Oral health promotion and dental care of children with microcephaly in the context of public health

Promoção da saúde bucal e cuidados odontológicos para crianças com microcefalia no contexto da saúde pública

Promoción de la salud bucodental y atención odontológica a niños con microcefalia en el contexto de la salud pública

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ABSTRACT

The university's fundamental mission is to be a source of scientific knowledge, technological innovation, and academic public health practices, all the while being mindful of social responsibility. But when faced with children in vulnerable clinical conditions, what would this public and professional knowledge and practice be? Currently, there is a lack of oral health education programs aimed at children with microcephaly, including a protocol for preventive dental care. This study aims to describe the field experiences of the academic team of the Dental School of the State University of Southwest Bahia in oral public health practices in children with microcephaly based on the principles of universality, equity, and integrality. Extracurricular activities provide a dialogue between the university and society, where both environments teach and learn from each other, making the university not the only place where knowledge is shared. Consequently, professors and students must understand that in order to achieve a high quality education, the implementation of extracurriculars in their academic curriculum is extremely necessary.

Keywords: university, public health, microcephaly, dentistry.
RESUMO
A universidade tem uma missão fundamental de proporcionar avanços tecnológicos, conhecimentos científicos e práticas acadêmicas de saúde pública, sem esquecer a sua responsabilidade social. Mas como se daria esse conhecimento profissional e essa prática extensionista diante de crianças em condições clínicas vulneráveis? Atualmente, há uma carência de programas de educação em saúde bucal voltados para crianças com microcefalia, incluindo um protocolo de atendimento odontológico preventivo. Este estudo propõe relatar experiências da equipe acadêmica do curso de Odontologia da Universidade Estadual do Sudoeste da Bahia nas práticas de saúde pública com base nos princípios da universalidade, equidade e integralidade. As atividades extracurriculares oportunizam um diálogo entre a universidade e a sociedade, em que ambos os ambientes ensinam e aprendem um com o outro, fazendo com que a universidade não seja o único lugar onde o conhecimento é disseminado. Consequentemente, professores e alunos devem compreender que, para alcançar uma educação de alta qualidade, a implementação de atividades extracurriculares no seu currículo acadêmico é extremamente necessária.

Palavras-chave: universidade, saúde pública, microcefalia, odontologia.

RESUMEN
La misión fundamental de la universidad es ser fuente de conocimiento científico, innovación tecnológica y prácticas académicas de salud pública, todo ello teniendo presente la responsabilidad social. ¿Pero qué conocimientos y prácticas públicas y profesionales se desarrollan frente a niños en condiciones clínicas de vulnerabilidad? En la actualidad, faltan programas de educación sobre salud bucodental dirigidos a niños con microcefalia, que incluyan un protocolo de atención dental preventiva. Este estudio tiene como objetivo describir las experiencias de campo del equipo académico de la Facultad de Odontología de la Universidad Estatal del Sudoeste de Bahía en prácticas de salud pública bucal con base en los principios de universalidad, equidad e integralidad. Las actividades extracurriculares constituyen una oportunidad de diálogo entre la universidad y la sociedad, en la que ambos entornos enseñan y aprenden mutuamente, de modo que la universidad no es el único lugar donde se difunde el conocimiento. En consecuencia, profesores y alumnos deben ser conscientes de que, para lograr una educación de calidad, es sumamente necesaria la implantación de actividades extracurriculares en su currículo académico.

Palabras clave: universidad, salud pública, microcefalia, odontología.

1 INTRODUCTION

In Brazil, the National Oral Health Policy within the scope of the Unified Health System (SUS) sanctioned Law No. 14,572 (2023) to amend Law No. 8,080 (1990) and include oral health in the field of activity of the SUS (Brasil, 2023). The concept of the university was conceived when the processes of public and democratic education began to be discussed. At that point,
professors and students initiated a debate on the role of the university in the face of social dilemmas, problems, and inequalities. The academic community must understand that, for quality education, it is necessary to carry out field experience to integrate the knowledge of teachers and students (FORPROEX, 2012). However, what public oral health practices should be developed for an extremely vulnerable population, such as children with microcephaly?

Microcephaly is a clinical condition manifested within the first 24 to 48 hours of a newborn's life. It is characterized by a smaller occipital-frontal circumference when compared to others of the same sex and age by the normative referred to in the patterns of growth from the Intergrowth Table, which relies on the measurement of the child’s cephalic perimeter in order to monitor their brain growth (WHO, 2023) (Gusmão et al., 2020) (Gomes et al., 2022). In addition to craniofacial disproportions, this condition may also lead to skeletal muscle dysfunctions, changes in hearing and vision as well as seizures and epilepsy in the fetus (WHO, 2023). Due to the psychomotor condition of children, daily care, such as oral hygiene, is carried out by their parents, who need guidance on how to develop oral health hygiene skills.

Recent studies showed that children with microcephaly, during the mixed detention stage, presented poor oral hygiene, evidenced by the build-up of calcified biofilm in the region of the deciduous molars, and had a high risk of dental caries development (WHO, 2023). Regarding dental development, studies have reported delayed eruption of the deciduous teeth, besides changes in the eruption sequence (Cavalcanti, 2017) (Marinho et al., 2020). As a result of the extended use of antiepileptic drugs to control seizures and epilepsy along with a significant dental plaque index, would the children with microcephaly show high levels of generalized gingival enlargement? Would the delay in dental development be related to a possible gingival overgrowth that hinders tooth eruption? With these questions in mind, professors and students of Dental School at the State University of Southwest Bahia (UESB) had the purpose of elaborating on a field experience to play a major role in improving the oral health of this population.

This study aims to report on public practices that complain about oral promotion and dental care of children with microcephaly in public oral health.
2 METHODOLOGY

This observational and descriptive study reports the field experiences of the academic team of the UESB Dental School. Since April 2017, the Álvaro Marques-Microcephaly Dental Center Project has been promoting oral health and providing dental care to individuals with microcephaly and also to their families. During this period, 26 families living in four cities in Bahia, Brazil, had dental care for their children with microcephaly. During the COVID-19 pandemic, oral health promotions were developed in a virtual view by dental students from the UESB Dental School under the guidance of the coordinator and collaborating professors from July 2020 to November 2021. Educational videos of oral hygiene and dental development were virtually shared through WhatsApp for mothers of these children once a week. Additionally, the academic team of the Nursing School was invited to conduct virtual meetings about mental health with mothers of children with microcephaly and oriented with videos about the importance of vaccination and hygiene of the body.

3 FIELD EXPERIENCE REPORT AND DISCUSSION

After the pandemic period, this project began to provide dental care at the UESB’s Dental Clinic from October 2021 until nowadays. Collaborating professors of different dental specialties were responsible for guiding the students according to the specific dental needs of children with microcephaly and their families. Along with clinical care, families of children with microcephaly were followed by WhatsApp to elucidate about the deciduous tooth loss. The academic community acknowledged the importance of disseminating science in a more accessible language for this vulnerable population.

All individuals with microcephaly registered in the project had not yet had access to public oral health promotion programs or dental care. Practices were initiated to guide oral hygiene and dental care (Figure 1) for children between the ages of five and eight who have severe microcephaly, neuropsychomotor disabilities, hearing and visual impairments, spasms, seizures, and early epilepsy. All of the children are on long-term use for at least two years of the following antiepileptic and anticonvulsant drugs: Phenobarbital, Carbamazepine, Topiramate, Valproate sodium, Benzodiazepine, Levetiracetam, and Oxcarbazepine. Throughout the use of
such drugs, there were no changes in the medical prescription of these patients. Regarding reports of oral hygiene routine, the majority of children brushed their teeth once a day but did not brush their tongues.

Figure 1. Dental care for children with microcephaly.

Source: Authors.

A recent study verified that these children have an increased risk for tooth decay and periodontitis (Cavalcanti, 2017). In this project, the intraoral examination showed that the patients were in the first transitional period of the mixed dentition. Halitosis, occurrence of biofilm on the upper and lower teeth, dental calculus on the upper and lower deciduous molars, lack of passive lip seal, atypical lingual interposition, excessive production of saliva, and generalized gingival enlargement were observed (Figure 2). The treatment plan suggested was: removal of calculus, oral prophylaxis, and application of sodium fluoride, along with guidance on oral hygiene with a follow-up every two months. All patients and their families received toothbrushes and instruction on oral hygiene.
In 2023, the project provided public oral health and dental care for individuals with craniofacial anomalies. Patients of this project consist of nine children with Microcefalia, two adolescents with Microcefalia, two children with cleft lip palate, and one with Pierre Robin Sequence. All these patients had interdisciplinary rehabilitation, including speech therapy, plastic surgery, neurologist, and otolaryngologist. In the cases of neuropsychomotor disabilities, dental surgery procedures must have the authorization of the neurologist. All the patients in this project have oral functional impairments and the speech therapist plays an important role in dentistry to rehabilitate these patients.

It was evident in this project that parents wished to improve their children’s oral health, despite the financial and urban mobility difficulties. The student's perception of the academic project as a pathway for interaction in the work and social spheres is in line with the reflection of the role of the university as an agent of development (Pietrovisk et al., 2018). The academic team needs to recognize that quality education necessitates public oral health practices as a component of their training.

4 CONCLUSION

Regarding the connection between teaching, research, and public health practices, the dissemination of scientific knowledge will be anchored in a single pedagogical process. The academic team pointed out that all the theoretical and practical activities developed in this project contributed significantly to the enrichment of their academic training, linking theory and practice with the ability to take transformative action in their professional future with social responsibility.
REFERENCES


