Association between high assessment of Primary Health Care and health state and use of health services in Brazil

Associação entre avaliação elevada da Atenção Primária à Saúde, estado de saúde e uso dos serviços de saúde no Brasil

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ABSTRACT The present study described the characteristics of individuals who use Primary Health Care (PHC) services and evaluated the association between the high assessment of PHC attributes, from the perspective of users, with health conditions and the use of health services in Brazil. This work is a cross-sectional study that analyzed data from the 2019 National Health Survey, in which 9,562 adults responded to the Primary Care Assessment Tool (PCATool). The association between high PHC assessment (general score ≥ 6.6) and health conditions and the use of services was tested, and it was found that the adult users who most use public PHC are between 40 and 59 years of age, women, with a low level of education, and brown. Those who best evaluated PHC were individuals who used the same service, who sought out services in the last 2 weeks, and who had been hospitalized. The greater use of health services points to a better assessment of PHC.

KEYWORDS Primary Health Care. Health services research. Health surveys. Health services.

RESUMO *O estudo descreveu as características dos indivíduos que utilizam os serviços da Atenção Primária à Saúde (APS) e avaliou a associação entre a avaliação elevada dos atributos da APS, sob a ótica dos usuários, com o estado de saúde e o uso dos serviços de saúde no Brasil. Trata-se de um estudo transversal que analisou dados 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 elevada da APS (escore geral ≥ 6,6) e estado de saúde e uso dos serviços. Verificou-se que os usuários adultos que mais utilizam a APS pública têm entre 40 e 59 anos, são mulheres, de baixa escolaridade e pardos. Os que melhor avaliaram a APS foram indivíduos que utilizaram o mesmo serviço, procuraram serviços nas últimas duas semanas e se internaram. Maior uso dos serviços aponta para melhor avaliação da APS.*

PALAVRAS-CHAVE *Atenção Primária à Saúde. Pesquisa sobre serviços de saúde. Inquéritos epidemiológicos. Serviços de saúde.*

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Introduction

Primary Health Care (PHC), defined as the main entryway to the Brazilian Unified Health System (SUS), is a space for healthcare practices provided by multidisciplinary teams[1]. The main attributes of PHC are accessibility in the first contact, integrality, longitudinality, care coordination, and focus on the family and the community, besides cultural competence[2].

The capacity of organizing the health system based on PHC services must come with the capacity to measure the level of guidance towards the PHC attributes in this very healthcare system[3], since the presence and improved evaluation of these attributes results in better health indicators, more user satisfaction, lower costs, and more equity, consequently producing a positive impact on the state of health of the populations and individuals[2].

Even though PHC evaluation studies have expanded greatly in Brazil, especially since the implementation of the National Program for Improving Primary Care Access and Quality (Programa Nacional de Melhoria do Acesso e da Qualidade da Atenção Básica – PMAQ-AB) in PHC, which has opened the door to nationwide studies regarding the health service[4,5]. However, there is still a lack of national studies using such instruments as the Primary Care Assessment Tool (PCATool-Brasil), focused on the users' point of view. The PCATool can contribute to measuring the PHC attributes, providing a quick diagnosis of the organization and the rendering of services, revealing relevant differences between the evaluations performed by managers, professionals, and users, or between the different healthcare models. This instrument allows for an assessment of the structure and the progress of the services[3], and it is based on the model of evaluation of the quality of health services proposed by Donabedian[6].

In 2019, the National Health Survey (NHS), the largest national inquiry on health, was pioneer in the use of the PCATool module, allowing, on a nationwide scale and from the perspective of the users, one to explore the assessment of PHC, as well as the characteristics associated with that evaluation[7,8].

Although there are local studies about PHC assessment[3,9], no nationwide studies using the PCATool and comparing with the use of healthcare services have ever been published. Therefore, the current study aims to describe the characteristics of the individuals who use PHC services and to evaluate the association between high scores of PHC attributes by the users, with the state of health, demand, and the use of healthcare services in Brazil.
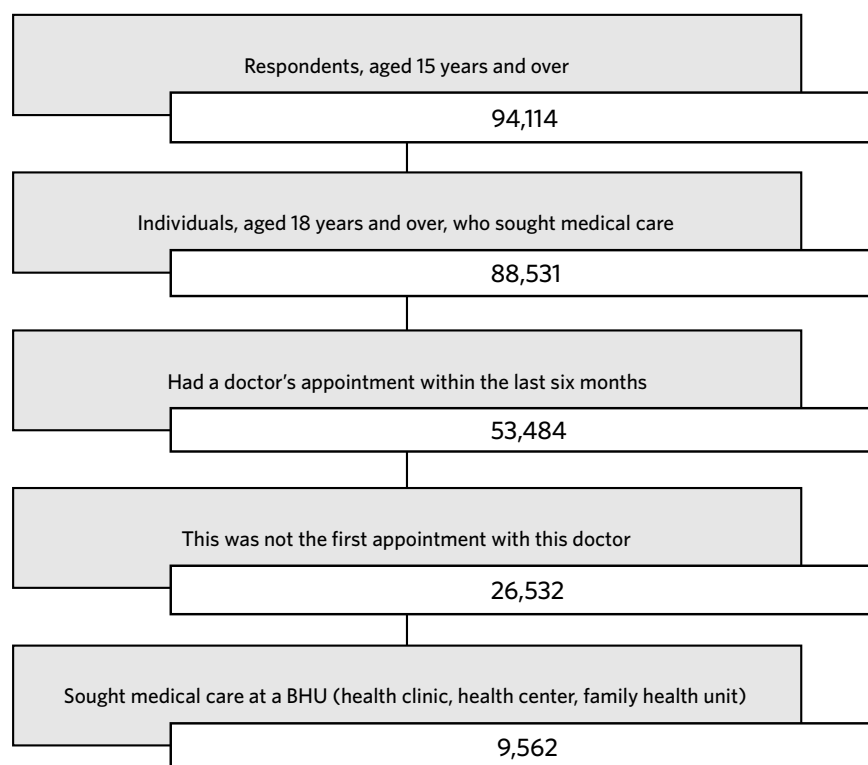
Material and methods

This is a cross-sectional study with data from the NHS 2019, which is a population-based health inquiry, representative of Brazil and the population residing in private households. The NHS 2019 was conducted by the Brazilian Institute of Geography and Statistics (IBGE) between August 2019 and March 2020, in partnership with the Ministry of Health[10].

Sample

The sampling plan of the NHS 2019 was designed by conglomerates in three selection stages: in the first, the sample was selected by census sectors or groups of census sectors; in the second, a defined number of households was selected; and in the third, a resident was selected among those who were 15 years of age and older, based on the list of residents obtained at the time of the interview. In every stage, simple random sampling was used. The sample was calculated for 108,525 households; however, data was collected in 94,111 households, a 93,6% response rate[11]. The current study analyzed information regarding individuals aged 18 years and older, who had a medical appointment in the previous six months at a Basic Healthcare Unit (BHU) or PHC and who had had at least two appointments with the same doctor, according to *figure 1*. Hence, the final sample totaled 9,562 indivíduals[8].

Figure 1. Flowchart for the selection of respondents for module H, Primary Health Care, NHS 2019

Respondents, aged 15 years and over
94,114

Individuals, aged 18 years and over, who sought medical care
88,531

Had a doctor's appointment within the last six months
53,484

This was not the first appointment with this doctor
26,532

Sought medical care at a BHU (health clinic, health center, family health unit)
9,562

Source: Created by the author.

Analyzed variables

OUTCOME

The evaluation of PHC attributes was conducted using the PCATool-Brasil evaluation tool (module H of the NHS)[8,11-13], a reduced version adapted for adult patients.

The PCATool had 26 questions, distributed in 10 components, to evaluate the attributes of PHC and the degree of affiliation[8,10], as shown in *box 1*. Some attributes were evaluated by two components, which, grouped in items, accessed the structure and the processes of the PHC services. Hence, the following attributes and components were evaluated: first contact accessibility (use and accessibility); longitudinality; coordination (integrality of care and information systems); integrality (services available and services provided); family; and community guidance and affiliation. The degree of affiliation in this study seeks to identify the service and/or doctor that are references for the interviewees. It is important to mention that the questions in the original PCATool were modified, changing the terms professional or doctor/nurse, to doctor[8,10,12].

Box 1. Attributes, components, and questions of the PCATool-Brasil questionnaire evaluated in module H of the NHS 2019

PHC Attribute	PHC Component	Questionnaire questions
Affiliation	Affiliation	H5. Do you usually look for "that doctor" when you get sick or need advice about your health?
Affiliation	Affiliation	H6. Is "this" the doctor who knows you best as a person?
Affiliation	Affiliation	H7. Is "this" the doctor most responsible for your health care?
Acesso de Primeiro Contato	Use	H8. When you have a new health problem, do you go to "this doctor" before going to another health service?
Acesso de Primeiro Contato	Accessibility	H9. When the "health service" is open, can you get quick advice over the phone if you need it?
Acesso de Primeiro Contato	Accessibility	H10. Is it difficult for you to get medical care at the "health service" when you think it is necessary?
Longitudinality	Longitudinality	H11. When you go to the "health service", is it the same doctor who sees you every time?
Longitudinality	Longitudinality	H12. Do you feel comfortable telling your concerns or problems to "that doctor"?
Longitudinality	Longitudinality	H13. Does "this doctor" know which problems are most important to you?
Longitudinality	Longitudinality	H14. If it were very easy, would you switch from the "health service" to another health service?
Coordination	Integration of care	H15. Did you consult any type of specialist or specialized service during the period in which you were being followed up by "this doctor?" (Interviewer Read all alternatives)
Coordination	Integration of care	H16. Did "this doctor" suggest (recommend, refer) you to see this specialist or specialist service?
Coordination	Integration of care	H17. "Did this doctor" write any information to the specialist about the reason for this consultation?
Coordination	Integration of care	H18. Does "this doctor" know what the results of this appointment were (with a specialist or in a specialized service)?
Coordination	Integration of care	H19. Did "this doctor" seem interested in the quality of care you received at the specialist or specialized service (did he ask if you were treated well or poorly)?
Coordination	Information systems	H20. If you wanted, could you read (consult) your medical records at the "health service"?
Completeness	Available Systems	H21. Counseling for mental health problems (e.g. anxiety, depression)?
Completeness	Available Systems	H22. Advice on how to quit smoking?
Completeness	Available Systems	H23. Advice on changes that occur with aging (e.g. decreased memory, risk of falling)?
Completeness	Services Rendered	H24. Guidance on healthy eating, good hygiene, and adequate sleep (getting enough sleep)?
Completeness	Services Rendered	H25. Guidance on appropriate physical exercise for you?
Completeness	Services Rendered	H26. Check and discuss the medications you are using?
Completeness	Services Rendered	H27. How to prevent falls?
Family orientation	Family orientation	H28. "Does this doctor" ask for your ideas and opinions (what you think) when planning treatment and care for you or a member of your family?

Box 1. Attributes, components, and questions of the PCATool-Brasil questionnaire evaluated in module H of the NHS 2019

PHC Attribute	PHC Component	Questionnaire questions
Family orientation	Family orientation	H29. Would "this doctor" meet with members of your family if you felt it was necessary?
Community orientation	Community orientation	H30. In the "health service", are surveys carried out with patients to see if the services are satisfying (meeting) people's needs?

Source: Created by the author.

The instrument used Likert-style answers, attributing scores from 1 to 4 for each attribute (1 = 'for sure not', 2 = 'probably not', 3 = 'probably yes', and 4 = 'for sure yes') and 'do not know/remember' (value = 9). To calculate the score of the degree of affiliation, a specific algorithm was used, with values from 1 to 4[8,12,14].

To calculate the general score of the PHC assessment, all of the answers were added up, and the averages were calculated for the attribute components and the degree of affiliation of the user with the service. The score values were standardized in a score varying from 0 to 10, considering that a general score ≥ 6.6 was considered to be a high assessment of PHC, in other words, it indicates services with characteristics of strong emphasis on the PHC attributes[8,12,14,15].

The PHC assessment was stratified according to the following demographic information: sex (male, female); age group (18-24, 25-39, 40-59, 60 years of age and older); education (unschooled and incomplete Elementary School, complete Elementary and incomplete High School, complete High School and incomplete college, and complete college); race/skin color (white, black, brown).

Explanatory variables

This study used variables related to the use of healthcare services and to the self-reported state of health, derived from Module J of the NHS 2019, as listed here below[10,16]:

a) State of health:

a1) Self-assessment of health: (J1a) 'Considering health as a state of physical and mental wellbeing, and not only the absence of diseases, what is ___ state of health?' (very good, good and regular and, very bad and bad);

a2) Limitations to activities due to health issues: (J2) 'In the last two weeks, was ___ unable to do any of his/her usual activities (work, go to school, play, house chores etc.) due to health reasons?' (no and yes)

b) Use of healthcare services:

b1) Use of the same healthcare service: (J9) 'Do you usually go to the same place, to the same doctor, or the same healthcare service when you need care?' (no and yes);

b2) Kind of service used: (J10a) 'When sick or needing healthcare, ___ usually goes to: [(BHU and other services (pharmacy, polyclinics, specialty center, Emergency Care Unit, outpatient clinic of public or private hospitals, doctors' office or private clinic, home care, among others)]';

b3) Seeking care: (J14) 'In the last two weeks, did ___ seek a place, healthcare service, or health professional to take care of his/her health?' (no and yes);

b4) Hospitalization in the previous 12 months: (J37) 'In the last 12 months, was ___ hospitalized for 12 hours or longer?' (no and yes).

Statistical analysis

Initially, our study described the PHC assessment scores and their respective 95%

Confidence Intervals (95%CI) according to sociodemographic characteristics (sex, age group, education, race/skin color), and the differences were evaluated without superimposing the 95% CI. To verify the association between a high PHC score (general PHC score > 6.6) and one's state of health and the use of healthcare services, this study used Poisson regression with robust variance, calculating the gross Prevalence Ratio (PR) and that adjusted by sex and age group. All of the analyses were conducted using the Survey module available in the Data Analysis and Statistical Software (Stata), version 14, using the weight of the NHS so that the data could be representative of the population from which we seek to obtain estimates.

Ethical aspects

The NHS 2019 was approved by the National Research Ethics Commission of the National Health Council, Certificate of Presentation for Ethical Appreciation – CAAE 11713319.7.0000.0008, according to Decision number 3,529,376. The participation of adults in the study was voluntary, and confidentiality of information was guaranteed.

Results

This study analyzed the answers from 9,562 individuals, aged 18 years and older, who evaluated the national PHC. Among the interviewees, 69.8% (95%CI 68.2 –71.4) were female, 35.7% (95% CI 34.0 – 37.5) were aged 40 to 49 years, and 31.6% (95%CI 29.9 – 33.3) were aged 60 years and older. In terms of education, 51.8% (95% CI 50.0 – 53.6) of the participants in the study were unschooled or had incomplete Elementary School Education, and 47.7% (95% CI 45.9 – 49.5) of the interviewees were brown (*table 1*). We noticed that 38% (95% CI 36.2 – 39.9) of the Brazilians classified PHC as geared towards its attributes (score ≥ 6.6). High evaluation among females was 38.9% (95% CI 36.7 – 41.1), with no difference for males; the population over 60 years of age gave the highest PHC assessment [41.6% (95% CI 38.7 – 44.6)] when compared to those who were aged 25 to 39 years. Considering the level of education, uneducated people or with and incomplete Elementary School Educatiom attributed a higher score to PHC [40.6% (95% CI 38.1 – 43.2)] when compared with those with complete High School and incomplete college educations [34.2% (95% CI 31.1 – 37.5)], with no difference found among the others. There were no differences in evaluations according to race/skin color (*table 1*).

Table 1. PHC assessment among adults who used PHC, according to sociodemographic variables, NHS 2019

Variables	N = 9,562		Score ≥ 6.6 N = 3,640		Score < 6.6 N = 5,922	
	%(*)	95% CI	%(*)	95% CI	%(*)	95% CI
Total			38	36.2-39.9	62	60.0-63.7
Sex						
Male	30.1	28.6-31.7	36.0	33.1-39.0	63.9	61.0-66.8
Female	69.8	68.2-71.4	38.9	36.7-41.1	61.0	58.8-63.2
Age range						
18 – 24	10.0	08.9-11.2	34.5	28.8-40.7	65.4	59.2-71.1
25 – 39	22.5	21.0-24.0	33.6	30.1-37.3	66.3	62.6-69.8

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	%(*)	95% CI	%(*)	95% CI	%(*)	95% CI
Total			38	36.2-39.9	62	60.0-63.7
40 – 59	35.7	34.0-37.5	38.6	35.7-41.6	61.3	58.3-64.2
60+	31.6	29.9-33.3	41.6	38.7-44.6	58.3	55.3-61.2
Education						
No education and incomplete elementary	51.8	50.0-53.6	40.6	38.1-43.2	59.3	56.7-61.8
Complete elementary and incomplete high school	14.4	13.3-15.6	36.7	32.7-40.9	63.2	59.0-67.2
Complete high school and incomplete higher education	27.6	26.0-29.3	34.2	31.1-37.5	65.7	62.4-68.8
Complete higher education	6.0	05.1-07.1	36.2	29.3-43.8	63.7	56.2-70.6
Race/Skin color						
White	37.9	36.0-39.9	36.8	34.0-39.8	63.1	60.1-66.0
Black	13.1	11.9-14.5	39.4	34.1-44.9	60.6	55.1-65,8
Brown	47.7	45.9-49.5	38.5	36.0-41.1	61.4	58.8-63.9

Source: Created by the author.

When analyzing the association between a high PHC assessment (≥ 6.6) and the explanatory variables, it was noted that individuals who used the same health service (PRaj = 1.34 (95% CI 1.14 – 1.56), those who sought care from a healthcare service in the two weeks prior to the interview (PRaj = 1.17 (95% CI 1.06 – 1.28), and people who were hospitalized in the last 12 months (PRaj = 1.19 (95% 1.03 – 1.37) offered a higher PHC assessment (*table 2*). No differences were found in the assessment of the service or in the self-assessment of the state of health, the use of the BHU, and the limitation of usual activities due to health issues (*table 2*).

Table 2. Association between high assessment of Primary Health Care (score ≥ 6.6) and health status and use of services. NHS 2019

Variables	Score ≥ 6.6		Prevalence Ratio (95% CI)			p-valor
	%(*)	95% CI	Gross		Adjusted	
Self-assessment of health						
Very good, good, and regular	38.14	(36.24-40.09)	1		1	
Very bad and bad	37.07	(31.16-43.39)	0.97	(0.81- 1.15)	0.94	(0.79-1.12)	0.509
Limitation of activities due to health						
No	37.8	(35.89-39.75)	1		1	
Yes	39.94	(35.3-44.76)	1.05	(0.93-1.19)	1.02	(0.91-1.16)	0.644

Table 2. Association between high assessment of Primary Health Care (score ≥ 6.6) and health status and use of services. NHS 2019

Variables	Score ≥ 6.6		Prevalence Ratio (95% CI)			p-valor
	%(*)	95% CI	Gross		Adjusted	
Use of the same health service						
No	29.22	(25.02-33.81)	1		1	
Yes	39.51	(37.55-41.51)	1.35	(1.15-1.58)	1.34	(1.14-1.56)	< 0.001
Type of services used						
Others	35.9	(31.12-40.98)	1		1	
Basic Health Unit	40.36	(38.21-42.53)	1.12	(0.96-1.30)	1.11	(0.96-1.28)	0.154
Search for medical care						
No	35.63	(33.45-37.87)	1		1	
Yes	42.42	(39.35-45.56)	1.19	(1.08-1.30)	1.17	(1.06-1.28)	0.001
Hospitalization in the last 12 months						
No	37.33	(35.46-39.23)	1		1	
Yes	44.34	(38.23-50.64)	1.18	(1,02-1.37)	1.19	(1.03-1.37)	0.017

Source: Created by the author.

Discussion

The current study analyzed data from the PCATool, referring to the NHS 2019, from individuals who had appointments with a PHC doctor in the six months prior to the interview. In this sample, 38% of the Brazilians classified PHC as having been advised about its attributes, given that elderly individuals and those with a low level of education gave the highest evaluation of PHC. Individuals who sought the same health service when they needed healthcare; those who sought a place, health service, or health professional to receive healthcare in the two weeks prior to the interview; and those who had been hospitalized for more than 24 hours in the 12 months before the interview, gave the highest evaluation of PHC.

This study also found that women and individuals, aged 40 to 59 years, use healthcare services the most, which is in accordance with other studies[8,17,18]. However, some other studies indicate that women and the elderly are rank the highest in that aspect[19-22]. The argument is that the female population is more perceptive regarding signs and symptoms of diseases, and more sensitive to practices of promotion/prevention. Moreover, women have demands regarding the menarche, prenatal care, and menopause, and thus seek out medical services more often[23,24]. The higher demand for healthcare services by the individuals, aged 40-59 years, is likely related to the female population and their specific demands referring to health prevention and menopause[24].

The present study determined that the less educated population uses PHC the most, a result that agrees with the findings of telephone inquiries conducted in Belo Horizonte and in the Federal District using the PCATool[17,25]. These results show the importance of both PHC and SUS in reducing social injustice, given that PHC expands access to healthcare to the most vulnerable population[18]. Moreover, it is important to emphasize the importance of SUS in terms of social inclusion and the reduction of iniquities[21,26].

The results show that less than 40% of the continuous PHC users evaluated the service

with a high score, which is in line with the existing literature in Brazil in terms of studies conducted at the municipal or regional levels of health care, carried out in different places and from the perspective of different social actors. Those studies also show that PHC, evaluated highly by a small part of the population, still lacks the necessary medical advice concerning its attributes[27-33]. This lack of medical advice concerning the PHC attributes is worrisome, since the presence of the attributes and their better quality promotes better health indicators, greater user satisfaction with the system, as well as lower costs and greater equity, and, consequently, has an impact on the state of health of both the populations and the individuals[2].

The results indicate the need to improve the quality of the PHC services at SUS[7,18], especially regarding the components process and structure[34]. The qualification of PHC in Brazil deals with complex issues that need to be addressed, related to the qualification of professionals, to establishing better family health teams, and to fragile working relations. Moreover, there is still work to be done on issues such as the different expectations by health professionals and users, the work process of the teams, as well as the balance between curative practices and health promotion actions and the prevention of grievances. Questions related to the funding and management of healthcare services also require attention[35].

Considering the needs identified in this study, one must contemplate the extinction of the PMAQ-AB, resulting from the implementation of the Prevent Brazil Program (Previne Brasil[36]), since that program used to function as an instrument for the expansion of access and qualification of PHC due to its robust methodology. The instrument evaluated and promoted strategies for the identification of weaknesses in the structure and the work process of the teams, especially regarding the attributes of first contact, longitudinality, and coordination of care. It also paid

better financial incentives for performance to the teams that managed to improve the quality of the care provided to the population[37,38]. We emphasize that the extinction of the PMAQ-AB caused stagnation and even setbacks in terms of PHC qualification.

The current study identified an association between high PHC scores and individuals who use the same services when they need healthcare. Likewise, findings from the study conducted by Oliveira[30], which also identified that having a time for the user to connect with the service, of more than two years, tends to result in a higher PHC assessment. Another study verified that highly frequent PHC users evaluate the services better, possibly due to the development of connections with the health team[32]. The increase in popularity of PHC throughout the national territory has been one of the factors that favored the establishment of connections, which is something essential for the longitudinal care of the individuals and their families, and contributes to the recognition that PHC is the regular source of healthcare[9].

This study identified that the people who most often seek healthcare services are those who give the highest evaluation. Studies by Oliveira[30] and by Gonçalves and collaborators[39] showed that services evaluated with a high score are related to populations with a more frequent use of healthcare services, given that those studies identified two or more appointments and 8.5 appointments per year, respectively. By contrast, one study conducted in the town of Teresina, PI, Brazil, indicated that, the higher the regularity of use of the BHU, the higher the percentage of high evaluations provided by male users[32]. Moreover, it is clear that health needs to interfere in the degree of the evaluation attributed to PHC[24]. The NHS 2013 confirmed that the highest motivation for using healthcare services is associated with the presence of diseases[20], and that the main reason for seeking care in the previous two weeks, according to the NHS 2019, was disease or treatment of a disease

[48.3% (95% CI 47.2 – 49.3)]; hence, having health demands addressed results in a high evaluation of PHC.

Another association identified in this study was between high PHC scores and individuals who had been hospitalized in the 12 previous months. The study highlighted that the highest prevalence of hospitalization in the 12 previous months was among individuals with a lower level of education and who that had Noncommunicable Diseases (NCDs)[20]. These users, who had been admitted to hospital, may have untreated NCDs, or users with mental illnesses, that is, the main public for PHC programmatic monitoring[40,41]. In this sense, these PHC users who require hospitalization tend to offer a better evaluation of PHC, possibly because they have access to the hospital network. Therefore, those who are hospitalized the most also search for and demand PHC care more frequently and tend to evaluate the services highly.

Therefore, users who required hospitalization tended to give a high evaluation of PHC, possibly because they had access to the hospital network. Those who were hospitalized were also the ones who sought and demanded care from PHC more often, and who offered higher evaluations of the the services.

In this sense, it is important to evaluate the quality of PHC, seeking to create strategies to adjust the demand and the use of services[22]. To understand this demand, one must consider governance and the public actions and policies aimed at prevention and reduction of risk factors, access to healthcare, organization of inspections and surveillance, as well as coping with social determinants[20].

One of the limitations of this study relates to the fact that, in order to be eligible for the interview of PHC quality assessment, participants must have had at least two appointments with the same BHU doctor or doctor from the Family Health Units[8]. The NHS, by using this filter, assumed that such individuals were more capable to answer questions concerning PHC attributes with more reliability and

assertion, since they had familiarity with the health service provided[8]. However, this study design excluded people who had no access to the services and less frequent users, who had had a doctor's appointment only once in the previous six months, and that strategy might have altered the overall assessment. As a consequence of the study design, the size of the sample was substantially reduced, compromising the performance of disaggregated analyses by town, or by services, which was possible when using the PMAQ-AB[4]. Moreover, the original PCATool questionnaire undersent changes, with its focus aimed exclusively at evaluating medical doctor's appointments. It is also important to mention that health care is provided in a multidisciplinary manner by PHC services, something that was not evaluated in the questionnaire used in this study[7].

Conclusions

The present study indicates that females, with a brown skin color, aged 40 to 59 years, with a low level of education are those who use PHC the most. Additionally, the best PHC assessment comes from those who more often seek out and use the same healthcare services, those who can be considered frequent customers or who are hospitalized more often. Therefore, the continuous use of PHC services results in higher PHC scores.

Many are the challenges for the consolidation of PHC in Brazil, especially regarding the quality of the services. Nonetheless, it is clear to us that PHC provides an important service in terms of reducing iniquities, as it is the entryway to SUS for vulnerable populations. Our study also highlights the immense difficulties, from 2016 to 2022, that the country had in terms of implementing PHC and SUS, given the policies of austerity through the reduction of financial resources from the Federal Government, thus compromising the consolidation of social policies of a universal nature and heavily impacting the achievements

the Brazilian population had witnessed in the 30 years since the creation of the SUS[42]. Therefore, we recommend investing in and strengthening of PHC, recognizing universal social rights, encouraging social participation, and affirming the role of the State, investing in both democracy and the construction of equalitarian healthcare policies.

Collaborators

Carvalho FC (0000-0002-5284-0373)* contributed to the conception and planning of the study, data analysis and interpretation, write-up of the first version and critical review of the content, and participated in the approval of the final manuscript. Gomes CS (0000-0001-6586-4561)* and Bernal RTI (0000-0002-7917-3857)* contributed with support to statistical analyses, data analysis and interpretation, write-up of the first version, and critical review. Pinto HA (0000-0002-8346-1480)* and Pereira CA (0000-0001-6183-1607)* contributed to the critical review of the content, data analysis and interpretation, critical review of the content, and approval of the final version of the manuscript. Malta DC (0000-0002-8214-5734)* contributed to the conception and planning of the study, data analysis and interpretation, write-up of the first version and critical review of the content, and participated in the approval of the final version of the manuscript and in the guidance of the study. ∎

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