





Association between positive assessment of Primary Health Care, sociodemographic characteristics and comorbidities in Brazil

Associação entre avaliação positiva da atenção primária à saúde e características sociodemográficas e comorbidades no Brasil

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ABSTRACT: *Objective:* To describe positive evaluations of Primary Health Care (PHC) in Brazil from the perspective of users and their association with sociodemographic characteristics and comorbidities. *Methods:* Analysis of the 2019 National Health Survey, in which 9,562 adults responded to the Primary Care Assessment Tool (PCATool). The association between positive PHC assessment (overall score ≥ 6.6) and individual characteristics was tested using Prevalence Ratios (PR) calculated by Poisson Regression. *Results:* Less than 40% of Brazilians rated PHC with a high score. Regarding the association of sociodemographic variables with high PHC assessment, adjusted for sex and age, the best PHC assessments were made by women [PR_{aj} 1.10 (95%CI 1.00–1.21)]; elderly (60 years and over) [PR_{aj} 1.27 (95%CI 1.09–1.48)]; people with a per capita income of 1 to 3 minimum wages (MW) PRaj 1.14 (95%CI 1.03–1.27) and ≥ 5 MW PRaj 1.75 (95%CI 1.39–2.21) when comparing with income up to 1 MW; residents of the South, Southeast and Midwest regions, compared to the North Region. Considering comorbidities, individuals with hypertension PRaj 1.29 (95%CI 1.17–1.43); diabetes PRaj 1.21 (95%CI 1.08–1.36); heart disease PRaj 1.23 (95%CI 1.07–1.41); musculoskeletal disorders PRaj 1.36 (95%CI 1.10–1.69); lung disease PRaj 1.48 (95%CI 1.13–1.95) and obesity PRaj 1.15 (95%CI 1.03–1.28) rated PHC better when compared to normal weight people. *Conclusion:* Users who evaluate PHC well are usually women, elderly, with high prevalence of chronic non-communicable diseases. A positive evaluation of PHC, in general, results from greater use of health services.

Keywords: Primary health care. Evaluation, health services. Health surveys. Noncommunicable diseases.

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RESUMO: *Objetivo:* Descrever a avaliação positiva da atenção primária à saúde (APS) no Brasil na ótica dos usuários e sua associação com as características sociodemográficas e comorbidades. *Métodos:* Análise da Pesquisa Nacional de Saúde 2019, com amostra de 9.562 adultos que responderam ao *primary care assessment tool* (PCATool). Foi testada a associação entre avaliação positiva da APS (escore geral $\geq 6,6$) e características individuais, sendo utilizadas as razões de prevalência (RP) calculadas por meio de regressão de Poisson. *Resultados:* Menos de 40% dos brasileiros avaliaram a APS com escore alto. No que se refere à associação das variáveis sociodemográficas com a avaliação elevada da APS, ajustada por sexo e idade, encontrou-se que a melhor avaliação da APS ocorreu entre mulheres [RPaj 1,10 (intervalo de confiança de 95% — IC95% 1,00–1,21)]; idosos (60 anos ou mais) [RPaj 1,27 (IC95% 1,09–1,48)]; pessoas com renda *per capita* de um a três salários mínimos (SM) [RPaj 1,14 (IC95% 1,03–1,27)] e ≥ 5 SM [RPaj 1,75 (IC95% 1,39–2,21)] quando comparadas com renda até um SM; e moradores das regiões Sul, Sudeste e Centro-Oeste em relação à Região Norte. Considerando as variáveis de comorbidades, avaliaram bem a APS indivíduos com hipertensão [RPaj 1,29 (IC95% 1,17–1,43)]; diabetes [RPaj 1,21 (IC95% 1,08–1,36)]; doença cardíaca [RPaj 1,23 (IC95% 1,07–1,41)]; distúrbio osteomuscular [RPaj 1,36 (IC95% 1,10–1,69)]; doença do pulmão [RPaj 1,48 (IC95% 1,13–1,95)] e obesidade [RPaj 1,15 (IC95% 1,03–1,28)] em comparação com pessoas eutróficas. *Conclusão:* Usuários que avaliaram bem a APS são mulheres, idosos, com prevalências elevadas de doenças crônicas não transmissíveis. A avaliação positiva da APS, em geral, resulta da maior utilização dos serviços de saúde.

Palavras-chave: Atenção primária à saúde. Avaliação de serviços de saúde. Inquéritos epidemiológicos. Doenças não transmissíveis.

INTRODUCTION

Primary health care (PHC), composed of multidisciplinary teams, is responsible for the coverage of specific territories with defined populations and acts as first contact with the health system^{1,2}. These teams should be dedicated to solving the vast majority of the population's health problems^{1,2} and establishing a strategic role in the health care network (RCN), functioning as a basis for its organization and effective integrality¹.

Despite the consensus that PHC is a priority public policy and extensive evidence that demonstrates that national systems based on PHC are more effective and equitable, scientific production in this field of knowledge is still low compared to related areas. From the existing studies, we can see an increase in number of PHC studies in Brazil from 2005 onwards, which may be associated with the expansion of population coverage from this period on. However, when analyzing the objects of investigation of the Brazilian PHC, research with scope limited to local investigations, of low cost, and with a small number of subjects is found to be very common³.

In Brazil, PHC expanded its population coverage significantly between 2000 and 2020, going from 42% in 2007 to 76% in 2020⁴. The expansion of PHC, however, was not always accompanied by an improvement in its quality. Quality means wider reach with better health outcomes⁵. There is evidence of strong and effective PHC when associated with

greater user satisfaction with the system². Therefore, it is essential to assess the quality and breadth of the services offered so we can provide information for society and managers to rely on in decision-making in the pursuit of improving the population's health with equity^{6,7}.

The primary care assessment tool (PCATool), developed by Starfield et al.⁸, had the health service quality assessment proposed by Donabedian⁹ as model, which is based on the triad "structure, processes and results". It allows measuring the quality of PHC from the users' point of view, evaluating service structure and process⁸ through essential attributes (individual's first contact with the health system, longitudinality, care comprehensiveness and coordination) and derivatives (cultural competence, family and community guidance) of PHC^{8,10,11}. There is an understanding that, when the health service is oriented towards the achievement of these attributes, it is able to provide comprehensive care from a biopsychosocial point of view to the community¹². The PCATool has been one of the most used instruments to assess the quality of PHC¹³, even though it had never been applied on a national scale.

In 2019, the National Health Survey, the largest national health survey, was innovated with the implementation of the PCATool module, allowing to explore the evaluation of PHC and characteristics associated on a national scale, from the users' perspective¹⁴.

This study is pioneer in seeking to describe positive evaluations of PHC in Brazil from the perspective of users and their association with sociodemographic characteristics and comorbidities.

METHODS

STUDY DESIGN

This cross-sectional study analyzed data from the National Health Survey (PNS) 2019, a home-based health survey. The PNS 2019 was carried out by the Brazilian Institute of Geography and Statistics (IBGE) between August 2019 and March 2020 and included in the PHC module (module H)^{14,15} the adapted and shortened version of PCATool-Brazil^{14,16,17}.

SAMPLE

The PCATool module was applied to 9,562 individuals aged 18 years or older, and only those individuals who had consulted with the same doctor at least twice when using PHC services in the six months before the interview¹⁴ responded. By using this filter, the PNS assumes that individuals were familiar with the health service provided¹⁴.

OUTCOME: PCATOOL DESCRIPTION AND CALCULATION

The questionnaire applied during the interview had 26 questions assessing PHC attributes, distributed across ten components¹⁴. The questions of the original PCATool instrument were adapted by replacing the terms professional or physician/nurse with physician.

The instrument used Likert-type responses, assigning scores from 1 to 4 for each attribute (1=definitely no; to 4=certainly, yes). Based on the average of responses of the items that make up the attribute, a general PHC score is obtained^{10,11,14,16}.

As an outcome, the general score obtained by the average between the components of essential and derived attributes and the degree of connection of the user with the service was initially calculated. The score values were standardized for a scale from 0 to 10, where values equal to or greater than 6.6 were considered as high score, with strong orientation to the attributes of PHC, which corresponds to responses to options 3 or 4 on the instrument's original scale^{10,11,14,16}. The overall mean PCATool score, the high score ≥ 6.6 and respective 95% confidence intervals (95%CI) were calculated for each of the 27 Federation Units (FU).

EXPLANATORY VARIABLES

This study followed the theoretical model of Perillo et al.¹⁸, which considers that users assigning a general score ≥ 6.6 to the system use services more often, as they have more comorbidities, and, consequently, a positive assessment of quality of care is provided. Taking into account the aptitude of PHC to assist and monitor individuals with chronic diseases, we sought to verify the associations between positive evaluation of PHC, socio-demographic variables and morbidities¹⁸.

Covariates studied

- Sociodemographic: gender (male, female), age group (years: 18–29, 30–39, 40–59, 60 or older), educational level (years of study: 0 to 8, 9 to 11, 12 or more), ethnicity / skin color (white, black, brown), region of residence (Brazil, large regions and FU), per capita income [up to 1 minimum wage (MW), 1-3 MW, 3-5 MW, 5 or more MW];
- Presence of morbidity or chronic non-communicable diseases (NCDs) and anthropometric measurements: body mass index (BMI) [eutrophic (BMI ≥ 18.5 and < 25 kg/m²), overweight (BMI ≥ 25 kg/m²) and obese (BMI ≥ 30 kg/m²)]; high blood pressure, diabetes, heart disease, work-related musculoskeletal disorders (WMSD), lung disease, and cancer.

STATISTICAL ANALYSIS

Models were calculated using Poisson regression to estimate crude and age-adjusted prevalence ratios (PR) and respective 95% CIs. All analyses were performed using the Survey module available in Data Analysis and Statistical Softwares (STATA), version 14, using the PNS weights.

ETHICAL ASPECTS

The 2019 PNS was approved by the National Research Ethics Committee of the National Health Council, under opinion number 3,529,376. The adults participated in the research voluntarily and the confidentiality of information was guaranteed.

RESULTS

Table 1 shows that the average overall PHC score in Brazil for adults was 5.9 (95%CI 5.8–5.9), ranging from 5.2 in Roraima (95%CI 4.5–5.8) to 6.6 (95%CI 6.2–6.9) in Mato Grosso. It was estimated that 38.1% of Brazilians who used PHC rated it as good, ranging from 22.6% (95%CI 14.8–32.9) in Rondônia to 53.3% (95%CI 43.5–62.8) in Mato Grosso.

Regarding sociodemographic variables (Table 2), 38.95% (95%CI 36.79–41.17) of women classified PHC as aimed at their attributes, as well as 41.67% (95%CI 38.73–44.66) of elderly users (60 years and over). The assessment attributed to PHC is higher among elder groups.

In terms of educational level, people with 0–8 years of schooling rated the services better [40.22% (95%CI 37.89–42.60)] than those with other educational levels (9–11 years and 12 years or more). When stratifying the population by ethnicity/skin color, no relevant differences were found between the black, brown and white populations. The population of the southern region of the country [45.35% (95%CI 41.47–49.28)] assigned a better score to their local PHC service than in other Brazilian regions. It is noteworthy that only 30% (95%CI 26.16–34.26) of respondents in the North Region consider PHC aimed at their attributes. As for the income of respondents, 66.65% (95%CI 49.43–80.33) of users with higher income, 5 or more MW, rated PHC well, followed by 42.2% (95%CI 38.58–45.90) of users with income of 1–3 MW.

Table 3 shows a classification by morbidity and anthropometric measures of users who used health services and rated PHC with high scores. It was found that 42.04% (95%CI 38.72–45.43) of obese users (BMI ≥ 30 kg/m²), 44.75% (95%CI 41.97–47.56) of hypertensive patients, 46.25% (95%CI 41.50–51.07) of diabetic patients and 47.79% (95%CI 41.76–53.89) of users with heart disease rated the services positively. Among people with WMSDs, this number reached 52.14% (95%CI 41.10–62.98) and among those with lung diseases, 57.63% (95%CI 41.76–72.07). This positive assessment for PHC aimed at their attributes was also given by users with cancer [45.33% (95%CI 34.07–57.09)].

Table 1. Mean overall primary health care score (0 to 10) assessed by adults aged 18 years and over and high prevalence score (≥ 6.6), with indication of the 95% confidence interval, Brazil, regions and Federation Units, National Health Survey 2019.

	Mean overall score		Score ≥ 6.6	
	Overall score	95%CI	%	95%CI
Brazil	5.9	5.8–5.9	38.1	36.3–39.9
Urban area	5.8	5.8–5.9	37.6	35.5–39.7
Rural area	6.0	5.9–6.1	40.4	37.0–43.8
North	5.5	5.3–5.7	30.1	26.3–34.2
Rondônia	5.6	5.2–5.9	22.6	14.8–32.9
Acre	5.3	4.9–5.7	27.5	19.9–36.8
Amazonas	5.8	5.4–6.2	39.1	30.7–48.1
Roraima	5.2	4.5–5.8	27.9	20.4–36.8
Pará	5.2	4.9–5.5	24.9	19.0–31.9
Amapá	5.4	5.0–5.7	24.9	15.9–36.8
Tocantins	5.9	5.5–6.2	36.8	27.7–46.9
Northeast	5.8	5.6–5.9	35.2	32.5–37.9
Maranhão	5.2	5.0–5.5	27.9	22.6–34.0
Piauí	6.0	5.7–6.3	40.6	33.8–47.7
Ceará	5.7	5.5–5.9	34.1	29.2–39.3
Rio Grande do Norte	6.0	5.7–6.2	38.3	31.0–46.2
Paraíba	6.0	5.7–6.3	45.4	38.1–52.9
Pernambuco	5.7	5.5–6.0	37.9	31.9–44.3
Alagoas	6.0	5.7–6.2	40.5	34.9–46.3
Sergipe	5.6	5.2–5.9	27.9	21.0–36.0
Bahia	5.7	5.5–6.0	31.5	24.8–39.1
Southeast	5.8	5.7–6.0	38.3	34.9–41.8
Minas Gerais	6.2	5.9–6.4	41.3	35.3–47.6
Espírito Santo	5.6	5.4–5.9	31.6	26.0–37.7
Rio de Janeiro	5.6	5.3–5.9	38.3	31.6–45.6
São Paulo	5.7	5.5–6.0	37.3	32.3–42.5
South	6.3	6.2–6.4	45.3	41.6–49.2
Paraná	6.1	5.8–6.3	39.8	34.5–45.4
Santa Catarina	6.4	6.2–6.6	45.3	39.0–51.8
Rio Grande do Sul	6.5	6.2–6.8	50.9	43.7–58.1
Midwest	5.8	5.6–6.0	37.9	33.0–43.1
Mato Grosso do Sul	5.9	5.6–6.2	37.1	30.0–44.8
Mato Grosso	6.6	6.2–6.9	53.3	43.5–62.8
Goiás	5.3	4.9–5.7	27.4	18.9–37.9
Federal District	5.7	5.2–6.1	38.1	29.4–47.8

95%CI: 95% confidence interval.

Table 2. Prevalence of adults aged 18 years and over who used health services and assessed primary health care with a high score (≥ 6.6), crude prevalence ratio and ratio adjusted for sex and age, according to sociodemographic variables, National Health Survey 2019

Variables	Score ≥ 6.6		Prevalence ratio (95%CI)				p-value
	%*	95%CI	crude		adjusted [†]		
Total	38.07	(36.23–39.94)					
Sex							
Male	36.02	(33.15–39.00)	1		1		
Female	38.95	(36.79–41.17)	1.08	(0.98–1.19)	1.10	(1.00–1.21)	0.0460
Age							
18–29	33.20	(28.86–37.84)	1		1		
30–39	34.63	(30.50–39.00)	1.04	(0.87–1.25)	1.04	(0.87–1.25)	0.6700
40–49	38.65	(35.73–41.65)	1.16	(1.00–1.36)	1.17	(1.00–1.36)	0.0520
60+	41.67	(38.73–44.66)	1.26	(1.08–1.46)	1.27	(1.09–1.48)	0.0020
Educational level							
0–8	40.22	(37.89–42.60)	1		1		
9–11	34.94	(31.94–38.06)	0.87	(0.78–0.96)	0.92	(0.83–1.02)	0.1200
12+	34.53	(29.08–40.41)	0.86	(0.72–1.02)	0.91	(0.76–1.08)	0.2810
Ethnicity/skin color							
White	36.87	(34.00–39.83)	1		1		
Black	39.40	(34.16–44.90)	1.07	(0.91–1.25)	1.09	(0.93–1.27)	0.2930
Brown	38.55	(36.02–41.15)	1.05	(0.94–1.16)	1.07	(0.96–1.18)	0.2040
Region							
North	30.05	(26.16–34.26)	1		1		
North East	35.17	(32.32–38.12)	1.17	(1.00–1.37)	1.15	(0.98–1.35)	0.0860
Southeast	38.29	(34.86–41.83)	1.27	(1.08–1.50)	1.23	(1.05–1.45)	0.0130
South	45.35	(41.47–49.28)	1.51	(1.29–1.77)	1.46	(1.24–1.72)	0.0000
Midwest	37.94	(32.85–43.32)	1.26	(1.04–1.53)	1.24	(1.02–1.51)	0.0300
Income [‡]							
Up to 1 MW	36.01	(33.92–38.16)	1		1		
1–3 MW	42.20	(38.58–45.90)	1.17	(1.06–1.30)	1.14	(1.03–1.27)	0.0150
3–5 MW	32.08	(23.38–42.24)	0.89	(0.66–1.20)	0.88	(0.65–1.19)	0.3960
5 or more MW	66.65	(49.43–80.33)	1.85	(1.45–2.37)	1.75	(1.39–2.21)	0.0000

*Frequency weighted for the population; [†]PR adjusted for sex and age; [‡]missing; 95%CI: 95% confidence interval; MW: minimum wage.

Table 3. Prevalence of adults aged 18 years and over who used health services and assessed primary health care with a high score (≥ 6.6), crude prevalence ratio and ratio adjusted for sex and age, according to the presence of morbidity, National Health Survey Health 2019.

Variables	Score ≥ 6.6		Prevalence ratio (95%CI)				p-value
	%*	95%CI	crude		adjusted†		
Total	38.07	(36.23–39.94)					
BMI							
Eutrophic	35.66	(32.91–38.50)	1		1		
Overweight	37.47	(34.48–40.57)	1.05	(0.94–1.17)	1.03	(0.92–1.15)	0.612
Obese	42.04	(38.72–45.43)	1.18	(1.06–1.31)	1.15	(1.03–1.28)	0.010
Hypertension							
No	33.73	(31.52–36.01)	1		1		
Yes	44.75	(41.97–47.56)	1.33	(1.22–1.45)	1.29	(1.17–1.43)	0.000
Diabetes							
No	36.51	(34.58–38.47)	1		1		
Yes	46.25	(41.50–51.07)	1.27	(1.13–1.42)	1.21	(1.08–1.36)	0.001
Heart disease							
No	37.23	(35.34–39.16)	1		1		
Yes	47.79	(41.76–53.89)	1.28	(1.12–1.47)	1.23	(1.07–1.41)	0.004
WMSD							
No	37.56	(35.73–39.43)	1		1		
Yes	52.14	(41.10–62.98)	1.39	(1.12–1.73)	1.36	(1.10–1.69)	0.004
Lung disease							
No	37.65	(35.83–39.51)	1		1		
Yes	57.63	(41.76–72.07)	1.53	(1.16–2.02)	1.48	(1.13–1.95)	0.005
Cancer							
No	37.87	(36.00–39.79)	1		1		
Yes	45.33	(34.07–57.09)	1.20	(0.92–1.56)	1.12	(0.86–1.47)	0.389

*Frequency weighted for the population; †PR adjusted for sex and age; 95%CI: 95% confidence interval; BMI: body mass index; WMSD: work-related musculoskeletal disorders.

Regarding the association of exploratory variables with high PHC assessment (outcome), adjusted for sex and age, it was found that females presented $PR_{aj}=1.10$ (95%CI 1.00–1.21), and the elderly $PR_{aj}=1.27$ (95%CI 1.09–1.48), comparing them with adults aged 18 to 29 years. Residents of the South Region had $PR_{aj}=1.46$ (95%CI 1.24–1.72), residents of the

Southeast had $PR_{aj}=1.23$ (95%CI 1.05–1.45) and of the Midwest region, $PR_{aj}=1.24$ (95%CI 1.02–1.51), all compared to residents of the North Region. As for per capita income, users who earned 5 or more MW had $PR_{aj}=1.75$ (95%CI 1.39–2.21), and users who earned 1-3 MW had $PR_{aj}=1.14$ (95%CI 1.03–1.27) compared to users with income up to one MW. All these results were statistically significant, but there was no difference in the assessment by ethnicity/skin color and schooling (Table 2).

Considering the analysis of statistically significant associations of morbidity variables adjusted for sex and age with high PHC rating, obese people had $PR_{aj}=1.15$ (95%CI 1.03–1.28) compared to eutrophic users. Among individuals who self-reported having CNCD, PR_{aj} was 1.29 (95%CI 1.17–1.43) for hypertensive individuals, 1.21 (95%CI 1.08–1.36) for the diabetic and 1.21 (95%CI 1.07–1.41) for people with heart disease. Users with lung diseases had $PR_{aj}=1.48$ (95%CI 1.13–1.95) and those with WMSDs had $PR_{aj}=1.36$ (95%CI 1.10–1.69). No statistically significant association was found for users with cancer (Table 3).

DISCUSSION

According to this study, PHC was better evaluated by women and by elderly users (aged 60 years and over), with an income of one to three MW and 5 or more MW, residents of the South, Southeast and Midwest regions, as well as users with hypertension, diabetes, heart disease, WMSD, lung disease and obesity.

Regarding the overall PHC score, 38.1% of Brazilians who used the service in the last six months rated PHC with a high score and attributed a mean overall score of 5.9 (95%CI 5.8–5.9). This low evaluation result of Brazilian PHC was also reported in other studies that used the PCATool and obtained a score even lower than the national average, as shown in the study carried out in Porto Alegre (RS) in 2007, which attributed an average general score of 5.5 for basic health units (BHU) covered by the Family Health Strategy¹⁹. In that same municipality, in 2012, the elderly population attributed a score of 5.7 to these BHU²⁰. In 2014, the PHC assessment reached a score of 5.721 in the city of Rio de Janeiro (RJ) and, in 2015, in Teresina (PI), the male population assigned a mean score of 5.5 to the local PHC²². These results point to the need to work on the qualification of PHC in Brazil, since, according to Donabedian⁹, the best health results are a consequence of investment in structure and improvement in the health care process.

Travassos and Martins²³ point out that access to and use of health services are mediated by socioeconomic and demographic aspects, available resources, supply of health services, presence of morbidities, and other factors. Therefore, a greater presence of diseases means greater demand for services, which results in a better evaluation of PHC. A study by Silva et al.²² states that the frequency of seeking care was associated with PHC scores: the more regular users needed the BHU, the higher the percentage of high scores attributed by them. This result was also found in another study²⁴ that confirmed an association between services with higher PHC scores, longer duration of illness (10.9 years) and greater frequency

of use of health services (8.5 consultations/year). It is noteworthy that the NCDs investigated here are all long-lasting and require continuous use of PHC. That is, the longitudinality attribute investigated here is essential in care.

Regarding demographic variables, women and elderly people evaluated PHC more positively and are the ones who most use health services^{23,25-27}. Women sought services more often, because, in general, they have a greater perception of signs and symptoms of diseases and promotion/prevention practices, in addition to the demands of menarche, prenatal care and menopause^{25,26}. Considering that the elderly use health services more often, this must be associated with multimorbidity, a greater perception of disease severity and health risks^{26,27}. In general, the use of and access to health services by this age group is relatively high²⁶. A study carried out in the capital of Minas Gerais in 2015 found that the elderly reported high quality scores for the PHC when compared to other adults¹⁸, just like a study²⁰ carried out in Porto Alegre in 2012 showed higher scores for PHC by the elderly than by adults over 18 years of age. This last study also showed that services with a high PHC score are related to strong presence of evidence-based preventive practices recommended for the elderly population²⁰.

In terms of educational level, no association was found; however, families with per capita income between one and three MW rated PHC better, a result that goes against a study²¹ carried out in the city of Rio de Janeiro with 3,530 individuals in 2014, in which no difference was found in the assessment of PHC by adults of different social classes; however, it is understood that low-income populations are more vulnerable, access public health services more and tend to have more comorbidities and worse health indicators, such as the more intense involvement of NCDs²⁸⁻³⁰. At the same time, the study points out that high income, ≥ 5 MW, was also associated with a positive PHC assessment. Individuals with higher income tend to use services more²⁶ and, therefore, may evaluate them well.

With regard to regions, the individuals who best evaluated PHC were those residing in the South, Southeast and Midwest regions, the richest in the country, and in FUs located in strata of higher human development index (HDI)³¹. Geopolitical region and HDI synthesize marked differences in urban and social infrastructure and in the greater coverage of educational and health services, contextual characteristics that were also associated with greater user satisfaction³². In addition, the quality reference standard is still found in a small number of BHUs and is mostly concentrated in the South and Southeast regions³³, being, therefore, better evaluated. In addition to maintaining regional and social inequalities, this points to the need for new investments to achieve equity in health care.

This study identified that positive PHC assessment was associated with obesity and several NCDs. According to Oliveira¹⁹, the presence of comorbidities increases the prevalence of strong PHC orientation by 46%, that is, chronic diseases are more prevalent in the population assisted in services classified with high scores. The results of the association between users with CNCD and high PHC assessment probably occur because this population uses health services more often and has more positive experiences with PHC teams^{26,34}. Some studies indicate that the quality of care characteristics in individuals with comorbidities are

significantly higher in services with a high overall PHC score when compared to services with a low overall PHC score^{24,35}. People with NCDs use services twice as often compared to adults without NCDs³⁴. In the PNS 2019, it was also found that in all socioeconomic and demographic strata, the presence of CNCD increases the prevalence of medical consultations²⁶. In summary, adults who reported having morbidities tended to assign a higher overall score when compared to the group without morbidities. A study that evaluated PHC in the capital of Minas Gerais in 2015 also reported that hypertensive, diabetic and obese users evaluated PHC better¹⁸.

PHC plays a fundamental role in the surveillance of NCDs and in the monitoring of risk factors, as it develops prevention actions and health promotion, as well as harm reduction at a relatively low cost through timely detection and treatment^{29,36}. It is known that these users need continuous monitoring and supply of inputs. Therefore, PHC needs to guarantee the principles of comprehensiveness and coordination of care^{18,37,38}. Considering that users with CNCDs have their care recommended by the Ministry of Health as one of the actions of PHC³⁶ and the PNS 2019 conducted an interview with users who used the services in the last six months, it would be plausible to assume that their satisfaction was higher than that of spontaneous demand users.

This study shows that less than 40% of the Brazilian population evaluates PHC positively. In this context, it is necessary to direct the training and continuing education of health professionals and managers to the attributes of PHC and to the health needs of the population through expansion of approaches and distance education devices, which will benefit the quality clinical care and collective actions⁵. Another aspect to be considered is the challenge of improving the structure of services and the qualification of organization and care management processes by a multiprofessional team so as to increase the effectiveness of PHC⁵.

The modification of the questions in the PCATool-Brazil adult short version¹⁶ questionnaire is one of the limitations of this study, where the terms describing different PHC professionals was replaced with “physicians” only. In this way, the general score presented is directly connected to the figure of the physician in PHC, unlike what has been validated in the country^{11,13,17}. This perspective addressed by the PNS 2019 appears to be rooted in the old biological and medical-centered practices, which goes in the opposite direction of the assumptions of PHC, which guides the formation of a multiprofessional team that distributes tasks according to the characteristics of each category aiming to build a multidisciplinary care that is expanded by different types of knowledge^{1,5,39,40}. Another aspect to consider is that the assessment proposed by the instrument includes only respondents who used a health service and had medical consultations¹², but not individuals who were unable to access the service. According to the PCATool-Brasil¹⁶ manual, the shortened version of this instrument allows the calculation of a general score only; specific scores for each of the essential and derived attributes are not determined^{12,15,16,37}.

Another limitation of this study was the sample size, which allowed analysis only for the FU^{14,15,39}, which could, at most, be expanded to their capitals¹⁴ because of the filter used for the respondents. In this way, a gap is seen in a national PHC evaluation system by

municipality with the extinction of the National Program for the Improvement of Access to and Quality of Primary Care (PMAQ-AB), when the financing program “Previne, Brasil” (Prevent, Brazil) was implemented⁴¹. This caused impoverishment of information regarding the quality of PHC at the municipal level for decision-making. The PNS 2019 would be complementary to the PMAQ-AB, not a substitute.

Since 2017, as a result of austerity policies⁴² such as Constitutional Amendment No. 95, an increase in inequality and vulnerability of the population has been observed, making it essential to monitor the quality of health care in population surveys⁴³.

In conclusion, the study emphasizes the importance of inserting a module in the PNS that allows assessing the quality of PHC. The study identified that users who best evaluate PHC are those who use the services the most, such as women and the elderly, low-income people and people with morbidities such as NCDs, hypertension, diabetes, heart disease, lung disease, WMSD, obesity.

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