

The School Health Program in the Federal District, Brazil, before and during the COVID-19 pandemic

O Programa Saúde na Escola no Distrito Federal antes e durante a pandemia da Covid-19

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DOI: 10.1590/0103-11042022E3031

ABSTRACT This exploratory descriptive research aims to analyze the implementation of the School Health Program in the Federal District, in the period before and during the COVID-19 pandemic. The data were produced from February to April 2022 through documentary research and application of an online questionnaire with professionals from the Primary Health Care (PHC) teams within the scope of the Primary Care Qualification Program of the Federal District-QualisAPS. The databases of the National Institute of Educational Studies and Research Anísio Teixeira, the Information System for Primary Care and the QualisAPS Platform were accessed on the actions developed from 2018 to 2021, the structuring of the program, and its inclusion in the action plans of family health and oral health teams. Through descriptive statistics and content analysis it was evident an increase in the adherence of schools to the PSE and a predominance of records related to oral health and vaccine verification, in both periods, with quantitative reduction due the pandemic period. The reality of the Federal District reveals that the interrelation of the Program with PHC and the support of QualisAPS enable a continuous planning process, bringing prospects for strengthening the actions.

KEYWORDS School health services. Primary Health Care. Health policy. COVID-19.

RESUMO Esta pesquisa do tipo exploratória descritiva objetivou analisar a execução do Programa Saúde na Escola (PSE) no Distrito Federal, no período anterior e durante a pandemia da Covid-19. Os dados foram produzidos de fevereiro a abril de 2022 mediante pesquisa documental e aplicação de questionário on-line a profissionais das equipes de Atenção Primária à Saúde (APS), no âmbito do Programa de Qualificação da Atenção Primária do Distrito Federal (QualisAPS). Foram acessados os bancos de dados do Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira, do Sistema de Informação para a Atenção Básica e da Plataforma QualisAPS sobre as ações desenvolvidas de 2018 a 2021, a estruturação do programa e a sua inclusão nos planos de ação das equipes de saúde da família e saúde bucal. Por meio de estatística descritiva e análise de conteúdo, evidenciaram-se ampliação da adesão das escolas ao Programa e predominância de registros referentes à temática saúde bucal e verificação vacinal nos dois períodos, mas com redução quantitativa em decorrência da pandemia. A realidade do Distrito Federal desvela que a inter-relação do PSE com a APS e o apoio do QualisAPS favorecem um processo contínuo de planejamento trazendo perspectivas de fortalecimento das ações.

PALAVRAS-CHAVE Serviços de saúde escolar. Atenção Primária à Saúde. Política de saúde. Covid-19.

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Introduction

The debate about school health is not new. Experiences such as the Health Promoting Schools (EPS) have been on the agenda of international agencies since the 1990s aiming to strengthen interventions that involve multifactorial and innovative activity in various fields such as curriculum, school environment and community¹.

The EPS are based on the expanded concept of health promotion established in the Ottawa Charter and seek to reduce risk factors and create environments to improve health by involving various actors in the identification of local needs (empowerment) as well as encourage students to take an active and critical role in decision-making processes on health-related issues¹.

Several initiatives to prioritize health promotion and intersectoriality, considering the social determinants of health combined with the perspective of organizational and systemic changes, have been experienced in international settings^{2,3}.

In Brazil, based on the scope of health promotion in conjunction with the Family Health Strategy (ESF), the School Health Program (PSE) was established in 2007 in a partnership between the Ministries of Health and Education. The program seeks to contribute to comprehensive care in the context of health promotion, protection and care, and to encourage intersectoriality as enacted by the Brazilian Unified Health System (SUS)⁴.

Comprehensiveness and intersectoriality are strategies that provide an opportunity to better implement public policies and tackle social exclusion. The PSE shares the principles and guidelines of SUS and contributes to the broad training for citizenship and the full enjoyment of social rights to health and education⁴.

In 2017, there was an increase in efforts to encourage the community's participation in the territories assigned to schools involving Family Health Teams (eSF) and basic

education teams using an expanded conception of health and following the logic of 'health-promoting schools'⁵.

However, while researching the implementation of the PSE in local-regional experiences, some weaknesses were observed. They include: incipient actions, mostly punctual and restricted to disease prevention issues; prescriptive educational actions conducted primarily by the health sector; actions guided by limitations, particularly the bureaucratization of services, waste of time, financial and human resources; and duplicity of actions which suggests an implementation process driven by the failure to meet the program's objectives⁶.

Despite these weaknesses, the program has expanded throughout the country revealing promising possibilities for its consolidation. According to a study developed by Machado and collaborators⁷ the North region has carried out most activities followed by the Northeast, Central-West, South, and Southeast regions respectively.

In 2020, with the impacts of the COVID-19 pandemic in Brazil and the suspension of in-person classes in schools, the PSE had to adapt to the context of the pandemic isolation and social distance and develop its activities by using digital technologies. Currently, in addition to the 12 actions already recommended by the PSE, actions on 'Health promotion and COVID-19 prevention' have been included which are supposed to be developed jointly by the health and education sectors with roles previously defined for each team in order to complement the expertise and increase learning in the school community⁸.

In this scenario, the need to know how the PSE actions were developed in the Federal District (DF) was raised, considering the incipency of local publications as well as the strategic importance of the program to strengthen the role of Primary Health Care (PHC), even before the pandemic. Thus, this study aims to analyze the implementation of the PSE in the Federal District in the period before and during the COVID-19 pandemic.

Material e methods

This is a descriptive and exploratory research conducted in the year 2022 in the Federal District. The DF health service network is structured in 7 Health Regions (RS) and 33 Administrative Regions (RA), which could correspond to municipalities if compared to the states of the Brazilian federation, where 176 Basic Health Units (UBS) are distributed (10 of which are of the Prison type), including 607 eSF, 318 Oral Health teams (eSB), and 56 teams of the Extended Expanded Family Health and Basic Healthcare Centers (NASF-AB) in the APS scope.

In the Federal District, the public education network is organized in 14 Education Regions (RE) in which 753 public and charter schools are distributed. In this context, 120 (37.7%) of the UBS have schools in the territory linked to the PSE⁹.

Data were produced by documentary research and the application of an online questionnaire to APS team professionals within the scope of the DF's Primary Care Qualification Program (QualisAPS). This program intends to strengthen APS through three axes: implementation of an evaluation system; training actions; and production and dissemination of knowledge about the DF health system¹⁰. This study is inserted in the third axis, being the result of collaboration between technical and management professionals from the Health Department of the Federal District (SES/DF) and researchers from the University of Brasilia (UnB).

The documentary research consisted of three stages:

In the first stage, a search was carried out in the School Catalog¹¹ of the Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira (INEP) in an attempt to find out how PSE is structured in the Federal District. This data is updated annually, according to the School Census. There are more than 226 thousand schools that encompass more than 50 million people (students and education professionals). The search criterion was the DF within the Federation Unit (UF) field. The result was exported as a 'csv' file. The data were extracted on April 19, 2022. These results

were complemented by information provided by the State Secretary of Education (SEE/DF)¹² and by the SES/DF¹³.

In the second stage, the practices and themes developed in the PSE were identified in Report of Collective Activity in Primary Care of the Primary Care Information System (SISAB)¹⁴ referring to the period before (2018-2019) and during the COVID-19 pandemic (2020-2021). The search criteria were: Geographic Unit = State; States = DF; Competency = January to December of each year (2018, 2019, 2020, and 2021); Report Line = INEP (Schools/Childcare); Report Column = Themes for Health/Health Practices. The data were extracted on March 10, 2022.

In the third stage, with the aim of analyzing the current situation of the PSE actions, data were extracted from the reports of the Quality Action Plans (PAQ) – a planning tool linked to QualisAPS in which the teams should develop at least four out of the 45 quality standards assessed in the self-assessment stage. For this study, we identified the number of teams that selected the standard 'Teams develop actions of the School Health Program (PSE) in their territory' for inclusion in the PAQ.

In addition, an online questionnaire was conducted via Google Forms application, made available by e-mail in April 2022 to the 542 professionals registered in the QualisAPS Platform, whose teams were in a UBS considered a reference for a school, not necessarily linked to the PSE. This procedure sought to avoid several respondents from the same team, which could result in biases in the analyses. The instrument, with a response time stipulated in 15 days, contained questions related to the 13 actions of the PSE and sought to know those actions developed by the APS teams as well as the partnerships, the prioritized methodologies, the facilities and difficulties to carry them out before and during the COVID-19 pandemic. A total of 17 responses were obtained, with 16 respondents from eSF and 1 from eSB with participation from all seven RS of the DF.

Quantitative data were interpreted by descriptive statistical analysis. Content analysis

was used to analyze the qualitative data from the questionnaire and the selected documents.

At the end, the results were systematized into three analytical categories: structuring of the PSE in the Federal District; PSE actions before and during the COVID-19 pandemic; perspectives for the PSE in the APS of the Federal District.

The study has complied with all ethical precepts for research involving human beings, having been approved by the Research Ethics Committees of the Faculty of Health Sciences of the University of Brasilia and the Foundation for Teaching and Research in Health Sciences of the Federal District (CAAE 29640120.6.0000.0030).

Results

Structuring the School Health Program in the Federal District

In the Federal District, the first subscription to the Program was in 2009 and it has been implemented uninterruptedly. In the

2017/18 period, there were 258 schools; in the 2019/2020 period, 298; and in the last joining period, 2021/2022, there was an expansion with 67 more schools.

Tables 1 and 2 show: the number of schools; the type of establishment, whether public or associated; location in rural or urban areas; distribution according to RS and link to the PSE. In the Federal District, there are a total of 1,377 public and charter schools, predominantly in the public sector and in urban areas.

Table 1 shows all public and private schools registered with INEP. The public schools include the Federal Institutes of Brasilia (IFB), Military Schools, Interscholastic Center for Languages, Center for Integral Attention to Children, Educational Center, Center for Special Education, Center for Elementary Education, Center for Early Childhood Education, Center for Youth and Adult Education, Center for High School Education, Center for Integrated High School Education, Center for Professional Education, Center for Early Childhood Education, Class School and Kindergarten. In the data generated by INEP, a SR of 590 schools, mainly private, was not available and appears in the table as 'No information'.

Table 1. Absolute (n) and relative (%) distribution of schools by Administrative Category, Location, and Health Region regarding adherence to the School Health Program (PSE), Federal District, 2021

Adhesion to PSE	No		Yes		Total	
	n	%	n	%	n	%
Category Administrative/Location						
Private	612	44.4%	62	4.5%	674	48.9%
Rural	4	0.3%	1	0.1%	5	0.4%
Urban	608	44.2%	61	4.4%	669	48.6%
Public	400	29.0%	303	22.0%	703	51.1%
Rural	32	2.3%	50	3.6%	82	6.0%
Urban	368	26.7%	253	18.4%	621	45.1%
Total	1,012	73.5%	365	26.5%	1,377	100.0%
Health Region						
Central	82	6.0%	46	3.3%	128	9.3%
South-Center	45	3.3%	29	2.1%	74	5.4%

Table 1. (cont.)

Adhesion to PSE	No		Yes		Total	
	n	%	n	%	n	%
East	16	1.2%	45	3.3%	61	4.4%
North	79	5.7%	43	3.1%	122	8.9%
West	75	5.4%	64	4.6%	139	10.1%
Southwest	89	6.5%	86	6.2%	175	12.7%
South	36	2.6%	52	3.8%	88	6.4%
No information	590	42.8%	0	0.0%	590	42.8%
Total	1,012	73.5%	365	26.5%	1,377	100.0%
Regional Education Coordination						
Brazlândia	21	1.5%	15	1.1%	36	2.6%
Ceilândia	60	4.4%	49	3.6%	109	7.9%
Gama	9	0.7%	45	3.3%	54	3.9%
Guará	20	1.5%	14	1.0%	34	2.5%
Núcleo Bandeirante	27	2.0%	15	1.1%	42	3.1%
Paranoá	14	1.0%	22	1.6%	36	2.6%
Planaltina	50	3.6%	24	1.7%	74	5.4%
Plano Piloto	84	6.1%	44	3.2%	128	9.3%
Recanto das Emas	21	1.5%	14	1.0%	35	2.5%
Samambaia	25	1.8%	40	2.9%	65	4.7%
Santa Maria	28	2.0%	8	0.6%	36	2.6%
São Sebastião	4	0.3%	24	1.7%	28	2.0%
Sobradinho	30	2.2%	20	1.5%	50	3.6%
Taguatinga	43	3.1%	31	2.3%	74	5.4%
No information or private	576	41.8%		0.0%	576	41.8%
Total	1,012	73.5%	365	26.5%	1,377	100.0%

Source: based on data from Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira (INEP)¹¹; Primary Care Information System (SISAB)¹⁴.

Table 2 shows only public schools or charter schools eligible for the PSE, which excludes IFB, Military Colleges and Interscholastic Center for Languages. Of the 753 eligible

schools, 365 had joined the PSE in 2021 which corresponds to 48.5% of the schools. The RA without UBS that have schools are referenced to the UBSs of nearby RAs.

Table 2. Absolute distribution of basic units (with and without School Health Program) total number of Family Health and Oral Health teams, total number of public or accredited schools, schools with access to the School Health Program, PSE coverage per school, according to Administrative Region and Health Region of the Federal District, 2021

RS	RA	UBS	UBS c/ PSE	UBS COB	eSF	eSB	ESC	ESC c/ PSE	ESC COB
Central	Cruzeiro	2	2	100.0%	10	4	10	7	70.0%
	Lago Norte	1	1	100.0%	4	2	5	2	40.0%
	Lago Sul	0	0	--	0	0	4	0	0.0%

Table 2. (cont.)

RS	RA	UBS	UBS c/ PSE	UBS COB	eSF	eSB	ESC	ESC c/ PSE	ESC COB
	Sudoeste/Octogonal	0	0	--	0	0	1	1	100.0%
	Plano Piloto	5	4	80.0%	24	13	93	32	34.4%
	Varjão	1	1	100.0%	3	2	2	2	100.0%
	Total Central	9	8	88.9%	41	21	115	44	38.3%
South Center	Candangolândia	1	1	100.0%	5	3	6	3	50.0%
	Guará	5	4	80.0%	23	11	22	8	36.4%
	Núcleo Bandeirante	2	2	100.0%	7	3	9	4	44.4%
	Park Way	1	0	0.0%	1	1	3	1	33.3%
	Riacho Fundo	2	2	100.0%	10	4	11	5	45.5%
	Riacho Fundo II	5	3	60.0%	16	9	10	2	20.0%
	Scia/Estrutural	2	2	100.0%	12	7	7	6	85.7%
	Sia	0	0	--	0	0	0	0	--
	Total South Center	18	14	77.8%	74	38	68	29	42.6%
East	Itapoã	3	2	66.7%	15	7	4	2	50.0%
	Jardim Botânico	1	0	0.0%	4	0	1	1	100.0%
	PARANOÁ	8	5	62.5%	23	13	30	19	63.3%
	São Sebastião	13	9	69.2%	26	12	27	24	88.9%
	Total East	25	16	64.0%	68	32	62	46	74.2%
North	Fercal	3	0	0.0%	4	2	10	0	0.0%
	Planaltina	20	13	65.0%	48	27	69	24	34.8%
	Sobradinho	6	6	100.0%	24	16	28	13	46.4%
	Sobradinho II	7	2	28.6%	21	12	10	7	70.0%
	Total North	36	21	58.3%	97	57	117	44	37.6%
West	Brazlândia	9	4	44.4%	16	9	32	15	46.9%
	Ceilândia	17	14	82.4%	76	41	107	49	45.8%
	Sol Nascente/Pôr do Sol	1	0	0.0%	4	1	0	0	--
	Total West	27	18	66.7%	96	51	139	64	46.0%
South-west	Águas Claras	2	2	100.0%	7	4	7	4	57.1%
	Arniqueira	0	0	--	0	0	2	2	100.0%
	Recanto das Emas	9	6	66.7%	36	22	36	15	41.7%
	Samambaia	13	12	92.3%	61	37	57	40	70.2%
	Taguatinga	7	6	85.7%	49	23	62	23	37.1%
	Vicente Pires	1	1	100.0%	8	3	2	2	100.0%
	Total Southwest	32	27	84.4%	161	89	166	86	51.8%
South	Gama	11	11	100.0%	40	17	52	44	84.6%
	Santa Maria	8	5	62.5%	30	13	34	8	23.5%
	Total South	19	16	84.2%	70	30	86	52	60.5%
	Total Federal District	166	120	72.3%	607	318	753	365	48.5%

Source: based on data from Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira (INEP)¹¹; Primary Care Information System (SISAB)¹⁴.

Basic Health Units (UBS); UBS with adherence to PSE (UBS c/ PSE); coverage percentage of UBS with PSE (UBS COB); Family Health Teams (eSF), Oral Health Teams (eSB) Public or contracted schools (ESC); Schools with adherence to PSE (ESC/PSE); PSE coverage per School (ESC COB); Administrative Region (RA); Health Region (RS).

School Health Program actions before and during the COVID-19 pandemic

In the pre-pandemic period, there was an increase in the practices recorded between 2018 and 2019 which went from 1,332 to 2,119 (*table 3*), predominantly those of Oral Health (SB) such as topical fluoride application and supervised tooth brushing. There was an increase in anthropometry registries and verification of vaccination status; on

the other hand, there was a decrease in eye health actions. There was a lack of records related to language development and to the National Tobacco Control Program and incipient hearing health practices.

When analyzing the pandemic period, especially the data for the year 2020, there is a reduction in most activities with the exception of supervised tooth brushing, topical fluoride application, and checking the vaccination status which registered an increase in 2021.

Table 3. Number of collective activities related to health practices developed in schools in the Federal District, with (Yes) and without (No) adherence to the School Health Program (PSE) between 2018 and 2021

	2018			2019			2020			2021			Grand Total
	No	Yes	Total	No	Yes	Total	No	Yes	Total	No	Yes	Total	
Anthropometry	13	17	30	19	273	292	1	1	2	9	11	20	344
Topical fluoride application	219	202	421	213	431	644	4	9	13	33	16	49	1,127
Language development	0	0	0	0	0	0	0	0	0	1	0	1	1
Supervised tooth brushing	319	368	687	324	592	916	10	7	17	43	68	111	1,731
Other collective procedure	24	67	91	23	98	121	8	3	11	17	28	45	268
National Tobacco Control Programme	0	0	0	0	0	0	0	0	0	0	0	0	0
Body practices / physical activity / leisure	12	9	21	18	9	27	3	2	5	4	6	10	63
Hearing health	1	0	1	0	2	2	0	0	0	0	0	0	3
Eye health	32	10	42	4	16	20	0	0	0	0	0	0	62
Checking vaccination status	21	18	39	29	68	97	2	2	4	11	43	54	194

Source: based on data from Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira (INEP)¹¹; Primary Care Information System (SISAB)¹⁴.

Regarding the themes developed in the PSE (*table 4*) in the pre-pandemic period, healthy eating and SB prevailed. The actions to control the *Aedes aegypti* mosquito, mental health, self-care for people with chronic diseases and citizenship and human rights had a slight increase. Violence prevention and promotion of the culture of peace had records in all the analyzed years. There was a

decrease in neglectable diseases and chemical dependence/smoking/alcohol.

The results show a great reduction in the records of the topics during the pandemic period. On the other hand, when comparing the years 2020 and 2021, it is observed, in the latter, an increase in records concerning SB, healthy eating, mental health, and environmental health. COVID-19 had registries only in 2021.

Table 4. Number of collective activities on health issues developed in schools in the Federal District, with (Yes) and without (No) adherence to the School Health Program (PSE) between 2018 and 2021

	2018			2019			2020			2021			Grand Total
	No	Yes	Total	No	Yes	Total	No	Yes	Total	No	Yes	Total	
Neglected diseases	38	32	70	7	17	24	0	1	1	5	2	7	102
Healthy eating	375	349	724	403	935	1338	31	37	68	90	137	227	2,357
Self-care for people with chronic diseases	41	7	48	33	44	77	12	16	28	4	7	11	164
Actions to combat the Aedes aegypti mosquito	54	78	132	120	136	256	25	21	46	19	60	79	513
Citizenship and human rights	11	9	20	29	38	67	5	3	8	4	6	10	105
Chemical dependency / tobacco / alcohol	32	13	45	11	27	38	1	1	2	2	23	25	110
Aging / Climacteric / Andropause	8	2	10	4	4	8	1	0	1	0	0	0	19
Medicinal plants / phytotherapy	0	2	2	1	4	5	0	0	0	1	1	2	9
Violence prevention and promotion of the culture of peace	40	13	53	23	45	68	0	5	5	4	13	17	143
Environmental health	20	30	50	23	28	51	6	0	6	11	38	49	156
Oral health	785	895	1,680	722	1391	2113	59	58	117	216	384	600	4,510
Occupational Health	9	8	17	3	13	16	1	5	6	6	4	10	49
Mental health	25	26	51	49	53	102	4	4	8	40	29	69	230
Sexual and reproductive health	51	40	91	44	55	99	5	13	18	6	15	21	229
School health week	143	82	225	96	123	219	1	7	8	6	20	26	478
Covid-19 prevention										8	8	16	

Source: based on data from the National Institute of Educational Studies and Research Anísio Teixeira (INEP)¹³; Health Information System for Primary Care (SISAB)¹⁴.

The description of the PSE situation in the studied period, from 2018 to 2021, was complemented by data from the online forms answered by APS professionals. In the period before the pandemic, of the 12 priority themes of the PSE, checking the vaccination status was mentioned the most (10), followed by oral health (8) and healthy eating and obesity prevention (7). Hearing health was not mentioned.

Only seven respondents said they had carried out actions in the PSE during the pandemic showing a reduction in comparison to the previous period. The actions for SB (5) were at the top followed by verification of vaccination status (4), environmental health (3), and COVID-19 prevention (3). Prevention of alcohol, tobacco and other drug use, hearing health, and eye health were not mentioned.

In the studied period, the integrations between eSF and eSB, between different eSF and NASF-AB team for the development of actions were referred as constant. However, it should be noted that not all eSF have eSB and NASF-AB of reference.

As for the professionals who developed the program's actions, there was a predominance of nurses in both periods (12 and 7) also standing out the community health agents (11) before the pandemic, and the nursing technicians (6) during the pandemic. The other professions that integrate the eSF, eSB and NASF-AB were mentioned in smaller numbers.

For the development of the actions in 2018 and 2019, several approaches were used with emphasis on lectures, workshops, theatrical performances, and videos. In the two

subsequent years due to the pandemic, digital technologies were used such as sending recorded videos, folders, and digital educational material in addition to the use of chats with users. Although in smaller numbers, there were also lectures, theatrical presentations, oral evaluations, and supervised brushing during the pandemic. Communication between health teams and schools was maintained through personal messaging applications due to the isolation and distancing control efforts against COVID-19.

Perspectives for the School Health Program in Primary Health Care in the Federal District

The professionals brought up some facilitating and hindering aspects for the effectiveness of the PSE actions that may help to outline ways to strengthen the program in the Federal District.

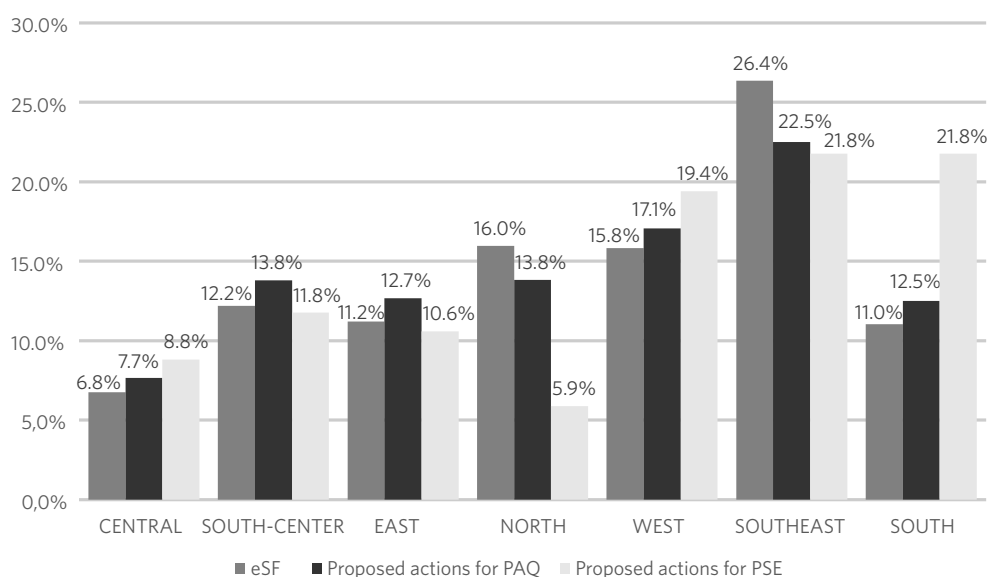
Before and during the pandemic the difficulties were structural such as the lack of

supplies, human resources, vehicles, and drivers. Before the pandemic, the difficulty in accessing educational materials was mentioned, while during the pandemic the instability and poor quality of the internet was pointed out. Another important concern was the difficulty in getting permission from the local management to carry out external activities due to the high demand in the UBS. In addition, the schools' lack of interest in coordinating with the health sector was mentioned by one respondent.

On the other hand, the engagement and partnership of APS teams, interest, openness, and welcoming of schools, and the availability of oral health kits by SES/DF were referred as facilitators in both moments. In the pandemic, the schools' adaptation to COVID-19 prevention measures was seen as a facilitator.

Future prospects were signaled by the number of eSFs and eSBs that have included PSE in their PAQs which began to be implemented in the year 2022 (graph 1).

Graph 1. Proportion in relation to the total number of Family Health teams, total proposed actions for the Quality Action Plan, and total proposed actions involving the School Health Program in the Federal District, 2022



Source: based on data from the QualisAPS¹⁰ Platform, Federal District Health Secretary, 2022.

Of the total of 4,148 actions proposed by 603 teams, 170 (4.1%) are linked to the standard 'Teams develop actions of the School Health Program (PSE) in their territory' which makes the PSE rank 6th among 45 standards self-assessed by the teams. The designed actions include the resumption of articulation with schools to select themes and prepare a schedule; and internal agreements between the teams and the local UBS manager to allocate human and material resources such as protected hours of work, educational materials, and sanitary transportation.

Discussion

The results show that at each cycle of PSE participation in the DF, there was an increase in the number of schools in the program. Two initiatives may have contributed: the establishment of an Intersectoral Working Group (GTI) by the health and education sectors, with representatives of the Oswaldo Cruz Foundation (FIOCRUZ) in Brasilia and the United Nations Population Fund (UNFPA) on a permanent basis for planning, coordination, evaluation, and monitoring of the PSE; and the formal commitment between UBS and school managers to agree on actions based on local demands at each moment of participation as an exercise to strengthen bonds¹⁵.

Before and during the pandemic, there was a predominance of issues and practices related to food and nutrition and SB similar to what was found in the study by Souza and Ferreira¹⁶, and there was an increase in the verification of the vaccination status in 2021 which coincides with the responses of the questionnaires.

The increase in healthy eating actions in the period 2018 to 2019 and keeping them in place in the years 2020 and 2021 could be explained by the implementation of the National Food and Nutrition Policy (1999), the District Food and Nutrition Policy (2021), and the National School Feeding Program (2021). They all recommend carrying out adequate and healthy

eating actions and monitoring nutritional status and food consumption in the PSE. In addition, the Ministry of Health launched in 2017 the 'Programa Crescer Saudável' (Growing Healthy Program) intended to tackle childhood obesity which was implemented in the Federal District in 2019 through the project 'Alimenta aí, Galerinha' (Eat Healthily Folks) inducing intersectoral actions of healthy eating, body practices, and physical activity, and providing care to children with obesity¹⁷⁻¹⁹.

The predominance of themes and practices related to SB may be associated with several factors: the historical performance of dentistry in schools; the fact that the eSB are composed by public servants which allows the construction of bonds and continuity of care; the historical isolation of the eSB²⁰ which made it keep the school as a niche of activity, and the availability of inputs to the SB actions by the SES/DF.

However, it is necessary to consider that "a SB is not restricted to the dentistry unit, but covers the field of competencies and responsibilities of other professional fields"²¹⁽²³⁵⁾, as directed by the public policy with the insertion of the eSB in the ESF in the year 2000, and with the publication of the National Oral Health Policy Guidelines in 2004. Even limited, the multidisciplinary work in the APS may be favoring the significant number of SB actions, especially the participation of physicians and community health agents, according to a study conducted in the Federal District²¹. During the pandemic period, dentists were away from their offices which may have favored the performance of certain activities such as the distribution of oral health kits.

The decline in vaccination actions in the first year of the pandemic (2020) was possibly due to the temporary guidelines of the World Health Organization to suspend the vaccination of the basic calendar²², similarly to what was observed in the study by Lopes Júnior et al.²³ in Vitória, Espírito Santo, Brazil. However, when routine vaccination was resumed, there was fear on the part of

families of their children becoming infected by SARS-CoV-2 associated with misinformation and lack of interest on the part of users²⁴. In the second year of the pandemic (2021), there was an increase in the verification of vaccination status, probably due to strategies to expand vaccination coverage and the request of basic proof of vaccination upon school enrollment²⁵. It can also be inferred that the return to school in hybrid model which occurred in the Federal District in August, 2021, may have contributed to the perception of the need to assess the schoolchildren's vaccination status before returning to school as a way to mitigate the risk of infectious and contagious diseases transmission.

Regarding the actions to promote a culture of peace, citizenship and human rights, violence prevention, and mental health promotion which had few records, the PSE is an important strategy to develop activities in this area. To do so, it is necessary that the health team can go schools because doing so makes the speech more valued and makes a difference in the work of health promotion²⁶. In this sense, the difficulty of getting permission from the local managers, mentioned by the professionals from the Federal District, needs to be overcome.

To strengthen this axis of PSE performance, there are recommended practices such as Integrative Health Practices (PIS) created in 2014 and recommended by the District Policy of Integrative Health Practices (PDPIIS) and more specifically, the 2019 Integrative Practices in School Project, highlighted on the national scene. Among the PISs carried out at schools there is the Integrative Community Therapy and meditation. Through meditation in the school district context, it was possible to verify that the processes of external violence have repercussions in the mental field as a result of information absorbed by the emotions²⁷⁻²⁹.

With regard to environmental health actions, it can be observed that the topic of tackling the *Aedes aegypti* mosquito was

characterized as mandatory in the PSE until the cycle of 2019 and 2020, a fact that contributed to enter the routine of actions of APS teams. In addition, fighting dengue is an intersectoral government policy of the Federal District³⁰.

Concerning the actions related to neglected diseases, it was found incipient records despite representing a challenge to global health. It is important to elucidate how this important issue should be included in the school space given the potential for reducing inequalities and consequently mitigating neglected diseases³¹.

The reproductive and sexual health issue, although widely discussed in recent decades, including productions arising from the PSE, is still subject to stigmas of various 'natures' whether in the socio-political context or in traditional educational practices in the APS and in the school context, or in the curriculum constraints that hinder the approach to adolescents, thus interfering in the social production of health³².

Reduced hearing acuity is a limiting factor for learning which can impair the development of language both oral and written and it can have deleterious effects on the school child's life when it is not diagnosed early³³. However, it was observed that there were few actions on these matters in the period studied showing the need to strengthen these actions in the PSE in the Federal District.

Although there have been actions to prevent chemical dependence, tobacco and alcohol use, there was no record of actions of the national tobacco control program in the PSE in the studied period. This situation points to the need for attention to the topic, since there is evidence that alcohol and cigarettes use is related to school failure besides increasing the risk of developing chronic and respiratory diseases putting pressure on the health system and demand more public resources³⁴.

It can be inferred that the school environment in the Federal District is not yet seen as a care space regarding smoking treatment.

However, according to information from the SES/DF website, 28 UBS offer this service which indicate that there are professionals trained to develop the program and to make the school a strategic place to carry out such actions³⁴.

The fact that only 7 respondents said they had carried out PSE actions during the pandemic compared to 12 who reported actions in the previous period is probably due to the restrictive measures imposed by the health crisis. Supporting this hypothesis, it could be observed that most of actions taken during the pandemic occurred in the second half of 2021 when the cases of COVID-19 were reduced and classes and collective activities were resumed in an in-person manner in the DF.

The PSE, by its nature, favors and at the same time presupposes cooperation intra- and intersectorially among the various professions and teams so that the integrality of school healthcare can be effective. The results of the questionnaire suggest the existence of constant integration, but the low number of respondents makes inferences difficult. The literature, despite mentioning the incipient integration in the Federal District, shows that the eSB works with the SF

[...] in cross-consultations, team meetings, home visits, intersectoral actions focused on school people and individual and group health education in an environment where the biomedical model predominates. Community health workers stand out as facilitators of integration, while oral health technicians remain invisible²¹⁽²³³⁾.

It is essential to reiterate the importance of the community agents as strategic professionals in APS who, since the implementation of the ESF have developed actions linked to state programs including the PSE³⁵. However, the National Primary Care Policy of 2017³⁶ has pointed to a decrease in the number of agents and a reconfiguration of the nature of their work tending to reduce their insertion

in the teams and to mischaracterize their role as educators³⁷.

The results of this study which indicate the protagonism of nurses and nursing technicians, can be related to the fact that they represent 70% of the health workforce in Brazil³⁸, but it can also be due to the fact that nurses were the ones who answered the questionnaire. These professionals stand out for the breadth of their activities both managerial and healthcare which can distance them from health promotion actions³⁹. Nevertheless, recent studies show the school as an environment for nursing intervention and its influence on education and health promotion⁴⁰.

Perspectives for the Federal District

The participation of professionals in the diagnoses, evaluations, and design of action strategies is essential for the effectiveness of the PSE. In this sense, the knowledge and experience they bring in should be taken into account by managers.

The reported difficulties for the development of the PSE practices in general follow what other studies have reported about the context of the program and APS. They point out the lack of material and human resources, excessive demands on the UBS, difficulties in liaising with the students' parents and the community, and the lack of participation of the whole team in the developed activities^{41,42}.

The facilitators seem to follow aspects brought by the literature: the intersectoral articulation and professional satisfaction in performing the activities of the PSE⁴² which are aspects directly associated with the engagement and partnership of the APS teams, the interest, openness and welcoming of the school mentioned by the professionals in this study.

When analyzing future perspectives, one can highlight the relevance that the QualisAPS Program has assumed among professionals and managers. By including as part of the quality evaluation standards, a standard on the

eSB and eSB activities in the PSE, QualisAPS induces reflection and intervention in the work processes and contributes to signaling the need for improvements in PSE's actions.

It should be noted that this study has limitations because it is descriptive in nature limiting data interpretation and inferences. However, the methodological choice in face of the recognized scarcity of studies with similar methodology in the Federal District and the triangulation of data production techniques allowed us to draw a baseline of the PSE situation and bring out reflections and perspectives of actions. Another limitation worth mentioning is the option of restricting the analysis of the scope of the program's implementation only from the APS perspective, even though it is acknowledged the premise of intersectoriality for the program's development. The vision and experience of the school protagonists could be the object of future studies.

Final considerations

This study is a pioneering initiative that traced the state of the art of the activities developed in PSE before and during the COVID-19 pandemic thus contributing to strengthening the teams' management and performance in

healthcare promotion in the school environment by the APS of the Federal District.

Strategic elements for its development are: the existence of permanent PSE coordination and monitoring instances, public policies that strengthen the development of the recommended actions as well as the commitment of primary care managers to include the program in the professionals' agenda.

The DF's reality reveals that the interrelation of the PSE with the QualisAPS allows a continuous and intersectoral process and the existence of local partnerships with the school community. This context strengthens organizational aspects and enables support for the implementation and planning of specific cross-cutting public policies, including the PSE in the APS of the Federal District.

Collaborators

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Received on 05/07/2022

Approved on 08/23/2022

Conflict of interests: non-existent

Financial support: non-existent