

## Chapter 8

# Rehabilitation Nursing Program for Elderly Functional Independence


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### ABSTRACT

*To identify the gains in elderly functional independence through the implementation of the rehabilitation nursing program, a pilot study involving the quantitative, descriptive, and cross-sectional case study methodology was applied to an accidental sample of elderly people, with only two persons having completed the previously defined intervention program. The Rikli and Jones functional fitness test for older adults exercises, such as a rehabilitation nursing exercise program and the Barthel scale, were used to measure the functional independence of the elderly in the performance of activities of daily living. From the implementation of the rehabilitation nursing program to the elderly who concluded it in its entirety, the results show global gains in the functional aptitude program and an improvement in functional independence with gains in most activities of daily living. An improvement in the functional independence of elderly people who participated in the rehabilitation nursing program involving the functional fitness exercises of Rikli and Jones was verified.*

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## **INTRODUCTION**

The advancement of science and technological and social development were driving the improvement of the living conditions of the population, with repercussions on longevity and life expectancy (Cardoso, Martins & Monteiro, 2017).

Most developed countries are currently facing the demographic aging phenomenon, with a significant increase in the number of elderly people, with overall life expectancy at birth rising from 65 to 72 years between 1990 and 2015 (Eurostat, 2017; OCDE, 2018). Japan is the country with the highest life expectancy at birth in the world, at 83.9 years. In Portugal, the average life expectancy is 81.2 years (OCDE, 2018), corresponding to an increase of 15 years in the last 50 years. This increase in the Portuguese elderly population translated in 2015, in more than 20% of people aged 65 or over.

Aging is an individual phenomenon, progressive and natural, which causes a process of physical and psychosocial changes, more or less important depending on the complex interrelationship of physical, psychological, social, economic and cultural factors that condition the lifestyle of the person, the social and environmental context in which it is inserted (Macêdo, Costa & Vieira, 2018; OMS, 2015). In this process, changes that occur due to physiological aging, such as a decrease in bone and muscle mass and slowing down of neurological and motor functions, combined with chronic degenerative diseases may make the person dependent on some activities of daily living. The result of this whole process culminates in a situation of fragility of the elderly, with a commitment to their functional capacity, hence the need for health care (Macêdo et al., 2018). In addition, longevity and lifestyle increase the incidence of chronic, long-term, slow progression and disabling diseases. These conditions determine limitations in the quality of life of affected elderly people, their relatives and caregivers, and have a strong economic and financial impact on families, communities and society. This framework justifies the need for health care in order to minimize the effects of disability (Cardoso, Martins & Monteiro, 2017)

Functional capacity is a concept that is associated with aging. It includes the ability to perform activities of daily living, with autonomy and involves physical activities, preservation of mental activities and social interaction (Costa, et al., 2017; Silva, Sampaio & Sampaio, 2017).

The quality of life of the elderly is directly related to their functionality and physical capacity they demonstrate. A quality aging is associated with a life with functional independence (Monteiro, 2012).

The evaluation of the functional capacity and physical fitness of the elderly allows the design of intervention strategies in the prevention and limitation of dependencies, contributing to a more active person (Costa et al., 2017). It is an important indicator with predictive capacity in terms of institutionalization, deterioration of the physical condition and the need of health resources.

Dependence is associated with a functional deficit and is often linked to a pathology or accident, and often the deficit generated is not fully compensable with the use of technical aids, as it can generate partial or total disability, temporary or permanent. It is variable from person to person and prevents the individual from autonomously carrying out their activities of daily living.

Functional incapacity is described as the decrease in the performance of self-care activities and a predictor of the health of the elderly person (Marques-Vieira, Amaral & Pontífice-Sousa, 2016).

Physical activity induces benefits in maintaining the capacity of joint movements, muscle strengthening and ligaments, improvement of the ventilator capacity and blood circulation and consequently in the improvement of the quality of life, which will be better if the physical activity is exercised in an adapted manner and regular (Leal, 2016). The elderly population practicing any type of physical activity significantly improves their functional capacity and, consequently, their independence in performing

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