

# Scope of the School Health Program in the municipality of Vitória de Santo Antão in the State of Pernambuco, Brazil

## *Abrangência do Programa Saúde na Escola em Vitória de Santo Antão-PE*

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**ABSTRACT** The research aimed to describe, through an evaluation study in 2016, the scope of the School Health Program (PSE) in the municipality of Vitória de Santo Antão State of Pernambuco in the Northeast region of Brasil. Data were collected between October 2016 and February 2017 using documental source from the Municipal Health and Education secretaries and the Regional Education Management. The municipality had 52 registered schools and 26 carried out some activity related to the program. The actions encompassed component I activities such as 'Anthropometric assessment', 'Verification of vaccination status', 'Oral health promotion and assessment', for example. The themes of component II were also verified such as 'Promotion of body practices and physical activity', 'Food safety and healthy eating actions', 'Promotion of Environmental Health and sustainable development', with focus on arboviruses. The number of actions in the urban area was higher when compared to the rural area. A good number of registered schools contrasting with the low activation (implementation) of the PSE, or even a 'very bad' reach of students, permeated the survey answers, enabling the solidification of subsidies of essential questions to new interventions in this research field and providing other knowledges about the program to the general public.

**KEYWORDS** School health service. Health programs and plans. Public policy. Program evaluation.

**RESUMO** A pesquisa objetivou descrever, por meio de um estudo de avaliação, o alcance do Programa Saúde na Escola (PSE) em Vitória de Santo Antão-PE, no ano de 2016. Os dados foram coletados entre outubro de 2016 e fevereiro de 2017, mediante fonte documental das Secretarias Municipal de Saúde, de Educação e da Gerência Regional de Educação. O município apresentou 52 escolas cadastradas, e 26 realizaram alguma atividade referente ao programa. As ações englobaram atividades do componente I, como, por exemplo, 'Avaliação antropométrica', 'Verificação da situação vacinal', 'Promoção e avaliação da saúde bucal'. As temáticas do componente II também foram verificadas, como 'Promoção das práticas corporais e atividade física', 'Ações de segurança alimentar e alimentação saudável', 'Promoção da saúde ambiental e desenvolvimento sustentável', com foco nas arboviroses. O quantitativo de ações na zona urbana foi superior quando comparada a área rural. Um bom número de escolas cadastradas contrastando com a baixa ativação (implementação) do PSE ou, ainda, um alcance 'muito ruim' dos estudantes permearam as respostas da pesquisa, possibilitando a solidificação de subsídios para o surgimento de questionamentos essenciais às novas intervenções nesse campo de pesquisa e fornecendo outros conhecimentos sobre o programa para o público geral.

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**PALAVRAS-CHAVE** Serviços de saúde escolar. Planos e programas de saúde. Política pública. Avaliação de programas e projetos de saúde.



## Introduction

Although adolescence is generally seen as a life stage when one is unlikely to get ill, it is a time when the social determinants of health have a major impact<sup>1</sup>. Thus, the health-disease process is predominantly influenced by factors such as access to education, prevalent violence, and social inequalities; and the negative impact of such conditions on adolescents makes them vulnerable to diseases and risks such as Sexually Transmitted Diseases (STD) and AIDS, alcohol and drug abuse, and death from external causes<sup>2</sup>.

Accordingly, addressing this population group's health with innovative actions through intersectoral and interdisciplinary interventions is a priority that demands strategic targeting of public policies. The objective of such policies is to promote the full development of the adolescents' potential in their physical, psychological, and social aspects as well as to provide interventions to encourage good habits, or change the bad ones, in order to reduce behaviors considered risky to the overall health of young people<sup>1</sup>.

Schools, for being an environment where a large number of adolescents and young people gather, have become active dissemination and incentive instruments for healthy habits and practices, mostly carried out through health education programs and actions, such as the School Health Program (PSE). It was implemented in 2007 as a strategy developed by the Ministries of Health and Education considering intersectoral policies that had, among its objectives, to address the vulnerabilities that compromise the full development of Brazilian children, adolescents, and youth<sup>3</sup>.

During the study period of 2016, the PSE was structured in five components that defined the actions to be developed by municipalities in schools; two of these, components I and II, assigned actions that should be addressed directly to the public inserted in their target institutions. The first component's actions referred to the clinical and psychosocial

evaluation aimed at obtaining information about growth, development, and mental health of children, adolescents, and young people. In component II, the proposals brought strategies for health promotion and prevention of diseases and illnesses intended to help students make healthier choices about their health<sup>2-4</sup>.

The themes and practices in the components mentioned earlier ranged from checking the vaccination card, anthropometric assessment, oral health analysis, promotion of a culture of peace, body practices, physical activity, among others, and should be handled according to their importance in the institutions with no rigidity on the part of the program guidelines for the total approach.

In its conception, the PSE is considered as the 'current expression of health-promoting schools in Brazil'<sup>5</sup>, expressed in a public policy that has, mainly, the intention of improving the quality of students' life and their school environment through the continued practice of health education. Nowadays, after 15 years of the PSE implementation in the country, the studies and interests on it are growing remarkably. Aware of the potential between the threads of that strategy, this study outlines the PSE's reach and the main themes addressed in the practices conducted in Vitória de Santo Antão-PE.

## Material and methods

This is an evaluation study, based on secondary information obtained through documentary sources from the Municipal Secretaries of Health, Education, and Regional Education Management (GRE) of Vitória de Santo Antão-PE. At the time, PSE used its own information system to detail the actions of component II which is the Integrated System of Monitoring, Execution, and Control (SIMEC). However, this system was outdated which ended up directing the search for data to the documentary sources found in the places where the program was developed.

The collection was carried out between October 2016 and February 2017 using the reports filed in the visited institutions. The documentation filed in the secretaries was manually checked in search of quantitative descriptions regarding the number of schools in the municipality; number of schools included in the PSE; number of students in each institution, number of students contemplated with the PSE actions in the entire municipality and in each specific location; number of actions developed; actions developed; Family Health Units (USF) of the municipality active in the program and number of schools participating and not participating in the PSE.

The scope was obtained by relating the total number of students, schools, and PSE actions to the number of those eligible to take part,

according to the RE-AIM program evaluation model as shown below. This model, created by Glasgow et al.<sup>6</sup> in 1999 and translated and adapted in 2013 for the Brazilian reality by Almeida et al.<sup>7</sup>, is a methodological path that seeks to help researchers and managers in the evaluation and planning of health programs and policies<sup>8</sup>.

It is organized by designating and directing evaluations of five different aspects of public policies and programs, which are: Reach, Efficiency or Effectiveness, Adoption, Implementation, and Maintenance<sup>7</sup>. The present study focused on evaluating the reach and used the formula recommended by the method for the necessary calculations, as follows:

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Equation 1: Calculation to obtain the 'reach' variable'

$$\text{REACH} = \frac{\text{No. of people who participated}}{\text{No. of eligible people}}$$

To adapt to the object of study, schools, themes, and students were considered as 'people', obtaining, in this way, the reach of the program and its themes in the total number of schools in the municipality and the number of students included by the actions; and 'activated schools' were defined as those in which some action of the PSE was carried out in the evaluated year.

The data were grouped in order to describe the overall reach of the PSE and its actions in the municipality, but were also fragmented to the point of narrating the scope in terms of municipal and state schools, with the municipal schools divided by location zone (rural or urban). For a plausible understanding and approximation with the reality of the program,

the actions were exposed in tables based on the division established between PSE's components I and II.

The researchers established a reach evaluation parameter for the study in which the reach was classified as 'Excellent' when the indicator reached between 0.81 and 1.0; 'Good', if the reach ranged from 0.61 to 0.80; 'Regular', if the variation was from 0.41 to 0.60; 'Poor', from 0.21 to 0.40; and 'Very Poor', if  $\leq 0.20$ . The collected information was typed and analyzed using the Microsoft Office Excel® 2007 program.

The research was approved by the Research Ethics Committee of the University of Pernambuco under CAEE: 56337416.4.0000.5207.

## Results

In 2016, there were 74 public schools in the municipality of Vitória de Santo Antão-PE, 26 in urban areas, 39 in rural areas, and 9 in the state system. Of the total number of schools, 52 were registered in the PSE representing a reach of 0.70; and of these, 23 carried out at least one activity inherent to the PSE that year encompassing an overall

reach of 0.36 activated schools in the city. Moreover, 3 activated schools were not part of the municipal registry.

*Table 1* describes the reach of the program in the municipality according to school location/management, showing that the active reach of the program in urban areas was greater than in rural areas and had a better classification in the reach of registration when compared to the actual reach of the program in all levels.

Table 1. Description of the PSE reach in the municipality of Vitória de Santo Antão-PE in 2016

Schools in the municipality	Registered Reach				Active Reach		
	Existing Schools	Registered schools	Indicator	Rating	Activated Schools	Indicator	Rating
Municipal Overall	74	52	0.7	Good	29	0.39	Poor
Municipal Rural	39	21	0.54	Regular	11	0.28	Poor
Municipal Urban	26	24	0.92	Excellent	15	0.58	Regular
State	9	7	0.78	Good	3	0.33	Poor

Source: Own elaboration.

*Table 2* addresses the reach according to component and reveals that in general the municipality had good and excellent reach for

components I and II respectively. However, it had regular or poor reach in these components when observed by location/reach.

Table 2. Description of the reach of the PSE actions in schools by component in the municipality of Vitória de Santo Antão-PE

Sphere / Location	Component I				Component II			
	No. of registered actions	No. of completed actions	Reach	Rating	No. of registered actions	No. of completed actions	Reach	Rating
Municipal Overall	7	5	0.71	Good	8	8	1	Excellent
Municipal Rural	7	2	0.28	Poor	8	3	0.37	Poor
Municipal Urban	7	4	0.57	Regular	8	5	0.62	Good
State	7	2	0.28	Poor	8	3	0.37	Poor

Source: Own elaboration.

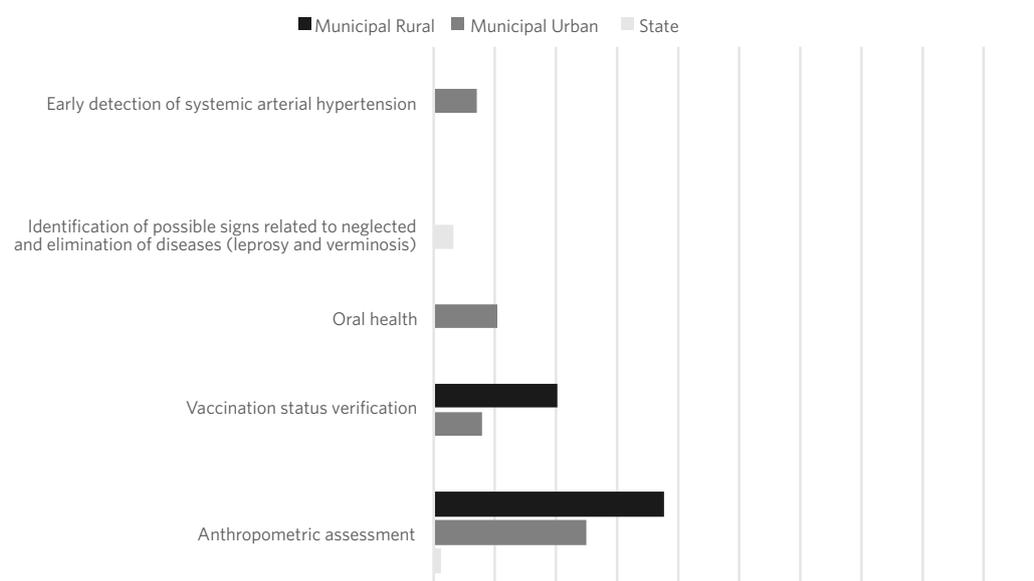
As for component I in which activities were performed, (*graph 1*) anthropometric assessment was a common practice in all three spheres, while verification of vaccination status occurred in urban and rural locations; oral health and early detection of Systemic Arterial Hypertension (SAH) were performed only in the urban area, and identification of possible signs of neglected diseases (leprosy and verminosis) was performed in the state and in rural areas.

The reach classification in rural locations was 'very poor' for the vaccination status check

and 'poor' for anthropometric assessment. The other themes were lacking in this region.

The themes addressed in state schools included the possible identification of signs related to neglected and elimination of diseases (leprosy and verminosis) and anthropometric assessment. Both had a 'very poor' reach among students. In the urban sphere, Systemic Arterial Hypertension (SAH), oral health, and vaccination status had 'very poor' coverage, and anthropometric assessment, 'poor'.

Graph 1. Achievements, in 2016, of PSE actions of component I regarding the number of students participating in the activated schools of Vitória de Santo Antão-PE, according to theme and school reach/location



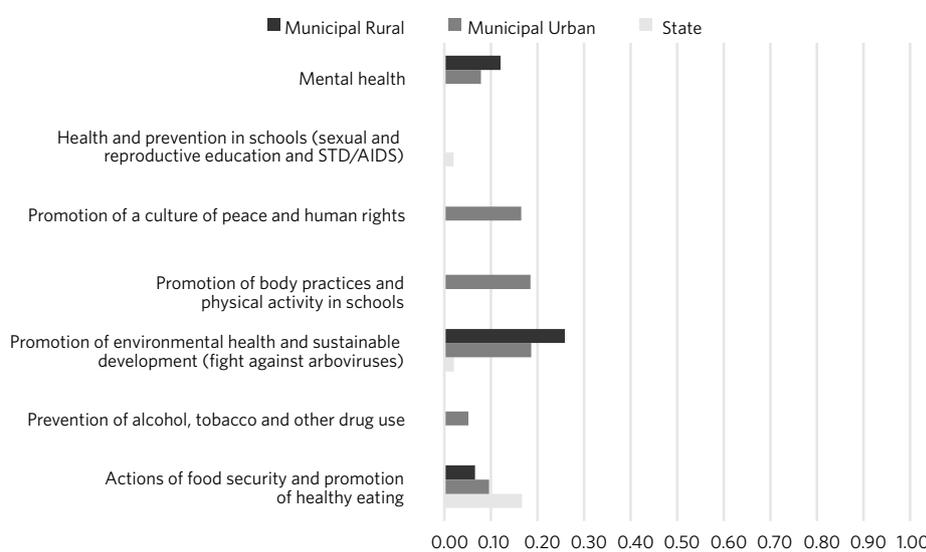
Source: Own elaboration.

Component II (*graph 2*) was achieved with the themes of food security actions and promotion of healthy eating in all locations. Mental health was present in rural and urban schools, while the theme of health and prevention in schools with an emphasis on sexually transmitted diseases was addressed in some state-level institutions. The practices promoting the culture of peace and human rights

as well as preventing the use of alcohol and other drugs were present in the urban area schools (*graph 2*).

In this component, the indicators show a 'very poor' student reach rating for all the themes addressed in schools in all locations, except when the subject was prevention of alcohol, tobacco and other drugs use which received a 'poor' rating in the urban area.

Graph 2. Achievement, in 2016, of PSE actions of component II relative to the number of students participating in the activated schools of Vitória de Santo Antão-PE according to theme and school reach/location



Source: Own elaboration.

## Discussion

For the PSE's implementation in the municipality in the year of the research, an annual agreement was made through a Letter of Intent between this authority and the state regarding the responsibility to cover the registered schools. In addition, the program's activities should be carried out by health professionals linked to the Family Health Strategy (ESF) and professionals of the schools<sup>3</sup>.

According to Machado, the program has mobilized important actions nationally, even if not homogeneously, in the regions<sup>13</sup>. That confirms the results found in this study of PSE's overall reach in the municipality studied which indicate a disparity between the schools registered in 2016 and those that carried out some activity under the program's purpose that year. It led to the assumption that there has been a possible difficulty in covering the agreed amount.

A study conducted in the city of Fortaleza, State of Ceará<sup>14</sup> pointed out the importance of shared responsibility between education and

health for the maintenance and implementation of actions in schools covered by the PSE. It also presented that partnership as a positive factor in overcoming challenges. Thus, from this perspective, the reach found in this study favors the formulation of questions that need answers such as: have education and health walked together providing intersectoriality and fulfillment of actions? Is the number of professionals sufficient to cover all schools? How does this annual demand organization happen?

Another important point was the reach differentiation between urban and rural areas, classified as 'regular' and 'poor' respectively. If a general look is taken, both need to be improved and when the analysis is specified for the two spheres, it becomes clear that there is an even greater need for modification of outreach in rural schools. It is believed that difficult access and transportation contribute to this reality. Much has been discussed about the difficulties faced by students in rural schools in various aspects, such as infrastructure, resources, availability of teachers, food issues,

physical inactivity, for instance<sup>15-17</sup>. Regarding the PSE, the results suggest that the possible achievement of the objectives advocated by the program becomes even more utopian if the fragmented and ‘no solution’ discourse outlined for rural schools is once again heard and reaffirmed.

In the face of all the questions, another discordant factor emerges: several registered schools, whether state, urban, or rural, were not reached by the activities, but three schools without registration were contemplated. The questions are raised wondering why there were professionals for such actions and why not for the other schools? And, once again, the way the program was implemented in practice in the municipality is called into question.

The answers found in this article examined the registration reach and school activities, also verifying the relationship between the recommended actions, the approached actions, and the differences between the locations they reach. In this aspect, if the direct comparison between the number of actions established by the program guidelines and those covered in the whole municipality is considered, the reach is excellent since Vitória de Santo Antão-PE has carried out, at least once, five actions from component I out of the seven pre-established, and all eight from component II during the year studied<sup>18</sup>.

Recurrently, the locations had differences especially between urban and rural practices. In addition to this differentiation of spheres, it suggests a lack of unity when selecting the actions that should be developed. It seems that there is a convenience guiding the choices despite the needs of each location.

The actions of anthropometric assessment, oral health, early detection of hypertension, and actions to promote healthy eating were some of the topics addressed by the municipality. These findings are consistent with the results of the research ‘School Health Program: health-promoting strategy in primary care in Brazil’ which was conducted using documentary sources from the Ministry of Health at a

national level. This research indicates that the aforementioned actions are predominant in the Northeast region of the country<sup>13</sup>.

When the number of students covered by each theme in the different locations is checked, the fragility of the PSE’s performance is more clearly understood. Ranked between ‘very poor’ and ‘poor’, this range alarms about a deficiency that interferes, in an impactful way, in the expected responses of the program. According to the PSE guidelines, in order to change the adolescent health panorama in the municipality, the main goals of health promotion and cultivation of healthy habits will be achieved if the target audience participates in the actions without fail<sup>4</sup>. This confirms that achieving the objectives of improving people’s quality of life depends directly on this participation and the scarcity and punctuality prevent the consolidation of the program’s guidelines.

The low reach of an implemented and agreed health program is not a reality only for the PSE. It is known that other interventions committed to carrying out specific actions have also shown difficulties in meeting the proposed objectives<sup>9-12</sup>.

This research presents the limitations of studies that use secondary data and documentary information such as the absence and quality of the data/information collected.

The PSE had a digital monitoring system of its actions in 2016 (Integrated System of Monitoring, Execution, and Control of the Ministry of Education – SIMEC)<sup>19</sup> whose data entry was under the responsibility of the program’s state and municipal managers. However, this monitoring was not done routinely which made it impossible to have a real and reliable monitoring or evaluation from this tool. The lack of reliable information in the state and municipal SIMEC led the researchers to rely on documentary reports from the Family Health teams involved in the program to obtain the necessary data, but the non-standardization of the team reports also led to deficiencies in information such as the

age range of the approached students, their grade or the identification of the professionals who conducted the actions, for example.

The system feeding is a determining factor for the continuity of the program agreement, and this is the way used to monitor and confirm its operation. SIMEC consisted of a report form that provided information such as the name of the professional who conducted the action, the theme addressed, and the way the activity unfolded. However, it was not necessary that all the items were filled in so the system could register the data, this being a hypothesis for the scarcity of data that was observed by researchers.

Despite the mentioned limitations, this study brings contributions that may be useful for more comprehensive evaluations at state and national levels since it uses a methodology that is already well validated and proposes parameters for comparison. Another contribution that this study brings is to point out the need for governmental actions to enable the real implementation of the program in the country.

## Conclusions

This article is an excerpt of the PSE in 2016. It discusses the evaluation of continuing education in health; a relevant and current theme that, if successful, brings positive impacts for the structuring of Brazil's public health. It is widely known that the PSE has been implemented in several regions of the country with distinct results, considering the peculiarities of the objectives and actions of each intervention

throughout the national territory. However, the low, but increasing, regularity of research that involves this strategy evaluation at a larger regional level prevents a direct confrontation or affirmation of some of the results here presented.

There were several findings in the research: regional disparities regarding the reach and implementation of the PSE expressed through the higher number of actions in the urban area of the municipality when compared to the rural area; high number of registered schools contrasting with the low PSE's activation (implementation); or even a 'very poor' reach of students who are the program's target audience. All that permeated the answers of the research enabling the rise of essential questions for new scientific interventions in this field and providing other understanding about the program for the general public.

## Collaborators

Cardoso MD (0000-0002-2256-8874)\* contributed to the conception of the work, analysis and interpretation of data for the paper, as well as, to the drafting and review of the text. Lorena Sobrinho JE (0000-0001-7820-735X)\*, Santiago LCS (0000-0003-3118-7018)\* and Silva BRVS (0000-0002-6140-6990)\* also contributed to the writing and revision of the text. Silva RT (0000-0003-4651-1941)\* and Pereira TP (0000-0001-8363-3871)\* contributed equally to the analysis and interpretation of data for the paper. Andrade PMC (0000-0002-7321-2114)\* is responsible for drafting the manuscript. ■

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