https://doi.org/10.1590/1980-549720210004

ORIGINAL ARTICLE / *ARTIGO ORIGINAL*

Factors associated with poor access to health services in Brazil

Fatores associados ao acesso precário aos serviços de saúde no Brasil

Marianny Nayara Paiva Dantas[I], Dyego Leandro Bezerra de Souza[II], Ana Mayara Gomes de Souza[I], Kezauyn Miranda Aiquoc[I], Talita Araujo de Souza[III], Isabelle Ribeiro Barbosa[IV]

ABSTRACT: ***Objective:*** To analyze factors associated with poor access to health services among the Brazilian population aged 19 years or older. ***Methods:*** This is a cross-sectional study based on data from the 2013 National Health Survey, obtained from a complex sample. The poor access outcome was defined as not having received care the last time the participant sought a health service and not seeking care again for lack of accessibility. We analyzed the prevalence of poor access and its association with socioeconomic and health factors by calculating prevalence ratios (PR) with 95% confidence intervals. We also used Poisson's multivariate regression model with the Wald test for robust estimation. ***Results:*** Out of the 60,202 valid responses, 12,435 individuals met the criteria for poor access. Poor access had a prevalence of 18.1% (95%CI 16.8 – 19.4) and was associated with the following factors: being black/multiracial (PR = 1.2; 95%CI 1.0 – 1.4); living in the North (PR = 1.5; 1.3 – 1.9) and Northeast (PR = 1.4; 1.2 – 1.6) regions compared to the Southeast region; living in a rural area (PR = 1.2; 1.1 – 1.4); being a smoker (PR = 1.2; 1.0 – 1.4); having poor/very poor self-rated health (PR = 1.3; 1.1 – 1.6); not having private health insurance (PR = 2.3; 1.7 – 2.9). ***Conclusion:*** Access to health services is still precarious for a considerable part of the Brazilian population, especially the most vulnerable groups.

Keywords: Health services accessibility. Health status disparities. Unified Health System. Health surveys.

[I]Graduate Program in Collective Health, Universidade Federal do Rio Grande do Norte – Natal (RN), Brazil.
[II]Department of Collective Health, Universidade Federal do Rio Grande do Norte – Natal (RN), Brazil.
[III]Graduate Program in Health Sciences, Universidade Federal do Rio Grande do Norte – Natal (RN), Brazil.
[IV]Faculdade de Ciências da Saúde do Trairi, Universidade Federal do Rio Grande do Norte – Santa Cruz (RN), Brazil.
Corresponding author: Talita Araujo de Souza. Rua General Gustavo Cordeiro de Faria, 601, Ribeira Natal, CEP: 59012-125, Natal, RN, Brasil. E-mail: talitaaraujo23@hotmail.com
Conflict of interests: nothing to declare – **Financial support**: Coordination for the Improvement of Higher Education Personnel (*Coordenação de Aperfeiçoamento de Pessoal de Nível Superior* – CAPES) – Brazil, grant 88882.375266/2019-01.

RESUMO: ***Objetivo:*** Analisar os fatores associados ao acesso precário aos serviços de saúde pela população brasileira de 19 anos ou mais. ***Métodos:*** Trata-se de estudo transversal, com base nos dados da Pesquisa Nacional de Saúde, 2013, obtidos de uma amostragem complexa. O desfecho acesso precário foi definido como não ter conseguido atendimento na última vez que procurou e não ter tentado novo atendimento por falta de acessibilidade. Foi analisada a prevalência do acesso precário e sua associação com fatores socioeconômicos e de saúde, por meio do cálculo da razão de prevalências (RP) com intervalos de confiança de 95%. Aplicou-se, ainda, o modelo multivariado pela regressão de Poisson, com teste de Wald para estimação robusta. ***Resultados:*** Das 60.202 respostas válidas, 12.435 indivíduos enquadraram-se nos critérios do acesso precário. A prevalência do acesso precário foi de 18,1% (IC95% 16,8 – 19,4) e associou-se com os seguintes fatores: ter cor da pele preta/parda (RP = 1,2; IC95% 1,0 – 1,4); residir na região Norte (RP = 1,5; 1,3 – 1,9) e Nordeste (RP = 1,4; 1,2 – 1,6) em relação à região Sudeste; viver na zona rural (RP = 1,2; 1,1 – 1,4); ser fumante (RP = 1,2; 1,0 – 1,4); ter autoavaliação de saúde ruim/muito ruim (RP = 1,3; 1,1 – 1,6); não ter plano de saúde privado (RP = 2,3; 1,7 – 2,9). ***Conclusão:*** O acesso aos serviços de saúde ainda é precário para uma parcela considerável da população brasileira, com destaque para a população mais vulnerável.

Palavras-chave: Acesso aos serviços de saúde. Disparidades nos níveis de saúde. Sistema Único de Saúde. Inquéritos epidemiológicos.

INTRODUCTION

Access is the opportunity to use health services when needed, expressing characteristics of its offer and circumstances that facilitate or hinder people's ability to use it effectively[1]. Access is simultaneously related to four elements: availability, accessibility, acceptability, and quality[2].

Availability corresponds to the number of services compared to the demand met and the care needed[3]. In turn, accessibility is understood as the non-differentiation of access to resources and health services among individuals, advocating physical accessibility, especially for those who live in more peripheral and distant locations, ensuring the closest provision of services without barriers.

Acceptability also refers to the adjustment of individual characteristics regarding products, services, and practices of workers of the facilities. It can be mainly perceived during care, when the user is respected as an individual and, during the service provision, a commitment to ensure quality can be noted, adapting to the context[4]. The fourth element, quality of service, is characterized not only by the qualification of professionals in the face of the population's peculiarities but also by the quality of the products used[2].

Several factors can intervene in the access to health services, including: the characteristics of the system, socioeconomic status of the population, schooling, cultural aspects, geographical characteristics of users and services, as well as belonging to specific groups. When these factors increase or decrease access to health services, we have access inequality[5,6].

Brazil still shows significant inequity signs, with evident inequalities that lead to restrictions to basic health services[7,8]. Despite the robustness of the health legal framework concerning equal access, the guarantee of health equality is still far from the desired[9]. This fact directly affects socially vulnerable groups because these disadvantages have consequences for their morbidity and mortality profile compared to other populations[10,11].

The Brazilian National Health Survey (NHS), a national household-based survey, aimed at knowing the population's health situation, lifestyle, and access to and use of health services, according to the region of residence, gender, and ethnicity and skin color, allowing the characterization of access to health services in the country[12].

Despite the progress made, the development of effective policies that prioritize equal access to health care still faces many challenges. Thus, the present study aimed at evaluating the poor access to health services among the Brazilian population aged 19 years or older and its associated factors, based on data from the 2013 NHS.

METHODS

This is a cross-sectional study that used data from the 2013 NHS, developed by the Brazilian Institute of Geography and Statistics (*Instituto Brasileiro de Geografia e Estatística* – IBGE) together with the Ministry of Health[13]. This research is a national household-based survey that characterized the Brazilian population as to health status, lifestyles, the surveillance of chronic diseases and risk factors, and the access to and use of health services[12].

It used a three-stage cluster sampling and assigned weights to each sampling unit. Census tracts, or set of tracts (territorial units for census data collection, defined by IBGE), corresponded to primary sampling units, households represented secondary sampling units, and adult residents constituted tertiary sampling units. The population investigated in the NHS consisted of adults (19 years or older) living in private homes in the country, except for those located in special census tracts (barracks, military bases, lodgings, campsites, boats, penitentiaries, penal colonies, prisons, jails, nursing homes, orphanages, convents, and hospitals). All subsample selection stages involved simple random sampling[12].

The sample size was set at 81,187 households, with one individual selected per household to answer the questionnaire. Interviews were conducted in 60,202 households with individuals aged 19 years or older, due to the response rate of 86%[14]. Other considerations on the sampling plan, weights, and effects of the NHS design are described in studies by Damacena et al.[14] and Souza Júnior et al.[12].

The NHS questionnaire was divided into modules, which covered characteristics of the household, of all residents (schooling, income, work, people with disabilities, health insurance coverage, use of health service, health of children under 2 years of age, health of older

adults), and of the adult resident selected (lifestyle, perceived health status, accidents and violence, chronic diseases, women's health, prenatal care, oral health, and medical care)[13].

This study analyzed Module J of the NHS questionnaire, which involves questions related to the use of health services. The outcome defined as poor access to health services expresses the frustrated need for health care, either by not having received care when sought or by not having sought the service again due to some accessibility issue.

The questions that grounded the elaboration of the dependent variable are related to the availability and accessibility of health services. The questions were: "J17. Have you received care the first time you sought a health service in the past two weeks?" The study considered the individuals who answered no to this question. We also used the question "J36. In the past two weeks, why did you not seek a health service?" and considered the affirmative answer to one of these alternatives: "they had no money"; "the service was distant or difficult to access"; "incompatible hours"; "the service is very slow"; "the facility had no specialist compatible with their needs"; "they thought they were not eligible"; "they did not like the professionals of the facility"; "strike in health services"; "transport difficulties". This survey had 60,202 valid answers, and 12,435 individuals met the criteria previously described for the poor access outcome.

The independent variables analyzed were: country region (Midwest; South; Southeast; North; Northeast), household situation (rural or urban), ethnicity (black/multiracial; other), gender (male or female), age group (18–24; 25–39, 40–59; 60 or older), living with spouse (yes or no), occupation (occupied or unoccupied), schooling (no schooling; elementary school; high school; higher education or more), use of tobacco and its derivatives (smoker — currently smokes a tobacco product; ex-smoker — formerly smoked a tobacco product; never smoked), alcohol consumption (heavy consumption — five or more daily drinks for men and four or more daily drinks for women in at least one occasion in the previous 30 days, considering the standard drink of 50 mL; moderate consumption — habitual consumption regardless of the amount consumed in the previous 30 days, but lower than heavy consumption; never drank), multimorbidity (no multimorbidity: 0 or 1 morbidity; 2 morbidities; 3 morbidities; 4 or more morbidities), self-rated health (very good/good; regular; poor/very poor), use of private medical or dental insurance (yes or no), and economic status according to the Brazilian Association of Research Companies (*Associação Brasileira de Empresas de Pesquisa* – ABEP) (A–B, C, D–E).

The ABEP classification is a socioeconomic classification standard used in Brazil that considers schooling and access to goods and basic public services to estimate the household income. The population is grouped into six major socioeconomic strata, based on the estimated average household income: A, B1, B2, C1, C2, D–E, with A corresponding to the higher income stratum and D–E to the lowest[14,15].

In the statistical analysis, we calculated the prevalence of poor access to health services in association with the socioeconomic characteristics and health conditions of the population studied. Subsequently, we conducted a bivariate analysis, calculating prevalence

ratios (PR)[16] with their respective 95% confidence intervals (95%CI) and p-values ($p < 0.05$). Significant variables in the bivariate analysis ($p < 0.20$) were included in the multivariate analysis, which used Poisson's regression[17] with the Wald test for robust estimation. We adopted the hierarchical model, and the entry of variables into the multivariate model followed the ascending order of the p-value. In this analysis, we considered sample weights resulting from the complex NHS sample design. For statistical analysis, we used the Stata software, version 14.

The National Research Ethics Committee approved the NHS project on July 8, 2013, under No. 10853812.7.0000.0008. The present study used secondary NHS data, available on official websites of the Brazilian Ministry of Health, not needing consideration by a research ethics committee, according to resolution No. 466/2012 of the National Health Council.

RESULTS

The prevalence of poor access to health services among the Brazilian population was 18.1% (95%CI 16.8 – 19.4). In the descriptive analysis, poor access was more prevalent among black and multiracial individuals (23.3%), those without schooling (30.4%), and people aged 18–24 years (19.8%) (Table 1).

We could also identify that most of the population with poor access was male (19.7%), lived with their spouse (18.3%), had some occupation (19.1%), and belonged to lower socioeconomic strata (D–E) (23.9%) (Table 3 of Complementary Material 1).

Table 2 presents the results of the bivariate and multivariate analyses, as well as the relationship between poor access to health services and socioeconomic and health factors. Among the statistically significant variables in the bivariate analysis, we underline the residents of the North and Northeast regions, black and multiracial individuals, smokers, people with poor/very poor self-rated health, and those who had no medical or dental insurance.

In the multivariate analysis, the following variables remained significantly associated with poor access to health services: being black and multiracial (PR = 1.2; 95%CI 1.0 – 1.4), living in the North (PR = 1.5; 1.3 – 1.9) and Northeast (PR = 1.4; 1.2 – 1.6) regions compared to the Southeast region (baseline), having poor/very poor self-rated health (PR = 1.3; 1.1 – 1.6), not having medical or dental insurance (PR = 2.3; 1.7 – 2.9). On the other hand, having three morbidities (PR = 0.5; 0.4 – 0.6) and higher education (PR = 0.3; 0.2 – 0.3) were related to a smaller proportion of poor access to health services in the final model.

Table 4, in Complementary Material 2, shows other results of the bivariate and multivariate analyses that presented a relationship between poor access to health services and socioeconomic and health factors. Among the variables statistically significant in the bivariate analysis, living in the rural area (PR = 2.0; 1.7 – 2.3) and belonging to the D–E socioeconomic strata (PR = 1.9; 1.6 – 2.4) stood out.

Table 1. Poor access to health services according to socioeconomic and health variables among the Brazilian adult population. National Health Survey, 2013*.

Variables	Prevalence (%) (N = 12,435)	95%CI
Poor access	18.1	16.8 – 19.4
Region		
Southeast	12.9	11.0 – 14.9
South	11.2	9.0 – 13.8
Midwest	24.5	21.4 – 28.0
Northeast	27.0	24.5 – 29.7
North	31.1	26.9 – 35.6
Ethnicity		
Other	12.9	11.3 – 14.6
Black and multiracial	23.3	21.6 – 25.2
Age (years)		
18–24	19.8	16.4 – 23.7
25–39	18.5	16.5 – 20.8
40–59	19.3	17.5 – 21.3
60 or older	15.2	13.2 – 17.4
Schooling		
No schooling	30.4	26.6 – 34.6
Elementary school	19.4	17.6 – 21.2
High school	17.2	15.0 – 19.6
Higher education or more	9.2	7.6 – 11.2
Smoking		
Never smoked	16.8	15.3 – 18.3
Smoker	24.7	21.4 – 28.3
Ex-smoker	17.7	15.5 – 20.2
Alcohol consumption		
Does not drink	18.1	16.7 – 19.5
Drinks moderately	17.1	14.2 – 20.5
Drinks heavily	20.3	15.8 – 25.8

Continue...

Table 1. Continuation.

Variables	Prevalence (%) (N = 12,435)	95%CI
Multimorbidity		
No multimorbidity	20.1	18.5 – 21.8
2 morbidities	19.2	16.6 – 22.2
3 morbidities	11.1	9.0 – 13.6
4 or more morbidities	12.5	9.9 – 15.6
Self-rated health		
Good/very good	14.5	12.9 – 16.3
Regular	19.9	18.0 – 21.9
Poor/very poor	25.0	21.7 – 28.7
Private medical or dental insurance		
Yes	7.1	5.7 – 8.9
No	23.6	22.1 – 25.3

*The poor access to health services expresses the frustrated need for health care, either by not having received care when sought or by not having sought the service again due to some accessibility issue; 95%CI: 95% confidence interval.

Table 2. Bivariate analysis with crude prevalence ratio and multivariate model with prevalence ratio adjusted for variables associated with poor access to health services among the Brazilian adult population. National Health Survey, 2013*.

Variables	Crude PR	95%CI	p-value	Adjusted PR	95%CI	p-value
Region						
Southeast	1			1		
South	0.8	0.6 – 1.1	< 0.01	1.6	1.3 – 1.9	< 0.01
Midwest	1.9	1.5 – 2.3		0.8	0.6 – 1.1	
Northeast	2.1	1.7 – 2.5		1.5	1.3 – 1.9	
North	2.4	1.9 – 2.9		1.4	1.2 – 1.6	
Ethnicity						
Other	1		< 0.01	1		0.01
Black and multiracial	1.8	1.5 – 2.0		1.2	1.0 – 1.4	

Continue...

Table 2. Continuation.

Variables	Crude PR	95%CI	p-value	Adjusted PR	95%CI	p-value
Age (years)						
60+	1			1		
18–24	1.3	1.0 – 1.6	0.03	0.9	0.7 – 1.1	0.37
25–39	1.2	1.0 – 1.4		0.9	0.7 – 1.1	
40–59	1.2	1.0 – 1.5		0.8	0.6 – 1.0	
Schooling						
No schooling	1			1		
Elementary school	0.6	0.5 – 0.7	< 0.01	0.7	0.6 – 0.8	< 0.01
High school	0.5	0.4 – 0.6		0.7	0.6 – 0.9	
Higher education or more	0.3	0.2 – 0.3		0.5	0.4 – 0.7	
Smoking						
Never smoked	1			1		
Smoker	1.4	1.2 – 1.7	< 0.01	1.2	1.0 – 1.4	0.01
Ex-smoker	1.0	0.9 – 1.2		0.9	0.8 – 1.1	
Multimorbidity						
No multimorbidity	1			1		
2 morbidities	0.9	0.8 – 1.1	< 0.01	0.9	0.8 – 1.1	< 0.01
3 morbidities	0.5	0.4 – 0.6		0.5	0.4 – 0.7	
4 or more morbidities	0.6	0.4 – 0.7		0.6	0.5 – 0.8	
Self-rated health						
Good/very good	1			1		
Regular	1.3	1.1 – 1.5	< 0.01	1.1	1.0 – 1.3	< 0.01
Poor/very poor	1.7	1.4 – 2.0		1.3	1.1 – 1.6	
Private medical/dental insurance						
Yes	1		< 0.01	1		< 0.01
No	3.3	2.6 – 4.1		2.3	1.7 – 2.9	
Alcohol consumption						
Does not drink	1					
Drinks moderately	0.9	0.7 – 1.1	0.53			
Drinks heavily	1.1	0.8 – 1.4				

*The poor access to health services expresses the frustrated need for health care, either by not having received care when sought or by not having sought the service again due to some accessibility issue; PR: prevalence ratio; 95%CI: 95% confidence interval.

DISCUSSION

The results indicate that the overall prevalence of difficult access to health services in Brazil was 18.1%, with great discrepancies between population groups. Such a result disagrees with the study conducted by Dilélio et al.[18], which identified a 3% prevalence of the lack of access among individuals who needed hospitalization.

Among the disparities in the use of health services at various levels of complexity and specialties or in the performance of procedures/exams, studies reveal that difficult access is more prevalent in the black population[19,20].

This difficult access to health services faced by the black population might be rooted in the structural racism that exists in Brazil, embodied in institutions and organizations by means of inequitable treatment, disadvantages in the access to benefits, negligence in not prioritizing the construction of health facilities close to this population, which represents environmental racism, as well as the slowness in implementing actions and policies targeted at them[21,22].

The evaluation between schooling and poor access (Table 2) shows that the population with a lower level of education, which, in Brazil, consists mainly of black individuals, also has the most difficult access to health services[23-25]. A study performed in Pelotas (Rio Grande do Sul) assessed the socioeconomic inequalities in access to health services and the quality of care in the municipality with a household survey, identifying that socioeconomic inequalities and schooling were factors that influenced the access to health services. Less-educated individuals also spent more time in waiting lines[26].

The evaluation of poor access according to country region revealed that individuals living in the North and Northeast regions presented greater difficulties compared to those in the Southeast region. The reality of the North region directly reflects the living conditions of its population, with one of the lowest Human Development Indices of the country, one of the highest Gini coefficients, and the second-lowest population density, justified by its territorial dimension, the long distances between localities, and deficiencies in transport systems, which can create obstacles for the regional development and, consequently, the access to health services[27].

This region has a low concentration of health professionals, geographical barriers, and the smallest number of specialists compared to other states[20]. We emphasize that, despite improvements in income distribution and poverty reduction in the country over the past two decades, the social discrepancies and inconsistencies in service distribution among Brazilian regions are still significant[28].

The regions with the most difficult access to health services have the highest concentration of black population (77.3% of individuals in the North and 73.0% in the Northeast are black)[29]. Also, these individuals mainly live in rural areas, representing 60% of this population[30], which corroborates the findings of the present study.

Not having private medical or dental insurance was another factor associated with poorer access to health services found in this study. People who depend solely on the public health system (*Sistema Único de Saúde* – SUS) are related to this vulnerability, particularly among the black population, those with low socioeconomic status, and people who live in the North and Northeast regions of Brazil[31]. Dias et al.[32], when assessing the access to medical care in Minas Gerais, identified that SUS users and those who had no health insurance presented more difficulty in scheduling appointments, faced long waiting lists, and were the ones who most sought primary care (PC) services for treatment and rehabilitation.

Even though the analyses of this study did not identify which level of complexity of health services faces difficulties in access, we highlight the current panorama of PC in Brazil, as it represents the preferential entry point into SUS. Except for the Northeast region, with 75% coverage for this service, the other Brazilian regions show a PC coverage between 50 and 60%[33].

As a result, a large part of the population remains unassisted, which can increase the difficulties in access and the acquisition of private insurance. This scenario evidences the need for public policies that expand coverage and access and prioritize PC as a potential source of improvement of health indicators in population groups, aiming at reducing regional differences.

People with poor/very poor self-rated health showed the highest prevalence of poor access to health services. This classification of self-rated health might be related to a high number of morbidities, fragility, and other health conditions, leading to a greater need for using the service and a high chance of facing access barriers[34,35].

Despite the evidence of a relationship between multimorbidity and difficult access, the results found in this study indicate that people who do not report multimorbidity are the ones with the most difficult access to health services. In this case, a higher number of morbidities could facilitate access to health services, as evidenced in other studies[20,36]. This finding may be based on the premise that health conditions receive greater attention by the services since most of them focus on treating the disease rather than preventive actions[37]. On the other hand, the difficult access to health services may limit the diagnosis of multimorbidity, preventing people with multiple health conditions from declaring this multimorbidity for being unaware of their situation.

We found that smokers have more difficult access to health services. The consolidation of anti-smoking laws has created a social stigma connected to tobacco and smokers. This situation may have led these individuals to marginalization, isolation, and a sense of not belonging regarding health services, which could be associated with their lower demand for health services[38,39].

Another striking feature of the difficult access to health services is related to the working status of the Brazilian population, as those who had an occupation reported greater difficulty in using these services. The incompatibility between the working hours of most health services and the working hours of users contributes

to perpetuating the disparities in access and the ignorance about their health, which can result in negative self-rated health[26,40].

The study has some limitations that should be considered. Among them, we highlight the information bias, which can interfere with the estimated prevalence of poor access and the reasons for not seeking the services a second time. Access-related data may be subject to recall bias from the respondent resident. On the other hand, the inadequate search for secondary and tertiary health services for issues pertaining to primary care could also result in a report of lack of access. For instance, a significant part of the demand for emergency services could be treated in primary care, but, for several reasons, the population seeks services considered specialized first, rather than going directly to a Basic Health Unit (*Unidade Básica de Saúde* – UBS). These situations may have caused an overestimation of the prevalence of lack of access. Nevertheless, this possible bias of the study is minimized by the high proportion of search for a UBS among individuals who declared a lack of access.

However, the data reported on the access to a range of health services are valid and useful because the results of this investigation can contribute to comparing the Brazilian scenario with that of other countries, in addition to the differential of its national representativeness, providing valuable information to support the organization of public policies aimed at mitigating the problem identified herein.

The findings of this study indicate that poor access to health services was more prevalent in the North and Northeast regions, among people with poor or very poor self-rated health, and those who do not have access to private health insurance. In contrast, multimorbidity and higher education were factors associated with a lower prevalence of the outcome. Our results reveal the need to improve the Brazilian health system to fix the inequities cited, as well as monitor this situation over the years with new population surveys in the country.

In general, this study corroborates the multidimensional understanding of access to health services and its relationship with the health and living conditions of the population. The universal access to these services depends on overcoming some obstacles; expanding the supply of services and professionals linked to SUS, the possibilities of access through care flows organized according to epidemiological, health, and social demands, and changing use patterns are among the main elements. We should also underline the historical challenges, including the public-private relationship in the provision of health services, the striking regional inequalities, and the underfunding.

Nonetheless, the analysis of access, supply, and use of health services needs to be complemented by assessments of the quality of care provided, which demands the investigation of other performance dimensions of the health care system, such as adequacy, continuity, acceptability, efficacy, efficiency, safety, and respect for the patient's rights.

REFERENCES

1. Sanchez RM, Ciconelli RM. Conceitos de acesso à saúde. Rev Panam Salud Publica 2012; 31(3): 60-8.
2. Botelho FC, França Junior I. Como a atenção primária à saúde pode fortalecer a alimentação adequada enquanto direito na América Latina? Rev Panam Salud Publica 2018; 42: e159. https://doi.org/10.26633/RPSP.2018.159
3. Assis MMA, Jesus WLA. Acesso aos serviços de saúde: abordagens, conceitos, políticas e modelo de análise. Ciênc Saúde Coletiva 2012; 17(11); 2865-75. http://doi.org/10.1590/S1413-81232012001100002
4. Álvares J, Guerra Junior AA, Araújo VE, Almeida AM, Dias CZ, Ascef BO, et al. Acesso aos medicamentos pelos usuários da atenção primária no Sistema Único de Saúde. Rev Saúde Pública 2017; 51(Supl. 2): 20s. http://doi.org/10.11606/s1518-8787.2017051007139
5. Pavão LB, Coeli CM, Lopes CS, Faerstein E, Werneck GL, Chor D. Uso de serviços de saúde segundo posição socioeconômica em trabalhadores de uma universidade pública. Rev Saúde Pública 2012; 46(1): 98-103. https://doi.org/10.1590/S0034-89102012005000002
6. Albuquerque MV, Viana ALA, Lima LD, Ferreira MP, Fusaro ER, Iozzi FL. Desigualdades regionais na saúde: mudanças observadas no Brasil de 2000 a 2016. Ciênc Saúde Coletiva 2017; 22(4): 1055-64. https://doi.org/10.1590/1413-81232017224.26862016
7. Gomes KDO, Reis EA, Guimarães MDC, Cherchiglia ML. Utilização de serviços de saúde por população quilombola do Sudoeste da Bahia, Brasil. Cad Saude Publica 2013; 29(9): 1829-42. https://doi.org/10.1590/0102-311X00151412
8. Macinko J, Dourado I, Guanais FC. Doenças Crônicas, Atenção Primária e Desempenho dos Sistemas de Saúde. Diagnósticos, instrumentos e intervenções. Nova York: Banco Interamericano de Desenvolvimento; 2011.
9. Cerqueira D, Ferreira H, Lima RS, Bueno S, Hanashiro O, Batista F, et al. Atlas da Violência 2016 [Internet]. IPEA: Brasília; 2016 [accessed on Mar. 1, 2019]. Available at: http://repositorio.ipea.gov.br/bitstream/11058/6529/1/Nota_n17_Atlas_Violencia.pdf
10. Arcaya MC, Arcaya AL, Subramanian SV. Inequalities in health: definitions, concepts, and theories. Glob Health Action 2015; 8(1): 27106. https://doi.org/10.3402/gha.v8.27106
11. Faerstein E, Chor D, Werneck GL, Lopes CS, Kaplan G. Race and perceived racism, education, and hypertension among Brazilian civil servants: the Pró-Saúde Study. Rev Bras Epidemiol 2014; 17(Supl. 2): 81-7. https://doi.org/10.1590/1809-4503201400060007
12. Souza-Júnior PRB, Freitas MPS, Antonaci GA, Szwarcwald CL. Desenho Epidemiologia e Serviços de Saúde, da amostra da Pesquisa Nacional de Saúde 2013. Epidemiol Serv Saúde 2015; 24(2): 207-16. https://doi.org/10.5123/S1679-49742015000200003
13. Instituto Brasileiro de Geografia e Estatística (IBGE). Pesquisa Nacional de Saúde 2013 - Percepção do estado de Saúde: estilos de vida e doenças crônicas [Internet]. Rio de Janeiro: IBGE; 2014 [accessed on Mar. 1, 2019]. Available at: https://biblioteca.ibge.gov.br/visualizacao/livros/liv94074.pdf
14. Damacena G, Szwarcwald CL, Malta DC, Souza Júnior PRB, Vieira MLFP, Pereira CA, et al. O processo de desenvolvimento da Pesquisa Nacional de Saúde no Brasil 2013. Epidemiol Serv Saúde 2015; 24(2): 197-206. https://doi.org/10.5123/S1679-49742015000200002
15. Associação Brasileira das Empresas de Pesquisa (ABEP). Alterações na aplicação do Critério Brasil [Internet]. Brasil: ABEP; 2018 [accessed on Oct. 30, 2018]. Available at: http://www.abep.org/criterio-brasil
16. Francisco PMSB, Donalisio MR, Barros MBDA, Cesar CLG, Carandina L, Goldbaum M. Medidas de associação em estudo transversal com delineamento complexo: razão de chances e razão de prevalência. Rev Bras Epidemiol 2008; 11(3): 347-55. https://doi.org/10.1590/S1415-790X2008000300002
17. Coutinho LMS, Scazufca M, Menezes PR. Métodos para estimar razão de prevalência em estudos de corte transversal. Rev Saúde Pública 2008; 42(6): 992-8. https://doi.org/10.1590/S0034-89102008000600003
18. Dilélio AS, Tomasi E, Thumé E, Silveira DS, Siqueira FCV, Piccini RX, et al. Lack of access and continuity of adult health care: a national population-based survey. Rev Saúde Pública 2015; 49: 31. https://doi.org/10.1590/S0034-8910.2015049005503
19. Jones AL, Cochran SD, Leibowitz A, Wells KB, Kominski G, Mays VM. Racial, Ethnic, and Nativity Differences in Mental Health Visits to Primary Care and Specialty Mental Health Providers: Analysis of the Medical Expenditures Panel Survey, 2010–2015. Healthcare 2018; 6(2): 29. https://doi.org/10.3390/healthcare6020029
20. Lopes CS, Hellwig N, Silva GA, Menezes PR. Inequities in access to depression treatment: results of the Brazilian National Health Survey - PNS. Int J Equity Health 2016; 15: 154. https://doi.org/10.1186/s12939-016-0446-1
21. Paradies Y, Truong M, Priest N. A Systematic Review of the Extentand Measurement of Health care Provider Racism. J Gen Intern Med 2014; 29: 364-87. https://doi.org/10.1007/s11606-013-2583-1

22. Almeida S. O que é racismo estrutural? Belo Horizonte: Letramento; 2018.
23. Saadi A, Himmelstein DU, Woolhandler S, Mejia NI. Racial disparities in neurologic health care access and utilization in the United States. Neurology 2017; 88(24): 2268-75. https://doi.org/10.1212/WNL.0000000000004025
24. Towne Jr. SD. Socioeconomic, geospatial, and geopolitical disparities in Access to healthcare in the US 2011–2015. Int J Environ Res Public Health 2017; 14(6): 573. https://doi.org/10.3390/ijerph14060573
25. Cabrera-Barona P, Blaschke T, Kienberger S. Explaining Accessibility and Satisfaction Related to Healthcare: A Mixed-Methods Approach. Soc Indic Res 2017; 133: 719-39. https://doi.org/10.1007/s11205-016-1371-9
26. Nunes BP, Thumé E, Tomasi E, Duro SMS, Facchini LA. Desigualdades socioeconômicas no acesso e qualidade da atenção nos serviços de saúde. Rev Saúde Pública 2014; 48(6); 968-76. https://doi.org/10.1590/S0034-8910.2014048005388
27. Augusto AO, Lima VLA, Sena LX, Silva AF, Gomes VR, Santos ACB. Mapeamento dos casos de violência contra a mulher na região metropolitana de Belém narrados pela mídia impressa do estado do Pará. Rev Para Med 2015; 29(2): 23-32.
28. Albuquerque MV, Viana ALA, Lima LD, Ferreira MP, Fusaro ER, Iozzi FL. Desigualdades regionais na saúde: mudanças observadas no Brasil de 2000 a 2016. Ciênc Saúde Coletiva 2017; 22(4): 1055-64. https://doi.org/10.1590/1413-81232017224.26862016
29. Instituto Brasileiro de Geografia e Estatística (IBGE). Síntese de indicadores sociais: uma análise das condições de vida da população brasileira. Rio de Janeiro: IBGE; 2016.
30. Instituto Brasileiro de Geografia e Estatística (IBGE). Censo demográfico 2010: Características da população e dos domicílios, resultados do universo. Rio de Janeiro: IBGE; 2011.
31. Instituto de Pesquisa Econômica Aplicada (IPEA). Retrato das desigualdades de gênero e raça. 4ª ed. Brasília: Ipea; 2011.
32. Dias OV, Araújo FF, Oliveira RM de, Chagas RB, Costa S de M. Acesso às consultas médicas nos serviços públicos de saúde. Rev Bras Med Fam Comunidade 2016; 11(38): 1-13. https://doi.org/10.5712/rbmfc11(38)1185
33. Malta DC, Santos MAS, Stopa SR, Vieira JEB, Melo EA, Reis AC. A Cobertura da Estratégia de Saúde da Família (ESF) no Brasil, segundo a Pesquisa Nacional de Saúde, 2013. Ciên Saúde Coletiva 2016; 21(2): 327-38. https://doi.org/10.1590/1413-81232015212.23602015
34. Medeiros SM, Silva LSR, Carneiro JA, Ramos GCF, Barbosa ATF, Caldeira AP. Fatores associados à autopercepção negativa da saúde entre idosos não institucionalizados de Montes Claros, Brasil. Ciênc Saúde Coletiva 2016; 21(11): 3377-86. https://doi.org/10.1590/1413-812320152111.18752015
35. Ho J, Kuluski K, Im J. "It's a fight to get any thing you need" — Accessing care in the community from the perspectives of people with multimorbidity. Health Expect 2017; 20(6): 1311-9. https://doi.org/10.1111/hex.12571
36. Viacava F, Bellido JG. Condições de saúde, acesso a serviços e fontes de pagamento, segundo inquéritos domiciliares. Ciênc Saúde Coletiva 2016; 21(2): 351-70. https://doi.org/10.1590/1413-81232015212.19422015
37. Viacava F, Oliveira RAD, Carvalho CC, Laguardia J, Bellido JG. SUS: oferta, acesso e utilização de serviços de saúde nos últimos 30 anos. Ciênc Saúde Coletiva 2018; 23(6): 1751-62. https://doi.org/10.1590/1413-81232018236.06022018
38. Stuber J, Galea S, Link BG. Smoking and the emergence of a stigmatized social status. Soc Sci Med 2008; 67(3): 420-30. https://doi.org/10.1016/j.socscimed.2008.03.010
39. Spink MJP. Ser fumante em um mundo antitabaco: reflexões sobre riscos e exclusão social. Saúde Soc 2010; 19(3): 481-96. https://doi.org/10.1590/S0104-12902010000300002
40. Nguyen PH, Kim SS, Nguyen TT, Tran LM, Hajeebhoy N, Frongillo EA, et al. Supply- and Demand-Side Factors Influencing Utilization of Infant and Young Child Feeding Counselling Services in Viet Nam. PLoS One 2016; 11(3): e0151358. https://doi.org/10.1371/journal.pone.0151358

Received on: 05/05/2020
Revised on: 08/08/2020
Accepted on: 08/11/2020

Authors' contributions: Dantas MNP, Souza DLB, and Barbosa IS designed the study, analyzed and interpreted the results, drafted the first version of the manuscript, and critically reviewed its content. Souza AMG, Souza TA, and Aiquoc KM analyzed and interpreted the data, drafted the first version of the manuscript, and critically reviewed its content. All authors have approved the final version of the manuscript and are responsible for its content, ensuring its accuracy and integrity.