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ORIGINAL ARTICLE

Overview of dentists' coverage in health teams in the Northern Macroregion of Minas Gerais: analysis of determinant aspects

Panorama da cobertura de cirurgiões-dentistas em equipes de saúde na Macrorregião Norte de Minas Gerais: análise de aspectos determinantes

Daniely Francine Fagundes Marques[1,*], Milleny Pereira Rodrigues[1], Laissa Geovana Cardoso Pereira[1], Monaliza Rocha Cavalcanti[1], Waldemar de Paula Júnior[2], Mariléia Chaves Andrade[2]

[1]*State University of Montes Claros. Montes Claros, Minas Gerais, Brazil.*
[2]*Department of Pathophysiology, State University of Montes Claros. Montes Claros, Minas Gerais, Brazil.*

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KEYWORDS

Dental Care Team
Dentists
Health
Health Team

ABSTRACT

Objective: To conduct a survey on the incidence of Family Health Teams, Oral Health Teams and dentists in the Northern Macroregion of Minas Gerais from 2008 to 2021.
Methods: Original study, quantitative and descriptive nature, prepared between the months of March and April 2023. The data used in the present study refer to the health teams and collaborating professionals and were obtained from the DATASUS platform. The only inclusion criterion considered was a municipality belonging to the Northern Health Macro-region of Minas Gerais, according to the state's Master Plan.
Results: Of the 86 municipalities in the northern macro-region of Minas Gerais evaluated, 63 (73.2%) showed an increase in the number of Health Teams and dentists in 2023, compared to 2008. An exponential increase was observed in the municipalities of Várzea da Palma (733.2%), Fruta de Leite (729.4%) and Francisco Dumont (550.3%).
Conclusions: There was an increase of in the number of Oral Health Teams and Family Health Teams in all municipalities, demonstrating a satisfactory distribution of dentists in the public sector and the concern with the oral health of the population by the authorities of the public power.

*Corresponding author:
Universidade Estadual de Montes Claros
Addr.: Rua Ernesto Neves, 191 – Bairro: Edgar Pereira. Montes Claros, MG, Brasil | CEP: 39.400-184
Phone: +55 (38) 98819-6536
E-mail: danyfranmar@gmail.com (Fagundes Marques DF)

This study was conducted at the State University of Montes Claros (Unimontes)

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PALAVRAS-CHAVE

Equipe de Saúde
Equipe de Saúde Bucal
Odontólogos
Saúde

RESUMO

Objetivo: Realizar levantamento sobre a incidência de equipes de saúde da família, equipes de saúde bucal e cirurgiões-dentistas na Macrorregião Norte de Minas Gerais de 2008 a 2023.
Métodos: Estudo original, de natureza quantitativa e descritiva, elaborado entre março e abril de 2023. Os dados utilizados no presente trabalho referem-se às equipes de saúde e profissionais colaboradores e foram obtidos na plataforma DATASUS. O único critério de inclusão considerado foi município ser pertencente à Macrorregião de Saúde Norte de Minas Gerais, conforme o Plano Diretor do estado.
Resultados: Dos 86 municípios da macrorregião Norte de Minas Gerais avaliados, 63 (73,2%) apresentaram aumento no número de equipe de saúde bucal e de cirurgiões-dentistas em 2023, comparado com 2008. Observou-se um aumento exponencial nos municípios Várzea da Palma (733,2%), Fruta de Leite (729,4%) e Francisco Dumont (550,3%).
Conclusões: Houve aumento no número de equipes de saúde bucal e equipes de saúde da família em todos os municípios, demonstrando distribuição satisfatória dos cirurgiões-dentistas no setor público e a preocupação com a saúde bucal da população por parte das autoridades do poder público.

INTRODUCTION

Healthcare organizations in Brazil underwent changes after the creation of the Unified Health System (Sistema Único de Saúde, SUS), moving from a hospital-centric model to a comprehensive model characterized by patient care[1]. Primary healthcare (PHC) is responsible for developing actions to promote, prevent, diagnose, and treat diseases, offering rehabilitation, harm reduction, palliative care, and health surveillance services at individual and collective levels[2].

The PHC underwent restructuring with the publication of the National Primary Care Policy (PNAB) in 2006, which considered the Family Health Strategy (FHS) the preferred and most modern model for interdisciplinary health care[3]. The FHS has a configuration aimed at expanding, qualifying, and consolidating primary care, positively impacting collective health, and redirecting curative to preventive focus[4].

The inclusion of dentistry in the multidisciplinary team was implemented after the publication of Ordinance No. 1,444, dated December 28, 2000, by the Ministry of Health [5]. The oral health team (OHT) can present different configurations divided into modalities. The first consists of the dental surgeon (DS) and oral health assistant or technician; the second consists of the DS and two oral health technicians or one technician and one assistant; and the third corresponds to the mobile dental unit. The OHT is responsible for oral health promotion, prevention, recovery, and treatment strategies, including head and neck cancer control and prosthetic rehabilitation[6].

The Northern Health Macroregion of Minas Gerais has characteristics that encourage research: large territorial extension, intense socioeconomic difficulties, and actions subdivided in a way that is not equal to its microregions[7].

The inclusion of DS in health teams (HT) is related to the demand for multidisciplinary health care and the increased incidence of oral cavity problems in the population. This study is justified by the need to promote comprehensiveness and equity in dental practice, especially in large regions facing profound socioeconomic inequalities and disharmonious public policies. The importance of approaching dentistry in a collective context goes beyond simple oral health care, as it seeks to create conditions so that all individuals have access to adequate care, regardless of their socioeconomic status or geographic location. Given the above, the present work aimed to evaluate the distribution of Family Health Teams, OHTs, and DS in the Northern Health Macroregion of Minas Gerais from January 2008, the date with the most recent data available, and 2023.

METHODS

Design

This original, cross-sectional, quantitative, and descriptive study was conducted using a public database.

Data extraction

Data collection was conducted through the online platform of the IT Department of the Unified Health System of Brazil (DATASUS-TABNET) from 22 to 27 March 2023, and all 86 municipalities in the Northern Health Macroregion of Minas Gerais (Figure 1) were individually evaluated.

On the DATASUS platform, information related to HT was acquired through the following flow:

1. Assistance Network;
2. CNES (National Registry of Health Establishments) – Health Teams;
3. Teams;
4. Minas Gerais.

The filters used were: 1. Health Macroregion and 2. North; Year 2008 and 2023.

The collection of information pertinent to the

number of inhabitants of each municipality studied was carried out along the following steps:

1. Demographics and Socioeconomic;
2. Resident Population;
3. Study of population estimates by municipality, sex and age, 2000 - 2021;
4. North Health Macroregion.

Filters used: years 2008 and 2021. The data obtained in 2008 were essential for carrying out the comparison between the periods. Demographic information from 2021 was used because it was the most up-to-date available on the platform.

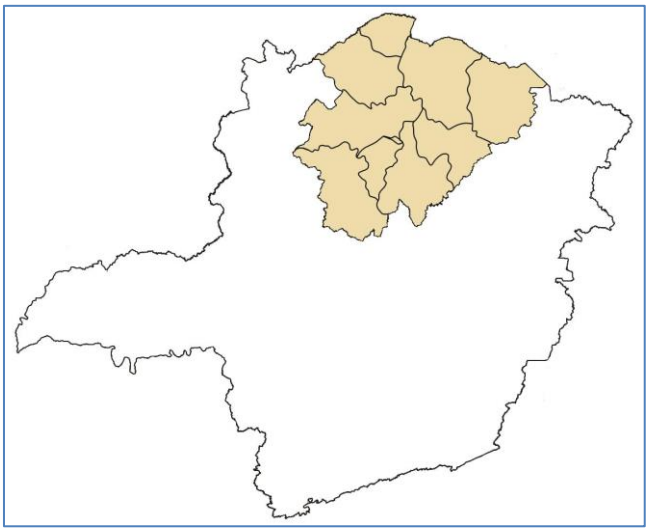

Figure 1 — Location of the Northern Health Macroregion in the State of Minas Gerais, Brazil, according to the state's Master Plan, adapted[8].

Management of extracted data

To standardize the information on numerical estimates acquired through research, mathematical formulas were used.

To obtain the variation in ESF between 2008 and 2023, the difference between the number of HT/100,000 inhabitants was calculated, multiplied by 100, and the result was divided by the number of HT in that period, a process carried out individually for each year studied.

The variation in DS in each city was calculated by subtracting the number of DS/100,000 inhabitants in 2023 from the number of DS/100,000 inhabitants in 2008, multiplying the value obtained by 100, and subsequently dividing this result by the number of DS/100,000 inhabitants in 2008.

Inclusion criteria

All municipalities belonging to the Northern Health Macroregion of Minas Gerais were included.

RESULTS

Table 1 presents the 63 cities in the Northern Health Macroregion of Minas Gerais that showed an increase in the distribution of HT and DS in 2023 compared with 2008. It was possible to observe an average increase of 260.36% in HT, with emphasis on Várzea da Palma (an increase of 733.18%), followed by Fruta de Leite (729.38%) and Francisco Dumont (550.30%). Furthermore, an average increase of 161.23% in the number of dentists was observed, emphasizing the city of Brasília de Minas, which presented an expressive result compared to the others, with a positive variation of 777.90%.

Table 2 presents the 5 cities (5.81% of the sample) in the Northern Health Macroregion of Minas Gerais that showed a decrease in the distribution of DS in 2023 compared with 2008. From these data, an average increase of 184.18% of HT can be noted, with emphasis on the city of São João do Pacuí, which showed a positive variation of 354.87%. The number of DS was reduced by an average of 11.18%, and Jaíba was the city that showed the most significant negative change: -16.73%. In other words, this location had a reduction in the number of DS per 100,000 inhabitant in 2023 compared with 2008.

Among the 86 municipalities in the Northern Macroregion of Minas Gerais, 20.93% did not have data on DS in HT, and 2.32% did not have information on HT in 2008. Table 3 presents the 18 cities that did not have elements in 2008 to provide a basis for comparison calculations with 2023. In 2023, the average HT per 100,000 inhabitant was 109.52, and the average CDs per 100,000 inhabitant in the same year was 47.

Therefore, it was impossible to calculate the variation in HT in Glaucilândia and Santa Fé de Minas because of the lack of data in 2008. Furthermore, it was impossible to verify the variation in DS between 2008 and 2023 in the 18 cities listed in Table 3.

DISCUSSION

The results revealed an increase in the number of HTs in 2023 compared with that in 2008. Of the 86 municipalities analyzed, 84 showed growth, whereas two did not have data available. This increase can be attributed to the implementation of health policies that seek to expand access to health services and population growth in the region[9].

Due to the unfavorable socioeconomic situation of the Northern Health Macroregion of Minas Gerais, it is assumed that the demand for health services in this region is even more significant than that in other areas of the state, especially given the population increase observed over the years. Between 2008 and 2021, it was estimated that the number of inhabitants of the Northern Health Macroregion of Minas Gerais grew from 1,588,940 to 1,700,450[10]. This population growth generates a greater demand for HT to meet the health demands of the local population[11].

As an example of a health policy that contributed to the increase in HT, the Mais Médicos Program (2013) stands out. This initiative enabled the allocation of doctors in areas that were difficult to provide, including North Minas Gerais. This program played a fundamental role in increasing the number of these regional teams,

Table 1 — Distribution and variation of health teams and dental surgeons in municipalities in the Northern Macroregion of Minas Gerais, Brazil.

Municipality	No. of HT/100,000 inhabitants. (2008)	No. of HT/100,000 inhabitants. (2023)	No. of DS/100,000 inhabitants. (2008)	No. of DS/100,000 inhabitants. (2023)	Variation in HT between 2008 and 2023 (%)	Variation in DS/100,000 inhabitants. between 2008 and 2023 (%)
Berizal	22.79	83.47	23.00	42	266.19 ↑	83.10 ↑
Bocaiúva	25.71	63.34	6.00	26	146.37 ↑	300.35 ↑
Botumirim	29.93	111.84	15.00	48	273.65 ↑	220.27 ↑
Brasília de Minas*	25.27	64.70	3.00	28	156.05 ↑	777.90 ↑
Capitão Enéas	34.97	84.48	7.00	39	141.57 ↑	457.46 ↑
Catuti	38.15	141.59	19.00	61	271.10 ↑	218.08 ↑
Claro dos Poções	37.50	120.35	13.00	53	220.90 ↑	327.87 ↑
Cônego Marinho	28.16	116.43	14.00	52	313.50 ↑	267.55 ↑
Coração de Jesus	26.42	108.94	19.00	49	312.28 ↑	158.74 ↑
Cristália	17.11	100.13	17.00	33	485.08 ↑	95.03 ↑
Curral de Dentro	29.04	114.40	15.00	51	294.00 ↑	250.22 ↑
Espinosa	31.55	69.61	13.00	22	120.68 ↑	75.54 ↑
Francisco Dumont*	20.43	132.88	20.00	57	550.30 ↑	178.70 ↑
Francisco Sá	27.81	90.71	8.00	38	226.15 ↑	375.64 ↑
Fruta de Leite*	16.13	133.79	16.00	57	729.38 ↑	255.45 ↑
Gameleiras	38.02	137.69	19.00	59	262.19 ↑	210.44 ↑
Grão Mogol	26.35	94.09	26.00	38	257.10 ↑	42.84 ↑
Ibiaí	38.01	94.36	25.00	35	148.23 ↑	39.63 ↑
Icaraí de Minas	28.01	106.56	9.00	49	280.45 ↑	426.77 ↑
Indaiabira	40.05	122.82	13.00	55	206.63 ↑	308.84 ↑
Itacambira	19.95	128.51	20.00	55	544.10 ↑	176.04 ↑
Itacarambi	27.74	82.53	6.00	39	197.47 ↑	594.11 ↑
Janaúba	26.77	75.99	25.00	33	183.84 ↑	31.14 ↑
Januária	18.06	57.39	5.00	18	217.68 ↑	290.99 ↑
Japonvar	25.52	112.63	13.00	50	341.27 ↑	292.24 ↑
Jequitaí	36.19	81.00	24.00	41	123.82 ↑	67.86 ↑
Joaquim Felício	23.17	105.11	23.00	42	353.54 ↑	81.42 ↑
Josenópolis	43.46	101.81	22.00	41	134.27 ↑	87.42 ↑
Lagoa dos Patos	23.00	123.09	23.00	49	435.08 ↑	114.03 ↑
Lontra	33.24	81.92	11.00	31	146.46 ↑	177.27 ↑
Mamonas	31.19	91.39	31.00	46	193.05 ↑	46.53 ↑
Manga	34.03	88.64	10.00	33	160.44 ↑	241.83 ↑
Matias Cardoso	30.23	88.03	30.00	35	191.17 ↑	16.47 ↑
Mato Verde	38.41	105.12	23.00	49	173.69 ↑	110.53 ↑
Mirabela	37.84	102.56	30.00	51	171.04 ↑	69.40 ↑
Miravânia	21.85	101.24	22.00	40	363.35 ↑	85.34 ↑
Monte Azul	35.18	116.82	35.00	54	232.05 ↑	52.19 ↑
Montes Claros	14.45	67.07	10.00	30	364.12 ↑	201.68 ↑
Montezuma	26.82	107.41	13.00	48	300.54 ↑	256.03 ↑
Ninheira	40.29	106.23	20.00	48	163.69 ↑	139.72 ↑

Table 1 — Distribution and variation of health teams and dental surgeons in municipalities in the Northern Macroregion of Minas Gerais, Brazil (cont.).

Municipality	No. of HT/100,000 inhabitants. (2008)	No. of HT/100,000 inhabitants. (2023)	No. of DS/100,000 inhabitants. (2008)	No. of DS/100,000 inhabitants. (2023)	Variation in HT between 2008 and 2023 (%)	Variation in DS/100,000 inhabitants. between 2008 and 2023 (%)
Novorizonte	40.00	130.89	40.00	56	227.23 ↑	40.24 ↑
Pai Pedro	33.15	114.79	33.00	49	246.27 ↑	48.40 ↑
Patis	35.60	116.07	18.00	50	226.03 ↑	179.46 ↑
Pedras de Maria da Cruz	27.65	89.34	18.00	41	223.04 ↑	120.26 ↑
Ponto Chique	25.06	116.14	25.00	46	363.41 ↑	85.37 ↑
Porteirinha	33.85	92.54	21.00	37	173.40 ↑	77.71 ↑
Riacho dos Machados	20.96	95.03	21.00	32	353.42 ↑	51.14 ↑
Rio Pardo de Minas	30.66	86.62	27.00	32	182.48 ↑	17.70 ↑
Rubelita	35.97	160.46	24.00	71	346.07 ↑	197.38 ↑
Salinas	22.80	76.44	15.00	24	235.24 ↑	57.14 ↑
Santa Cruz de Salinas	43.94	122.73	44.00	49	179.33 ↑	11.73 ↑
São João da Lagoa	21.26	80.82	21.00	40	280.20 ↑	90.10 ↑
São João da Ponte	42.36	111.85	27.00	52	164.07 ↑	92.67 ↑
São João das Missões	34.22	105.80	26.00	45	209.21 ↑	76.69 ↑
São Romão	29.85	78.66	30.00	31	163.54 ↑	5.41 ↑
Serranópolis de Minas	22.50	103.39	22.00	41	359.57 ↑	83.83 ↑
Taiobeiras	35.52	109.66	26.00	43	208.69 ↑	67.55 ↑
Ubaí	34.03	94.78	17.00	39	178.53 ↑	132.11 ↑
Urucuia	22.75	57.24	8.00	23	151.63 ↑	201.96 ↑
Vargem Grande do Rio Pardo	41.85	138.75	42.00	59	231.55 ↑	42.09 ↑
Várzea da Palma*	8.38	69.82	22.00	27	733.18 ↑	22.75 ↑
Varzelândia	41.03	103.68	15.00	52	152.72 ↑	236.96 ↑
Verdelândia	36.10	94.47	36.00	42	161.68 ↑	16.30 ↑

DS: dental surgeons; HT: health teams.
↑ : Increase
(*) City that showed the greatest increase.
Data source: Information Technology Department of the Unified Health System (DATASUS)

Table 2 — Distribution of health teams and dental surgeons in municipalities in the Northern Macroregion of Minas Gerais with a reduction in the number of dental surgeons.

Municipality	No. of HT/100,000 inhabitants. (2008)	No. of HT/100,000 inhabitants. (2023)	No. of DS/100,000 inhabitants. (2008)	No. of DS/100,000 inhabitants. (2023)	Variation in HT between 2008 and 2023 (%)	Variation in DS/100,000 inhabitants. between 2008 and 2023 (%)
Guaraciama	41.95	99.90	41.95	39.96	138.16 ↑	-4.74 ↓
Jaíba **	36.16	67.75	24.11	20.08	87.35 ↑	-16.73 ↓
Padre Carvalho	34.22	92.79	34.22	30.93	171.14 ↑	-9.62 ↓
São Francisco	18.35	49.45	14.68	12.36	169.41 ↑	-15.81 ↓
São João do Pacuí *	24.56	111.71	49.12	44.68	354.87 ↑	-9.03 ↓

DS: dental surgeons; HT: health teams. ↑: Increase ↓: Reduction
(*) City with the highest positive variation
(**) City with the highest negative variation
Data source: Information Technology Department of the Unified Health System (DATASUS)

Table 3 — Distribution of health teams and dental surgeons in municipalities in the Northern Macroregion of Minas Gerais with non-calculable variation.

Municipality	No. of ES/100,000 inhabitants. (2008)	No. of ES/100,000 inhabitants. (2023)	No. of CDs/100,000 inhabitants. (2008)	No. of CDs/ 100,000 inhabitants. (2023)	Variation in ES between 2008 and 2023 (%)		Variation of no. of CDs/ 100,000 inhabitants. between 2008 and 2023 (%)
Bonito de Minas	20.87	95.64	-	43	358.24	↑	-
Buritizeiro	22.00	70.96	-	25	222.59	↑	-
Campo Azul	26.75	130.55	-	52	387.99	↑	-
Engenheiro Navarro	27.57	124.31	-	55	350.93	↑	-
Glaucilândia ***	-	157.38	-	63	-	-	-
Ibiracatu	34.71	131.09	-	56	277.66	↑	-
Juramento	24.05	91.76	-	46	281.56	↑	-
Juvenília	17.14	122.68	-	53	615.58	↑	-
Lassance	15.10	107.79	-	46	613.91	↑	-
Luislândia	15.44	103.93	-	45	573.29	↑	-
Montalvânia	36.51	109.43	-	48	199.75	↑	-
Nova Porteirinha	39.78	120.11	-	53	201.96	↑	-
Olhos-d'Água	19.22	112.13	-	48	483.28	↑	-
Pintópolis	27.37	92.84	-	40	239.23	↑	-
Pirapora	24.12	58.05	-	19	140.65	↑	-
Santa Fé de Minas ***	-	131.37	-	53	-	-	-
Santo Antônio do Retiro	42.61	123.02	-	55	188.68	↑	-
São João do Paraíso	35.51	88.25	-	42	148.55	↑	-

DS: dental surgeons; HT: health teams.
↑: Increase. (-) : Insufficient data for calculation
(***): City that did not present data on HT in 2008.
Data source: Information Technology Department of the Unified Health System (DATASUS)

resulting in improved access to health services for the local population[12] thereby drawing attention to the need for oral health interventions.

According to the results of this article, in recent years, the number of HT has also shown growth in other regions of the national territory. A study conducted in 2022 by Rocha et al.[13] found an average coverage of HT in the Northeast region of 65.38% in 2018, with a progressive increase in subsequent years, reaching averages of 66.69%, 68.38%, and 70.16% in 2019, 2020 and 2021, respectively.

In relation to the other results found, the significant increase in the number of DS working in the public service stands out.A total of 63 municipalities showed positive variation in this aspect. This increase in the field of activity of DS in the public service began with the inclusion of these professionals in the OHT of the FHS, following Ministerial Ordinance 1,444 of December 28, 2000, which establishes financial incentives aimed at restructuring healthcare services oral care offered in municipalities through the FHS[14].

This insertion contributed to the dissemination of dental care integrated into a multidisciplinary team and provided free of charge. With this change, the need for adaptation in the training of DS to act in the provision of primary care increased[15].Therefore, public authorities have developed strategies for training and valuing higher education professionals over the years. For example, we can mention the implementation of updates, improvements, and *lato sensu* postgraduate courses, such as Specialization and Multidisciplinary Residency in Family Health, promoted by the Ministry of Health[16].

Regarding the level of training of professionals who currently perform their activities in primary healthcare in the Northern Health Macroregion of Minas Gerais, the cross-sectional study developed by Barbosa et al.[17], which included the participation of 317 professionals linked to the FHS in municipalities in the region, stands out. The results revealed that over half of these workers had completed a postgraduate course, mainly in Primary Health Care/Family Health.

In addition to specialization courses, policies were implemented, such as the Primary Care Professionals Valorization Program (PROVAB), created in 2011, to attract qualified professionals, especially recent graduates with little experience in the area, to

work in the Primary Care[18]. These incentives can be considered as determining factors for the positive variation in the number of DS.

Corroborating the findings of this study, Cubis, Vianna, and Gomes[19] analyzed the evolution of OHT coverage in Brazilian macroregions from 2009 to 2019 and found an increase of 8.1% in OHT population coverage in the Southeast Macroregion of the country. This reinforces the growing trend in the availability of oral health services, with the DS as an active professional.

Another factor that directly affects the increase in DS is the demand from the population residing in the region. A sample-based study was developed by Pinto et al.[20], who collected oral health data in municipalities throughout the state of Minas Gerais, classifying them into "Interior I", "Interior II," and "Capital", according to the municipality's resource allocation (I-largest allocation; II -smaller allocation). The North Macroregion of the state mainly presented the "Interior II" classification, and the results showed that in places with the lowest allocation, the average number of decayed teeth was 50% higher than in Interior I and around 2 times higher than in the Capital. Other problems cited in the study were periodontal diseases, the need for prostheses, and occlusopathies, which also affect municipalities in Interior II.

It is possible to establish a relationship between the results provided by Pinto et al.[20] and the increase in population in the municipalities studied. If, between 2008 and 2023, there was a growth in a population marked by more intense dental needs than in more developed municipalities, the demand for dental services increased proportionally to the expansion of the number of inhabitants, compelling more DS to these locations[21].

Concerning the reduction in the number of DS observed in 5 of the 86 municipalities studied, it is necessary to identify the factors that motivated this decline. A survey of small municipalities in the state of Paraná revealed an imbalance in salaries paid to higher education professionals. Doctors received, on average, more than triple the salaries of dentists and nurses, and even the highest salaries were still considered low[22]. Factors such as these generate great discontent and lack of motivation among these workers.

In this context, Alves and Pizzio[23] point out that remuneration exerts a significant influence on the impact of health at work, especially in long working hours and in the lack of time to adopt healthy habits. The perception of unsatisfactory remuneration leads healthcare professionals to seek multiple jobs, resulting in long hours in the workplace and adverse consequences for physical and mental health.

Furthermore, when discussing the reduction in the number of DS in HT, another relevant aspect is the integration of OHT into teamwork. Research by Scherer et al.[24] revealed that working together remains a challenge for professionals, mainly because of the predominance of the biomedical model. It was also highlighted that the development of joint actions, which require more significant contact and participation, is still incipient among the teams. This aspect directly influences the principle of comprehensiveness because team practices are essential in the comprehensive approach to the individual, promoting health promotion, prevention, treatment, and rehabilitation actions[5].

Similarly, Oliveira et al.[26] showed that the challenges in integrating the OHT with other FHS teams are a reality in the public health system. The study added the precariousness of inputs and physical structure as aggravating factors in the working conditions of ESB professionals. According to the authors, these aspects generate agenda overcrowding, professional overload, and user dissatisfaction.

This set of difficulties related to the working conditions of DS in HT is intrinsically associated with the dissatisfaction of these professionals[27]. This contributes to the negative results observed in this study.

This study has some limitations that must be considered when interpreting the results. In some municipalities, there was no registration of data regarding the number of DS in 2008 (20%) and the number of OHT in the same year (2%), which may have impacted the results. Furthermore, the information in the tables was obtained through calculations based on information from DATASUS, which may introduce biases, such as data that were not registered and, therefore, were not included in the calculations or rounding that interfered with the precision of the values obtained.

However, it is important to highlight as a positive aspect that this is one of the few studies that has evaluated, to date, the variation in the number of DS in OHT in the Northern Health Macroregion of Minas Gerais. The factors that influenced this process and its results may generate subsidies for new multidisciplinary strategies in PHC to promote quality oral health.

More comprehensive studies are needed to investigate the possible relationship between the associations studied and the quality of care provided to patients, aiming to identify the possible impacts of professionals' working conditions on the quality of dental services offered.

CONCLUSION

According to the results of this study, between 2008 and 2023, there was an increase in the number of HT implemented in all municipalities in the Northern Health Macroregion of Minas, given the population increase in the period analyzed.Consequently, with the increase in HT, there was also an increase in OHT due to the increase in incidences related to oral health.

The population increase in the Northern Health Macroregion of Minas Gerais generated the need to readjust health teams, including professionals who graduated in Dentistry, adapting them to a larger quantitative group of inhabitants. Currently, this region has more than twice as many higher education institutions as in 2008, consequently, a greater distribution of professionals in public service locations.

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