

PODIUM

Journal of Science and Technology in Physical Culture

Volume 19
Issue 1

2024

University of Pinar del Río "Hermanos Saíz Montes de Oca"



Translated from the original in spanish

Original article

Promotion of physical activities for older adults: an educational strategy for Gerontology students

*Promoción de actividades físicas para adultos mayores: Una estrategia educativa para
estudiantes de Gerontología*

*Promoção da atividade física para adultos mais velhos: uma estratégia educacional para
estudantes de Gerontologia*

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Received: 23/11/2023.

Approved: 29/01/2024.

ABSTRACT

Currently, there is a progressive trend towards population aging. The purpose of this research was to present an educational strategy for students of the 5th level of Gerontology that contributes to the promotion of physical activity in older adults. The research was framed in a mixed methodology and a cross-sectional descriptive design. Scientific methods were used that in the theoretical order include analysis-synthesis, inductive-deductive and structural systemic and as empirical methods documentary review, observation, survey and



interviews, applied to a sample of 38 subjects. The study revealed the importance of physical activity as a strategy that allows achieving active aging with quality of life. According to these results, the application of an educational strategy, structured in three stages and two phases, contributes to the self-management of student learning, where the professional context becomes an authentic training space.

Keywords: physical activity, older adults, educational strategy

RESUMEN

En la actualidad, existe una tendencia progresiva al envejecimiento de la población. El propósito de esta investigación consistió exponer una estrategia educativa para los estudiantes del 5.º nivel de Gerontología que contribuya a la promoción de la actividad física en el adulto mayor. La investigación se enmarcó en una metodología mixta y un diseño descriptivo de corte transversal. Se emplearon métodos científicos que en el orden teórico se encuentran análisis-síntesis, inductivo-deductivo y el sistémico estructural, y como métodos empíricos la revisión documental, la observación, la encuesta y entrevistas, las cuales fueron aplicadas a una muestra de 38 sujetos y revelan la importancia de la actividad física como estrategia que permite alcanzar un envejecimiento activo y con calidad de vida en la tercera edad. Según estos resultados, la aplicación de una estrategia educativa estructurada en tres etapas y dos fases contribuye a la autogestión del aprendizaje de los estudiantes, donde el contexto profesional se convierte en un auténtico espacio de formación.

Palabras clave: actividad física; adulto mayor; estrategia educativa.

RESUMO

Atualmente, há uma tendência progressiva de envelhecimento da população. O objetivo desta pesquisa foi apresentar uma estratégia educacional para estudantes do 5º nível de Gerontologia que contribua para a promoção da atividade física em idosos. A pesquisa foi enquadrada em uma metodologia mista e um desenho descritivo transversal. Foram



utilizados os métodos científicos teórico, indutivo-dedutivo e sistêmico-estrutural, e os métodos empíricos foram revisão documental, observação, inquérito e entrevistas, que foram aplicados a uma amostra de 38 sujeitos e revelam a importância da atividade física como estratégia para alcançar o envelhecimento ativo e a qualidade de vida dos idosos. De acordo com esses resultados, a aplicação de uma estratégia educacional estruturada em três etapas e duas fases contribui para o autogerenciamento da aprendizagem dos alunos, em que o contexto profissional se torna um autêntico espaço de treinamento.

Palavras-chave: atividade física; idosos e estratégia educacional.

INTRODUCTION

Currently, one of the most significant changes in society is the progressive trend toward population aging; longevity is increasingly latent and there is a strong increase in life expectancy in this age group. Latin America and the Caribbean are not immune to this process, as an accelerated aging of their populations is described.

According to Pozo *et al.* (2020) and Recalde *et al.* (2017), Rodríguez, Á., (2020), the policies implemented worldwide generally do not respond to the needs and problems of the elderly population, because they are planned exclusively by senior management, there is a divorce between the programs and the social reality of the older adults (there are no diagnoses) and they lack sufficient human and financial resources.

In conclusion, these policies and programs do not have continuity because they are planned, but many times they are not executed or evaluated and they limit the inclusion and participation of older people in all aspects of life; hence, it is necessary to look for educational strategies containing pedagogical methods, procedures and actions that contribute to improving their quality of life.

Martín (2018) states that the World Health Organization (WHO) highlights the important role of physical activity in achieving healthy aging with quality of life and that its practice, throughout life, has the main benefit of increasing longevity, preserve muscle strength and cognitive function, reduce levels of anxiety and depression and significantly improve



feelings of self-esteem. From the physical point of view, it reduces the risks of chronic diseases, mainly vascular diseases of any location (cerebral, central and peripheral) and from a social point of view, promotes greater participation in the community and allows the maintenance of social networks and ties between generations.

In this sense, it highlights how physical activity affects the quality of life of older adults in three main psychological aspects: distraction, self-efficacy and social relationships; therefore, its practice is a distraction from everyday life and strengthens the state of mind. The motivation to carry out physical activity is in turn an essential factor for increasing self-concept, self-determination and self-efficacy and the importance of promoting its systematic practice allows social interaction, cooperation with others and, consequently, a process of active and healthy aging.

Physical activity in older adults decreases with age and the reduction in movement is a health factor, along with the slow reaction of reflexes and decreased muscle tone at rest that cause poor coordination and motor clumsiness. Immobility and sedentary lifestyle are the main threats to health and affect the quality of life, in such a way that what is no longer possible as a result of aging will soon be impossible and a pattern of disability and inactive lifestyle develops.

Marquez *et al.* (2020) point out that the reasons why older people do not exercise are lack of social support, poor health, and a lack of knowledge and lack of opportunities. From this conception, increasing physical activity among older people as a measure to delay morbidity is one of the most important approaches in health today (Bauman, *et al.*, 2016).

It is necessary to highlight that many older adults are reluctant to practice physical activity, due to the fear of injuries associated with the risks inherent to their age and the absence of adequate promotion, guidance and supervision regarding the exercises they should carry out. This situation places this age group in a condition of inactivity and sedentary lifestyle that contributes to the sum of multiple associated diseases, such as obesity, arthritis, osteoporosis, muscular dystrophy, tendonitis, depressive disorders, among others.



On the other hand, the systematic practice of physical activity is one of the main non-pharmacological strategies for healthy aging and improving the health-related quality of life of older people. Various questions can be asked in this regard: what elements must be considered for the promotion of physical activity in the older adults? How to enhance the promotion of physical activities for the older adults, through an educational strategy? And how to contribute to the preparation and training, from an educational approach, of Gerontology students?

In this sense, various studies linked to the topic are presented, among which Chasipanta *et al.* (2020), Chávez *et al.* (2018), Chávez (2019), González (2022), Nazaret, Santaella and Rodríguez (2021) and Villareal *et al.* (2021) stand out, who recognize the valuable effect generated by physical activity during old age, by contributing to the reduction of cardiovascular risk, type 2 diabetes, several types of cancer, musculoskeletal deterioration and depression; in addition, it strengthens mental health by prolonging lucidity and the quality of life that is reflected in the person's capacity to successfully carry out the tasks of daily life. Therefore, a determining aspect in the older adults is to eliminate inactivity and stay active to achieve an independent life.

The promotion of physical activities in the older adults constitutes relevant content in the training of Gerontology students, it makes it possible to promote and strengthen intergenerational relationships, combat negative stereotypes, promote a positive image and incorporate specific methods, techniques and tools from education to provide integrative multidisciplinary solutions, given the diversity of factors and responses of this segment of the population.

The training of students in real contexts faces the problems that are identified with their profession, guarantees that the contents have an immediate link with the experience of the subjects and their culture; therefore, it constitutes experientially significant learning. Hence, said content becomes relevant for the analysis of social reality and decision-making to intervene in them. This becomes possible through educational actions and procedures that generate transformation, where the professional context becomes an authentic training space.



From this perspective, Gerontology students develop their preparation and training by equipping themselves with useful knowledge for the self-management of learning in their professional context. Managing from heterogeneity, promoting the systematic practice of physical activity contributes to active aging and incorporates the aging process into local development and innovation strategies. This involvement is achieved, from its relationship with local development, participation, contribution and social responsibility that enriches theory and practice.

Finally, it is possible to infer that the execution of an educational strategy for Gerontology students is dynamic, flexible and integrative, with an inter-transdisciplinary vision. This initiative must promote the promotion of physical activities that, among other dimensions, include biological, psychological, social, political, historical, cultural and economic. This leads to the implementation of integrative actions and procedures, based on the promotion of the systematic practice of physical activities in older adults.

In turn, independence, autonomy and self-esteem are facilitated, through the massification, diversification and systematization of the strategy; which allows the life of the older adults to be prolonged, with opportunities to recreate, enjoy the environment and carry out multiple activities that allow them to remain active and with an adequate quality of life, as a strong indicator of well-being at this stage of life.

Seen in this way, the objective of this study is to present an educational strategy for students of the 5th level of Gerontology that contributes to the promotion of physical activity in older adults.

MATERIALS AND METHODS

A pilot study was carried out with a mixed methodology and descriptive cross-sectional design, led by students of the 5th level of the Higher University Technology in Gerontology career in Quito, Ecuador, in order to analyze the benefits of promoting physical activity in the older adults, which led to the development of professional, academic and scientific skills.



Different theoretical methods are used:

Analysis-synthesis: for the analysis of contents related to the development and promotion of physical activity, active aging and the quality of life of the older adults.

Inductive-deductive: allowed to analyze, through different bibliographies, the effects and benefits of physical activity in the older adults, in order to propose a dynamic, flexible and integrative educational strategy, for students of the 5th level of the career Higher Technology University in Gerontology.

Structural systemic: in the construction of the stages and phases of the educational strategy containing procedures and actions.

On the other hand, empirical level methods were applied:

Observation: applied to the process for verification in practice, through direct perception and determining the frequency with which the older adults perform physical activities. This was applied for a month.

The survey technique: It was applied to the older adults, to determine the levels of motivation they have about physical activity, its benefits, health status, as indicators of the dimensions of inactivity, sedentary lifestyle, active aging and quality of life.

The interview technique: implemented to students of the 5th level of the Higher University Technology in Gerontology career, to know their perception of the need to promote physical activity in the older adults, in order to promote active aging and raise the quality of life, through the defined dimensions.

Document review: it was worked with the data offered by population statistics.

From the point of view of the mathematical-statistical methods, measures of central tendency were implemented to describe the data collected and use the arithmetic mean and percentage frequencies, among others.



The coherent instrumentation of these methods allowed to model the intervention, collect preliminary results and provide the educational strategy for students of the 5th level of the Higher University Technology in Gerontology career that promotes the promotion of physical activity in the older adults.

It was worked with a sample of 38 students from the 5th level of this program and it was decided to work with this pilot sample to evaluate the results and then assess the possibility of expanding it.

The variable promotion of physical activity was measured using a questionnaire. The construct has three dimensions: inactivity and sedentary lifestyle, active aging and quality of life. The questionnaire to evaluate this variable is composed of 17 items. For all items in the questionnaire, the responses presented a 7-point Likert-type format, where 1 is completely disagree; 2, strongly disagree; 3, somewhat disagree; 4, neither agree nor disagree; 5, somewhat agree; 6, somewhat agree and 7, totally agree. Statistical in the analysis was performed with SPSS version 25.

Besides, it was carried out an interview to go deeper in the perception and experiences of the 5th level students of Higher University Technology in Gerontology career around the research topic.

DISCUSSION

It was of great importance to review documents from the National Institute of Statistics and Censuses of Quito, Ecuador, to have references of the VIII data Population Census and VII Housing Census, presented on September 21, where 1,520,590 people aged 65 and over were counted, and it was possible to identify that there are more elderly women in Ecuador, 53.6 % (815,136) than men, 46.4% (705,454); the percentage of older adults increased from 6.2 % in 2010 to 9 % in 2022.



In Guayaquil, Ecuador (2023), the results of the 8th Population Census and the 7th Housing census were known, which counted 4,391,923 people in the province of Guayas and revealed that in this province the number of women predominates, 2,237. 631 (50.9%) compared to that of men 2,154,292 (49.1 %).

100 % of the students involved observed in an unstructured way the behavior of carrying out physical activities in older adults, belonging to the Guayas province, Guayaquil canton (Table 1).

Table 1. - Result of unstructured observation

Citadel	Type of activity they carry out	Times of greatest participation	Total observed
Mallorca	Biohealthy	Mornings	120
	Walks		82
Valencia	Biohealthy	Mornings	132
	Walks		112

The data obtained shows that in the Villa España area, the Citadel with the greatest participation in physical activities are Mallorca and Valencia and although these activities are attended voluntarily and unplanned, the percentage of attendance of people in this age group is low. significant. When relating this result to the 2023 population study, it is found that only 0.01 % of the adult population performs some physical activity.

A survey was applied to adults and the need for educational transformation in the training of the students of this research is corroborated, as shown in Figure 1.



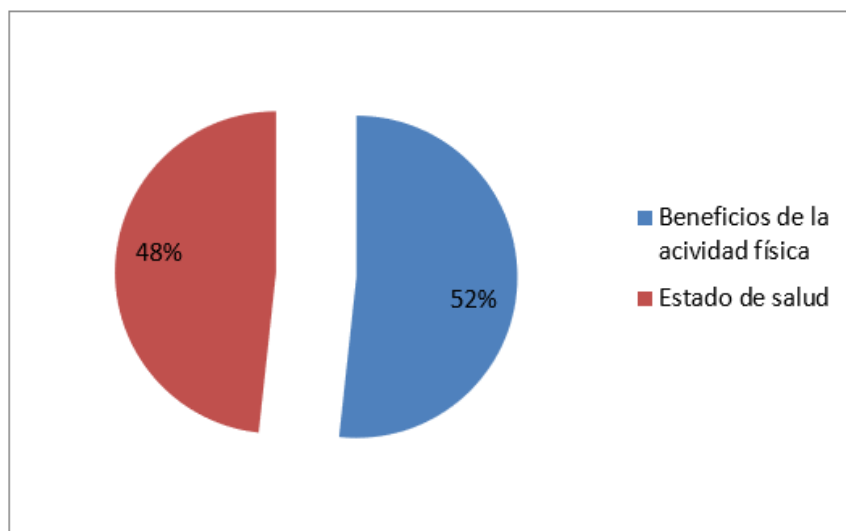


Fig. 1. - Graphic representation of the motivations for practicing physical activity in the respondents.

52 % of those surveyed said they practiced physical activity to know its health benefits; However, they lack professional guidance to carry it out in an organized and planned manner. In this same order, the remaining 48% agree that those who take walks do so for health problems and recommended by the doctor, but agree on the lack of guidance to carry out said activity.

The interview conducted with the students made clear their appreciation of the usefulness of promoting physical activity in the older adults, in the largest number of citadels in the Guayaquil canton. It is valid to highlight that the results obtained so far denoted the need for an educational strategy for students to promote the promotion of physical activity in older adults.

Hence, the proposed educational strategy aims to contribute to the preparation of 5th level students of the Higher University Technology in Gerontology career, for the promotion of physical activity in the elderly and its contribution to active aging, and with quality of life, both physical and mental. Three stages stand out, ranging from:



Stage I. Preparation and diagnosis

Educational strategy is prepared and organized, from a methodological point of view, those vocational training situations that serve as a starting point for the development of professional skills are specified, and compliance with the objectives is guaranteed. of student training.

Besides, results and criteria must be obtained through a continuous diagnostic study that allows evaluating the participation of students and their updating and enrichment in the development of the process, so that systematic treatment is possible, and evaluating the transformations that arise in their professional development. In this aspect, the upward and progressive development of professional training is guaranteed to ensure they perform in a committed, flexible and transcendent manner, with the transformation of their professional reality.

The methodological preparation planned at this stage must have a transdisciplinary character, which leads to achieving in the planning and organization of the process a globalizing, integrating and totalizing conception oriented towards practice in the training of students. This moment of the stage will be aimed at:

- Carry out methodological preparations that provide instruction and training to students of the 5th level of said Career.
- Provide for learning situations in vocational training that serve as an initial basis in the stages of the educational strategy, favoring the adequate training of professionals in training and the fulfillment of the objectives set out in the professional model.
- Prepare all documentation that includes learning guides, intervention plans, incident records and learning control records, among others.

Stage II. Execution and transfer

This stage is the most important within the educational strategy for the development of the dynamics of the professional training process of students at this level of Gerontology. In it,



the actions and procedures aimed at developing the training process are specified, where the professional context becomes an authentic training space.

In the contextual-professional training process, students are encouraged to develop qualities that allow them to learn to self-manage their learning, by building ways to orient themselves and develop their training itinerary, based on the insufficiencies and achievements achieved in the development of the vocational training process. This second stage is subdivided into two phases that characterize the most significant moments in its development, which are:

- Phase I Contextual intervention.
- Phase II Contextual situational reorientation.

Phase I. Contextual intervention

This phase, based on the identification and formulation of the problem posed in its first approach, is aimed at the evaluation by the students in training of each of the possible alternative solutions and the implementation of the processes of promotion of physical activities in the elderly, this facilitates modifying reality and self-transformation, and becomes a mediator in the learning process, through control and evaluation that guarantee conscious learning.

The sequencing of the contextual intervention process involves the use and implementation of established methods and procedures that resolve situations in typical vocational training and requires the elaboration of these, starting from the confrontation with learning situations whose solution requires the implementation in practice of creative and innovative thinking of the students involved in the solution process.

For this phase it is suggested:

- Promote the collective analysis of each of the possible alternative solutions provided by the students that derive from their experiences and experiences in professional performance.



- Evaluate the availability of material and technological resources, tools and instruments available for the implementation of intervention processes and the solution to the problem.
- Determine the sequence of intervention to solve the problem posed that allows revealing the multiple cause-effect relationships and establishing the different intervention actions. The interaction relationships established by the subject with the object, as well as between the subjects themselves, which allows the development of an orientation of the subject in its context of action.
- Encourage students to record each of the incidents of their actions in this stage of the educational strategy; the activities developed, the orientations carried out, the content notes collected from the exchange with the other actors in the process and the development of their ideas must appear. activities, as well as the evaluations and suggestions made.
- Promote efficient performance, in solving the diversity of situations and professional problems that must be faced, in the various contexts of action.
- Promote levels of autonomy and independence in professional performance.

Phase II. Contextual situational reorientation

This second phase is aimed at developing in students in training a process of individual and group reflection on the results of educational actions and the transfer of previous experiences and experiences to the solution of the problem, which responds to training needs; this fosters new learning situations in training that arise in the various contexts of professional performance.

It constitutes a process of systematization and generalization of the experiences acquired in the continuous confrontation with the solution of professional training work situations and allows, in turn, students in training to self-manage their learning. For the development of this phase it is proposed:



- Propitiate an assessment and analysis environment of the stages of planning, selection and execution of the educational intervention processes that allow for the issuance of evaluative criteria and promotes the self-regulation of learning.
- Promote the integration and application of appropriate knowledge to solve problems in the context of professional action.
- Contribute to the development of new experiences that imply the need to integrate and transfer previous experiences and mean a qualitative leap in your professional development.

Stage III. Evaluation and control

At this stage, the control and evaluation of each of the stages and phases of the development of the educational strategy and the fulfillment of the proposed objective is planned, taking into consideration the level of planning and preparation of the students of the 5th level of Higher University Technology in Gerontology career.

Among the aspects that must be evaluated are:

- The preparation and professional development achieved by students of the Gerontology degree.
- The level of precision in the proposal aimed at promoting physical activity in older adults.
- The level of development in the interactions that are encouraged between students and the various actors to collaborate in the organization and execution of work tasks that enable the solution of the situation posed.
- The level of self-assessment of the professional performance of the students of the Career, based on the determination of their errors and progress in professional training.



This educational strategy proposal contains actions and procedures that contribute to each of the stages and phases, synthesizing the main guidelines to self-manage their self-learning, levels of autonomy and independence in the various contexts and their professional performance. This contributes to the promotion of physical activity in older adults as the main way to achieve active aging with quality of life (Figure 2).

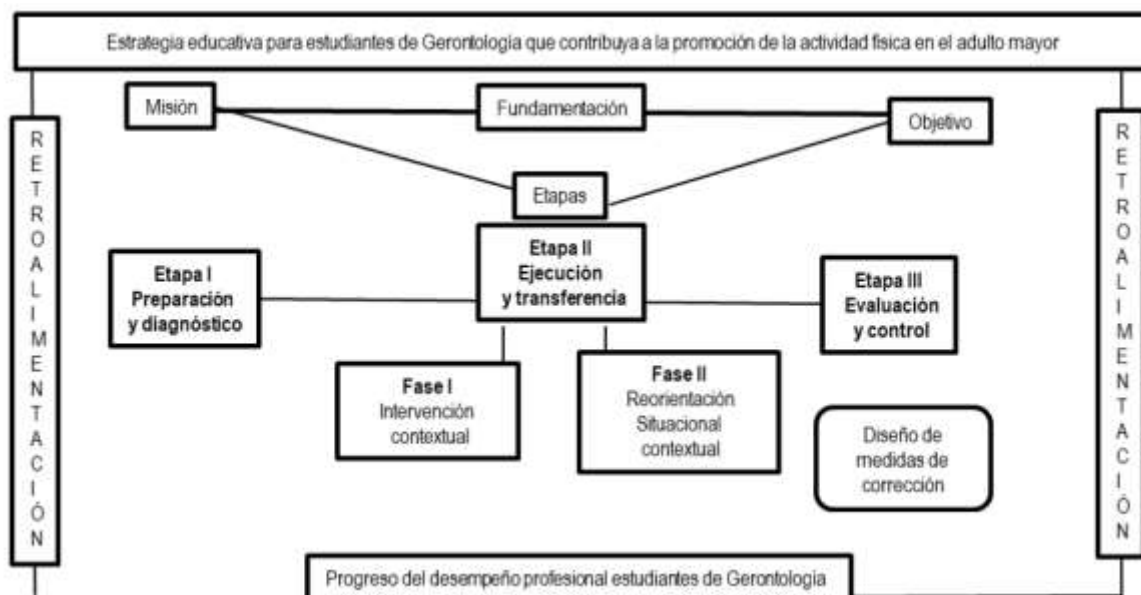


Fig. 2 - Graphic representation of the strategy

DISCUSSION

Based on the previous analysis, the diagnostic bases are established for the establishment of the educational strategy; the starting point is to consider as the axis for the intervention the training method that allows the development of skills, the academic and scientific preparation of the students of the 5th level of the Higher University Technology in Gerontology career and the deployment of knowledge for the promotion of physical activities. as a means of active aging that raises the quality of life and increases the physical and psychological well-being of the elderly.



In the study, it was confirmed, as a favorable element, that all the older adults surveyed have interest and motivation in developing physical activities, and all of them recognize the benefits of these activities for health. This is in accordance with the guidelines of the World Health Organization (2021), which points out the need to incorporate, within the active aging process, the adaptation of physical activities according to the capabilities, opportunities and possibilities of the older adults, enhance the physical, mental and social well-being associated with a healthy lifestyle and activate integrated participation in society, the community and especially the family (Analuiza, *et al.*, 2020).

This analysis delves into other research carried out in Argentina, Chile, Mexico, Portugal and Uruguay, among others, on physical activity and its impact on the quality of life of older adults.

Consequently, the findings found on inactivity and sedentary lifestyle in elderly people are the main causes identified in this work and are associated with the limited practice of physical activity in old age. It is evident that a sixth of the sample studied does not perform regular physical exercises, which allows establishing a positive association between the most active people and the highest levels of quality of life.

These results reaffirm similar research in which the practice of physical activity in older adults improves the perception of their quality of life, as well as the effectiveness of physical activity programs that promote functional capacity, both physical and cognitive (Castro, *et al.*, 2019; Martínez, *et al.*, 2021; Romero, *et al.*, 2021; Villarreal, *et al.*, 2021).

However, given the different strategies implemented internationally, the national environment needs that in the training process of students of the 5th level of Gerontology, the promotion and dissemination be achieved, from the pedagogical science of specialized programs, containing specific methodological indications for (duration, frequency and individualization). This The goal, oriented towards physical activity, should include the treatment of educational content that motivates older adults to systematically practice it, according to their needs and the cultural requirements of the country. Given the scattered bibliography that exists in Ecuador, the present research aims to alleviate the lack of educational strategies associated with the stated objective.



From an educational perspective, there is agreement with Ledo and Deroncele (2017), as it contributes to training a professional with a humanistic sense, capable of contributing to the promotion of the health of older adults. The proposed route works through the promotion of physical activities as an essential component of the subject's own self-transformation, in this case the 5th level students of the Gerontology career, based on the relationship with their context of professional performance, linked to the training-labor content, through the internalization of the demands of society, to ensure that the professional acts and feels, in his social action, as a transforming and enriching subject of thought, in his daily practice.

Mesa *et al.* (2020) use dance therapy in his study with elderly people to create a healthy and happy environment, which dissipates the tensions typical of age ranges. This is significant, since the empowerment of knowledge is achieved by becoming health promoters towards the family, the community and the environment. In this case, the intention to raise the quality of life of the elderly, their self-esteem and modify their lifestyles towards healthier habits is relevant, reasons for which students of the Higher University Technology in Gerontology career must be prepared.

For any intervention with the desire to provide a solution to the problem addressed, it is necessary to determine the tastes and preferences of the professionals and patients involved in the study, their criteria are respected to design a program of physical-recreational activities as a motivating strategy, as reported by Hernández *et al.* (2017). Hence, the proposal presented requires a diagnosis in the first stage.

Recalde *et al.* (2017) in their study found insufficiencies in the advice and support of community and family factors towards the practice of physical activity and little knowledge of the elderly about the aspects related to it; which causes non-attendance to physical-recreational practices in the Febres Cordero Parish, in Guayaquil, Ecuador; this problem can be addressed from different spheres in Guayas, Guayaquil.



CONCLUSIONS

By way of conclusions, it can be stated that the referential study carried out allowed to clarify and define dimensions with respect to the topic studied, select and apply methods that from science characterize the phenomenon being studied and show ways to provide a solution, from an educational strategy to than the 5th level students of the Higher University Technology in Gerontology degree.

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Conflict of interests:

The authors declare not to have any interest conflicts.

Authors' contribution:

The authors have participated in the writing of the work and analysis of the documents.



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