

The physical condition in older adults from Nursing Home 4 of the Santa Clara municipality

Abstract

Physical condition is a determining parameter when defining the state of health and quality of life in older adults and much more necessary when it refers to institutionalized older adults. The importance of its evaluation lies in obtaining results that allow physical activity to be adapted to the characteristics of this age group, as well as achieving a good level of independence and validity in the aging stage. In this way, the objective of this research was defined: to analyze the behavior of physical condition in older adults from nursing home 4 of Santa Clara. 21 older adults belonging to this institution participated. In the research process, theoretical, empirical and mathematical statistical methods were used, such as interviews, surveys, document analysis, and measurement. As a result, the current state of the physical condition of the sample under study was obtained, and the need to improve the quality of life of these older adults was confirmed.

Keywords: *physical condition, older adult, quality of life*

Introduction

Physical fitness is a term studied by numerous authors, and there are important results in scientific literature at an international and national level. Its traditional orientation is directed towards sporting activity and towards the achievement of various objectives in human beings.

In the decades of the 80s and 90s, the model that associates physical activity with health was developed; it takes into account the state of physical condition and health (Boyaro & Tió, 2014). According to the author, health-oriented physical conditioning focuses its objective on the well-being of the subject. It is linked to the practice of physical activities, and is closely related to reducing the risk of developing diseases derived from a sedentary lifestyle in advance.

Currently, population aging is the center of attention of many researchers. It is considered a success of public health policies and the socioeconomic development achieved by a country. It constitutes

a challenge for society, and this must be adapted to maximize the health and functional capacity of older people, their security and social participation.

Rodríguez Herrera et al., (2022) points out that Barbados and Cuba will be the oldest countries in Latin America and the Caribbean in the immediate future. In 2025, Cuba will be the oldest country in Latin America, and by 2050 one of the oldest in the world, with more than 11 million inhabitants.

Villa Clara does not escape this situation and is the oldest in the country, with a population of 779,125, of which 185,637 are over 60 years old, with a considerable number of elderly people over 85 years old (17,546). Care for the elderly in Cuba is developed based on political definitions led by the National Public Health System. Among the most significant actions is the National Program for Comprehensive Care for the Elderly, applicable at all levels of medical care; It consists of an institutional (nursing homes) and community approach with the inclusive participation of all organisms.

This care provided by the Cuban state takes into account the needs of this age group based on the changes that occur in the aging organism (biochemical, physiological, morphological, psychological, functional and social), all with repercussions on autonomy and independence functional of older people.

Its improvement allows us to ensure a more stable health, resist daily stress and prevent diseases, all these aspects contribute to raising the quality of life, and physical condition becomes a fundamental element, since the involution of its components (muscle strength, flexibility , balance, agility and aerobic capacity) leads to decreased functional capacity and disability.

Authors such as Tarducci et al., (2020); Matos Duarte et al., (2022); Heredia et al., (2021); they agree on the importance of physical condition for the health and independence of older people in their conditional and coordinative capacities. Merellano Navarro (2017) and Herazo Beltrán et al., (2017), refer to the importance of a healthy physical condition for the functional independence and quality of life of older adults, because it constitutes a risk factor for disability.

Other authors, such as Benavides Rodríguez et al., (2020), consider physical condition as an important indicator to define the state of health, the level of dependency and the quality of life in institutionalized older adults.

In the area of Community Physical Activity and from the research objectives, the systematic practice of physical activities in all spaces is prioritized. Specifically, in nursing home 4 of the Santa Clara municipality, the real situation reflects the absence of physical activities as a complement to the maintenance of physical condition. Therefore, the following objective is proposed: to analyze the behavior of physical condition in older adults from Nursing Home 4 of the Santa Clara municipality.

Materials and methods

The study was carried out with older adults who belong to the 4 San Vicente de Paula Nursing Home, located in Independencia 222/ Unión y Maceo. The population is made up of 26 older adults, of which 21 participated in the research. The inclusion criteria were belonging to the household, not being in a wheelchair or using a walker, and the willingness to participate in the research, for which they signed the informed consent.

Of the older adults, 14 are internal, representing (66.6%) and 7 are semi-internal (33.3%). The age range is between 69 to 91 years for an average age of (76.6). Two are at the university level (9.5%), 12 are at the upper secondary level (57.1%) and seven are at the primary level (33.3%). They are happy, enthusiastic and motivated to carry out activities of a varied nature.

To carry out the research, we work with two key informants, the director of the center, a Specialist in Comprehensive General Medicine, and the social worker, a Graduate in Social and Occupational Rehabilitation. They have an average work experience of (25.5) years and (53.5) years of age.

The investigative process was structured in three moments and in correspondence with the specific objectives set. In the first moment, a theoretical review of the object of study and its foundation was carried out.

In the second moment, the population and the sample were determined. The medical and administrative assistance staff of the Nursing Home were contacted to establish the relevant coordination.

The review of governing documents such as medical records was carried out to verify the current status of the diseases they suffer from, the medications they consume and the guidelines to be followed by the doctor. Also, the Program for the Elderly and the Methodological Indications (2020-2024) were reviewed to verify the presence of aspects related to the physical condition of adults.

The measurements shown were taken in February 2022. Among the studied indicators of physical condition are height and body weight, to calculate the body mass index, this was calculated using the formula: $BMI = \text{Weight} / \text{Size}^2$. Also, tests were applied to measure the behavior of upper and lower limb strength and flexibility in the upper and lower part of the body.

A survey was applied to older adults using the scale that evaluates the quality of life in the elderly, a document prepared and validated in Cuba by Álvarez, Bayarre and Quintero. For this research, items related to the health and life satisfaction dimensions were used.

Also, an interview was applied to the director of the home and the social worker, with the objective of knowing her criteria about the way in which the physical condition of the older adults at the center is cared for and behaved.

In the third moment of the investigation, the results were collected, analyzed and interpreted, to prepare the final report and issue conclusions. The empirical frequency distribution was used to process the recorded data.

Results and discussion

From the review of the medical records, it was found that 100% have chronic non-communicable diseases. High blood pressure predominates in 15 of them (71.4%), five have diabetes and bronchial asthma respectively (23.3%), and eight have ischemic heart disease (38%). There are no toxic habits and they consume medications such as diazepam, dipendramine, amlodipine, captopril,

glibenclimide, salbutamol, theophylline and vitamins. They are compensated for the pathologies they suffer from and the family in general is concerned and aware of their health.

Cultural, political and knowledge activities predominate in the Home. It is important to highlight that in this place activities of the Chair of the Elderly of the Faculty of Physical Culture belonging to the Central University “Marta Abreu” de las Villas are carried out. It has excellent acceptance by older adults and the group of home workers. The center meets the conditions to systematically develop physical activity as long as it is adapted to the conditions of the premises.

The program has the objectives to achieve, the aspects to take into account for a correct selection of activities, as well as the fundamental and complementary activities to develop. Also, the considerations in each part of the class, in addition to the organizational methods and procedures that can be used. However, its guidelines and indications are scarce in relation to the physical condition of the elderly.

In the Methodological Indications for 2020-2024, care for older adults is prioritized due to the accelerated aging process and chronic non-communicable diseases. The improvement of physical condition through the control and evaluation of functional tests is also highlighted.

It also proposes recommendations for the practice of physical exercises and those that can be performed based on the physical condition and state of health of each older adult. The document offers the Lawton and Brody scale to determine the level of independence that the older adult has when carrying out instrumental activities of daily living. This scale covers aspects such as the ability to use the telephone, shop, prepare food, take care of the house, wash clothes, take medication, manage financial affairs, and use transportation.

The following table shows the results obtained in the application of the body mass index of the study population.

Table 1. Body mass index

| Classification | Quantity | Percent |
|-----------------------|-----------------|----------------|
|-----------------------|-----------------|----------------|

| | | |
|-----------------------------------|----|--------|
| Low Weight (Malnourished grade I) | 4 | 19.0 % |
| normal weight | 10 | 47.6 % |
| overweight | 4 | 19.0 % |
| Mild obesity (grade I) | 3 | 14.2 % |

Note: Elderly women classified as underweight are classified by Home Public Health specialists as Grade I Malnourished.

The figures related to overweight and slight obesity (33.3%) respond to the changes and metabolic alterations related to the reduction in estrogen concentration produced by the transition from the reproductive state to the postmenopausal state, as an expression of female aging, this entails to the increase in adipose tissue in certain areas of the body.

Physical inactivity is also an important factor to take into account, since they spend a long time sitting or lying down, which favors the accumulation of fat and associated diseases. This result reinforces the need to practice physical exercises for this age group, systematically and of moderate intensity to reduce the concentration of fats in the aging organism.

In relation to the tests applied, table 2 shows the results of their application.

Table 2. Tests to evaluate physical condition

| Total | Arm strength | | | | Leg strength | | | | Flexibility 1 | | | | | Flexibility 2 | | | | |
|-------|--------------|---|----|-----|--------------|---|----|------|---------------|---|------|----|------|---------------|-----|---|----|------|
| | MB | B | R | % | MB | B | R | % | MB | B | % | R | % | MB | % | B | R | % |
| 21 | | | 21 | 100 | | | 19 | 94.4 | | 3 | 14.2 | 18 | 85.7 | 1 | 4.8 | | 20 | 95.2 |

Note: Two older adults were not evaluated for leg strength since they did not have enough strength to get up from the chair.

Regular (R) evaluations were obtained for both the strength of the upper and lower limbs. This is an important element to highlight since strength is a fundamental conditional capacity to perform common activities in daily life such as: transporting food or an object, carrying grandchildren, among others, and is closely related to health condition. Therefore, it is a negative indicator in the state of these muscular planes that are responsible for maintaining the body in the bipedal position and supporting the body weight, so its correct toning favorably influences the stability of the body, resistance and the equilibrium. It also influences the level of independence and validity in the aging stage.

As an interesting fact, two older adults could not be evaluated in the test that evaluates leg strength (9.5%). It is necessary to highlight that the scale proposed by the National Institute of Sports, Physical Education and Recreation does not have the category of not evaluated, an aspect that should be taken into account for future research.

The results coincide with Higuera & Carrillo (2022) who found that there is a gradual, progressive and generalized loss of muscle mass and musculoskeletal strength that begins in the third decade of life and accelerates over the years. years and that, together with the presence of diseases, is associated with muscle atrophy, loss of strength, decreased mobility, increased falls, fragility, disability and dependency.

Although this situation is negative, it can be improved through a system of exercises that tones and strengthens the muscles of the upper and lower limbs; in turn, they must be adapted to the characteristics of this population and with an adequate dosage.

In the flexibility (1) of the lower part of the body (sitting in a chair and reaching forward) and flexibility (2) of the upper part (scratching the back), evaluations very similar to the previous ones were found. It should be noted that the lack or decrease in flexibility combined with a decrease in strength leads to a reduction in motor capacity with varying degrees of dependency.

These general results are explained through the changes that flexibility undergoes during the gradual aging process, which is significantly influenced by hormonal changes (postmenopause), biological factors associated with aging (increase in intra- and inter-articular connective tissue ,

the decrease and shortening of ligaments, tendons and muscles), weight gain and the presence of convergent diseases.

A good level of flexibility in adulthood contributes to the comprehensive health of the joint structures and greater joint mobility, which prevents joint pathologies associated with cartilage wear (osteoarthritis), which limit movement causing a pattern of disability in the life of the elderly.

In this way, exercises aimed at promoting flexibility not only improve, but also compensate for daily activities and constitute one of the most important ingredients in the set of measures that older adults can adopt to improve their quality of life.

In the survey applied to older adults and in the scale that evaluates physical and social functionality, better results are seen in semi-internal older adults when carrying out a greater number of activities related to daily life such as (bathing, cooking, washing, cleaning, washing, using public transport, taking care of grandchildren and moving without needing support), so they have greater independence in numerous activities of daily living.

A decrease in physical, daily and social activities was observed in older adults living at home, due to their state of health and their condition as inmates. These aspects are key in the self-validity of the elderly and influence displacement, personal care and quality of life in general, and coinciding with Benavides Rodríguez et al., (2020), institutionality is related to an increase in physical inactivity and limitations in at least one of the basic activities of daily living.

On the future expectation indicator, the coincident criteria between internal and semi-internal older adults were the support of the Cuban State in the care and protection of the elderly. They have few aspirations for the future because they feel older, have illnesses and cannot carry out activities with the same vigor with which they did when they were younger.

In relation to the satisfaction with the present indicator, they consider that their life with retirement did not lose meaning, because it is a natural stage in which they need to rest and dedicate time for themselves. They think that their life is almost always boring and monotonous, since they do not go out anywhere to have fun and they socialize very little with other people their age.

They consider that they had wishes left to fulfill since they were faced with taking care of a family from a very young age, they postponed plans and even jobs to take care of their children and that these aspects influenced the fulfillment of their aspirations. They do not feel satisfied with the socioeconomic housing conditions they have and many of them do not want to live in the Nursing Home.

They feel happy with the family they built and sometimes with the life they lead. These responses are based on carrying out cultural activities and on the topics taught through the Chair for the Elderly, so they feel motivated and happy when they are attended to.

The criteria from the diagnosis made through the scale allow us to recognize a decrease in the quality of life of older adults, this is subject to the individual's perception of their health, needs, aspirations and ideals and which are closely related with the quality of life and vary depending on the evolutionary stage in which the human being is, in this case aging.

It coincides with the study carried out by Pomaquero, MA (2021) which revealed that institutionalized older adults experience feelings of loneliness due to being separated from their family, being apathetic, not very participatory in scheduled activities, there is demotivation due to the monotony in the routine and not being listened to, therefore, also present greater risk factors such as a sedentary lifestyle and isolation.

In addition, they show more visible disabilities and require more help to carry out activities of daily living; In contrast, older people who live with their family and were cared for at the day center were more active, participatory, and kept busy with different tasks.

In the interview applied to the Director and the Social Worker, it was found that since the period in which the study began, physical activities or measurements of physical condition are scarce; some of the aspects that influenced it were the period of social isolation caused by the Covid-19 and the absence of a teacher to attend to them. Only quarterly physiatrist evaluations have been performed. They consider it necessary to apply tests to measure physical condition since they allow the plan to be followed and are closely related to the maintenance of health in the elderly.

They highlight that the periodic evaluation of physical condition contributes to raising the quality of life of older adults, since systematic exercise improves the quality of life and stops “a little” the atrophy of the different organ systems and the osteomyoarticular system. They also explain that it is vitally important to daily check all the processes involved in the care of older adults to maintain their quality of life.

Conclusions

The methods used to verify the current state of the physical condition of the older adults of the Nursing Home 4 of the municipality of Santa Clara allow us to confirm that there is a deterioration in the strength of arms, legs and flexibility in this age group. The analysis of physical condition confirms the deterioration of physical abilities in this age group, which leads to various degrees of dependency, such as maintaining the bipedal position, translation and self-validity, which influences the quality of life of these older adults. The need to carry out physical activities to maintain an adequate physical condition in accordance with age that contributes to validity, and to counteract the negative effects of present chronic diseases, is evident.

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