

Profile of endodontists in a Brazilian metropolis regarding dental care for patients with special needs

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ABSTRACT

The aim of this study was to characterize the profile of endodontic professionals from the state of São Paulo, Brazil in relation to dental treatment for patients with special needs (PSN). An online questionnaire on professional training and data on PSN dental care was sent to 3,500 endodontic professionals registered with the São Paulo Regional Dental Council in 2017. Of the 138 returning professionals, 57.2% were female; 34.8% aged 31-40 years; 42.8% had 11-20 years since graduation; 38.4% had 11-20 years of endodontic specialization. Only 22.5% were trained to provide dental care to PSNs and of these, 58.1% had only theoretical classes. Of those who did not receive post-graduation training, 80.4% would like to have received it. Regarding the interest in PSN care courses after specialization, it was observed that only 15.9% performed some type of course, most of them theoretical only. Regarding difficulties during PSN care, "lack of patient collaboration during care" was mentioned by 74.6%, and "insecurity due to lack of professional preparation" by 55.0%. The analysis of the association of variables by the Chi-square test showed that the longer the training time, the lower the difficulty during PSN care ($p=0.0415$). Specialists find more difficulties compared to those with associated training (masters and doctorate) ($p=0.0369$). There was no significant association between difficulties in PSN care and type of HEI (public or private) ($p> 0.05$). The current panorama of endodontic professional training does not seem to include care for patients with special needs.

Descriptors: Education, Dental, Graduate. Dental Care for Disabled. Health Services Accessibility. Endodontics.

1 INTRODUCTION

The World Health Organization (WHO) estimates that 15% of the world's population lives with disabilities¹. In Brazil, according to the Brazilian Institute of Geography and Statistics (IBGE) in 2010², 45.6 million people (23.9%) have some type of disability, whether intellectual, motor, physical, sensory or multiple. Patients with special needs (PSN) or with disabilities have one or more temporary or permanent mental, physical, sensory, emotional, growth or medical limitations that prevent them from undergoing conventional dental interventions³.

Special needs dentistry involves the management of oral health care for patients with intellectual, systemic, physical or psychiatric disabilities and became a specialty in Brazil in 2002⁴. Dental treatment for PSN requires planning based on the patient's disabilities and particularities, requiring behavioral management, scientific knowledge, and modification of techniques for successful treatment^{5,6}.

There is evidence of national and international variation in the availability of undergraduate education and training in the PSND area, and discipline is not yet mandatory in institutions⁷. In the United States and Canada, sixty-five Dentistry schools were questioned regarding the education of undergraduate students on PSND and twenty-two institutions answered that they address the PSND topic during graduation, 64% of which compulsory. Most schools deal with the theme in the 3rd year of student education and only 36% of institutions have service specially adapted for PSND⁵. In Brazil, of the 221 higher education institutions with dentistry degree, fifty-six (27.7%) offer the subject, and thirty-four (60.7%) offer the subject in

compulsory mode, fourteen (25%) as optional subject and in eight institutions, it is not available⁸.

Dental surgeons (DS) are likely to come across a significant number of PSN over the course of their working lives⁷, as this group of individuals is at higher risk for oral diseases. This scenario occurs due to the systemic use of medications, poor eating habits⁹, difficulty in controlling plaque¹⁰, dental trauma caused by falls and increased overjet and lack of lip sealing¹¹. Among the various types of dental care, endodontic treatment is one of the PSN needs due to carious injuries and dental trauma.

Given the above, this study aimed to characterize the profile of endodontic specialists in the state of São Paulo in relation to the dental treatment aimed at PSNs.

2 MATERIALS AND METHODS

The study included all DS endodontic professional with active registry in the Regional Council of Dentistry of São Paulo (CROSP), with any time since graduation and willing to participate voluntarily, in accordance with the Informed Consent Form, answering the online questionnaire.

The study was descriptive exploratory, with cross-sectional design and quantitative approach. Initially, a letter was sent to the CROSP President explaining the research objectives and requesting the sending of online questionnaires to DS endodontic professionals with active registry in the state to their respective email addresses, registered in the state.

For data collection, an online questionnaire structured, self-applicable, easy to understand, was elaborated by researchers through Google forms, containing 15 multiple

choice questions to select more possible or dichotomous options “YES” or “NO” type. The access to the questionnaire occurred through a link sent to the email of professionals registered at CROSP.

The study was approved by the Institutional Ethics Research Committee under protocol No. 67128517.9.0000.5373.

Data were processed using the SPSS version 23.0 software (IBM, Armonk, NY, US). Descriptive data were analyzed by absolute (n) and relative (%) frequency distribution. Chi-square test was used with 5% significance level ($p < 0.05$).

3 RESULTS

The sample consisted of endodontic professionals who answered the questionnaire. Of the 3,500 questionnaires sent via email, 138 were valid, representing a response rate of 3.94%.

Regarding the characterization of the professional profile of respondent endodontic specialists in the state of São Paulo (Table 1), it was observed that the sample was predominantly female (57.2%); the most prevalent age group was 31-40 years (34.8%); most graduated from private institutions (61.3%), with 11-20 years since graduation (42.8%), and 53 DS (38.4%) had 11-20 years of endodontics specialization. Most professionals, 88 (63.8%), performed their professional activities in the private service and 86 (62.3%) worked as generalists and endodontics specialists.

Table 2 shows data on the professional training of endodontists. Most research participants (65.9%) had exclusively specialization course in endodontics, and only one (0.7%) also had specialization in Patients with Special Needs Dentistry (PSND).

Regarding the training of endodontists in PSND during the graduate course, only thirty-one (22.5%) reported having received some type of training, and of these, 18 (58.1%) reported having received only theoretical classes. Of those who did not receive PSND training, when asked about the interest in having received it in the respective period, most endodontists. (80.4%) answered in the affirmative. Regarding the interest in PSND courses after specialization in endodontics, it was observed that only 22 (15.9%) received some type of course, and most of these took only theoretical courses (52.4%).

When asked about major difficulties during dental care for PSN, participants could indicate more than one answer (table 3), with six answer options. “Lack of patient collaboration during care” was reported as the greatest difficulty (50%), followed by “lack of technical and human resources to make care possible” (33.3%) and “insecurity due to lack of preparation professional” (30.4%). When asked where professionals referred PSNs when they could not treat them, 39.7% reported to refer them to specialized services and to other colleagues. Only 5.3% reported not referring PSNs because they do not know where to refer these patients.

By analyzing the association of variables by the Qui-square test (Table 4), it was observed that the longer the training time, the lower the difficulty in “insecurity due to lack of professional preparation” ($p = 0.0415$). Professionals highlighted option 5 “all the difficulties mentioned above” more, compared to those with associated training (master’s and doctorate) ($p = 0.0369$). There was no significant association between difficulties and the type of higher education institution HEI (public or private) ($p > 0.05$).

Table 1. Sample characterization

Variables	N	%
<i>Sex</i>		
Male	59	42.8%
Female	79	57.2%
<i>Age group</i>		
20-30	20	14.5%
31-40	48	34.8%
41-50	39	28.3%
51-60	25	18.1%
> de 60	6	4.3%
<i>Undergraduate higher education institution</i>		
Private	84	61.3%
Public	53	38.7%
<i>Time since graduation (years)</i>		
< 5	11	8.0%
5 to 10	14	10.1%
11 to 20	59	42.8%
> 20	54	39.1%
<i>Time since obtaining the title of endodontist (years)</i>		
< 5	26	18.8%
5 to 10	30	21.7%
11 to 20	53	38.4%
> 20	29	21.0%
<i>Professional practice</i>		
Generalist	4	2.9%
Specialist only	48	34.8%
Both	86	62.3%
<i>Professional service</i>		
Public	9	6.5%
Private	88	63.8%
Both	41	29.7%

Table 2. Professional training of endodontists

Variables	N	%
<i>Postgraduate studies</i>		
Specialization only	91	65.9%
Specialization and Master's degree	29	21.0%
Specialization, Master's and Doctorate	18	13.0%
<i>Did you receive postgraduate training in PSND?</i>		
Yes	31	22.5%
No	107	77.5%
<i>How did this PSND training take place?</i>		
Theoretical class	18	58.1%
Practical class	2	6.5%
Theoretical and practical classes	11	35.5%
<i>If you did not receive PSND training, would you like to have?</i>		
Yes	86	80.4%
No	21	19.6%
<i>Did you take PSND courses after specialization?</i>		
Yes	22	15.9%
No	116	84.1%
<i>If so, in what way?</i>		
Theoretical	11	52.4%
Update	9	42.9%
Specialization	1	4.8%

Table 3. Dental care for PSN by endodontists

Variables	N	%
<i>What are the difficulties in attending PSNs?</i>		
Lack of patient collaboration during care	69	50.0%
Lack of technical and human resources to provide care	46	33.3%
Insecurity due to lack of professional preparation	42	30.4%
Remuneration not compatible with work	24	17.4%
All difficulties cited above	34	24.6%
Other answers	16	11.6%
<i>Where do you refer PSNs when you cannot provide dental care?</i>		
Specialized services and other colleagues	52	39.7%
Specialized services	45	34.4%
Other colleagues	27	20.6%
Do not refer them because do not know where to refer these patients	7	5.3%

Table 4. Association between time since graduation, professional education and difficulty in treating patients with special needs

Variables	Care difficulty “Insecurity due to lack of professional preparation”			Total n (%)	p-value
	Do not know	Yes	No		
Time since graduation					
Less than 5 years	1	6	4	11 (8.0%)	0.0415*
5 to 10 years	0	7	7	14 (10.1%)	
11 to 20 years	1	14	44	59 (42.8%)	
More than 21 years	0	15	39	54 (39.1%)	
Total	2 (1.4%)	42 (30.4%)	94 (68.1%)	138 (100%)	
Professional education					
Care difficulty “All the difficulties mentioned above”					
Specialization	0	22	69	91(65.9%)	0.0369*
Specialization + Master’s	1	4	24	29 (21.0%)	
Specialization + Master’s + Doctorate	1	8	9	18 (13.0%)	
Total	2(1.4%)	34(24.6%)	102(73.9%)	138(100%)	

* Qui-square test

4 DISCUSSION

The state of São Paulo is the most populous in Brazil, with the highest DS concentration in the country (29.4%)¹². Of all endodontists in the country, a large part is in the state (24.2%), the majority of whom (65.3%) are female, as was observed in the present sample. Of the 29,189 DS specialists in various areas of dentistry in the state of São Paulo, only 256 (0.9%) are PSND specialists¹³, making it important for professionals in other specialties to be trained in attending PSNs to meet market demand as the number of people with disabilities tends to increase each year.

In addition, with the increased life expectancy of PSNs and the need and interest to

keep healthy teeth, SDs should be willing, better equipped and prepared to provide endodontic treatment to these patients¹⁴, and should use conscious sedation techniques, general anesthesia, and opt for single-session endodontic treatment, when feasible.

A study in Australia using questionnaires found that all PSND-specialized DS and 95.7% of endodontists reported that they had already undergone endodontic treatment in PSNs, while just over half of general clinical DS (51.4%) had already performed. Among the reasons given by professionals for not performing endodontic treatment for PSNs, limited cooperation was reported by 64.4% and involuntary movements by 51.5%¹⁴. This study

showed that the greatest difficulty found by endodontists was the behavior of PSNs, hindering collaboration during care.

It was also observed in our study that “insecurity due to lack of professional preparation” was one of the difficulties reported by endodontists. Most PSN caregivers reported the lack of training of DS as a major barrier to access dental treatment^{15,16}. Therefore, the need for professional training becomes evident, not only theoretically, but clinically way, aiming to improve the quality of care and the possibility of endodontic treatment for PSNs. It was found in this sample that professionals who were only specialists in endodontics reported more difficulties in treating PSNs when compared to those with associated training (master’s and doctorate) ($p = 0.0369$), making clear the importance of continuing learning and professional training.

The higher education system in Brazil is divided into private and public institutions. Public universities are funded by the government, with no financial cost to students, and the selection process is generally more competitive than in private institutions. Professors and researchers at Brazilian public universities are candidates and have higher salaries compared to those of private institutions. According to the Ministry of Education, there are 56 active institutions in SP that provide undergraduate course in Dentistry, 9 public and 45 private¹⁷. In 2018, the three best dental schools in the state of São Paulo were public¹⁸. Training in public or private institution did not influence difficulty during treatment for PSNs by respondents ($p > 0.05$).

Early exposure to clinical experience involving PSNs and introduction of the PSND discipline in the undergraduate curriculum is of great importance⁶. The number of universities

that include regular PSND discipline in undergraduate courses is much lower than Brazil's need⁸. Considering the great difficulty in exposing undergraduate students to treat PSNs, this exposure may be worse in postgraduate courses, as only 22.5% of our sample reported have received some type of PSND training, a very low number regarding the great dental need for these patients.

PSNs have the right to receive dental treatment in a similar way to the general population. A multidisciplinary approach to the management of PSNs requiring endodontic treatment provides this group of patients with the opportunity to maintaining healthy teeth¹⁴, leaving procedures such as tooth extraction as the last dental treatment option.

5 CONCLUSION

The current scenario of endodontic training in the state of São Paulo, Brazil, does not seem to include caring for patients with special needs. The introduction of the PSND discipline in undergraduate courses is necessary to increase interest in theoretical and practical scientific knowledge in future dental professionals, both generalists and specialists.

RESUMO

Perfil dos endodontistas de uma metrópole brasileira quanto ao atendimento odontológico a pacientes com necessidades especiais

O objetivo do estudo foi caracterizar o perfil dos endodontistas do estado de São Paulo, Brasil em relação ao tratamento odontológico de pacientes com necessidades especiais (PNE). Um questionário *online* sobre capacitação do profissional e dados sobre o atendimento odontológico de PNE foi enviado para 3.500 endodontistas registrados no

Conselho Regional de Odontologia de São Paulo. Dentre os 138 profissionais que retornaram, 57,2% eram do sexo feminino; 34,8% estavam na faixa etária entre 31 e 40 anos; 42,8% tinham entre 11 e 20 anos de formados; e 38,4% possuíam 11 a 20 anos de especialidade. Apenas 22,5% eram capacitados para o atendimento de PNE, sendo que desses, 58,1% tiveram apenas aula teórica. Dos que não receberam capacitação na pós-graduação, 80,4% gostariam de ter recebido. Com relação ao interesse em cursos de atendimento a PNE após a especialização, observou-se que apenas 15,9% realizaram algum tipo de curso, a maioria apenas teórico. Em relação às dificuldades durante o atendimento de PNE a "falta de colaboração do paciente durante o atendimento" foi citada por 74,6%, a "insegurança devido à falta de preparo profissional" por 55,0%. A análise da associação das variáveis pelo teste Qui-quadrado apontou que quanto maior o tempo de formação, menor essa dificuldade ($p=0,0415$). Os especialistas encontram mais dificuldades comparados aos que tem formação associada (mestrado e doutorado) ($p=0,0369$). Não houve associação significativa entre as dificuldades e o tipo de instituição de formação (pública ou privada) ($p>0,05$). O panorama atual da formação do endodontista não contempla o atendimento as pessoas com necessidades especiais.

Descritores: Educação de Pós-Graduação em Odontologia. Assistência Odontológica para Pessoas com Deficiências. Acesso aos Serviços de Saúde. Endodontia

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