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EXTENSION PROPOSAL FOR HEALTH EDUCATION WITH THE ELDERLY

Amado Batista Mainegra^{1,*}, Yadira Arnet Fernández², Odette González Aportela¹ and Regina Celia de Souza Beretta²

¹Center for Studies for the Improvement of Higher Education, University of Havana, Havana, Cuba

²Postgraduate Program in Health Promotion Sensu strictu of the University of Franca, Sao Paulo, Brazil

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*Corresponding author:

Amado Batista Mainegra

ABSTRACT

Introduction: Tuberculosis is an infectious disease with a recognized socioeconomic component, being much more frequent in underdeveloped countries. **Objective:** Undertake an extension strategy for education in food health. **Methodology:** A concurrent research was carried out in two stages, four times the theoretical and empirical research methods were used. The validity of the proposal was endorsed by consulting specialists. Results: An extension strategy for the training of people was developed, in which health education and conceived not at the university level as a process. A strategy articulates spaces for dissemination and dissemination of knowledge about tuberculosis and two spaces for teaching and learning. The proposed strategy was endorsed by 35 university professors from Cuba and Brazil, who will confirm its validity. **Conclusions:** A proposed extension strategy will promote interaction and active participation of two involved, or that in turn will generate a social commitment to tuberculosis and its prevention, will allow an increase in the perception of risk and, in addition, to awareness of a great number of people on or after contracting a pandemic older than humanity.

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INTRODUCTION

Acute Respiratory Infections (ARI) constitute a complex and heterogeneous group of diseases caused by a large number of causative agents that affect some point of the respiratory tract and represent for all countries an important health problem that remains current, both due to its large morbidity figures, as well as its outstanding mortality (WHO, 2018). Without doubt, one of the main IRA is tuberculosis, known as a bacterial disease contagious than infect mainly the lungs, being considered one of the oldest pandemics and declared as disease re-emerging by World Health Organization Health, in 1992. Precisely this international body in the Global Tuberculosis Report 2019, registered that this disease is capable of affecting about 10 million people annually, it is still one of the 10 main causes of death, as well as the main cause when it is a single agent infection (Mycobacterium tuberculosis), above HIV / AIDS. Other elements included in this Report refer to the fact that the disease can affect anyone anywhere, but the majority of people who develop TB (around 90%) are adults (...). Worldwide, an estimated 1.7 billion

people are infected with M. tuberculosis and therefore are at risk of developing the disease (WHO, 2019, p. 7). This is because this disease in the population elderly, a strong susceptibility, both in relation to new infections terms of reactivation of the disease, both related to decreased cellular immunity, affected by the process immune aging. Tuberculosis is a disease with a recognized socioeconomic component, in fact, it is much more frequent in underdeveloped countries, where the economic situation and the difficulty of access to health systems favor the presence of other diseases associated with aging, contributing. This way, 95% of those who get sick annually around the world; However, in very few occasions the presence of the environmental component is addressed in the prevention of this disease, closely related to the previous one and therefore, in most cases subsumed by the first, not being explicitly stated, even when it has been demonstrated scientifically, how climate change, just to give one example, "has notably modified the body's immune response, allowing easier infection and earlier and more frequent reactivation of M. tuberculosis infection and progression to tuberculosis disease" (Alcivar et al., 2018, p. 82). The prevention and control of tuberculosis worldwide is an issue to which particular attention is given by the health authorities of each country,

which is expressed in the design and implementation of national control programs in which they are integrated. the activities of search, diagnosis and treatment of cases and the control of contacts within the general health services; however, there are still shortcomings that must be eliminated. Achieving the goal of eradication to which governments aspire requires a high responsibility of specialized personnel to detect cases that still remain undiagnosed, help them and cut the chain of transmission, but it is also a task of the family, of the promoters community and society as a whole, which implies a work that allows strengthening the social and community mobilization of the population aimed at reducing tuberculosis and its transmission, for which it is very important to achieve the strengthening of community participation. In this sense, Higher Education Institutions (IES), as cultural institutions, must satisfy social and individual needs from the integral formation of the human being as an active entity of the society in which they work, this means that a One of the responsibilities of HEIs towards society is to perpetuate and disseminate its cultural heritage to the community with which it interacts and from which it is nurtured at the same time. To fulfill this mission, the university, as a formative and transformative institution, needs to bring together all its work and project it both within and outside the walls, in which health promotion plays a very important role for the whole of society.

The Cuban experience in this matter is wide, recognizing its beginning for higher education from the development of health promotion programs led by the Ministry of Higher Education (MES) since the 90s of the last century (Fernández *et al.*, 2019), those that had an economic and organizational boost with the projects of the Global Fund to fight AIDS, tuberculosis and malaria, among them, the project Strengthening the National Program for the Control of tuberculosis in the Republic of Cuba (CUB -708-G03-T), executed between January 2009 and December 2013, in which older adults were the target audience for various activities. Even though the results of all the actions derived from the aforementioned project were positive, even the level of knowledge about the characteristics, symptoms and transmission routes of the disease can be considered as medium (Arroyo *et al.*, 2012), coinciding with that registered in other Latin American countries (Muñoz *et al.*, 2018; Wilches- Luna *et al.*, 2016; Lukac *et al.*, 2016; Delgado-Jaime *et al.*, 2015), which together with the incidence of environmental factors related to the disease and that are scarcely addressed in health promotion actions, have been the cause in several countries that a small part of the vulnerable population remains, with hidden transmission of tuberculosis infection-disease. That is why the present work aims to design an extension proposal of environmental education for health with older adults, as a contribution of the Cuban experience with Brazilian collaboration in the prevention of tuberculosis and in compliance with the goal set by the Organization Panamericana de Salud to make our region the first in the world to achieve the elimination of tuberculosis as a public health problem.

MATERIALS AND METHODS

A concurrent mixed research (Hernández- Sampieri and Mendoza , 2018) was designed in two stages. First stage: a prospective systematization of the experience of Cuban universities was carried out in Project CUB-708-G03-T, specifically regarding the training of health promoters for older adults in the period 2009 - 2013. The systematization was developed as an integral, creative and reflective process, at the same time dynamic and flexible, guided by the interpretive paradigm. A qualitative systematization was carried out with a descriptive design, for this, theoretical (analysis-synthesis, induction-deduction) and empirical (documentary analysis, participant observation) methods were used. In this stage , the training actions developed with older adults were subjected to critical review, in dialogic spaces of horizontal exchange , in which the following participated: 4 professors from the University Extension Directorate of the University of Havana; 17 professors who acted as coordinators of each Cuban university attached to the Ministry of Higher Education before Project CUB-708-G03-T; 74 older adults who

participated in the project's training activities and who were studying in the University Program for the Elderly. The data collected from the dialogic interaction were interpreted by means of discourse analysis of each relevant communicative event. Second stage: the proposed strategy for the training of health promoters of older adults was elaborated and evaluated, for which theoretical methods (analysis-synthesis, induction-deduction, systemic structural and functional) and empirical methods (documentary analysis and consultation with experts). The design of the strategy took into account the pedagogical foundations of health promotion and environmental education for the general structuring and articulation of theoretical-practical elements , according to the proposal by Batista (2016). To assess the design of the proposed strategy, 37 experts were consulted (25 of them from seven Cuban HEIs and the other 12 corresponded to teachers from eight Brazilian HEIs) by applying a questionnaire that took into account as validity criteria those proposed by Sevilla and López (2015, p. 665-666):

- Feasibility: understood as the possibility of being applied in practice.
- Relevance: it is related to the convenience regarding social, political and training demands.
- Relevance: it is associated with the possibility of solving a problem in practice.
- Sustainability: it is linked to the possibility of joining the extension work of the HEIs for permanent work with the elderly .
- Sustainability: that informs of the possibility of being prolonged in time.
- Transferability: refers to the possibility of being used in other contexts with the same objective, provided that the characteristics of said scenarios are considered.

The Cronbach's Alpha was determined to the questionnaire used as a simple and reliable way to validate the construct of the Likert-type scales used, in addition, as a measure that quantifies the correlation between the items that compose it. For this, the criterion established by different authors was assumed in which a Cronbach's Alpha value between 0.70 and 0.90 indicates good internal consistency (Oviedo and Campo-Arias, 2005).

RESULTS AND DISCUSSION

The systematization of the training actions with older adults developed in the CUB-708-G03-T Project, allowed to arrive at the following findings:

- The training of health promoters for the elderly is conceived for the prevention of tuberculosis without taking into account the environmental dimension.
- Training activities are limited to the transmission of information.
- E l performance of trained health workers is insufficient, since the training activities undertaken can not overcome the dichotomy between theoretical training and practical experience .
- The actions carried out show a concept close of health promotion limits n do the extension work to the actions of an educational, usually with unidirectional community character .
- The use of a questionnaire on basic knowledge of tuberculosis as a pre and post test, turned out to be an important element to evaluate the level of knowledge of the participants.

Based on the findings, an extension strategy was designed for the training of health promoters of older adults , in correspondence with the strategy of the OP S (2019), specifically regarding strategic line 2: facilitate participation and empowerment of the community, and the commitment of civil society. Thus, it is intended that older adults who participate in the actions of the extension strategy to have "full and

continuous access to complete, accurate and appropriate, as well as comprehensive education for salt ud " (OP S, 2019, p 7). The strategy was designed taking as a fundamental premise that university extension should be assumed as a substantive integrating function of university processes (Figure 1), emphasizing in this case, the extracurricular component of the pedagogical process, which is inserted in a space and time sociocultural to transform it qualitatively, process it scientifically and turn it into a process of evolutionary, constant and systematic development for the university-society binomium. In this way, it contributes to what was proposed in the Fifth World Conference on Health Promotion (WHO, 2000), where it was stated that "when a person can decide to be healthy, they first need precise, reliable knowledge (...) on how to achieve a good health and on the health risks that arise in their daily life " (p. 2 8) .

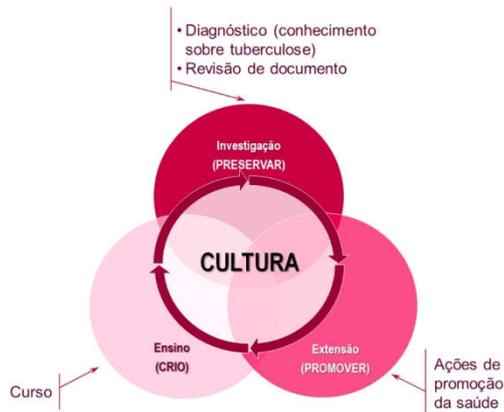


Figure 1. Integration of university substantive processes in the prevention of tuberculosis. Source: Modified from Batista et al. (2010)

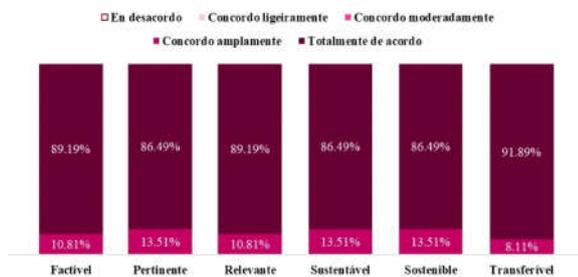


Figure 2. Results of the experts' assessment of the validity of the proposed strategy

This idea corroborates the need for HEIs to develop cultural promotion programs, through which basic information on health is transmitted, turning them into true health promotion programs. Therefore, through university extension, health promotion is presented as a process of collective construction, fundamentally aimed at influencing the causes and determinants of health to improve it, which implies working with people and not on them, value both the interest for the individual and the environment, involve all social sectors in the action, make the community and the local sphere the central nucleus of the work and highlight the positive aspects, when determining the objectives and at the time of selecting action strategies. At the same time, the criteria of Castillo (1987) are agreed when he states that: Health Education must contribute to developing a critical awareness of reality, of the characteristics of our insertion in the natural and human world in which we live, of our relationships with beings and things, of our rights and duties. In relation to those who share this moment and space with us. In a broader sense, Health Education is an education for life, for individuals and human groups ... it is about learning to see life with different eyes, love it and choose at all times the behaviors that They help to allow you to live it in health. (p. 10). From this approach, in the proposed extension strategy, education for health in the university setting is conceived as a process that is not limited only to transmitting information, but

seeks to develop knowledge, skills and abilities that contribute to social production health, through dynamic learning processes, where two-way communication is privileged, as well as the critical and participatory attitude of the participants. The general objective of the strategy is to strengthen social and community mobilization in the prevention of tuberculosis in the university community and its surroundings with the participation of older adults from a conception of environmental education for health. A flexible strategy was designed based on the principles of action-participatory research, adapting the actions to the interrelation between the university community and the territorial communities, with the peculiarity of including research, teaching, dissemination and dissemination of scientific knowledge on tuberculosis, to be carried out with different community agents. Each action is expected to be progressively executed, evaluated and redesigned, taking into account the felt and perceived needs of the participants. In addition, throughout the implementation, the partial results of the strategy will be exposed to critical review in dialogic spaces of horizontal exchange, suggestions for improvement will be incorporated into the redesign of future actions. Thus, the strategy feeds permanently and develops in a rigorous process of research and creation. As part of the research actions, the questionnaire used in the CUB-708-G03-T Project was redesigned to evaluate the degree of knowledge of the participants about tuberculosis. The questionnaire collects sociodemographic data and includes basic questions about the causative agent, symptoms, vulnerable social groups and health behaviors related to the disease.

The strategy converges the spaces for the dissemination and dissemination of knowledge about tuberculosis and the two designed teaching-learning spaces:

- Course on Health Education for the prevention of tuberculosis.
- Training Course for Promoters-facilitators older adults for the prevention of tuberculosis.

The Course of Health Education for the prevention of tuberculosis proposed as part of the strategy, has a total duration of 32 hours classroom and pursues as general target: to facilitate the appropriation of scientific knowledge about tuberculosis for the elderly, to strengthen the perception of risk in the face of this disease. The contents of the Course (table 1) were complemented with the completion of two evaluative tasks and the preparation of a course work. The tasks consist of the design and application of a tuberculosis survey, which the participants must process statistically. The second task consists of preparing an electronic presentation on a specific topic related to tuberculosis, which participants must present on the last day of the course. In this case, it is proposed to work in pairs or in small groups if the group of participants is greater than 20 people.

The general objective of the course for the training of promoters-facilitators is to implement community work strategies for the prevention and control of tuberculosis in the university environment and its social environment, for this, it is organized in two stages:

- 1st stage (theoretical-practical): In this stage the contents will be organized in eight meetings or sessions of 4 face-to-face hours each, for a total of 32 face-to-face hours.
- 2nd stage (practical): In this stage the course will be fully developed in a practical way and students will have at least 4 hours during 15 days to develop a strategy for promotion, communication and social mobilization at the community level, appropriate to a context or determined population group and aimed at the prevention of tuberculosis, which should be implemented at least partially. Participants will work in small groups of up to 5 members who will be coordinated by a teacher from the course. The orientations of the work to be carried out will be given in the last meeting of the theoretical-practical stage and the results will be presented the day after completing the 15 days of practical work, in a ninth meeting of 4 hours like the previous ones, therefore that this stage will comprise a total of 64 hours.

Tab la 1. Organization of the contents of the two courses that are proposed

Encounters	Health education course	Health education course
1	<ul style="list-style-type: none"> • Presentation of the Course (objectives, structure, work dynamics). • Presentation of students and group of teachers (participatory technique). • Pre-test application. • Health from a sanological approach . Health vs Disease. • Environmental determinants of health. 	
2	<ul style="list-style-type: none"> • Infectious diseases. • Acute respiratory infections. Tuberculosis. • Tuberculosis as a health problem: history of tuberculosis (national and international); updated national and international epidemiological situation. • Practical activity • Tuberculosis: basic clinical, microbiological and epidemiological information for prevention work (1st part): 	<ul style="list-style-type: none"> • Forms of tuberculosis. Pulmonary tuberculosis: generalities: • Clinical features. Signs and symptoms. • Diagnosis and treatment. Drug resistance. • Practical activity
3	Causal agent. Diagnosis and treatment. Drug resistance. Signs and symptoms of the disease. Transmission routes. Forms of tuberculosis. Pulmonary tuberculosis: generalities: Vulnerable groups. <ul style="list-style-type: none"> • Practical activity 	
4	<ul style="list-style-type: none"> • Tuberculosis: basic clinical, microbiological and epidemiological information for prevention work (2nd part): HIV / AIDS and tuberculosis. Socioeconomic and environmental factors related to tuberculosis. • Practical activity 	<ul style="list-style-type: none"> • Tuberculosis epidemiology: infection-transmission, vulnerable groups. • Socioeconomic and environmental factors related to tuberculosis. • Practical activity
5	<ul style="list-style-type: none"> • Health promotion and disease prevention. • Role of the health promoter. • Communication in Health Promotion. 	<ul style="list-style-type: none"> • HIV / AIDS-Tuberculosis co-infection. • Addictions and tuberculosis. • Practical activity
6	<ul style="list-style-type: none"> • Prevention and control of Tuberculosis. Strategies at the national, regional and global levels. • Community Strategies for Health Promotion and Tuberculosis Prevention. Stratification of population areas at risk. • Educational promotion actions in vulnerable social groups. • Practical activity 	<ul style="list-style-type: none"> • Strategy for TB prevention at the community level. • The health promoter. • Practical activity
7	<ul style="list-style-type: none"> • Possible actions to be taken from the Universities. • Video debate. 	<ul style="list-style-type: none"> • Social communication in health. • Participatory communication and strategic communication. • Risk communication. Crisis communication. • Strategic planning of social communication in health. • Practical activity • Post- test of knowledge. • Orientations of the work to be carried out in the practical stage of the course.
8	<ul style="list-style-type: none"> • Post-test application. • Closure of the course (fulfillment of objectives and expectations of the participants). • Technique application to evaluate the Course. 	
9		<ul style="list-style-type: none"> • Presentation of the results of the practical work carried out. • Conclusions and Closure of the Course (fulfillment of objectives and expectations of the participants). • Technique application to evaluate the Course.

The contents of this course are shown in Table 1. A facilitator-promoter is considered to be any person trained in the subject of tuberculosis, with mastery of the basic aspects of the disease, who through educational and promotional activities helps the working groups to take collective ideas, search for solutions, promote interaction and the communication between the participants, the taking of actions, enables the generation of knowledge and dialogue without manipulating them and without imposing criteria. In both courses, the evaluation is made up of the delivery of the oriented tasks, the participation in the planned practical activities and a minimum of 80% attendance to classes. In the design of both course proposals, the design of the teaching groups through which the participants model, simulate and execute the professional activity of a health promoter is of vital importance, when faced with the design and execution of an extension action of a nature educational, in this way, the student is placed in concrete conditions of realization, where it analyzes and offers alternative solutions. The student is thus trained to work in a team, in decision-making, in oral and written communication, in self-training, in the search and investigation of solutions to professional problems. With the teaching task, the students apply the acquired knowledge and put it into function of a research activity, which, coinciding with Hernández (2002), develops in them the skills related to mastering the methods of scientific research, processing the information, the report of results and qualities, among others, such as creativity, self-assessment and perseverance. In this way, the investigative activity is established as a specific feature and presupposes not only the formal application of a research method, but also training in the processes of searching for scientific-technical information, checking conjectures and self-control of the activity.

The investigative activity gives way to the elaboration of a proposal of educational action of health promotion, which constitutes an activity of a purely extensionist nature. In this way, the initial premise with which university extension is assumed as a substantive integrating function of university processes is specified, emphasizing in this case, the extension component of the pedagogical process, which is inserted in a space and time sociocultural to transform it qualitatively, process it scientifically and turn it into a process of evolutionary, constant and systematic development for the IES-society binomial. For the development of research and extension actions, an essential step is the formation of the teams of participants, which, depending on the topic addressed and the particular characteristics of the group, can respond to their places of residence and the needs of the health sector in each territory.

It is also proposed that, in the implementation stage of health promotion extension activities, the participants take into account some important aspects raised by Batista (2016, pp. 95-96):

- The type of activity should encourage group participation and ensure easy understanding of the matter to be discussed.
- Make it easier for people to express their doubts and concerns regarding the subject.
- The beginning of the activity is an important element, it is necessary to make the participants feel that this is their space and that this is an activity created for them.
- Know statistical data in order to provide basic information.
- Stay motivated throughout the activity.
- Use simple language, without technicalities, these, if necessary, should be explained.
- Give priority to important topics to be dealt with in the activity (transmission routes, risk behaviors, preventive measures, etc.)
- Identify issues whose technical complexity is difficult to understand, for example, in relation to I to co - tuberculosis infection - HIV / AIDS, tuberculosis latent or drug resistance, among others.

The results emanating from each of the activities and actions to be developed as part of the extension strategy designed, in the form a self-reflective, permanent process will allow analysis, control and adjustment systematic in compliance with I intended target, thus

ensuring way to make the necessary adjustments. The analysis of the validity of the extension strategy (Figure 2) confirms the feasibility, relevance, sustainability and transferability of the proposal, demonstrated that 100% of the experts consulted in Cuba and Brazil, said they were among fully compliant and largely compliant. The use of the questionnaire applied to the experts is supported by the Cronbach's alpha result of 0.82, so the degree of internal consistency is good. On the other hand, when we recognize Brazil as one of the countries with the highest incidence of tuberculosis in the world, we see how similar strategies such as those developed in Cuba have been effective for the eradication of this disease in the territory. In this regard, it is noteworthy the proposal developed as part of the Health Strategy de la Familia (ESF) in a city of the province of Alagoas-Brazil, based on the promotion of educational activities group on pulmonary tuberculosis and possible factors associated with this occurrence to reduce its incidence in the population. Achieving with this project the increase of knowledge, skills and attitudes for the identification of the disease by the older adults of the community, as well as achieving a greater involvement of ESF professionals and community agents in the management and control of the users at risk of becoming ill from TB. Finally, but not least, the community empowerment in decision-awareness of the importance of prevention and not only promotion of TB and its impact on the physical social level, psychological and (Ramirez, 2018, p. 35).

CONCLUSION

The extension strategy for health education proposed in the research is based on the role that Older Adults can play in the prevention of tuberculosis, not only because people over 65 years of age constitute a social group vulnerable to tuberculosis, but because of the leading role that the majority play within their own community, which will favor, through educational actions, sensitize the population, turning their actions into an increasingly participatory prevention process.

The design of two courses, as spaces for teaching and learning, in which it was assumed as a premise to the university extension as a university function that integrates essential processes, allows to have a space where participants performed shall activities in which, from linking theory and practice, put g an tested in real situations, skills and theoretical knowledge, evaluate themselves, enrich those KNOWLEDGE I and skills and identify new problems, which, besides contributing to their training in the field of health, contributes to education for citizenship, also facilitating knowledge of the community and social context, while allowing them to provide a service of positive value in response to demands for satisfaction of external or internal needs of the HEI. Undoubtedly, strategies like this should be part of the university extension programs of Latin American HEIs to face the challenge of making Latin America the first region in the world to achieve the elimination of tuberculosis as a public health problem.

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