1):45-9.

22. Sousa JE, Maciel LKB, Oliveira CAS, 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.

23. Matos MS, Tenório RM. Expectativas de estudantes de Odontologia sobre o campo de trabalho odontológico e o exercício profissional. Rev Bras Pesqui Saúde 2011; 13(4):10-21.

24. Costa DS, Rocha MP. O Cirurgião-Dentista e o Mercado de Trabalho no Brasil: Uma Revisão Sistemática da Literatura. Id on Line Rev Mult Psic 2017; 11(38):102-14.

25. Botazzo C. Da Arte Dentária. São Paulo: HUCITEC/FAPESP, 2000.

26. Saliba NA, Moimaz SAS, Prado RLD, Garbin CAS. Percepção do cirurgião-dentista sobre formação profissional e dificuldades de inserção no mercado de trabalho. Rev Odontol UNESP 2012; 41(5):297-04.

27. Zuchini ARB, Lolli MCGS, Lolli LF, Lolli HA. Perfil profissional do cirurgião-dentista em associação ao conhecimento e utilização de marketing. Arq Odont 2016; 48(1):19-25.

Correspondence to:
Danielle Tupinambá Emmi
e-mail: dtemmi@yahoo.com.br
Faculdade de Odontologia, Universidade Federal do Pará
Av. Augusto Corrêa, 1
Cidade Universitária Prof. José da Silveira Netto, Guamá
66.075-110 Belém/PA Brazil