What is the mortality scenario for women of reproductive age in Brazil?

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Abstract

Women play a fundamental role both in the country's production and in the family's constitution, so this study aims to analyze the mortality rate of women aged 10 to 49 years in Brazil in the period from 2007 to 2016. This is an epidemiological study of ecological type with a spatial distribution performed using data from the Mortality Information System. For the development and analysis of the data, the 161 Intermediate Regions of Urban Articulation were considered, whose dependent variable was the Mortality Coefficient of Women of Childbearing Age, that is, women aged between 10 and 49. The data were analyzed in the Statistical Package for the Social Sciences, where the data were aggregated, the coefficients calculated and the classical analyses of these were also carried out. Then, mortality data were spatialized in TerraView to determine global and local spatial distributions. The survey of the data showed that the mortality of women of childbearing age was relevant, mainly in the North, Southeast, and Midwest regions. As for the sociodemographic profile of this population, it was observed that the majority of deaths occurred in women aged 40 to 49 years (48.35%), among brown (45.24%), single women (52.92%), and those with a low education. It is expected that there will be greater visibility of this event and greater strengthening of public policies aimed at promoting the improvement of living and health conditions in this population segment.

Keywords: Reproductive Health. Mortality. Health Information Systems. Spatial Analysis.

INTRODUCTION

Women play a fundamental role both in the country's production and in the family's constitution and are the focus of many studies in the public health scenario. The term Women of Childbearing Age (WCBA), in Brazil, corresponds to the age group of 10 to 49 years, which consists of a majority because it represents 51.6% (104,772) of the total female population, according to data from the National Survey of Household Samples (NSHS)[1,2].

Deaths of WCBA correspond to 24% of deaths worldwide and are mostly associated with sexual and reproductive life[3]. In Brazil, 16% of all female deaths correspond to this age group, about 67,006 deaths in the last year, suggesting a weakness in women's health care, since they result from deaths that are often preventable and resolvable[4].

Furthermore, in developing countries, such as Brazil, these deaths reflect the reduction in the fertility rate and increased

life expectancy, indicating that these women are increasingly exposed to greater risks of becoming ill and dying in relation to women, in the same age group, living in developed countries[3]. Thus, it is observed that female longevity, determined above all by biological and behavioral advantages, does not necessarily translate into a healthier existence. This is mainly due to changes in lifestyle that have triggered several health problems in this population segment, in a different way from the rest of the population[5].

Based on this scenario, the female population was incorporated into national health policies in the first decades of the 20th century, being limited, during this period, to demands related to pregnancy and childbirth[6]. However, with the various changes arising in the female population, the National Policy for Integral Attention to Women's Health (PNAISM), anchored to the theoretical axis Integral Attention to Women's Health and guided by the gender perspective, proposes to understand and reach women in all the aspects of their lives going beyond the sexual and reproductive approach, and, thus, face reductionist approaches that consider only the biological aspect of the female body marked by the pregnancy-puerperal cycle[7].

At the international level, it is worth highlighting the Millennium Development Goals (MDGs) which were established by the United Nations (UN) in September 2000, with eight objectives listed, among which, three are directly related to women's health. These objectives were the first global policy framework for development and contributed to guide government action at the international and national levels[8].

From this perspective, it is emphasized that the investigation of maternal and women of childbearing age mortality is mandatory, according to Ordinance No. 1119, of June 5, 2008. This measure aims to list the

determining and conditioning factors of the cause of death in order to reduce the event[9]. In this way, the Information Systems (SIS) have been important tools for producing knowledge concerning the health situation, in addition to supporting the planning, organization, operation, and evaluation of actions, services, programs and policies[10].

Therefore, the present study aimed to analyze the mortality rate of women aged 10 to 49 years in Brazil in the period from 2007 to 2016.

METHODOLOGY

This was an ecological epidemiological study with the spatial distribution of mortality in women of childbearing age (WCBA), with data collected in the Mortality Information System (MIS), from 2007 to 2016. The national territory was used as a basis.

The study was carried out with aggregated secondary data whose scenario was all Brazilian municipalities; however, the 5565 municipalities that make up the national territory were not used, but only the 161 regions that were defined based on socioeconomic criteria by the Brazilian Institute of Geography and Statistics (IBGE) and called Intermediate Regions of Urban Articulation (IRUA).

The population chosen was Women of Childbearing Age (WCBA), corresponding to those between 10 and 49 years of age, which is the age group in accordance with indicator 27 contemplating the proportion of women of childbearing age (WCBA) deaths, contained in the guidelines, objectives, goals, and indicators of the Ministry of Health, approved on 19 June 2013 by the Tripartite Interagency Commission (TIC)[2]. It should also be noted that the population was thus

determined as it corresponds to the most vulnerable age group and encompasses different life cycles of women in situations of violence.

As the main variable of the study, the Mortality Coefficient in women aged 10 to 49 years (WCBA) was implemented. For purposes of calculating this variable, the following method was adopted: deaths of women of childbearing age (year to year), divided by the population of women in the same age group and multiplied by ten thousand.

Secondary dependent variables were evaluated: the general mortality coefficient of women of childbearing age, the mortality coefficient by topics of ICD-10 causes and the mortality coefficient by age group. The data were obtained from MIS/DATASUS. The following independent variables were selected: Gini Index, Human Development Index (HDI), and Percentage of Poor people extracted from the United Nations Development Program (UNDP). Variables of access to services through the Department of Primary Care (E-management PC) were also considered as data was extracted referring to the coverage of primary care and coverage of the *Bolsa Família* Program.

For the spatial analysis and construction of the maps, the TerraView program was used. The first step to analyze the data in the software was to ask for the neighborhood matrix. Negative values close to zero indicate the absence of significant spatial autocorrelation for the values of the study variable in the analyzed region; however, values that were negative and significant point to a negative autocorrelation, indicating that the variable of interest tends to have different values to the nearest locations in the analyzed region.

Oliveira *et al.* (2018) further explains that the diagram is divided into four parts: Q1-positive value and positive local averages (high-high) and Q2-negative value and negative local average (low-low), which indicate the points of positive spatial association, in the sense that a location has neighbors with similar values; Q3-positive value and negative local average (high-low) and Q4-negative value and positive local average (low-high), which indicate points of negative spatial association, in the sense that a location has neighbors with different values.

For statistical analysis, data were entered into the Statistical Package for the Social Sciences (SPSS) software version 22.2, version 10101141047. The data were evaluated based on the mean, median, standard deviation, confidence interval considering 95% and $p < 0.05$, Student t test was performed for comparisons between means. In the spatial analysis, Terra View 4.2.2 software was used to build thematic maps that represent the spatial distribution of the average of the coefficients in relation to the intermediate regions of urban articulation, as well as the Moran Global Index (MGI) and significance (p). The MGI verifies the spatial dependence of the data, and may display positive values, indicating a direct correlation and values similar to neighboring municipalities, or negative values, indicating an inverse correlation, in which the high values will be surrounded by neighbors with low values or the reverse.

For this study, approval of the Ethics and Research Committee (CEP) was not necessary to appropriate public domain data, as recommended by Resolution 510/2016 of the National Health Council.

RESULTS

In order to understand how WCBA mortality behaves, an analysis of general mortality in this population in Brazil was carried out. For this, the WCBA population was first characterized, where the data are shown in table 1, which lists the descriptive analysis of deaths year by year in relation to race/color, education, marital status, and age group. It was possible to identify that the highest proportion of deaths occurred in brown women, especially in 2016, whose death value reaches 45.24% in the population, as well as among white women.

Regarding the age group, it is observed that women aged 40 to 49 had a higher frequency of deaths, in which the numbers of deaths assessed increased as age also increased. As for education, its highest percentage was among those who studied for 4 to 7 years, followed by those who had between 8 and 11 years of study; and as for marital status, the proportion of deaths was higher among single women.

Table 2 shows the analysis of the Mortality Coefficient of Women of Childbearing Age. It also reveals the mean, median and standard deviation of the mean, in the 161 intermediate regions of urban articulation in Brazil, according to the years 2007 to 2016. A significant increase between the first and the second five-year period (quinquennium), with an average of 11.94 per ten thousand women in the first five years and 12.28 in the second. The data can be seen below.

Table 3 also shows these WCBA mortality coefficients in the Brazilian regions, demonstrating an increase most years analyzed, homogeneously, between the states. Alagoas, in the Northeast, stands out with a coefficient of 12.01 in 2014, as well as Espirito Santo and Rio de Janeiro, which

in 2016 expressed the highest coefficient among States, 13.14 per 10,000 women. Rio Grande do Sul, located in the south of the country, also stands out.

From the above, figure 1(a) shows the geoprocessing of the distribution of the mortality coefficient per 10,000 women in the Intermediate Regions of Urban Articulation in Brazil, from 2007 to 2016. The municipality of Nova Friburgo in Rio de Janeiro (Alto-Alto) demonstrated a higher mortality coefficient with an average of 50.79 to 63.45, as well as in the Northern regions, mainly in Amazonas, Amapá, and a small portion of Tocantins, which had an average of 38.12 and, finally, Goiás in the midwestern part of the country.

In figures 1 (b) and (c), respectively, it is possible to observe the spatial analysis of the WCBA mortality coefficient, with a Moran Global index of 0.12 and p=0.03 that reveals positive autocorrelation and significant spatial dependence in relation to neighboring regions.

Figure 1 (b) refers to the MCWCBA BoxMap, and high coefficients can be seen throughout the North, Northeast, especially in the states of Rio Grande do Norte, Paraíba, Alagoas, and Pernambuco. The South and Southeast regions also deserve to be highlighted, mainly for the states of Rio Grande do Sul and Espírito Santo, respectively.

Regarding MoranMap, figure 1 (c), it can be seen that most of the clusters seen previously are not statistically significant, with the exception of Espirito Santo, Rio de Janeiro and São Paulo, in the Southeast, and Rio Grande do Norte, in the Northeast, who presented positive values and positive local averages (High-High), such that this area is considered at risk for WCBA mortality.

Table 1– Distribution of deaths of women aged 10 to 49 years from 2007 to 2016, according to race, education and marital status, Brazil.

	2007		2008		2009		2010		2011		2012		2013		2014					
	n	f	N	F	N	F	N	f	N	F	n	f	n	f	n	f	n	f	n	f
Age group																				
10 to 14	2200	3.43	2272	3.47	2251	3.35	2227	3.35	2091	3.12	2124	3.17	2024	3.03	1974	3.00	1846	2.83	1867	2.78
15 to 19	3880	6.06	3927	6.01	3947	5.88	4000	6.02	4162	6.21	4170	6.23	4134	6.19	3927	5.98	3876	5.93	.797	5.65
20 to 29	10920	17.04	10910	16.68	11564	17.23	11250	16.92	11178	16.68	10858	16.22	10537	15.78	10538	16.04	10185	15.59	10393	15.48
30 to 39	16415	25.62	16664	25.48	17305	25.78	17279	25.98	17356	25.90	17817	26.62	17909	26.81	18129	27.59	18181	27.83	18625	27.74
40 to 49	30664	47.85	31618	48.35	32049	47.75	31741	47.73	32219	48.08	31958	47.75	32186	48.19	31147	47.40	31240	47.82	32465	48.35
Education																				
None	4794	11.19	4947	10.92	4953	10.42	4683	9.72	4999	9.81	5048	9.68	5004	9.56	4772	9.15	4673	8.88	4853	8.86
1-3 years	9079	21.19	9115	20.12	9016	18.98	9089	18.87	11342	22.26	11465	21.99	11000	21.02	10473	20.08	9968	18.95	9709	17.73
4-7 years	14947	34.89	15923	35.15	16876	35.52	16937	35.16	16062	31.52	16096	30.88	15835	30.25	15798	30.28	15914	30.25	16477	30.08
8-11 years	9557	22.31	10464	23.10	11331	23.85	11755	24.40	13600	26.69	14624	28.05	15249	29.14	15782	30.25	16481	31.33	17681	32.28
12 or more	4467	10.43	4852	10.71	5339	11.24	5710	11.85	4959	9.73	4894	9.39	5251	10.03	5343	10.24	5568	10.58	6049	11.04
Marital status																				
Single	33281	52.02	34761	53.16	36522	54.42	36453	54.82	34720	51.82	34370	51.35	34122	51.09	34187	52.02	34443	52.72	35531	52.92
Married	20428	31.93	20405	31.20	20492	30.53	19691	29.61	18610	27.77	17794	26.59	17613	26.37	16875	25.68	16792	25.70	16992	25.31
Widow	2324	3.63	2230	3.41	2148	3.20	2028	3.05	2021	3.02	1763	2.63	1771	2.65	1674	2.55	1543	2.36	1518	2.26
Divorced	3162	4.94	3313	5.07	3561	5.31	3408	5.13	3411	5.09	3414	5.10	3391	5.08	3359	5.11	3260	4.99	3383	5.04
Race																				
White	28974	45.22	29180	44.62	29823	44.44	28836	43.36	28996	43.27	28639	42.79	28204	42.23	27309	41.56	27071	41.44	27519	40.98
Black	5785	9.03	6014	9.20	6070	9.04	6133	9.22	6435	9.60	6329	9.46	6237	9.34	6131	9.33	6052	9.26	6191	9.22
Yellow	171	0.27	175	0.27	185	0.28	185	0.28	170	0.25	179	0.27	177	0.27	173	0.26	180	0.28	197	0.29
Brown	23915	37.32	25137	38.44	26158	38.97	26996	40.60	27267	40.69	28183	42.11	28519	42.70	28872	43.94	29099	44.54	30378	45.24
Indigenous	232	0.36	220	0.34	251	0.37	245	0.37	258	0.39	279	0.42	286	0.43	324	0.49	306	0.47	374	0.56

Legend: n= Sample / f= frequency

Table 2– Descriptive analysis of the mortality rate of women aged 10 to 49 years per quinquennium studied, Brazil.

Quinquennium	N	Mean*	Median	SD	CI Minimum	Maximum	P
2007-2011	161	11.94	10.27	7.88	0.14	65.82	
							<0.001
2012-2016	161	12.28	10.81	7.78	0.15	61.07	

Source: MIS/DATASUS

Table 3– Mortality rate for women aged 10 to 49 years in the Brazilian states, from 2007 to 2016, Brazil.

| State	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Acre	9.14	8.69	10.97	10.22	10.18	10.81	10.06	10.39	9.85	10.10
Alagoas	11.34	10.13	10.61	11.72	11.99	11.75	11.90	12.01	10.64	11.75
Amapá	7.25	8.17	7.47	7.51	9.32	8.44	9.58	9.76	11.16	10.28
Amazonas	8.25	8.73	9.38	9.64	9.19	9.91	10.26	11.25	10.74	10.91
Bahia	10.22	10.28	10.83	10.77	11.11	11.13	11.07	10.56	10.83	11.11
Ceará	8.44	8.60	8.72	9.08	9.06	9.64	10.05	9.31	9.65	9.61
Distrito Federal	8.28	8.66	9.15	8.52	9.49	8.69	9.02	8.74	8.29	8.91
Espírito Santo	11.70	12.16	12.17	11.63	11.70	11.34	11.24	11.56	10.80	10.62
Goiás	9.80	10.64	10.96	11.12	11.24	11.45	11.72	11.99	11.41	11.56
Maranhão	8.50	8.95	8.85	9.34	9.86	9.87	10.06	9.93	10.07	10.78
Mato Grosso	10.46	10.42	10.99	10.98	10.98	11.54	11.71	11.96	11.64	11.50
Mato Grosso do Sul	11.06	11.25	11.71	11.66	11.14	11.90	12.42	11.83	11.24	12.71
Minas Gerais	10.93	11.21	11.38	11.22	11.26	10.95	10.79	10.54	10.55	10.71
Pará	8.89	9.24	9.18	9.62	9.87	10.46	10.13	10.25	10.21	10.52
Paraíba	9.44	10.32	9.93	10.27	10.23	10.80	10.85	9.99	10.86	11.19
Paraná	10.54	11.06	11.44	11.02	10.81	10.75	10.72	10.36	10.40	10.60
Pernambuco	10.56	11.19	11.33	10.99	11.30	11.03	11.00	10.86	10.75	11.67
Piauí	9.17	9.88	9.77	9.52	9.52	10.24	9.86	10.19	10.29	9.88
Rio de Janeiro	13.38	13.62	13.71	13.44	13.59	13.12	12.93	12.97	12.47	13.14
Rio Grande do Norte	7.95	8.09	8.46	8.08	9.23	9.01	9.29	9.78	9.28	10.18
Rio Grande do Sul	11.32	11.12	11.86	11.44	11.20	11.28	11.38	10.27	10.50	10.85
Rondônia	8.52	9.23	10.27	10.06	10.80	11.09	10.59	10.40	10.79	10.31
Roraima	9.42	9.42	9.96	10.37	9.22	10.37	12.18	9.56	10.70	11.31
Santa Catarina	9.75	9.77	10.29	10.07	9.76	10.33	9.77	9.61	9.43	9.98
São Paulo	10.33	10.28	10.56	10.33	10.25	10.12	10.03	9.97	9.96	10.08
Sergipe	8.81	9.84	9.91	10.24	10.57	10.24	10.90	10.90	10.98	10.76

Source: MIS/DATASUS
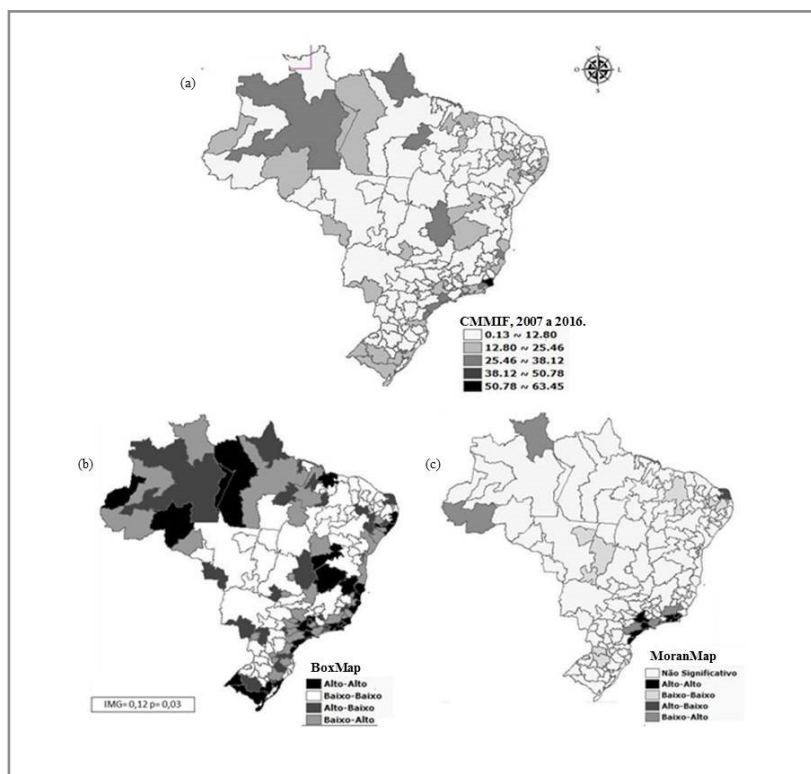
Figure 1– Spatial Distribution of the General Mortality Coefficient of Women of Childbearing Age from 2007 to 2016, Brazil.

DISCUSSION

The mortality profile of women of childbearing age identified in the present study shows some similarities with other studies in demonstrating that women in the older age groups, single, with low education and brown skin are more exposed to this type of event (Table 1) .

Research carried out in Brazil that has already demonstrated the existence of mortality in this population profile. In São Luís (MA), from 2002 to 2011, it also showed similar results, and it is possible to observe that the number of deaths increased progressively as the age group increased[12]. In the state of Bahia, mortality among WCBA with the age group of 40 at 49 years of age was substantially significant, out of a total of 1,055 deaths investigated, 22.6% (n= 453) were of that age. Moreover, these women also had less education, between 1 and 3 years (n= 238; 22.6%), were mostly black, considering both black and brown skin color (n= 645; 61.1%), and single[13].

This pattern can also be seen in the study conducted by Pitilin et al.[14] in Pará. The authors infer that all deaths frequently belonged to the group of deaths preventable by interventions within the scope of the Unified Health System (SUS). This statement is also reinforced by Melo et al.[15] who evidenced in a study carried out in Viçosa (Minas Gerais), that among the WCBA deaths investigated in this region, 100% were considered avoidable and preventable.

Thus, the relationship between the age group

and this event may be associated with the increase in life expectancy of the Brazilian population, especially among women over 40 years of age. Additionally, according to the Ministry of Health, the fact that most women are single is related to the growth in the number of poor families led exclusively by women of reproductive age, accentuating gender inequalities and contributing to the burden of responsibilities, with consequent illnesses[16,17].

Regarding education, the shorter time of study does not only have implications for work, employment, and income opportunities, but also for the health sector, frighteningly affecting women at the height of reproductive life[18]. The Ministry of Health reinforces that individuals with less education have a poor self-assessment of health, and healthy habits also tend to improve as the level of education increases. These determinants have a direct impact on the population's health status[19]. It is also possible to infer that social inequalities, which are quite evident, are mainly reflections of poverty and, in turn, of the lack of investments in education, which is still deficient.

As for race/color, it is possible to affirm that social differences determined by color are detected in Brazil, as there has been a smaller and statistically significant number of deaths in white women, over the years, a trend that was not detected among brown women[20]. Yet, there is a correlation with greater purchasing power and whites, which implies low income levels predispose women to higher risk factors for death[21].

In the comparison between the first (2007-2011) and the second (2012-2016) five-year periods in Table 2, 11.94 deaths per 10,000 women identified in the first five years increased to 12.28 in the second. According to Oliveira[22] the deaths of women in the reproductive period, even when relatively small in number, are an important public health problem, as the analysis

of these deaths allows the capture of information that explains their occurrence and, thus, creates conditions that make it possible to identify their specificity and seek ways to prevent them.

From this perspective, the Pan American Health Organization (PAHO) states that external causes are a serious public health problem and, among those that impose a great burden on health services, are those that correspond to binomial accidents and violence23. The WHO emphasizes that mortality from external causes is among the 10 main causes of death in WCBA in the world, and are more prevalent in developing countries, such as Brazi[24].

As for the analysis of these coefficients between the states (Table 3), it was possible to observe a homogeneous growth of this event. When geo-processed, Figure 1 identifies significant spatial dependence related to these coefficients; especially in all states in the northern region, where high coefficients could be seen, as well as in the Southeast and Midwest. In addition to the findings of this study, a study conducted in Belém (PA) indicates that, of the 3,365 female deaths, 539 occurred in women aged 10 to 49 years, corresponding to a specific female mortality rate of 11.1/10,000 in this age group[25].

From this perspective, it was previously explained that the Southeast region, with emphasis on the state of Espírito Santo, revealed high rates of mortality from external causes. These data are in line with a study carried out by other authors, in which they demonstrate that, in 2015, external causes had the third place among the biggest cause of death in this state, with an index that reached 16.30%. This demonstrates a great proportional difference in relation to the other states in the Southeast region. São Paulo, for example, has an index of 8.15%, that is, half the percentage demonstrated by Espírito Santo26.

This fact is directly related to behavioral and style differences, changes in the role of women within society, such as: insertion in the labor

market, increased schooling, reduced number of children, among other aspects, which have been causing possible impacts on differentials of illness and death in this population[27].

In Porto Velho (RO), in the years 2009 to 2013, 859 deaths of women of childbearing age were recorded, with a higher frequency in 2011, totaling 181 (21.1%). The second highest frequency occurred in 2010, with 177 (20.6%), and the third highest was in 2012, with 171 (19.9%) deaths[28]. In the Northeast, the high coefficients are found mainly in the states of Rio Grande do Norte, Paraíba, Alagoas, and Pernambuco (Figure 1(b)). Alves[29] conducted a study in the state of Pernambuco in relation to the mortality of women of childbearing age, finding a high rate of deaths in this group, and are in the sertão higher than in the metropolitan region, where the data contributed to manage intervention policies for the state. In Rio Grande do Norte, from 2006 to 2010, of the 167 municipalities in the state, 141 recorded deaths from WCBA, totaling 4,199 records, with a mortality coefficient of 82,644/100 thousand WCBA. The municipalities who had a higher frequency of deaths were Natal, Mossoró, and Parnamirim, considering that they concentrate a large part of the population of the state[30].

Although the main causes of this mortality in WCBA were not presented, it is estimated that, in 2016, 41 million deaths occurred due to Chronic Noncommunicable Diseases (CNCDs), representing 71% of the overall total of 57 million deaths, in which the four main CNCDs were: cardiovascular disease (17.9 million deaths; 44% of all CNCD deaths); cancer (9.0 million deaths; 22%); chronic respiratory disease (3.8 million deaths; 9%); and diabetes (1.6 million deaths; 4%). It is also estimated that low- and middle-income countries face the greatest risks (21% and 23%, respectively), almost double the rate in high-income countries (12%)[31]. It is believed that most hospitalizations for these diseases could be prevented by timely assistance in the Family Health Strategy (FHS)[32].

In view of the above discussion, it is suggested that the deaths of women of reproductive age indicate the fragility of health services in meeting the guiding principles of the Unified Health System (SUS), in addition to failing in prevention and health care for women[33]. A study carried out in the southeastern region of Brazil showed that the highest frequency of deaths in WCBA occurs in public establishments and most of these are due to preventable causes, reflecting the need to guarantee comprehensive health care for women[34].

Under this perspective, in order to improve the quality of access and the fragmentation of care networks, in June 2011, through Ordinance No. 1,459, the Cegonha Network was created within the SUS, which consists of a assistance network that structured in an organized way and aims to ensure women the right to reproductive planning and humanized care in pregnancy, childbirth, and the puerperium, as well as to children the right to safe birth and healthy growth and development. Some of its principles are respect, protection, and the realization of human rights; respect for cultural, ethnic, and racial diversity; the promotion of equity; the gender approach; the guarantee of sexual and reproductive rights of women, men, youth, and adolescents[35].

However, Pitilin and Sbardelotto[14] reinforce that, health services are still not suitable to the social changes that permeate the profile women inserted in the labor market and that the new reality of the role of women in society needs a new look. In the meantime, the barriers found in accessibility are mainly related to the way the team organizes its work process and service hours, which makes it difficult for people who work during business hours, as well as the great bureaucracy that users face to be able to be attended the same day that they seek the health service[36].

In this sense, the profile and sensitivity of health professionals are important in the

insertion of new conducts and routines, ensuring resoluteness in the provision of care in the scope of primary care when dealing directly with the demands arising from these women jointly, in their entirety, in addition to building an evidence-based therapeutic plan focused on the real needs of women. The scientific knowledge acquired may permeate the introduction of differentiated measures for practice.

Furthermore, Santos[37] demonstrates that, linked to the adequacy of health services to the demands of this public, health surveillance is extremely important, as it is responsible for the information and interventions that make it possible to reduce risks and promote health in the territories through connections with the Health Care Networks. It is an essential function of SUS and considers the complex economic, environmental, social, and biological phenomena that determine the level and quality of health of Brazilians, at all ages, aiming to control and reduce risks.

Thus, it is important to evolve in the knowledge about the health problems that most affect this population group, and mortality studies, conducted through official data, are of great value in delineating the health profile of women of reproductive age and are relevant for exhibiting the health situation, as well as the living conditions experienced by the female class in the region from which it is derived.

CONCLUSION

The data revealed that the mortality of women of childbearing age was relevant, especially when compared to other studies developed in Brazil. Regarding the sociodemographic profile in the WCBA population, it is observed that the majority of deaths occurred in women aged 40 to 49 years old, single, and with 4 to 7 years of study. In addition, geoprocessing shows that mortality was quite present in regions such as the North, Southeast, and Midwest, deserving greater visibility because they had the highest coefficients. This shows the need for differentiated public policies for the Brazilian regions, considering the existing data and the socioeconomic realities and health care levels.

There was also a lack of research aimed at the mortality of women of childbearing age in Brazil, a fact that reduced the parameters for discussion, requiring publications on this topic in this population. In addition, the information contained herein will make it possible to guide, strategic planning, health actions aimed at reducing risks that could often be avoided. It is noteworthy that this research may have limitations because it deals with the use of secondary data on mortality, which is subject to underreporting, even with the significant gain in the quality of the SIS. Another limitation refers to the ecological bias that must be remembered in studies with this type of design.

In view of the situation in which women of childbearing age live, it is also expected that there will be greater visibility of this event and greater strengthening of public policies aimed at promoting the improvement of living and health conditions of this population segment; especially since knowing the mortality profile of women of childbearing age is necessary for understanding their main demands and health problems. This allows state and municipal health managers to develop equitable, comprehensive, and universal health actions for this clientele.

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