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Epidemiological Characteristics of Schistosomiasis Mansoni in the Bahia States, Brazil (2007 - 2022)

Características Epidemiológicas da Esquistossomose Mansônica no Estado da Bahia, Brasil (2007 - 2022)

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Abstract

Schistosomiasis mansoni (MS) is considered a serious public health problem in the country and in the world, the disease has endemic characteristics in several regions of the country. This study aimed to analyze the epidemiological profile of schistosomiasis mansoni (MS) in the State of Bahia from 2007 to 2022. It is a descriptive study of temporal trend, developed through the tabulation of data obtained by the informatics department of the Unified Health System (DATASUS). Thus, it can be observed in the study that the State of Bahia is considered an endemic area for the disease, with a total of 31,048 cases over 16 years, the period analyzed. Alluding to the sociodemographic profile, we can observe the prevalence of the disease in males, brown, aged between 20 and 39 years and with an elementary school level (5th to 8th grade incomplete). Regarding the epidemiological variables, we can see the prevalence in 2007, with the month of May having the highest rate of notifications.

Through this, it becomes explicit that one of the factors related to the prevalence of the disease is the lack of information to be provided to the population.

Keywords: Database. Endemic. Public Health.

Resumo
A esquistosomose mansônica (EM) é considerada um grave problema de saúde pública no país e no mundo, a enfermidade apresenta características endêmicas em diversas regiões do país. Este estudo objetivou analisar o perfil epidemiológico da esquistosomose mansônica (EM) no Estado da Bahia no período de 2007 a 2022. É um estudo descritivo de tendência temporal, desenvolvido por meio da tabulação dos dados obtidos pelo departamento de informática do Sistema Único de Saúde (DATASUS). Desse modo, pode-se observar no estudo, que o Estado da Bahia é considerado uma área endêmica para doença, apresentando um total de 31.048 casos ao longo de 16 anos, período analisado. Alusivo ao perfil sociodemográfico, podemos observar a prevalência da enfermidade em indivíduos do sexo masculino, pardos, com a faixa etária entre 20 a 39 anos e com nível de escolaridade de ensino fundamental (5º a 8º ano incompleto). Respectivo às variáveis epidemiológicas, podemos constatar a prevalência no ano de 2007, tendo o mês de maio com maior índice de notificações. Mediante a isto, torna-se explícito que um dos fatores relacionados a prevalência da doença é a carência de informações a serem fornecidas a população.

Palavras-chave: Base de Dados. Endêmica. Saúde Pública.

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1 Introduction

Schistosomiasis mansoni (SM) is considered a serious public health problem in the country and in the world, the disease has endemic characteristics in several regions of the country, being a parasitic disease, caused by the trematode *Schistosoma mansoni*, whose adult forms inhabit the mesenteric vessels of the definitive host (humans), and the intermediate forms develop in aquatic snails of the genus *Biomphalaria* (Katz, 2018; Buelow *et al.*, 2021; Malta *et al.*, 2022; Wang *et al.*, 2024).

Clinical manifestations may vary according to the parasite load and immune response, however, according to the intensity of the infection, they may remain asymptomatic (Costa; Silva-Filho, 2021; Arruda; Dantas; Bachur, 2023). Among the main symptoms we can mention abdominal pain, weakness, dry cough, diarrhea, nausea, fever, vomiting, chills and in more severe cases hepatomegaly, splenomegaly, weight loss, blood in the stool, liver fibrosis and dizziness (Baluku *et al.*, 2023; Carbonell *et al.*, 2021; Ofori; Forson, 2024; Paiva *et al.*, 2025; Ponzo *et al.*, 2024; Vitorino *et al.*, 2012).

The prevalence rates of MS can be made explicit through the analysis of cultural behaviors, especially those that result in the exposure of individuals to water clusters close to places of residence or work, making it important to emphasize that parasitosis constitutes the high prevalence of diseases in Brazil, covering both sexes, at all ages (Alencar *et al.*, 2024; Paz *et al.*, 2021; Santos *et al.*, 2023; Sobrinho *et al.*, 2020; Trindade *et al.*, 2024).

Through data analysis, it became evident that the states of the Northeast region are considered conducive to inficionation. MS is characterized as endemic in a wide extension of the Bahian territory, among 417 municipalities belonging to the State of Bahia, 167 (40%) are considered endemic, because there is a constant presence of regular cases of MS in the local population, 122 (29.3%) are classified as focal, that is, they are municipalities with a high incidence of the disease, thus there is a need to improve the health and well-being of the population, and 128 (30.7%) are endemic for MS transmission, thus there is continuous transmission of the disease in a given geographic area (Bezerra *et al.*, 2021; Coelho *et al.*, 2021; Gomes *et al.*, 2022; Menezes *et al.*, 2023; Poague; Mingoti; Heller, 2023; Silva *et al.*, 2022).

According to the guidelines of the Ministry of Health, endemic and focal municipalities must maintain routine mortality control actions, the actions of the schistosomiasis control program (PCE), community health education, basic sanitation and the monitoring of data in the information system of the schistosomiasis surveillance and control program (SISPEC) (Almeida *et al.*, 2023; Camelo *et al.*, 2023; Murta *et al.*, 2022; Schuster *et al.*, 2022).

Based on this information, the objective of this study was to characterize the cases of schistosomiasis mansoni in the State of Bahia, from 2007 to 2022, to support strategies capable of minimizing the transmission of the causative agent.

2 Material and Methods

2.1 Ethical aspects

The data used in this study were free, secondary, and the names of the different patients involved in the study were not mentioned, thus respecting the ethics of the study based on Resolution No. 510 of the National Health Council, of April 7, 2016, and the approval of the Research Ethics Committee was not required.

The methodology of an article outlines the procedures employed to conduct the research, including the type of study, sample selection, methods of data collection and analysis, ethical considerations, and limitations of the study. Its detailed and transparent description is essential to ensure the replicability and reliability of the results, in addition to providing a solid basis for the interpretation and generalization of the findings.

2.2 Study location and data collection

A retrospective descriptive epidemiological study was carried out, using secondary notification data between the years 2007 and 2022 of the prevalence of schistosomiasis mansoni (MS) in the State of Bahia.

The population for this study was identified by means of probabilistic linkage of records from the Notifiable Diseases Information System (SINAN). The data collected were obtained through the virtual platform of the Department of Informatics of the Unified Health System (DATASUS) and academic tools, such as online research collections, websites such as Scielo and Google Scholar. The research was developed through a data survey in the State of Bahia, thus analyzing by socioeconomic issues, individuals affected by the disease in the gestational period, clinical form, qualitative analysis, quantitative analysis, confirmed cases per year, confirmed cases per month, municipalities with the highest prevalence rates, municipalities with the highest rates in the state, epidemiology, morbidity, level of education, climatic and economic issues of the state, which contribute to the high prevalence of the disease in general.

2.3. Variables

Qualitative analysis (positive, negative, not performed and unknown) was performed, as well as the clinical form (intestinal, intestinal hepato, splenic hepato, acute, other forms and unknown) and quantitative analysis (zero, one or + eggs). A quantitative and qualitative analysis of the reported cases of patients affected by MS was also performed.

Gender (male, female and unknown), race (yellow, white, indigenous, brown, black and unknown), age group (1 to 4 years, 5 to 7 years, 8 to 14 years, 15 to 19 years, 20 to 39 years, 40 to 59 years, 60 to 69 years, 70 to 79 years, over 79 years of age, unknown, and not informed) and the level of education (illiterate, incomplete elementary school 1st to 4th, complete elementary school, incomplete elementary school 5th to 8th, complete elementary school, incomplete high school, complete high school, incomplete higher education, complete higher education and ignored), as well as cases confirmed by pregnant women (1st trimester, 2nd trimester, 3rd trimester, gestational age unknown, gestational age not informed, not applicable and ignored).

Cases were analyzed according to the number per year, number per month, hospitalization rate per year, and amounts spent annually on patients, in the period from 2007 to 2022.

2.4 Statistical analysis

The data were processed using the Statistical Package for the Social Sciences - SPSS, version 23.0 (Chicago, IL, USA). For the descriptive analysis of the data, simple and relative frequencies were used.

3 Results and Discussion

By analyzing the results (Table 1), it became evident that MS affects a higher percentage of male individuals, with an absolute number of 17,445 reported cases, which corresponds to 56.18% of

the total number of cases. When analyzing the race variable, we can observe that brown individuals obtained the highest number of notifications, with an absolute number of 18,801 cases, which corresponds to 60.55% of the number of notifications registered. In the age group variable, it is possible to observe that individuals between 20 and 39 years old have the highest number of registered notifications, with an absolute number of 12.593 cases, which corresponds to 40.55% of the total number of notifications. When observing the schooling variable, it was found that in most of the notifications, the information regarding the schooling variable was ignored, as there is an absolute total of 12.436 unknown cases, which corresponds to 40.05% of the total number of cases.

Table 1 - Sociodemographic characteristics present in notifications of confirmed cases of schistosomiasis mansoni - 2007 to 2022

Features (*n* = 31,048)	**N**	**%**
Sex		
Male	17.445	56.18
Female	13.594	43.78
Ignored	9	0.02
Race		
Yellow	411	1.32
White	3.167	10.2
Indigenous	172	0.55
Brown	18.801	60.55
Black	4.223	13.6
Ignored	4.274	13.76
Age group		
< 1 year	302	0.97
Between 1 and 4 years	290	0.93
Between 5 and 7 years old	1.553	5
Between 8 and 14 years old	3.286	10.58
Between 15 and 19 years old	3.388	10.91
Between 20 and 39 years old	12.593	40.55
Between 40 and 59 years old	6.979	22.47
Between 60 and 69 years old	1.676	5.39
Between 70 and 79 years old	722	2.32
Over 79 years old	252	0.81
Ignored	5	0.01
Not informed	2	0.006
Schooling		
Illiterate	1.177	3.79
Elementary school (1st to 4th incomplete)	4.829	15.55
Elementary school (4th complete)	3.020	9.72
Elementary school (5th to 8th incomplete)	4.869	15.68
Complete elementary school	1.750	5.63
Incomplete high school	1.305	4.2
Complete high school education	1.336	4.3
Incomplete higher education	110	0.35
Higher education	216	0.69
Ignored	12.436	40.05

Note: N = number of observations.
Source: research data.

In the sociodemographic characteristics analyzed in confirmed cases of schistosomiasis mansoni (MS), it can be observed that infection by the flatworm *Schistosoma mansoni* is predominant in tropical and subtropical areas. Melo *et al.* (2018) relate some risk factors to the prevalence, such as contact with contaminated water, whether linked to recreational, economic or domestic activities; living in communities where basic sanitation is inadequate or absent; the existence of an intermediate host (snail genus *Biomphalaria*); living in rural communities, which develop activities focused on agriculture and fishing; which may cause the highest incidence of MS cases in the state of Bahia.

There was a higher frequency of MS cases in males and browns. It should be noted that the relationship between gender and risk of infection is conditioned by different exposure habits (Silva *et al.*, 2021). However, the predominance of MS transcends the relationship between gender and skin color, because in Brazil, the low socioeconomic level and the low level of education cooperate for the population to be more deprived in terms of housing conditions, health care, knowledge about personal hygiene habits and public policies for basic sanitation (Barbosa; Silva, 2019; Melo *et al.*, 2018).

Regarding the age group, it was observed that there was a predominance of individuals between 20 and 39 years old, who can be considered as economically active, as these individuals are more susceptible to contaminated areas, due to exposure to work in crops, fishing and use of contaminated water for domestic and leisure purposes.

Most of the confirmed cases of MS (Table 2) in the state of Bahia occurred in non-pregnant women. This occurs regardless of individual circumstances; the susceptibility of the parasite is general. Therefore, anyone, regardless of age, sex or ethnic group, once in contact with contaminated water, can contract the infection (Ministry of Health, 4th edition, Brasília/DF 2014).

Table 2 - Number of confirmed cases in pregnant women with schistosomiasis mansoni according to gestational period - 2007 to 2022

Confirmed cases by pregnant women (*n* = 31,048)	**N**	**%**
Q1	45	0.14
Q2	107	0.34
Q3	53	0.17
Gestational age unknown	116	0.37
Gestational age not informed	6.481	20.87
Not applicable	19.988	64.37
Ignored	4.258	13.71

Note: N = number of observations.
Source: research data.

It can be observed that the most common clinical form among the case notifications is the intestinal one (Table 3), with an absolute number of 11,157 cases, which corresponds to 35.93% of the total number of notifications. It is also notorious that in 17,836 notifications, the clinical forms of the affected individuals were not informed, which corresponds to 57.44% of the number of notifications registered.

Table 3 - Clinical form of individuals diagnosed with schistosomiasis mansoni between 2007 and 2022

Forma clínica (*n* = 31.048)	**N**	**%**
Intestinal	11.157	35.93
Hepato intestinal	275	0.88
Splenic hepatos	201	0.64
Acute	1.176	3.78
Other ways	403	1.29
Ignored	17.836	57.44

Note: N = number of observations.
Source: research data.

In the face of literature analysis, the clinical intestinal form had a higher prevalence of cases, due to the fact that the state of Bahia is considered a highly endemic area for schistosomiasis, as it is located in the Brazilian semi-arid region, with a predominant Caatinga biome, presenting the peculiarity of having intermittent streams, which culminate with flooding in irrigation channels, in addition to dams for water supply in periods of drought. All this provides favorable conditions for the development of the life cycle of the flatworm *Schistossoma mansoni* and results in the contamination of most of the autochthonous population, which lives on the margins of these irrigated areas.

The vector of *Schistosoma mansoni* is a gastropod mollusk of the species *Biomphalaria glabrata*, which is found in large numbers in dams and irrigation ditches during all seasons of the year, depositing a large number of eggs that will be ingested by the population through contaminated water or food, causing a higher concentration in the gastrointestinal tract (Bina; Prata, 2003; Lima *et al.*, 2019; Palasio; Chiaravalloti-Neto; Rocha *et al.*, 1995; Palasio *et al.*, 2019; Rocha *et al.*, 1996; Tuan, 2023; Zanardi *et al.*, 2019).

In the qualitative analysis, which characterizes the presence of the causative agent in the feces of affected individuals, it is evident that 13,424 individuals had the causative agent, corresponding to 43.23% of the total notifications. In addition, 14,892 notifications were not added to the information corresponding to the presence of the causative agent, this number corresponds to 47.96% of the total number of case notifications (Table 4).

Table 4 - Qualitative analysis of schistosomiasis m cases. between 2007 and 2022

Qualitative analysis (*n* = 31048)	**N**	**%**
Positive	13.424	43.23
Negative	360	1.15
NO	2.372	7.63
Ignored	14.892	47.96

Note: N = number of observations. NR = Not performed.
Source: research data.

The qualitative analysis carried out in this study aimed to ascertain whether there was the presence of eggs of the causative agent of MS in the feces of affected individuals, since schistosomiasis is a parasitic disease that affects humans, having as its etiological agent the worm *Schistossoma mansoni* (Leite *et al.*, 2017) element.

On the other hand, it was possible to observe that there was a large percentage of notifications where the information corresponding to the qualitative analysis was ignored, so it is evident that there were failures in the act of making the notifications of the cases. The failures may have been caused by the incompleteness of the data or even by laboratory failures, since there are important variations in the positivity of the stool test, depending on factors such as parasite load, laboratory experience and time of infection (Vitorino *et al.*, 2012).

The quantitative analysis is related to the number of disease-causing agents present in the feces of affected individuals, and it was found that in 16,851 individuals there was no presence of eggs of the causative agent, which corresponds to 54.27% of the total notifications, and that 14,197 (45.72%) had one or more eggs in their feces (Table 5).

Table 5 - Quantitative analysis of schistosomiasis m. between 2007 and 2022

Quantitative analysis (*n* = 31048)	**N**	**%**
Zero	16.851	54.27
One or + eggs	14.197	45.72

Note: N = number of observations.
Source: research data.

The quantitative analysis allowed the inspection of the number of eggs of the causative agent of MS that are present in the feces of affected individuals. It was observed that in about 54.27% of the notifications, the total number of eggs found in the feces of the individuals corresponded to zero. This large percentage can be justified by possible failures in the performance of laboratory tests, since the stool test has low sensitivity, especially in areas where *Schistossoma mansoni infections* with a small parasite load predominate (Vitorino *et al.*, 2012).

The evolution of the patients, evaluated according to the year of the recurrent notification of MS cases in the state of Bahia, showed that 42.97% of the notified cases evolved to cure of the individuals, with an absolute number of 13,342 cases, and only 0.18% of the notified cases evolved to the state of death of the individuals, with an absolute number of 58 cases of deaths caused by MS (Table 6).

Table 6 - Confirmed cases according to clinical form and year of notification, Bahia, Brazil

Year	Ign/White	Care	Non-Healing	Schistosomiasis	Other causes	Total
2007	11.983	9.005	74	-	-	21.062
2008	1.598	942	3	1	-	2.544
2009	331	438	4	2	1	776
2010	320	374	9	2	2	707
2011	402	343	6	3	2	756
2012	371	248	3	1	2	625
2013	414	275	7	2	2	700
2014	437	405	2	3	-	847
2015	295	419	13	3	-	730
2016	225	194	5	3	1	428
2017	291	198	4	5	4	502
2018	169	167	5	2	2	345
2019	144	114	5	7	2	272
2020	129	65	4	4	1	203
2021	139	78	6	12	7	242
2022	213	77	7	8	4	309
Total	17.461	13.342	157	58	30	31.048

Source: research data.

The clinical evolution showed that the individuals evolved to the state of cure, and that this positive percentage was obtained through a set of factors, including the rapid and accurate diagnosis. Another factor that contributes to the positive evolution of patients diagnosed with MS is the treatment, which consists of curing the disease, reducing or reducing the parasite load of the host, preventing the evolution to the severe forms, and also minimizing the production and elimination of flatworm eggs, as a form of primary prevention of the transmission of the disease (Arruda; Dantas; Bachur, 2023; Carvalho *et al.*, 2023; Melo *et al.*, 2023).

For the number of cases per year of MS notification in the state of Bahia, in the period from 2007 to 2022, it was observed that the highest numbers of cases recorded occurred in the years 2007

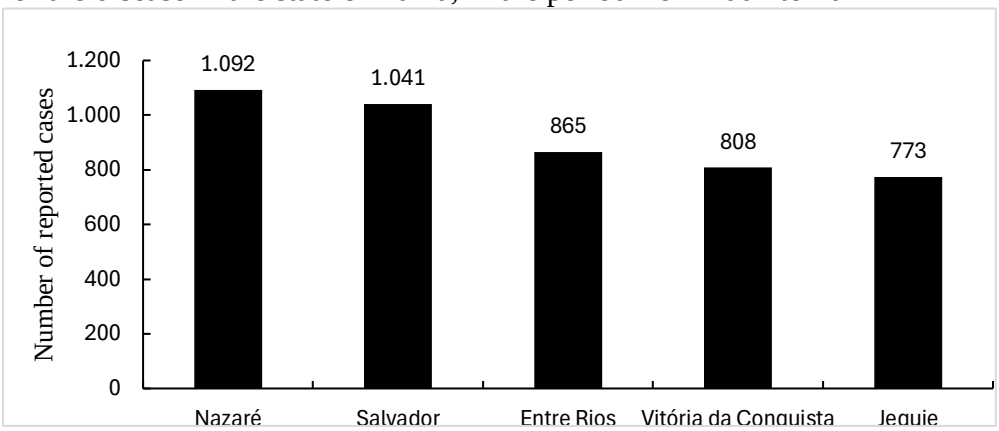
and 2008. In 2007, there was the highest rate of notifications, totaling 21,062 registered cases, consecutively in 2008 a total of 2,554 notifications were registered. In the following years, the number of cases continues in a period of oscillations, expressing its lowest rate of notifications in 2020, with a total of 203 cases registered.

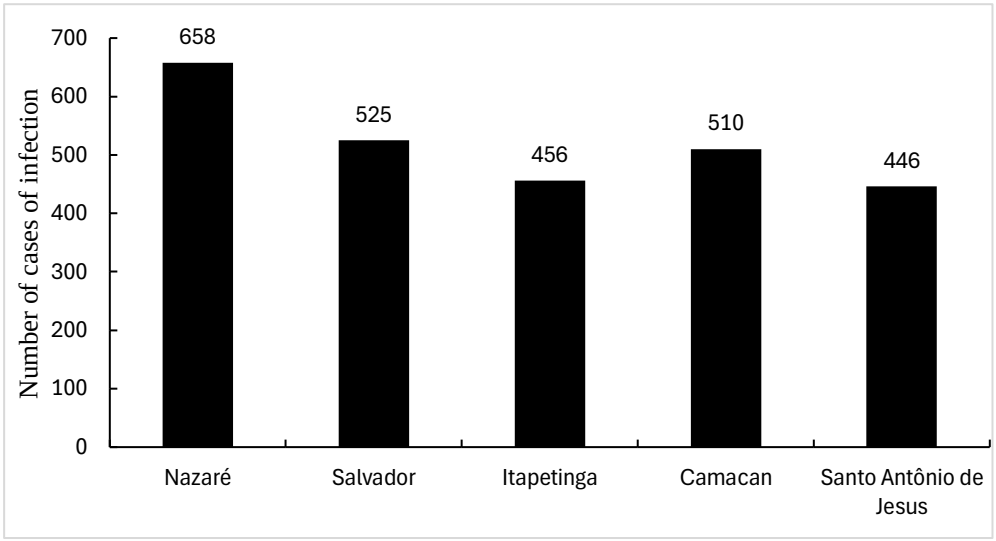
The year 2007 presented high rates of notifications of MS cases, which can be clarified through the analysis of cultural behaviors, especially those that result in the exposure of individuals to water clusters close to places of residence or work (Sobrinho *et al.*, 2020). This increase is linked to the growth in the proportion of the territory of endemic area, and to the successive migratory flows in the development of agricultural activities in the rural area, which enable all favorable conditions for the installation and propagation of the agent *Schistossoma mansoni*. These factors are related to and favor the transmission of the disease, to a greater or lesser extent, according to the local reality (Barreto; Gomes; Barbosa, 2016).

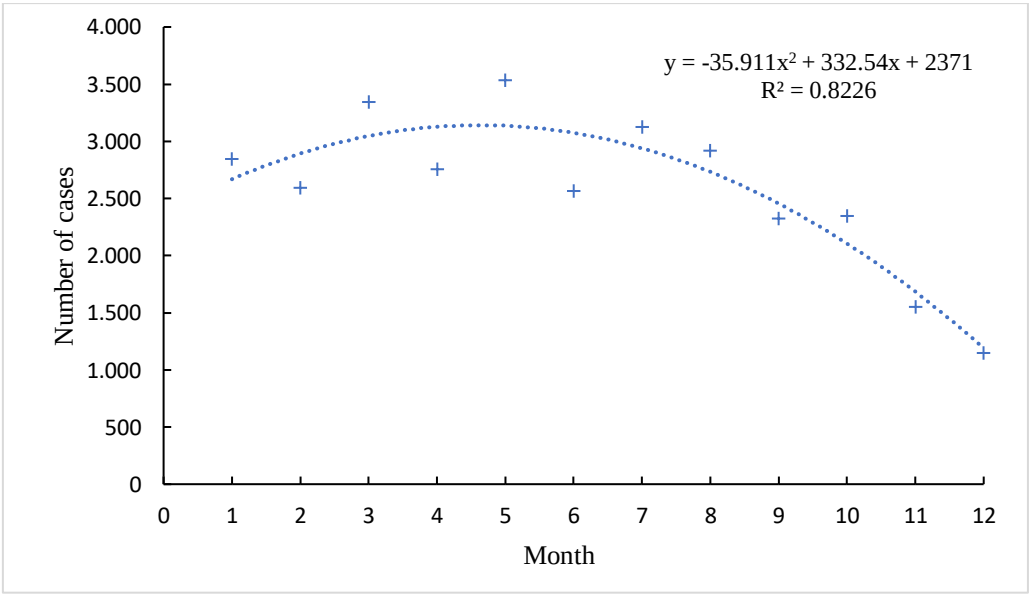
In addition, through the studies carried out, it was possible to observe that there was a sharp reduction related to the number of cases reported in recent years. Thus, some factors may be related to the low notification rates in recent years, among them we can mention the occurrence of individuals possibly affected by MS who did not seek medical care and for this reason did not obtain an accurate diagnosis, disregarded cases, notifications not made by the health departments, and inconsistent data filling may be linked to the reduction of this scenario. In view of this, it is necessary to encourage an improvement in the quality of filling out these records, reducing the fields with blank ignored data, guiding the professionals involved in this action (Frias *et al.*, 2010).

It is verified that even with the reduction in the number of cases analyzed in recent years, it is still necessary to go a long way until an efficient control of the disease can be guaranteed, and in no way can government agencies fail to treat schistosomiasis as a priority in the elaboration of public health policies and actions for prevention, promotion and reduction of cases. In this sense, it is important to achieve the elimination of the disease, which depends, in addition to collective treatment, on the promotion of health education and the provision of adequate living and working conditions among the general population (Inobaya *et al.*, 2015).

Figure 1 - Schistosomiasis mansoni cases by municipality in the state of Bahia. A. Number of case notifications. B. Number of infections. C. Number of cases by months (1. January, 2. February, 3. March, 4. April, 5. May, 6. June, 7. July, 8. August, 9. September, 10. October, 11. November, 12. December), recorded in the municipalities with the highest prevalence rates of the disease in the state of Bahia, in the period from 2007 to 2022







Source: resource data.

The state of Bahia is composed of 417 municipalities, and the five municipalities with the highest number of recurrent notifications of MS cases in the state were selected : Nazaré, Salvador, Entre Rios, Vitória da Conquista and Jequié. Among these, the municipality with the highest number of notifications is the municipality of Nazaré, which holds 3.52% of the total number of notifications registered in the state, with the absolute number of 1,092 notifications registered. The second municipality with the highest number of notifications is the municipality of Salvador, which has 3.36% of the cases registered in the state, with an absolute number of 1,041 notifications registered (Figure 1A).

Figure 1B shows the 5 municipalities with the highest numbers of recurrent infections and MS cases, and it can be observed that the municipality of Nazaré has the highest number of cases, accounting for 4.47% of the cases registered in the state, with an absolute number of 658 cases of infections. The second municipality with the highest number of registered infections is the municipality of Salvador, which has 3.56% of the cases, with an absolute number of 525 cases of registered infections.

The municipalities of Salvador and Nazaré are considered endemic for MS and had the highest number in this study, as they have a high contamination rate, representing 4.47% of the cases registered in the municipality, with an absolute number of 658 reported cases. This disease, the social, cultural and environmental issues of the human being effectively contribute to the acquisition of (Ramos *et al.*, 2007).

Most municipalities in the state of Bahia have a lack of basic sanitation, associated with domestic activities contributing to the increase in notifications, people use rivers inhabited by snails infected by *Schistosoma mansoni,* for washing clothes, dishes, bathing and fishing, making them susceptible to the disease, these are factors that contribute to the continuation of the problem. Thus, this disease presents itself in a population with a precarious socioeconomic and environmental standard (Oliveira *et al.*, 2019; Rey, 2008).

Programs such as basic resources and sanitation actions are capable of solving the problems of the population, sanitary facilities and sewage treatment are very important in this process**.** The fact that the municipalities have an abundant aspect in rivers, lakes and dams favors the presence of intermediate hosts of *Schistosoma mansoni*. It is important to note the need to implement surveillance and control actions for the disease, in order to prevent the establishment of schistosomiasis transmission foci in the municipalities (Souza *et al.*, 2017). The fight against schistosomiasis involves the establishment of sanitary, medical and educational measures that contribute to helping and understanding the population about prevention and how it could be combated (Torres-Vitolas *et al.*, 2023).

In addition, other studies also point out that the absence of leisure options leads the poorest people to seek fun in streams, lakes, public beaches and rivers. Schistosomiasis is an endemic disease in low-income populations (Vuoso, 2022). This action is problematic, because it is in these regions that the trematode that causes schistosomiasis is found, which in adult forms inhabit the mesenteric vessels of the definitive host (man) and in intermediate forms develop into aquatic gastropod snails of the genus *Biomphalaria*. (Santos *et al.*, 2023).

In this study, it was noted that there is a high rate of cases in the municipalities of Nazaré and Salvador, the high prevalence of cases reported in these municipalities may be predominantly linked to the number of health centers and hospitals established in the municipalities. In line with the study developed by Melo *et al.* (2018), the level of education is an essential factor in controlling the parasite, as access to information provides a greater understanding of the importance of health care and personal hygiene, which are necessary measures for the prevention of schistosomiasis mansoni (Barbosa; Silva, 2019).

Figure 1C shows the number of cases reported according to the months of the year, and it is possible to observe that in May there was the highest number of cases. It is noted that the regression is presented in a polynomial curve that signals a drop in cases from the month of May, this can be explained by the strength of the R2 equivalent to 82.26%.

In the first half of the year, referring to the months of May to September, where the season in evidence is winter, the numbers of contaminated individuals rose significantly, which may be strongly related to the precarious environmental and sanitary conditions (Katz, 2018).

This growth in cases is linked to the fact that at this time of year, with the increase in the rainfall rate, it influences the appearance of floods, and acts directly on the development, proliferation and greater spread of the parasite. Therefore, environmental conditions, such as the increase in the volume of rivers, and the overflow of lagoons, function as a home for the larvae and favor the reproduction of snails of the genus *Biomphalaria.* In addition, schistosomiasis is highly prevalent in tropical and subtropical regions of the world and is considered a serious socioeconomic and public health problem, as it increases the incidence and morbidity rates related to the disease (Cardoso *et al.*, 2021).

Furthermore, socioeconomic conditions, such as poor basic sanitation, difficult access to medical care, and severe poverty, contribute to the maintenance of the schistosomiasis transmission cycle (Soares *et al.*, 2019). In this way, the population, which is deprived of this right, because they are in contact with water, end up being contaminated. But also, other factors, in addition to basic sanitation, act as conditioning factors, and contribute to the occurrence of schistosomiasis in a locality, highlighting socioeconomic level, occupation, leisure, level of education and information of the population exposed to the disease. These precedents are related to and favor the transmission of

the disease, to a greater or lesser extent, according to the local reality (Barreto; Gomes; Barbosa, 2016).

4 Conclusion

The profile of patients with schistosomiasis mansoni in Bahia is mostly composed of brown men, aged between 20 and 39 years. Patients tend to evolve to cure, and death rates are reduced. In addition, seasonal variations were noted, with a higher rate of cases in the first half of the year. The municipality of Nazaré had the highest number of cases. In addition, the lack of accurate records through the evaluation forms showed the need to improve the notification and registration system.

In this scenario, this study provides information that can be used as subsidies by health agencies for the promotion of strategies, and the setting up of planning and implementation of preventive measures to reduce and control cases of schistosomiasis mansoni in the state of Bahia.

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