


Dentistry for patients with special needs: curriculum structuring in dental courses in the state of Rio Grande do Sul, Brazil

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Abstract Persons with special needs are those with temporary or permanent limitations that require specialized care and healthcare providers who are able to assist them. Teaching dentistry to accommodate persons with special needs with therapeutic resoluteness is essential in dental courses. The aim of the present study was to describe the teaching of Dentistry for Persons with Special Needs (DPSN) in the curricula of dental courses in the state of Rio Grande do Sul, Brazil. The study was carried out through a search of the website of the Ministry of Education and Culture as well as the websites of the dental courses of higher education institutions. Each course - public and private - was analyzed in terms of the presence of DPSN teaching; curriculum structure - compulsory, elective/optional, and extension project; method offered - theoretical and/or practical; workload; and nomenclature employed. The state of Rio Grande do Sul has 23 higher education institutions with undergraduate courses in dentistry and 11 - two public and nine private - (47.8%) offer the teaching of DPSN. Four are mandatory, five are elective/optional, and two are extension projects. With regards to the teaching process, nine of the courses are theoretical/practical and two are only theoretical. There is no standardization in terms of nomenclature, workload, or the period/semester in which DPSN is offered. The present results enable the inference that, in addition to the need to expand the teaching of DPSN in undergraduate dental courses in the state, it is necessary to establish guidelines and protocols for structuring a common teaching and learning basis. It can therefore be concluded that there is a need for greater knowledge and academic training, favoring dental care and greater inclusion for persons with special needs.

Descriptors: Disabled Persons. Dental Care. Education, Dental.

Odontología para pacientes con necesidades especiales: estructuración curricular en los cursos de odontología en el estado de Rio Grande do Sul, Brasil

Resumen Las personas con necesidades especiales (PNE) son aquellas que presentan limitaciones, temporales o permanentes, y que requieren de una atención especial. Estas personas necesitan atención especializada y profesionales de la salud calificados para atenderles. Por tanto, la enseñanza de la odontología para la recepción y resolución terapéutica de la PNE es esencial en los cursos de odontología. Este estudio tiene como objetivo presentar una visión general de la enseñanza de la "Odontología para Personas con Necesidades Especiales (OPNE)" en los planes de estudio de los cursos de odontología en Rio Grande do Sul (RS), Brasil. La investigación se realizó a través de una búsqueda en internet en la página web del Ministerio de Educación y Cultura y en las páginas web de las carreras de Odontología de cada Institución de Educación Superior (IES). Cada curso - público o privado, fue evaluado respecto a la presencia de docencia OPNE; estructuración curricular - obligatoria; proyecto electivo/opcional y de extensión; metodología ofrecida - teórica y/o práctica; carga de trabajo y nomenclatura utilizada. Se encontró que RS cuenta con 23 IES con cursos de grado en Odontología y 11 (47,8%) - dos públicas y nueve privadas - ofrecen enseñanza OPNE. Cuatro son obligatorias; cinco como electivos/opcionales y dos como proyectos de extensión. Respecto al proceso pedagógico, nueve presentan la enseñanza en forma teórico-práctica y dos sólo teórica. No existe una estandarización en cuanto a la nomenclatura, carga horaria y periodo/semestre en que se ofrece. De los resultados obtenidos, se puede inferir que,

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además de la necesidad de ampliar la enseñanza de OPNE en los cursos de pregrado en Odontología en RS, es necesario establecer directrices y protocolos para estructurar una base común de enseñanza y aprendizaje. Se concluye entonces que existe necesidad de mayor conocimiento y formación académica para favorecer la atención odontológica y una mayor inclusión de la PNE.

Descritores: Personas con Discapacidad. Atención Odontológica. Educación en Odontología.

Odontologia para pacientes com necessidades especiais: estruturação curricular nos cursos de Odontologia do estado do Rio Grande do Sul, Brasil

Resumo Pessoas com necessidades especiais (PNE) são as que apresentam limitações, temporárias ou permanentes, e que exigem atenção diferenciada. Esses indivíduos precisam de atendimento especializado e profissionais de saúde aptos para atendê-los. Deste modo, o ensino de Odontologia para o acolhimento com resolutividade terapêutica de PNE é essencial nos cursos de Odontologia. Esse estudo tem como objetivo apresentar o panorama do ensino de "Odontologia para Pessoas com Necessidades Especiais (OPNE)" nos currículos dos cursos de Odontologia do Rio Grande do Sul (RS), Brasil. A pesquisa foi realizada por meio de uma busca na *internet* no sítio eletrônico do Ministério de Educação e Cultura e nos sítios eletrônicos dos cursos de Odontologia de cada Instituição de Ensino Superior (IES). Cada curso - público ou privado, foi avaliado quanto à presença do ensino de OPNE; estruturação curricular - obrigatória; eletiva/optativa e projeto de extensão; metodologia oferecida - teórica e/ou prática; carga horária e nomenclatura utilizada. Verificou-se que o RS tem 23 IES com curso de graduação em Odontologia e 11 (47,8%) - duas públicas e nove privadas - apresentam ensino de OPNE. Quatro apresentam-se como obrigatória; cinco como eletiva/optativa e duas como projeto de extensão. Quanto ao processo pedagógico, nove apresentam o ensino na forma teórico/prático e duas somente teórico. Não existe uma padronização quanto à nomenclatura, carga horária e período/semestre em que a mesma é ofertada. A partir dos resultados obtidos pode-se inferir que, além da necessidade de expandir o ensino de OPNE nos cursos de graduação em Odontologia no RS, é preciso estabelecer diretrizes e protocolos para a estruturação de uma base comum de ensino e aprendizagem. Conclui-se, então, que há necessidade de maior conhecimento e capacitação acadêmica favorecendo a atenção odontológica e maior inclusão de PNE.

Descritores: Pessoas com Deficiência. Assistência Odontológica. Educação em Odontologia.

INTRODUCTION

Brazilian legislation for the inclusion of persons with disabilities (Statute of Persons with Disabilities) is a set of norms to ensure and promote fundamental rights and freedoms to achieve the social inclusion of this population. Public agencies, private organizations, and service providers are obligated to give persons with disabilities priority care through individualized services that ensure differentiated treatment and immediate care¹.

More than one billion individuals – approximately 15% of the global population – live with some form of disability and disability rates continue to increase due to the increase in life expectancy and the aging of the population². In Brazil, approximately 17.3 million individuals two years of age or older live with some type of disability³. Persons with disabilities are those with restrictions of a physical, intellectual, or sensorial nature that impede their full permanent participation in society^{4,5}. However, not every person with disability requires a specialist in dentistry for persons with special needs (DPSN), which is the designation adopted by the Federal Dentistry Council. The justification is that the term "persons with special needs" encompasses a larger population, involving individuals with systemic impairments, pregnant women,

and obese individuals. DPSN takes into consideration temporary or permanent limitations of an intellectual, physical, sensorial, emotional, or medical (e.g., diabetes and hypertension) nature that impede being submitted to a conventional dental situation⁶.

Dental treatment for persons with disabilities involves the understanding of specific difficulties (e.g., motor, communication, and physical limitations). Moreover, nonspecific difficulties, such as the lack of skilled healthcare providers, architectonic barriers, and overprotection/rejection of persons with disabilities also interfere with treatment⁶.

Persons with disabilities are more vulnerable to oral problems and have greater frequencies of dental caries, periodontal disease, and traumatic dental injuries. With regards to the prevalence of caries in this population, no differences are found between the sexes. Moreover, about 80% do not receive routine dental care and treatment⁷⁻⁹. Persons with disabilities are more likely to have access to care denied compared to the general population due to fact that many healthcare providers do not have consolidated skills in terms of DPSN¹⁰. Thus, difficulties related to dental treatment for persons with disabilities begin with the absence of knowledge on DPSN during the educational process of future dentists in undergraduate dental courses in Brazil¹¹.

In June 2021, the Ministry of Education issued new National Curricular Guidelines for dental courses, determining clinical dental care for persons with special needs as curricular content¹². To ensure skilled future dentists, dental students depend on their education and it is of extreme importance for students to have contact with persons with special needs while in the undergraduate course to attenuate their insecurity when providing care for such individuals after graduation¹³.

Therefore, the aim of the present study was to describe the teaching of “dentistry for persons with special needs” (DPSN) in the curricula of dental courses in the state of Rio Grande do Sul, Brazil.

METHOD

An exploratory, descriptive study with a quantitative approach was conducted. The website of the Ministry of Education (www.emec.mec.gov.br) and official websites of institutions of higher education in the state of Rio Grande do Sul were consulted. The entire teaching projects of the 23 dental courses were analyzed, as available on each website. Data were collected independently by two researchers. Divergences of opinion were resolved by consulting a third researcher to establish a consensus. The analysis of the documents led to the identification of the number of dental courses in the state in August 2020, classification of public or private course, and whether the teaching of DPSN was offered. The courses that offered DPSN were then classified according to curricular structure (mandatory, elective/optional, or university extension), teaching process (theoretical, practical, or both), total work load (in hours), semester in which DPSN was offered, and nomenclature. The data were tabulated and analyzed using descriptive analysis. Due to the non-involvement of human subjects and the use of material considered in the public domain, there was no need for approval from an ethics committee.

RESULTS

All dental schools in the state are registered on the Ministry of Education website. Rio Grande do Sul has 23 dental courses – three public and 20 private courses. The teaching of DPSN is offered in 11 courses (48%) – two public and nine private courses. In terms of the curricular structuring of teaching DPSN, four disciplines are mandatory, three are elective/optional, and two are university extension projects in the nine private courses, whereas such disciplines are elective/optional in the two public courses. With regards to teaching process, nine institutions offer both theoretical and practical activities (two public and seven private courses) and two institutions offer only theoretical teaching (**Table 1**).

The results also revealed considerable variability in the nomenclature employed, although the term “special needs” is included in most institutions (55%). The workload also varies considerably, ranging from 30 to 80 hours, with an average of 54 hours. DPSN teaching is offered between the fifth and tenth semesters of the course. Thus, there is no standardization with regards to the nomenclatures, curricular structure, workload, or semester of the course in which DPSN is offered (Table 1).

Table 1. Curricular structure of DPSN teaching in dental courses in state of Rio Grande do Sul, Brazil.

| Type of institution | Curricular structure | Teaching process | Nomenclature | Workload (hours) | Semester |
|---------------------|----------------------|---------------------------|---|------------------|------------------|
| Public | Elective | Theoretical/ Practical | Dental Care for Patients with Special Needs | 60 | 7 th |
| Public | Optional | Theoretical/ Practical | Integral Care for Patients with Special Needs | 72 | 5 th |
| Private | Mandatory | Theoretical/ Practical | Dentistry for Special Patients | 40 | 8 th |
| Private | Mandatory | Theoretical/ Practical | Internship in Clinic for Infants and Children with Special Needs | 60 | 9 th |
| Private | Mandatory | Theoretical | Dentistry in Collective Health for Patients with Special Needs and Geriatric Patients | 36 | 8 th |
| Private | Mandatory | Theoretical/ Practical | Internship in Integrated Clinic for Patients with Special Needs | 60 | 10 th |
| Private | Elective | Theoretical/ Practical | Treatment of Special Patients | 80 | 8 th |
| Private | Elective | Theoretical/ Practical | Treatment of Special Patients | 80 | 8 th |
| Private | Elective | Theoretical | Special Patients | 30 | 10 th |
| Private | Extension project | Theoretical/ Practical | Conquering Health: Dental Care for Patients with Disabilities | 40 | 8 th |
| Private | Extension project | Theoretical/ Practical | Dental Care for Patients with Special Needs | 40 | 8 th |

DISCUSSION

Around one billion individuals in the world and around 45 million in Brazil live with some type of disability and require medical and dental care from trained healthcare providers¹⁴. According to the National Curricular Guidelines for undergraduate dental courses, dentists should have a generalist, humanist, critical, reflective education based on ethical and legal principles and the understanding of the socioeconomic and cultural situations of their communities¹². Thus, it is essential for their education to qualify them to deal with technical and human diversity.

Thus, there is an evident need for dentists to have knowledge and skills to address the needs of patients, irrespective of their particularities¹⁵. According to Bonato *et al.* (2013)¹⁶, the education of dentists should involve DPSN. However, the authors state that the number of courses that offer such content is far below the needs of the country. Andrade *et al.* (2022)¹⁷ also state that curricular structures of dental courses in Northeast Brazil also lack the DPSN component and this can exert a direct impact on the education of general dentists. Conceição *et al.* (2021)¹⁸ report that the inexperience of dental students in the management of persons with special needs generates gaps in their education and can contribute to the barrier to access to oral health services for this population.

In the state of Rio Grande do Sul, less than half of dental schools offer DPSN and only one-third do so mandatorily. Elective/optional classes are those chosen by the student. The optional modality involves receiving credits, whereas the elective modality is not part of the curricular profile of the course. In the state, these classes constitute the model proposed by approximately half of the dental schools. There is also teaching offered as university extension, which

requires interest on the part of the student in activities involving interactions between the university and society. This model was proposed in two of the dental schools. The results make it clear that the majority of dental schools in the state that offer DPSN teaching (63%) leave it up to the student to choose to receive a DPSN education or not.

In a study conducted to assess the teaching of DPSN at dental schools in Northeast Brazil, the authors found that 44% had the DPSN component and that 91% of the courses offered it as a mandatory discipline¹⁹. Investigating the DPSN curricular component in the state of Paraíba, Penha et al. (2018)²⁰ found that six of the nine dental courses in the state offered such content and the discipline was mandatory in all six courses. Faria *et al.* (2021)²¹ analyzed the ten dental courses in the state of Rio Grande do Norte and found that five offered the discipline, which was optional in only one course.

Teaching processes that combine theory and practice broaden the knowledge and skills of students with the intention to form more qualified, efficient, humanized dentists^{14,22}. Bonato *et al.* (2013)¹⁶ described the importance of clinical experience to the education of undergraduate dental students in providing care for persons with special needs. The results of the present study are in agreement with this perspective, as more than 80% of the courses in the state of Rio Grande do Sul that offer DPSN teaching do so including both theory and practice. On the other hand, the study found important difference in the total workload and period of the course in which the class is offered, demonstrating the difficulty that administrators and professors have in identifying the possibilities and characteristics of the teaching and learning process involved in DPSN.

Several differences were found with regards to the nomenclature used to characterize the teaching of DPSN, although the term "special needs" was recurrent. Analyzing the names of the disciplines, Penha *et al.* (2018)²⁰ and Faria *et al.* (2021)²¹ also found considerable variability. Another study that analyzed the teaching of DPSN in Brazil found that the most widely used nomenclature was "special patients", followed by "dentistry for special patients"²³. The results of the present study in the state of Rio Grande do Sul are in agreement with the designation adopted by the Federal Dentistry Council (2002) for this specialty: "Dentistry for Patients with Special Needs".

As a large portion of dentists are not prepared to offer dental care for persons with disabilities and these patients have difficulties finding appropriate dental services, permanent curricular reforms are important to professional qualification in oral health care for persons with disabilities^{11,14,24}.

Higher education institutions in Brazil have teaching autonomy guaranteed by law and can establish the curricular programming of each course. The National Education Council determines the essential content to be addressed during the course, but each school has the option of offering DPSN or not in the curricular structure, which was neglected for a long time. With the recognition by the Federal Dentistry Council of DPSN as a specialty, there has been an increase in the offer of different DPSN teaching modalities in dental courses^{14,22}. In June 2021, the reformulation of the National Curricular Guidelines for dental courses in Brazil was issued. The chapter addressing curricular structure and content made the discipline of DPSN (both theory and practice) mandatory in dental schools. The institutions had two years to adjust to the new format¹¹.

The present study has limitations related to the complete availability of official information by the dental schools, which should be accessible to all individuals. Moreover, delays in the dissemination of data, changes in curricular matrices, and out-of-date websites are possible sources of bias. On the other hand, the inclusion of all curricular matrices of the undergraduate courses in the state and the careful data collection process are strengths of this study.

Dentists prepared to offer care to persons living with disabilities are the main facilitators of access to dental services and should promote actions to improve health care for this population^{25,26}. Thus, there is a need for the preparation of professors for the teaching of DPSN.

CONCLUSION

Although the rights of persons with disabilities and the new National Curricular Guidelines (21/06/2021) make the inclusion of DPSN mandatory, the results of the present study reveal that less than half of the dental schools in the state of Rio Grande do Sul offer the teaching of DPSN in their curricular matrices. When present, the decision to study the

discipline is up to the students at most dental schools. It is also important to highlight barriers in the process of teaching DPSN, such as management and human resources for the characterization and composition of competences and skills for providing dental care for persons with disabilities.

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