

Original article




Theoretical conception of physical-therapeutic orientation for chronic ischemic cardiac patients in phase III

Concepción teórica de orientación físico-terapéutica para cardiopatas isquémicos crónicos en fase III

Concepção teórica da orientação fisioterapêutica para pacientes cardíacos isquêmicos crônicos em estágio III

Ana Luisa Tabares Estable¹  0000-0002-2106-0550  atabares@uo.edu.cu

Graciela Ramos Romero¹  0009-0006-9375-6895  chelaramos5603@gmail.com

¹ University of Oriente. Santiago de Cuba, Cuba.

Received: 22/09/2024

Accepted: 14/01/2025

ABSTRACT

Cardiovascular diseases are increasing every day in the world population and are the first cause of death. The current situation shows that failures occur in the community after medical discharge that do not promote a quick and sustainable recovery of these patients. The article presented aims to socialize a theoretical conception of physical-therapeutic orientation for Chronic Ischemic Heart Patients in Phase III, in which the analytical-synthetic theoretical methods have been used to deepen the theoretical foundations, inductive-deductive to know in its essence the studied process and deduce its most specific particularities, the historical-logical to look for the background of how this problem has been addressed previously and the systemic-structural-functional due to the system character that was given to the conception. Among the empirical methods and techniques used were document analysis, which allowed the study of instruments involved in the process, observation and

interviews that made it possible to approach the process in practice, and the criteria of specialists that allowed the assessment of the feasibility and importance of the theoretical concept provided. In addition, mathematical-statistical methods were used, fundamentally in the diagnosis carried out prior to the creation of the theoretical concept of physical-therapeutic orientation for Chronic Ischemic Heart Patients in Phase III. This theoretical concept contributes to the reintegration of these patients into work and all social activities, with a healthy lifestyle and responsible behavior. In this way, it is possible to reduce mortality and morbidity due to this cause.

Keywords: cardiac patients; ischemic patients; orientation.

RESUMEN

Las enfermedades cardiovasculares se incrementan cada día en la población mundial y constituyen la primera causa de muerte. La situación actual evidencia que ocurren fallas en la comunidad después del alta médica que no propician una recuperación rápida y sostenible de esos enfermos. El artículo que se presenta tiene como objetivo socializar una concepción teórica de orientación físico-terapéutica para Cardiopatas Isquémicos Crónicos en la Fase III, en el que han sido utilizados como métodos teóricos el analítico-sintético para profundizar en los fundamentos teóricos, inductivo-deductivo para conocer en su esencia el proceso estudiado y deducir sus particularidades más específicas, el histórico-lógico para buscar los antecedentes de cómo ha sido abordada esta problemática anteriormente y el sistémico-estructural-funcional por el carácter de sistema que se otorgó a la concepción. Entre los métodos y técnicas empíricas se emplearon el análisis de documentos, que permitió el estudio de instrumentos implicados en el proceso, la observación y entrevista que hicieron posible acercarse al proceso en la práctica y el criterio de especialistas que permitió valorar la factibilidad e importancia de la concepción teórica aportada. Además, se utilizaron métodos matemático-estadísticos, fundamentalmente en el diagnóstico realizado previo a la creación de la concepción teórica de orientación físico-terapéutica para Cardiopatas Isquémicos Crónicos en la Fase III. Esta concepción teórica contribuye a la reinserción de estos pacientes al trabajo y a todas las actividades sociales, con un estilo de vida saludable y una conducta responsable. Así es posible reducir la mortalidad y la morbilidad por esta causa.

Palabras clave: cardiopatas; isquémicos; orientación.

RESUMO

As doenças cardiovasculares estão aumentando a cada dia na população mundial e são a principal causa de morte. A situação atual mostra que ocorrem falhas na comunidade após a alta médica que não favorecem uma recuperação rápida e sustentável desses pacientes. O objetivo deste artigo é socializar uma concepção teórica de orientação físico-terapêutica para Cardiopatas Isquêmicos Crônicos em Fase III, na qual os métodos teóricos analítico-sintéticos foram utilizados para aprofundar os fundamentos teóricos, indutivo-dedutivo para compreender a essência do processo estudado e deduzir suas particularidades mais específicas, histórico-lógico para buscar os antecedentes de como esse problema foi abordado anteriormente e sistêmico-estrutural-funcional devido ao caráter sistêmico dado à concepção. Entre os métodos e técnicas empíricos utilizados estão a análise de documentos, que permitiu o estudo dos instrumentos envolvidos no processo, a observação e as entrevistas, que possibilitaram a abordagem do processo na prática, e os critérios de especialistas, que permitiram avaliar a viabilidade e a importância da concepção teórica apresentada. Além disso, foram utilizados métodos matemático-estatísticos, fundamentalmente no diagnóstico realizado antes da criação da concepção teórica de orientação físico-terapêutica para Cardiopatas Isquêmicos Crônicos na Fase III. Essa concepção teórica contribui para a reintegração desses pacientes ao trabalho e a todas as atividades sociais com um estilo de vida saudável e um comportamento responsável. Dessa forma, é possível reduzir a mortalidade e a morbidade por essa causa.

Palavras-chave: pacientes cardíacos; pacientes isquêmicos; aconselhamento.

INTRODUCTION

This article is derived from research aimed at chronic non-communicable diseases, which have become a major public health problem worldwide and affect all countries. This has been contributed to by the low level of regular physical activity that society has been subjected to due to the hectic pace of life today, which has led to an increase in cardiovascular diseases, which have heart failure as a precursor, as considered by Melendo-Viu et al. (2024).

In Cuba, policies are being drawn up to guide and advise the population in order to reduce the risk factors that impact health.

The process of Prophylactic and Therapeutic Physical Culture in the treatment of Ischemic Heart Disease has been the subject of interest of authors such as Cordero et al. (2022) and Morán (2023), they refer to its benefits in the therapeutic area, even so, an analysis of reality shows that a small percentage participate in Cardiac Rehabilitation programs, which is not extended to people suffering from Chronic Ischemic Heart Disease Phase III in the community.

Guidance has been addressed by authors such as López (2024), who exhibits valuable theoretical and practical contributions, from the psychological, pedagogical, and military points of view, which provide models, classifications, concepts, among others, but in few of the cases consulted it is specified how to carry out such guidance from a physical-therapeutic perspective to people with Chronic Ischemic Heart Disease in Phase III.

Hence the importance of raising awareness among these people about the need to make physical activity a habitual and regular practice in their lives, as considered by Benítez et al. (2024), from a strategic conception, where guidance is one of the main procedural contents for people with Chronic Ischemic Heart Disease Phase III. Physical-therapeutic guidance is considered a tool that improves the quality of life and a primary social objective of physical activity. Studies on the role of this process in the therapeutic treatment of the Physical Culture professional are really scarce and do not exhaust all the possibilities of its use and scientific expectations. There is not much scientific evidence or reference results for the solution of this problem, particularly related to heart disease, as it is a condition with a higher incidence and is also frequent in the Santiago territory.

Other authors also claim that Chronic Ischemic Heart Disease Stage III, among cardiovascular diseases, is the leading cause of death in the world, which makes the topic relevant. This leads to integrating theory and practice, that is, the cognitive, affective, motor and attitudinal foundations in the process of guiding people who suffer from it and thus facilitating their transition to independence.

The important role played by the technicians who care for these patients should be highlighted, highlighting the role of the nurse, as Fernández and Pérez (2021) considers, who enforces the guidelines offered by cardiologists for the care of these patients. Several methods have been designed to measure the quality of life in people suffering from this disease, who may present symptoms such as angina, heart failure, as well as limitations in their physical capacity to carry out both daily life activities and work activities.

In this sense, programs, exercises, alternatives and other tools are proposed to guarantee care for people with chronic non-communicable diseases. In the case of this research, a theoretical concept of physical-therapeutic orientation for Chronic Ischemic Heart Patients in Phase III is proposed. In which two poles intervene: oriented and counselor. It is a process where the Physical Culture teacher plays the role of counselor.

Nowadays, regular physical activity is carried out for therapeutic purposes, both in the prevention and in the control and rehabilitation of various chronic diseases, including those associated with cardiovascular disorders, followed by its application in the detection of myocardial ischemia. This physical exercise has an important role in the diagnosis and functional evaluation of people with heart disease to improve their quality of life.

The authors' experience in nursing, in the area of Cardiology, their training in the recovery of people with Ischemic Heart Disease and as a professor at the Faculty of Physical Culture, as well as the diagnosis made through the analysis of normative documents, interviews, observations of activities in the Grandparents' Circles, where convalescents of the disease attend, allowed them to appreciate the following external manifestations of the problem:

- The Prophylactic and Therapeutic Physical Culture programs are a reference for their general orientations and guidelines in this sphere of professional action, however, they only specify the specifics of their execution with ischemic heart patients up to Phase II.
- Methodological deficiencies are observed in Physical Education classes, which has a negative impact on the systemic and personalized management of care for these people.
- During community treatment, a cooperative work style is not achieved, excluding the importance of physical activity in the care of these patients.

These manifestations gravitate in the problematic situation, which is concretized in the contradiction that occurs between the little physical-therapeutic orientation that chronic ischemic heart patients have in Phase III and the real possibilities that they have of using their own resources, strengths and weaknesses to carry out a physical-therapeutic activity that implies a healthy lifestyle.

For this reason, the question is formulated: How can we contribute to the physical-therapeutic care of people with Chronic Ischemic Heart Disease in Phase III in the community context? This is involved in the process of Prophylactic and Therapeutic Physical Culture in the treatment of Ischemic Heart Disease, whose purpose is to promote proactive attitudes and ways of facing the disease. The

objective of this article is to socialize a theoretical conception of physical-therapeutic orientation for Chronic Ischemic Heart Disease in Phase III. For its elaboration, the following tasks are developed:

- To theoretically substantiate the process of Therapeutic Physical Culture in the care of Ischemic Heart Disease.
- To diagnose the current state of physical-therapeutic care for people with Chronic Ischemic Heart Disease in Phase III.
- To develop a theoretical concept of physical-therapeutic guidance for people with Chronic Ischemic Heart Disease in Phase III.

The relevance of the article is given by the implications that the aforementioned concept offers to contribute to the professional therapeutic work of the Bachelor of Physical Culture in terms of the prevention and control of these diseases, of the risk factors and achieving a reduction in mortality from a health-related approach, obtaining responsible behavior in these people in the intersectoral community context.

MATERIALS AND METHODS

The objective was achieved by using the following methods:

From the theoretical level:

- Analytical-synthetic: it was used to delve into the foundations of the process that allowed the development of the theoretical concept of physical-therapeutic orientation for Chronic Ischemic Heart Patients in Phase III.
- Inductive-deductive. Through induction, the factors that govern the physical-therapeutic care process from the orientation of people with Chronic Ischemic Heart Disease in Phase III were known, which become premises to deduce its new conception.
- Historical-logical: It allowed us to analyze the background of how the problem that generated the theoretical conception created has been previously addressed.
- Systemic-structural-functional: It allowed the study of the phenomenon that is the object of study of the article to define its components, essential relationships and the theoretical conception of physical-therapeutic orientation for Chronic Ischemic Heart Patients in Phase III as a resulting quality.

- Triangulation of methods: It favored collecting and analyzing the information from the applied methods, contrasting their results and interpreting them to check their confirmations and inadequacies and thus corroborate the need to design a theoretical conception of physical-therapeutic orientation for Chronic Ischemic Heart Patients in Phase III.

Empirical level methods:

- Document analysis: This was carried out by analyzing the Therapeutic and Prophylactic Physical Culture program, the work in sports teams, medical records of heart patients, the program of the Therapeutic Physical Culture subject of the E study plan, the Bachelor's degree in Physical Culture of physical-therapeutic activity.
- Observation: It allowed to verify the attention from the physical-therapeutic orientation provided by Physical Culture professionals to people with Chronic Ischemic Heart Disease Phase III during the class.
- Interviews: With Physical Education teachers who worked in the communities to assess the training of these professionals in caring for the aforementioned patients, as well as with the doctor and nurse at the clinic to learn about the medical indications for providing care from a physical-therapeutic perspective to people with Chronic Ischemic Heart Disease Phase III.
- Specialist criteria: It was used to evaluate the feasibility and usefulness of the theoretical conception of physical-therapeutic orientation for Chronic Ischemic Heart Patients in Phase III.

The mathematical-statistical methods used were descriptive-inferential analysis, supported by the processing of tables and graphs, accompanied by the percentage calculation technique to perform the statistical processing of the diagnosis made.

A population of 22 people suffering from Chronic Ischemic Heart Disease Phase III from the Sports Complex of the town of "Versalles" was used.

A sample was selected from them, using as inclusion criteria that they suffered from the disease in Phase III of its development and as exclusion criteria those with heart disease in Phases I and II, any other disease or completely healthy (Tables 1 and 2).

Table 1. Sample characterization

M	AND	S	TPE	Rv
10	45 and 72 years	3 women	3 - 5 years	3 women
		7 men		7 men

Table 2. Sample legend

Legend	
M Sample	S ... Sex
	TPE ...Time to suffer from the disease
And Age	Rv Revascularized

RESULTS

The result offered in this article is the theoretical conception of physical-therapeutic guidance for Chronic Ischemic Heart Patients in Phase III, but the limitations shown as external manifestations of the problem made it necessary to carry out a diagnosis to describe the state of care presented by chronic ischemic heart patients in Phase III.

Document analysis: The programs for community-based physical therapy and the program for the subject of physical therapy, curriculum E of the Bachelor's degree in this specialty, did not offer sufficient guidance for the work to be carried out with Phase III ischemic heart patients; they only addressed Phase II. The methodological indications were insufficient, they dealt with exercises with little variety, work with weights was limited, the progressive increase in loads was not always taken into account and aerobic work was given little weight.

Observation: There was insufficient guidance on the use of an adequate diet. The observed classes had fundamentally instructive objectives. The content was based on physical-therapeutic exercises, the methods were reproductive (repetition of movement). The evaluation focused on the results, and highlighted the low motivation for this activity, as they commented that they did not like it.

In general, the classes were characterized by irregularity, poor systematicity, inadequate planning and the absence of a favorable emotional climate due to the lack of interest and low participation of chronic ischemic heart patients in Phase III.

Interviews: 100% of the sample had undergone revascularization (revascularization refers to a group of medical treatments that restore blood flow to parts of the heart when such flow is limited or blocked; these include both surgery and minimally invasive procedures). All had toxic habits (coffee, cigarettes, alcohol). The teachers were methodologically prepared to work with people with Chronic Non-Communicable Diseases, but not with Chronic Ischemic Heart Disease Phase III. No importance was given to complementary actions such as meetings, group reflections, educational activities, etc.

Doctors and nurses were interviewed and identified bronchial asthma, diabetes mellitus, high blood pressure, cervical osteoarthritis and obesity as the most common pathologies in people with chronic ischemic heart disease in phase III. They said they did not know exactly how physical education professionals guided physical activities for people with heart disease, whether they only did so in their classrooms or used other spaces.

Discussion group technique: The medical-methodological indications proposed to the teachers were based on the control of heart rate, blood pressure and external changes before, during and after physical-therapeutic activities.

The most important thing that the heart patients knew about their illness was that it was a heart condition, that it could be serious, that it could be controlled, that it was a concern for the family and that they could not stop taking the treatment prescribed by the doctor. None of them attended classes regularly because they did not believe in the importance of physical exercise for the illness they suffered from.

Once the analysis of the diagnostic results was completed, it was evident that some contribution was needed to help achieve the stated goal of reincorporating these patients into social life. For this reason, the theoretical concept of physical-therapeutic guidance for Chronic Ischemic Heart Patients in Phase III was created.

This conception had four relevant concepts: physical-therapeutic orientation process, orientation, cardiovascular disease and physical-therapeutic activity. It was integrated into several subsystems and their components (Table 3).

Table 3. Subsystems and components of the theoretical conception of physical-therapeutic orientation for chronic ischemic heart patients in phase III

Theoretical concept of physical-therapeutic orientation for people with Chronic Ischemic Heart Disease in Phase III	
Subsystems	Components
1. Guidance process to enhance the autonomy of people with Chronic Ischemic Heart Disease in Phase III	<ul style="list-style-type: none"> • Knowledge-Self-knowledge • Transformer for orientation
2. Prophylactic	<ul style="list-style-type: none"> • Organizational training • Prophylactic-Preventive • Community work
3. Public health worker	<ul style="list-style-type: none"> • Promotion of health education content • Follow-up • Assessment

All the elements that form part of the conception gave it a system character due to the link and relationships established between them. The above elements favoured the development of rules to develop a principle. The rules were:

1. Recognizing chronic ischemic heart disease patients in Phase III in their particularity
2. Identifying the context of coexistence
3. Personalization of content
4. Enhance the strengths and progress of chronic ischemic heart patients in Phase III
5. Promote assistance during physical therapy for these people
6. Encourage chronic ischemic heart patients in Phase III to take the lead in their recovery
7. Individualized, conscious and systematic nature of the practice of physical activity in the community and at home.

These rules made possible the elaboration and argumentation of the principle of physical-therapeutic orientation, which strengthened the care of chronic ischemic heart patients in Phase III in the community context. This principle had an individual and group character, and was fulfilled for each of the chronic ischemic heart patients in Phase III involved in the process as protagonists of their social and work reintegration and the activities of daily life. It entailed accepting oneself and others.

The principle presupposed exercising constructive criticism with a strong emotional charge, accompanied by sincere self-criticism with an objective basis, to guarantee timely observations that would encourage reflection in oneself and in others, achieving necessary transformations not preceded by whims or superfluous reasons.

The relationships established in the group were taken into account, which allowed the satisfaction of various interests, encouraged the active participation of its members, as well as their protagonism, which was not always achieved in isolation. It also guaranteed adequate communication between the heart patients and the teacher. An obligatory rule in this principle was the treatment of the teachers, who avoided making only negative remarks or, on the contrary, always praise. The roles were rotated, and tasks were assigned to each and every member of the group, respecting their interests, concerns, experiences and motivations in carrying out the tasks given. Emphasizing the fulfillment of these favored both the individual and the group, and an attempt was made to reconcile individual and collective interests to achieve the objectives set.

The theoretical concept explained favored social and occupational reintegration and daily life activities, promoted a healthy lifestyle and responsible behavior, and reduced mortality and morbidity, in addition to stimulating healthy behavior in chronic ischemic heart patients in Phase III. A graphic representation of the explained concept is presented below.

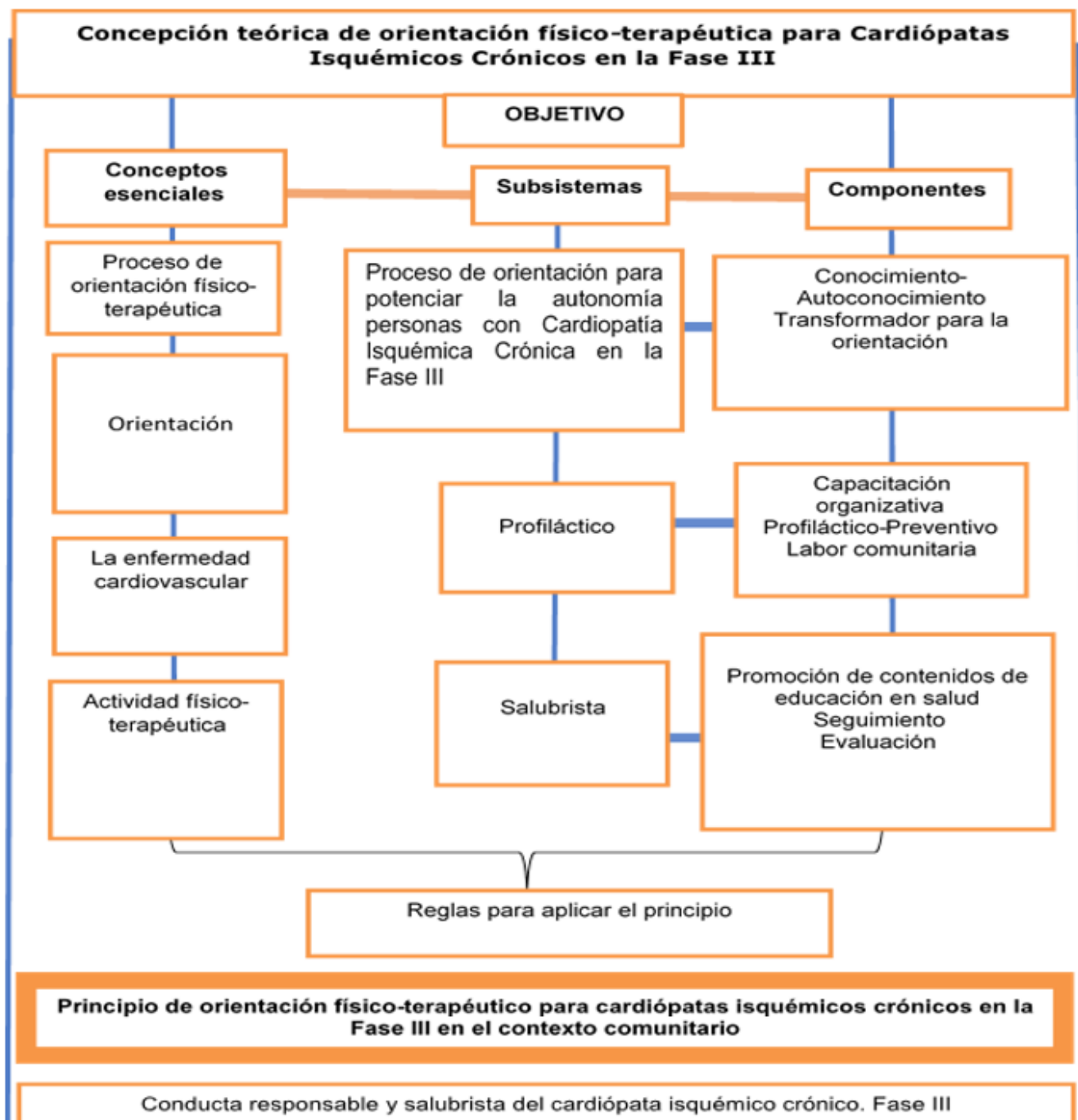


Figure 1. Theoretical conception of physical-therapeutic orientation for Chronic Ischemic Heart Patients in Phase III

The theoretical conception of physical-therapeutic orientation for Chronic Ischemic Heart Patients in Phase III supported the obtaining of the following results:

- Many heart patients eliminated toxic habits, mainly alcohol and cigarettes.
- Topics on chronic ischemic heart disease Phase III were inserted into the Therapeutic Physical Culture programs.
- The methodological indications were expanded to deal with the variety of exercises, work with weights, the progressive increase in loads and aerobic work.
- More guidance on proper diet was appreciated.
- They insisted on using educational objectives more in classes, expanded the types of exercises, used various types of methods depending on the types of participating heart patients, and involved them more in the evaluation.
- In general, the classes gained in regularity, systematicity, planning and an emotional climate.
- The teachers increased their methodological preparation for working with people suffering from Chronic Ischemic Heart Disease Phase III.
- Doctors and nurses contributed to the implementation by participating in physical activities with heart patients.
- The medical-methodological indications were enriched.
- The Physical Education professional increased his training to guide heart patients in physical activities.
- Patients increased their knowledge about Chronic Ischemic Heart Disease Phase III.

In this section, the theoretical conception of physical-therapeutic orientation for Chronic Ischemic Heart Patients in Phase III was presented as a research result that was presented in this article. The specialist criterion method was carried out by selecting 20 candidates, who were confirmed through a document. 90% of them positively valued the theoretical concession they assessed.

DISCUSSION

The results obtained from the application of the theoretical concept of physical-therapeutic orientation showed significant improvements in qualitative aspects. Many heart patients showed a positive change in their attitude towards physical exercise, identifying it as an indispensable tool to improve their quality of life. This orientation process strengthened the sense of belonging and

commitment of the participants, who became more actively involved in the proposed activities, favoring their social and emotional integration.

In the community setting, it was observed that patients acquired a greater level of self-knowledge about their health condition, which allowed them to take a more active role in managing their disease. This change was reflected in a notable decrease in the initial levels of demotivation towards physical activity. Furthermore, group work created an environment of mutual support, where participants shared experiences and fostered empathy, generating a favorable emotional climate for their rehabilitation.

The individualized approach to physical therapy allowed the activities to be adapted to the needs and abilities of each patient. This resulted in better compliance with the established objectives and greater adherence to the recommendations. The enriched methodological indications and the constant monitoring of the teachers promoted that the patients felt accompanied and supported throughout the process, increasing their perception of physical and emotional well-being. These qualitative results validated the effectiveness of the applied theoretical conception.

On the other hand, after confirming the validity of the theoretical conception developed, a reference search was carried out in current authors. Although no similar conceptions were identified, there was agreement with authors such as Rodríguez et al. (2024), Cordero et al. (2021) and Cardoso et al. (2022) regarding the importance of guidance in general. Ischemic Heart Disease was addressed in works by Rodríguez et al. (2024), Cordero et al. (2021) and Flores-Mendoza et al. (2024), but Phase III of this disease was not specified. Several authors highlighted the relevance of physical exercise in the treatment of the disease, but without going into depth on the physical-therapeutic orientation.

Finally, the literature reviewed, together with the application of empirical methods and research techniques, allowed us to show that the activity has been mainly focused on the care of people with Chronic Ischemic Heart Disease in Phase II. The authors' approaches were related to elements implicit in the theoretical conception, but in a partial way, which justifies its validity and importance in this specific field.

The theoretical concept of physical-therapeutic orientation developed contributed significantly to improving the quality of life of chronic ischemic heart patients in Phase III, evidenced by their attitude towards physical exercise and their social and emotional integration.

The individualized approach and group work allowed patients to acquire greater self-knowledge, assume an active role in their rehabilitation and generate an environment of mutual support that favored their therapeutic process.

The results validated the effectiveness of the applied theoretical conception, highlighting the importance of physical-therapeutic orientation as a key tool for rehabilitation in Phase III, an area little addressed by previous literature.

It is recommended to continue to deepen the application of this concept, extending its scope to other community contexts and strengthening the training of professionals in Physical Culture to care for heart patients at this stage.

REFERENCES

- Benítez, J., Hernández, S., Domínguez, L., Vega, D., & Rivas, E. (2024). Entrenamiento físico de pacientes tras un infarto de miocardio en presencia de fibrilación auricular. *Revista Cubana de Cardiología y Cirugía Cardiovascular*, 30.
<https://revcardiologia.sld.cu/index.php/revcardiologia/article/view/2309>
- Cardoso, M., Gómez, A., Zarco, A., Ponce, M., Robles, B., & Aburto, I. (2022). La cultura del padeciente en el descontrol de la enfermedad crónica no transmisible. *Revista de la Facultad de Medicina (México)*, 65(3), 40-57. https://www.scielo.org.mx/scielo.php?pid=S0026-17422022000300040&script=sci_arttext
- Cordero, A., Compuzano, R., Cequier, Á., López, E., & González-Juanatey, J. (2022). Caracterización clínica y terapéutica de la cardiopatía isquémica en España. *Medicina Clínica Práctica*, 5(3), 100322.
https://www.researchgate.net/publication/362644707_The_Sufferer_Culture_in_the_Lack_of_Control_of_a_Chronic_Non-Communicable_Disease
- Cordero, A., Rodríguez-Mañero, M., Bertomeu-González, V., García-Acuña, J., Baluja, A., Agra-Bermejo, R., Álvarez-Álvarez, B., Cid, B., Zuazola, P., & González, J. (2021). Insuficiencia cardiaca de novo tras un síndrome coronario agudo en pacientes sin insuficiencia cardiaca ni disfunción ventricular izquierda. *Revista Española de Cardiología*, 74(6), 494-501.

<https://www.revespcardiol.org/es-insuficiencia-cardiaca-de-novo-tras-articulo-S0300893220303830>

- Fernández, C., & Pérez, R. (2021). Rol de la enfermera en los equipos de cardiooncología. *Enfermería en Cardiología: Revista Científica e Informativa de la Asociación Española de Enfermería en Cardiología*, 28(82), 28-39. <https://enfermeriaencardiologia.com/revista/82-2/rol-de-la-enfermera-en-los-equipos-de-cardiooncologia/>
- Flores-Mendoza, J., Palacios-Mata, D., & Díaz-Lovin, R. (2024). Validación de la escala de creencias de control hacia la adherencia a la alimentación cardiosaludable en cardiopatía isquémica. *Revista Santiago*, 164, 52-54. <https://santiago.uo.edu.cu/index.php/stgo/article/view/164>
- López, L. (2024). Primer anuncio. XXXIII Simposio Internacional de Cardiología Intervencionista. *Revista Cubana de Cardiología y Cirugía Cardiovascular*, 30. <https://revcardiologia.sld.cu/index.php/revcardiologia/article/view/2310>
- Melendo-Viu, M., Raposeiras, S., Abu-Assi, E., Dobarro-Pérez, D., Castro, M., Fernández, S., Pérez, L., Blanco, S., García, E., & Íñiguez, A. (2024). Insuficiencia cardiaca en octogenarios con fibrilación auricular: incidencia y factores de riesgo. *Revista Española de Cardiología*, 77(10), 19-26. <https://www.revespcardiol.org/es-insuficiencia-cardiaca-en-octogenarios-con-articulo-S0300893222006789>
- Morán, M. (2023). Cardiopatía isquémica. Prevención, diagnóstico y tratamiento. *Revista NPunto*, VI(61). <https://www.npunto.es/revista/61/cardiopatia-isquemica-prevencion-diagnostico-y-tratamiento>
- Rodríguez, T., Rodríguez, S., Zamora, S., Martell, J., Navarro, J., López, B., & Pérez, M. (2024). Fundamentos para la educación en el manejo de las cardiopatías isquémicas y las cardiopatías congénitas desde una perspectiva multidimensional. *Universidad y Sociedad*, 16(1), 110-119. http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S2218-36202024000100110

Conflict of interest

Authors declare no conflict of interests.

Authors' contribution

The authors participated in the design and writing of the article, in the search and analysis of the information contained in the consulted bibliography.



This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License