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# Medication use by the "quilombola" population: a survey in Southwestern Bahia, Brazil

# ABSTRACT

**OBJECTIVE:** To characterize the medication use by the *quilombola* population.

**METHODS:** A population-based cross-sectional study was conducted with 797 adult *quilombola* in Vitória da Conquista, BA, Northeastern Brazil, in 2011. Analysis of variance was used to compare means of drugs by subject, according to demographic, socioeconomic and health-related behavior variables. Prevalence, prevalence ratios and their 95% confidence intervals were estimated. Multivariate analysis was carried out using Poisson regression with robust variance.

**RESULTS:** The most widely consumed drugs by the population were those for the cardiovascular and nervous systems. Prevalence of medication use was 41.9%, significantly higher among women (50.3%) than men (31.9%). After adjusted analysis, medication use was associated with being female gender, being aged 60 or older, higher economic level, worse self-rated health, greater number of self-reported diseases and number of medical appointments.

**CONCLUSIONS:** Strategies to improve rational drug use should preferentially focus on women and older adults. Thus, special attention should be given to promote rational prescription in everyday health services.

**DESCRIPTORS:** African Continental Ancestry Group. Drug Utilization. Socioeconomic Factors. Risk Groups. Health Vulnerability. Ethnicity and Health. Cross-Sectional Studies.

## **INTRODUCTION**

Medications are important therapeutic instruments used in the disease/health process. They are among the most commonly used interventions and of great value in treating diseases, increasing survival and improving quality of life.<sup>6</sup> Their use is influenced by demographic structure and socio-economic and cultural factors.<sup>2-6,10-12</sup> The use of prescription and non-prescription medications is greater among women and older people, making them more susceptible to drug interactions and inappropriate use.<sup>3,10-12</sup> Most Brazilian studies on this topic have been carried out in the South and Southeast of the country, <sup>5-8,10-12</sup> in urban areas<sup>1,2,4,5,7,8</sup> and limited to a specific age group.<sup>4,6,8,10-12</sup>

In the literature available there is a lack of epidemiological studies that characterize the situation and use of medications in specific populations in rural areas and in other regions of Brazil, especially in the Northeast. There are different patterns of medication use, which change over time and according to changes in the profile of diseases and in health policies. Regular local investigations are needed, which enable data on medication use to be identified, monitored and produced for specific populations.

Obtaining information on medication use in the *quilombola* population is important in identifying the problems that exist in this area and factors associated with their use. This population lives in a context characterized by exclusion, by denial of their natural right to belong and, as they are mainly located in rural areas, by geographical difficulty.<sup>9,15</sup> This context determines specific conditions of vulnerability and inequalities in health care and subsidized the development and implementation of specific affirmative policies for the black and *quilombola* communities.<sup>a,b,c</sup>

This study aimed to describe the use of medications by the population of *quilombola* communities.

# METHODS

This was a cross-sectional population based study using data from the COMQUISTA project (*Quilombola* Communities from Vitória da Conquista: Evaluation of Living conditions – *Comunidades Quilombolas de Vitória*  *da Conquista: Avaliação de Condicionantes de Saúde*), in Vitória da Conquista, BA, Northeastern Brazil, in 2011.<sup>d</sup>

The 797 participants were selected using probabilistic two-stage sampling: i) proportional division between the five districts that contain *quilombola* communities, according to the population and selection of each community, chosen through simple random selection; ii) random selection of residences according to the proportional distribution per district. Residents aged 18 and over in the selected residences were invited to take part in the research.

When calculating the sample size, the following were considered: an estimated prevalence of 50.0% given the heterogeneity of the events measured, accuracy of 5%, 95% confidence interval (95%CI) and a design effect of 2. An extra 30.0% was added to the number obtained, to cover losses, producing a sample size of 884 individuals. Details of the survey's sampling process can be found in another publication.<sup>d</sup> The losses encountered (15.5%) were smaller than forecast in the beginning of the study, but significantly higher among males and younger individuals (18 to 34 years old). The main reasons for losses were not being in the residence and refusals.

The data were obtained using a semi-structured questionnaire adapted from the National Health Survey.<sup>e</sup> A pilot study was carried out to verify the recruitment dynamic, test the data collection instruments and confirm the viability of the investigation. Individual interviews were carried out at the homes and applied using laptop computers (HP Pocket Rx5710) between September and October 2011.

The dependent variable was medication use, obtained based on the following question: "In the last 15 days have you used any medications?", checked by the presentation of packaging or prescription. For those who responded yes, the name, pharmaceutical form and dosage of each were recorded, and whether or not they had been prescribed by a health care professional (doctor, dentist or nurse). The medications were classified according to the Anatomical Therapeutic Chemical (ATC) Classification System,<sup>f</sup> levels 1 (anatomical) and 2 (therapeutic). The

<sup>&</sup>lt;sup>a</sup> Ministério da Saúde. Portaria no 992/GM, de 13 de maio de 2009. Institui a Política Nacional de Saúde Integral da População Negra. *Diario Oficial Uniao*. 14 mai 2009 [cited 2012 Feb 25]. Available from: http://bvsms.saude.gov.br/bvs/saudelegis/gm/2009/prt0992\_13\_05\_2009.html <sup>b</sup> Brasil. Lei ordinária nº 12.288, de 20 de julho de 2010. Institui o Estatuto da Igualdade Racial; altera as Leis nº 7.716, de 5 de janeiro de 1989, 9.029, de 13 de abril de 1995, 7.347, de 24 de julho de 1985, e 10.778, de 24 de novembro de 2003. *Diario Oficial Uniao*. 21 jul 2010 [cited 2012 Feb 25]:1. Available from: http://www.planalto.gov.br/ccivil\_03/\_Ato2007.2010/2010/Lei/L12288.htm

<sup>&</sup>lt;sup>c</sup> Secretaria Especial de Políticas de Promoção da Igualdade Racial. Programa Brasil Quilombola. Brasília (DF): Abaré; 2004 [cited 2010 May 12]. Available from: http://bvsms.saude.gov.br/bvs/publicacoes/brasilquilombola\_2004.pdf

<sup>&</sup>lt;sup>d</sup> Bezerra VM, Medeiros DS, Gomes KO, Souzas R, Giatti L, Guimarães MDC et al. Inquérito de Saúde em Comunidades Quilombolas de Vitória da Conquista/BA (Projeto COMQUISTA): aspectos metodológicos e análise descritiva. *Cienc Saude Coletiva* [internet]. 2013 ago [cited 2013 Ago 2]. Available from: http://www.cienciaesaudecoletiva.com.br/artigos/artigo\_int.php?id\_artigo=12327

<sup>&</sup>lt;sup>e</sup> Ministério da Saúde. Pesquisa Nacional de Saúde (PNS). Inquérito Região Integrada do Distrito Federal (RIDE/DF). Brasília (DF); 2011 [cited 2011 Apr 02]. Available from: http://www.pns.icict.fiocruz.br/index.php?pag=proposicao

World Health Organization. Anatomical therapeutic chemical (ATC) classification index with defined daily doses (DDD's) 2000. Oslo; 2000 [cited 2012 Feb 15]. Available from: http://www.whocc.no/atc\_ddd\_index/

medications were classified by their presence, or not, in the *Relação Municipal de Medicamentos Essenciais* (REMUME<sup>g</sup> – Municipal List of Essential Medicines) in force at the time. The units of analysis were the individual and the medications. The mean number of medications per interviewee was used as an indicator of intensity of use. Each medication was broken down by principle active ingredients with the help of the Pharmaceutical Specialties Dictionary<sup>h</sup> in order to calculate the mean number of active ingredients per interviewee.

Independent variables were age, marital status, schooling, work status, economic level (economic classification defined by the Associação Brasileira de Empresas de Pesquisa (Brazilian Institute of Research Companies),<sup>i</sup> self-perceived state of health, number of self-reported morbidities, frequency of home visits form a community health worker or health care professional and number of medical appointments in the preceding 12 months. The number of morbidities was defined based on adding the interviewee's self-reported morbidities and included in the questionnaire (hypertension, diabetes, hypercholesterolemia, heart disease, stroke, asthma or asthmatic bronchitis, arthritis, chronic spinal problems, tuberculosis, depression, other mental disease, lung disease and osteoporosis). Gestational hypertension or diabetes were not considered.

Differences between the means of active ingredients per interviewee were compared using variance analysis. The prevalence of medication use was calculated based on the number of participants who responded having used at least one medication in the 15 days preceding the interview divided by the total number of interviewees. The Prevalence Ratio was used as an estimate of association between medication use and the explanatory variables in question. This measure and its 95%CI were estimated using Poisson regression with robust variance. Poisson multiple regression with robust variance was used to obtain estimates of the prevalence ratios for medication use, adjusted for potential confounding factors. Those variables which had an association with medication use with a level of significance < 20% in the univariate analysis were included in the initial model. A level of significance of 5% was used for the tests and to judge whether the variables would remain in the final model. Models were compared using Akaike's Information Criterion (AIC) and Bayesian Information Criterion (BIC). The fit of the model was evaluated using Chi-square test. The R program, version 2.11.1 was used to analyze the data.

The research was approved by the Research Ethics Committee of the *Faculdade São Francisco de*  on 29/10/201

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*Barreiras* (CAAE 0118.0.066.000-10, on 29/10/2010) and of the *Universidade Federal de Minas Gerais* (CAAE 0118.0.066.203-10, on 13/7/2011), and followed the standards set by the Declaration of Helsinki and by Resolution 196/96 of *Conselho Nacional de Saúde*. Participants were informed of the research objectives and procedures beforehand and assured of the confidentiality of all data by reading the informed consent form, expressing their agreement to take part in the study.

#### RESULTS

Among the 797 adult individuals who responded to the survey, 54.3% were female; the majority were aged between 35 and 59 years old (41.5%). More than half (61.4%) cohabited and 72.4% had up to four complete years of schooling (Table 1). The majority were unemployed and 85.6% belonged to economic class D or E. The predominant self-perception of health was good or very good and 41.2% of the interviewees reported having none of the morbidities in question. With regards to health care service use, half of the participants had not seen a doctor and 50.3% of them had received a monthly visit from a community health worker or health care professional. The frequency of medication use was 41.9% (95%CI 38.5;45.4).

Participants used 714 different types of medicine, corresponding to 853 active ingredients (mean = 1.1 active ingredients/individual; standard deviation – 1.7; range = 0 to 15). The majority of medications had been prescribed by a doctor, dentist or nurse (83.3%) and 70.0% of them appeared in REMUME.

The most commonly used medications belonged to Cardiovascular, Nervous and Musculo-skeletal system, and Alimentary tract and metabolism (Table 2), with means of consumption higher for these groups. The most commonly used therapeutic subgroup were diuretics (mean of 0.15/individual), followed by agents acting on the renin-angiotensin system (0.13), analgesics (0.08) and anti-inflammatory and antirheumatic products (0.07). Drugs used in diabetes predominated in Alimentary tract and metabolism.

The prevalence of medication use was significantly higher in women than in men (50.3% and 31.9%, respectively) (Table 3). Medication use was positively and significantly associated with being female, older age groups, better economic level (classes D, C and B2), worse self-reported health, a higher number of self-reported diseases and a higher number of medical

<sup>&</sup>lt;sup>g</sup> Secretaria Municipal de Saúde de Vitória da Conquista. Comissão de Farmácia e Terapêutica. Relação Municipal de Medicamentos Essenciais: REMUME 2010. Vitória da Conquista; 2010.

<sup>&</sup>lt;sup>h</sup> Dicionário de Especialidades Farmacêuticas: DEF 2011/12. 40 ed. Rio de Janeiro: EPUC; 2011.

<sup>&</sup>lt;sup>1</sup>Associação Brasileira de Empresas de Pesquisa. Critérios de classificação econômica no Brasil. São Paulo; 2012 [cited 2012 Mar 21]. Available from: http://www.abep.org/novo/Content.aspx?ContentID=301

**Table 1.** Characteristics of the studied *quilombola* population. COMQUISTA Project, Vitória da Conquista, BA, Northeastern Brazil, 2011.

Variable	Total		
	n	%	
Sex			
Male	364	45.7	
Female	433	54.3	
Age (years)			
18 to 34	289	36.3	
35 to 59	331	41.5	
60 and over	177	22.2	
Marital status			
No partner	308	38.6	
With partner	489	61.4	
Schooling (completed years of study)			
0	274	34.6	
1 to 4	299	37.8	
5 and over	219	27.7	
Work situation			
Currently not working	408	51.2	
Currently working	389	48.8	
Economic class			
E	275	34.8	
D	401	50.8	
C and B2	114	14.4	
Self-perceived health state			
Very good/good	356	44.8	
Regular	337	42.4	
Bad/very bad	101	12.7	
Number of self-reported morbidities			
None	328	41.2	
1	280	35.1	
2 or more	189	23.7	
Frequency of visits by CHW or health care professional			
Monthly	393	50.3	
1 to 6 times/year	193	24.7	
Never	195	25.0	
Number of medical appointments (last 12 months)			
None	399	50.1	
1 to 2	247	31.0	
3 or more	151	18.9	
Use of medications (preceding 15 days)			
No	463	58.1	
Yes	334	41.9	

**Table 2.** Distribution of medications by group and subgroup according to anatomical and therapeutic classification (1<sup>st</sup> and 2<sup>nd</sup> levels of the ATC),<sup>a</sup> and ratio of number of medications per individual. COMQUISTA Project, Vitória da Conquista, BA, Northeastern Brazil, 2011.

Anatomical and therapeutic group	n	%	Number of medications per individual
Alimentary tract and metabolism	81	11.3	0.10
Drugs for acid-related disorders	18	2.5	0.02
Antiemetics and antinauseants	6	0.8	0.01
Drugs used in diabetes	33	4.6	0.04
Vitamins	13	1.8	0.02
Blood and blood forming organs	27	3.8	0.03
Antithrombotic agents	18	2.5	0.02
Antianemic preparations	8	1.1	0.01
Cardiovascular system	314	44.0	0.39
Cardiac therapy	10	1.4	0.01
Diuretics	118	16.5	0.15
Beta blocking agents	36	5.0	0.05
Calcium channel blockers	22	3.1	0.03
Agents acting on the renin- angiotensin system	102	14.3	0.13
Lipid modifying agents	22	3.1	0.03
Genitourinary system and sex hormones	26	3.6	0.03
Sex hormones and modulators of the genital system	23	3.2	0.03
Anti-infectives for systemic use	19	2.7	0.02
Antibacterials for systemic use	18	2.5	0.02
Musculo-skeletal system	80	11.2	0.10
Anti-inflammatory and antirheumatic products	56	7.8	0.07
Muscle relaxants	23	3.2	0.03
Nervous system	108	15.1	0.14
Analgesics	64	9.0	0.08
Antiepileptics	17	2.4	0.02
Psycholeptics	13	1.8	0.02
Respiratory system	27	3.8	0.03
Drug for obstructive airway diseases	7	1.0	0.01
Cough and cold preparations	7	1.0	0.01
Anti-histamines for systemic use	13	1.8	0.02
Sensory organs	11	1.5	0.01
Ophthalmologicals	11	1.5	0.01
Total	714	100.0	0.90

<sup>a</sup> It includes anatomical therapeutic groups (1<sup>st</sup> ATC level) with frequency above 2% and the most frequent therapeutic subgroups (2<sup>nd</sup> ATC level), totaling less than 80.0% within each level.

CHW: community health worker

appointments in the preceding 12 months (Table 3). A negative significant association was observed with having five or more complete years of schooling and being in work at the time of the interview.

The mean number of active ingredients taken by the interviewees was significantly higher among females, older ages groups, those with lower levels of schooling, those who were out of work, those with a better economic level, with worse self-evaluated health, a higher number of reported diseases and medical appointments (Table 3).

The following proved to independently associated with more frequent medication use in the *quilombola* population: a) being female; b) being aged 60 and over; c)

Table 3. Prevalence and prevalence ratio (PR) for medication use, mean and standard deviation (SD) for the number of active ingredients according to the variables analyzed. COMQUISTA Project, Vitória da Conquista, BA, Northeastern Brazil, 2011. (N = 797)

		Medication use			
Variable	%	PR	95%CI	Mean	SD
Sex				$p^{b} = 0.$	0057ª
Male	31.9	1		0.9	1.8
Female	50.3	1.58	1.32;1.89	1.2	1.7
Age (years)				$p^{b} = 0.$	0000ª
18 to 34	29.8	1		0.6	1.1
35 to 59	38.4	1.29	1.03;1.61	0.9	1.5
60 and over	68.4	2.30	1.87;2.82	2.1	2.4
Marital status				$p^{b} = 0.$	6268
No partner	38.0	1		1.0	1.8
With partner	44.4	1.17	0.98;1.39	1.1	1.7
Schooling (complete years of studies)				$p^{b} = 0.$	0001ª
No studies	49.3	1		1.3	2.1
1 to 4	42.1	0.86	0.71;1.02	1.1	1.7
5 or more	32.4	0.66	0.52;0.82	0.7	1.2
Work situation				$p^{b} = 0.$	0000ª
Currently not working	50.2	1		1.3	1.8
Currently working	33.2	0.66	0.56;0.78	0.8	1.7
Economic class				$p^{b} = 0.$	0062ª
E	33.8	1		0.9	1.6
D	45.1	1.33	1.10;1.63	1.1	1.7
C and B2	50.9	1.50	1.18;1.92	1.5	2.1
Self-perceived health				$p^{b} = 0.$	0000ª
Very good/good	28.7	1		0.6	1.3
Regular	50.4	1.76	1.45;2.14	1.4	2.0
Bad/very bad	60.4	2.11	1.68;2.65	1.6	1.9
Number of self-reported morbidities				$p^{b} = 0.$	0000ª
None	23.8	1		0.5	0.9
1	40.4	1.70	1.33;2.16	1.0	1.7
2 or more	75.7	3.18	2.58;3.93	2.3	2.2
Frequency of visits by CHW or health care professional				$p^{b} = 0.$	6795ª
Monthly	41.5	1		1.0	1.7
1 to 6 times/year	43.5	1.05	0.86;1.28	1.2	1.9
Never	41.5	1.00	0.82;1.23	1.0	1.6
Number of medical appointments (last 12 months)				$p^{b} = 0.$	0000ª
None	27.8	1		0.6	1.3
1 to 2	50.2	1.80	1.48;2.21	1.4	2.1
3 or more	65.6	2.36	1.94;2.87	1.7	1.8

CHW: community health worker

<sup>a</sup> Significant values (p < 0.05)

<sup>b</sup>p estimated by variance analysis

higher socio-economic level, with dose-response gradient; d) self-evaluating health as bad or very bad; e) higher number of self-reported morbidities, with dose-response gradient (Table 4). The values predicted by the models were shown to be adequate to the observed values.

# DISCUSSION

The frequency of medication use in this population (41.9%) was lower than that observed in studies of adults in Fortaleza, CE, Northeastern Brazil (49.7%),<sup>1</sup> Lorena, SP, Southeastern Brazil (51.3%),<sup>7</sup> Pelotas, RS, Southern (65.9%),<sup>2</sup> and in Brazil (49.0%).<sup>3</sup> This may be partially explained by *quilombola*'s minor access to medications, once they live in rural areas, where public health care services are generally limited. For those resident in more distant locations, with no regular provision of public transport, travelling from their place of residence to acquire medications can be difficult.<sup>6</sup> The percentage of medications present in REMUME was high as, in low income populations,

**Table 4.** Prevalence ratios, adjusted for medication use, of the variables included in the final regression model. COMQUISTA Project, Vitória da Conquista, BA, Northeastern Brazil, 2011.

Variables	PR	95%CI
Sex		
Male	1	
Female	1.53	1.31;1.79ª
Age (years)		
18 to 34	1	
35 to 59	1.05	0.85;1.29
60 and over	1.47	1.19;1.81ª
Economic class		
E	1	
D	1.26	1.06;1.49ª
C and B2	1.40	1.12;1.74ª
Self-perceived health		
Very good/good	1	
Regular		0.99;1.44
Bad/very bad	1.33	1.06;1.66ª
Number of self-reported morbidities		
None	1	
1	1.42	1.12;1.81ª
2 or more	2.18	1.73;2.75ª
Number of medical appointments (last 12 months)		
None	1	
1 to 2	1.34	1.11;1.62ª
3 or more	1.64	1.36;1.99ª

<sup>a</sup> Significant values (p < 0.05) – Wald test (Z)

more prescription of medications available in municipal health care network pharmacies is common. In studies of the older adults in Brazil, lower levels of medication use were found in small cities in the countryside (such as 69.1% in Bambuí, MG, Southeastern Brazil),<sup>10</sup> in areas of low socio-economic levels (the periphery of Fortaleza, 60.7%)<sup>4</sup> and in rural areas (Carlos Barbosa, RS, Southern Brazil, 63.5%).<sup>6</sup> Medication use in *quilombola* communities do not seem to differ from that observed in rural or low income communities.

Medication use was more prevalent among women, which agrees with the literature.<sup>1,2-6,11</sup> Sans et al<sup>13</sup> explain that medication use is higher among women because of the higher frequency of medical appointments and the subsequent greater probability of health problems being detected and diagnosed. Moreover, various health care programs (prenatal, breast cancer and cancer of the uterus prevention) are aimed at women, making them more prone to medicalization.<sup>2</sup> In this study, the number of medical appointments was significantly higher among women.

The most commonly used group of medications were those that acted on the cardiovascular, nervous and musculo-skeletal system, and alimentary tract and metabolism, in agreement with other population-based national studies<sup>5</sup> and studies on older adult population.<sup>4,6,10-12</sup> Other national studies on the adult population<sup>2,3</sup> showed similar data, although the ATC system was not used to classify the medications, which limits comparisons.

Research in Catalonia,<sup>13</sup> Spain, showed the same therapeutic groups, albeit in a different order of classification, with drugs used for the nervous system predominating. There is no set prescription standard, which depends on the characteristics of the health care system and of the population assessed. However, Ribeiro et al<sup>11</sup> stated that it was possible that the prescriber takes on patterns of prescribing according to the age of the patients and according to ideological and market pressures, which would explain the similarities observed.

There were high levels of consumption of analgesics and anti-inflammatory and antirheumatic products. This may be explained by the greater tendency to selfmedicate, common among users of these therapeutic classes,<sup>14</sup> partly due to their being over-the-counter drugs and their sale being, often, irregular. In fact, 65.6% of analgesics and 46.4% of anti-inflammatory and anti-rheumatic products had not been prescribed by a health care professional.

Medication use increased with age, a trend that is consistent with the literature<sup>2,3,5,7</sup> and that may reflect the higher prevalence of morbidities that occur with advancing age. This effect was confirmed in the adjusted analysis, in which this variable was independently associated with medication use. Schooling negatively influenced the amount of medications used. This finding differed from those found among the elderly in Belo Horizonte, MG,11 and Rio de Janeiro, RJ,<sup>12</sup> in the population of Fortaleza, CE,<sup>1</sup> and of Brazil,<sup>3</sup> but agrees with that found in the population of Pelotas, RS.<sup>2</sup> The effect, however, did not persist after adjusting for the other variables. The communities in question were homogenous with regards to the level of schooling (more than 70.0% had up to four complete years of schooling), which meant that the cutoff point for this variable was lower than that adopted in other studies, making comparisons difficult. Other factors investigated, such as age, may also confound the association. In fact, an association was found between age and schooling, indicating that the proportion of individuals aged 60 and over, without schooling, was 75.7% (against 33.3% and 10.8% in the 35 to 59 and 18 to 34 age groups, respectively), and at the same time, they used more medications.

Higher medication use among individuals in higher economic levels was consistent with the study by Bertoldi et al,<sup>2</sup> although level A and B1 were not identified in the *quilombola* population. Other studies that used monthly household income as an indicator of economic level<sup>1,6,10</sup> found similar results. This association was confirmed after adjusted analysis.

Medication use was lower among individuals who were working at the time of the interview, although this effect did not persist after adjusting for the other variables. Rural work has characteristics that may interfere in the use of medications. Dal Pizzol<sup>6</sup> highlighted that rural workers, who remain laboring the whole day, may stop using one or more medications more frequently than those in urban environments if the use is made more difficult by the conditions of rural work itself.

A trend was observed for the frequency and number of medications used to increase with worsening of health. Self-perception of health was shown to be negatively associated with medication use, in agreement with the findings of other epidemiological studies.<sup>1,3,7,10-13</sup> The effect of this variable was confirmed in the adjusted analysis. Another variable that indicates the health status of the population was the number of self-reported comorbidities, which shows individuals' chronic health problems and which was associated with medication use even after adjustment.

The variables related to health care services, frequency of home visits from community health care workers or health care professionals and the number of medical appointments behaved differently. The frequency of home visits proved not to be associated with medication use, even with the study population coming from a rural zone and considering this visit an opportunity in which medications could have been supplied.

Frequency of medication used increased as the number of medical appointments increased, even after adjustment, as had been indicated in other studies.<sup>1,11,12</sup> Arrais et al<sup>1</sup> suggested that this could be related to increasing medicalization of society, in which the majority of appointments end in a prescription. The Brazilian Health Care System faces difficulties in overcoming the practices of the bio-medical model, as the population value and prefer curative practices, individualized care based on prescriptions to activities promoting health and preventing health problems. Hand in hand with this practice often goes irrational use of medications, which can lead to a variety of problems, such as adverse reactions, iatrogenic disease, resistance (antimicrobial) and unnecessary costs.<sup>2</sup>

This study had some limitations. The use of a 15-day recall period to assess medication use was prioritized to enable comparison with other studies, as the majority used this period. However, this strategy may result in memory bias. To avoid this limitation, analysis was restricted to medications for which there was proof of use, through showing packaging or prescription. The differential loss, observed in males and in the 18 to 34 age group, may have caused an overestimate of the use of medications by the overall population and by males, as lower consumption is expected in underrepresented groups.

Assessment of individual determinants of consumption in quilombolas indicates that women, as well as the elderly, are the group with the greatest propensity to use medications; they should, therefore, be the groups given preference when developing specific strategies for ensuring rational use. Higher numbers of medical appointments also significantly increased medication use, which reinforces the need to intensify promotional strategies in the day-to-day work of the health care services. Knowing the profile of medication use in the quilombola population is the first step in understanding access and discussing rational use. Aspects such as selfmedicating and polypharmacy, as well as the lifestyle, beliefs and values of the quilombolas in seeking health care and using medication need to be investigated in greater detail.

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