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Research Article

Assessment of oral health knowledge and actions of community health workers linked to Family Health Strategy in the city of Rio Grande (RS)

Avaliação dos conhecimentos e ações em saúde bucal de agentes comunitários de saúde vinculados à Estratégia Saúde da Família do município de Rio Grande (RS)

Evaluación de los conocimientos y acciones en salud bucal de agentes comunitarios de salud vinculados a la Estrategia de Salud de la Familia en la ciudad de Rio Grande (RS)

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Abstract

Introduction: The objective of this study was to evaluate the knowledge of and actions in oral health of community health workers (CHWs) who work in family health teams in the municipality of Rio Grande (RS). **Methods**: The study had a cross-sectional design, and data were collected in November 2023, through the application of a questionnaire containing questions about sociodemographic and occupational characteristics, actions, and knowledge of oral health CHWs. A total of 162 CHWs participated, representing 89.5% of the municipality's total, 116 of which were linked to the family health teams with an oral health team. **Results**: The results demonstrated that 58.6% of CHWs scored above average in relation to knowledge. This knowledge did not present significant differences in relation to sociodemographic and occupational variables. More than a third of the CHWs (35.8%) were currently carrying out oral health actions in the territory and this group was responsible for the largest proportion with knowledge scores above average. Important conceptual difficulties regarding the main risk factors for developing cavities and the low percentage of CHWs who carry out oral health actions were identified in this study. **Conclusions**: These findings provide new perspectives to be considered by managers and professionals responsible for permanent education in oral health for CHWs.

Keywords: Community health workers; Oral health; Primary health care.

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Resumo

Introdução: O objetivo deste estudo foi avaliar os conhecimentos e as ações em saúde bucal de Agentes Comunitários de Saúde (ACS) de equipes de Saúde da Família (eSF) no Município de Rio Grande (RS). **Métodos**: O estudo teve delineamento transversal e os dados foram coletados em novembro de 2023, por meio da aplicação de um questionário contendo perguntas sobre características sociodemográficas, ocupacionais, ações e conhecimentos dos ACS de saúde bucal. Participaram 162 ACS, representando 89,5% do total do município, sendo 116 deles vinculados à eSF com equipe de Saúde Bucal (eSB). **Resultados**: Os resultados demonstraram que 58,6% dos ACS obtiveram pontuação acima da média com relação aos conhecimentos, sem diferenças significativas quanto às variáveis sociodemográficas e ocupacionais. Pouco mais de um terço dos ACS (35,8%) realiza ações de saúde bucal no território, e este grupo foi responsável pela maior proporção com pontuação de conhecimentos acima da média. Dificuldades conceituais importantes acerca dos principais fatores de risco para desenvolver cárie e a baixa porcentagem de ACS que realizam ações em saúde bucal foram identificadas neste estudo. **Conclusões**: Os achados fornecem novas perspectivas a serem consideradas por gestores e profissionais responsáveis pela educação permanente em saúde bucal dos ACS.

Palavras-chaves: Agentes comunitários de saúde; Saúde bucal; Atenção primária à saúde.

Resumen

Introducción: El objetivo de este estudio fue evaluar los conocimientos y acciones en salud bucal de los Agentes Comunitarios de Salud (ACS) de los equipos de Salud de la Familia (eSF) del Municipio de Rio Grande (RS). **Métodos**: El estudio tuvo un diseño transversal y los datos fueron recolectados en noviembre de 2023, mediante la aplicación de un cuestionario que contenía preguntas sobre características sociodemográficas, ocupacionales, acciones y conocimientos sobre salud bucal de los ACS. Participaron 162 ACS, que representan el 89,5% del total del municipio, 116 de las cuales estaban vinculadas al eSF con un equipo de Salud Bucal (eSB). **Resultados**: Los resultados demostraron que el 58,6% de los ACS obtuvieron puntuación superior a la media con relación al conocimiento. Este conocimiento no presentó diferencias significativas con relación a variables sociodemográficas y ocupacionales. Un poco más de un tercio de los ACS (35,8%) se encontraban actualmente realizando acciones de salud bucal en el territorio y este grupo fue responsable de la mayor proporción con puntajes de conocimiento superiores al promedio. En este estudio se identificaron importantes dificultades conceptuales al respecto de los principales factores de riesgo para el desarrollo de caries y un bajo porcentaje de ACS que realizan acciones de salud bucal. **Conclusiones**: Los hallazgos brindan nuevas perspectivas que deben ser consideradas por los gestores y profesionales responsables por la educación permanente en salud bucal de los ACS.

Palabras clave: Agentes comunitarios de salud; Salud bucal; Atención primaria de salud.

INTRODUCTION

In different countries, community health workers facilitate access to health services. They also act as a bridge between technical knowledge and health practices for specific groups or communities, of which they themselves are members, translating the cultural and social particularities of these groups to health services and professionals. Their work is shaped by the conception of health, the model of care, and the health system design of each national reality, in each specific context.[1]

In Brazil, the Community Health Worker (CHW) Program was implemented at the end of the 1980s with the objective of improving the health conditions of its communities.[2] The institutionalization of the CHW within the Unified Health System (SUS) is related to the process of expanding access and promoting quality in primary health care. The program transitioned from a moment of greater selectivity and focus, with actions specifically directed at improving some health indicators and targeting groups in situations of poverty, to a later moment of structuring a new model of care that incorporates the concept of social determination of the health-disease process, and was organized and disseminated on the basis of the Family Health Strategy (FHS).[3]

The evolution of the practice and responsibilities of the CHW has followed the evolution of public policies, and the inclusion of the oral health team in FHS represented an innovative and challenging project for the CHW, bringing with it new approaches, including the understanding of oral health as a component of health in its broadest expression.[4] The role of CHWs in oral health care is being valued, and the search

for specific knowledge is pressing, insofar as the approach to building the figure of this professional stems from a comprehensive view of health, which clearly includes oral health.[5-7]

However, both the training process and the work of these professionals are more characterized by their proximity to the medical and nursing fields, demonstrating a certain distance from dentistry and making their participation in oral health actions less effective.[8-10] CHWs perform few oral health education activities, justifying this by the fact that they have not been instructed.[7] Studies have sought to evaluate the oral health knowledge of CHWs,[11] the actions and practices developed,[7,12] and their influence on the level of information of the user,[6] in addition to the importance of oral health training for these professionals.[13,14] The results demonstrate that there is an appreciation of the topic of oral health for the practice of CHWs, while at the same time showing a deficiency of knowledge in this area. The objective of this study was to evaluate the knowledge and actions regarding oral health of CHWs in the municipality of Rio Grande (RS).

METHODS

The study had a cross-sectional design. A survey was administered to CHWs from the FHS teams in Rio Grande, a municipality with 191,900 inhabitants.[15] According to data available in the National Registry of Health Establishments, the municipality had 40 public health establishments (two hospitals, 34 basic health units (BHUs), two emergency care units, and two psychosocial care centers). Among the BHUs, 30 are registered as family health units, and 49 health teams work in these units.

The target population consisted of the 181 CHWs registered in the FHS teams of the municipality in 2023, who were invited to participate in the study. Based on this number, the CHWs were divided into three groups of approximately 60 people. The dates, location, and time of each group's meeting were sent by official letter to the units by the municipal FHS management itself. Data collection was carried out through the application of a semi-structured questionnaire developed by the authors and took place during these meetings with the professionals.

A pre-test of the research instrument with five dental assistants and two dentists from the Rio Grande FHS was conducted in October 2023. The questionnaire was administered in a meeting scheduled during working hours and with prior authorization from management. This pre-test was essential to improve the instrument.

The exposure variables included sociodemographic characteristics (gender identity, age, education level, training, length of residence in the neighborhood, family income), self-perception of oral health, time since the last dental visit, and occupational characteristics (unit where they work, time in the position, connection with FHS, total workload in the position, activity in the BHU and in the area).

The outcomes of this research were the extent of CHWs' knowledge of oral health and the oral health actions developed in their work process. Knowledge about oral health was obtained through an instrument based on the studies of Frazão and Marques[6] and Bianco,[16] addressing the main oral health problems (dental caries, periodontal disease, cancer…), oral hygiene, diet, care during pregnancy, and knowledge about deciduous and permanent dentition. For this block of questions, different values were assigned to each answer, adopting the criterion of the principles of beneficence and non-maleficence, used within the framework of the principlist paradigm of bioethics. There were 12 questions with four to six answer options, whose assigned score value ranged from 0 (minimum value: least correct alternative) to 5 (maximum value: most correct alternative), following the criteria already mentioned. The maximum score in the sum of the 12 questions was 41 points. For the analyses, this score was dichotomized into two groups: above and below the average. The questions about the actions of CHWs in oral health were based on the study

of Moura et al.,[17] including oral health education and actions in the area (lectures, activities, registration). In addition, the CHWs' knowledge of health services available to the population was collected.

The data obtained were organized on Excel spreadsheets. After checking the range and consistency of the variables, the data analysis was descriptive and inferential, using Stata 15.0 software. Differences between proportions according to the categories of the variables were examined using the χ^2 test, recommended for comparing proportions. Differences with p-values less than 0.05 were considered significant.

The project was approved by the Research Ethics Committee (CEP) of the Faculty of Medicine of Rio Grande (RS), under opinion number 6.337.774.

RESULTS

Of the 181 CHWs invited to participate, 10.5% (18) were not found because of being on vacation, leave, or sick leave, and one CHW refused to answer the questionnaire. Thus, 162 CHWs (89.5%) participated in the study. Of these, a little more than 70% worked in family health teams linked to BHUs. All 30 family BHUs in the municipality had representatives in the sample.

Considering that the score for knowledge in oral health could range from 0 to 41 points, the average obtained by the sample was 36.2 points (standard deviation – SD=4.7), and 58.6% of the participants obtained a score above the average (data not presented in the table).

Table 1 presents the distribution of the sample according to sociodemographic, behavioral, and occupational characteristics. In addition, it describes the proportion of CHWs with above-average knowledge of oral health according to these characteristics. Almost 90% of the respondents were cisgender women, and 28% were between 24 and 38 years old. About a quarter reported having completed higher education, with the most frequently cited being social Work (22%) and nursing (12%), and 70% completed this training less than seven years ago (data not presented in the table). Only 6% reported being smokers, about a third perceived their health as fair or poor, and almost half had a dental appointment in the last six months. Slightly more than half of the CHWs have worked at the basic health unit for less than nine years. All reported working 40 hours per week and performing their activities both in the community and within the BHU. None of these variables were statistically significant in relation to knowledge about oral health.

Slightly less than 60% had already received some guidance on oral health through lectures. Figure 1 shows the percentage distribution of CHWs who received this guidance according to the topic (n=94). It is noteworthy that the most frequently mentioned topic was oral health for schoolchildren, and the least cited was guidance on the use and cleaning of dentures.

Regarding oral health actions developed in the territory, 21.6% of the CHWs had never performed such activities, 42.6% had done so in the past, and 35.8% currently perform them. The most recurrent activities performed were guidance to pregnant women (92%), information on the dentist's days and hours at the unit (98.2%), and guidance to mothers of babies and children on oral hygiene (63.4%). Only one-third of the sample usually records the activities developed in oral health.

Figure 2 shows the procedures performed by the SUS dental service in Rio Grande and shows whether the CHWs recognize these services as offered or not to the community. All recognized tooth extraction as a service offered and the fabrication of dental prostheses as a service not performed in the municipality. Most of the sample recognized tartar removal, dental restoration, and emergency consultations as offered services, and also stated that teeth whitening, endodontics, and the installation or removal of orthodontic appliances are not SUS services in Rio Grande.

Table 1. Distribution of the sample according to sociodemographic, behavioral, and occupational characteristics and association with above-average knowledge about oral health. Rio Grande (RS), 2023.

Variables	n	%	% CHWs with above-average knowledge	p-value
Gender identity				
Cisgender woman	145	89.5	58.6	0.987
Cisgender man	17	10.5	58.8	
Age				
24 to 38	46	28.4	71.7	
39 to 43	40	24.7	57.5	0.171
44 to 50	40	24.7	52.5	
51 to 70	36	22.2	50.0	
Education				
High school completed	93	57.4	54.8	
Incomplete higher education	28	17.3	67.9	0.443
Completed higher education	41	25.3	61.0	
Smoking				
Current smoker	10	6.1	40.0	
Ex-smoker	12	7.4	66.7	0.412
Never smoked	140	86.4	59.3	
Self-perception of oral health				
Very Good	23	14.2	69.6	
Good	86	53.1	62.8	0.106
Fair	43	26.5	51.2	
Poor	10	6.2	30.0	
Last time at the dentist				
Less than 6 months	71	46.1	54.9	
Less than 1 year	36	23.4	69.4	0.310
More than 1 year	47	30.5	55.3	
Time working at BHU (years)				
0 to 4	56	34.6	55.8	
5 to 8	28	17.3	57.5	0.283
9 to 15	54	33.3	70.7	
16 to 27	24	14.8	50.0	
Worked at BHU with OHT				
Yes	116	71.6	56.9	0.474
No	46	28.4	63.4	
Total	162	100	58.6	–

BHU: basic health unit; OHT: oral health team

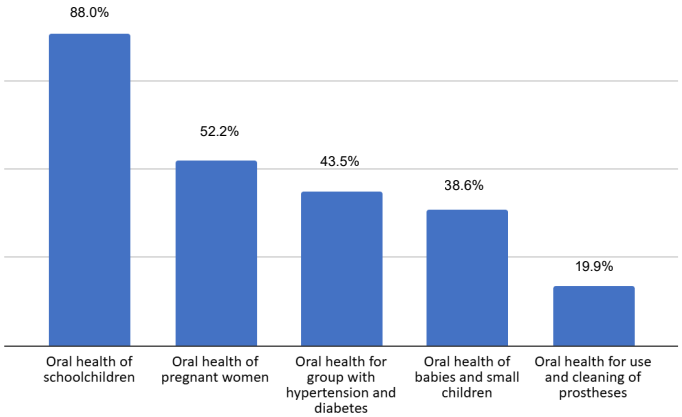

Figure 1. Proportion of community health workers who received guidance on oral health through lectures (n=94) according to the topic. Rio Grande (RS), 2023.

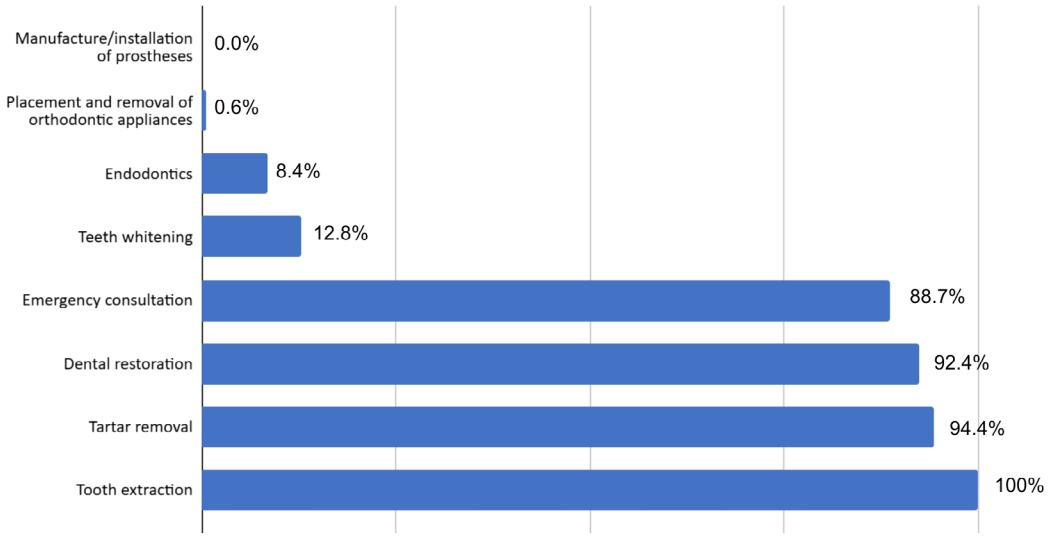

Figure 2. Procedures performed by SUS (Brazilian Unified Health System) dental services in the municipality, according to the knowledge of community health workers. Rio Grande (RS), 2023.

Chart 1 presents the distribution in relation to the maximum score achieved in each of the questions about the main oral health problems, oral hygiene, diet, care during pregnancy, knowledge about deciduous and permanent dentition, highlighting the correct alternative. Regarding oral health problems, only 43.2% of the CHWs achieved the maximum score for knowledge about the main cause of dental caries. Correct knowledge about bad breath, gingival bleeding, gingivitis, and oral cancer was recorded among 75.3 and 85.8% of the sample. Adequate knowledge regarding deciduous and permanent dentition and tooth replacement reached just over 70% of the CHWs. The vast majority of the sample (97.5%) correctly perceived the importance of oral hygiene and diet as causes of strong teeth and recognized the importance of dental treatment during pregnancy and the use of fluoride at all stages of life. More than 90% of the CHWs also correctly answered that an untreated caries lesion can lead to the need for root canal treatment.

Chart 1. Distribution of the sample according to correct and incorrect responses regarding oral health knowledge* among community health workers. Rio Grande (RS), 2023.

Questions regarding knowledge of oral health	n	%
1. In your opinion, regarding baby teeth, which option do you consider correct?		
a. because they are temporary teeth, they do not need care	1	0.6
b. they guide the eruption or “birth” of permanent teeth (correct)	116	71.6
c. they appear in the mouth when the mother stops breastfeeding the baby	3	1.8
d. they are teeth that fall out easily because they have no roots	37	22.8
e. did not know/no answer given	5	3.1
2. From birth to adulthood, how many times do teeth change?		
a. once (correct)	117	72.2
b. twice	31	19.1
c. three times, including the wisdom teeth	7	4.3
d. did not know/no answer given	7	4.3

It continues...

Chart 1. Continuation.

Questions regarding knowledge of oral health	n	%
3. In your opinion, at what age do the first permanent teeth begin to erupt?		
a. around 6 months to 1 year	11	6.8
b. 2 to 3 years	5	3.1
c. 5 to 6 years (correct)	114	70.4
d. 8 to 9 years	26	16
e. 11 to 12 years	4	2.5
f. did not know/no answer given	2	1.2
4. What is your perception regarding the main cause of strong teeth?		
a. parental inheritance (birth)	2	1.2
b. race	1	0.6
c. good financial condition	1	0.6
d. good oral hygiene and diet (correct)	158	97.5
e. did not know/no answer given	0	0
5. To you, tooth decay is a disease mainly caused by:		
a. poor formation of tooth structure	0	0
b. bacteria adhering to the teeth	87	53.7
c. constant use of antibiotics	0	0
d. lack of saliva in the mouth	2	1.2
e. frequent consumption of sugary products (correct)	70	43.2
f. did not know/no answer given	3	1.8
6. In most cases, bad breath is caused by:		
a. emotional stress	0	0
b. use of medications	1	0.6
c. smoking and excess	10	6.2
d. failure to remove bacterial plaque that accumulates on the teeth and tongue (correct)	139	85.8
e. sugary and fatty foods	4	2.5
f. did not know/no answer given	8	4.9
7. You think that bleeding gums are:		
a. normal always occur with brushing	9	5.6
b. the main cause of tooth decay	4	2.5
c. an infection that affects nerve of the tooth	4	2.5
d. the first sign of gum disease (correct)	135	83.3
e. did not know/no answer given	10	6.2
8. To prevent gingivitis, it is necessary to perform oral hygiene procedures, correctly using:		
a. only a toothbrush	5	3.1
b. toothbrush and fluoride toothpaste	18	11.1
c. toothbrush and dental floss (correct)	122	75.3
d. special mouthwashes and fluoride solutions	10	6.2
e. did not know/no answer given	7	4.3
9. In your opinion, indicate the alternative that can lead to a tooth needing root canal treatment:		
a. untreated caries lesion (correct)	151	93.2
b. excess fluoride	1	0.6

It continues...

Chart 1. Continuation.

Questions regarding knowledge of oral health	n	%
c. use of a broken denture	0	0
d. poorly fitted removable bridge	2	1.2
e. did not know/no answer given	8	4.9
10. You think that during pregnancy dental treatment should be::		
a. preventive and periotic(correct)	158	97.5
b. avoided throughout the whole pregnancy	0	0
c. for only emergency cases	1	0.6
d. did not know/no answer given	3	1.8
11. Fluoride is important:		
a. only in childhood, during tooth formation and eruption	6	3.7
b. in adulthood	5	3.1
c. in old age	0	0
d. in all stages of life (correct)	145	89.5
e. did not know/no answer given	6	3.7
12. In your perception, indicate the alternative that mentions the risk factor most related to the appearance of oral cancer:		
a. ingestion of medications	0	0
b. diet rich in salt and sugar	5	3.1
c. excess alcohol and smoking (correct)	133	82.1
d. loss of permanent teeth	3	1.8
e. did not know/no answer given	21	13
Total	162	100

*Instrument based on the study by Frazão and Marques.[6]

DISCUSSION

Most CHWs demonstrated an above-average level of knowledge about oral health, and this higher level was associated with currently performing oral health activities in their territory. Knowledge is one of the elements that contribute to the population increasing their skills in controlling the determinants of the health-disease process, thus highlighting the importance of the CHWs through their presence in the area and their actions.[6]

In this study, the length of service in the FHS and working in a unit with an oral health team were not associated with a higher average of accumulated knowledge in oral health. In contrast, a previous study found that CHWs with more than ten years of experience had positive results regarding knowledge in oral health, confirming that the length of service in the FHS is important for understanding the work of the CHW, based on their daily practices.[17] Other studies have shown that the knowledge of CHWs linked to FHS with an oral health team is better when compared to CHWs linked to FHS without an oral health team.[7,18]

It can be observed that slightly more than half of the CHWs received educational lectures on oral health. However, the topics on which the CHWs received training were not actually related to what they teach in their practice. Some studies[13,19] have highlighted the importance of this training to improve oral health care. This fact is corroborated by the study by Frazão and Marques[6], which found significant changes in oral health knowledge among women and mothers in the area of operation of the agents who were trained to provide health education to the community.

Although not statistically significant, but situated at threshold values, it is noteworthy that the levels of knowledge in the group of community health agents who performed educational activities were higher than those of those who had never performed activities in oral health. A strict examination of statistical significance cannot fail to point out those factors that are potentially modifiable by interventions. In the study by Mialhe et al.,[19] many agents did not carry out health education activities or did so sporadically, because they had not been instructed to do so. According to Rodrigues et al.,[20] the proficiency of CHWs in addressing oral health topics is due to continuing education processes. These agents trained to guide families on oral health can expand the coverage of preventive actions and oral health surveillance,[21] and can act as transformative agents through their role in disseminating information.[22]

A good understanding by the CHWs of the dental procedures and/or services provided by SUS in the municipality may be related to the fact that most (71.6%) are working in an FHS linked to an oral health team. In addition, units that do not have a dental office receive services from the Mobile Dental Unit once a week. The proximity of the CHW to the oral health team facilitates the identification and dissemination of available services to the community. Scherer et al.[23] analyzed the integration of the oral health team to the FHS and concluded that CHWs facilitate user access to oral health, as they are the link between the team and the community. They guide the population on the use of and access to health system services.[24]

When analyzing the knowledge questions in isolation, it is possible to verify that doubts still exist. Less than half of the CHWs associated the main cause of cavities with the frequent consumption of sugary products. Cavities are a well-known disease, and it can be assumed that this topic is conveyed by the CHWs. The study by Bianco[16] found that more than 30% of users who received information from agents in their micro-area did not show knowledge of the subject, as did more than 20% of the CHWs interviewed. The study by Nascimento et al.[25] showed similar results to the present study, as the CHWs considered the presence of bacteria (55.3%) as the main cause of cavities, more so than the frequent consumption of sugary products (40.9%).

Three questions related to knowledge sought to situate the study in relation to oral health in childhood. Regarding deciduous dentition, the present study surpassed those found by Frazão and Marques,[6] in which only 43.8% of the CHWs recognized the importance of deciduous teeth in guiding the eruption of permanent teeth. The premature loss of deciduous teeth can lead to the development of atypical swallowing and phonation, causing delays or acceleration in the eruption of permanent teeth and favoring orthodontic problems.[7] In the present study, most CHWs recognized that there is only one change of dentition in a lifetime, these results agreeing with those of other studies,[6,17,26] which can contribute to the prevention of occlusal problems. Regarding the question about the timing of eruption of the first permanent teeth, most CHWs selected the expected alternative, a result similar to that of Frazão and Marques.[6] The processes of dental growth and development are elements whose knowledge is relevant for the physical development and overall evolution of the patient. The chronology of tooth eruption serves as an indicator of biological events and can be influenced by genetic and environmental factors.[27]

Among the questions with the highest number of correct answers, the following stand out: the main cause of healthy dentition, dental treatment during pregnancy, and the reason for endodontic treatment. Regarding healthy dentition, the results were similar to other studies,[4,6,25] in which CHWs pointed to oral hygiene and healthy eating as the most important factors, disregarding responses about parental inheritance, race/color, and financial condition. The question about dental treatment during pregnancy achieved a similar performance to the study by Gouvêa et al.,[7] in which the CHWs recognized that dental treatment during pregnancy should be preventive and periodic. Vinagre et al.[26] found that most agents agree that caries disease in pregnant women

occurs because of the increased frequency of eating and decreased frequency of oral hygiene. According to Bianco,[16] the CHW needs to inform pregnant women about the necessity and safety of dental treatment. The need for endodontic treatment was also recognized by CHWs in other studies,[4,6,7] with similar scores as those found. The knowledge transmitted by CHWs, that untreated caries can evolve into an endodontic problem, can lead to greater demand for and adherence to dental treatment at the BHU.

Another relevant topic addressed in this study referred to the problem of halitosis, considered a negative factor for an individual's self-image, impacting confidence and causing social avoidance.[28] The proportion of CHWs who selected the expected answer was similar to that observed by Bianco.[16] Lack of knowledge about how to prevent halitosis can affect quality of life.[7]

Two questions on the form were related to knowledge about gingival conditions. Affections that affect the gums can lead to tooth loss and cause damage to the body. Most participants stated that using a toothbrush and dental floss is important to prevent gingivitis and that gum bleeding is not normal, but rather the first sign of a disease, as mentioned by Vinagre et al.[26] It is suggested that the oral health education program (eSB) has a positive influence on these results, since guidance on oral hygiene is one of the most common practices performed by dentists within the primary health care unit. Gouvêa et al.[7] confirmed this hypothesis when comparing CHWs with and without the oral health education program and confirmed that the latter group had inferior knowledge.

Regarding knowledge about fluoride, this study presented results similar to those of Nascimento et al.,[25] in which most CHWs responded that fluoride is important at all stages of life. Possibly, the incorporation of fluoride into toothpaste in Brazil since 1988 is responsible for the popularization of the product.[16]

Factors predisposing to the appearance of oral cancer were the subject of the last question of the questionnaire. Among oral pathologies, neoplasms have been attracting attention due to their increasing incidence. Oral cancer is a malignant tumor that affects the lips and structures of the mouth.[29] It is the fifth most frequent tumor in men in Brazil, and most cases are only diagnosed in advanced stages. The knowledge of the CHWs was satisfactory, as most reported excessive alcohol and smoking as risk factors. These numbers are higher than those of Vinagre et al.[26] and Silva et al.[4] and similar to those of Frazão e Marques,[6] highlighting that the latter registered better results after training the CHWs.

At this point, it is relevant to discuss that the issues related to oral cancer prevention were not mentioned among the practical guidelines of the CHWs, although their knowledge on this topic was adequate. It is worth highlighting the discrepancy between knowledge and practices and possible solutions for this, such as continuing education. The beneficial effect of CHW training was also evidenced in other studies,[6,26,30] pointing to the need for continuing education with CHWs in oral health.

The strengths of the study include the high sample coverage in relation to the universe of CHWs in the municipality and the potential of the results to serve as support for management in continuing education programs. As limitations, the fact that the instrument was self-administered is pointed out, which may have led to some type of information and memory bias, in addition to the high proportion of missing values for the family income variable, which made its use in the analyses impossible.

The results showed that the studied population presented deficiencies in certain subjects related to knowledge in oral health. However, most CHWs perform or have performed some activities in oral health, and those who currently perform these activities obtained a higher knowledge score compared to those who did not engage in oral health activities. Thus, it can be suggested that the continuous technical-scientific improvement of CHWs is fundamental for the enhancement of their skills and the acquisition of new competencies.[31]

Oral health teams should understand the importance that community health agents assume in resolving the main problems related to oral health. However, for the dentist to provide the CHW with oral

health training based on the principles of the SUS, academic training (undergraduate and postgraduate) is necessary, with experiences gained through the integration of teaching and service. Thus, the dentist will have, in addition to an understanding of reality, professional growth and commitment to necessary social changes, which will allow them to understand the factors that influence the health-disease process.[18] In this context, it is important to emphasize that professional qualification and exclusive dedication to the public health system require unique professional profile characteristics consistent with the demands of work in the FHS.[32] Therefore, it is fundamental that SUS managers facilitate periodic training in oral health, in order to provide CHWs with the possibility of contributing more effectively to actions for the promotion, prevention, and recovery of health. In addition, they should provide educational materials on oral health to complement the knowledge base to be passed on to the population assisted by FHS.[18]

CONFLICT OF INTERESTS

Nothing to declare.

AUTHORS' CONTRIBUTIONS

MRNM: Project administration, Formal analysis, Conceptualization, Data curation, Writing – original draft, Writing – review & editing, Investigation, Methodology, Resources, Software, Supervision, Validation, Visualization. ET: Project administration, Formal analysis, Conceptualization, Data curation, Writing – original draft, Writing – review & editing, Investigation, Methodology, Resources, Software, Supervision, Validation, Visualization. MMSS: Project administration, Formal analysis, Conceptualization, Data curation, Writing – review & editing, Investigation, Methodology, Resources, Validation, Visualization. CIR: Conceptualization, Resources, Validation, Visualization.

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