HEALTH EDUCATION IN OR WITH THE SCHOOL?

EDUCAÇÃO EM SAÚDE NA OU COM A ESCOLA?

EDUCACIÓN EN SALUD ¿EN LA O CON LA ESCUELA?

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ABSTRACT

Objective: to analyze how health actions take place in the school environment. **Method:** integrative review in LILACS, IBECs, BDENF, MEDLINE and COCHRANE databases. The search and data collection period was carried out in September 2016. **Results:** out of a total of 24,774 publications, 20 met the criteria for inclusion and analysis of scientific rigor. The research corpus was formed through abstracts of publications processed in Iramuteq software. Two subcorpora and four classes were represented in the dendrogram of the Descending Hierarchical Classification and named from the Content Analysis. **Conclusion:** the actions were divided into two models, quantitatively proportional and opposite in form and content. Most still focus on the biological and prescriptive model; however, constructivist models involving the school community are present. **Descriptors:** School Health; Health Education; Intersectoral Collaboration; Interbranch Relations; Vocational Education; Interdisciplinary Communication.

RESUMO

Objetivo: analisar de que forma as ações de saúde desenvolvem-se no ambiente escolar. **Método:** revisão integrativa nas bases LILACS, IBECs, BDENF, MEDLINE e COCHRANE. O período de busca e coleta dos dados foi realizado em setembro de 2016. **Resultados:** de um total de 24.774 publicações, 20 atenderam aos critérios de inclusão e à análise do rigor científico. O *corpus* da pesquisa formou-se por meio dos resumos das publicações processados no *software* Iramuteq. Formaram-se dois *subcorpus* e quatro classes representados no dendograma da Classificação Hierárquica Descendente e nomeados a partir da Análise de Conteúdo. **Conclusão:** as ações dividiram-se em dois modelos quantitativamente proporcionais e opostos em forma e conteúdo. A maioria ainda se centra no modelo biológico e prescritivo, entretanto, modelos construtivistas envolvendo a comunidade escolar fazem-se presentes. **Descritores:** Saúde na Escola; Educação em Saúde; Colaboração Intersectorial; Relações Interprofissionais; Formação Profissional; Comunicação Interdisciplinar.

RESUMEN

Objetivo: analizar de que forma las acciones de salud se desarrollan en el ambiente escolar. **Método:** revisión integrativa, en las bases LILACS, IBECs, BDENF, MEDLINE y COCHRANE. El período de búsqueda y recolección de datos fue realizado en septiembre de 2016. **Resultados:** de un total de 24.774 publicaciones, 20 atendieron a los criterios de inclusión y el análisis del rigor científico. El corpus de la investigación se formó a través de los resúmenes de las publicaciones, procesados en el *software* Iramuteq. Se formaron dos subcorpus y cuatro clases representadas en el dendograma de la Clasificación jerárquica descendente y nombradas a partir del Análisis de Contenido. **Conclusión:** las acciones se dividieron en dos modelos cuantitativamente proporcionales y opuestos en forma y contenido. La mayoría todavía se centra en el modelo biológico y prescriptivo, sin embargo, modelos constructivistas involucrando a la comunidad escolar se hacen presentes. **Descriptor:** Salud en la Escuela; Educación para la Salud; Colaboración Intersectorial; Relaciones Interprofesionales; Formación Profesional; Comunicación Interdisciplinaria.

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INTRODUCTION

The insertion of health in the school did not happen in an articulated way to the needs and precepts of the directives of the education. It is considered as a health mark in the school the Frank System created, in 1779, by the German doctor Johann Peter Frank. The Frank System resulted in a code elaborated later by Franz Anton Mai that placed great emphasis on the disciplining of health education. The first "law" referred to the duties of a health officer by proposing action in educational institutions, instructing both children and teachers on the maintenance and prevention of a healthy life, and providing adolescents with information on care who should have sexual excesses.¹

This is the earliest known reference point for a health proposal in the school that originated the Medical Police in Europe.¹ In Brazil, similarly, school health or school hygiene emerged with a focus on the control of epidemic diseases.² It planned in three lines: that of the medical police, that of sanitarism, and that of childcare. Lines of action focused on the biological model of disease control, space hygiene and symptom monitoring.¹⁻²

Throughout the twentieth century, with the technological advance and discussions regarding the expansion of the concept of health and health promotion with the Ottawa Charter in 1986, and particularly in Brazil, with the Health Reform, new proposals were the School Health Promotion (SHP).³ This is contrary to the traditional models of school health programs that, over decades, are characterized by vertical, welfare, normative and medical approaches.³⁻⁴

Another important intersectoral experience was implemented in 2004: the Health and Prevention in School Project (HPS), a milestone in the integration of education and health systems, focusing on the school as a space for articulating policies aimed at adolescents and young people aiming at the promotion of sexual and reproductive health.⁵

These experiences have become references for the construction of the current School Health Care Policy in Brazil, through Decree No. 6,286, of December 5, 2007, through the School Health Program (SHP), with the perspective of building actions that integrate the school community for active participation in interinstitutional programs and projects between health and education. It includes, in the guidelines of the SHP, the proposal of intersectoral, interdisciplinary and multiprofessional articulation in addition to

health care actions through axis III of the program that advocates the continuous training of health professionals and education in relation to educational actions of cross-cutting themes in a collaborative way.⁶

Space relevant to health promotion, the school has become the locus of several actions in the health area. However, it should be stressed that the changes promoted in the attitudes of life and self-care by the students are temporary. Teachers complain that the health sector develops isolated and punctual actions that are not in line with the needs of the school community that precariously participates in the decisions about the subjects and actions of health education in the school.¹

OBJECTIVE

- To analyze how health actions take place in the school environment.

METHOD

Integrative review, using Cooper's analysis systematization.⁷ The study was developed following the following phases: 1) formulation of the problem; 2) data collection; 3) data evaluation; 4) analysis and interpretation; and 5) presentation of the results.

Phase 1 - As a study question and aiming to trigger the development of the research, the following guiding question was defined: in what way do health actions take place in school? Phase 2 - The following databases were chosen: the Virtual Health Library of Bireme: Latin American and Caribbean Literature (LILACS), Nursing Database (BDENF), Spanish Bibliographical Index of Health Sciences (IBECS), MEDLINE (Medical Literature Analyzes and Retrieval System Online), BBO, Index Psychology and COCHRANE. Cross-references were made with the Health Sciences Descriptors (DeCS) and the respective terms of the Medical Subject Headings (MESH) with the boolean operator "and": 1st Health Promotion and School Health / Health Promotion and School Health; 2nd Education in Health and School Health / Health Education and School Health; 3rd Family Health and School Health / Family Health and School Health; 4th School Health and Health in School Program / School Health and School Health System. The period of search and data collection was performed in September 2016. For this first search, a total of 24,774 articles were located in the selected databases.

Databases / Libraries Crossing Desc	Health Promotion and School Health	Health Education and School Health	Family Health and School Health	School Health and Program at School	Total
	n	n	n	n	n
MEDLINE	5659	13.302	600	0	19561
LILACS	856	1477	103	909	3345
COCHRANE	289	448	2	0	739
BDENF	70	154	11	74	309
IBECS	68	123	7	190	388
BBO	91	154	6	35	286
Index - Psychology	29	100	2	15	146
Total	7062	15758	731	1223	24774

Figure 1. Distribution of the publications located in the selected databases covering health education actions in the school according to the cross-referencing of the descriptors. Recife (PE), Brazil, 2016.

Phase 3 - The following inclusion and exclusion criteria were selected for the selection of articles. Inclusion Criteria: articles that address health actions developed at school by institutional health programs at school and / or by the Family Health Strategy and / or by Higher Education Institutions; having as subjects students of basic education, teachers, school community (school professionals and students' families) and / or school as scenario; original article in Portuguese, English or Spanish; article with abstract and full text available in its entirety; year of free publication.

Exclusion criteria: dissertations, theses, manuals, editorials, reflective articles and reports of experience or review of integrative and / or systematic literature. In this phase, articles were selected that met the inclusion and exclusion criteria. Subsequently, we discarded duplicate articles, identifying a total of 41 articles. With these 41 articles, the methodological rigor was evaluated through the Critical Appraisal Skills Program (CASP).⁸

In the instrument, ten questions assess the existence and clarity of the following questions in the studies: 1. Objective; 2. methodological design; 3. technical-methodological procedures; 4. Sampling; 5. data collection; 6. Researcher relationship and participants; 7. ethical aspects; 8. analysis procedures; 9.results and discussion and 10.contributions and limitations of the

research. Each question in the checklist assigns a response with the corresponding score: yes - one point; in part - zero point; not - zero point. The first two questions must be answered in order to continue the assessment. The included articles score between six and ten points, otherwise, the study is considered with low methodological rigor, excluding it from the review.

By means of this analysis procedure, 20 articles with a CASP score equal to or greater than six were selected as the final sample, according to figure 2.

Phase 4 - Data analysis and interpretation: in this phase, the text analysis software IRAMUTEQ (Interface of Multidimensional Analyzes of Textes et de Questionnaires) was used. This is a free open source software available free of charge at (www.iramuteq.org). Developed by the French researcher Pierre Ratinaud, which, similar to ALCESTE, uses an algorithm for the construction of statistical analyzes of texts. The software makes possible several textual analyzes, among them, the Descending Hierarchical Classification (DHC). The program enables textual analyzes such as basic lexicography (word frequency calculation) and multivariate analyzes (DHC and similarity analysis).⁹⁻¹⁰

Databases / Libraries Crossing Desc	Health Promotion and School Health	Health Education and School Health	Family Health and School Health	School Health and Program at School	Total
	N	n	n	n	N
MEDLINE	5	2	0	0	7
LILACS	2	6	4	15	27
BDENF	0	0	0	1	1
IBECS	0	0	0	6	6
Total	7	8	4	22	41
Selection CASP*	3	5	1	11	20

Figure 2. Distribution of selected publications after application of inclusion and exclusion criteria and CASP analysis. Recife, (PE), Brazil, 2016.

*Critical Appraisal Skills Programme

The textual corpus of this study is composed of the abstracts of the final sample. Initially, articles from the Adobe Reader format were converted to the Microsoft Office Word format through the online smallpdf.com program and subsequently entered into the software for processing.

For each abstract, it was called a text or ICU (Initial Context Unit). After the recognition of the ICU, in the analysis, the program converts it into segments of text or ECU (Elementary Context Unit) that is constituted in the enunciation of the word giving origin to the unit of text or CU (Context Unit) the statistical calculations. The command lines that preceded and codified each text are composed of the variables: article identification (n), descriptor, year of publication and place of study. Among the possible analyzes, we used: 1) descriptive statistics; 2) Descending Hierarchical Classification (DHC) presented as a

dendrogram and 3) A unit of context (colored corpus) representing each class.

RESULTS

Phase 5 - systematization of the integrative review. The sample, the corpus statistics, the DHC represented in the dendrogram, the analysis and interpretation of the representative classes and excerpts of each are described.

Sample description

It was observed that the majority of the selected studies developed in Brazil in which the quantitative approach and the theme of healthy eating were privileged. The year of publication, between 2005 and 2013, the CASP criterion, between six and eight, and the prevalent language, Portuguese, according to figure 3.

Characteristics	(n)	Article identification
Level of evidence (methodological rigor)		
CASP = 8	5	26, 27, 33, 35,39
CASP = 7	8	22,35,29,30,34,36,39,41
CASP = 6	7	23,24,38,31,32,37,38
Type of methodological approach		
Quantitative	15	22,23,24, 25, 26, 31, 32, 33, 34, 35, 36, 37 38,39, 40
Qualitative	3	28,29,41
Quanti-qualitative	2	23, 30
Country of origin		
Brazil	13	23,24,25,26,27,28,29,30,31, 32,33, 36,40
Spain	3	28,29,30
Portugal	2	34, 35
Chile	1	22
Colombia	1	37
Theme		
Health food	5	23,26,28,30,35
Oral Health	4	22, 24,27,39
Sexual health / STD / AIDS	2	29,40
Smoking, alcohol and drugs	2	35,38
Domestic violence	2	33,40
Postural Education	2	25, 32
Bullying	1	34
Teacher Health	1	30
Intersectoral Action	1	37
Total	20	

Figure 3. Quantitative distribution of the characteristics of the analyzed sample. Recife (PE), Brazil, 2016.

Sample statistics

The textual corpus refers to the 20 abstracts of the articles selected, processed in the IRAMUTEQ software, which were divided into 115 ICUs of which 70% were considered 61% for CHD and 4120 words with a frequency equal to or greater than three.

In the first partition of the software, two subcorpus were identified: the I, which corresponded to 51.4% of the CUs and suffered

a second partition, forming classes I and IV, and subcorpus II, with 48.6% of the CU. And there was also a second partition in which classes III and II were formed, in that order. Subcorpus and class are presented in the descending hierarchical classification (DHC) in the graphical form of a dendrogram (Figure 1).

Subcorpus and classes were deductively deduced by means of the hierarchical

relationships of the words in each class represented in the DHC.

It was verified that the DHC of the words and the value of X2 represent the level of association of the latter with the class and the

subcorpus. Thus, through the lexical analysis of each word, it was possible to characterize the health education actions represented by each of the four classes and two subcorpus.

Figure 4. Dendrogram of descending hierarchical classification. Recife (PE), Brazil, 2016

Subcorpus I - Class I

This class consisted of 21.4% of the study corpus. In the excerpts, it was evidenced that the prevention actions aimed at measuring its impact and effectiveness. These actions were instrumented through booklets, objects and educational materials using lectures to socialize during the meetings. In the studies, behavioral changes are shown for healthier habits in the intervention period, however, these changes did not last for a long time. The involvement of the school was basically made up of the intervention and control groups. The studies were developed by professors of Institutions of Higher Education.

The objectives of the study were to measure the effectiveness of educational leaflet-supported counseling and to study smoking progression, a greater efficacy was not observed in the intervention group that used the leaflet. (Article 22)

After a discontinuation period of 2.5 years in the 2002 and 2003 school year, fissure sealants and fluoride varnish show no significant influence on oral health quality. (Article 23)

Subcorpus I - Class IV

Class IV concentrated the highest percentage of corpus. The words refer to diagnostic interventions in the child population and teachers. In the selected studies, actions of application and prescription of treatments, therapeutic behaviors, evaluation of school performance, eating habits and oral health, training of parents and teachers to act as models to be copied by children and students are identified. These actions differed from class I because they did not work with control groups.

Caries gingivitis was measured by oral clinical examination at the beginning and at the end of the study. The dietary pattern was obtained by applying a questionnaire, caries disease was found in 58.5% of the children. (Article 24)

The intervention was based on the assumption that children need to be reinforced on a frequent, contingent, intense, differentiated and systematic basis and that parents need to act as appropriate role models for their children, being trained to maintain and implement behaviors. (Article 25)

Subcorpus II - Class II and III

In these two classes, similar proposals were presented in which the involvement of the participants was the condition for their execution. We focused actions involving the school community considering the context where the school was inserted. Two constructivist educational strategies stand out: Paulo Freire's popular education and circle of culture in which the participants engaged in themes of their interest, acting in a reflexive way, valuing their knowledge and providing involvement in identifying their needs.

In class III, actions were developed aimed at adolescents' health, discussing issues of gender and sexuality. Pedagogical actions were also carried out with the teachers to deal with problems of family violence perceived in the classroom.

We held Health Promotion workshops, based on the Freirean dialogic approach, a culture circle, with the purpose of contributing to the promotion of knowledge, reflection and decision of adolescents in caring for themselves and being protagonists. (Article 27)

In class III, studies were concentrated where the perception of the social role of the school and the valorization of the community were developed, providing recognition and self-esteem. Needs of inter-sectoral actions that approach school and community were pointed out. The following excerpts from the studies highlighted in the colored corpus exemplify this class.

Educational action problematizing from elements of the context ... reflected daily life and valued work ... cultural identity ... create a food and nutrition education program strengthening families' self-esteem. (Article 29)

They sought alternative solutions to the problems encountered through community participation, health education and the building of alliances between the educational community, health sector, education and municipal authorities. (Article 30)

DISCUSSION

In this review, health actions have developed in two ways in quantitative proportion, however, following pedagogical models that counterpose in form and content.

In subcorpus I, interventions are based on the biological, welfare and prescriptive model present in the *modus operandi* of the health sector, identified with the origin of school health, medical police and sanitarianism, in

which they intervened with prescriptions of rules of health and healthy habits, medicalizing the actions of health in the school.^{1,12} The actions were mainly based on clinical data and the quantification of signs and symptoms with the interest in evaluating the efficacy of the procedures. Actions based on healthy assumptions and normality with prescription of rules, behaviors and ways of living were also observed. This way of doing so has resonance in the literature where the school reports that it does not feel part of this model of health education, which could explain the fact that permanent changes in habits and behaviors of health promotion of the school community are not obtained.¹²

In a study carried out in 2013, in municipal schools in the State of Minas Gerais, there were similar results in which the actions of the School Health Program - SHP focused mainly on clinical evaluations carried out by Primary Care professionals with little or no participation of the school community in the definition of these actions.^{13,15} Both the health professional and the teacher maintain the concept that health is responsible for health education actions at school and teachers feel deprived of this responsibility.^{15,19}

In an analysis of school health in Latin America, this practice of the health sector in school was observed¹¹ corroborating findings of this review in which most of the studies selected focused on Latin America. It is pointed out, as one of the probable aspects for this health, the precarious discussion about health promotion in the undergraduate curriculum and in the continuing education of the health and education professionals, emphasizing that in the latter one rarely contemplates contents of health.^{11,18-19}

To counter this model, we found a significant number of studies in which educational actions were developed with the involvement of the school community. Although triggered by actors outside the school, the use of problematizing methodologies, starting from the previous knowledge of the members of the school, was constituted as another form of doing. A methodological model in which interventions do not arrive ready and standardized to be applied.

They were actions in which discussions and reflections of students, teachers and families were identified identifying needs and leading their confrontation. This way of acting in school coincides with the model of health education of the HPS ⁴, having, as references, the concept of health promotion and the expanded concept of health, advancing

towards an integral conception of the human being considering its social context and politico.³ The HPS introduced a new praxis of health education in the school in which the school community is involved in the identification of its problems and the strategies of solution.¹⁷

In a study carried out in the Brazilian state schools in 2002, evaluating the health actions developed by the school itself, it was verified that most of the actions focused on the needs pointed out by the school community, highlighting pedagogical issues of how to approach social and teachers in their disciplines.¹⁵

The school has the competencies to develop health education actions, advocated as a cross-cutting theme in the General National Guidelines for Basic Education, and it is also suggested the partnership with the health area. However, studies are scarce bringing this analysis. The articulation between health and education stands as a priority challenge in the school health agenda and actions taken in schools, which are not demanded / pointed out / discussed with the school, should not prevail.^{13-14,18}

CONCLUSION

It can be seen that the actions of health education in the school space were divided into two opposing models. However, as seen in this review, quantitatively proportional between the two models, which projects an advance in the constructivist methodological conceptions initiated in the early twentieth century.¹⁻³

However, the actions of health education centered on the biological model still prevail characterized by health professionals of the local services and by health HEI teachers who usually enter the schools alone or in uniprofessional groups.

It is also emphasized that health actions carried out by the school itself are little known, not allowing the evaluation of this potentiality.

It is concluded that, despite advances, most health education actions take place "in" the school without the effective involvement of the school community. However, there is a growth of actions of the same field in which it is invested in the inclusion of the school community, thus allowing the construction of actions and projects "with" the school.

REFERENCES

1. Figueiredo TAM, Machado VLT, Abreu MMS. Health at school: a brief history. *Ciênc Saúde Coletiva*. 2010 Mar; 15(2):397-402. Doi: <http://dx.doi.org/10.1590/S1413-81232010000200015>
2. Lima GZ. *Saúde escolar e educação*. São Paulo: Cortez; 1985.
3. Harada J, Mattos PCA, Pedrosa GC, Moreira AMM, Guerra AB, Silva CS, et al. Introdução. In: Sociedade Brasileira de Pediatria. *Escola Promotora de Saúde* [Internet]. Brasília: SBP; 2003 [cited 2018 Mar 18]. Available from: http://www.sbp.com.br/fileadmin/user_upload/img/cadernosbpfinal.pdf
4. Ministério da Saúde (BR), Organização Pan-Americana da Saúde. *Escolas promotoras de saúde: experiências do Brasil* [Internet]. Brasília: Ministério da Saúde; 2007 [cited 2018 Mar 21]. Available from: http://bvsmms.saude.gov.br/bvs/publicacoes/escolas_promotoras_saude_experiencias_brasil_p1.pdf
5. Ministério da Saúde (BR), Secretaria de Vigilância em Saúde. *Programa Nacional de DST e Aids. Diretrizes para implantação do Projeto Saúde e Prevenção nas Escolas* [Internet]. Brasília: Ministério da Saúde; 2006 [cited 2018 Apr 18]. Available from: http://bvsmms.saude.gov.br/bvs/publicacoes/diretrizes_prevencao_escolas.pdf
6. Ministério da Saúde (BR). *Caderno do Gestor do PSE* [Internet]. Brasília: Ministério da Saúde; 2015 [cited 2018 Apr 02]. Available from: http://bvsmms.saude.gov.br/bvs/publicacoes/caderno_gestor_pse.pdf
7. Cooper HM. Scientific guidelines for conducting integrative research reviews. *Rev Educ Res*. 1982 June; 52(2):291-302. Doi: <https://doi.org/10.3102/00346543052002291>
8. Public Health Resource Unit. *The Critical Skills Appraisal Programme: making sense of evidence: 10 questions to help you make sense of reviews* [Internet]. England: Public Health Resource Unit; 2006 [cited 2018 Apr 18]. Available from: <http://www.cfkr.dk/images/file/CASP%20instrumentet.pdf>
9. Reinert M. Classification descendante hiérarchique et analyse lexicale par contexte: application au corpus des poésies d'Arthur Rimbaud. *Bull Méthod Sociol*. 1987 Jan;13(1):53-90. Doi: <https://doi.org/10.1177/075910638701300107>
10. Reinert M. *Alceste une méthodologie d'analyse des données textuelles et une application: Aurélia de Gerard de Nerval*. Bull

Méthod Sociol. 1990 Mar; 26(1):24-54. Doi: <https://doi.org/10.1177/075910639002600103>

11. Cerqueira MT. A construção da Rede Latino Americana de Escolas Promotoras de Saúde. In: Ministério da Saúde (BR), Organização Pan-Americana da Saúde. Escolas promotoras de saúde: experiências do Brasil [Internet]. Brasília: Ministério da Saúde; 2007 [cited 2018 Mar 21]. Available from: http://bvsms.saude.gov.br/bvs/publicacoes/escolas_promotoras_saude_experiencias_brasil_p1.pdf

12. Meira MEM. For a critique of medicalization in education. Psicol Esc Educ. 2012 Jan/June; 16(1):135-42. Doi: <http://dx.doi.org/10.1590/S1413-85572012000100014>.

13. Silva KL, Sena RR, Gandra EC, Matos JAV, Coura KRA. Health promotion in the school health programme and nursing inclusion. REME Rev Min Enferm. 2014 July/Sept;18(3): 614-22. Doi: 10.5935/1415-2762.20140045

14. International Union For Health Promotion and Education. Construindo escolas promotoras de saúde: diretrizes para promover a saúde em meio escolar [Internet]. Saint-Denis Cedex: IUHPE; 2009 [cited 2018 May 18]. Available from: https://www.dge.mec.pt/sites/default/files/ficheiros/iuhpe_hps_guidelinesii_2009_portuguese.pdf

15. Valadão MM, Bydlowski CR, Westphal MF, Pereira IMTB. Promoção da Saúde na Escola: repercussões nas secretarias de educação do Brasil. In: Ministério da Saúde (BR), Organização Pan-Americana da Saúde. Escolas promotoras de saúde: experiências do Brasil [Internet]. Brasília: Ministério da Saúde; 2007 [cited 2018 Mar 21]. Available from: http://bvsms.saude.gov.br/bvs/publicacoes/escolas_promotoras_saude_experiencias_brasil_p1.pdf

16. Ferreira IRC, Vosgerau DSR, Moyses SJ, Moyses ST. Normative measures of the Health in the School Program: content analysis associated with ATLAS TI software. Ciênc Saúde Coletiva. 2012 Dec; 17(12):3385-98. Doi: <http://dx.doi.org/10.1590/S1413-81232012001200023>

17. Silva MA. Promoção da saúde na escola: brincar e construir uma nova práxis. In: Ministério da Saúde (BR), Organização Pan-Americana da Saúde. Escolas promotoras de saúde: experiências do Brasil [Internet]. Brasília: Ministério da Saúde; 2007 [cited 2018 Mar 21]. Available from: http://bvsms.saude.gov.br/bvs/publicacoes/escolas_promotoras_saude_experiencias_brasil_p1.pdf

18. Faria FHP, Aguiar AC, Moura ATMS, Souza LMBM. Perceptions of professionals in family health and in education about health promotion in the school environment. Rev APS [Internet]. 2013 Apr/June [cited 2018 May 12]; 16(2):158-64. Available from: <https://aps.ufjf.emnuvens.com.br/aps/articula/view/1828/716>

19. Besen CB, Souza Netto M, Ros MA, Silva FW, Silva CG, Pires MF. A estratégia saúde da família como objeto de educação em saúde. Saúde Soc. 2007 Jan/Apr; 16(1):57-68. Doi: <http://dx.doi.org/10.1590/S0104-12902007000100006>

20. Ministério da Educação (BR), Secretaria de Educação Fundamental. Parâmetros curriculares nacionais: terceiro e quarto ciclos: apresentação dos temas transversais [Internet]. Brasília: Ministério da Educação; 1998 [cited 2018 Apr 02]. Available from: <http://portal.mec.gov.br/seb/arquivos/pdf/ttransversais.pdf>

21. Ministério da Educação (BR), Secretaria de Educação Básica, Secretaria de Educação Continuada, Alfabetização, Diversidade e Inclusão, Conselho Nacional da Educação. Diretrizes Curriculares Nacionais Gerais da Educação Básica [Internet]. Brasília: Ministério da Educação; 2013 [cited 2018 Mar 03]. Available from: <http://portal.mec.gov.br/docman/julho-2013-pdf/13677-diretrizes-educacao-basica-2013-pdf/file>

22. Galbea J, Traver P, Navarra B, Martínez A, Galvee Z, Aliaga Y, et al. Consejo breve para la prevención del tabaquismo en escolares de 2.º a 4.º de Educación Secundaria Obligatoria de Zaragoza. Rev Pediatr Aten Primaria [Internet]. 2009 Jan/Mar [cited 2018 Apr 18]; 11(41):49-6. Available from: http://scielo.isciii.es/pdf/pap/v11n41/4_origi nal3.pdf

23. Iglesias CH, Atienza MBP, Bravo M, Sánchez EP, Soto EM, Rodríguez MPG. Impact of public preventive programmes on oral quality of life of 11 to 12-yr-old school students. Med Oral Patol Oral Cir Bucal. 2007; 12:E408-11.

24. Badalotti TS, Weigert KL, Bos AJG. Effect of a health education program in the oral health profile of preschool children: an experience in the public network of Porto Alegre, Brasil. Rev Bras Promoç Saúde [Internet]. 2013 Jan/Mar [cited 2018 Mar 21];26(1):102-9. Available from: <http://www.bioline.org.br/pdf/bh13027>

25. Cia F, Barham EJ, Fontaine AMGV. Impacts of a parent intervention program: their children's academic

achievement and classroom behavior. *Psicol Reflex Crít.* 2010;23(3):533-43. Doi: <http://dx.doi.org/10.1590/S0102-79722010000300014>

26. Xavier IALN, Santos ACO, Silva DM. Vocal health of teacher: phonoaudiologic intervention in primary health care. *Rev CEFAC.* 2013 July/Aug;15(4):976-85. Doi: <http://dx.doi.org/10.1590/S1516-18462013000400027>

27. Beserra EP, Araújo MFM, Barroso MGT. Health promotion in transmissible diseases: an investigation among teenagers. *Acta Paul Enferm.* 2006 Oct/Dec; 19(4):402-7. Doi: <http://dx.doi.org/10.1590/S0103-21002006000400006>

28. Moreno-Manso JM, Sánchez MEGB, Blázquez-Alonso M. Application of a child abuse prevention programme in an educational context. *Ann Psicol.* 2014 Oct; 30(3):1014-24. Doi: <http://dx.doi.org/10.6018/analesps.30.3.154231>

29. Boog MCF. Nutrition education program in a rural elementary school. *Rev Nutr.* 2010 Nov/Dec;23(6):1005-17. Doi: <http://dx.doi.org/10.1590/S1415-52732010000600007>

30. Cárdenas LMC, Cárdenas CCS, Cely NAA. Implementación de la estrategia escuela saludable. Una alianza intersectorial. *Invest Educ Enferm* [Internet]. 2010 Nov [cited 2018 Apr 12];28(3):428-34. Available from: <http://www.scielo.org.co/pdf/iee/v28n3/v28n3a13.pdf>

31. Navarrete C A, Burgos A A. Programa de higiene bucal, y su impacto en flora bacteriana. *Rev Chil Pediatr.* 2008 June; 79 (3): 267-71. Doi: <http://dx.doi.org/10.4067/S0370-41062008000300004>

32. Botelho LP, Zanirati VF, Paula DV, Lopes ACS, Santos LC. Promotion of a healthy nutrition for school children: learning and perceptions of an operative group. *Nutrire: Rev Soc Bras Aliment Nutr* [Internet]. 2010 Aug [cited 2018 Apr 18]; 35(2):103-16. Available from: http://sban.cloudpainel.com.br/files/revistas_publicacoes/288.pdf

33. Benini J, Karolczak APB. Benefits of a posture education program for schoolchildren in the city of Garibaldi, RS. *Fisioter Pesq.* 2010 Oct/Dec;17(4): 346-51. Doi: <http://dx.doi.org/10.1590/S1809-29502010000400012>

34. Cavalcanti LA, Carmo Júnior TR, Pereira LA, Asano RY, Garcia MCL, Cardeal MVL, et al, Effects of an intervention in schoolchildren to

promote a healthful alimentary habits. *R Bras Ci e Mov* [Internet]. 2011 [cited 2018 Apr 18]; 20(2):5-13. Available from: <https://portalrevistas.ucb.br/index.php/RBCM/article/viewFile/2408/2247>

35. Santos NML, Maders C, Lemos VMA, Ziembowicz LF Baron. The Impact of the Preventive and Educational Program of the Viçosa Family Health Unit in Oral Health of Schoolchildren. *Rev Fac Odontol* [Internet]. 2010 Jan/Apr [cited 2018 Apr 10]; 50(2):15-9. Available from: <http://seer.ufrgs.br/RevistadaFaculdadeOdontologia/article/viewFile/18413/17359>

36. Gabriel CG, Santos MV, Vasconcelos FAG. Evaluation of a program to promote healthy eating habits among schoolchildren in the city of Florianópolis, State of Santa Catarina, Brazil. *Rev Bras Saúde Matern Infant.* 2008 July/Sept; 8(3): 299-308. Doi: <http://dx.doi.org/10.1590/S1519-38292008000300009>.

37. Foltran FA, Moreira RFC, Komatsu MO, Falconi MF, Sato TO. Effects of an educational back care program on Brazilian schoolchildren's knowledge regarding back pain prevention. *Rev Bras Fisioter.* 2012 Mar/Apr;16(2):129-33. Doi: <http://dx.doi.org/10.1590/S1413-35552012005000023>

38. Mendes CS. Preventing school violence: an evaluation of an intervention program. *Rev Esc Enferm USP.* 2011 June; 45(3):581-8. Doi: <http://dx.doi.org/10.1590/S0080-62342011000300005>

39. Barroso TMMDA, Mendes AMOC, Barbosa AJF. Prevention program of use/abuse of alcohol in school-aged adolescents: stop to think. *Esc Anna Nery Rev Enferm.* 2013 July/Sept; 17(3):466 - 73. Doi: <http://dx.doi.org/10.1590/S1414-81452013000300009>.

40. Yokota RTC, Vasconcelos TF, Pinheiro ARO, Schmit ,BAS, Coitinho DC, Rodrigues MLCF. "Promotion of healthy eating habits by schools" study: comparison of two nutrition education strategies in the Federal District of Brazil. *Rev Nutr.* 2010 Jan/Feb;23(1):37-47. Doi: <http://dx.doi.org/10.1590/S1415-52732010000100005>

41. Gubert FA, Santos ACL, Aragão KA, Rodrigues DCP, Vieira NFC, Pinheiro PNC. Educational technology in the school context: strategy for health education in a public school in Fortaleza-CE *Rev eletrônica enferm* [Internet]. 2009 [cited 2018 Mar 01];11(1):165-72. Available from: <https://www.fen.ufg.br/revista/v11/n1/pdf/v11n1a21.pdf>

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