

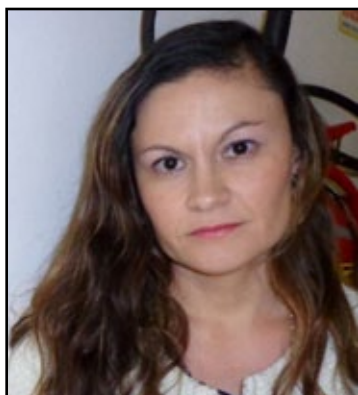


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Original Articles



An Evaluation of the use of Educational Technology, the “Health-Environment Integrated Panel” in nursing education: a descriptive study

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ABSTRACT

Aim: To evaluate the use of educational technology, the “Health-Environment Integrated Panel” with nursing graduates. **Method:** This is a descriptive, evaluative research, of a qualitative approach, conducted through a questionnaire with 18 nursing students of Rio das Ostras campus, of the Federal Fluminense University in May 2015. The data received analytical treatment that included exploration, organization and interpretive synthesis. **Results:** The results show the usability of technology and good ability to generate reflection, interaction and motivation for learning about the dynamics of the health-disease process resulting from socioenvironmental changes in the territory, and the ethical and political attitudes of nurses front these issues. **Discussion:** With the use of educational technology in this scenario, it was possible to implement a creative and stimulating practice of teaching, which involved action-reflection on various aspects of observed reality, favoring significant learning on the health-environment relationship in the training space of nurses. **Conclusion:** We suggest adjustments and validation of the aforementioned technology.

Descriptors: Educational Technology; Environmental Health; Students, Nursing.

INTRODUCTION

The literature on the use of educational technologies in the training area in nursing discusses their applicability in various situations involving teachers, monitors, and nursing students⁽¹⁾.

In the nursing education area, proponents have considered educational technology as a set of mediators devices of the teaching-learning process that must contain a logical organization, so that they can be systematically planned, observed, understood and transmitted. In addition, the technology, while material, should also be recognized as an important component in the educational work, and should be seen as a facilitator, which together with other strategies, make the most complete educational system in its planning and execution. Thus, educational technology can be characterized as a process or product⁽²⁾.

However, educational technologies have been used many times without proper systematization and evaluation⁽¹⁾. In the Brazilian scenario on environmental health education in nurse training, no studies were found that use and evaluate educational technologies in socioenvironmental teaching practices.

Environmental education becomes an important nurse's working instrument in the contemporary socioenvironmental problems and their impact on public health^(3,4). Thus, there are increasing demands for nurse training with specific skills aimed at education, coping and risk management in environmental health⁽⁵⁾.

Following this line of thought, it is considered that educational technology can be used for knowledge and reflection of the complexity of anthropogenic environmental problems, seeking to instill in students a broad and critical understanding of environmental interrelations with man, and its effects to human health⁽⁶⁾.

Based on this, our study is relevant regarding the contribution to changes in educational practices that result in student empowerment for action in education and nursing care, in line with an ecological ideal, of dignity, justice and social commitment and ethics in health promotion. The objective of this study is to evaluate the use of educational technology "Health-Environment Integrated Panel" with nursing students.

METHOD

It is evaluative, descriptive research with a qualitative approach. The evaluation of an action or educational process is understood as an integrated methodology to the dynamics of this process, which allows us to obtain useful information to judge it. In this study, an evaluation of environmental health education technology was based on a dialogical and dialectic perspective⁽⁷⁾, implying that the understanding of the difficulties of the students may come from the perception and participation by those involved.

The technique used was a self-report questionnaire, which was developed based on the study of Sabóia et al⁽⁸⁾. The study participants were 18 students enrolled in courses of the last semester of the second year of the nursing undergraduate course at the Institute for Humanities and Health, Rio das Ostras Campus/UFF, who participated in the use of this technology in May 2015.

The technology, called the "Health-Environment Integrated Panel" represents a proposal for an active methodology of teaching and learning about the resonance of socioenvironmental changes in the health-disease process in a territory.

The methodological steps of the application of technology are described below.

At first, the participants visited a territory that had experienced profound changes and socioenvironmental conflicts, as well as an expansion of health risks to communities arising from the process of building the Petrochemical Complex of Rio de Janeiro (COMPERJ)⁽⁹⁾. This scenario was the municipality of Itaboraí, one of the poorest areas of the metropolitan region of the state of Rio de Janeiro, with a human development index of 0.693⁽⁹⁾.

In a second step, the contextualization of reality was portrayed in the classroom environment by participants and researchers. Therefore, educational technology was developed from the construction of an integrated panel with pictures and descriptions of problem situations, which were encountered during the visit carried out with students in the surrounding areas of COMPERJ so that participants could relate them to the environmental and health impacts observed in the field.

At the end of the meeting, the participants who agreed to participate in the study signed the Informed Consent and completed the questionnaire of assessment of the technology, which contained the following questions: Between very good, good, fair, poor and without opinion, which concept would you give to educational technology? Did the technology favor reflection? Were the issues of interest to you? Did you feel at ease during the group? Would you indicate to other colleagues to participate in the same kind of educational technology? What did you most like about the activity? What did you like least about the activity? Suggestions.

For the data analysis, an analytical interpretation strategy was adopted⁽¹⁰⁾, fulfilling the steps of: comprehensive reading material; organization of data, following the grouping logic instrument issues; identifying characteristics of the material; and the development of interpretive synthesis.

The research project was approved by the Ethics Committee in Research at the University Hospital Antonio Pedro of UFF, under n ° 1,585,527.

RESULTS

The sample of subjects was composed of 18 nursing students aged between 19-38 years, being 16 females and two males.

The technology has been well evaluated by the students, since 13 participants attributed the "good" concept to it and five attributed the term "regular". Some limitations, which were identified by the students, referred to the distance traveled, the university vehicle, and the restriction on access roads to the place of the enterprise construction during the visit to the field.

Among the positive aspects pointed out by all students on the usability of educational technology included: the relevance of technology to stimulate interest, reflection and student participation in a relaxed way, allowing the use of existing knowledge and the clarification of questions of students; the opening space for the apprehension of new knowledge about the socioenvironmental issues addressed; refer to other colleagues to participate in the technology; and the suggestion to reproduce it at another times in the academic education of nurses.

The data showed that the Health-Environment Integrated Panel enabled the expression of the students, on their own terms, of points of view, beliefs, attitudes and representations, as well as exchanges of ideas, values and experiences, based on field observation, photos and interaction between participants.

Regarding the consideration of the content covered, 16 academics said that the technology was able to promote reflection, considering the interactive and well prepared in its method of

teaching because it was able to stimulate the autonomy and motivate the learning of specific content and other transversal to the various disciplines of the course curriculum in question, such as the ethical and political attitudes of nurses and social participation in deliberative spaces on health and the environment.

DISCUSSION

The dynamic and creative nature of the technology "Health-Environment Integrated Panel" encouraged the participation of young students in an intense way, relaxed and interactive in the action-reflection steps on different aspects of the observed reality, favoring exchanges of knowledge about the relationship health-environment.

Within the training scenarios of the nurses, the characteristic of promoting students' active participation is seen as essential to problematizing pedagogical practice, since it provides the dialogue, meaningful learning and empowering of the student⁽¹¹⁾.

The data shows also that the use of the Health-Environment Integrated Panel allowed the approach from theory to practice, from the questioning of everyday socioenvironmental and health situations of the nurse's work, which require these professional, management and care competencies for care under the new paradigm ecosystemic in health⁽⁹⁾.

The current problems of the reality experienced by students can be used as elements constituting innovative teaching strategies, optimizing the teaching-learning process on environmental health in nurse training⁽⁵⁾.

Arise in this study, the active methodology of problematization, substantiated by the theoretical-philosophical framework of Paulo Freire, as a promising pedagogical practice

in environmental health, given the identified difficulties and gaps in other studies to overcome a fragmented socioenvironmental approach, reductionist, dichotomous and discontinuous in undergraduate nursing curricula in Brazil^(4,12).

In this sense, technology encouraged the students to reflect on local environmental issues and its association with health risks and, moreover, facilitated the deepening of discussions on the ethical-political positioning of the population and the nurse as a essential assumption for the change of these issues because it was identified strong interest of students to share and discuss social and environmental values.

Thus, the educational process has collaborated in the development of professional skills based on the increasing exercise of autonomy, citizenship and social commitment⁽¹³⁾.

One study⁽¹⁴⁾ found that the healthcare students did not realize that it is health professional's responsibility to search for healthy environments, urging a discussion on this topic in the training areas of these professionals.

In occasion of an environmental education that changes attitudes and behavior, we must expand the academic spaces to the interior of the communities and seek pedagogical practices which encourage students' understanding of how different social groups and classes produce, organize and transform the living environments according to their interests, positions and power relations⁽¹⁵⁾.

It appeared that the understanding of the socio-political organization of individuals and population groups by the students, and how they face the socioenvironmental complex situations in the territories, are premises for the discussion of values and the ethical and social commitment of nurses related to health promotion and sustainability of life⁽⁵⁾.

CONCLUSION

We conclude that the main objectives of the technology "Health-Environment Integrated Panel" were achieved, since the results showed a positive evaluation of the educational process, usability and a good ability to generate reflection, autonomization and motivation of the nursing student for learning about socioenvironmental and health issues, skills and ethical values of the nurse for ecological care and health care.

However, it was identified that the technology needs adjustments in the first step of explanation to the target audience on all stages of the process, considering objectives, questions and expectations of the field visit, including the logistics of this activity.

Thus, considering the limitations of this evaluative research in terms of the development of an experimental methodological process for environmental health education with nursing graduates and techniques of survey and data analysis, it is suggested that the validation of the relevant technology, glimpsing the reproducibility of this resource in theoretical and practical teaching practices on the health-environment relationship in nurse formative scenarios.

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