Regional inequalities in employment relationships and professional qualification of dentists working in Primary Care

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ABSTRACT

This transversal study aimed to compare employment relationships and professional qualification of dentists that work in Primary Care in different geographical regions in Brazil. Data was obtained from the Module VI of the external evaluation of the 2nd Cycle of the *Programa Nacional do Acesso e da Qualidade da Atenção Básica* - PMAQ-AB (Primary Care Access and Quality National Program). The comparison between regions was carried out using the chi-square test ($p<0.05$) and descriptive analyses. In the 17,117 Oral Health Teams assessed, most of the dentists were statutory civil servants (44.1%), and among them, most were found in the south region (63.6%), while the lowest number was observed in the southeast (37.8%). Nearly half of these professionals were approved in a public test (49.6%), and the highest number was observed in the south (79.5%), while the lowest number was found in the northeast (40.9%). Regarding their professional qualification, (73.1%) had complementary education, and among them, most were specialized in varied areas other than Collective Health (53.2%), with the highest figures observed in the north (59.3%) and the lowest in the northeast (50.4%). Those specialized in Family Health or Collective/Public Health (26.7% and 18.7%, respectively) were most frequently found in the southeast (38.7% and 21.4%), while the lowest frequency was observed in the north (11.4% and 14.9%, respectively). In all comparisons, the "p" value was ($p\leq0.001$). Therefore, regional inequalities were observed in employment relationships and professional qualification in Brazil, which reinforces the need for public policies that favor the retention and qualification of these professionals.

Descriptors: Oral Health. Health Human Resources. Professional Qualification.

1 INTRODUCTION

The oral health history in Brazil is characterized by the absence of consistent public policies and was, for a long time, marked by excluding and damaging health practices[1]. In 1988, with the approval of the current Federal Constitution, health became a right of the Brazilian population, and the National Unified Health System (SUS) was created, with the principles of universality, wholeness, and equity[2]. However, oral health had its insertion broadened in the health public services only years later[3,4].

For this reason, aiming at guaranteeing the universality of the health care, in the late 2000 the Health Ministry (HM) published the Ordinance 1.444, which included the Oral Health Team (OHT) in the Family Health Strategy (FHS). This strategy sought to reorganize dental services provided by the primary care (PC) and to improve the Brazilian population oral health epidemiological indicators.[3]. In 2004, through the current Oral Health National Policy, another step towards wholeness was taken through the expansion of the primary care services and their availability at the secondary and tertiary levels[4].

An increase in the number of oral health teams and the inclusion of specialized services turned the SUS into the greatest employer of dentists (DS) in Brazil in the recent years[5]. However, the distribution of these professionals throughout the Brazilian states is heterogeneous, mainly due to the concentration of dentistry colleges in the center-south region of the country[6]. This might result in difficulties to manage and retain these professionals and, consequently, regional differences regarding the allocation of human resources in the SUS are observed. Therefore, the different types of employment relationships found in the health public system might harm the stability of these workers as well as the quality of the services offered to the population[7].

When entering the FHS, the DS along with the other team members (oral health assistants and technicians), had to adapt to a new work process, which was previously developed with a predominantly private, curative and biological focus[3]. Aiming at responding to the health needs of the population that uses the FHS dental services, professional qualification was stimulated with the purpose of fostering education processes linked to the Health Permanent Education. Since the 1990s, the HM has invested in the qualification of the primary care through updating and improvement courses and lato sensu graduate courses such as Specialization and Family Health Multiprofessional Residency[8].

One of the main objectives of the Política Nacional de Educação Permanente em Saúde – PNEPS (Health Permanent Education National Policy) is to strengthen the SUS through a strategy of education and qualification for the development of the health work[9]. The availability of such Permanent Education (PE) is materialized in a strong work management tool, justifying its value in the improvement of the work process qualification of individual workers and the team as a whole[10].

Just as any work process, health care must be monitored and evaluated so that improvements can be implemented including the dimensions of productivity, satisfaction, and personal fulfillment of professionals and users, economy of means, and resource optimization. With this purpose, the SUS has implemented the the *Programa Nacional do Acesso e da Qualidade da Atenção Básica* - PMAQ-AB (Basic Care Access and Quality National Program), which measures the PC several structuring axes, including employment relationships and professional qualification, which might interfere in the work process increasing the primary care quality[11,12]. Taking that into consideration, this study aimed to identify regional inequalities in the employment relationships and

professional qualification of dental surgeons working in PC in Brazil, by surveying the data of the PMAQ-AB 2nd cycle.

2 METHODOLOGY

This is a quantitative, transversal and analytical study, carried out with secondary data from the Module VI of the external evaluation instrument of the 2nd cycle (2013-2014) of the PMAQ-AB, made available by the Health Ministry.

The sample was made up by the OHT of the PC (OHT of the FHS or parameterized) who adhered and received the external evaluation of the 2nd Ciycle of the PMAQ-AB. Variables were selected from the Module VI of the data collection instrument, which included interviews with the OHT members (DS or oral health technician/assistant) and verification of documents in the health unit. This study analysis only included forms filled in by the DS, since the objective of this study focused on those professionals.

The external evaluation was carried out in a multicentric approach, by higher education institutions in the 27 Brazilian states, which coordinated the teams of calibrated interviewers that should collect data from the professionals using validated forms, record their answers on tablets, and analyze the respective documents whenever the instrument requested this action. The participants signed a free and informed consent form and were secured the right to refuse to participate.

Module VI included 230 questions sub-divided into themes. The sub-divisions from VI-3 to VI-6 were used in this study and corresponded to the following themes: VI-3 Education and Qualification of Oral Health Team professionals; VI-4 Employment relationship; VI-5 Career Plan; VI-6 Permanent Education in the process of qualification of the actions developed. Therefore, 32 questions were analyzed and included.

The variables investigated were divided into two axes (chart 1): a) employment relationships, which described the type of employment and the characteristics of the recruiting agents; b) education and professional qualification, which identified the continuous and permanent education actions offered to the OHT (FHS or parameterized). The results of different Brazilian regions were compared (north, northeast, center-west, southeast, and south).

The data obtained was analyzed using the *Statistical Package for the Social Sciences* (SPSS) 20.0 (IBM, Armonk, NY, USA), and presented in absolute (n) and relative (%) frequencies. The associations between the variables studied (outcomes) and the Brazilian regions (independent variable) were carried out using the chi-square test ($p<0.05$). As for the variables in which the answer options were "Yes" or "No", although the tables in the PMAQ-AB data base only presented the category 'Yes', our analysis also considered the category 'No'.

The external evaluation of the 2nd cycle of the PMAQ-AB was coordinated by the Escola Nacional de Saúde Pública/Fundação Oswaldo Cruz – Fiocruz (Public Health National School/Oswaldo Cruz Foundation) and was approved by the Institution Research Ethics Committee under number 02040212.1.0000.5240, and the data is available as public domain.

3 RESULTS

The study initial sample included 18,115 OHT that answered module VI of the questionnaire; however, 998 were excluded for having been answered by the oral health assistant or technician, thus 17,117 OHT were included in the study.

Most of the dentists were statutory civil servants (44.1%), and were mostly found in the southern region (63.6%), while the lowest number was found in the southeast (37.8%). The second

Chart 1. Variables and categories of analysis

Axis	Variable	Categories
Employment relationship	Recruiting Agent	Direct Administration; Public Law Intermunicipal Consortium; Private Law Intermunicipal Consortium; Public Law Public Foundation; Private Law Public Foundation; Social Organization (OS); Public Interest Civil Society Organization (PICSO); Charitable Organization; Non-governmental Organization (NGO); Company; Cooperative; Others
	Type of employment relationship	Statutory Civil Servant; Commissioned post; Temporary contract by the public administration ruled by special law (municipal/state/federal); Service Temporary Contract; Civil Servant ruled by the Consolidation of Labor Laws (CLT); CLT Contract; Self-employed; Others
	Entrance	Public test; Public selection; Appointment; Other
	Career Plan	Yes/No
	Progression due to time of service	
	Progression due to performance evaluation and /or development (merit)	
	Progression due to title/ professional education	
	Incentive, gratification, performance financial bonus.	
Education and professional qualification	Family Health Specialization	Yes/No
	Public Health/ Collective Health specialization.	
	Different specialization	
	Family health residency	
	Public Health/ Collective Health residency	
	Different residency	
	Family Health Master's Degree	
	Public Health/ Collective Health Master's Degree	
	Different Master's Degree	
	Family Health PhD	
	Public Health/ Collective Health PhD	
	Different PhD	
	Which of these Permanent Education (PE) actions do the OHT take part in?	Seminars; Exhibitions; Workshops; Discussion Groups; Physical classroom courses; Telehealth; Telemedicine University Network (RUTE); SUS Open University (UNASUS); Distance Education Courses; Experience exchange; Tutorial/advice; BHU receives undergraduate, specialization students, residents, among others.
	Which OHT professionals are involved in the PE actions?	Only the dentist; only the oral health assistant or technician; the whole OHT.
	Do the PE actions meet the team's requirement and needs?	Yes/No

type of employment relationship with noticeable relevance was the service temporary contract (20.4%), and the region with the highest number of this type of employment relationship was the northeast (30.1%), while the lowest number was observed in the south of the country (3.0%). The main form of entrance of dental surgeons in the public service was public test (49.6%), with the highest figures in the south (79.5%) and the lowest in the northeast (40.9%). Entrance due to appointment was also highly prevalent (23.1%) and the northeastern and northern regions presented the highest percentages (33.5% and 30.3%, respectively), while the southern and southeastern regions showed the lowest percentages (4.4% and 16.9%, respectively) (table 1).

The main recruiting agent was the direct administration (82.5%), showing the highest percentage in the northern region (90.7%) and the lowest in the southeastern region (73.1%). Out of the 16,642 dentists that answered questions about the career plan, 21% stated having this plan, and the southern region was the most prevalent (40.4%), while the northeastern showed the lowest prevalence (12.4%). Among the types of progression analyzed, the progression due to time of service outstood all over the country (87.9%) (table 1).

As for professional qualification, 73.1% reported not having it or doing some type of complementary education course. The analysis including only DS who completed/are doing some complementary course, *latu sensu* graduate courses at the specialization level in other areas rather than Family/Collective/Public Health prevailed (53.2%), with the highest percentage in the north (59.3%) and the lowest in the northeast (50.4%). Among those who completed a *strictu sensu* graduate course, Master's Degrees in other areas different from Family/Collective/Public Health were the most frequently reported (7.2%) and their highest figures were seen in the north (8.3%), while the northeastern region presented the lowest numbers (6.5%) (p=0.046) (table 2).

When the types of Permanent Education actions attended by the OHT in Brazil were analyzed, the most frequent records included attendance to seminars, exhibitions, workshops and participation in discussion groups (64.2%), with greatest attendance in the south (70.6%) and lowest percentage of attendance in the north (53.5%). The least used action was the RUTE-Telemedicine (1.5%), which was most cited in the south (2.7%), presenting the lowest figures in the northeast (1.0%). In relation to PE actions, among the teams that reported having participated, 82.0% of the actions aimed at the whole OHT, 14.1% of the actions targetted only the DS, and 3.9% included the oral health assistant or technician, also presenting regional differences (Table 3).

The DS evaluated that the PE actions meet the team's requirements and needs (74.4%), with the highest percentage in the southeastern region (77.6%) and the lowest in the northern region (63.7%) ($p \leq 0.001$) (figure 1).

4 DISCUSSION

Most of the DS taking part in the PMAQ-AB were in employment relationships considered formal by the HM and started to work after being approved in a public test, and the main recruiting agent was the direct administration. However, most of the professionals reported not having a career plan and the main types of progression were due to service time and title/professional education. These findings are in agreement with the study developed with medical doctors working in the SUS in the 1st and 2nd cycles of the PMAQ-AB external evaluation[13], that is, this is a characteristic of employment in the health sector in the municipalities, not only linked to the type of professional working for the SUS.

The northeastern region presented the higjest number of OHT participants in the 2nd cycle of the PMAQ-AB external evaluation and was the place that presented the lowest proportion of formal employment relationships and recruitment via public test. In that region, being appointed to the position was the most prevalent way of starting the activity. A previous study in the northeast reported better employment relationships for the Community Health Agents[14], which might demonstrate greater retention of professionals at the elementary and high school level of education, which does not occur with higher education professionals. This aspect was also observed in the state of Paraná,

Table 1. Employment relations of Oral Health Teams taking part in the PMAQ-AB external evaluation 2nd cycle in Brazilian regions, 2013-2014

Variable	Brazil (n = 16982)	Geographical region					p-value
		South (n = 2467)	Southeast (n = 4711)	Center-West (n = 1508)	Northeast (n = 7143)	North (n = 1153)	
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	
Type of employment relationship							
Statutory civil servant/ CLT public employee	8587 (50.5)	2034 (82.4)	2139 (45.4)	866 (57.5)	3046 (42.7)	502 (43.5)	< 0.001
Temporary contract: special law public administration, service contract or CLT	7844 (46.2)	396 (16.1)	2464 (52.3)	583 (38.7)	3797 (53.2)	604 (52.4)	
Commissioned post, self-employed and others.	551 (3.2)	37 (1.5)	108 (2.2)	59 (3.9)	300 (4.2)	47 (4.1)	
Entrance process							
Public test	8494 (49.6)	1970 (79.5)	2217 (46.6)	864 (57.3)	2946 (40.9)	497 (42.7)	<0.001
Public selection	2792 (16.3)	290 (11.7)	1257 (26.4)	225 (14.9)	879 (12.2)	141 (12.1)	
Appointment	3951 (23.1)	109 (4.4)	807 (16.9)	269 (17.8)	2413 (33.5)	353 (30.3)	
Others	1880 (11.0)	109 (4.4)	481 (10.1)	151 (10.0)	966 (13.4)	173 (14.9)	
Recruiting agent							
Direct administration	14013 (82.5)	2124 (86.2)	3441 (73.1)	1196 (79.6)	6202 (86.8)	1050 (90.7)	< 0.001
Public or private law intermunicipal consortium	365 (2.1)	32 (1.3)	55 (1.1)	66 (4.4)	187 (2.6)	25 (2.2)	
Public or private law foundation	817 (4.8)	210 (8.5)	317 (6.8)	86 (5.7)	166 (2.3)	38 (3.3)	
SO, PICSO or NGO	552 (3.2)	8 (0.3)	525 (11.1)	4 (0.2)	14 (0.2)	1 (0.1)	
Charitable organization, company, cooperative, and others	1230 (7.2)	91 (3.8)	369 (7.8)	150 (10)	576 (8.1)	44 (3.8)	
With career plan (multiple answers)	3501 (21.0)	981 (40.4)	1035 (22.4)	354 (24.3)	871 (12.4)	260 (23.7)	<0.001
Progression due to time of service	2885 (87.9)	861 (91.3)	842 (85.7)	296 (90.0)	679 (85.6)	207 (88.1)	<0.001
Progression due to merit	1827 (56.1)	539 (57.1)	660 (66.5)	122 (37.4)	385 (50.1)	121 (53.5)	<0.001
Progression due to title and professional education	2744 (81.3)	797 (83.5)	736 (73.6)	308 (89.8)	687 (82.8)	216 (87.1)	<0.001
Incentive, gratification, performance financial bonus	3966 (23.4)	654 (26.7)	1084 (23.0)	303 (20.4)	1740 (24.4)	185 (16.2)	<0.001

CLT = Consolidation of labor laws. SO = Social Organization. PICSO = Public Interest Civil Society Organization. NGO = Non-Governmental Organization.

Table 2. Dentists that took part in the 2nd cycle of the PMAQ-AB 2014 external evaluation that have professional qualification at the specialization, residency, Master's and Doctorate degree levels in Brazilian regions, 2013-2014

Variable (multiple answers)	Brazil (n=12514)	Region					p-value
		South (n=1920)	Southeast (n=3449)	Center-West (n=1046)	Northeast (n=5342)	North (n=757)	
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	
*Specialization**							
Family health	3346 (26.7)	574 (29.9)	1335 (38.7)	255 (24.4)	1096 (20.5)	86 (11.4)	<0.001
Public or Collective Health	2339 (18.7)	400 (20.8)	739 (21.4)	176 (16.8)	911 (17.1)	113 (14.9)	<0.001
Other areas	6657 (53.2)	1085 (56.5)	1819 (52.7)	612 (58.5)	2692 (50.4)	449 (59.3)	<0.001
*Residency**							
Family health	200 (1.6)	50 (2.6)	84 (2.4)	8 (0.8)	53 (1.0)	5 (0.7)	<0.001
Public or Collective Health	121 (1.0)	28 (1.5)	45 (1.3)	13 (1.2)	34 (0.6)	1 (0.1)	<0.001
Other areas	256 (2.0)	40 (2.1)	112 (3.2)	20 (1.9)	69 (1.3)	15 (2.0)	<0.001
*Master's degree**							
Family health	48 (0.4)	12 (0.6)	20 (0.6)	2 (0.2)	11 (0.2)	3 (0.4)	<0.058
Public or Collective Health	146 (1.2)	32 (1.7)	50 (1.4)	8 (0.8)	46 (0.9)	10 (1.3)	<0.020
Other areas	899 (7.2)	137 (7.1)	278 (8.1)	76 (7.3)	345 (6.5)	63 (8.3)	<0.046
*PhD**							
Family health	33 (0.3)	4 (0.2)	10 (0.3)	2 (0.2)	15 (0.3)	2 (0.3)	<0.659
Public or Collective Health	35 (0.3)	9 (0.5)	11 (0.3)	4 (0.4)	10 (0.2)	1 (0.1)	<0.213
Other areas	207 (1.7)	29 (1.5)	79 (2.3)	19 (1.8)	66 (1.2)	14 (1.8)	<0.005

*Considering only concluded courses.

where the worst types of employment relationships are associated to professionals at the higher level of education[15]. Some consequences of this flexibilization of the employment relationships such as worker's unsatisfaction, depreciation of the civil servants' commitment to the community, work segmentation and interruption of health actions, have become a great challenge for the management of the health team labor process[14].

In this study, the main recruiting agent was the direct administration in all regions. However, there are several other forms of employment contract reported such as temporary contracts, CLT contracts, commissioned posts, appointment, and others. Curiouslu, the HM considers precarious the work developed without ensuring the workers' social security and entered without a public test[16] and also considers irregular all employment relationship started in a public institution without a public test or selection, except for outsourced workers in areas that are not responsible for the projects[17,18].

Table 3. Distribution of types of action and professionals involved with Permanent Education (PE) in the Oral Health Teams (OHT) that took part in the 2nd cycle of the PMAQ-AB 2014 external evaluation in different Brazilian regions

Variable	Brazil (n=17117)	Region					p-value
		South (n=2478)	Southeast (n=4762)	Center-West (n=1509)	Northeast (n=7204)	North (n=1164)	
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	
PE actions and activities (multiple answers)							
Seminars, exhibitions, workshops, discussion groups	10985 (64.2)	1750 (70.6)	3117 (65.5)	834 (55.3)	4661 (64.7)	623 (53.5)	<0.001
Physical classroom courses	8456 (49.4)	1604 (64.7)	2648 (55.6)	648 (42.9)	3179 (44.1)	377 (32.4)	<0.001
Experience exchange	8028 (46.9)	1254 (50.6)	2570 (54.0)	536 (35.5)	3277 (45.5)	391 (33.6)	<0.001
Distance Education Courses	3813 (22.3)	740 (29.9)	1666 (35.0)	250 (16.6)	1056 (14.7)	101 (8.7)	<0.001
Telehealth	3505 (20.5)	834 (33.7)	1373 (28.8)	334 (22.1)	857 (11.9)	107 (9.2)	<0.001
UNASUS	2373 (13.9)	599 (24.2)	812 (17.1)	122 (8.1)	779 (10.8)	61 (5.2)	<0.001
BHU as an education space (interns and residents)	2831 (16.5)	487 (17.6)	836 (17.6)	173 (11.5)	1193 (16.6)	142 (12.2)	<0.001
Tutorial/advice	1711 (10.0)	293 (11.8)	612 (12.9)	82 (5.4)	649 (9.0)	75 (6.4)	<0.001
RUTE-telemedicine	260 (1.5)	68 (2.7)	82 (1.7)	24 (1.6)	72 (1.0)	14 (1.2)	<0.001
Others	1167 (6.8)	179 (7.2)	364 (7.6)	103 (6.8)	448 (6.2)	73 (6.3)	<0.035
Professionals involved in PE actions							
Whole OHT	11516 (82.0)	1883 (84.4)	3342 (81.6)	913 (80.8)	4729 (82.0)	649 (80.2)	<0.001
Only the dentist	1973 (14.1)	271 (12.1)	630 (15.4)	163 (14.4)	796 (13.8)	113 (14.0)	<0.001
Only the oral health assitant and/or technician	549 (3.9)	78 (3.5)	125 (3.1)	54 (4.8)	245 (4.2)	47 (5.8)	<0.001

PE= Permanent Education. UNASUS = SUS Open University. BHU = Basic Health Unit. OHT = Oral health team. RUTE-Telemedicine = Telemedicine University Network.

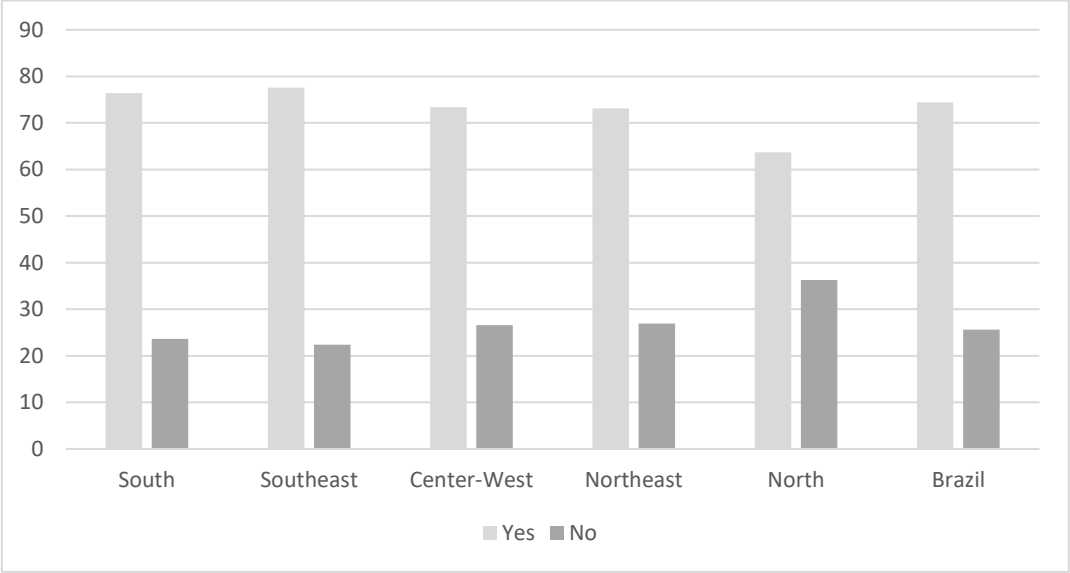

Figure 1. Distribution of the perception of Permanent Education actions meeting the requirements and needs of the Oral Health Team taking part in the 2nd cycle of the PMAQ-AB 2014 external evaluation in Brazilian regions (p<0.001)

On the other hand, in the southern region, the work management presented better performance, which contributes positively to the retention of professionals and might result in a more longitudinal care, as shown in several health indicators[19]. With the purpose of improving employment relationships within the SUS, the federal government started to incentivize the regulation of employment relationships in the public sector, aiming to substitute precarious contracts with legal ones through the application of public tests[17], since the current labor management situation is still a great obstacle to the achievement of the SUS objectives, representing one of the main reasons for the high turnover of professionals in primary care[7].

Regional inequalities also present the same pattern regarding the low number of professionals that have a career plan, most of the professionals who reported having a career plan were found in the south, while the lowest numbers were observed in the northeast. A study carried out in 2008 pointed out the low rate (11.8%) of Position, Career and Salary Plans (PCSP) in Brazilian capitals and municipalities with over 50 thousand inhabitants and at least 500 positions among health professionals[20]. In this study, highest prevalence of the PCSP (21.0%) existence was verified, which represents a significant improvement occurred in a decade, considering the fact that, in the PMAQ-AB case, small municipalities were also included, and these places tend to show lower PCSP proportion[21].

Progression due to time of service and title/ professional education were the most prevalent in this study. In another study that evaluated successful experiences of implementation of PCSP, the types of progression considered in the plans were: performance evaluation and professional qualification. However, many PCSP did not adhere to the progression due to the time of service fearing the financial impact that it could cause[22]. All successful plans included in the study were based on performance evaluation, but none of them had a law regulating it, which represented great difficulty and was the probable cause of this type of progression being the least prevalent at the national level[22]. In addition, a study showed that great part of the municipalities has a single plan for all the municipality/state workers[21]. Although managers tend to consider the existence of a specific plan an advantage to both the management and health workers, mainly for the valorization and retention of these professionals, resulting in improvement in the quality of the service rendered to the population[20,23], several difficulties are listed which have financial, legal, and technical[20] origin, or lack of a policy regulating its implementation and lack of autonomy of the Health Municipal Secretariat to create the plan[20,21].

Regarding the dentists' professional qualification in the PC, higher percentage of education was observed, in both latu sensu and stricty sensu graduate courses, in dentistry areas focused on individualized, curative and isolated practices when compared to the specific education in the Family Health and/or Public/Collective health areas. Such aspect might reinforce a professional education in the area focusing on specialities and with a private clinic approach, in a labor process with curative isolated practice, which might create difficulties for the professional's action in public health[24]. It may also reinforce the idea of working in the public service with a generalist character, with low perception of the need for education in the collective health field. A study showed that preparing the team for the family health theme was a relevant factor associated to the performance of the Health Primary Care, highlighting the importance and the value of the specific education in the area[25], the dental surgeon is, when compared to medical doctors and nurses, the PC professional with the highest education rates in family health specialization[26].

In this study, the highest concentration of

professionals qualified to work in the family health or public/collective sectors was found in the southeastern region, while the lowest rates were seen in the northern region. This aspect might reinforce the regional inequality, both regarding professional distribution, also evident in the lower adhesion of the OHT to the PMAQ-AB, and also in the number of undergradaute and specialization courses in each region, with the highest concentration in the southeast-south axis[6]. However, low qualification or professional preparation to work in the public service might hamper the quality of the care given and slow the improvement of the population access to health services, since it worsens the work planning ability and team actions. For this reason, the family health specialization might generate reflections and change in the workers' routines such as the reorganization of the labor process and the development of collective activities and fostering of self-referral[12].

In addition to specialization, the adhesion to the PCSP should be reinforced aiming at changing the teams' labor process. In this study, as in the literature[27], greater access to PE in physical classroom courses was verified. The limitation of those programs is that the discussions are restricted to the health unit staff, not exposing the team to a second opinion. The addition of their knowledge and updating of actions and programs should be developed with better use of PE provided by distance learning courses such as the UNASUS, Telehealth and RUTE-Telemedicine. However, these approaches have been more used by municipalities with higher population rates[27], and in this study, they were mostly used in the southern and southeastern regions.

Permanent education, when well designed, modifies the labor process, promotes the professionals' critical view, increases social participation, and enables the management of local health issues[11]. However, a study with participants in the 1st cycle of the PMAQ-AB evaluation revealed that the professionals reported that some PE actions did not meet the teams' requirements and needs[26], which might be noticed in PE actions with conventional character, previously defined by a central command in a context in which the professionals cannot see themselves as protagonists of the process. These findings demonstrate the need for effective policies to incentivize the small municipalities to adhere to professional qualification programs, the use of PE through distance learning courses, for example, and contribute to their education and increased resolution in PC.

As for the use of the Basic Health Unit (BHU) as a space of education for interns and residents, the national average was 16.5%, a rather low number in the Brazilian general scenery. Since Brazil is a country with several dentistry undergraduate and graduate courses as already mentioned, this number could be significantly improved with the increase in the number of BHU that accept interns and residents in education programs. One of the SUS obligations, in addition to serving the population, is to guarantee the education of qualified professionals for the assistance based on the principles of universality and equity, leading them to a critical education aiming at the development of these professionals' human values[28]. Another discouraging point observed was the low number of units that hold a tutorial/advice program, which means that many units that receive interns/residents do not have professionals to supervise and guide their activities.

When analyzing the results, we had to consider that this study presents some limitations for having been developed with secondary data from the PMAQ-AB, which only considers the teams that took part spontaneously and applied for the evaluation process. Thus, for not being a representative sample of all OHT working in the country, it might not depict the actual scenery of the

Brazilian PC reality. However, it also deserves attention for having used broad data at national level, which might favor the understanding of the issue investigated.

We could notice that the dentists who took part in the study had quite good professional qualification, however, a lot can still be done to improve the specific education in the public health or family health areas. In addition, we could verify the coverage of the PE programs, despite the fact that some regions are more benefitted by them. When verifying the absorption of policies, such as professionals' retention, career plan and the implementation of PE policies in the southern region, we could observe that other regions can also achieve these aims, and more effective policies should be implemented in the regions that present lower indices seeking some balance between the geographical areas.

Despite some advancement was observed, this study revealed that there are still many challenges to be faced regarding human resources in the SUS. These include precarious selection of professionals, low salaries and qualification, and lack of specific qualification of the employees to deal with collective health problems. Such issues affect negatively the development of professional-community bonds and impact the labor process and the population health conditions[29].

5 CONCLUSION

Most of the dentists that took part in the PMAQ-AB external evaluation were in employment relationships considered formal by the HM, since they had started to work after having passed a public test and had been hired by the direct administration. However, most of these professionals did not have a career plan and the prevalent types of progression are due to time of service and title/professional education.

Regarding professional qualification, most of the professionals working for the SUS had dental qualification in other areas rather than Family/Public/Collective health. This fact hampers the team integrated labor process and the way to provide care and assistance. The PE is mainly developed in physical classrooms actions and courses, while other formats such as distance learing (Telehealth, UNASUS, and others) are underused and the teaching-service integration is incipient, since very few BHU receive students in internship or residency programs.

There were evident regional differences concerning the issues analyzed, and the best indicators were seen in the southern and southeastern regions. This aspect showed that these regions were able to absorb policies leading to the deprecarization of the employment relationships such as the retention of professionals, career and workers' qualification plans, and the implementation of PE policies. However, such policies must be thought aiming at reducing inequalities, and actions must be incorporate and become effective in other Brazilian regions as well.

RESUMO

Desigualdades regionais nas relações de trabalho e qualificação profissional de cirurgiões-dentistas atuantes na Atenção Básica

O estudo transversal objetivou comparar as relações de trabalho e qualificação profissional de cirurgiões-dentistas atuantes na Atenção Básica nas regiões geográficas brasileiras. Utilizou-se dados do Módulo VI da avaliação externa do 2º ciclo do Programa Nacional do Acesso e da Qualidade da Atenção Básica (PMAQ-AB). A comparação entre regiões foi realizada pelo teste qui-quadrado ($p<0,05$) e análises descritivas. Das 17.117 Equipes de Saúde Bucal avaliadas, a maioria dos cirurgiões dentistas era Servidor Público Estatutário (44,1%), sendo, este número, maior na região Sul (63,6%) e menor no Sudeste (37,8%), com ingresso por concurso público (49,6%), sendo maior no Sul (79,5%) e menor no Nordeste (40,9%). Em relação à qualificação profissional,

(73,1%) possuíam formação complementar e dentre estes, a maioria tem especialização em outras áreas que não Saúde Coletiva (53,2%), sendo maior no Norte (59,3%) e menor no Nordeste (50,4%). Os especialistas em Saúde da Família ou Saúde Pública/Saúde Coletiva (26,7% e 18,7%) respectivamente foram mais frequentes no Sudeste (38,7% e 21,4%) e menor no Norte (11,4% e 14,9%) respectivamente, para todas o valor de "p" foi ($p \leq 0.001$). Portanto, houve desigualdades regionais nas relações de trabalho e qualificação profissional no Brasil, e por isso, políticas indutoras para fixação dos profissionais e sua qualificação precisam ser reforçadas.

Descritores: Saúde Bucal. Recursos Humanos em Saúde. Qualificação Profissional.

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