Short Comunications

Curricular strategy for public health and environmental training: the environmental dimensión in the basic sciences of the medical studies

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INTRODUCTION

The damage to the environment is increasing due, to a large extent, to the bad anthropic practices that destroy the habitat of all living beings including the human being itself. Over the years, new environmental problems appear, while existing ones are aggravated at different levels. The most important consequence of all this is the establishment and aggravation of weather conditions, which is the most important global environmental problem affecting the planet.[1] All this is caused in turn by the establishment of others that as a whole prevent the normal development of ecosystems, which leads to the extinction of many species of flora and fauna, thereby endangering life on Earth, because, among other reasons, environmental problems generate health problems.[2,3,4]

It is indispensable that human beings become conscious of the problem to face, it is necessary to create an environmental culture but to achieve this it is essential to spread knowledge and develop values with an environmental focus at home, at school, in the community , hence for this reason the urgent need of environmental education in all its forms and levels as it plays an important role in the formation of human beings.[5,6]

Universities face the great challenge of training different professionals that the society needs to be able to face all the problems of its time, among which is the environmental problem. In the Medical Studies Mayor, both are given the relationship between environmental problems and health problems. It is essential that the environmental dimension be present as part of medical studies, not only as knowledge but also as values, habits, skills, in such a way that the task of promotion and prevention of the general practitioner is more effective and that through its educational labor contributes to develop an environmental awareness in the population.

The Environmental Education for Sustainable Development (EESD) must be present in all the governing documents of the curriculum,[5,6,7,8] as a transversal axis of them with the concurrence of all the subjects from a horizontal and Vertical interdisciplinary approach. Therefore, one way to achieve this is through the curricular strategies that constitute a particular way of curricular organization of the contents to get objectives of a wide degree of generality, that go through the whole curriculum.[9,10]

The curricular strategy of Public Health and Environmental Training [10] constitutes an action guide, an orientation or another tool to introduce the ED in different subjects of the discipline knows as Biological Bases of Medicine (BBM). After carrying out the corresponding analysis, in this Strategy the elements related to Public Health predominates, however, those related to the ED are very general.

The present study proposes a modality of inclusion of the ED, through the Curricular Strategy of Public Health and Environmental Training in some contents of different subjects of Basic Sciences of the discipline abovementioned (BBM) in these Medical Studies, which illustrate them with concrete examples.

METHODS

A bibliographic review was made about the curricular strategies, the documents of the Medical studies, study plan and, in particular, the curricular strategy of public health and environmental training were analyzed to determine the presence of contents from the environmental sphere through different terms, proper to that sphere. As well as, contents of the Basic Sciences present in the syllabus of the different subjects of the discipline Biological Bases of Medicine (BBM) and their direct relationship with the environmental dimension (ED) were examined through concepts, categories, problems, factors and risks,

the environmental among others. For the analysis, the analytical-synthetic and the functional structural systemic methods were used as theoretical methods.

RESULTS AND DISCUSSION

It reveals, through different examples, the relationship between the ED and the contents of subjects of the Basic Sciences belonging to the BBM discipline. Table 1 shows the different subjects of this discipline and its link with Basic Sciences.

Table 2 presents contents of the different Basic Sciences that are taught in the different subjects of the BBM discipline and their links with aspects dealt with the environmental sphere, such as definitions, factors and environmental problems.

Through Molecular Genetics that is a topic of Molecular Biology, contamination can be introduced as a global and Cuban environmental problem, as well as its impact on human health, thus the mutation of DNA caused by contaminant agents leads to alterations at the molecular level that cause deformations and other disorders. The congenital malformations are a specific content of Embryology taught in the subject of Ontogeny and Osteomyoarticular System (OMAS).

In Cellular Respiration topic of Metabolism and Nutrition subject when teaching the inhibitors (CN, CO, arsenic), the role they play as air and water contaminants can be emphasized, while the aspirin, in high doses works as an uncoupler and it is related to educational factors. In both cases, it can be stand out that alteration in cellular respiration processes can lead to death.

In the above mentioned subject different environmental harms such as water and soil contamination, deforestation, loss of biological diversity, affectations to the forest cover have an important link with the topics of nitrogen compounds and nutrition since it would affect the acquisition of metabolically useful nitrogen by higher organisms including man and the consequences for life that this would bring, since it would be impossible to obtain essential Amino Acids and therefore, the synthesis of proteins and other nitrogenous compounds would be affected, as well as obtaining other compounds like vitamins and minerals.

The subject of Ontogeny-Omas studies the Osteomyoarticular system (OMAS) and the skeleton fractures that can be related to accidents and other psycho-emotional factors. Here, the importance of the responsibility value is recognized and how the opposite can

damage the environment including the human being as part of him. You can also stand out aspects of an educational nature.

In the subject of Nervous, Endocrine and Reproductive Systems through the study of the organs of the senses and in particular the ear, it is analyzed how hearing can be affected by sonic contamination.

Some contents from Physiology and Anatomy corresponding to respiratory system in the subject of CRRDS are related to air pollution, an environmental problem that directly affects human health, in the generation and exacerbation of asthma, chronic obstructive pulmonary disease (COPD) and acute respiratory diseases (ARDs).

CONCLUSIONS

We propose a modality of inclusion of the ED, through the Curricular Strategy of Public Health and Environmental Training, in some contents of different subjects of Basic Sciences that make up the discipline Biological Bases of Medicine in these studies, which is illustrated with concrete examples.

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