



Primary Health Care attributes and associated factors from the perspective of dental surgeons

Atributos da Atenção Primária à Saúde e fatores associados na perspectiva de cirurgiões-dentistas

Atributos de la Atención Primaria de Salud y factores asociados en la perspectiva de cirujanos dentistas

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ABSTRACT

Objective: To analyze the degree of extension of Primary Health Care attributes and associated factors from the perspective of dental surgeons. **Methods:** This is a cross-sectional study carried out with dental surgeons from Sobral, Ceará, from April to August 2019 using the Primary Care Assessment Tool - Professional Version validated for oral health services. Sociodemographic and professional data were also collected. Association analysis and binary logistic regression were performed using professional variables and the value of the extension of the attributes. **Results:** The results obtained from a sample consisting of 50 dental surgeons linked to Primary Health Care showed that: oral health services have a strong orientation to Primary Health Care (7.22), with the lowest score found for the attribute access (3.48) and the highest for the comprehensiveness attribute - services provided (9.70). The highest value of the attributes was associated with an increase in the value of the gross salary and having no other paid job. Being a woman, not having any other paid job and being professionally satisfied with work in Primary Health Care were predictive factors for the increase in the value of the attributes. **Conclusion:** Primary Health Care was well evaluated by dental surgeons, but with low values for access and increased job satisfaction as a predictive value for improving performance based on attributes.

Descriptors: Primary Health Care; Health Services Research; Oral Health.

RESUMO

Objetivo: Analisar o grau de extensão dos atributos da Atenção Primária à Saúde e fatores associados na perspectiva de cirurgiões-dentistas. **Métodos:** Trata-se de um estudo transversal realizado com cirurgiões-dentistas de Sobral, Ceará, Brasil, de abril a agosto de 2019, utilizando o Instrumento de Avaliação da Atenção Primária à Saúde (Primary Care Assessment Tool - versão profissional), validado para serviços de saúde bucal. Dados sociodemográficos e profissionais também foram coletados. Foi realizada análise de associação e regressão logística binária utilizando variáveis profissionais e o valor da extensão dos atributos. **Resultados:** A partir da amostra, constituída por 50 cirurgiões-dentistas vinculados à Atenção Primária à Saúde, os resultados indicaram: os serviços de saúde bucal têm forte orientação para a Atenção Primária à Saúde (7,22), com o menor escore para o atributo acesso (3,48) e o maior para o atributo integralidade - serviços prestados (9,70). O maior valor dos atributos esteve associado a um aumento do valor do salário bruto e a não possuir outra atividade remunerada. Ser do sexo feminino, não possuir outra atividade remunerada e estar satisfeito profissionalmente com o trabalho em Atenção Primária à Saúde foram fatores preditivos para o aumento do valor dos atributos. **Conclusão:** A Atenção Primária à Saúde foi bem avaliada pelos cirurgiões-dentistas, porém com baixo valor do acesso e aumento da satisfação profissional como valor preditivo para melhoria do desempenho com base nos atributos.

Descritores: Atenção Primária à Saúde; Pesquisa sobre Serviços de Saúde; Saúde Bucal.



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RESUMEN

Objetivo: Analizar el grado de extensión de los atributos de la Atención Primaria de Salud y los factores asociados en la perspectiva de cirujanos dentistas. **Métodos:** Se trata de un estudio transversal realizado con cirujanos dentistas de Sobral, Ceará, Brasil, entre abril y agosto de 2019, utilizándose el Instrumento de Evaluación de la Atención Primaria de Salud (Primary Care Assessment Tool – versión profesional), validado para los servicios de salud bucal. También se ha recogido los datos sociodemográficos y profesionales. Se ha realizado el análisis de asociación y regresión logística binaria utilizándose las variables profesionales y el valor de la extensión de los atributos. **Resultados:** A partir de la muestra de 50 cirujanos dentistas vinculados a la Atención Primaria de Salud, los resultados indicaron que los servicios de salud bucal tienen fuerte orientación para la Atención Primaria de Salud (7,22) con la más baja puntuación para el atributo acceso (3,48) y la mayor para el atributo integralidad – servicios ofrecidos (9,70). El mayor valor de los atributos se asoció con el aumento del valor del sueldo bruto y con el hecho de no tener otra actividad de pago. El hecho de ser del sexo femenino, no tener otra actividad de pago y estar satisfecha profesionalmente con el trabajo de la Atención Primaria de Salud han sido factores predictivos para el aumento del valor de los atributos. **Conclusión:** La Atención Primaria de Salud ha sido bien evaluada por los cirujanos dentistas, aunque con pequeño valor de acceso y el aumento de la satisfacción profesional como valor predictivo para la mejora del desempeño basado en los atributos.

Descriptor: Atención Primaria de Salud; Investigación sobre Servicios de Salud; Salud Bucal.

INTRODUCTION

Primary Health Care (PHC) seeks to make population's access to health actions and services effective in addition to dedicating itself to replacing the individual, curative and hospital focus with an integral model of collective, preventive, territorialized and democratic health care adapted to the context of the Unified Health System (*Sistema Único de Saúde – SUS*)⁽¹⁾.

In Brazil, the inclusion of Dentistry in PHC occurred in 2000⁽²⁾. This inclusion added the attributions to improve the population's quality of life through the construction of a model of care based on health promotion, protection, early diagnosis, treatment and recovery in accordance with SUS principles and guidelines aimed at the individual, the family and the community contextualized in territories⁽³⁾.

Thus, PHC has established itself as one of the most effective ways of organizing a health system, being internationally defined by its essential attributes: first contact access, longitudinality, comprehensiveness and coordination of care, in addition to derived attributes: family guidance, community guidance and cultural competence⁽⁴⁾.

One of the proposals to measure these attributes is to define strategies that can measure the quality of PHC⁽⁵⁾. Some initiatives of the Ministry of Health seek to institutionalize evaluation processes. It is worth mentioning the National Program for Improving Access and Quality (*Programa Nacional de Melhoria do Acesso e da Qualidade – PMAQ*), which aims to encourage municipalities to improve the quality of health services, and the primary health care assessment tool (Primary Care Assessment Tool – PCATool), used to check the presence and extent of its attributes⁽⁶⁾.

The PCATool is recognized and validated in other countries, in addition to presenting a safe assessment of PHC, as the questionnaire allows the collection of information that makes it possible to measure its operational, practical and structural features⁽⁷⁾. It should be noted that when there are professionals with stronger orientation to PHC, there is a greater probability of better health levels at lower costs, in addition to better health indicators⁽⁸⁾.

The recent inclusion of dental surgeons in PHC requires studies to assess their performance from the perspective of professionals. In this context, the assessment of PHC reflects how much the structure of the service and the professionals who provide it demonstrate a welcoming, humanized approach and also technical competence in solving low-complexity health problems⁽⁸⁾.

Therefore, this study aimed to analyze the extent of the attributes of Primary Health Care and related factors from the perspective of dental surgeons.

METHODS

This is a quantitative cross-sectional study with a survey-based analysis. Participants were all the 60 dental surgeons linked to PHC in the city of Sobral, located in the Northwest Region of the state of Ceará, 235 kilometers from Fortaleza (state capital), with an estimated population of 208,934 inhabitants (inhab) in 2019⁽⁹⁾. Professionals on vacation or leave, for any reason, during the period of data collection, and those who refused to participate in the study were excluded.

Data were collected by two trained researchers. A structured questionnaire was used in two stages. The first stage assessed the sociodemographic and professional profile of the participants, and the second assessed the extension of the attributes of PHC in relation to dental services through the Primary Health Care Assessment Instrument (PCATool SB – professional version), both adapted and validated for oral health services⁽¹⁰⁾.

PCATool SB - professional version consists of 90 items divided into nine components (subscales). Responses are given on a Likert-like scale, ranging 1 (certainly not) to 4 (certainly yes). The instrument assigns, through the subscales, scores to each essential attribute, namely: first contact access, longitudinality, comprehensiveness and coordination of care. It also assigns scores to the derived attributes: family guidance, community guidance and cultural competence⁽¹⁰⁾.

The scores are able to assess the degree of orientation of the service towards PHC in relation to the attributes. In addition, an essential score can be generated by analyzing all the questions that make up the essential attribute scores. And an overall score is obtained from the scores on essential and derived attributes so that high scores denote effectiveness of PHC. The score on each attribute was categorized according to the recommended cutoff value: 1 - Orientation towards PHC - with scores ≥ 6.6 (in a range of 0 to 10); 2- No orientation towards PHC - with scores < 6.6 ⁽¹⁰⁾.

The possible responses for each of the items are: “certainly yes” (value = 4), “probably yes” (value = 3), “probably not” (value = 2), “certainly not” (value = 1) and “I don’t know/I don’t remember” (value = 9). The scores for each of the attributes or its components are calculated by a simple arithmetic average of the values of the responses of the items that make up each attribute or their components. Based on these responses, it is possible to compute a score for each PHC attribute and also an essential score and an overall score⁽¹⁰⁾.

Interviews were previously scheduled and held by telephone. When this was not possible, they were held face to face through contact with the manager of the health center and/or with the dental surgeons themselves. There were up to four scheduling attempts with each professional. Data were collected from April to August 2019 at the Primary Health Care (PHC) center where the professionals work.

Descriptive and inferential statistical analyses were run on a database built using both Microsoft Excel® and the Statistical Package for the Social Sciences (SPSS), version 22. Orientation to PHC score was obtained by calculating the mean, standard deviation and confidence intervals of the values that make up each dimension corresponding to the attributes of the PCATool SB. Associations between the degree of orientation to PHC and sociodemographic characteristics were checked by the Fisher’s exact test, with a significance of $p < 0.05$, and binary logistic regression was performed using the dependent variable “orientation to PHC”.

The study was approved by the Scientific Committee of the Sobral Health Secretariat and by the Research Ethics Committee of the State University of Vale do Acaraú (*Universidade Estadual Vale do Acaraú – UVA*) through Plataforma Brasil (Approval No. 3.241.899).

RESULTS

We carried out 50 interviews with PHC dental surgeons, corresponding to 83.3% of the study population ($n=60$). Of the remaining ten, four professionals were on sick leave and six were on vacation. In all, 76% ($n=38$) of the respondents were women and 24% ($n=12$) were men. Age ranged 22 to 69 years, with a predominance of the age range 23 to 32 years ($n=28$; 56%).

Most professionals ($n=35$; 70%) claimed to be a graduate from a public institution. Also, the majority ($n=34$; 68%) reported earning from R\$ 2,500.00 to R\$ 3,799.00. Half of the interviewees ($n=25$; 50%) stated that they did not have any other paid job. Most dental surgeons (92%; $n=46$) had a weekly workload of 40 hours, followed by 8% ($n=4$) who had a workload of 20 hours a week (Table I).

The overall score for orientation to PHC was 7.22, with a standard deviation of ± 0.63 . In the analysis of the scores obtained for each attribute of the PHC, for the essential attributes, the lowest mean score was found for the attribute access (3.48, with a standard deviation of ± 1.11) and the highest was found for the attribute comprehensiveness - services provided (9.70, with a standard deviation of ± 0.47).

With regard to derived attributes, mean scores were: 7.96, with a standard deviation of ± 1.44 , for family guidance; 7.25, with a mean deviation of ± 1.66 , for community guidance; and 6.35, with a standard deviation of ± 2.43 , for cultural competence. The total score for the essential attributes was 7.26, with a maximum of 8.49 and a minimum of 6.09, and with a standard deviation of ± 0.63 . With regard to derived attributes, the total score was 7.19, with a maximum of 10 and a minimum of 3.93, and with a standard deviation of ± 1.44 (Table II).

Table I - Sociodemographic and professional characteristics of dental surgeons. Sobral, Ceará, Brazil, 2019.

Variable	n	%
Sex		
Male	12	24
Female	38	76
Marital Status		
Single	28	56
Married / Common-law marriage	22	44
Age		
22 to 31 years	31	62
32 to 41 years	12	24
42 to 51 years	3	6
52 to 61 years	3	6
62 to 71 years	1	2
HEI from which graduated		
Public	35	70
Private	15	30
Graduate		
Yes	21	42
No	29	58
Gross salary (reais – R\$) for the job at the PHC center		
1,500.00 to 1,704.00	4	8
2,500.00 to 3,799.00	34	68
3,800.00 to 5,000.00	12	24
Another paid job?		
No	25	50
Yes	3	6
Estimated weekly workload for dental surgeons		
20h	4	8
40h	46	92
Time working in PHC		
Less than 5 years	29	58
5 years or more	21	42
Permanent Health Education actions		
No	3	6
Yes	47	94
Type of contract		
Permanent	4	8
Temporary	46	92
Satisfaction with work in PHC		
Yes	24	48
No	26	52
Satisfaction with working conditions in PHC		
Yes	15	30
No	35	70

n: number of responses; %: percent frequency; HEI: higher education institution; PHC: Primary Health Care

When checking the association between variables we observed that, based on the classification of attributes as strong and weak, a statistically significant result was obtained in relation to the following factors: gross salary for the work performed at the PHC center and having another paid job at the time (Table III).

Table II - Variables associated with the overall score for oral health in Primary Health Care by each attribute from the perspective of dental surgeons. Sobral, Ceará, Brazil, 2019.

Attributes	Mean	Max	Min	SD	95%CI
Essential	7.26	8.49	6.09	0.63	7.43 ± 7.09
Access	3.48	6.66	1.48	1.11	3.78 ± 3.18
Longitudinality	6.44	8.88	3.88	1.08	6.74 ± 6.14
Coordination - Integration of care	7.57	10	4	1.42	7.96 ± 7.18
Coordination - Information system	7.33	10	4.44	1.58	7.76 ± 6.90
Comprehensiveness - Available services	9.07	10	6.08	0.91	9.32 ± 8.82
Comprehensiveness - services provided	9.70	10	7.61	0.47	9.83 ± 9.57
Derived	7.19	10	3.93	1.44	7.59 ± 6.79
Family guidance	7.96	10	5	1.38	8.34 ± 7.58
Community guidance	7.25	10	3.33	1.66	7.71 ± 6.79
Cultural competence	6.35	10	0	2.43	7.03 ± 5.67
	7.22	9.25	5.01	1.03	7.51 ± 6.94

Max: Maximum value; Min: minimum value; SD: standard deviation; 95%CI: 95% confidence interval

Table III - Association of sociodemographic factors with Primary Health Care attributes. Sobral, Ceará, Brazil, 2019.

	General attributes			Essential attributes			Derived attributes		
	Strong n	Weak n	p	Strong n	Weak n	p	Strong n	Weak n	p
Sex									
Male	7	5	0.256	8	4	0.191	6	6	0.506
Female	30	8		33	5		24	14	
Marital status									
Single	23	5	0.197	23	5	1.000	18	10	0.567
Married/Common-law marriage	14	8		18	4		12	10	
Age									
22 to 31 years	26	8	0.635	27	7	0.625	22	12	0.565
32 to 41 years	8	3		10	1		5	6	
42 to 51 years	1	0		1	0		1	0	
52 to 61 years	1	2		2	1		2	1	
62 to 71 years	1	0		1	0		0	1	
HEI from which graduated									
Public	23	12	0.035	27	8	0.247	20	15	0.754
Private	14	1		14	1		10	5	
Graduate									
Yes	16	5	1.000	17	4	1.000	14	7	0.560
No	21	8		24	5		16	13	
Gross salary (reais – R\$)									
1,500.00 to 1,704.00	2	2	0.120	3	1	0.495	2	2	0.046
2,500.00 to 3,799.00	28	6		29	5		24	10	
3,800.00 to 5,000.00	7	5		9	3		4	8	
Other paid job									
No	21	4	0.196	24	1	0.023	17	8	0.387
Yes	16	9		17	8		13	12	
Weekly workload									
40h	2	2	0.275	3	1	0.560	2	2	1.000
20h	35	11		38	8		28	18	
Time working in PHC									
Less than five years	22	7	0.754	24	5	1.000	16	13	0.560
Five years or more	15	6		17	4		14	7	

Table III - Association of sociodemographic factors with Primary Health Care attributes. Sobral, Ceará, Brazil, 2019. (Continuation)

	General attributes			Essential attributes			Derived attributes		
	Strong n	Weak n	p	Strong n	Weak n	p	Strong n	Weak n	p
Permanent Health Education actions									
No	2	1	1.000	2	1	0.456	2	1	1.000
Yes	35	12		39	8		28	19	
Type of employment									
Permanent	2	2	0.275	3	1	0.560	2	2	1.000
Temporary	35	11		38	8		28	18	
Satisfaction with work in PHC									
Yes	21	3	0.037	22	2	0.142	17	7	0.159
No	16	10		19	7		13	13	
Satisfaction with working conditions in PHC									
Yes	11	4	1.000	12	3	1.000	10	5	0.754
No	26	9		29	6		20	15	

n: frequency of responses; p: significance for Fisher's Exact test; PHC: Primary Health Care; HEI: Higher education institution

The gross salary of the interviewed professionals showed that dental surgeons who earn from R\$2,500.00 to R\$3,799 have a higher prevalence of strong orientation towards PHC in essential and derived attributes, with statistically significant results ($p < 0.05$) between this range of gross salary of dental surgeons and orientation to PHC in its derived attributes. However, the orientation to these attributes decreases as the salary range increases. Furthermore, there was a strong orientation to both essential and derived attributes among those who did not have another paid job. Not having a paid job prevailed in the essential attributes, with a statistically significant association ($p < 0.01$).

Table IV presents the estimates of the parameters of the binary logistic regression model for the independent variables. It is observed that the values of the estimates of the variables "having a *lato* or *stricto sensu* graduate degree", "PHC experience time", "weekly workload", "work status", "permanent health education activities" and "satisfaction with working conditions" were not significant at the 5% level, but individual models related to the greatest effects were constructed. Only the odds ratios for the variables "sex", "other paid activity" and "satisfaction with work in PHC" were significant at the level of 0.05 (Table IV).

Table IV - Binary logistic regression adjusted for the effects of independent variables on the odds of Primary Health Care centers improving their orientation towards Primary Health Care. Sobral, Ceará, Brazil, 2019.

Variables	B	p value	OR	95%CI	
				Lower bound	Upper bound
Being a woman	2.656	0.049	14.237	4.811	29.881
Being a graduate	-0.371	0.647	0.690	0.141	3.381
Not having another paid job	0.687	0.047	1.988	1.008	3.921
Working in PHC for more than 5 years	-0.596	0.493	0.551	0.100	3.028
Working 40 hours weekly	1.157	0.274	3.182	0.400	25.310
Type of employment (permanent)	1.664	0.196	5.282	0.423	65.974
Permanent Health Education actions	0.377	0.766	1.458	0.121	17.561
Satisfaction with work in PHC	1.041	0.021	3.534	3.156	8.137
Satisfaction with working conditions in PHC	0.517	0.708	1.164	0.527	2.573
	-0.517	0.532	0.532	0.118	3.019

B: regression coefficient; p: significance; OR: odds ratio; 95%CI: 95% confidence interval; PHC: Primary Health Care.

Women are 14.52 times more likely to be in oral health services with strong orientation to PHC compared to male professionals. In addition, people who do not have another paid job are approximately twice as likely to be in oral health services with strong orientation to PHC compared to professionals with other paid jobs. Dental surgeons who are professionally satisfied with their work in PHC are approximately 3.5 times more likely to be in oral health services with a strong orientation to PHC in relation to professionals dissatisfied with their work.

DISCUSSION

The evaluation of the extension of the PHC attributes from dental surgeons' perspective yielded an overall value above the cutoff point of 6.6. The result of the present study demonstrates the importance of health evaluation to improve the quality of services provided, as observed when evaluating it based on the attributes of PHC⁽¹¹⁾. The PCATool SB - professional version presented adequate psychometric characteristics for the evaluation process in this study, which are important to contribute to strategic planning based on essential and derived attributes⁽¹²⁾.

In the analysis of attributes, first contact access to oral health services had the lowest score in this study, a finding that has also been reported in other studies using the PCATool⁽¹³⁻¹⁶⁾. This result can be related to the characteristics of functioning and organization of the work process of the services, especially aspects related to the opening hours and the use of telephone-based services so that the patient can contact the service and get assistance⁽¹⁷⁾.

Difficulty in accessing dental surgeons in PHC is one of the findings of this study, which may be related to the high demand for private dental clinics and the reduced level of user affiliation with PHC⁽¹⁷⁾. It should be noted that to change this scenario, work segmented into lines of care in health care models focused on chronic conditions is appointed as a strategy for improving access and the bond between professionals and patients, thus strengthening the coordinating role of PHC in relation to the other points of the network⁽¹⁸⁾.

As in the findings of this study, low access was also related to low mean longitudinality score in other studies using the PCATool^(17,19). From the perspective of SUS users, the attributes access and longitudinality were well evaluated in studies that used the PCATool in PHC services participating in the More Doctors Scheme (*Programa Mais Médicos*) from the Federal Government of Brazil⁽²⁰⁾.

The attribute "coordination", in the subdimensions "Integration of care and information system", presented scores above 6.6 in the present study, a finding also reported in other studies that used the PCATool Brazil - professional version. These studies related the high score to the articulation between care technologies that link good practices and humanized care^(21,22). The high average for the integrality attribute in this study may result from a service network articulated in relation to the levels of care, with actions aimed at promoting health for the identification, prevention and treatment of oral diseases^(15,23).

PHC derived attributes "family guidance" and "community guidance" exhibited a high mean score, showing strong orientation to PHC in this study. These attributes reinforce the territorialized role of the ESF as a strategy for organizing the PHC in Brazil through knowledge of the living conditions of users, patient-centered care and knowledge of the social determinants of the covered territory⁽²⁴⁾. On the other hand, "cultural competence" had a score showing weak orientation to PHC in the present study, which is similar to that in the study that validated the PCATool SB - professional version⁽¹⁰⁾, thus showing the need for greater cultural knowledge of the territory.

The prevalence of women among the professionals interviewed in this study followed the trend observed in other studies, which reflects the current profile of dentistry in SUS^(10,25), being a predictive variable for the strengthening of PHC. A study with users showed a preference for dentists and an association of females with improved access. However, as for the other attributes, there are no differences between the sexes⁽²⁶⁾.

In the present study, the higher frequency of dental surgeons and graduates from a public institution, although without significant association, differs from a similar study in which the mean scores for derived and general attributes were significantly higher among professionals trained in public institutions compared to those who graduated from private institutions⁽¹³⁾. According to the Ministry of Education of Brazil, from 2003 to 2010, there was an expansion of 31% of federal universities, which increased from 45 to 59, and from 148 campi to 274 campi/units, which might explain this profile.

The percentage of dental surgeons who receive salaries of R\$ 2,500.00 to R\$ 3,799.00 was associated with a higher frequency of strong orientation to PHC in the present study, which can be explained by the fact that well-paid professionals have better performance on their work process⁽²⁷⁾. However, there was a decrease in the mean scores when the salary range increased, a finding that needs further exploration. The absence of any other paid job is associated with and predicts a strong orientation towards PHC in the present study. It is known that adequate remuneration, the adoption of career plans and the guarantee of labor and social security rights are crucial aspects that contribute to the fixation of professionals, exclusive dedication and the feasibility of the attributes of PHC⁽²⁸⁾.

Despite the lack of statistical significance between the performance of continuing health education actions and the attributes of PHC in the present study, it is known that contextualized professional development improves the autonomy of the team, the availability of labor, the clarity of the description of the position, and the roles and responsibilities contribute to a better performance in health care and to an improvement in access⁽²⁸⁾.

Also within the health work context, job satisfaction in PHC was a predictor for a strong orientation of attributes to PHC in the present study. Job satisfaction is determined by aspects related to professional identity and working conditions, with dental surgeons being a professional category vulnerable to occupational risks inherent in performing dentistry⁽²⁹⁾. Satisfied professionals favor the performance of teamwork and improve user's perception of the service offered⁽³⁰⁾.

Some limitations of the present study include the fact that data collection was performed at only one point in time, a methodological characteristic of studies with a cross-sectional design, which prevents the cause-effect relationship. However, the analysis identifies relevant associated and predictive aspects. The findings of this study can be linked to other sources of collection in evaluative studies, such as the structure of the service and the perception of users. In order to reduce the response bias in a self-reported data instrument, the subjects of this study were instructed on the formative nature of the assessment of health services. Thus, the information obtained through the PCATool SB - professional version - can be used in planning and decision-making in health to improve the quality of PHC.

CONCLUSION

The study found an overall score that presented a strong orientation towards PHC from the perspective of dental surgeons. The attribute analysis presented high scores for the attributes "coordination", "comprehensiveness" and "community guidance", and low scores for the attributes "access", "longitudinality" and "cultural competence". The intermediate increase in gross salaries was strongly oriented to PHC in derived attributes. It was observed that values above this range lead to a decrease in the frequency of strong orientation, thus increasing the weak orientation to PHC.

Regarding paid job, the percentage of professionals with no other work activity was associated with a strong orientation towards PHC in essential attributes. In the bivariate logistic regression analysis, the variables "female sex", "not having another paid job" and "satisfaction with work in PHC" were predictive of better PHC performance.

CONFLICTS OF INTEREST

There are no conflicts of interest in the present study.

CONTRIBUTIONS

Marthana de Maria Araújo Miranda contributed to the study design and conception; acquisition, analysis and interpretation of data; and writing and/or revision of the manuscript. **Igor Iuço Castro-Silva** and **Pollyanna Martins** contributed to the writing and/or revision of the manuscript. **Jacques Antônio Cavalcante Maciel** contributed to the analysis and interpretation of data; and writing and/or revision of the manuscript. All authors approved the final version for publication.

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