Educational practices of nutritionists: educational perspectives expressed in the PSE

Práticas educativas de nutricionistas: perspectivas educativas manifestadas no PSE

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DOI: 10.1590/0103-11042022E310I

ABSTRACT Health education is a knowledge production process that expands people's critical and reflective awareness. The objective of the study was to analyze the educational practices of nutritionists in the School Health Program related to educational perspectives. This was a qualitative, explanatory study, carried out through semi-structured interviews with 22 nutritionists in 10 host cities of health regions in the state of Piauí, in the Northeast region of Brazil. The interviews were transcribed and analyzed according to content analysis by Bardin. After such analysis, they were submitted to the IRaMuTeQ software and presented in word clouds and similarity analysis. The educational practice was related to guidance, transfer, and intervention. Action planning, situational diagnosis, time, and resources were considered in the reports for carrying out the practices. As for health conditions, schools do not always inform professionals about the demands for actions. For the participants, health is the protagonist in facing these actions and there is a lack of intersectoriality between education and health. The educational practices, in general, are guided by the transmission of knowledge, changes in behavior, and an authoritarian nature. The study suggests another perspective of health education with the participation of society focused on the autonomy of the subject.


RESUMO A educação em saúde constitui processo de produção do conhecimento que amplia a consciência crítica e reflexiva das pessoas. O objetivo do estudo foi analisar as práticas educativas de nutricionistas no Programa Saúde na Escola relacionadas com as perspectivas educativas. Estudo qualitativo, explicativo, realizado por meio de entrevistas semiestruturadas com 22 nutricionistas em 10 municípios-sede de regiões de saúde do estado do Piauí. As entrevistas foram transcritas e analisadas, segundo análise de conteúdo de Bardin. Após essa análise, foram submetidas ao software IRaMuTeQ e apresentadas em nuvens de palavras e análise de similitude. A prática educativa foi relacionada como orientação, repasse e intervenção. O planejamento de ações, o diagnóstico situacional, o tempo e os recursos são considerados nos relatos para execução das práticas. Quanto às condições de saúde, nem sempre as escolas informam aos profissionais as demandas de ações. Para os participantes, a saúde é protagonista no enfrentamento dessas ações, e há ausência da intersectorialidade entre educação e saúde. As práticas educativas, de modo geral, acontecem pautadas na transmissão do conhecimento, mudanças de comportamentos e de cunho autoritário. O estudo sugere outra perspectiva de educação em saúde, com a participação da sociedade, centrada na autonomia do sujeito.

Introduction

Health education is a process of knowledge production. Through purposeful educational practices, it expands people’s critical and reflective consciousness. In the health field, educational practices are closely related to the concept of health¹. Thus, educational practices can create possibilities for health promotion.

An intersectorial policy to promote health is the School Health Program (PSE), established by Decree No. 6,286 of December 5, 2007. Its purpose is to contribute to the comprehensive education of students in the public basic education network through actions of prevention, promotion, and healthcare².

The PSE is composed of 13 health promotion and disease prevention actions, among them the promotion of healthy eating and obesity prevention³. It is noteworthy that Brazil is going through a Nutritional transition, especially among children and adolescents, with a significant increase in overweight and obesity⁴. Given this situation, strategies to promote healthy eating in school environments are necessary to transform this social epidemiological context.

Melo and Oliveira⁵ emphasize the pedagogical unpreparedness of some professionals as well as the lack of interest in producing planned educational practices. Moreover, poor planning can result in ineffective actions, becoming reproducers of a traditional education that often blames the individual for becoming ill.

Therefore, the objective of this study was to analyze the educational practices of Nutritionists in the PSE related to educational perspectives.

Material e methods

This is a qualitative explanatory type study involving 22 Nutritionists. It intends not only to describe, but to explain, or in other words, to understand the educational practices in the way they are conceived and carried out, seeking to analyze the causes, relationships, and consequences of the phenomenon⁶.

Ten host municipalities of health regions in the state of Piauí participated in the study: Piripiri (Cocais), Campo Maior (Carnaúbas), Teresina (Entre Rios), Valença (Vale do Sambito), Picos (Vale do Rio Guaribas), Oeiras (Vale do Canindé), Floriano (Vale dos Rios Piauí e Itaueiras), Uruçuí (Tabuleiros do Alto Parnaíba), Bom Jesus (Chapada das Mangabeiras) and São Raimundo Nonato (Serra da Capivara).

The criteria for choosing those municipalities were: being the host municipality of the health regions in the State of Piauí and have been developing Nutrition actions in the PSE. As for the selection of participants, they were: Nutritionists who developed food and Nutrition education activities in the PSE. Theoretical saturation was used; thus, from the moment data started to be repeated, the sample size was closed⁷.

For data production, semi-structured interviews were carried out individually and recorded with the use of a cell phone from March to May, 2020. There was prior contact by phone and WhatsApp® with the participants to set the date, place and time of the interviews. The participants talked about their continuing education actions in the PSE; the quantity of their actions carried out; how they understood educational practice and its relation to health promotion; the used methodologies; interaction with other professionals; action planning and mobilization with other municipal departments; and, finally, school and community participation in the actions.

Nineteen face-to-face interviews were carried out in eight municipalities. However, due to the new coronavirus (SARS-CoV-2) pandemic and the social isolation recommended by the World Health Organization and the Brazilian Ministry of Health, it was necessary to conduct the remaining three interviews by videoconference via Skype® to complete the data collection.
The interview locations were determined by the professionals interviewed or by the manager who authorized the research. They took place in Basic Health Units (UBS) offices, auditorium, library, meeting room, and health secretaries. The interviews ranged from 6 to 21 minutes, totaling 4 hours and 49 minutes. Subsequently, the interviews were transcribed by the researcher and, after taking notes, they were used for data compilation.

The content analysis proposed by Bardin was adopted, and the software IRaMuTeQ® (Interface of R pour analyses Multidimensionnelles de Textes et de Questionnaires), was specifically used for the word cloud and the similarity analysis for word organization and distribution. The theoretical reference was based on Pérez Gómez and Behrens. In this research, the following were considered for data analysis and interpretation: academic, technical, practical, and dialogical perspectives as well as the counter-hegemonic and hegemonic pedagogical conceptions.

The professionals were informed about the research objectives, its risks and benefits and signed the Free and Informed Consent Form. The research respected ethical principles, according to Resolution No. 466/2012 of the National Health Council. The study was approved by the Research Ethics Committee of the Federal University of Piauí, under opinion No. 3,563,782.

Results e discussion

Characterization of participants

Twenty-two Nutritionists participated in the study with a predominance of females (86.36%) (19); males were 13.64% (3). Regarding continuing education, 18 participants had one to three specialization courses, mostly in the clinical area or family health, one participant had a master’s degree and the others had no postgraduate degree.

Working time in the PSE ranged from 4 months to 12 years; regarding the type of contract these participants had with the municipalities, 68.19% (15) were civil servants and 31.81% (7) had temporary contracts.

The other results are presented in four thematic axes: educational practices in the context of the PSE; action planning; specific health promotion needs to assist schools; and intersectoriality.

Educational practices in the context of the PSE

The excerpts below highlight the concept of educational practices for Nutritionists:

*Educational practice for me is a way to be able to guide people, help them on some issue, not necessarily in the area that I am, as a Nutritionist.* (Nutri 4).

*It is everything that will take information to some other public, that we can pass on information.* (Nutri 10).

*Educational practice would be an intervention, right? First you would make an assessment and figure out the need for change. If there was a need, normally in our area there is [laughs] a need, and we would give some orientation.* (Nutri 11).

In general, the reports of Nutri 4, 10 and 11 denote academic and technical perspectives. These, specifically in the excerpt from Nutri 10, are associated with the view that the transmission of information and technical knowledge about food and nutrition are part of the educational practice for these participants. When focusing on the understanding of educational practices, Freire emphasizes the need for methodical rigor, research, critical thinking, and that teaching is not only knowledge transfer as it implies the understanding of reality, commitment, and dialogue.
Accordingly, the educational practices, in addition to promoting exchanges of knowledges, require the promotion of health so when related to pedagogical conceptions, they are associated with the need to develop counter-hegemonic educational practices enabling the inclusion of the historical, social and cultural context of the participants.

**Action planning**

The National Health Promotion Policy has as guidelines the action planning in accordance to the context of the territories in order to build healthy spaces as a guarantee of social rights. Machado et al. point out that the lack of action planning in the PSE may lead to undermining public policies in the areas of assistance, education, and health. According to the reports from Nutri 2, 8, and 11, planning takes into account the analysis of indicators, situational diagnosis, time, and resources:

*I guess, the first thing you really have to do is look at the indicators, right? So, first we have to see the indicators and how they are. It is necessary that we identify the situational diagnosis of the population and what is the public in need of health education actions, actions, interventions, especially from Nutritionists regarding health promotion initiatives. So, I think the first thing is this.* (Nutri 2).

*First of all, it is time, right? We need time to be able to plan.* (Nutri 8).

*Sometimes, we have a lot of things in mind, but then when you go to put them into practice, you see that it is impossible. Then you have to look for ways that are more economical, but draw the student’s attention.* (Nutri 11).

Thus, with the situational diagnosis of the school or community, it is possible to have strategies, considering the PSE indicators as well as the reality in which the actions take place. Another important component refers to the resources required for the implementation of educational practices as stated by Nutri 11, which require cost-effective ways, but draw the students’ attention.

So, producing actions that meet the PSE program objectives requires educational practices from Nutritionists, who have an understanding of dialogical approaches so as to seek transformation not only among Nutritionists, but also among students.

The concern of Nutri 2 with the situational diagnosis to implement educational practices was also present. Therefore, it is possible to plan according to the needs, not only of that particular school, but of the entire community. Especially because students can be multipliers of the information, spreading within society.

Following this logic, despite the planning intention and the accomplishment of the strategies selection, shortcomings may arise: lack of materials or human resources. Thus, there is the need to raise resources including didactic materials, games, and others to carry out the educational practices of the PSE. It should be noted that, through Ordinance No. 1.055 of April 25, 2017, the criteria for adherence to the Program were redefined and, among them, the guarantee of financial incentives to fund PSE activities.

In addition to the need for adequate resources, it is necessary that the pedagogical project is appropriate to promote the connection between strategies and tactics, since besides choosing an appropriate method, it is important to detail what is needed at the time of execution.

Thus, based on the Nutritionist’s approach to the educational practices, it is important to highlight the relationship with the educational perspectives that rule their work. Nutri 8 highlights the lack of materials for the activities requiring investment made by the professionals if they intend to use them in the educational practices:
Because we don’t have them, we don’t have EVA, we don’t have cardboard, we don’t have anything. If we want to work with these materials, we have to buy them, unfortunately. (Nutri 8).

When asking the participants about the strategies used to carry out the educational practices, considering the educational perspectives within the PSE, an excerpt from the interview with Nutri 10 is shown below:

We always work with lectures and anthropometric evaluations; we always use them in our activities. All this stuff about instruments and ingredients, depending on the activity we are going to perform, we have to talk to our superior, the health secretary. (Nutri 10).

The use of lectures seems to overlap with other forms of methodologies as revealed by Nutri 10 and are characterized as reiterative. In general, lectures in the traditional perspective, are frequent in educational practices, even with characteristics of the technical approach. The immediate solution is to train the student to change eating behavior based on the instrumental dimension.

From this perspective, Behrens11 points out that academic teaching allows educational practices to be sequential without involving other contexts; it only follows a logic. In the report provided (Nutri 10), there was a predominance of the academic perspective characterized by the transmission of contents and supported by theory, stable, and standardizing methodology.

Therefore, it is related to the roots of the biomedical model, focused on disease recovery instead of being focused on health promotion. This supports a study by Almeida et al.16, who found the lecture strategy performed by nutritionists to address nutritional education in 72.5% of the actions. The common use of lectures in nutrition education activities as the only way to engage in educational practices may reflect the traditional teaching as well as the idea of being the holder of knowledge17. In this sense, it goes against the principles established by the Food and Nutrition Education Framework in which the promotion of self-care goes beyond the mere transmission of knowledge, and should have as basic requirements the shared construction of knowledge18.

The professional who gets engaged with a problem of a certain action in order to change the context, reflects the characteristics of the practical approach19, even if there are controversial situations for changing the reality,

We always try to bring in a methodology that draws the teenagers’ and children’s attention. (Nutri 2).

When the audience is older with teenagers, and even adults, people over the age of eighteen, I do a more directed practice to explain and guide healthy eating. (Nutri 5).

Nutri 2 and Nutri 5 recognize the need to analyze their practices by mentioning that they look for methodologies to draw the students’ attention, beyond the age group being taken into consideration, so that methodologies can be built according to the age of the student. That is because the educational practice should not be performed only with the intention of generating numbers and quantity of actions, but rather with the importance given to it, so that the educational practice achieves the proposed goal.

According to their planning, nutritionists seek methodologies according to the school reality, so that both professional and student have interaction to transform that reality as presented in the following speech:

So, depending on the size of the public, the age group, we create games of everything, board games that is not in a tiring way, that is not in a way that is only expository, that is only us, us talking, and also seek interaction, so that it does not get too boring, right? (Nutri 8).

This vision seems to permeate the construction for thoughtful paths. Therefore,
when revealing the social aspect, taking into account the local and school realities, it brings attributes of a dialogical perspective. This perspective transcends the mere exposition and contemplates the dialogue with the other as Nutri 8 states, when considering interaction as necessary step to foster dialogical relationships. What articulates the development of these educational practices is having compatible agendas for all the professionals involved in the actions; this can also be a strategy to help in the planning of actions and from this engagement there can be a change in the development of these practices.

**Specific health promotion needs to assist schools**

The PSE foresees that the family health teams visit periodically schools enrolled in the program, so that healthcare needs can be identified. Thus, according to the local context, healthcare promotion actions should be carried out through diagnosis as pointed out in axis 2. In the reports from the interviews with Nutri 2, 10, 6, and 15, some situations are presented below:

*We always have this partnership of developing some action, not only when the school really needs it, or when the principal sees it, but we also carry out two, three times a year, some activities to promote healthy eating.* (Nutri 2).

*We are the ones who take it to schools, schools don’t even come to us to tell us what their needs are, you know. So, we get there and plan other activities often according to the needs we identify.* (Nutri 10).

*I see that with these actions we serve the school, but we also serve the entire population because we pass on information, right?* (Nutri 6).

*The secretary’s interest is that the PSE be carried out so that we can feed the system and generate numbers, that’s it! That’s all they are interested in.*

even think that the flaw is that there is no continuity of actions. A punctual educational action is not very effective, it must have continuity. (Nutri 15).

According to that information, the four participants indicate that developing health promotion actions involves specific contexts such as: school, secretary, school directors, schoolchildren, and the population. As revealed by the excerpts above, what is taught by nutritionists during the educational practices is taken home by students.

For Souza, the aspects related to food and nutrition should not be treated with punctual and individual practices because there must be participatory construction between school, professionals, and families. In this sense, educational practices based on dialogues between nutritionists and the school community make it possible to meet the needs, according to the strategies planned by the secretaries and professionals, and also to take into account the needs of the social context. According to Nutri 15, somehow it converges to the dialogical perspective by realizing that only occasional actions do not meet the students’ needs.

Accordingly, punctual actions without coordination between sectors become fragile with abstract possibilities of intersectoriality compromising the perspective of dialogic practice of PSE actions. Veras conducted a study in the municipality of São Benedito, Ceará, with education and health professionals analyzing the training process about PSE’s characteristics and noted that the activities are carried out only when health professionals go to the school. Moreover, there is no continuity, evidencing the absence and discontinuity of integration between education and health.

In the view of Nutri 6, the importance of effectiveness of educational practices benefits students, their families, and the population. Other aspect reported by Nutri 15 was that the educational practices were meant only to generate numbers for the monthly reports that must be submitted to the Ministry of Health, making it clear the dissatisfaction regarding
the discontinuity since the occasional educational practices only to meet immediate needs do not mean a solution.

An aspect highlighted by Nutri 10 is that schools do not consider the needs of professionals to perform some educational practice. Only when the professional arrives at school, he/she becomes aware of that need and redirects his/her planning. Thus, it breaches one of the principles of nutrition education actions, regarding planning, evaluation, and monitoring of actions: processes that have the participation of all those involved tend to cause better results, especially the intersectorial approach which is the collective construction and exchange of knowledge between the education and health sectors\(^\text{18,22}\).

The participants’ observations referred to nutrition-related health promotion actions intended for action and reflection. Behrens\(^\text{11}\) points out that teaching based on social reality leads both the educator and the one educated to reflect on the environment in which they live. Hence, it is urgent to consider the needs of sectors, professionals, students as well as the needs of the community in order to provide a more dialogic educational practice in the PSE.

One of the main complaints is the shortage of nutrition professionals to handle all the activities that must be performed in schools. Nutritionists 20 and 21 state that there are many actions to be carried out, but the number of nutritionists is insufficient to meet the demand. There are usually only one or two professionals to carry out all the nutrition education activities in the municipality, as highlighted by the participants:

*Also, we don't have enough professionals to do it continuously. That is why, when we identify it, we bring it to Primary Care, right? It involves the parents, it involves the issue of school feeding, then we try to get everything done.* (Nutri 20).

*It is a very large number of activities that we have to carry out. Usually, we don’t have time to go back and do a follow-up work.* (Nutri 21).

Thus, the needs expressed concern the lack of professionals to develop continuous actions that are in contradiction with the many activities to be developed. Therefore, the professionals address these needs at the basic units with the families, with the educational nutritionists who are responsible for school meals in order to fill this gap.

These specific needs lead us to think about the connection with the PSE strategy, the understanding of how these educational practices will be developed. Several factors must be taken into consideration: the critical eye of each professional to use an appropriate methodology; to propose actions according to the work context; to systematize the activities planning in order to meet these needs. Additionally, a more specific vision from managers can articulate new directions both in the issue of the number of professionals and the planning of activities.

Some perspectives, be they academic, technical, practical or dialogical, will depend on the relationship with the training and the conception of the PSE educational practice of each professional who will carry out the activities. In this way, the correlation of specific needs with educational perspectives assumes a traditional character as they are done only to comply with what is determined.

**Intersectoriality**

The connection between health and education in the PSE educational practices reflects the necessary intersectoriality to face the challenges of implementing health promotion strategies\(^\text{23}\). Besides being one of the principles on which the program is based, this articulation helps in sharing knowledge related to food and nutrition.

The health-education interface described in the literature highlights weaknesses such as the work overload of health professionals, the lack of communication between the sectors, and the absence of monitoring...
actions24,25. In the findings of this study, as exposed in the previous axis, Nutri 20 highlights that the number of nutritionists is insufficient to perform continuous actions.

The education and health sectors have different agendas which may hinder joint actions. According to Farias et al.24, the collaboration between education and health requires negotiation to face the non-conformities of these two sectors. Consequently, if there is no involvement between education and health, it prevents the monitoring of actions and holds back the dialogical perspective.

For this to happen, human resources training is a necessity as the PSE policy requires intersectorial actions. Thus, the relevance of the educational practice, mediated by discussion through dialogue in an interdisciplinary way, adds the reality present in everyday life to the educational practice, so that the actions are detached from merely hegemonic practices.

This is so in theory, but in practice, I believe that there is no such planning. In my opinion, the two secretariats are very distant; there is no interconnection. Mainly the PSE, only the healthcare professionals work (Nutri 14).

To be honest, we have to do our own way. We can observe things and we are sorry that the secretaries let us down a lot, they leave us very unattended in terms of lack of equipment, lack of support, even lack of knowledge of what is and what is not our responsibility. Here in our municipality, the Health Secretary is in charge of this, but other professionals consider it a nutritionist’s responsibility. (Nutri 15).

Even in theory it is, right? [laughs] But we realize that when we develop some activities in the PSE, it is very much the responsibility of Health sector alone. Health complains, Education complains. (Nutri 21).

On the intersectoriality, these reports reveal gaps between the Secretaries of Education and Health related to PSE and also denial regarding the intersectorial planning. The participants also point out that the existence of the partnership between the two institutions only happens in theory. When educational practices are carried out, they are under the responsibility of health professionals only, according to the nutritionists’ reports. Also mentioned by Nutri 15 are: the lack of equipment and support, and not knowing what are the professionals’ responsibilities when carrying out the PSE actions.

Therefore, the relationship between education and health outlined in the official speeches does not seem to represent the school reality because, as the reports showed, only nutritionists from the health sector engage with the PSE educational practices regarding the promotion of nutrition and food. Thus, it is inferred that dialogue and the preparation of shared strategies between the two secretaries are difficult.

This lack of involvement between the sectors can lead to isolated educational practices, merely to fulfill the tasks. This implies an individual and not necessarily collective approach, weakening the promotion of care which may imply practices based on academic or technical perspectives depending on the strategy or method used to carry out the educational practices.

It is worth highlighting the importance of the two sectors being open to dialogue in order to find ways to work together in an integrated manner. In this way, they would be approaching dialogical perspectives, and then, the contribution would be for both students and nutritionists who are involved in the process, as well as for the social and cultural contexts.

As for intersectoriality, it is important to provide training or continuing education activities about the PSE in order to change educational practices among health and education professionals. They are essential to improve the Program’s actions26. Another
point would be the creation of Intersectorial Working Groups proposed by the PSE itself as a strategy for the construction, planning, and execution of actions through articulation by various sectors involving representatives from education, health, and the community.

The intersectorial relationship allows the strengthening of public health policies, so the engagement between education and health sectors and community participation should not be solely assigned to a specific sector. Making the health sector responsible for the direction of PSE educational practices can be indicative of a biased and fragmented view because actions need to go beyond the sectors. The interaction between health and education, whether at school or in health service environments, is an essential path for improving and achieving quality of life.

Word cloud and similarity analysis

Educational practices in the PSE are important for managers, health and education professionals to be observers of the processes, to become critical of their daily practice.

Thus, to systematize the ideas of this study, the word cloud (figure 1) organizes the words according to their frequency and brings representations of what the nutritionists highlight about the PSE educational practices as they are the keywords of the corpus. The word ‘people’ is used and refers to the participants of the study and it was mentioned 422 times according to the statements. The word ‘no’, with a frequency of 158 times in the transcription of the text corpus, is due to the lack of dialogue between the education and health secretaries and the lack of materials for the activities.

Figure 1. Word cloud – educational practices of nutritionists related to educational perspectives. Teresina, State of Piauí, 2020
The similarity analysis (Figure 2) is anchored in the graph theory⁹, thus, after the analysis, it was possible to notice the central lexical elements ‘people’ and ‘no’ and the existing connections with ‘school’, ‘child’, ‘health’, ‘lecture’, ‘school health program’, ‘secretary’, ‘education’. It is observed that the relationships tend toward traditional educational practices far from dialogical ones which are based on collaboration and partnership.

Figure 2. Similarity analysis – educational practices of nutritionists related to educational perspectives. Teresina, State of Piauí, 2020

Source: Research data.
Final considerations

The research found that the educational practices used by nutritionists are, in general, based on traditional teaching through lectures, folders, and are only focused on the transmission of knowledge. It was verified that the educational practice is understood as a transfer, intervention, and guidance with planning being essential for its implementation.

The distance between health professionals and education professionals in carrying out educational practices in the PSE was evident. There is no predominant dialogic relationship for the action planning involving education and health. It is necessary to establish partnerships, so that through the PSE Program as an intersectorial policy, links are built between the sectors involved, since intersectoriality is a great challenge for the development of more dialogical relations.

Knowledge of pedagogical perspectives – such as traditional, technical, practical, and dialogic – contributes to broadening the understanding of theoretical-methodological choices, perhaps overcoming the limitations of hygienist approach in educational practices, since the understanding of educational practice is intrinsically related to professional training.

Collaborators

Pereira I (0000-0001-6703-8087)* and Bandeira H (0000-0001-6439-0632)* contributed to the conception/design of the work; research; data analysis and interpretation for the paper; drafting of the paper; revision and final approval for publication.

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Received on 05/09/2022
Approved on 08/30/2022
Conflicts of interests: non-existent
Financial support: non-existent