

Structure of services and material health resources associated with the School Health Program

Estrutura dos serviços e recursos materiais em saúde associados ao Programa Saúde na Escola
Estructura de servicios y recursos materiales en salud asociados al Programa Salud en la Escuela

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ABSTRACT

Objectives: to describe the structure used in the School Health Program and analyze the association between its material resources and the actions carried out. **Methods:** cross-sectional, quantitative, analytical, and normative study. A normative instrument of the program was applied to collect data from May to July 2017 with 105 Family Health Strategy professionals. Data were organized and analyzed using descriptive and inferential statistics on IBM SPSS Statistics 22.0 software. **Results:** financial resources were made available with low periodicity; the most used human resources were dentists; the most frequent infrastructure resource was the school; the most frequently used materials were those related to administrative support (legal-size paper and pen) and clinical resources (fluoride, toothbrush, and toothpaste). An association was identified between resources and anthropometric assessment activities and vaccination status. **Conclusions:** the program structure showed reduced financial resources and priority participation of human resources from the health sector, and the actions were carried out by using the school infrastructure and administrative and clinical materials. **Descriptors:** School Health Services; Financial Resources in Health; Health Workforce; Structure of Services; Material Resources in Health.

RESUMO

Objetivos: descrever a estrutura utilizada no Programa Saúde na Escola e analisar a associação entre os recursos materiais e as ações desenvolvidas. **Métodos:** estudo transversal, quantitativo, analítico e normativo. Utilizou-se o instrumento normativo do programa para coletar dados de maio a julho de 2017, com 105 profissionais da Estratégia Saúde da Família. Os dados foram organizados e analisados de forma descritiva e inferencial no IBM SPSS Statistics 22.0. **Resultados:** foi observada baixa frequência de recursos financeiros; os recursos humanos mais utilizados foram odontólogos; o recurso infraestrutural mais frequente foi a escola; os materiais mais frequentemente utilizados foram de apoio administrativo (papel ofício e caneta) e clínicos (flúor, escova e creme dental). Identificou-se associação entre recursos e atividades de avaliação antropométrica e situação vacinal, por exemplo. **Conclusões:** a estrutura do programa detém recursos financeiros reduzidos, participação prioritária de recursos humanos do setor saúde, e suas ações são desenvolvidas na infraestrutura escolar, com materiais administrativos e clínicos. **Descritores:** Serviços de Saúde Escolar; Recursos Financeiros em Saúde; Mão de Obra em Saúde; Estrutura dos Serviços; Recursos Materiais em Saúde.

RESUMEN

Objetivos: describir la estructura utilizada en el Programa Salud en la Escuela y analizar la asociación entre recursos materiales y acciones desarrolladas. **Métodos:** estudio transversal, cuantitativo, analítico y normativo. Se aplicó instrumento normativo del programa para recolectar datos de mayo a julio de 2017, con 105 profesionales de Estrategia Salud de la Familia, organizados y analizados descriptiva e inferencialmente con IBM SPSS Statistics 22.0. **Resultados:** se observó baja frecuencia de recursos financieros; los recursos humanos más utilizados fueron odontólogos; el recurso de infraestructura más habitual fue la escuela; el material de uso más frecuente fue de apoyo administrativo (papel oficio y bolígrafo) y clínico (flúor, cepillo y dentífrico). Se identificó asociación entre recursos y actividades de evaluación antropométrica y situación vacunal, por ejemplo. **Conclusiones:** la estructura del programa recibe recursos financieros escasos, participación prioritaria de recursos humanos del sector salud, en infraestructura escolar y con material administrativo y clínico. **Descritores:** Servicios de Salud Escolar; Recursos Financieros en Salud; Fuerza Laboral en Salud; Estructura de los Servicios; Recursos Materiales en Salud.

INTRODUCTION

Health interventions oriented toward educational spaces are important strategies to promote health and can considerably affect the quality of life and well-being of the school community⁽¹⁾. The origin of these proposals is deep-seated in the influence of the Health Promoting Schools movement, created by the World Health Organization in the 1990s. It proposed a change in the system, with the integration of the health and education sectors, the establishment of adequate settings, and the effective participation of the school community⁽²⁻³⁾.

The execution of these intersectoral actions has proved important when it is considered that children enrollment rate in primary and high schools worldwide has increased in the past few years, reaching values over 90% and 80%, respectively⁽⁴⁻⁵⁾. From another perspective, it is known that several risk factors can compromise the health of children and adolescents at school age, including malnutrition and overweight, smoking, consumption of alcohol, inadequate eating habits, and a sedentary lifestyle, which can lead to the development of chronic noncommunicable diseases⁽⁶⁾.

The main Brazilian intervention oriented toward school health was created in 2007 and entitled School Health Program. Its goal is carrying out health activities in primary education institutions to meet the health needs of the people who are part of this environment. The program's normative instruction proposes that it be implemented by carrying out activities organized into three components: Component I, referring to clinical and psychosocial actions; Component II, referring to actions designed to promote and prevent diseases and health problems; and Component III, referring to actions to train professionals so they can carry out the activities listed in Components I and II⁽⁷⁾.

Operationalizing these actions requires that the resources intended to subsidize the planning and execution of the program's proposals are made available and transferred⁽⁸⁾. When properly managed and transferred in enough amounts by the governmental sphere, these resources can influence the implementation of health policies⁽⁹⁾, such as the School Health Program, which may impact the quality of life of the population they are oriented toward⁽¹⁰⁾.

Although financial and structural resources are necessary, their scarceness has been one of the difficulties to implement the program, and having them available can be considered a factor that increases the chances of a school health intervention to be successful⁽¹¹⁾. Resource availability has been one of the ways to contribute to changing habits toward a healthier lifestyle among students⁽¹²⁾.

Given that the structural difficulties and needs of the School Health Program are known and that it is a national intervention, it is necessary to examine the availability of the resources intended for the operationalization of this program. The authors developed their reasoning based on the comprehension that if there is an offer of structure and material resources, there is an influence on the execution of the actions proposed by the program.

OBJECTIVES

To describe the structure used in the School Health Program and analyze the association between material resources and actions carried out.

METHODS

Ethical aspects

The present study complied with international and Brazilian ethical principles involved in human research. The Research Ethics Committee at the Federal University of Rio Grande do Norte evaluated the study proposal and its adequacy to the recommendations of the Brazilian National Health Council Resolution 466/2012. The board members approved the execution of the study as per report no. 2,064,901 and Certificate of Presentation for Ethical Appreciation no. 64873916.1.0000.5537. The participants were informed about the risks and benefits resulting from being part of the study sample and signed free and informed consent forms after agreeing to contribute to the study.

Study design, location, and period

This was a cross-sectional, quantitative, analytical, and normative study.

Normative studies are carried out by comparing what is proposed in the recommendations of a program and the availability of these in its operationalization⁽¹³⁾.

Manuscript writing followed the guidelines proposed in the Strengthening the Reporting of Observational Studies in Epidemiology statement⁽¹⁴⁾.

The study was carried out at Family Health Units (FHUs) in the municipality of Natal, capital of the state of Rio Grande do Norte, Brazil. The estimated population of this city is over 800 thousand people, who have their health needs met by the Brazilian Unified Health System at 79 facilities, among which 38 are FHUs (used as the study setting), distributed over five health districts (South, East, West, North I, and North II)⁽¹⁵⁻¹⁶⁾.

The study was carried out between May and July 2017.

Population, sample, and inclusion and exclusion criteria

There was neither information about the number of professionals who carried out school health activities nor a list with their names during the study execution period. It was a consensus that each FHU in the municipality would have a professional responsible for carrying out activities with their team.

Therefore, for the participant selection process, it was considered that each of the 38 FHUs should have at least one family health team, made up of a physician, a nurse, a nursing technician or aide, a community health worker, a dentist, and an oral health technician or aide, which made up a group of 228 professionals.

Based on sample calculation for finite populations and applying a 95% confidence interval and a 5% sampling error, it was established that 144 professionals of that group should make up the study sample. It was decided that data collection would be performed with six participants from different professions at each FHU to guarantee that the sample would include similar numbers of professionals from different categories.

Dividing 144 professionals by six (the number of categories that compose FHU teams) resulted in the definition of the number of 28 FHUs to be included in the study sample and visited for

data collection. The units were selected by making a draw. If the drawn unit did not have a professional that carried out School Health Program activities, another FHU was drawn.

The inclusion criterion for Family Health Strategy professionals was having carried out activities of the examined program previously. Professionals who were not developing their professional activities for being on vacation or leave of any kind were excluded.

The study was performed with 105 out of the 144 professionals that sample calculation indicated. This occurred because in some FHUs only a few drawn professionals carried out School Health Program activities. During the visits to FHUs for data collection, 28 professionals declared that they did not carry out the program's actions even having a member of their team included in these activities, seven refused to participate in the study, and four were away from their functions. The authors opted to not replace these professionals with members from other categories so data would have better representativeness regarding the different professional classes existing in FHUs.

Study protocol

Data were collected by applying an instrument whose development was based on the norms that guide the execution of the School Health Program. The description of the program's structure took into account financial, human, infrastructural, and material resources recommended to carry out primary health care activities, including school health ones, listed in the Self-evaluation for Access and Quality Improvement of Primary Care instruments⁽¹⁷⁾. In the context of the present study, structure is defined as human, material, organizational, and physical resources necessary for providing health care⁽¹⁸⁾.

The questions were grouped into categories addressing professional characterization and structure dimension, and the presence or absence of items in each category could be indicated by the participants. Question adaptation was carried out by five professionals with experience in the education and school health care fields who were not part of the sample.

Data collection was performed by four nurses and four nursing undergraduate students. They were submitted to training and received guidance on the procedures of that step of the study.

Results analysis and statistics

Data were typed on IBM SPSS Statistics 22.0 spreadsheets. This software was used to treat data with descriptive and inferential statistics and create tables showing absolute and relative numbers. Inferential statistics procedures included Pearson's chi-squared test and Fisher's exact test.

Initially, the resources used by the professionals were identified, and were analyzed in a subsequent step according to the list of activities in Components I and II of the School Health Program⁽⁷⁾.

RESULTS

The participants who made up the sample were physicians (5.7%), nurses (19.0%), nursing technicians or aides (12.4%), community health workers (22.9%), dentists (21.0%), and oral health technicians or aides (19.0%). Women prevailed in the sample (84.8%), and the most frequent levels of education were: technical training (31.4%), specialization (26.7%), and graduate degree (19.0%).

Table 1 – Characterization of the human resources used in the School Health Program, Natal, Rio Grande do Norte, Brazil, 2017

Human resources*	N	%
Dentists	100	95.2
Community health workers	96	91.4
Oral health technicians or aides	89	84.8
Nurses	83	79.0
Nursing technicians or aides	78	74.3
Physicians	59	56.2
Teachers	54	51.4
School managers	44	41.9
Family health unit managers	29	27.6
Undergraduate students	10	9.5
Pedagogical coordinators	7	6.6
Invited professionals	4	3.8
Support staff	1	0.9

Note: *The sum exceeds 100% because the participants could mention more than one variable.

Table 2 – Characterization of the infrastructure resources used in the School Health Program, Natal, Rio Grande do Norte, Brazil, 2017

Infrastructure resources*	n	%
Schools	105	100.0
Nongovernmental organizations	8	7.6
Religious institutions	7	6.7
Health units	4	3.8
Multisport gyms	3	2.9
Councils	2	1.9

Note: *The sum exceeds 100% because the participants could mention more than one variable.

Table 3 – Characterization of the material resources used in the School Health Program, Natal, Rio Grande do Norte, Brazil, 2017

Material resources*	N	%
Legal-size paper	63	60.0
Pens	62	59.0
Toothpaste	59	56.2
Toothbrushes	59	56.2
Fluoride	57	54.3
Gloves	55	52.4
Educational materials	48	45.7
Pencils	47	44.8
Anthropometric scales	42	40.0
Measuring tapes	42	40.0
Demonstrative materials	36	34.3
Instructive materials	33	31.4
Stethoscopes	32	30.5
Sphygmomanometers	32	30.5
Folders	32	30.5
Needles	28	26.7
Cotton balls	28	26.7
Colored pencils	27	25.7
Card stock paper	26	24.8
Anthropometric rulers	25	23.8
Other materials	25	23.8
Immunobiologics	22	21.0
Syringes	22	21.0
Medications	16	15.2
Condoms	16	15.2
Personal protective equipment	13	12.4
Macromodel kits	12	11.4
Clinical torches	8	7.6
Projectors	8	7.6
Glucometers	4	3.8
Otosopes	2	1.9
Spoons	2	1.9

Note: *The sum exceeds 100% because the participants could mention more than one variable.

Table 4 – Characterization of the association between material resources and Component I activities advocated by the School Health Program, Natal, Rio Grande do Norte, Brazil, 2017

Material resources	Component I activities			p value*
	Yes n (%)	No n (%)	Total N (%)	
Anthropometric evaluation				
Anthropometric scales	37 (98.1)	5 (11.9)	42 (100.0)	<0.001
Anthropometric rulers	25 (100.0)	-	25 (100.0)	<0.001
Measuring tapes	34 (81.0)	8 (19.0)	42 (100.0)	<0.001
Instructive materials	18 (54.5)	15 (45.5)	33 (100.0)	0.028
Vaccination status evaluation				
Immunobiologics	21 (95.5)	1 (4.5)	22 (100.0)	<0.001
Syringes	21 (95.5)	1 (4.5)	22 (100.0)	<0.001
Needles	21 (95.5)	1 (4.5)	22 (100.0)	<0.001
Gloves	19 (34.5)	36 (65.5)	55 (100.0)	0.876
Cotton balls	26 (92.9)	2 (7.1)	28 (100.0)	<0.001
Instructive materials	17 (51.5)	16 (48.5)	33 (100.0)	0.018
Early detection of chronic diseases				
Medications	8 (50.0)	8 (50.0)	16 (100.0)	0.005
Folders	6 (18.8)	26 (81.3)	32 (100.0)	0.507
Immunobiologics	12 (54.5)	10 (45.5)	22 (100.0)	<0.001
Instructive materials	7 (21.2)	26 (78.8)	33 (100.0)	0.786
Educational materials	9 (18.8)	39 (81.3)	48 (100.0)	0.358
Sphygmomanometers	16 (50.0)	16 (50.0)	32 (100.0)	<0.001
Early detection of neglected diseases				
Medications	8 (50.0)	8 (50.0)	16 (100.0)	<0.001
Folders	6 (18.8)	26 (81.3)	32 (100.0)	0.190
Immunobiologics	6 (27.3)	16 (72.7)	22 (100.0)	0.017
Sphygmomanometers	8 (25.0)	24 (75.0)	32 (100.0)	0.009
Instructive materials	8 (24.2)	25 (75.8)	33 (100.0)	0.012
Educational materials	8 (16.7)	40 (83.3)	48 (100.0)	0.221
Ophthalmologic evaluation				
Clinical torches	1 (12.5)	7 (87.5)	8 (100.0)	0.213
Stethoscopes	3 (9.4)	29 (90.6)	32 (100.0)	0.026
Otosopes	1 (50.0)	1 (50.0)	2 (100.0)	0.057
Spoons	1 (50.0)	1 (50.0)	2 (100.0)	0.199
Instructive materials	3 (9.1)	30 (90.9)	33 (100.0)	1.000
Nutritional evaluation				
Anthropometric scales	5 (11.9)	37 (88.1)	42 (100.0)	0.262
Anthropometric rulers	5 (20.0)	20 (80.0)	25 (100.0)	0.018
Measuring tapes	5 (11.9)	37 (88.1)	42 (100.0)	0.262
Glucometers	1 (25.0)	3 (75.0)	4 (100.0)	0.275
Stethoscopes	5 (15.6)	27 (84.4)	32 (100.0)	0.054
Sphygmomanometers	5 (15.6)	27 (84.4)	32 (100.0)	0.054
Instructive materials	2 (6.1)	31 (93.9)	33 (100.0)	1.000
Oral health evaluation				
Fluoride	46 (80.7)	11 (10.3)	57 (100.0)	<0.001
Toothpaste	47 (79.7)	12 (20.3)	59 (100.0)	<0.001
Toothbrushes	47 (79.7)	12 (20.3)	59 (100.0)	<0.001
Instructive materials	17 (51.5)	16 (48.5)	33 (100.0)	1.000
Colored pencils	17 (63.0)	10 (37.0)	27 (100.0)	1.000
Card stock paper	13 (50.0)	13 (50.0)	26 (100.0)	0.955
Legal-size paper	35 (55.6)	28 (44.4)	63 (100.0)	0.202
Hearing evaluation				
Instructive materials	1 (3.0)	32 (97.0)	33 (100.0)	1.000
Otosopes	1 (50.0)	1 (50.0)	2 (100.0)	0.057
Clinical torches	1 (12.5)	7 (87.5)	8 (100.0)	0.213
Psychosocial evaluation				
Instructive materials	1 (3.0)	32 (97.0)	33 (100.0)	0.314
Folders	-	32 (100.0)	32 (100.0)	1.000
Pens	1 (1.6)	61 (98.4)	62 (100.0)	1.000
Colored pencils	1 (3.7)	26 (96.3)	27 (100.0)	0.257
Pencils	1 (2.1)	46 (97.9)	47 (100.0)	0.448
Legal-size paper	1 (1.6)	62 (98.4)	63 (100.0)	1.000
Card stock paper	1 (3.8)	25 (96.2)	26 (100.0)	0.248

Note: *Pearson's chi-squared test or Fisher's exact test.

Table 5 – Characterization of the association between material resources and Component II activities advocated by the School Health Program, Natal, Rio Grande do Norte, Brazil, 2017

Material resources	Component II activities			p value*
	Yes n (%)	No n (%)	Total N (%)	
Promotion of healthy eating habits and food safety				
Macromodel kits	2 (16.7)	10 (83.3)	12 (100.0)	0.729
Personal protective equipment	1 (7.7)	12 (92.3)	13 (100.0)	0.289
Instructive materials	11 (33.3)	22 (66.7)	33 (100.0)	0.083
Promotion of sexual and reproductive health and prevention of sexually transmissible infections/AIDS				
Condoms	13 (81.3)	3 (18.8)	16 (100.0)	<0.001
Instructive materials	18 (54.5)	15 (45.5)	33 (100.0)	0.001
Demonstrative materials	19 (52.8)	17 (42.2)	36 (100.0)	0.001
Folders	15 (46.9)	17 (53.1)	32 (100.0)	0.024
Promotion of body practices and physical activities				
Educative materials	3 (6.3)	45 (93.8)	48 (100.0)	0.658
Folders	1 (3.1)	31 (96.9)	32 (100.0)	1.000
Demonstrative materials	2 (5.6)	34 (94.4)	36 (100.0)	1.000
Pens	5 (8.1)	57 (91.9)	62 (100.0)	0.077
Colored pencils	2 (7.4)	25 (92.6)	27 (100.0)	0.601
Pencils	4 (8.5)	43 (91.5)	47 (100.0)	0.170
Legal-size paper	2 (3.2)	61 (96.8)	63 (100.0)	0.387
Card stock paper	3 (11.5)	23 (88.5)	26 (100.0)	0.096
Prevention of use of alcohol, tobacco, crack, and other drugs				
Demonstrative materials	10 (27.8)	26 (72.2)	36 (100.0)	0.037
Educational materials	11 (22.9)	37 (77.1)	48 (100.0)	0.150
Folders	8 (25.0)	24 (75.0)	32 (100.0)	0.170
Pens	11 (17.7)	51 (82.3)	62 (100.0)	1.000
Pencils	11 (23.4)	36 (76.6)	47 (100.0)	0.125
Colored pencils	10 (37.0)	17 (63.0)	27 (100.0)	0.001
Legal-size paper	15 (23.8)	48 (76.2)	63 (100.0)	0.034
Card stock paper	10 (38.5)	16 (61.5)	26 (100.0)	0.001
Promotion of culture of peace and human rights				
Educational materials	3 (6.3)	45 (93.8)	48 (100.0)	0.658
Folders	2 (6.3)	30 (93.8)	32 (100.0)	0.639
Demonstrative materials	3 (8.3)	33 (91.7)	36 (100.0)	0.336
Pens	5 (8.1)	57 (91.9)	62 (100.0)	0.077
Colored pencils	3 (11.1)	24 (88.9)	27 (100.0)	0.106
Pencils	3 (6.4)	44 (93.6)	47 (100.0)	0.655
Legal-size paper	2 (3.2)	61 (96.8)	63 (100.0)	0.387
Card stock paper	3 (11.5)	23 (88.5)	26 (100.0)	0.096
Prevention of violence and accidents				
Colored pencils	5 (18.5)	22 (81.5)	27 (100.0)	0.261
Legal-size paper	9 (14.3)	54 (85.7)	63 (100.0)	0.556
Card stock paper	6 (23.1)	20 (76.9)	26 (100.0)	0.056
Educational materials	8 (16.7)	40 (83.3)	48 (100.0)	0.221
Demonstrative materials	8 (22.2)	28 (77.8)	36 (100.0)	0.027
Folders	4 (12.5)	28 (87.5)	32 (100.0)	1.000
Promotion of environmental health and sustainable development				
Colored pencils	4 (14.8)	23 (85.2)	27 (100.0)	0.468
Legal-size paper	7 (11.1)	56 (88.9)	63 (100.0)	1.000
Card stock paper	7 (26.9)	19 (73.1)	26 (100.0)	0.005
Educational materials	8 (16.7)	40 (83.3)	48 (100.0)	0.106
Demonstrative materials	6 (16.7)	30 (83.3)	36 (100.0)	0.135
Folders	3 (9.4)	29 (90.6)	32 (100.0)	1.000

Note: *Pearson's chi-squared test or Fisher's exact test.

The answers of the participants allowed to identify the School Health Program structure. The first identified item was the existence of financial resources. Among the 105 professionals in the sample, 16.2% declared that resources were made available to carry out the program's activities. These resources can be transferred to professionals directly or the municipal government, which coordinates the expenses with the program execution.

Data related to the human resources used in the School Health Program are shown in Table 1.

The results in Table 1 indicated the presence of a higher number of professionals who carry out technical activities, such as the professionals that made up the oral health and nursing teams. Additionally, there was the contribution of people from other areas, for instance teachers, who play an important role in the educational sector, as well as the administrative staff and undergraduate students.

Data related to the infrastructure resources used to carry out the program's activities are shown in Table 2.

The higher frequency of used settings was observed for schools (100%). In contrast, the other community resources were used by professionals with a lower frequency, as exemplified by nongovernmental organizations (7.6%).

The material resources used by Family Health Strategy professionals in the operationalization of the School Health Program are shown in Table 3.

The results related to material resources indicated that there was a higher frequency of objects used to support administrative activities and those intended for the activities carried out by oral health teams.

Because of that, material resources data were submitted to statistical analysis taking into account the actions mentioned in Component I advocated in the norms of the School Health Program. The results of this analysis are shown in Table 4.

Data allowed to identify that there was a stronger statistical association between some material resources and activities related to anthropometric assessment, vaccination status, early detection of chronic diseases, early detection of neglected diseases, and oral health evaluation.

The statistical association between material resources and Component II actions was also analyzed. These results are shown in Table 5.

Data indicated that there was a statistical association between some of the material resources and activities to promote sexual and reproductive health and prevention of sexually transmissible infections/AIDS, as well as activities to prevent use of alcohol, tobacco, crack, and other drugs.

DISCUSSION

The findings of the present study showed availability of financial resources, prevalence of human resources from the health sector, prevailing use of schools as infrastructure resources, and more frequent use of material resources that support administrative tasks or clinical and psychosocial assessment activities.

The use of financial resources in the School Health Program identified in other studies carried out in the metropolitan area of the city of Salvador, the Brazilian Northeast region, and Portugal

has been similar to that found in the present study⁽¹⁹⁻²⁰⁾. These studies pointed out that the available resources can hinder the implementation of health actions oriented toward students. By considering that funding availability contributes to implementing these activities⁽²¹⁾, the results of the present study regarding financial resources may negatively influence the monitoring of the health condition of students. It is important to stress that these resources are directly transferred to the program management team, which must use them in ways that contribute to the actions to be carried out.

For the advocated activities to be performed effectively, the conjoint participation of health professionals and the staff that works at school is necessary⁽⁸⁾, as pointed out by a study carried out in Canada⁽²¹⁾. This study stressed the importance of the participation of principals, teachers, and other school employees for the onset of the activities of a school health service⁽²¹⁾. However, this study showed a different characteristic regarding human resources. There was greater participation of professionals from the health sector, such as dentists, community health workers, oral health technicians or aides, and nurses. The presence of teachers and other categories or agents was identified in the execution of the program, even if in smaller proportions.

Regarding infrastructure resources, the school setting was the most used to carry out the program's activities, which corroborated the findings of a study that mentioned the school environment as the main responsible for promoting health actions at the school level⁽²²⁾. Nevertheless, it is important that School Health Program actions be expanded to other infrastructure settings in the community where they are carried out to strengthen the partnerships with other institutions.

Regarding material resources, it was observed that most of the objects were used in administrative (legal-size paper, pens, pencils) and dental activities (toothpaste, toothbrushes, fluoride). Most of the materials necessary to plan and execute the activities were available, although in reduced quantities. This find corroborated the results of a study that indicated the presence of materials considered essential for the execution of school health services⁽²³⁾.

The materials made available in programs oriented toward school health contribute to improving knowledge and healthy practices among students⁽²⁴⁻²⁵⁾. This was exemplified by a study carried out in Nepal, which showed that material availability helped implement the proposed activities⁽²⁶⁾.

It is important to consider that monitoring the needs related to these materials in the program execution is an important strategy to adjust the transfer of resources according to the real demands of the places where the activities are carried out. This point was emphasized by a study performed in Iran, which pointed out that material availability must be corrected in school health interventions to guarantee the proper implementation of the school health program⁽²⁷⁾.

Measuring tapes and anthropometric scales and rulers showed a statistical association with anthropometric evaluation activities. This result stresses the importance of making these resources available at schools because they are indispensable for monitoring students' weight and height as a way to keep track of their health condition⁽²⁸⁾.

Vaccination status activities showed a statistical association with the following material resources: immunobiologics, syringes, needles, and cotton balls. These materials are important to update the vaccination status of children and adolescents whose vaccination status is incomplete to reduce the occurrence of vaccine-preventable diseases.

Another important aspect that these resources allow is increasing vaccination coverage based on activities carried out at the school setting. It must be emphasized that an increase in vaccination coverage can be triggered by health education strategies and integration between health services⁽²⁹⁾, and both these activities have the potential to be carried out in the School Health Program context.

Regarding the statistical association found between oral health evaluation activities and the presence of the material resources fluoride, toothpaste, and toothbrushes, a study carried out in the Brazilian state of São Paulo applied these and other resources to perform oral health activities at school that proved effective in improving toothbrushing practices and developing healthy habits⁽³⁰⁾.

Instructive and demonstrative materials, folders, colored pencils, legal-size paper, and card stock paper were material resources that showed a statistical association with both Component I (early detection of chronic and neglected diseases) and Component II (promotion of sexual and reproductive health, prevention of sexually transmissible infections/AIDS, and prevention of use of alcohol, tobacco, crack, and other drugs) activities.

Using these resources is important to guide professionals on how to carry out the program's activities (instructive materials) and to help them implement the actions, when they share information with students by means of folders and demonstrative materials. This contributed to increasing the effectiveness of the activities, as exemplified by a study carried out in Germany, in which the interventions that involved the use of educational materials effectively contributed to promoting behaviors and were associated with the improvement of students' health⁽³¹⁾.

Study limitations

The present study had some characteristics that can be considered limitations: the use of a single source for data collection and the fact that the population and the sample were health professionals only. The latter limitation can be justified by the predominance of health professionals over education ones in the Brazilian context.

Additionally, it was not possible to keep proportionality in the professional categories in the final sample even though equal participation of the six professions included in the study was advocated for the sampling process.

Contributions to the nursing, health, or public policy area

The results of the present study allow to understand the importance of managing the resources of the School Health Program based on the needs of the place where it is carried out. To do that, managers have to be committed to offer support and transfer financial resources in adequate amounts to meet the demands of each school, especially regarding the materials identified as showing a statistical association with the planning and execution of activities of professionals who make up health and education teams, including nurses.

CONCLUSIONS

The structure of the School Health Program had a reduced amount of financial resources, showed a prevailing participation of human resources from the health sector, had schools as the most used infrastructure resource, and showed a prevalence of material resources applied to carry out administrative support and clinical activities.

It was identified that some materials showed a statistical association with activities advocated by the program. For instance, measuring tapes and anthropometric scales and rulers had an association with anthropometric evaluation activities; immunobiologics, syringes, needles, and cotton balls showed an association with vaccination status evaluation activities; fluoride, toothpaste, and toothbrushes had an association with oral health evaluation activities; and instructive and demonstrative materials, folders, colored pencils, legal-size paper, and card stock paper showed an association with activities related to early detection of chronic and neglected diseases, promotion of sexual and reproductive health, prevention of sexually transmissible diseases/AIDS, and prevention of use of alcohol, tobacco, crack, and other drugs.

It is suggested that other studies on the structure of the School Health Program be carried out with a higher number of data sources to make the results more consistent. Consequently, the authors encourage the execution of studies that apply data triangulation after data collection with professionals from the health and education sector, secondary data extracted from information and monitoring systems, and documental data sources such as record books, which are commonly used by professionals who work at the School Health Program.

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