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Reduction of inequalities in medical visits in Brazil: analysis of the Northeastern and Southeastern regions between 2003 and 2008

Redução das desigualdades no uso de consultas médicas no Brasil: análise das regiões Nordeste e Sudeste entre 2003 e 2008

Paulo Sérgio Cardoso da Silva[I], Antonio Fernando Boing[I], Karen Glazer Peres[I,II]

ABSTRACT: *Objective:* To analyze the socioeconomic inequalities in medical visits (MV) in the past year in Brazil. *Methods:* Data from adults aged ≥ 20 years old who participated in the Brazilian National Household Surveys and living in the Northeastern (2003; n = 75,652 and 2008, n = 79,779) and Southeastern (2003; n = 76,029 and 2008; n = 79,356) regions were analyzed according to MV. We compared MVs according to demographic and health variables in the first (D1) and last (D10) *per capita* family income deciles. All analyses considered the complex cluster design. *Results:* The proportion of people who had MV during this period increased in the Northeastern (from 61.2 to 66.9%) and the Southeastern (from 67.9 to 73.5%) regions. The absolute difference (AD) in the use of MV, according to D1 and D10 in this period, was equal to 6.4 percentage points (pp) in the Northeastern and 4.2 pp in the Southeastern regions. Significant reduction in inequalities was observed among men without chronic diseases, in those who had a positive perception of their health, and among those without health insurance which included MV. The Southeastern region has also showed significant reduction among those with chronic disease (8 pp) and with negative health self-perception (6 pp). *Conclusion:* The increasing number of MVs was found in Brazil. However, persistent inequalities were observed between the poorest and the richest, higher in the Northeastern than in the Southeastern region. More effective and equitable policies to reduce health inequalities should be adopted in Brazil.

Keywords: Health services. Health inequalities. Socioeconomic factors. Epidemiology. Brazil. Medical consultation.

[I]Graduate Program in Collective Health, Public Health Department, *Universidade Federal de Santa Catarina* – Florianópolis (SC), Brazil.
[II]Australian Research Centre for Population Oral Health, School of Dentistry, The University of Adelaide – Adelaide, Australia.
Corresponding author: Karen Glazer Peres. Universidade Federal de Santa Catarina. Campus Universitário, Trindade, CEP: 88010-970, Florianópolis, SC, Brasil. E-mail: karen.peres@ufsc.br

RESUMO: *Objetivo:* Analisar as desigualdades socioeconômicas na utilização de consultas médicas (CM) no último ano no Brasil. *Métodos:* Dados da Pesquisa Nacional por Amostra de Domicílios (≥ 20 anos de idade) das Regiões Nordeste (2003, n = 75.652 e 2008, n = 79.779) e Sudeste (2003, n = 76.029 e 2008, n = 79.356) foram analisados segundo CM. Compararam-se as prevalências de CM segundo as variáveis exploratórias demográficas e de saúde no primeiro (D1) e último (D10) decil de renda familiar *per capita*. As análises consideraram o desenho amostral complexo. *Resultados:* A proporção de pessoas com CM aumentou no período na Região Nordeste (61,2 para 66,9%) e Sudeste (67,9 para 73,5%). A diferença absoluta de CM, segundo D1 e D10 no período, foi de 6,4 pontos percentuais (pp) no Nordeste e 4,2 pp no Sudeste. Houve importante redução das desigualdades entre os homens; naqueles sem doenças crônicas; naqueles que tinham uma percepção positiva da sua saúde e naqueles sem plano de saúde com direito a CM. A Região Sudeste ainda apresentou redução entre aqueles com apenas uma morbidade autorreferida (8 pp) e com percepção negativa da saúde (6 pp). *Conclusão:* Houve aumento de CM no Brasil. Observa-se ainda persistente desigualdade entre os mais pobres e os mais ricos, maior no Nordeste do que no Sudeste. Políticas para a redução da desigualdade em saúde mais eficazes e equânimes devem ser adotadas no Brasil.

Palavras-chave: Serviços de saúde. Desigualdades em saúde. Fatores socioeconômicos. Epidemiologia. Brasil. Consulta médica.

INTRODUCTION

Based on the Brazilian Constitution of 1988, health began to be recognized in the country as a right to all citizens and a duty of the state. In the early 1990s, with the regulation of health actions and services by laws n. 8.080/90 and 8.142/90, a legal base was created for the principles that structure the universal and redistributive model of the Unified Health System (SUS)[1].

However, even if SUS was built on healthcare equity, in the national context it is possible to observe important differences regarding the access and the use of health services. Among the main determining variables, it is important to emphasize the socioeconomic profile of people, their health-related characteristics and the demand for care, as well as the structure of the offered services[2-4]. Many studies show that women use health services more often, as well as older people and people with chronic conditions[5,6].

With regard to socioeconomic inequalities, Travassos et al.[7] identified, in the 1990s, more medical visits in Brazil among the richer population, and there was only

a slight reduction of such a difference between 1989 and 1996/7. By analyzing the outcome between 1998 and 2008, Viacava[8] identified that all Brazilian regions presented increasing percentage of financial care provided by SUS; the Northeastern region was the most prevalent one (68.6%), and the Southeastern region, the least prevalent one (49.9%) in 2008[8]. However, the variations in socioeconomic inequalities concerning medical visits were not analyzed in the regions in the context of amplified access.

Marked by major social inequalities, the National Commission on Social Determinants of Health recommends the encouragement for the production of evidence regarding the magnitude of such inequalities in Brazil, as well as the social determinants of health, in order to subsidize the construction of public policies addressed to the reduction of social and health-related inequalities in Brazil. The association between the use of health services and other demographic, socioeconomic and behavioral variables needs to be further analyzed so that public policies can be better oriented[6].

The Brazilian National Household Survey (PNAD) between 1998 and 2008 included, every 5 years, a set of questions related to health, which is added to the socioeconomic questions that are regularly collected. This instrument enables the acquirement of information about perceived morbidity, access to health services, plan coverage, use of health services, among others that are extremely relevant. Besides, its sampling process allows comparing the results between the years when it was conducted[9].

By considering that Brazil presents inequalities concerning the use of health services in its macro-regions, and due to the fact that the Northeastern and the Southeastern regions presented, throughout its history, remarkable inequality in terms of use of health services[7,10], knowing the magnitude of these inequalities can help to create more efficient and equal public policies, favoring the reduction of health inequalities in Brazil. The relevance of the analysis of medical visits stands out, since they are characterized as the main demand of the health system, overloading it in terms of time, due to the higher demand of services, and also financially, because of the higher number of requests for complementary examinations[11].

Being aware of the magnitude and the variation of inequalities concerning the use of medical visits is essential to plan and organize health services[12]. The constant control of the variables related to the use of health services allows health policies to be better oriented in search for universality and equality[5].

The objective of this study was to analyze the magnitude of socioeconomic inequalities in medical visits in the Southeastern and Northeastern regions of Brazil, from 2003 to 2008.

METHODS

The study was conducted based on data from PNAD 2003 and 2008, carried out by the Brazilian Institute of Geography and Statistics (IBGE).

PNAD 2003 was performed in a total of 133,255 households, and 384,834 people participated[13]. In 2008, 150,591 household units were surveyed, distributed in all Units of the Federation, accounting for a total of 391,868 people. PNAD counts on a probability sample of households that allows the inference of its results all over Brazil. The sampling process is conducted in several stages, and the cities are considered as primary units; the census sectors are considered as secondary units; and the households are considered as tertiary units. The survey is applied to all people living in the surveyed households. The methodology of PNAD predicts the use of substitute respondents. Additional details about the PNAD sample can be consulted in publications from IBGE[9]. For this study, data from PNAD 2003 and 2008 were used referring to adults (≥ 20 years old or more) from the Northeastern (2003, n = 75,652 and 2008, n = 79,779) and Southeastern regions (2003, n = 76,029 and 2008, n = 79,356).

The analyzed outcome was the use of medical visits, and this information was obtained by the question "Did you see a doctor in the past 12 months?". The exploratory variables were gender (male; female), age in years per age group (20 to 29; 30 to 39; 40 to 49; 50 to 59 and 60 years old or more), *per capita* family income decile, self-reported morbidity (no diseases; one; two or more), health self-perception (positive; negative) and having a health insurance plan giving access to medical visits (yes; no). The *per capita* family income variable was built based on the ratio between monthly family income for all of the household units (which excludes pensioners, domestic workers and their relatives), being afterwards classified in income deciles. Missing values were excluded for not being representative (< 0.01% of the sample).

For the analysis of socioeconomic inequalities, the associations of the outcome with the other variables were tested, and the prevalence of the outcome in the first (D1) and the last (d10) *per capita* family income decile was estimated for both years (2003 and 2008). The ratio of the proportions of individuals who visited a doctor in the past 12 months was calculated between the richest (D10) and the poorest (D1) people in the Northeastern and Southeastern regions and in both periods (2003 and 2008). The descriptive statistics about the use of medical visits in Brazil and other variables considered the 95% confidence interval (95%CI). In order to test the significance of the sample, the χ^2 test was used. The investigated subsamples were large enough to obtain 80% power or more to test the associations between the independent variables and the outcome, by considering the exposure frequency between 38.9 and 86.1%, alpha error of 5% and minimum prevalence ratio of 1.2.

The statistical analyses were conducted in the software STATA 11.0, considering the individual sample weights in the data base of both PNADs (2003 and 2008), and the complex sampling plan of the studies. Since it is a public data base, managed and executed by IBGE, and because the data are available without the identification

of the participants, the proposal of this study was not submitted to the Research Ethics Committee.

RESULTS

In the Northeastern Region, it was possible to observe the increasing proportion of people who visited a doctor in the past year, ranging from 61.2% (2003) to 66.9% (2008). There was also a higher prevalence of medical visits among women and older people, both in 2003 and 2008. The prevalence among those who belong to the richest decile was higher than among the ones belonging to the poorest decile in both years; however, the increase was significant for those belonging to the poorest decile (54.7 to 60.8%), and because of this fact, the inequality between the deciles from 2003 and 2008 reduced. The higher the number of chronic conditions, the higher the attendance to the doctor. Individuals with negative health self-perception presented higher prevalence of medical visits in both investigated years, when compared to those with positive health self-perception. The prevalence of medical visits from 2003 to 2008 changed little among those with health insurance plans; however, it was more expressive for those without a health insurance plan (Table 1).

In the Southeastern region, the proportion of people who visited a doctor in the past year also increased, ranging from 5.6 percentage points (pp), from 2003 to 2008. Besides, as well as in the Northeastern region, women visited the doctor more often, as well as older and richer people in both analyzed periods. By analyzing the poorest decile, it was possible to observe increasing prevalence of medical appointments from 2003 to 2008 (61.5 to 68.6%), which contributed with the reduced inequality between the richest and the poorest. The ones with two or more chronic conditions also visited doctors more often than people with only one chronic disease. There was increasing prevalence of medical visits for people without health insurance plans (6.3 pp) and the ones with health insurance plan with access to medical visits (2.1 pp) in the analyzed periods (Table 2).

Brazil presented reduced inequality in the prevalence of medical visits from 2003 to 2008, therefore, the relationship between the poorest and the richest decreased 3.7 pp in the analyzed period. When the Northeastern region was analyzed, it was possible to observe reduced inequality in the prevalence of medical visits between the poorest (D1) and the richest (D10) from 2003 to 2008, of 6.4 pp, while in the Southeastern region this reduction was lower (4.2 pp) (Figure 1).

Table 3 presents the prevalence of medical visits according to the first and the tenth income decile and the independent variables of the Northeastern region. When the prevalence ratio of medical visits among the poorest and the richest men (D10/D1) was

analyzed, there was a reduction of about 13.9% in inequality (1.87 in 2003 to 1.61 in 2008). Among women, such a reduction was of approximately 9% in the same period. The prevalence ratio of medical visits between the richest (D10) and the poorest (D1) decreased in all age groups, from 2003 to 2008. A higher prevalence was observed in terms of medical visits among those with two or more chronic conditions. For those without chronic diseases, there was a reduction in terms of inequality of about 15.6% (1.67 in 2003 to 1.41 in 2008). The ratio between the poorest and the richest (D10/D1) decreased approximately 15.4% among those who had a positive perception of health (D10/D1 of 1.75 in 2003, and 1.48 in 2008). Among those without health insurance, it was possible to observe increasing prevalence of medical visits among the poorest (54.6%

Table 1. Prevalence and distribution of variables related to medical visits in the past year in the Northeast. Brazil, 2003 (n = 75,652) and 2008 (n = 79,779).

Variables	2003		2008	
	Total	Visited a doctor in the past 12 months	Total	Visited a doctor in the past 12 months
	n (%)	% (95%CI)	n (%)	% (95%CI)
Total Northeastern sample	75,652	61.2 (60.2 – 62.2)	79,779	66.9 (66.0 – 67.7)
Gender*				
Male	35,718 (47.2)	47.6 (46.5 – 48.8)	37,502 (47.0)	54.2 (53.2 – 55.2)
Female	39,934 (52.8)	73.5 (72.6 – 74.5)	42,277 (53.0)	78.3 (77.5 – 79.2)
Age (years)*				
20 – 29	23,349 (30.9)	54.7 (53.5 – 55.9)	22,918 (28.7)	61.0 (59.9 – 62.1)
30 – 39	18,175 (24.0)	58.8 (57.5 – 60.1)	18,356 (23.0)	64.7 (63.6 – 65.8)
40 – 49	13,612 (18.0)	62.3 (61.0 – 63.5)	15,333 (19.2)	66.9 (65.8 – 68.0)
50 – 59	9,170 (12.1)	66.3 (64.9 – 67.7)	10,645 (13.3)	71.2 (70.0 – 72.4)
≥ 60	11,324 (15.0)	72.2 (70.8 – 73.5)	12,527 (15.7)	76.7 (75.7 – 77.7)
Income*				
1st decile	15,051 (20.4)	54.7 (53.3 – 56.0)	14,188 (18.2)	60.8 (59.5 – 62.1)
10th decile	3,791 (5.1)	82.0 (80.3 – 83.7)	4,534 (5.8)	81.7 (80.2 – 83.2)
Self-reported morbidity*				
No diseases	47,053 (62.2)	50.9 (49.7 – 52.0)	49,090 (61.5)	57.5 (56.5 – 58.5)
1 disease	16,032 (21.2)	72.7 (71.7 – 73.8)	17,579 (22.0)	76.9 (75.9 – 77.9)
≥ 2 diseases	12,556 (16.6)	84.9 (83.6 – 86.2)	13,110 (16.4)	88.3 (87.5 – 89.0)
Health self-perception*				
Positive	50,052 (66.2)	53.5 (52.2 – 54.7)	52,580 (65.9)	60.3 (59.2 – 61.3)
Negative	25,595 (33.8)	75.4 (74.5 – 76.2)	27,199 (34.1)	78.9 (78.0 – 79.7)
Health insurance plan giving access to medical visits*				
No	68,045 (89.9)	59.2 (58.2 – 60.2)	70,943 (88.9)	65.2 (64.3 – 66.0)
Yes	7,604 (10.1)	83.4 (82.3 – 84.5)	8,836 (11.1)	84.2 (83.2 – 85.1)

*$p < 0.001$ (χ^2 test for each year).
Source: Brazilian Institute of Geography and Statistics, 2003 and 2008[9,13].

in 2003 to 60.7% in 2008), which explains the decreasing ratio between groups (D10/D1) of about 10.1% in the analyzed period (from 1.39, in 2003, to 1.25, in 2008) (Table 3).

In the Southeast, there was increasing prevalence of medical visits in all of the categories. The ratio between the richest and the poorest (D10/D1) decreased from 2003 to 2008 in both genders, being higher among men (10.1%) than women (4%). For those aged less than 50 years old, it was possible to observe decreasing ratio between the richest and the poorest (D10/D1) from 2003 to 2008 (9.1, 4.8 and 12.2%, respectively). Both for the poorest (D1) and the richest (D10), there was increasing prevalence in medical visits in all of the categories involving the number of chronic diseases, except for the poorest participants (D1) with two or more chronic diseases,

Table 2. Prevalence and distribution of variables related to medical visits in the past year in the Southeast. Brazil, 2003 (n = 76,029) and 2008 (n = 79,356).

Variables	2003		2008	
	Total	Visited a doctor in the past 12 months	Total	Visited a doctor in the past 12 months
	n (%)	% (95%CI)	n (%)	% (95%CI)
Total Southeastern sample	76,029	67.9 (67.2 – 68.5)	79,356	73.5 (73.0 – 74.1)
Gender*				
Male	35,787 (47.1)	56.2 (55.4 – 57.0)	37,264 (47.0)	62.3 (61.6 – 63.1)
Female	40,242 (52.9)	78.2 (77.6 – 78.9)	42,092 (53.0)	83.4 (82.9 – 84.0)
Age (years)*				
20 – 29	20,112 (26.5)	58.7 (57.8 – 59.7)	19,200 (24.2)	65.1 (64.1 – 66.0)
30 – 39	17,456 (23.0)	64.7 (63.7 – 65.7)	17,021 (21.5)	70.7 (69.8 – 71.6)
40 – 49	15,693 (20.7)	69.0 (68.1 – 69.9)	16,353 (20.6)	74.0 (73.2 – 74.8)
50 – 59	10,696 (14.1)	73.5 (72.5 – 74.5)	12,581 (15.9)	77.5 (76.6 – 78.4)
≥ 60	12,047 (15.9)	81.2 (80.4 – 82.0)	14,201 (17.9)	84.3 (83.5 – 85.0)
Income*				
1st decile	4,463 (6.07)	61.5 (59.8 – 63.3)	3,711 (4.91)	68.6 (66.7 – 70.4)
10th decile	9,435 (12.84)	78.3 (77.1 – 79.4)	9,421 (12.47)	81.2 (80.2 – 82.1)
Self-reported morbidity*				
No diseases	43,497 (57.2)	56.8 (55.9 – 57.6)	44,388 (55.9)	63.6 (62.8 – 64.3)
1 disease	17,462 (23.0)	76.6 (75.9 – 77.4)	18,480 (23.3)	81.7 (81.0 – 82.4)
≥ 2 diseases	15,035 (19.8)	90.0 (89.5 – 90.6)	16,488 (20.8)	91.3 (90.7 – 91.8)
Health self-perception*				
Positive	57,047 (75.0)	62.2 (61.5 – 63.0)	58,689 (74.0)	68.8 (68.1 – 69.4)
Negative	18,976 (25.0)	85.0 (84.4 – 85.7)	20,667 (26.0)	87.3 (86.7 – 87.9)
Health insurance plan giving access to medical visits*				
No	60,536 (79.6)	64.9 (64.2 – 65.6)	61,385 (77.4)	71.2 (70.6 – 71.9)
Yes	15,490 (20.4)	78.9 (78.1 – 79.8)	17,971 (22.7)	81.0 (80.3 – 81.8)

*p < 0.001 (χ^2 test for each year).
Source: Brazilian Institute of Geography and Statistics, 2003 and 2008[9,13].
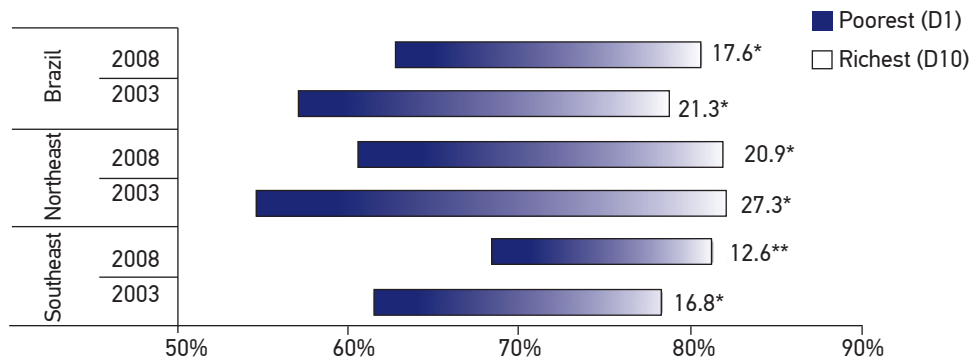
Note: values beside the horizontal bars represent the difference between D1 and D10.
*p < 0.001; **p = 0.001 (χ^2 test).
Source: Brazilian Institute of Geography and Statistics, 2003 and 2008[9,13].

Figure 1. Proportion of people who visited a doctor in theplast year, with amplitude of variation between the richest 10% and poorest 10% in the Northeastern and Southeastern regions of Brazil in 2003 and 2008.

Table 3. Proportion of people who visited a doctor in the past year, according to the 1st and 10th deciles of per capita family income and related variables, in Northeastern Brazil, in 2003 and 2008.

Variable	2003				2008			
	Prevalence			Ratio	Prevalence			Ratio
	All	D1	D10	D10/D1*	All	D1	D10	D10/D1*
Total sample	61.2	54.7	82.0	1.50	66.9	60.8	81.7	1.34
Gender								
Male	47.6	38.9	72.9	1.87	54.2	45.3	73.0	1.61
Female	73.5	68.0	90.3	1.33	78.3	74.1	89.7	1.21
Age (years)								
20 – 29	54.7	53.6	73.3	1.37	61.0	59.9	77.6	1.30
30 – 39	58.8	53.4	80.3	1.50	64.7	60.9	78.0	1.28
40 – 49	62.3	55.3	83.7	1.51	66.9	59.8	82.1	1.37
50 – 59	66.3	58.2	88.0	1.51	71.2	63.6	81.8	1.29
≥ 60	72.2	63.2	86.5	1.37	76.7	65.7	89.2	1.36
Self-reported morbidity								
No diseases	50.9	46.0	76.9	1.67	57.5	53.1	75.1	1.41
1 disease	72.7	70.7	84.9	1.20	76.9	72.8	88.3	1.21
≥ 2 diseases	84.9	80.2	92.2	1.15	88.3	84.9	93.1	1.10
Health self-perception								
Positive	53.5	46.1	80.5	1.75	60.3	53.9	79.6	1.48
Negative	75.4	71.2	88.2	1.24	78.9	74.4	90.6	1.22
Health insurance plan giving access to medical visits*								
No	59.2	54.6	75.9	1.39	65.2	60.7	76.0	1.25
Yes	83.4	75.7	88.3	1.17	84.2	77.7	87.8	1.13

*p < 0.001 (χ^2 test for each year).
Source: Brazilian Institute of Geography and Statistics, 2003 and 2008[9,13].

among whom the prevalence reduced 1.8 pp from 2003 to 2008. For those without chronic conditions and the ones with one chronic disease, the ratio D10/D1 reduced (8.2 and 6.6%, respectively) in the analyzed period. When the ratio (D10/D1) is considered, it is possible to observe the reduced inequality from 2003 to 2008, both for those with positive (about 8.6%) and negative health self-perception (about 5%). Regardless of the income category and of having a health insurance plan, there was an increasing prevalence of medical visits from 2003 to 2008. The inequality between D10 and D1 reduced with regard to the presence of a health insurance plan (1.22 in 2003 to 1.15 in 2008) (Table 4).

Table 4. Proportion of people who visited a doctor in the past year, according to the 1st and 10th deciles of per capita family income and related variables, in Southeastern Brazil, in 2003 and 2008.

Variable	2003				2008			
	Prevalence			Ratio	Prevalence			Ratio
	All	D1	D10	D10/D1*	All	D1	D10	D10/D1*
Total Sample	67.9	61.5	78.3	1.27	73.5	68.6	81.2	1.18
Gender								
Male	56.2	49.4	68.5	1.39	62.3	56.7	71.0	1.25
Female	78.2	70.1	87.0	1.24	83.4	76.4	90.5	1.19
Age (years)								
20 – 29	58.7	58.7	70.9	1.21	65.1	65.6	72.5	1.10
30 – 39	64.7	60.5	75.4	1.25	70.7	66.8	79.4	1.19
40 – 49	69.0	61.3	80.0	1.31	74.0	70.8	81.2	1.15
50 – 59	73.5	69.0	78.9	1.14	77.5	71.6	82.3	1.15
≥ 60	81.2	79.3	86.4	1.09	84.3	79.6	89.0	1.12
Self-reported morbidity								
No diseases	56.8	52.3	70.2	1.34	63.6	60.0	73.6	1.23
1 disease	76.6	69.9	85.0	1.21	81.7	78.0	87.8	1.13
≥ 2 diseases	90.0	86.1	93.6	1.09	91.3	84.3	94.1	1.12
Health self-perception								
Positive	62.2	54.7	75.9	1.39	68.8	62.2	79.2	1.27
Negative	85.0	77.1	93.5	1.21	87.3	80.8	92.8	1.15
Health insurance plan giving access to medical visits*								
No	64.9	61.1	74.7	1.22	71.2	67.9	78.0	1.15
Yes	78.9	81.1	81.7	1.01	81.0	87.4	84.1	0.96

*p < 0.001 (χ^2 test for each year).
Source: Brazilian Institute of Geography and Statistics, 2003 and 2008[9,13].

DISCUSSION

The ratio between the richest and the poorest, when analyzing medical visits, was higher in the Northeastern region. This difference decreased from 2003 to 2008, which suggests a reduction in socioeconomic inequalities; however, the value was much higher than the national average. The Southeastern region, on the other hand, had lower amplitude in comparison to the national average, and much lower to that found in the Northeastern region in both years, thus reflecting lower levels of inequalities. It was possible to observe reduced inequality between the richest and the poorest in both regions, especially because the prevalence was maintained among the richest and due to the increasing prevalence among the poorest in the analyzed periods. In a study based on PNAD 2003, it was observed that the Northeastern region had one of the largest proportions of people assisted by SUS in the two weeks prior to the study — much higher than the national average — and the lowest proportions of health services outside of SUS, among the other macro-regions. In the Southeastern region, this relationship was more balanced, even if the health services provided by SUS have been more frequent. The same study also showed that, among the users of SUS, the *per capita* family income did not influence the prevalence rates, while for those who were not users of SUS, having higher income meant the higher prevalence of service use[4]. Capilheira and Santos[11] showed that those who belonged to classes A and B visited a doctor 13% more often than the ones belonging to classes D and E. Another study demonstrated that the prevalence of health service use was of 26.7% among the richest, against 15.1% among the poorest. After the stratification as being a SUS user or not, it was possible to observe higher prevalence among the poorest for SUS users, and a higher prevalence among the richest for non-users[4]. Goldbaum et al.[3] found similar results in their study.

Both in the Northeastern and in the Southeastern region, it was possible to observe a higher prevalence of medical visits among women, older people, richer people, those with more chronic conditions, with negative health self-perception and with a health insurance plan that gives access to medical visits, thus corroborating the findings of other studies[3,4,14-19]. Still, the inequality among men and poorer women decreased when compared to richer people in both assessed macro-regions. A study by Giatti and Barreto[19] showed increasing prevalence of medical visits among men from 1998 to 2008, and this increase was higher among unemployed people (23.2%) when compared to workers without social security (17.9%).

One finding that needs to be emphasized was that, in the Southeastern region, the poorest people with two or more chronic diseases presented decreasing prevalence of medical visits from 2003 to 2008, and the richest ones in this same group presented

increasing prevalence. This situation causes problems, once individuals with more chronic conditions and lower income are those who mostly depend on public health services[5,8,15].

In both analyzed regions, there was an increasing prevalence of medical visits among the poorest, for those with a positive and a negative health perception, from 2003 to 2008. Bastos et al.[6] assessed the prevalence of medical visits in the public health service and observed that, among men who had a negative health perception, the prevalence of medical visits was 13% higher in comparison to those with excellent or very good health self-perception. Among women, this value was of 26%. Another study showed that those who considered their health as being poor/ regular visited doctors 2.96 times more often than the ones with excellent health[14]. Capilheira and Santos[11] showed 33% more prevalence of medical visits among the ones who considered their health as being regular or poor, in comparison to those who considered their health to be excellent or very good. With the amplification of the Family Health Program (PSF), health services began to improve considerably in terms of access and use in different groups, also showing superior treatment in mostly excluded strata[20].

This study verified that individuals without health insurance with access to medical appointments presented increasing prevalence of medical visits in both regions in the analyzed period, even though they attend the doctor's office less often than those with health insurance plans. With regard to health plans, the National Agency of Supplementary Health[21] states that 13.57% of the Northeastern region was insured in 2012, increasing 24.72% from 2010 to 2012. As to the Southeastern region, in 2012, 41.39% of its population was insured, increasing 4.97% from 2010 to 2012. A study showed that 36.9% of those with private health insurance and no chronic diseases visited a doctor in the past 12 months, while the prevalence for the ones with private health insurance plan and chronic diseases was of 11.4%[6]. Another study identified 3.3 times more chances of visiting a doctor in the past 12 months among users of SUS, ad 6 times more chances among people with health insurance plans, both compared to those who financed their own appointments[19].

By relating the concentration of health insurance plans among the regions, a national study showed a major difference between the regions of Brazil, and the coverage of the supplementary service was larger in the South and the Southeast[9]. This difference impacts directly on the ratio of SUS users in relation to supplementary health; therefore, in the Southeast region, while that ratio is 1:1, in the Northeastern region it reaches the proportion of 2 SUS appointments for 1 visit in the supplementary system[4].

CONCLUSION

The prevalence of medical visits increased and the inequality between the richest and the poorest decreased in both macro-regions analyzed from 2003 to 2008. Even though the Northeastern region still presents important differences concerning medical visits among the richest and the poorest, the decreasing inequality was more present in this region when compared to the Southeast.

The action of measuring socioeconomic inequality levels in terms of medical visits has been very used in national analyses[6-8,10,11]. One of the hypotheses for the expressive reduction in the levels of inequality in terms of health in Brazil, in the past few years, is the PSF adopted by the Federal Government. Created in 1994, PSF has the objective of reorganizing basic health care in the country[22], but in 2003, with the Program of Expansion and Consolidation of the Family Health Strategy (PROESF), the access to health services was widely spread throughout the Brazilian cities[20]. The approximate coverage was, in 2000, of 20.6% of the Northeastern population, increasing to 55% in 2004. In 2004, the Southeast presented 30% of coverage[23]. Another hypothesis that cannot be ruled out is the possibility of the increasing search for preventive medical visits, which, in the long term, could lead to a reduced prevalence of chronic degenerative conditions.

Even though the health-related inequalities are decreasing, they are still unacceptable, surrounded by relationships in which inequity is strongly present. According to the National Commission on Social Determinants of Health, inequities should be remedied by specific public policies that promote education, income redistribution and increasing social security[24]. These policies should increase the average of health service use in regions whose rates are below the national mean, thus ensuring an equal distribution, and also prioritizing the social distribution in regions with good access to services[9]. Recent studies have been showing that the increasing number of initiatives such as the Family Health Strategy seem to favor the access and the consequent use of health services of the population[4,6]. Since this is a descriptive study, its role is that of considering hypotheses about the profile of the user who visits a doctor in Brazil, and its limiting factor is the lack of control of potential confounding factors. However, the construction of public policies to fight health-related inequalities in Brazil needs scientific evidence, therefore it is essential that further studies can approach this theme and clarify the relationship of society and health services in the different socioeconomic macro-regions and dimensions, thus enabling the control of changes and policies adopted in the country.

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