



## Educational mediation applied with students about environmental health

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**ABSTRACT.** To describe an educational action applied by nurses about environmental health at a school. This is a research-action study carried out at a public school of Ceará State, in 2009. A group approach was accomplished with pictures triggering discussions. For this dialogue, concerning time and space, the pictures were culture tokens proposed by the students, completely within the context and relevant to the investigation. It was observed that the environmental health, in their conception, is a healthy nature, free of contaminations, and they also reported the connection between environmental health and people's mental well-being. They had brought pictures that showed natural elements from where they live, demonstrating the value of their productive land. The correlation between nurse and school is increasingly frequent in the health area, corresponding to a space that favors the use of interdisciplinary techniques to explore educational actions addressed to respond specific demands.

**Keywords:** adolescent, environment, health education, nursing.

### Mediação educativa aplicada com estudantes sobre saúde ambiental

**RESUMO.** Descrever uma ação educativa na escola aplicada por enfermeiros sobre saúde ambiental. O estudo categoriza-se como pesquisa-ação, executado numa escola municipal do Ceará em 2009. Foi realizada uma abordagem grupal com fotografias desencadeadoras de discussão. Para esse diálogo, referente ao tempo e ao espaço, as fotografias foram fichas de cultura propostas pelos próprios educandos, sendo itens totalmente contextualizados ao grupo e pertinentes à investigação. Observou-se que a saúde ambiental, na concepção deles, é uma natureza saudável, isenta de contaminações, como também relataram a intimidade da saúde ambiental com o bem-estar mental das pessoas. Eles trouxeram fotos que demonstravam elementos naturais de onde eles moram, exibem a valorização da terra produtiva que possuem. A correlação enfermeiro-escola é cada vez mais frequente na área da Saúde, sendo espaço que favorece a utilização de técnicas interdisciplinares para explorar ações educativas direcionadas a responder demandas específicas de grupos.

**Palavras-chave:** adolescente, meio ambiente, educação em saúde, enfermagem.

### Introduction

The nurse practice is founded in the care. This can be of assistance, curative, preventive and rehabilitative and is directed to the individual, family, community and environment to promote a better well-being.

Educational actions developed by nurses should comprise the meaning of subject, encourage people to think about their socio-environmental commitment, allowing an active management in the transformation of learning. The education can be seen as a tool that effectively contribute to a sustainable future, with interventions coherent with the present, as also show to human beings the importance of self-determination to perform healthy actions in their environment (VAN EIJK; ROTH, 2007).

In this context, the nurse develop the role of health in the community, in order to find a balanced achievement of actions of Health Promotion in the real situation, being valuable the understanding of these actions in primary health care (JERDÉN et al., 2006), thus due to this conduct it is necessary to reflect about how the nurse can be included in this area through educational activities in environmental health.

Regarding the Health Promotion, nurses play different roles in the contribution of health of individuals and communities, additionally these professionals are the most suited to perform these implementations (OLSHANSKY, 2007).

The nurse has key role in Health Promotion by leading people to think about their lifestyle, to be able to make healthy decisions and to be

protagonists in the struggle for their rights. It is important the debate of actual situations experienced by specific groups, so that the individual seek to identify vulnerabilities in the context. In this study, the educational intervention was developed by articulating the relationship between health and environment in a reflective perspective.

It aimed at describing an educational action in school applied by nurses about environmental health.

## Material and methods

This is an exploratory-descriptive study with qualitative approach using the action-research. The qualitative approach is characterized by association standards as a way to clarify the dimension of the phenomena of interest (POLIT et al., 2004).

The research was developed in a school in the municipality of Ceará State, Brazil, which is under an increasing process of industrialization and contextualization in vicinity of the construction of a coal-fired power plant. The participants were 17 students, aged 12 to 14 years that engaged in this process through attendance in discussions about environmental health and among the community organization. The community of these young is characterized as a traditional society that tries to preserve its identity (CHAUÍ; NOGUEIRA, 2007).

In the study, 17 participants were considered the ideal amount to reach the objectives, since the mediator had greater control of conducting the dialogues with a reduced number. According to Minayo (2010), the number of participants is a decision of the researcher as ideal and able to reflect the multiple dimensions of the object of study. We obeyed the following criteria: be properly enrolled in the school and be indicated by teachers, because they knew the students more involved with the environmental health of the municipality. The investigation took place in March 2009.

As tools and observation procedures it was employed a field book, recorder, and group approach.

The observation can be done to collect information such as the characteristics and conditions of the individual, allowing the description of the phenomena. The qualitative researchers gather the data, observing with the minimum of structure and restriction imposed by the study. This fact favors to realize the universe of the participants, and the good understanding and appreciation of the phenomena of interest, thus being possible to extract meanings of the participants' culture (POLIT et al., 2004).

The group approach was made through dialogue with the participant students. An educational action

lasting 1h 30 min. was adopted, based on Freire's pedagogy. In this, there is an animator that organizes and coordinates the group to provide an opening for the participation of students in the dialogues (BRANDÃO, 2004).

The students were asked to take photographs of their region so that we could find out in their perception what would be environmental health, then these images could be used to trigger discussions, characterizing cultural tokens. These aim to suggest a debate from figures of actual situations of the group, leading the students to think about their real world, and criticize it through dialogue (BRANDÃO, 2004).

The use of pictures allows deducing statements about the views of the subjects in relation to their own lives, which can be a support for discoveries (FLICK, 2004). The available resources were personal cameras and camera phones, and the images were projected for discussion. Not all students brought pictures due to limited resources, hence only eight photos were acquired, but all were within the same context, being flexible the participation in the discussions about the images content.

Nevertheless, not all photos were included herein, because they were not legible in black and white, justifying the only two photos in this study.

Data analysis was made through discursive practices supported by narratives of the participants. These practices have the dynamics as a constructive element, i.e., describe a conversation process. The interpretative repertory of this process serves as reference about the culturally constituted aspects, working at level of production of senses to ease the understanding of the social elaboration of the concepts that people has about the world (SPINK; MEDRADO, 1999). The narratives were grouped according to convergence of ideas.

From the perspective of Paulo Freire, the education has as principle the cultural action related to critical awareness, seen as an education host of problems, and the critical pedagogy as a cultural praxis, contributing to raise people's awareness, and favor the pedagogical revolution, in its essence, significant for all (TORRES, 1998).

Legal and ethical aspects involving human beings were duly respected. Furthermore, the anonymity was guaranteed, using the word *rosa* for female students and *cravo* for male students, followed by an alphabetic letter; besides that they had freedom to participate or not. Also, we ensured that the research would not bring any harm to school activities. The participant was informed about all the study objectives, and the parents or guardians must sign

the consent term for the participation of the student in this research. The study was approved by the Research Ethics Committee of the Federal University of Ceará on December 19<sup>th</sup>, 2008, under the protocol number 252/08.

### Results and discussion

Some pictures, cultural tokens, and comments about the collected material are organized below. Each picture has a title given by the authors and the description of the pictures narrated by the students.

[...] is a natural landscape that is close to my house, when I want to feel good, breathe fresh air, I'll go there and stay a little (Rosa B).



**Figure 1.** Picture of a leafy tree.

The photo was taken close to my house, no pollution, is green, there is the house of my neighbor nearby. (Rosa B).

In this picture, there is the interference of man, the house (Cravo C).



**Figure 2.** House.

There is no pollution in this pond, we all take a bath (Rosa E).

[...] people can do recreation. (Rosa I). This picture depicts the nature (Rosa E).



**Figure 3.** Picture of the pond in the studied district.

The environmental health in their conception was reaffirmed as a healthy nature, free from contamination, as also the intimacy of environmental health with the mental well-being of people. They brought pictures that showed natural elements from where they live, display the value of productive land they have, and have the view that all they need they have, i.e., live harmoniously with nature. These findings demonstrate once again the characteristics of a traditional community.

This picture is the house of a colleague, because there are a lot of trees, cashew trees, banana trees (Rosa H).

It means that we have everything we need in our community [...] (Rosa J).



**Figure 4.** Photo 4 – Picture of trees.

It's a small carnaúba tree, here there are in several places. My father planted near our house (Rosa J).



**Figure 5.** Picture of a typical tree of the Northeastern Brazil – carnaúba.

In the sky there is the ozone layer that is being destroyed, and the sun is burning more our skin (Rosa M).



**Figure 6.** Picture of the sky during the day.

Again in the narratives, it was evidenced the appreciation of their lands and the affective relationship between the young and the District. The pictures also portray aspects of the region, like the pond, soil fertility, and also the natural losses, such as the sky depicting the problem of the ozone layer. The students report at several times the relationship between the trees and environmental health, once in their perception, the green characterizes the environment as being healthy.

The picture, used as a strategy to break the communication patterns, brings images and relationships, contribute to a critical reflection on the relational aspects (TORALLES-PEREIRA et al., 2004), besides that, in the present study, they gave room for different points of debate.

In a heightened perception of the discussion, the interventions are necessary to tackle health inequities. For these actions, it is necessary the strengthening of support networks for vulnerable groups to mitigate the effects of adverse material and psychosocial conditions to face the differential vulnerability (BUSS; PELLEGRINI FILHO, 2007).

It is important that all educational activity is increasingly more contextualized and open to the studied group, in their expressions, being a rich moment in action-research the integration for an exchange, and the use of actions, personal or collective words to be items of discussion. At this point, the nurse as animator should be involved in the process for a discussion based on local truth, encouraging the participants to be active in debates.

Freire's pedagogy favors the harmony and involvement between participants and animator by mediating the dialogue with themes of their experience and interest, being important that the learning emerges from the group itself, because the participants realize in their context and can reflect about their own reality (BESERRA et al., 2006).

In the speech of the students, one can observe the valuation of their land, their cultural roots, asking about health risks, and the importance of debating this problem by the community.

According to Rozenbaum and Leitão (2006), since the industrialization of the field reached a great number of rural workers, leading them to unemployment, the governments have spent resources in land expropriation, but do not provide adequate infrastructure and consistent measures of support for these excluded citizens.

The discussion continued and is founded in current reality:

[...] all was green before, but now there is already the railway line, the track, also it began the defeat and here is a good land, but in a few years how it will be? (Cravo C).

It is sad, because several companies will come, the world needs help, many don't want to see this, and many are closing their eyes to the situation we have. Each day we should say to the people about the situation of our planet, because our planet needs our help (...) (Rosa F).

The environment as enabler of life has increasing threats that pose risks to life of beings, aspect that should cause intense discussion, taking as pillar the democracy, because these threats frequently are result of intervention of society on Nature (RIGOTTO, 2007). The participants describe they have already felt these changes and demonstrate restlessness of how will be the community in the future, the view of their future is marked by a dichotomy and imprecision.

The development of cities points the coexistence, in a given time, of historically contradictory representations about the daily life of the street space through a historical process, characterizing the society (FREHSE, 2001). In this context, it is observed that this coexistence is something clearly perceived in the lives of the students.

The students identified the difference in the community dynamics after establishment of companies, as also expressed concern about it. Still on the comments, it is observed that the adolescents perceive that many people still do not get involved in the process said in speech: "[...] many are closing their eyes to the situation we are". It is a real and complex situation when the human being does not realize as dependent on nature and that without it the life is not possible.

In the speech of Cravo C, we notice changes in the region due to industrialization process, since its implementation needs easy access, but implicates in other problems, like increased risk of accidents, a fact that mischaracterize the community.

In the discussion, the youth action was enhanced in this context, to be active in the community about the problem experienced. We should stimulate the social criticism and the understanding that the life reality often reflects the historical social exploitation. Then the teacher has to support the community, so that it wins their difficulties through discussions that strengthen the awareness and the addressing of problems experienced in everyday life of the community (WIMMER; FIGUEIREDO, 2006).

The environmental health as a collective action was described by an adolescent:

[...] the world is in our hand, depend on us (Rosa B).

This statement shows the perception of the social commitment that these students have with environmental health, and the overall aspect of the problem, because each one has to be active in his context. Several professionals can be protagonist along with community to empower them, among them the Nurse.

In agreement with Bodstein (2002), the Brazilian public health system has its emphasis on decentralization of services for the municipalities. So it is important that the strengthening and reorganization of basic care can acquire the understanding of a set of actions, basic services, and of primary care in public health at municipality basis, which is a key role and capacity of response and of appropriateness of the municipalities in the activities related to this level of health care.

A study performed by Cezar-Vaz (2007) observed that, given the organizational structure of primary health care, there are no strategies operating in the relationship between health and environment, both in the identification of environmental problems that negatively imply in the community, and in the ways to act with the communities in the environmental problems identified. So, it becomes important for nurse effectively insert into this subject and discuss educational activities that promote reflection on this theme, as the present study.

## Conclusion

In summary, the discussions comprising the environment need to be more evidenced in health care through strategies encompassing specific demands of each municipality.

In group approach, it was noted that the students showed to feel love for their land and their history. For this discussion, relative to time and space, the pictures represented cultural tokens proposed by them, being items completely contextualized to the group and relevant to investigation.

The correlation between nurse and school is increasingly frequent in health area, favoring the use of interdisciplinary techniques to explore educational actions directed to respond specific demands.

At last, it is important to emphasize the role of the nurse in environmental health, mediating educational and assistance interventions, and the need for further studies addressing environmental health under different circumstances, always respecting the uniqueness of the local and of the communities.

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