



Knowledge and educational practices of daycare teachers about oral health

Conhecimentos e práticas educativas de professoras de creches sobre saúde bucal

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ABSTRACT

The aim of this study was to identify the knowledge and educational practices of daycare teachers about oral health. This is a qualitative descriptive study, developed with 28 teachers in Manaus, state of Amazonas, Brazil. Data were collected through semi-structured interviews and systematized by thematic content analysis with the support of the word cloud resource. The results showed that, among the 28 (100%) interviewed, 23 completed the undergraduate program and 5 completed undergraduate and graduate programs. The age ranged from 25 to 67 years. The teachers had knowledge about oral health and emphasized the bad habits of the children, which led to caries, and healthy habits. In relation to educational practices, playful technologies have emerged. The teachers' knowledge about oral health was strongly based on caries disease, with indications of the approximation to the preventive care model.

Keywords: Comprehensiveness in health. Health Services needs and demands. Unified health system.

RESUMO

O objetivo deste estudo foi identificar os conhecimentos e as práticas educativas de professoras de creches sobre saúde bucal. Trata-se de estudo qualitativo e descritivo, desenvolvido com 28 professoras em Manaus, Brasil. Os dados coletados por meio de entrevista semiestruturada foram sistematizados pela análise de conteúdo temática com apoio do recurso nuvem de palavras. Os resultados mostraram que, dentre as 28 (100%) entrevistadas, 23 concluíram a graduação e 5 possuíam graduação e pós-graduação. A idade variou entre 25 e 67 anos. As professoras tinham conhecimentos acerca de saúde bucal e enfatizaram os maus hábitos das crianças, que levavam à cárie, e os hábitos saudáveis. Em relação às práticas educativas, emergiram tecnologias lúdicas. Concluiu-se que os conhecimentos das professoras sobre saúde bucal estavam fortemente ancorados na doença cárie, com indicativos de aproximação do modelo assistencial preventivo.

Palavras-chave: Integralidade em saúde. Necessidades e demandas de serviços de saúde. Sistema único de saúde.

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INTRODUCTION

In the last five decades, several preventive measures were developed against dental caries and periodontal diseases, so that millions of people could benefit from new studies and products for

dental treatment. To avoid a global burden of developing dental caries, education and prevention programs are required for children and parents of all socioeconomic levels¹.

In this sense, oral health is considered a fundamental human right,

however there are many challenges for this right to be guaranteed. Among the challenges, inequalities in oral health stand out, which continue to exist globally². Oral diseases are common and are among the most expensive to treat^{2,3}. In the case of children, particularly, untreated caries affect their growth and well-being and, often, their effects remain ignored⁴.

Oral diseases affect children's quality of life and facial esthetics, in addition to causing eating problems, sleeping difficulties, emergency visits to dentists and hospitals, poor learning ability, insufficient nutrition and inadequate growth³. Dental caries, in particular, affects children both socially and psychologically. In addition, there are reports in the literature that this disease is present at higher levels in children from families with greater socioeconomic disadvantage, also involving the educational level of fathers/mothers, family income and social class⁵.

Recognizing the school as a privileged space for health promotion, in 2007 Brazil instituted the School Health Program (PSE), by Decree 6286, which registers, in art. 4: "The health actions provided for under the PSE will consider care, promotion, prevention and assistance, and will be developed in conjunction with the basic public education network and in accordance with the principles and guidelines of the SUS, and may include the following actions, among others [...] item

V – assessment of oral health and hygiene"⁶.

Thus, educational interventions on oral hygiene with kindergarten children, considered a stage of basic education, have positive effects on behavior and attitudes regarding care related to oral health. However, such educational activities must be playful and suitable for each age group, to achieve success in learning and captivate their attention, so that they adopt these oral care actions in their daily lives⁷.

Dental surgeons can contribute to early childhood education teachers to obtain knowledge about oral health prevention. Thus, although the educational institution is not considered by most teachers as the main source of information on preventive dentistry, it will need a school health agent or the dentist to expand the knowledge of teachers on prevention, promotion and attention to oral health⁸.

Although early childhood education is not mandatory for the 0- to 3-year-olds served at the day care center, there is government pressure to increase the number of places and many children attend these institutions. The historical trajectory of the day care center allows to affirm that it was created to take care of young children. Considering that most of the day of children attended at day care centers is mediated by teachers⁹, these professionals who live with them on a daily basis have the attributions of advancing actions from the perspective of their integral

development in the preschool environment. With regard to oral health, for example, the guidelines they convey, regarding brushing after meals and snacks, must articulate health and education to face the vulnerabilities that compromise the full development of children¹⁰.

Considering that, in early childhood education, they are developing affective, social, motor and language skills that allow greater autonomy for their personal care and for active participation in their routine at home and in educational institutions, it is relevant that healthy behaviors are promoted and consolidated in this age group¹¹.

In kindergarten children, oral health is largely determined by behavioral factors. In particular, inadequate oral hygiene habits, such as frequent consumption of sugary foods and beverages and the absence of preventive visits to the dentist, are decisive for the emergence of problems. In addition, the parents' educational level or a history of immigration, combined with the fact that they are raised in poor communities, are factors that contribute to the emergence of tooth decay¹⁰.

Childhood is an important period for acquiring new knowledge and habits, which may later be reflected in health-related behaviors. The World Health Organization, in 1989, supported the promotion of oral health as an integral part of health actions for all. The oral health

goal for the year 2010, not yet achieved in Brazil, was 90% of 5-year-old children free from caries⁷.

Thus, as oral caries is a serious public health disease, it is understood that it is important to assess the knowledge of early childhood educators and the activities they develop related to oral health. Studying and investigating the topic is necessary, so that early childhood educators can be informed about the importance of oral hygiene care and harmful habits of the child to prevent diseases and/or lesions in the oral mucosa, as well as to prevent a severe progression of existing and/or predisposing oral diseases. In this sense, the objective was to evaluate the knowledge and educational practices of daycare teachers about oral health.

METHODOLOGY

This was a qualitative descriptive study. From this perspective, we sought to involve description, registration, analysis and interpretation of current phenomena. The study is a subproject of an integrated research project entitled "Human Development, Health and Childhood in the Amazon Context".

Twenty-eight teachers from three public daycare centers participated in the study, distributed as follows: GCP Municipal Daycare Center (n=10), ALP Municipal Daycare Center (n=8) and MDC

Municipal Early Childhood Education Center (n=10). The daycare centers are located in the Compensa and Petrópolis neighborhoods of the city of Manaus, capital of the state of Amazonas, Brazil.

The teachers were invited to participate in the study in person in all daycare centers. Interviews were scheduled and carried out by the first author of the article. They took place between October 2020 and the first week of March 2021 and lasted 20 to 30 minutes. This field activity took place before the first Covid-19 diagnosis in the state of Amazonas, which took place on March 13, 2020. Initially, the study team carried out a common presentation protocol with the direction and pedagogical coordination of the institutions. After authorization for the research, the objectives and methods that would guide the study were presented to the teachers. The inclusion criteria adopted were: having higher education and working for over a year in early childhood education. The exclusion criterion was referring not accompanying the oral health process after the meals and snacks.

For data collection, the semi-structured interview technique was used, according to a guided script, with themes on knowledge, characteristics and practices addressed by the teachers for oral hygiene and oral health actions. The instrument consisted of 20 themes, among which professional profile, form of acquisition and level of knowledge about oral health

stand out, and oral health approach practices in the classroom or during tooth brushing at school.

To organize the data collected in the interviews, thematic content analysis was adopted with the support of the word cloud resource. The online tool known as the “word cloud” (WC) allows to create an image of words based on a certain text. In the cloud, the words that occur most frequently appear with greater prominence. Different fonts, word layouts and color schemes can be selected for easy viewing WCs are, therefore, the representation of a visually hierarchical list, for classification purposes¹².

The presence or absence of certain elements, such as words and themes, can be a significant factor in the analysis (qualitative perspective), as well as the frequency in which a given recording unit appears (quantitative perspective)¹³. WC meets the need to identify which terms are most repeated and used when debating a topic, making it possible to draw a map of relationships between the terms and the feelings expressed by them.

Answers from teachers were transcribed in full in a text file. For content analysis, numerals, prepositions, articles and pronouns were removed, among other grammatical elements of limited semantic value. Next, a WC was generated using algorithms from the Wordart.com website. Currently, this type of textual analysis has been widely used, especially in studies of

human and social sciences¹⁴. Images (figures) were obtained.

The project followed the ethical standards for research with human beings. Participants' consent was obtained by signing the Informed Consent. The Integrated Research Project was submitted to the Research Ethics Committee of the State University of Amazonas, and was approved with a protocol number 3.676.349 and CAAE 13357019.9.0000.5016.

To ensure anonymity, the letter P was used for coding the registration units, followed by the number representing the order of participation in the interviews.

RESULTS AND DISCUSSION

This section addressed the characterization of the participants and the categories that emerged from the interviews and were grouped according to repetition and similarity. It was possible to analyze the characteristics of the participants and the subjective written

answers about oral health, placing them in a subgroup with the following themes: The (poor) oral hygiene habits of children lead to caries, healthy habits among children can avoid caries and playful educational technologies in favor of oral health.

CHARACTERIZATION OF PARTICIPANTS

The female sex predominated. Regarding the level of education, among the 28 teachers, 23 completed undergraduate programs and 5 completed undergraduate and graduate programs. Age ranged between 25 and 67 years.

(POOR) ORAL HYGIENE HABITS OF CHILDREN RESULT IN CARIES

The first word cloud (Figure 1) highlighted: accumulation of food, lack of hygiene, not going to the dentist, not brushing teeth, not flossing, sugar consumption. Words such as bacteria, hygiene, sugar stood out.



and the lack of proper brushing and cleaning of teeth and mouth. (P21).

Sugary and sticky foods and drinks. The more sugar you consume, the more acid is produced, which results in caries. (P25).

Through foods rich in sugar

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enamel and dentin due to bacterial acid activity, while 12.7% associated it with tooth disease.

When analyzing the knowledge and perception about oral health of teachers and preschool children in a municipality in the state of Bahia¹⁶, the teachers, when interviewed about what would be caries and its etiological factors, the survey participants claimed (78.57%) to know what the disease is and 50% indicated insufficient brushing as the main etiological factor, while 21.43% associated sugar consumption and insufficient brushing at the beginning and progression of the disease. Thus, according to survey data, it is essential that teachers are updated with courses and/or information on oral health.

The available literature, as well as the data from this research demonstrate that teachers have basic knowledge, which makes it possible to recognize the occurrence of caries. Considering the quantitative results in Figure 1, the teachers in this study stated that the occurrence of caries is motivated by lack of hygiene, lack of brushing teeth, accumulation of food on the teeth, consumption of sugar, and the presence of bacteria.

The presence of sugary food intake was found in 78.50% preschool-age children in a school located in Goiânia. Among these, 64.29% consumed sugary foods or drinks daily. Furthermore, most of

them (77.33%), before bedtime, drank milk/bottle with added sugar. In addition, 78.67% did not brush their teeth after this milk (before bedtime), according to the report of parents or caregivers¹⁷.

By analyzing Figure 1, it was inferred that, when using the expression “Not going to the dentist”, the teachers pointed out as a predisposing factor for the occurrence of caries the failure to visit the dentist regularly. Thus, it is understood that these teachers recognized the importance of professional dental care for these children.

Studies show that for teachers to be able to effectively develop the role of health educators, they need content related to the topic of oral health. However, most educators have limitations regarding this specific content, as it was not addressed in initial and/or continuing education¹⁸.

Although many parents and guardians receive guidance regarding the oral health of their preschool-age children, the lack of interest of some of them in taking their children to preventive and/or curative visits in this age group is still notorious, especially those from 0 to 1 year old. Thus, it is evident that, even aware of such importance and agreeing with the visit, this step is still a negative point¹⁷.

It is known that it is necessary to include education and guidance for children, especially in the preschool-age group, since it is during this period that the individual-personal and sensorimotor

Through mouth hygiene/Prevention. (P21, P23).

Brushing teeth after meals, flossing, going to the dentist/visiting the dentist for evaluation. (P6, P8, P9, P10, P20, P22, P26, P27).

Dental caries is a dynamic and multifactorial disease and requires some actions to reverse this situation in early childhood, such as the multidisciplinary awareness of parents/guardians, caregivers and even health professionals in general, such as dentists, nurses, pediatricians and others interested in early childhood caries. Likewise, it is worth limiting the consumption of sugar in beverages and foods for children under 2 years of age, brushing the child's teeth at least twice a day and using fluoride toothpaste at 1,000 ppm and with the indicated amount for each age group. Monitoring by a health professional, dentist or health agent is also valid to promote preventive guidelines in the first year of life¹⁹.

Although the results of this study indicate positive aspects about the teachers' knowledge about the importance of proper hygiene, with brushing frequency at least three times a day and the use of dental floss to prevent caries, a study²⁰ shows controversial results, stating that there are still many limitations in knowledge about oral health in pedagogy programs. The survey showed that 75% graduates of pedagogy said they had not addressed the topic of oral health at school

during their undergraduate programs. Thus, these teachers need to be trained to contribute to health promotion in schools²⁰. By understanding that these teachers can go beyond the curricular content, the authors believe that they will be able to leverage positive leaderships and alliances in favor of educational improvements and changes in bad habits related to health.

Furthermore, considering that oral health is a student's right, the National Curriculum Guidelines should support theoretical knowledge that would guarantee this right. Therefore, the contribution of health professionals is essential to develop a "health promoting school", since this alliance, by offering teachers reflections on these themes, can strengthen their knowledge, leading to health promotion for preschool children²¹.

The contact between dentists and teachers is enriching, as the influence of the school on children's lives is noticeable. With the exchange of information between these professionals, children and the school community will only gain from changing habits and developing good oral hygiene²².

LUDIC EDUCATIONAL TECHNOLOGIES IN FAVOR OF ORAL HEALTH

In the third word cloud (Figure 3), there is the highlight of the word videos, followed by games, mouth demonstrations, brushing, stories, puppets, paintings,

panels, songs and little songs, conversation circle, orientation.



Figure 3. Word Cloud – Activities related to knowledge about oral health with students.

Educational technologies, understood here as devices to mediate educational practices, can have different formats. For children, especially, those with a playful format stand out. It is known that the different playful ways go far beyond being just “games”, since children are in an important and significant process of intellectual and motor development. Therefore, it is at this stage that they can make the best use of knowledge, developing healthy habits early on that can extend throughout their lives²³.

It is important that the games are enjoyable for children and adapted to each age group. In the case of oral health, playfulness facilitates the dissemination of educational information about oral health²⁴, as fun brings new sensations and

works as a reinforcement for learning²⁵. By being present at the games, children begin to have their first experiences with values, such as responsibility, in addition to learning to respect rules, wait their turn, contribute to a possible negotiation, also learning the value of achievement, as well as the resolution of a conflict²⁵.

The activities most used by teachers in daycare centers were exactly in the playful format, through videos, stories, games, brushing, puppets and mouth demonstrations. The teachers looked for several playful ways to educate children and, in this way, promote oral health education in the classroom. It is interesting to point out that the mouth demonstration, the brushing and brushtooth demonstration are also highlights of this cloud, revealing

that many were and/or had already done supervised brushing with their students.

According to a survey carried out at the Maria Canale Angelelli daycare center in Piracicaba, state of São Paulo, when referring to the appropriate activities for each age group, the teachers stated that those suitable for children from 0 to 1 year of age included the participation and management of parents/guardians in these activities. Puppet theater is the most used as a strategy for children aged 1 to 3 years old, with at least two characters and a maximum duration of 5 minutes. For children aged 3 to 6 years, it can include more characters, as they age, and with a maximum time of 10 minutes, so as not to lose their attention. The teachers in this research, in addition to pointing out storytelling and listening to music as more interesting in the classroom, also presented other games, respecting the age range of the classes²³.

Playful educational technologies, in addition to motivating preschool children, are effective, as they help in the adoption of oral hygiene habits. Moreover, attention should be drawn to the importance of sustaining educational programs, as they are essential and serve as strategies for building new habits related to oral health for children. The school is a privileged space for such actions, as it is in this pre-school phase that children learn and begin to develop their personal care skills²⁶.

Educational programs developed in schools need to be more attractive, frequent, dynamic and, most importantly, permanent. To enhance the learning development process of children, it is essential that there is a good partnership between parents/caregivers, teachers, health professionals and the community, in order to add knowledge and efforts with these early childhood educators. For this, we suggest the implementation of guidelines and educational practices on oral health for parents and caregivers, especially for those responsible for children under 1 year of age²³.

CONCLUSION

The knowledge of daycare teachers about oral health was strongly based on the caries disease, with indications of approximation of the preventive care model. The educational practices of these teachers evidenced the application of playful technologies as educational devices with children.

It is necessary to reflect on the importance of involving the family and the professionals of the Family Health Strategy in this process, which needs to be collective and interprofessional. It is necessary to expand clinical sensitivity to reach the social with regard to oral health. The lack of mention, in this study, of professionals and primary care units may

indicate the physical absence of these subjects in the context of daycare centers.

The exchange of experiences and knowledge between teachers, dentists and family members can contribute to the construction of other technological approaches closer to the dialogic and interprofessional scope, with the ability to motivate the child to develop a good oral health.

The theme of this study can strengthen the daycare center as a decentralization device for health promotion and health disease prevention for children. In turn, this study has practical implications by pointing out the inclusion of educators within educational-prevention programs in oral health and the need to include topics of this nature in the initial and continuing education of teachers in the initial grades, for example, a subject on Education and/or Health. Oral health promotion actions are capable of being indisputable tools for the exchange of knowledge and, in this way, by combining them with educational processes of schooling and human development, they will be able to mediate learning, quality of life and creativity, through playful activities such as puppet theater, storytelling, videos, drawings, music, etc.

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