Original article

Deaths without medical assistance in the Northeast region from 2019 to 2023

Mortes sem assistência médica na região Nordeste no período de 2019 a 2023

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ABSTRACT | OBJECTIVE: To describe the profile of deaths without medical care in the Northeast region from 2019 to 2023. **METHOD:** This is an ecological descriptive time series study, consulted in the Mortality Information System (SIM), made available by the *Departamento de Informática* of the *Sistema Único de Saúde* (DATASUS). The variables selected for analysis were sex, location (states and capitals of the Northeast region), age group, color/race, education, marital status and place of occurrence. **RESULTS:** Between the years 2019 to 2023, there were 14,151 deaths without medical care, with a reduction over the period. The year with the highest number of deaths recorded was 2020, with 3,866 deaths. The distribution of deaths varied among the federative units of the Northeast region, with a predominance in Bahia (4,586; 32.4%). Deaths were predominantly recorded in males (8,083; 57.1%), in people aged ≥ 80 years (6,467; 45.7%), self-declared brown race/color (9,128; 64.5%), and in those with no years of schooling (5,844; 41.3%). The main place of death was at home (12,344; 87.2%). **CONCLUSION:** Mortality due to lack of medical care in the Northeast region, although it has shown a reduction, is still high, which suggests the need for measures to increase the capacity for diagnosis and health treatment to reduce deaths from this cause.

KEYWORDS: Death. Cause of Death. Medical Assistance. Health Services Accessibility.

RESUMO | OBJETIVO: Descrever o perfil de mortes sem assistência médica na região Nordeste nos anos de 2019 a 2023. **MÉTODO:** Trata-se de um estudo ecológico de série temporal descritivo, consultado no Sistema de Informações sobre Mortalidade (SIM), disponibilizados pelo Departamento de Informática do Sistema Único de Saúde (DATASUS). As variáveis selecionadas para análise foram: sexo, local (estados e capitais da região nordeste), faixa etária, cor/raça, escolaridade, estado civil e local de ocorrência. **RESULTADOS:** Entre os anos de 2019 a 2023 ocorreram 14.151 mortes sem assistência médica, com redução ao longo do período. O ano em que mais houve registro de morte foi 2020 com 3.866 óbitos. A distribuição dos óbitos variou entre as unidades federativas da região Nordeste, com predomínio na Bahia (4.586; 32,4%). O registro de óbitos predominou no sexo masculino (8.083; 57,1%) nas pessoas na faixa etária de ≥ 80 anos (6.467; 45,7%), raça/cor autodeclarada parda (9.128; 64,5%) e em quem não possuem nenhum ano de estudo (5.844; 41,3%). O principal local de ocorrência das mortes foi no domicílio (12.344; 87,2%). **CONCLUSÃO:** A mortalidade devido à falta de assistência médica na região Nordeste, embora tenha apresentado redução ainda é elevada, o que sugere a necessidade de medidas que aumentem a capacidade de diagnóstico e tratamento de saúde para redução das mortes por esta causa.

PALAVRAS-CHAVE: Morte. Causas de Morte. Assistência Médica. Acesso aos Serviços de Saúde.

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1. Introduction

Death means the cessation of a life definitively and can occur by several events, from naturalness to external causes[1]. Although in contemporary society, before significant technological advances in health, some people in several countries are extremely vulnerable due to the lack of health care, which can increase the chances of death. Adequate health services must be present in all societies, since they constitute the main tool to minimize mortality amenable to treatment due to their ability to prevent, diagnose and apply treatment measures on a universal basis[2,3].

The classification of the underlying cause of death is fundamental for the evaluation and planning of public health actions[4]. Characterized by conditions that have not been sufficiently investigated to determine the exact cause of a disease or condition that led to death is represented by the categories between R00 and R99 in the tenth revision of the International Classification of Diseases (ICD). In turn, she complains in her chapter about death due to lack of assistance, categorized as R98, and it means that the person who died was not being accompanied by a health professional during the illness that caused the death[5].

In Brazil, although institutionalized by the *Lei Federal* nº 8.080, de 1990 – *Lei Orgânica da Saúde* (LOS), when health was established as a universal right that must be guaranteed by the State, the health care of the Brazilian population does not occur in the same way throughout the territory and in all populations[6,7]. There are still some problems such as the persistence of coverage of health services, shortage of health professionals, regional disparities in the quality of care, revealing, especially for the poorest segment of the population, and as a consequence the increase in mortality rates, since some segments of the population do not go to health services or do not have adequate assistance[3,6].

One of the reflections of socioeconomic and regional inequalities in health in Brazil is that despite changes in mortality profile has changed in recent decades, with a reduction in deaths caused by malnutrition, infectious, parasitic and maternal causes children and accelerated growth of deaths from chronic non-communicable diseases[8], the problem of deaths due to lack of assistance still persists.

Another consequence of problems related to access to health services and quality of care is the occurrence of deaths declared as due to ill-defined causes (CMD). These deaths fall into two main categories: those without medical assistance, and those with ill-defined causes where, despite receiving medical care, the exact cause of death could not be determined[9]. There is evidence showing a strong association between mortality and the distribution of health services, highlighting that as these decrease the number of deaths increases, especially in populations with low educational level and older[2]. Many of these deaths could have been avoided by providing health care to the population by treating the health problem properly when it occurs.

A study shows a reduction in the proportion of deaths classified as poorly defined in Brazil in the period from 1998 to 2012, and that their occurrence is higher in the North and Northeast regions, and lower in the South and Central-West[10]. According to the authors, these deaths occur more in older age groups and in places with unfavorable socioeconomic conditions.

Considering that 72.69 million Brazilians (34% of the population) do not have access to basic health care, and that another 33.3 million are also not covered by private health plans — remaining, therefore, without access to any type of assistance[11] — it is plausible to expect a significant number of deaths due to lack of care.

Health care must be present in the development of the human being itself as a condition for its survival. In this sense, promoting the integrality of care, knowing and eliminating the aspects that can lead to death is fundamental and should be strengthened in the basic care, in which the nurse has distinguished herself as a strategic and indispensable professional[12].

Although aspects related to causes of death represent important and fundamental data for understanding the health status of the population[1], there is a lack of publications on the occurrence of deaths due to lack of assistance. It is important to emphasize that one of the positive points of this type of research is that the breadth of the analysis can contribute to political decisions, and for health professionals themselves, including nursing, to use the information in the planning of basic care actions. These facts point to the relevance of this research. Thus, the objective of this study was to describe the profile of deaths due to lack of medical care in the Northeast region from 2019 to 2023.

2. Method

This is an ecological study of descriptive time series carried out with secondary data, consulted in the Mortality Information System (SIM), available from the *Departamento de Informática* of the *Sistema Único de Saúde* (DATASUS)13, health (TABNET)/ epidemiological and mortality information.

The *Departamento de Análise da Situação de Saúde* of the *Secretaria de Vigilância em Saúde* oversees SIM, a comprehensive epidemiological monitoring system that works in conjunction with the State and Municipal Health Secretariats. The main purpose of this system is to collect mortality data and distribute them to various levels of the health sector. The standardized Death Certificate (DO) is the main means of data entry into the system and is used nationally.

The study population was constituted by the records of deaths due to lack of medical assistance in the northeastern region of Brazil, recorded from 2019 to 2023. This period was chosen by composing the last five years with complete data available in TABNET. The data was accessed on June 29th, 2024. Initially, the option selected on the site was: Mortality - since 1996 by ICD-10 in the option of Vital Statistics, then chosen "general mortality" and geographical coverage "Brazil by Region and Federation Unit". Subsequently the "TABNET" was accessed, to select the formatting of the table and the variables used.

The inclusion criteria considered were all records of deaths of people who died without medical assistance in the Northeast between the years of 2019 to 2023 represented by the cause ICD10-102 and category ICD-10: R98. The sample excluded ignored deaths in relation to age, sex and place of occurrence, because the information of these variables considered as "ignored" were small numbers (below 1,000), therefore, without impact on the analysis. The period chosen for analysis was due to the interest in evaluating the latest available information, that is, of the last five years. We chose to analyze the deaths by place of residence considering that they represent the origin of the person who died from this cause.

The variables selected for analysis were those already existing in the system: sex (male and female), place (states and capitals of the northeast region), age group, color/race (white, black, yellow, brown, indigenous and ignored), schooling (none, 1 to 3 years, 4 to 7 years, 8 to 11 years, 12 years and more, 1 to 8 years, 9 to 11 years), marital status (single, married, widowed, legally separated, other and ignored) and place of occurrence (hospital, another health facility, home, public road and others).

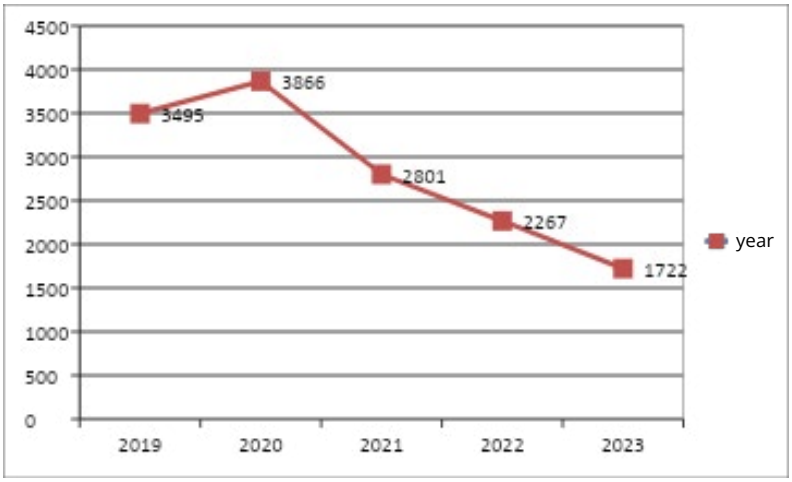
For data analysis, the table tools available in the Excel and Word programs of the Microsoft Office 2016 software were used. The information regarding the variables of interest were examined by means of relative and absolute frequency.

The study followed the rules of *Resolução* 466/12 of the *Conselho Nacional de Ética em Pesquisa* and considering that secondary data from the public domain were used, does not present ethical and moral implications and dispenses the authorization of the research ethics committee.

3. Results

In the period analyzed, there were 14,151 deaths without medical assistance, with a reduction over the period (50.7%). The year with the highest number of deaths was 2020, with 27.3% of deaths (Figure 1).

Figure 1. Distribution by absolute frequency of deaths without assistance in the Northeast region from 2019 to 2023



Source: MS/SVS/CGIAE - Mortality Information System - SIM.

The distribution of deaths varied among the federative units of the Northeast region, with a predominance in Bahia with a total of 4,586. Rio Grande do Norte stands out for the lowest frequency with 40 deaths (Table 1).

Table 1. Death without medical assistance in the federative units of the Northeast region from 2019 to 2023 (N=14,151)

Federative Unit	Year					Total
	2019	2020	2021	2022	2023	
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Maranhão	353 (10.0)	429 (11.1)	353 (12.6)	369 (16.3)	366 (21.3)	1.870 (13.2)
Piauí	405 (11.6)	617 (16.0)	538 (19.2)	330 (14.6)	273 (15.9)	2.163 (15.3)
Ceará	111 (3.2)	168 (4.3)	95 (3.4)	38 (1.7)	42 (2.4)	454 (3.2)
Rio Grande do Norte	16 (0.5)	7 (0.0)	8 (0.3)	3 (0.1)	6 (0.3)	40 (0.3)
Paraíba	251 (7.2)	262 (6.7)	255 (9.1)	373 (16.5)	279 (16.2)	1.420 (10.0)
Pernambuco	781 (22.3)	830 (21.5)	514 (18.4)	482 (21.3)	324 (18.8)	2.931 (20.7)
Alagoas	42 (1.2)	89 (2.3)	34 (1.2)	50 (2.2)	30 (1.7)	245 (1.7)
Sergipe	103 (2.9)	89 (2.3)	103 (3.7)	103 (4.5)	44 (2.6)	442 (3.1)
Bahia	1433 (41.1)	1375 (35.6)	901 (32.2)	519 (22.9)	358 (20.8)	4.586 (32.4)
Total	**3,495 (100.0)**	**3,866(100.0)**	**2,801 (100.0)**	**2,267(100.0)**	**1,722 (100.0)**	**14,151 (100.0)**

Source: MS/SVS/CGIAE - Mortality Information System - SIM.

Table 2 presents information regarding the records of deaths without medical assistance in the federal units of the Northeast region according to age, sex, race/color, schooling, marital status and place of occurrence. Males had a higher percentage of deaths (57.1%) compared to females (43.9%). The number of deaths in people aged ≥ 80 years stood out in all federative units (45.7%) and the age range from 1 to 9 years for the lowest number of records (0.3%).

In relation to the self-declared race/color, more deaths occurred in black individuals, being brown (64.5%) and black race/color (7.7%). It is important to highlight the large number of deaths that have the race/ color ignored (6.0%). Deaths predominated in unmarried individuals (33.2%) and those who have no year of study (41.3%). It is noteworthy that the high number of deaths with education (24.5%) and marital status ignored (18.0%). The main place of occurrence of these deaths was at home (87.2%).

Table 2. Death without medical assistance in the Northeast Region according to sociodemographic characteristics and place of occurrence. 2019 to 2023 (N= 14,151) (to be continued)

Variables	Federative Unit *									Total
	MA	PI	CE	RN	PB	PE	AL	SE	BA	
	N	N	N	N	N	N	N	N	N	N (%)
Sex										
Male	1,117	1,302	312	22	785	1527	131	247	2640	8,083 (57.1)
Female	753	861	142	18	635	1404	114	195	1946	6,068 (42.9)
Age group (years)										
< 1	29	29	3	-	6	17	3	2	17	106 (0.8)
1-9	7	7	-	-	2	12	-	-	17	44 (0.3)
10-19	23	14	3	-	4	26	3	-	14	87 (0.6)
20-29	55	42	13	1	10	49	6	3	51	230 (1.6)
30-39	64	107	26	1	33	76	14	13	110	444 (3.1)
40-49	103	154	63	1	82	142	17	21	222	805 (5.7)
50-59	156	206	68	7	127	238	31	28	406	1,267 (9.0)
60-69	266	291	74	7	163	376	38	63	562	1,840 (13.0)
70-79	414	435	81	7	284	596	43	81	920	2,861 (20.2)
≥80 years	753	878	123	16	709	1,4	90	231	2,267	6,467 (45.7)
Race/color										
White	311	384	62	13	407	958	60	123	648	2,966 (21.0)
Black	184	207	14	1	73	160	16	50	385	1090 (7.7)
Yellow	5	8	2	-	8	15	1	-	16	55 (0.4)
Brown	1,327	1,462	373	25	855	1,735	151	250	2950	9,128 (64.5)
Indigenous	9	2	3	-	2	21	1	4	18	60 (0.4)
Ignored	34	100	-	1	75	42	16	15	852	852 (6.0)

Table 2. Death without medical assistance in the Northeast Region according to sociodemographic characteristics and place of occurrence. 2019 to 2023 (N= 14,151) (conclusion)

Variables	Federative Unit *									Total
	MA	PI	CE	RN	PB	PE	AL	SE	BA	
	N	N	N	N	N	N	N	N	N	N (%)
Education (years of study)										
None	1,022	1,067	124	13	466	1375	112	196	1,469	5,844 (41.3)
1 - 3	309	503	99	10	199	606	37	98	766	2,627 (18.7)
4 - 7	238	221	118	4	112	423	33	31	274	1,454 (10.3)
8 - 11	119	114	42	1	39	146	14	6	118	599 (4.2)
≥12	20	19	30	-	12	54	3	3	17	158 (1.1)
Ignored	162	239	41	12	592	327	46	108	1942	3,469 (24.5)
Marital status										
Single	475	534	196	9	360	978	64	180	1,898	4,694 (33.2)
Married	618	697	100	8	357	796	61	126	1,152	3,915 (27.7)
Widowed	408	580	98	14	393	843	66	94	876	3,372 (23.8)
Legally separated	33	74	34	3	54	98	14	12	115	437 (3.1)
Other	218	133	9	3	40	66	12	6	113	600 (4.2)
Ignored	118	145	17	3	216	150	28	24	432	1,133 (8.0)
Place of occurrence										
Hospital	56	83	21	3	42	541	16	18	113	893 (6.3)
Other health facility	2	7	10	-	8	18	41	1	8	95 (0.7)
Home	1,663	1,875	388	34	1,27	2,222	165	413	4314	12,344 (87.2)
Public road	65	81	15	2	31	82	13	7	72	368 (2.6)
Others	84	117	20	1	69	68	10	3	79	451 (3.2)

Source: MS/SVS/CGIAE – Mortality Information System - SIM.
*Acronyms of the Brazilian states of the Northeast region (MA- Maranhão, P - Piauí, CE - Ceará, RN - Rio Grande do Norte, PB - Paraíba, PE - Pernambuco, AL – Alagoas, SE – Sergipe, BA – Bahia).

4. Discussion

The findings shown in this study indicate that there was a decline in the absolute number of deaths due to lack of medical care in the analyzed period (2019-2023). Despite this important decrease in the percentage of deaths in recent years, the Northeast still has a high number of deaths due to this cause. These deaths in this macro-region represented 2nd place in Brazil, with a proportion of 37.7%, behind only the Southeast region (39.3%)[13]. It is known that these two regions are the most populous in Brazil, being the Southeast region with a larger contingent than the Northeast. It should be noted that, although the deaths due to lack of medical assistance represent only 1.0% of this total, it means that 14,151 people died without medical assistance[13].

Despite the progress in reducing income inequality and poverty, which has been occurring in Brazil, there are still social inequalities in the use of health services. It is known that access to health care is strongly influenced by socioeconomic status and place of residence, with the concentration of people living in poverty in the Northeast being the highest among the five Brazilian regions. The Northeast region contains the states with the highest levels of horizontal inequality in the use of medical consultations, the precariousness of health units, the lack of supplies, medicines, the high turnover of medical professionals, all of which represent barriers to health care, mainly in small municipalities in disadvantaged regions, which can cause death due to lack of assistance[14].

Still regarding the number of deaths in 2020, there is a small increase followed by a decline. The decline after 2020 and 2021 may have been caused by the period of the COVID-19 pandemic, which brought repercussions for the population in regards to the concentration of health services in assisting people positively detected for COVID-19[15,16]. The authors suggest that fear of contracting the disease in overcrowded healthcare facilities, combined with restricted access to services, led many individuals to avoid seeking medical care for underlying conditions. As a result, these cases often went undiagnosed, resulting in these undiagnosed deaths. However, it can be observed that the decline in the number of deaths continues until 2023, without justification in the literature.

Nevertheless, it is noted that inequalities in access to health services, especially in the Northeast region, have contributed to mortality rates being so high in this region which includes economically disadvantaged populations, with lower levels of education and higher inaccessibility in health services[3]. According to the authors, the lack of access to health services among the Brazilian population is 18.1%, and residents of the North and Northeast regions stand out as having the most difficult access.

Equity in access to health is essential to promote a healthier society and reduce morbidity and mortality rates[7]. However, in Brazil, medium and high complexity equipment that helps in the diagnosis and treatment of diseases has been usually concentrated mainly in capitals, metropolises and a few regional poles, resulting in the existence of areas with little coverage of these services, which makes it difficult to provide equal and adequate assistance[17]. These authors explain the relationship between this disparity in health care coverage and the combination of several factors such as social and economic policies, growth of income and education and regional development strategies, and that in the Northeast the development of services was extremely concentrated in a few regions.

A study that assessed the trends in inequalities in mortality due to conditions amenable to intervention in health care in a number of European countries since the 1980s concluded that it is necessary to increase investments in health care in socioeconomically disadvantaged areas to reduce mortality due to causes amenable to treatment[18].

Concerning deaths without medical assistance by federal units of the Northeast, the results indicate that Bahia predominates in terms of higher occurrence of deaths and Rio Grande do Norte presented the lowest. No explanation was found in the literature for such findings, but it is known that Bahia is the most populous state of the Northeast (14,141,626 inhabitants), but Rio Grande do Norte does not have the lowest population (3,302,729 inhabitants), leaving this position for Sergipe (2,210,004 inhabitants)[19].

The literature had no publications on the object of this research in the Northeast states, only a study published in 2008 that points out that in the country, out of the total of 133,434 ill-defined causes, approximately 53.3% correspond to deaths without assistance, being the Northeast Region to have greater proportions mainly in the states of Maranhão, Piauí, Rio Grande do Norte and Pernambuco[20].

Compared to sex, there was a higher proportion of deaths due to lack of medical care among men than among women. This data can be justified in view of the fact that even in the family and social context, there is an expectation that men must manifest strength, which is reflected in the reluctance to take care of their health, in addition to the socialization of conceptions that do not favor the promotion of self-care practices among men and this directly influences the state in which this user will reach health services, and consequently the diagnosis of the causes of morbidity and mortality[21].

In relation to the age group, the highest frequency of deaths due to lack of medical care observed in this study was among people aged 80 years or older. It is known that the number of elderly has been growing more and more as verified by the most recent census conducted by the *Instituto Brasileiro de Geografia e Estatística* (IBGE) in 2022, which shows that the number of people aged 65 or older grew 57,4% in 12 years[22]. A study that evaluated ill-defined causes of death in the elderly population in Maranhão in 2000, 2010 and 2015 shows a reduction in deaths without medical assistance in the last analyzed years, and justifies this reduction by the improvement in medical care to this population and also by the reduction of ill-defined causes in general[23].

The fact that deaths occur more in black race/color, it is known that the difficulty of access to health services by the black population is greater and may be based on structural racism existing in Brazil, which occurs in institutions and organizations through unequal treatment[20]. A study on the household mortality of elderly people in the city of Rio de Janeiro during the Coronavirus pandemic in 2020 found that the black elderly population had higher excess deaths for all causes in households when compared to the white population in the period, 109% and 73.9%, respectively. Therefore, it is assumed that deaths due to lack of assistance are within this profile[24].

A research notes that among the medical causes of mortality in elderly people in Brazil between 2010 and 2015, natural deaths were highlighted as the second most common among the public and consequently, the most common places of death were hospitals and homes[25].

As for deaths due to lack of medical care according to the self-declared race/color criterion, there was a predominance among people of brown color. In Brazil, according to the IBGE, the brown population along with the black population is more vulnerable according to an analysis of the poverty lines proposed by the World Bank (IBGE, 2022)[19], which makes them more likely to die due to lack of medical care. This trend is reflected in both richer and poorer countries, where health conditions in the lower socioeconomic strata and consistently marginalized ethnic groups are more precarious[26].

Still regarding the relationship between mortality without medical care and access to health, in addition to socioeconomic inequality, it is highlighted that those who live in remote regions have fewer opportunities or need to travel long distances to access quality health services, because the distribution of resources from the *Sistema Único de Saúde* (SUS) is unequal, with resources being concentrated in urban areas to the detriment of rural areas[7]. As a result, it is thought that much of these deaths occur in people who reside in small municipalities and rural areas.

Analyzing deaths due to lack of medical care according to schooling, the finding is that they occur in greater numbers in those who have no year of study. The literature shows how mortality rates and causes are related not only to the distribution of health services, hospital infrastructures and health professionals, but also with characteristics of the population related to schooling and aging[2]. Research that evaluated the epidemiological profile of deaths from ill-defined causes (IDC) in the states of the North in the period from 2010 to 2017, Although without identifying in the methodology whether or not deaths due to lack of medical care were included, it shows that the lower the level of education, the higher the percentage of deaths due to IDC and that individuals with 12 years or more of schooling represents the population with the number of deaths due to this cause[27].

The Northeast has the largest black population (black and brown) in Brazil[28], as well as leading the number of individuals with low education, representing a good portion of the population that has precarious access to goods and services and diagnostic and health treatment services, and still lack of knowledge and clarification[17]. The fact that the main place of occurrence of deaths due to lack of medical care was at home and largely in people aged 80 years or older, one can think of cases of natural death in which the person was so short time under the care of a doctor or hospital that there was no time to diagnose the disease that led to death. From this reflection turns to the fact of precarious access for some specific populations and dealing with elderly people there are barriers

that are structural, geographical and cultural, such as the idea that with advancing age there is nothing to do, leading these people to seek less health services and die within their own homes[3]. However, in the study on the epidemiological profile of deaths from ill-defined causes (IDC) in the states of the northern region in the period from 2010 to 2017, the occurrence with more expressive numbers in relation to deaths from IDC is in hospital (62.5%), with the household being the second (22.6%)[27].

One of the reflections originated from this study is that when we talk about death due to lack of assistance, we can think of the concept of mysthanasia that occurs by an unfortunate death and that could be avoided because it stems from social causes that represent the decline of minimal conditions of a dignified life, as lack of education, poverty, violence, lack of access to goods and services[29]. According to the authors, these issues are considered factors that contribute to death caused by human vulnerability and are originated by government policies that neglect health, the supply of inputs and technologies, and that mainly reach them make use of the public health network.

Another important issue of the registration of deaths without medical assistance observed in this study concerns the large amount of data "ignored" in the information that is in DATASUS, revealing a problem in feeding these data. In this perspective, it is understood that there is a compromise in the analysis of some characteristics. Although the mortality information system (SIM) has shown improvements in data quality in recent decades, they still present inconsistency and incompleteness, with variations between regions and required variables. This situation compromises the statistical analysis of information and has an impact on the monitoring and implementation of preventive measures for mortality due to causes in specific populations. In this sense, it is necessary to raise awareness and empower health networks to achieve a high degree of completeness of the variables of this information system[30].

Despite the exploratory and descriptive nature of the study and limitations inherent to the use of secondary data, which present incompleteness of information in relation to some important variables, the information presented on deaths due to lack of medical assistance allowed to obtain a panorama of this problem in the Northeast region. Another limitation was the lack of scientific publications on the object of this study. The results of this research contribute to greater visibility of deaths without assistance in the Northeast and points to the need for the restructuring of health care services provided to the population, including nursing professionals, improvement of access to these services for the most vulnerable and for the need to improve the registration of information.

5. Conclusion

The study in question shows that 2020 stood out as the most critical period, registering 3,866 deaths, highlighting the disparities in the geographical distribution of deaths, with Bahia leading numerically, while Rio Grande do Norte stands out positively. The epidemiological profile of deaths without registration of medical care in the Northeast region of Brazil reveals a higher incidence among elderly men, especially over 80 years old, brown, single, uneducated, and with a predominance of occurrences at home.

It is noteworthy that the accessibility of health services has a direct impact on the number of deaths, since more vulnerable people with lower education levels and older adults have higher death rates due to lack of medical care, bringing the problem of lack of health guaranteed to all in egalitarian form, which is a reflection of a public power that does not provide inputs, nor finance health as a priority. Thus, it is necessary for public policies to focus on these significant rates of deaths due to lack of assistance mainly regarding people's lack of access to services in order to ensure that these numbers reduce over the years.

Authors' contributions

The authors declared to have made substantial contributions to the work in terms of research design or design; data acquisition, analysis or interpretation for the work; and writing or critical review of relevant intellectual content. All authors approved the final version to be published and agreed to take public responsibility for all aspects of the study.

Competing interests

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