

THE ROLE OF PRIMARY HEALTH CARE FOR THE COPING OF SCHISTOSOMIASIS MANSONI: A SYSTEMATIC REVIEW IN BRAZIL

ATUAÇÃO DA ATENÇÃO PRIMÁRIA EM SAÚDE PARA O ENFRENTAMENTO DA ESQUISTOSSOMOSE MANSÔNICA: UMA REVISÃO SISTEMÁTICA NO BRASIL

ACCIÓN DE LA ATENCIÓN PRIMARIA DE SALUD PARA COMBATIR LA ESQUISTOSOMIASIS MANSONI: UNA REVISIÓN SISTEMÁTICA EN BRASIL

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ABSTRACT

Objective: To investigate, estimate and diagnose the role of Primary Health Care (PHC) in coping with schistosomiasis mansoni in Brazil. **Methods:** This is a systematic review study to evaluate the performance of PHC in the context of schistosomiasis, since the creation of the Community Health Agents Program (PACS). Data were obtained using the PRISMA methodology (1991-April/2021). **Results:** The search identified 14 works, most of them developed in the state of Pernambuco. The findings of this study show a relatively low number of studies addressing Primary Care as the main health policy for basic care for schistosomiasis, as well as the fragility of articulation between surveillance and PHC. **Conclusions:** It was identified the need for more studies that discuss PHC as an important level of care and a viable strategy for the control of schistosomiasis, which still maintains incipient actions contributing to the disease persisting as a public health problem in Brazil. **Descriptors:** Primary Health Care; Schistosomiasis; Family Health Strategy; Family Health Program.

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RESUMO

Objetivo: Investigar, estimar e diagnosticar a atuação da Atenção Primária a Saúde (APS) no enfrentamento da esquistossomose mansônica no Brasil. **Métodos:** Trata-se de um estudo de revisão sistemática para avaliar a atuação da APS no contexto da esquistossomose, desde a criação do Programa de Agentes Comunitários de Saúde (PACS). Os dados foram obtidos por meio da metodologia do PRISMA (1991- abril/ 2021). **Resultados:** A busca identificou 14 trabalhos, a maioria desenvolvida no estado de Pernambuco. Os achados deste estudo mostram um quantitativo relativamente baixo de trabalhos abordando a Atenção Primária como principal política de saúde de cuidados básicos para esquistossomose, assim como a fragilidade de articulação da vigilância com a APS. **Conclusões:** Identificou-se a necessidade de mais estudos que discutam a APS como importante nível de atenção e estratégia viável para o controle da esquistossomose, que ainda mantém ações incipientes contribuindo para que a doença persista como um problema de saúde pública no Brasil.

Descritores: Atenção Primária à Saúde; Esquistossomose; Estratégia Saúde da Família; Programa de Saúde da Família.

RESUMEN

Objetivo: investigar, estimar y diagnosticar el papel de la Atención Primaria de Salud (APS) en el enfrentamiento de la esquistosomiasis mansoni en Brasil. **Métodos:** Se trata de un estudio de revisión sistemática para evaluar el desempeño de la APS en el contexto de la esquistosomiasis, desde la creación del Programa de Agentes Comunitarios de Salud (PACS). Los datos se obtuvieron mediante la metodología PRISMA (1991-abril/2021). **Resultados:** La búsqueda identificó 14 obras, la mayoría desarrolladas en el estado de Pernambuco. Los hallazgos de este estudio muestran un número relativamente bajo de estudios que abordan la Atención Primaria como la principal política de salud para la atención básica de la esquistosomiasis, así como la fragilidad de la articulación entre la vigilancia y la APS. **Conclusiones:** Se identificó la necesidad de más estudios que discutan la APS como un importante nivel de atención y una estrategia viable para el control de la esquistosomiasis, que aún mantiene acciones incipientes contribuyendo a que la enfermedad persista como problema de salud pública en Brasil.

Descriptorios: Primeros auxilios; esquistosomiasis; Estrategia de Salud de la Familia; Programa de Salud de la Familia.

INTRODUCTION

Considered endemic in the countries of America, Asia and Africa, schistosomiasis is the most important waterborne parasitic disease in America, where it is estimated that 240 million people are infected worldwide.^{1,2} In Brazil, there are approximately 1.5 million people infected, characterizing the country as the most endemic in the Americas. For decades,

problem in the country³, mainly related to insufficient sanitation measures to control transmission.⁴

The fight against schistosomiasis in Brazil began with the Special Schistosomiasis Control Program (PECE), created in 1975 by the Superintendency of Public Health Campaigns (SUCAM). This program was limited to coproscopic investigations, mass chemotherapy treatments and treatment of breeding sites of

epidemiological importance with the use of molluscicides. In the 1980s, PECE was replaced by the Schistosomiasis Control Program (PCE) with actions focused on the diagnosis and treatment of *Schistosoma mansoni* carriers.⁵

At the same time, in 1991, the Ministry of Health formulated the Community Health Agents Program (PACS), whose initial objective was to reduce infant and maternal mortality, especially in the Northeast and North, through access to health services in the most vulnerable territories. Due to its preventive nature, this program was extended to the entire country, given the relevance of the activities carried out by agents in basic municipal health services, focusing on the family and not just the individual.⁶

Based on the positive impact of the PACS, and when considering the need to add other professionals to work alongside the agents, the Ministry of Health implemented the Family Health Program (PSF) in 1994, made up of multi-professional family health teams with the aim of to promote, protect and restore the health of the individual and the community.⁷ After a few years, the PSF was defined as a “Family Health Strategy” (ESF). As a result, on March 28, 2006, through Ordinance No. GM/648, the Ministry of Health published the National Primary Care Policy (PNAB),

considered a historic milestone for the national consolidation and expansion of the ESF in Brazil.⁸

Scholars point out that Primary Health Care (PHC) should be the main gateway into the Unified Health System, being responsible for around 80% to 90% of basic health care. With regard to schistosomiasis, this should be the main gateway for communities to access, diagnose and treat parasitosis.⁸⁻⁹ In Brazil, the ESF is distributed in 76.8% of Brazilian municipalities, and in the region Northeast, the area with the greatest endemicity of the disease, PHC coverage is 87.1%.¹⁰ Currently, municipalities are responsible for carrying out epidemiology and schistosomiasis control actions, which are included in PHC programming. Furthermore, these actions are conditioned on the implementation of public policies that are the responsibility of municipal managers.¹¹

In this context, considering that the actions of the PCE in PHC consist of reducing the occurrence of severe forms of the disease, the evolution of deaths and the reduction of the prevalence of infection to minimize the risk of transmission, this study aimed to investigate, estimate and diagnose the performance of PHC in combating schistosomiasis mansoni in Brazil based on a systematic review of the literature.

MATERIALS AND METHODS

This is a systematic review study that aims to evaluate the performance of Primary Health Care as a basic health policy in the context of schistosomiasis mansoni in Brazil, since the creation of PACS in 1991 to the present day. To apply the method, the following steps were adopted:

- (1) Delimitation of the topic and formulation of the research question;
- (2) Establishment of inclusion and exclusion criteria;
- (3) Search for publications in selected databases;
- (4) Classification and analysis of the information found in each manuscript;
- (5) Analysis of chosen studies;
- (6) Presentation of the results found and
- (7) Inclusion, critical analysis of findings and synthesis of the literature review.

To formulate the leading question, the PICO strategy was applied (P – population, I - intervention, C – comparison, O – outcome) which translated into Portuguese means respectively: population, intervention, comparison and expected results, recommended model for reviews. In this way, following the first stage, the question was created: “What are the actions and recommendations developed since the creation of the PACS to combat schistosomiasis mansoni in Brazil?”.

For the inclusion criteria, Brazilian studies were defined, quantitative and qualitative, published from January 1, 1991 to April 30, 2021, which answered the guiding question and with full texts available online in English and/or Portuguese. Monographs, articles, dissertations and theses were considered. Opinion articles, guides, manuals, simple and expanded summaries were excluded, as well as those studies that did not present the specific object of this review in the title, abstract or text.

The research was carried out in electronic databases: Scientific Electronic Library Online (Scielo), National Library of Medicine (PubMed) and Regional Portal of the Virtual Health Library (VHL). To select publications, health descriptors were considered, in Portuguese and English, combined with Boolean operators: Primary Health Care OR Family Health Strategy OR Family Health Program AND Schistosomiasis and Primary Health Care OR Family Health Strategy OR Family Health Program AND Schistosomiasis.

For the process of systematizing the selection of studies, the authors opted for the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) methodology, a checklist with 27 items and 1 flowchart that aims to assist authors in

improving the quality of systematic reviews.¹³

The selection of studies initially occurred through prior reading of the titles and abstracts, when the criteria were met, the texts were read in full. Furthermore, the articles were cross-referenced in the Microsoft Excel 2016 spreadsheet using the VLOOKUP formula to exclude duplicates of the work.

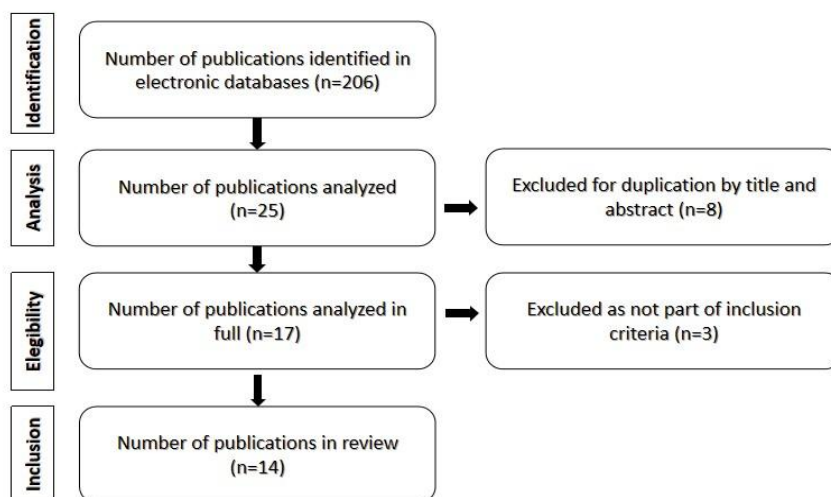
In the analysis process, data relating to the periodical of publication (title, year of publication, database) were highlighted; the authors (names) and the study (objective, type of study, data source and main results). The data was extracted and organized in spreadsheets, presented as a table and figures created in Microsoft® Excel and Microsoft® PowerPoint version 2016. There

were no disagreements about the inclusion of the manuscripts between the authors.

APPROACHES AND RESULTS

In the period from January 1, 1991 to April 30, 2021, 206 published works were identified on the role of PHC in combating schistosomiasis mansoni. The distribution of findings by database occurred at the following frequency: Scielo: n=12 (5.8%), Pubmed: n=132 (64.1%) and VHL: n=62 (30.1%). Subsequently, after reading in full, 190 (92.2%) works that did not answer the guiding question of this research were excluded. After applying the PRISMA method, the study composition flowchart was structured (Figure 1) demonstrating the number of 14 studies selected for analysis (Table 1).

Figure 1. Flowchart of selection of studies on the role of primary health care in combating schistosomiasis mansoni through PRISMA, Brazil, 2022.

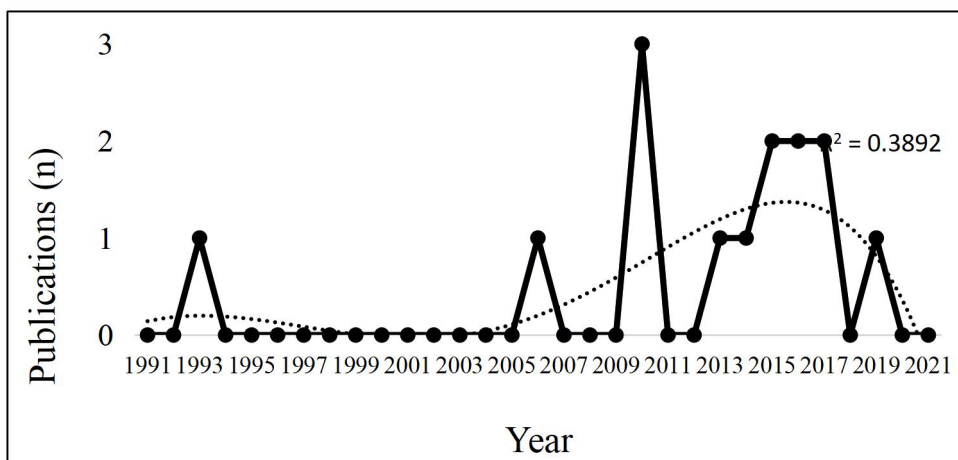


Source: Authors, 2022.

Regarding the data source, it was observed that the majority of studies used only primary data (n=10; 71.4%). Regarding the approach among the selected studies, it was identified that the majority represented by 57.1% (n=8) dealt with diagnosis, treatment and/or control, while 42.8% (n=6) addressed the ESF performance (Table 01).

Regarding the type of academic work published, 57.1% (n=8) were represented by scientific articles and 42.9% by monographs, dissertations and theses (n=6) (Table 01). The year with the most published studies was 2010, representing 21.4% of total publications (n=3). There is an interval of more than 10 years of publication from 1994-2005 (Figure 2).

Figure 2. Distribution of published studies that highlighted schistosomiasis in primary health care by year, in the period 1991-2021.



Source: Authors, 2022.

Regarding the location of the studies, it was observed that Pernambuco concentrated half of the studies carried out (n=7; 50%), followed by the state of Minas Gerais (n=6; 42.9%) and Espírito Santo (n=1; 7.1%).

Table 1. Categorization of studies on the role of primary health care to combat schistosomiasis mansoni in Brazil in chronological order of publication.

Year of Publication	Reference	Title	Data source	Goal	Electronic database	Type of study	Approach	Results
1993	Barbosa et al.	Modelo Alternativo para o Controle da Esquistossomose: Estado Atual do Projeto no Estado do Espírito Santo, Brasil	Primary data	Build a schistosomiasis control model developed in integration with local health services and with the active participation of the community, to reduce prevalence and incidence indicators, and the intensity of infection in the study area.	PubMed e Scielo	Article	Diagnosis, treatment and/or control	The intervention phase, which began in October 1992, involves maintaining control measures in their full extent and depth for 36 months (September 1995). The areas of social sciences and organization of health services, alongside the epidemiology group, are intensifying their actions.
2006	Carvalho DP	Prevalência da Esquistossomose Mansoni em Medina, Vale do Jequitinhonha Minas Gerais	Secondary data	To know the prevalence of this parasite in the region served by the Family Health Program Team, Equipe	BVS	Article	Diagnosis, treatment and/or control through nursing/me	Of the 2,925 medical records analyzed, only 1,380 had records of the results of the fecal parasitological examination. 248 positive tests for schistosomiasis

				Bonfim, in Medina.			dical consultation	mansonii were found. The prevalence in this study was high (17.97%), confirming that it is an important public health problem in the municipality.
2010	Reis et al.	Accessibility to and utilisation of schistosomiasis-related health services in a rural area of state of Minas Gerais, Brazil	Primary and secondary data	To compare the accessibility and utilization of schistosomiasis diagnosis and treatment services in a small village and surrounding rural area in the north of the state of Minas Gerais.	PubMed e Scielo e BVS	Article	Diagnosis, treatment and/or control through parasitological survey	There was considerable variation in the accessibility and use of schistosomiasis-related health services between the central village and the rural area. This suggests that the schistosomiasis control program should be incorporated more quickly into primary health services.
2010	Farias GCF	Avaliação do Grau de Implantação do Programa de Controle da Esquistossomose no Município de Tracunhaém, Zona da Mata, Pernambuco,	Primary data	To evaluate the degree of implementation of the schistosomiasis control program (PCE) in the municipality of Tracunhaém.	BVS	Monography	Diagnosis, treatment and/or control through questionnaires	In the municipality of Tracunhaém, the schistosomiasis control program for both primary care and health surveillance was considered partially implemented, where it reached, respectively, 78.5 points and 77.5 points.

		Brasil						
2010	Garcia GCG	Perfil de Morbimortalidade dos Residentes do Município de Ferreiros-Pernambuco, no Período de 1997 A 2007	Secondary data	To analyze the morbidity and mortality profile of residents of the municipality of Ferreiros - PE, from 1997 to 2007.	BVS	Monography	ESF's actions through Sinan and Siab	The morbidity and mortality profile of the municipality of Ferreiros demonstrated by the results found reveals that the municipality needs to improve health care, as the impact of diseases and injuries on this society in particular is increasing.
2013	Quites HFO	Avanços e Desafios do Programa de Controle da Esquistossomose em Municípios do Vale do Jequitinhonha em Minas Gerais	Primary data	Analyze the organization and operationalization of schistosomiasis surveillance and control actions after its decentralization process in the municipalities belonging to the Regional Health Management of Pedra Azul, Minas Gerais.	BVS	Thesis	Diagnosis, treatment and/or control through questionnaires	There are still few surveillance and infection control strategies in PHC in this endemic area. There is no uniformity of actions and effective integration between these professionals and the PCE. There is a lack of monitoring and evaluation in the execution of the activities carried out. This scenario associated with the social and structural problems of the municipality favors the permanence of this endemic in the region.

2014	Oliveira TA	A Esquistossomose no Distrito de Águas Claras (Mariana-Minas Gerais)	Literature review	Carry out a theoretical in-depth study of schistosomiasis, presenting the actions carried out by the Águas Claras Family Health Strategy, during 2013, in the approach to this pathology.	BVS	Monography	ESF's activities	It was then found that not only treatment is sufficient, but there is a need to develop an effective vaccine associated with ongoing health education for the population.
2015	Melo MISB	Análise da Implantação das Ações de Controle da Esquistossomose na Estratégia de Saúde da Família: um estudo de caso em localidade litorânea vulnerável do estado de Pernambuco	Primary data	Evaluate the implementation of schistosomiasis control actions developed by the EqSF in a coastal location vulnerable to the transmission of the disease in the State of Pernambuco.	BVS	Dissertation	ESF performance through questionnaires	The context analysis showed that the Municipality of Ipojuca has an advanced management capacity to manage the PCE in the ESF, however, it proved to be inefficient in properly conducting the implementation of the intervention studied in Serrambi, due to the fragile government project and the lack of capillarization of favorable factors for Serrambi.
2015	Quinino LRM	O Programa de Controle da	Primary data	To evaluate the implementation of the	BVS	Thesis	Diagnosis, treatment	Deficiencies in knowledge about clinical practice and

		Esquistossomose: uma análise de implantação em municípios do estado de Pernambuco, Brasil, entre 2010-2012		Schistosomiasis Control Program in municipalities in the state of Pernambuco, Brazil, between June 2010 and July 2012.			and/or control through questionnaires	epidemiology were identified, which obscured the comprehensive vision and discouraged articulation with other sectors. Factors such as non-formalization of objectives, incipient management culture, centralization of decisions, poor organizational climate and lack of structure contributed to the non-implementation of actions.
2016	Quites et al.	Evaluation of schistosomiasis control activities in the Family Health Strategy in municipalities in the Jequitinhonha Valley, Minas Gerais, Brazil	Primary data	Analyze the quality of schistosomiasis diagnosis, treatment and control actions in municipalities belonging to an endemic area in Minas Gerais.	PubMed, Scielo e BVS	Article	Diagnosis, treatment and/or control through questionnaires	Monitoring and evaluation of services offered in PHC for schistosomiasis control activities are still incipient in municipalities. There is no uniformity in the actions developed, nor a definition of strategies aimed at controlling the infection. Surveillance and control are compromised due to fragmentation, lack of planning, uncertainty and slowness in the data collected and the distance

								between ESF and PCE.
2016	Caraciolo; Melo; Quinino	Avaliação normativa das ações dos enfermeiros da saúde da família no controle da esquistossomose em Pernambuco	Primary data	Carry out a normative assessment of schistosomiasis control actions regarding the role of EqSF nurses in the state of Pernambuco.	Scielo e BVS	Article	ESF performance through questionnaires	There is difficulty on the part of nurses in complying with what is recommended for the effective control of schistosomiasis, as well as the completeness of care and surveillance actions. There is also a tendency for nurses to maintain the characteristics of centralized, verticalized and disintegrated health care models the context of the population.
2017	Costa et al.	Programa de Controle da Esquistossomose: avaliação da implantação em três municípios da Zona da Mata de Pernambuco, Brasil	Primary data	Evaluate the implementation of Schistosomiasis Control Program (PCE) actions in three municipalities in Mata Sul de Pernambuco.	Scielo	Article	Diagnosis, treatment and/or control through questionnaires	We can see a weakness in the municipalities studied regarding malacology and the implementation of actions aimed at health education.

2017	Santos et al.	Doenças Negligenciadas no Município de Sabará: casos, portadores e percepções	Primary and secondary data	To understand the epidemiological situation, the sociodemographic profile of its carriers, and to assess the perception of ESF professionals on aspects related to the disease.	BVS	Article	ESF performance through Sinan and questionnaires	It can be seen that there is a lack of knowledge about the main endemic diseases, vectors and intermediate hosts, a lack of knowledge about the DNS service flow, insufficient coordination between Primary Health Care and other levels of care, and the lack of information made available by PHC to the population.
2019	Dubeux et al.	Avaliação do Programa de Enfrentamento às Doenças Negligenciadas para o controle da esquistossomose mansônica em três municípios hiperendêmicos, Pernambuco, Brasil, 2014	Primary data	To evaluate the implementation of actions to control schistosomiasis mansoni from the Program to Combat Neglected Diseases in three municipalities in Pernambuco, Brazil.	PubMed, Scielo e BVS	Article	Diagnosis, treatment and/or control through questionnaires	The insufficiency and Professional turnover were relevant as difficulties presented. there was also mention of inadequate physical conditions; however, technicians and managers were motivated to act on schistosomiasis control actions provided for in the SANAR program.

Source: Authors, 2022.

DISCUSSION

This systematic review identified a relatively low number of works that relate PHC as the main basic care health policy to compose intervention measures for schistosomiasis when compared to other publications at this level of care on another topic (n=43)¹⁴, the which denotes a scarcity for this approach. In 1993, a group of researchers in the city of Espírito Santo wrote about a proposal for a schistosomiasis control model integrating all levels of care and management, from a social perspective on the health-disease process and collective education.¹⁵

A study¹⁶ pointed out the deficiency in the implementation of the Schistosomiasis Control Program in a municipality in Pernambuco, a reality that was also identified in another study¹⁷ which highlighted the lack of uniformity of actions and effective integration between PHC professionals and the PCE in a municipality of Minas Gerais. Despite these deficiencies, these studies highlighted that the process of decentralization of health actions to municipalities represented a positive advance in terms of expanding management power.¹⁸ However, it is necessary to plan strategies according to the local reality and that actions between primary care, health surveillance and the PCE are strengthened

so as not to compromise the comprehensiveness of care.

To obtain effective actions to control schistosomiasis, it is necessary to highlight the importance of the population's access to health services. A survey carried out in a municipality in Minas Gerais concluded that there is considerable variation between access and use of health services related to schistosomiasis.¹⁹ Populations in rural areas have limited access to diagnosis and treatment, being more affected by schistosomiasis. disease, as in addition to being communities with greater social vulnerability, they reside in unhealthy environments. Primary care is responsible for ensuring access to diagnostic and laboratory health support, in accordance with the National Primary Care Policy.²⁰

The fragility between actions to combat and control the disease is reflected in negative impacts that contribute to schistosomiasis continuing to be a public health problem. The work carried out in Pernambuco with a historical series of ten years, revealed that the municipalities needed improvements in health care, as the morbidity and mortality profile due to schistosomiasis was increasing in the period studied.²¹ In this same state, another study¹¹, highlighted some weaknesses in controlling the disease, such as the insufficiency and turnover of professionals and inadequate

physical conditions, despite the technicians and managers having shown motivation to act in the actions to control schistosomiasis provided for in the Program to Combat Neglected Diseases – Sanar.²²

The operationalization aspects of the PCE in PHC23-24 refer to an insufficient human resources framework, exceptionally Community Health Agents (CHA) for effective coverage of the registered population. Researchers demonstrated that ACS's have better knowledge of neglected diseases, including schistosomiasis, when compared to nurses and nursing technicians/aides.²⁵ The proportionality of human resources places the ACS as the territory's social educator, acting concomitantly with the Agents. of Endemic Diseases (ACE). However, Ordinance No. 2,436 of September 21, 2017 fragments the actions of the ACS, mischaracterizing the nature of its educational and social work.^{20,}
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The study carried out with the ESF in Pernambuco reported that there is difficulty among nurses in complying with recommendations for the effective control of schistosomiasis, as well as the completeness of care and surveillance actions. The authors of this same study also highlight a tendency of these professionals to maintain the characteristics of centralized, verticalized

and disintegrated health care models from the context of the population.²⁷

According to PNAB (2017), common responsibilities between the ACS and ACE are the development of health promotion activities; prevention of diseases and injuries, especially those most prevalent in the territory; and health surveillance, through regular home visits and individual and collective educational actions. Furthermore, the activity for these professional categories is the identification and recording of situations that interfere in the course of diseases or that have epidemiological importance related to environmental factors, carrying out, when necessary, blocking the transmission of infectious diseases and injuries, such as schistosomiasis.²⁰ Considering the above, it is highlighted that the coordination and development of surveillance and control actions between ACS and ACE need to be strengthened within health teams so that there are no professionals who are more overloaded than others and compromise effectiveness of interventions.

Thus, among the factors that weaken the coordination of PHC in combating and controlling schistosomiasis, one can mention the lack of knowledge about the disease. Studies have identified deficiencies in knowledge about the clinical and epidemiology of the disease on the part of

professionals, which obscured the comprehensive vision and discouraged coordination with other sectors. There was evidence of a lack of knowledge about the main endemic diseases, vectors and intermediate hosts; as well as a lack of knowledge about the flow of care on the part of PHC professionals.²⁴⁻²⁵

This lack of knowledge among professionals about the disease, treatment and transmission leads to under-registration, incompleteness and under-reporting, as such information is an important instrument for constructing the health situation through investigation at the site of infection and delimitation of the risk situation²⁸, as well as the recording and publicity of this information through Health Information Systems. In this sense, the persistence of this problem encouraged the Ministry of Health to promote, in 2017, the free distance learning course entitled “Clinical Management and Epidemiology of Schistosomiasis in Primary Care”, as a strategy to support the updating of professionals who work in PHC.²⁹

Furthermore, among the main actions developed in PHC in relation to schistosomiasis, it is possible to highlight the diagnosis and treatment to achieve control and cure of the disease.⁸ A study carried out based on parasitological examinations of feces, showed a high

prevalence (17.9%) of parasitosis in Vale do Jequitinhonha-MG, a municipality considered endemic. The author highlights that controlling the disease is complex and must involve the treatment of schistosomiasis cases.³⁰ Therefore, timely diagnosis and treatment carried out by primary care reduces the evolution of its severe forms and interrupts the disease transmission cycle.³¹⁻³²

According to the basic care notebook³³, malacology activities for capturing and identifying snails, identifying and mapping water collections of epidemiological importance and mobilizing the community to control intermediate hosts of schistosomiasis are the responsibilities of Endemic Disease Control Agents, It is the role of the ACS to communicate the existence of snail breeding sites to the supervising instructor in the area. In this sense, a weakness was reported in the municipalities studied regarding malacology actions and strategies aimed at health education.³⁴ From a biological and epidemiological point of view, malacology actions in identifying the vector species are of great importance for tracing the profile transmission of the disease in the locality, identifying places at greater risk for the occurrence of the disease.³⁵

Although the results of this study are only descriptive, the evidence presented here,

through the use of robust analysis methods with primary and secondary data, guarantees reliability and precision in the information. This approach supports descriptive epidemiology, fundamental for identifying and characterizing changes over time, and can be used as an instrument to redirect new planning and action strategies.

In this research, it was possible to verify a scarcity of academic works focusing on primary health care actions aimed at schistosomiasis when compared to other themes in PHC. There does not appear to be investment in strengthening the importance of this level of care as the main gateway into the Unified Health System to combat this disease.

CONCLUSIONS

Finally, the need for more scientific work on schistosomiasis in PHC was observed as an important level of attention to minimize the impact of schistosomiasis. It is noteworthy that actions to control schistosomiasis are still incipient in PHC, which contributes to the disease persisting as a public health problem in Brazil. There is a need for greater incorporation of PCE at this level of health care, so that the disease is approached horizontally, considering infected individuals and the social context in which they are inserted, as well as strengthening notification, diagnosis and

treatment actions. timeliness of cases, health education, continuing education for health professionals who work in PHC and health surveillance actions (environmental, parasitological and malacological).

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