Elementary and lower secondary school students’ perceptions of the Health at School Programme: a case study in Belo Horizonte, Brazil

Abstract The Health at School Programme is a Brazilian inter-sector policy resulting from a partnership between the Ministries of Health and Education to expand health actions to public school students, with a view to the comprehensive education of primary and lower middle school students. This qualitative study was carried out in 2016 to investigate Brazilian schoolchildren’s perceptions of activities under the Health at School Programme. Data were collected from schoolchildren eleven to fourteen years of age using the written report (essay) as the instrument. Analysis of the reports highlighted two themes: 1. the Health at School Programme as care, and 2. the Health at School Programme as benevolence. For some, the activities meant the possibility of health care, of identifying problems and arranging solutions, and the opportunity for gaining information and learning that may be beneficial in maintaining health – the offer was received passively, however; for others, they were a blessing, a favour, for which they showed their gratitude. The schoolchildren were passive and receptive, without being proactive enough to produce their own health. Co-responsibility seems to be a seed that is still germinating.

Key words School health services, Perception, Qualitative research
Introduction

The Health at School Programme (Programa Saúde na Escola, PSE) is an inter-sector policy introduced in Brazil in 2007 as the result of partnering between the Ministries of Health and Education for the purpose of improving the health of public school pupils by means of promotion, prevention and care measures. Schools participating in the PSE must include the topics addressed by the health activities in their educational policy project and teachers must discuss these topics in the classroom, where they are assisted by health personnel from referral Primary Health Care facilities (on a proximity criterion) with agendas scheduled for the purpose.

The Health at School Programme in Belo Horizonte (PSEBH) started in 2008 and, since 2010, all day-schools offering primary and lower secondary education have been included, since when expansion to municipal early childhood education centres (Unidades Municipais de Educação Infantil, UMEIs) has begun.

The PSE pursues actions in three areas, known as components: I – evaluation of health conditions; II – health promotion and disease prevention; and III – training and/or capacity-building.

The introduction of health promotion activities in the school environment is desirable and necessary. The intention is to improve knowledge and develop skills, making it possible to opt for healthy behaviour.

With the focus on comprehensive education and improved health for schoolchildren, activities designed to contribute to preventing disease and health disorders are introduced so as to intervene in possible risks of illness associated with this age group. In the event disease is found, the PSE endeavours to evaluate the schoolchildren’s health conditions and refer them to the treatment centre most appropriate to each pathology.

As schoolchildren are subjected to these programmes, it was considered appropriate for them to take part in the related evaluations, in line with concerns raised by studies of child welfare and social surveys of this age group. However, children and adolescents are still largely disregarded in evaluation and decision-making processes, even when the action affects their lives directly.

Komulainen reports that professionals are willing to listen to this population and interested in how that listening could best be performed. At the same time, there is a concern to evaluate whether or not children’s or adolescents’ voices can command credibility and from what point that would be possible, considering competencies, age, maturity and the credibility of what they say, which he considers “ambiguity in ethics and practice”.

Bubadué et al. argue the need for a broad movement to think about this population’s voice in decision-making processes, particularly in countries with universal health systems, where broad coverage is required in order for users to access services.

In this connection, the question arises: What participation have schoolchildren had as actors in the Health at School Programme in Belo Horizonte (PSEBH)? What has this programme meant to them?

Accordingly, this study aimed to investigate schoolchildren’s perceptions of the activities conducted by the PSEBH in municipal primary and lower secondary schools.

Method

In this case study, a qualitative approach was applied, using written reports (essays) as data collection instruments.

It was decided to seek the answer to the first question by evaluating schoolchildren’s perceptions of the PSE, understanding perception as the way individuals interpret social realities, that is, the meaning developed on the basis of senses, sensations and relations established. Perception was treated according to the sociocultural cultural theory of Vygotsky, i.e., it is as a result of social interaction that information and concepts are recreated, reinterpreted and re-signified. Thus, there is a relation between perception and other mental functions (sensation, attention, memory, thought, imagination, language), in which experiences are recorded and categorised, for their own meanings to be produced as perceptions of elements of the real world are held up against information present in the psychological apparatus.

Two primary and lower secondary schools (Escolas Municipais de Ensino Fundamental, EMEFs) were selected for the study, on the following inclusion criteria: they were in the same Administrative Region (Pampulha); they differed by the scenarios in which PSE activities were conducted; and agreement was given by their directors and the regional education management office (Gerência Regional de Educação, GERBES).
The schools are classified as of average or average-to-high vulnerability.

Data on the PSEBH were obtained from the municipal education department (Secretaria Municipal de Educação, SMED), as follows: the sample schools were characterised using data from the portfolios of annotations on all health promotion and disease prevention actions at each school, as well as the annual consolidated figures of the SMED’s Municipal PSE Coordination and the Ministry of Education’s Integrated Monitoring, Execution and Oversight System (Sistema Integrado de Monitoramento, Execução e Controle, SIMEC), all relating to 2015.

Data were collected from adolescent schoolchildren from 11 to 14 years old, using their written reports (essays) as the instrument. Kishimoto et al. explain that written language lends itself to the expression of meanings, thus offering an integrated representation of (particularly children’s and adolescents’) worldviews. It is a manner of investigating the person, because it brings out part of their experiences and constitutes a point of contact with what individuals have appropriated during their life history.

Two classrooms were selected intentionally at each school. All pupils in the classrooms selected received Free and Informed Consent Forms (Termos de Consentimento Livre e Esclarecido, TCLE), so that their parents or guardians could authorise their participation, in addition to a separate Free and Informed Assent Form (Termo de Assentimento Livre e Esclarecido, TALE), for them to authorise their own participation. All participants were informed, in the presence of their teacher, of the study’s aims, voluntary nature and anonymity.

Although all pupils participated in the classroom activities proposed for each group, essays were included only from those for whom TCLEs were returned signed by their parents or guardians, as well as TALEs signed by the pupils themselves, thus totalling 44 essays for analysis.

Data were collected in the classroom, during a normal class period (50 minutes), in both morning and afternoon shifts, in May and June 2016. All material necessary for the activities was provided by the researcher, comprising: white A4 paper, black pencil, eraser, ballpoint pen and ruler. The pupils could ask for as many sheets of paper as needed and could use their own ballpoint pen or black pencil if they wanted to.

First of all, the pupils were informed of the context of the study and, in order to create a relaxed climate, the lead researcher posed some questions for an initial conversation: Here at this school there’s a programme called the Health at School Programme, known as the PSE. The programme runs activities here at the school. Who knows the PSE? Who’s taken part in anything?

After that stage, the lead researcher explained what they were going to do: Now I want you to do an essay, write a piece saying what you think about the PSE here at the school. Don’t forget to put your name, age and class on the back of the page.

That information was reformulated and/or added to, in response to the level of understanding observed, until it was clear what was being asked, always with a concern to leave the pupils free to write whatever they wanted. The lead researcher remained in the classroom until everyone has finished their essays, always ready to give an extra clarification as necessary. The concern was always not to induce what was reported.

Thematic Content Analysis was applied to all the material, which was examined and read systematically and exhaustively by two researchers. This made it possible to organise the emerging themes in order to understand the important structures and to construct dimensions and units of meaning, in the endeavour to identify persistent features amid the variability of the data. In this way, the themes were specified for analysis.

In organising and systematising the data, the ATLAS TI computer programme was used to organise the written accounts, by school, by means of codes, so that the researchers could identify and group written passages and proceed to typify them.

In order to guarantee anonymity, the essays were identified by a number (1-44), followed by the acronym EMEF (Escola Municipal de Ensino Fundamental) and the number 1 or 2 (the school).

The study was approved by the research ethics committees of the Universidade Federal de Minas Gerais (COEP/UFMG) and the Belo Horizonte municipal government (COEP/PBH), on 23 December 2014.

Results and discussion

The PSEBH was introduced into the municipal primary and lower secondary education system to conduct health evaluation, disease prevention and health promotion activities for children and adolescents, in agreement with the schools.

In 2015, there were 173 municipal primary and lower secondary schools distributed across
nine education regions in the municipality of Belo Horizonte. Of the total of 157,201 pupils from 6 to 15 years old (51.25% male) enrolled, the parents of 122,463 (84.74%) had given their agreement to the municipal government, authorising their participation in any activity of the PSEBH\textsuperscript{9,10}.

The activities conducted at the two study schools are given in Table 1, by component area of the PSEBH, showing that the PSE was present in the schools, to a greater or lesser extent.

Neither of the schools offered activities relating to culture of peace/combatting violence or environmental health/sustainable development, which are topics that form part of the health promotion and disease prevention area.

Data analysis revealed two themes emerging from the adolescents’ essays: the Health at School Programme as care and the Health at School Programme as benevolence.

**The Health at School Programme as care**

One of the features mentioned by the schoolchildren – perhaps the most mentioned – was the possibility of accessing health services. Andrade & Minayo\textsuperscript{14} write that, as accessibility is a complex concept relating to conditions of life, education, health spending, cultural habits, as well as to service supply and suitability, it should consider various social and political points of view.

The schoolchildren highlighted the examinations conducted at the school, particularly of eyesight and oral health. They welcomed the fact that health personnel visited the school, particularly when the outcome was a problem solved, and explicitly acknowledged the care, warmth and concern of others towards each of them\textsuperscript{15}.

 [...] the programme helped me with my eyesight problem [...] besides the eye specialist, the programme also has various other resources, including a dentist [...] (E9-EMEF 1).

 [...] a woman always comes, and she goes from class to class seeing if people have caries in their teeth and, if they see caries in your teeth, they will refer you to a health centre [...] (E27-EMEF 2).

 [...] they also examine your throat, height and weight and other things [...] (E13-EMEF 1).

 [...] it helped my brother a lot last year [...] discovered that my brother was having trouble seeing [...] (E44- EMEF 2).

Health care actions were seen to be a major presence in the essays, suggesting that the activities may be giving priority to care services focussed on clinical assessment. Studies by Sousa et al.\textsuperscript{16} and Lotta & Favareto\textsuperscript{17} raised this issue, relating it primarily to funding. On the other hand, there can be no disregarding how much care means to the population, which believes that professional care itself guarantees health, discounts the other factors. Also, what comes through clearly from the essays is that the problems detected need to be referred and addressed at the school itself.

Studies of service access and use have concluded that these are associated with socio-economic and psychosocial factors\textsuperscript{18,19}. Although it may seem reasonable, service expansion alone does not guarantee improved access and use\textsuperscript{20}, although such expansion does need to be priori-

\begin{table}[h]
\centering
\small
\begin{tabular}{|l|l|l|l|}
\hline
Component/Area & Activity & EMEF 1 & EMEF 2 \\
\hline
Evaluation of health conditions (\%) & Visual Acuity & 45.78 & 15.39 \\
& Oral Health & 47.98 & 58.38 \\
& Vaccination status & 43.44 & 31.98 \\
& Anthropometric Evaluation & 51.86 & 72.82 \\
\hline
Health promotion and disease prevention (at least one activity per year) & 1st dose anti-HPV & Yes & Yes \\
& Supervised daily brushing & Yes & No \\
& Food security / promotion of healthy diet & Yes & Yes \\
& Body exercise / physical exercise & Yes & Yes \\
& Sexual health education & Yes & No \\
& Reproductive health / DST/AIDS prevention & Yes & No \\
& Prevention of alcohol, tobacco and other drug use & Yes & Yes \\
& Prevention of dengue & No & Yes \\
\hline
\end{tabular}
\caption{PSE activities for schoolchildren conducted at the two schools participating in the study in Belo Horizonte, 2015.}
\end{table}

Source: PBH, 2015\textsuperscript{8}. 

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tised for population groups with greater difficulty in accessing and using services\textsuperscript{21}.

Minors normally attend health services accompanied, or even taken, by their parents. That situation makes it more difficult for them to keep dental appointments, which has been observed among schoolchildren. To the pupils, health assessment at school means problems solved.

Some of the schoolchildren’s essays highlighted the health promotion and disease prevention actions pursued at the school.

\textit{Every year, they give the 9 to 12 year old girls a referral form for them to get vaccinated at the health centre next to the school. That vaccination is the HPV vaccine} [...] (E15-EMEF 2).

\textit{At my school, there’s a PSE worker. He takes care of the pupils by inspecting how they brush their teeth} [...] he teaches them to do the same at home [...] (E8-EMEF 2).

\textit{... they help to prevent diseases like obesity, flu, and help with various projects such as Zero Zika, Everyone against Dengue} [...] (E13-EMEF 1).

The schoolchildren’s perception of disease prevention and health promotion are limited to a greater extent to what others can do for them. The information is made available (it is good that this is done), but there is no effort to identify the development of skills that lead to healthy behaviour\textsuperscript{4}. It is perceived as care and, accordingly, health promotion and disease prevention actions are applied in order to avert problems.

In only one of the schools were there reports of the schoolchildren’s learning and acquiring health care behaviour.

\textit{In the canteen, they put up signs or hand out leaflets on avoiding waste of food} [...] (E27-EMEF 2).

\textit{... it teaches various things about health and the diseases that we are always in danger of catching at any time} [...] (E25-EMEF 2).

\textit{... I learned to be healthier, now I take a walk every Tuesday and I hope that will always continue. And I learned to combat dengue, zika and chikungunya} [...] (E39-EMEF 2).

\textit{... I learned that nobody should stop brushing their teeth; if you stop brushing, you’ll get caries} [...] (E40-EMEF 2).

The question of the physical proximity between the school and the primary health care centre is indicated in the literature as a factor facilitating health-related activities at schools and rendering them more effective\textsuperscript{5}. That physical proximity, by making for better integration between health and education, may account for the presence of these reports in the school\textsuperscript{7}. Integration between sectors makes it possible to envisage solutions with the potential to overcome obstacles to the activities’ being effective and sustainable\textsuperscript{17,22}.

Faial et al.\textsuperscript{23} add that school is a promising environment for multiplying health promotion actions for young people. Educational practices should foster active participation by schoolchildren and members of the school community towards guaranteeing healthy habits and behaviour by way of inter-sector actions directed to broad, comprehensive, interdisciplinary care with the involvement of everyone.

In addition, the school must know what level its pupils have developed to, so as to direct its teaching in accordance with the stages of their development and enable them to attain further stages of intellectual development. That is, it should be suited to their age and the level of their knowledge and skills. The educational actions should be integrated with the pupils’ knowledge and experience, so that their identity can develop. Depending on how the educational actions are carried out, they may merely convey information without fostering any change in behaviour\textsuperscript{24-26}.

All this information underlines the importance of integrating the personnel involved in conducting the activities in this school, because the schoolchildren’s essays seem to show stirrings of autonomy and awareness in relation to adopting safe behaviour.

Another issue was the lack of knowledge, among the personnel working in conducting the health promotion activities, as to how the pupils interpret certain matters, given their level of cognitive development and their personal experiences. This can undermine the approaches made by the teachers, nurses and doctors, in addition to hindering education by parents\textsuperscript{27}.

Health and education personnel may not perceive the failings in preventive education, but they should think about how the schoolchildren articulate their points of view on aspects of their own learning, so as to be able to direct efforts towards maximising that potential\textsuperscript{25,28}.

Faial et al.\textsuperscript{23} explain that strengthening institutions such as the family and school, which form subjects, and adopting health education practices, means going beyond the simple act of conveying information. It is paramount to foster the articulation of thoughts, which makes it possible to apprehend knowledge and acquire attitudes and behaviour towards the risks and vulnerabilities.
The Health at School Programme as benevolence

Some essays showed that the pupils did not recognise health as a right, just as they did not exercise their citizenship: they received the PSE actions as benevolence (favours) and the attitude they displayed was one of gratitude. Trad & Esperidião[32] raised these and other questions relating to the construction of mutual responsibility, for which they encouraged implementation of the principles of the national humanisation policy (Politica Nacional de Humanização, PNH).

This shows that people who want to help us give things like spectacles, toothpaste, tooth brushes. I hope that this programme grows more and more and that it helps more pupils (E9-EMEF 1).

[...] they look after us and I call that goodness, kindness towards people who need it [...] thank you very much, PSE people, for looking after people at school [...] (E35 – EMEF 2).

[...] I am very grateful to this programme (E15-EMEF 1).

I and my family are very happy that they do so many things just to protect us from diseases [...] (E25-EMEF 2).

The essays may reflect what the schoolchildren hear in their family or social circles or even at school. However, educational activities should be introduced and carried out with a view to fostering the empowerment of the schoolchildren and relatives involved. There seems to be a departure from the concept of citizenship, given the essays that contain expressions of gratitude and the kindness of the people who conduct the activities.

In Brazil, health is a universal right and the State is responsible for providing the material conditions, public policies and health care programmes through access to health prevention, promotion and recuperation measures. There are a great many difficulties in building and maintaining the national health system (Sistema Único de Saúde, SUS) as a universal right, but comprehensive health care must be assured by public access to services at the various levels[30]. In that regard, young people are entitled to information on their health and also to express their wishes in relation to proper care, that is, they must be included as active participants in their own health care[6].

The feeling of equality in civil, political and social rights must be present in all citizens, and the guidelines of Brazil’s Child and Adolescent Statute and related public policies stipulate that adolescents’ health care rights will be assured[15].

Two essays came close to the meaning of co-responsibility a regards the role of school and family.

[...] I think there should be a talk on how important it is to use spectacles, when necessary [...] There’s a girl who went to be tested and she has 5 degrees of myopia, I think; she got spectacles, but doesn’t use them (E10-EMEF 1).

[...] Of course, parents have to care for and worry about their children, even with the school taking this care of all of us (E11-EMEF 1).

In the essays, there seems to be a concern with co-responsibility for health matters[31]. Opting for one therapy or another is an individual decision influenced by the family and social network, where particularly communication through by dialogue can possibly produce understanding and care in health. Mello et al. [15] emphasise that health education should be dialogical and emancipatory, so that knowledge can spread. Actions directed to producing change are empowerment-related, and the education process is responsible for choices and decision making towards taking self-responsibility for life[32].

Karisimopoulou et al. [33] found that schoolchildren who followed a health education-social skills programme improved their perceptions in areas relating to physical wellbeing, family life, financial resources, friends, school life, social acceptance (bullying) and leisure. They also mention that, although other studies had rarely considered schoolchildren’s perceptions of economic dimensions of their lives, those perceptions improved considerably, which could be attributed to an improvement in their relations with their parents. When pupils feel supported and have opportunities to use their social skills in ways that are meaningful for their life, they show more interest in learning.

Final remarks

The intention here was not to evaluate the actions of the PSE in these schools, that is, to do more than understand what the programme meant to the subjects of its actions. In this study context, the PSE had been in place for some time, making it possible to discern what it meant to the adolescent schoolchildren.

The pupils’ essays reported all the health care activities conducted at the school, but the same pattern was not observed in relation to the health promotion and disease prevention activities.
The schoolchildren described the difficulties of keeping appointments with dentists, ophthalmologists or other health specialists, because of the distance from their homes to the primary health care centre, parents’ lacking time to take them to the appointment and so on. This is a frequent reality in communities with average or average-to-high vulnerability, such as the study sites.

For some, the activities offered the possibility of health care, of having someone identify problems and refer them for solution, and the possibility of accessing information and some learning, which could be useful in maintaining their health. However, this was a one-way offer and received passively, at some remove from what might be seen as a right. To others, it was benevolence, a favour, for which they expressed their gratitude. For a few, it involved actions that called for co-responsibility, a joint effort towards an agreed end.

Despite the passive attitude expressed in most of the essays, the schoolchildren were very receptive, but lacked the proactive approach necessary to produce their own health. Co-responsibility seems to be a seed that is still germinating.

It should be borne in mind that perception relates feelings, memory, thought, imagination and the findings cannot be considered exclusive and static, as a direct reaction to an action.

Listening to the “voices” of this population may be a good starting point for a social study of their lives, considering the existence of ambiguities involved in communication, resulting from interactions, discourses and practices.

Other studies should be conducted to support health education practices that go beyond the simple act of conveying information or offering care in the form of treatment. This can contribute to strengthening both school and family, because it fosters the articulation of thinking and the acquisition of knowledge, attitudes and safe behaviour towards risks and vulnerabilities.

One limitation of this study may be that the research was conducted exclusively in a school environment. The school environment may encourage pupils to supply the “right answer”34. On the contrary, however, Angell et al.35 suggest that school is a place where children are more comfortable and may reveal more in their essays than they actually intend to, although it is also a place where children may not feel authorised to refuse to participate.

Collaborations

FPSL Oliveira and EF Ferreira participated in the design, design, analysis, writing and interpretation of the data. FPSL Oliveira, EF Ferreira and AMD Vargas reviewed the literature on the subject. S Dias and Z Hartz participated in the analysis and interpretation of the data. All authors approved the final version of the manuscript.

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