



# The Most Common Cardiovascular, Orthopedic, and Neurological Problems in the Elderly and Nursing Care

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## Abstract

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**AIM:** Health problems of the elderly in addition to purely medical constitute a complex and quite acute social, economic, psychological, and spiritual problem, which are growing unstopably everywhere in the world. The main purpose of this study is to assess the general health of the elderly, to identify the most common pathologies, and to describe the role and responsibilities of the nurse in the elderly with cardiovascular, neurological, and orthopedic diseases, in all patients in geriatric clinics.

**METHODS:** The method used during this study was conducted through a questionnaire of the elderly in geriatric centers. The paper includes data on patients during the period April–June, 2020.

**RESULTS:** Data were observed on 300 elderly persons of whom 100 persons or 33% were female and 200 persons or 67% were male. The mean age of patients was  $90 \pm 65$  years. These elderly people were given information about living conditions, social problems, diseases they had, etc. The most common pathologies of these elderly people studied were cardiovascular problems 25%, orthopedic problems 31%, and neurological problems 43%. We see that women are more predisposed to cardiovascular problems in 66% of cases compared to men in 34% of cases; most predisposed to orthopedic problems are again women in 55% of cases compared to men in 45% of cases and more predisposed to neurological problems are men in 60% of cases and women in 40% of cases, it is significant ( $p < 0.001$ ).

**CONCLUSIONS:** From the above data, it is noticed that almost all the elderly have a concomitant disease. The role of the nurse should be to focus on the daily monitoring of the patient's condition, to identify in time the possible risks, and to explain to the patient how to take the therapy, how long to take this therapy, what may be the side effects and how medications should be combined.

## Introduction

The world's population is ageing rapidly. Between 2015 and 2050, the proportion of the world's older adults is estimated to almost double from about 12% to 22%. In absolute terms, this is an expected increase from 900 million to 2 billion people over the age of 60 [1].

The health problems of old age, in addition to being purely medical, constitute a complex and quite acute social, economic, psychological, and spiritual problem, which is growing unstopably everywhere in the world. The elderly are a heterogeneous group affected by health and non-health factors. The latter are mainly health-related social factors that contribute to the social problems faced by the elderly [2], [3].

This problem is appearing with increasing proportions in our country, in Albania. It is becoming more and more necessary today to increase the interest of the society for the elderly. Like children, seniors need a service in specialized geriatric multidisciplinary facilities.

Healthy aging depends on health promotion, and disease and injury prevention. A healthy lifestyle is an important thrust of health promotion. Good health maintenance in the early life and later years through a healthy lifestyle, avoidance of smoking and alcohol, prudent diet, and regular exercise can help the social and cultural life of the elderly, including fewer physician visits, and fewer medications taken. Health education and counselling must be provided at all opportunities that aging is not a disease, and that early treatment can prevent disability [2], [3].

Furthermore, there are more and more people who live long without complaints and problems, although with age their risk for disease increases more and more. Retirement, abandonment by children or lack of physical, and social activity causes many older people to face depression and its consequences. The aging process, then, is a normal process that affects almost proportionately all the cells, tissues, organs, and systems of the organism of living beings, including humans. Through this study you can learn about some of the problems of the elderly, how they take care of themselves and the role of nursing care in old age [2], [3].

## The Most Common Pathologies of the Elderly

### **Cardiovascular problems**

Heart failure occurs more in the elderly, and its prevalence increases with age. Heart failure is more common in men than women. *Hypertension* is called the “silent killer,” so the vast majority of the elderly have no complaints. High blood pressure is well known to be a major risk factor for cardiovascular events, such as stroke and myocardial infarction, 1 and linear relationships between cardiovascular risk and both systolic and diastolic BPs, unrelated to age, have also been reported based on a meta-analysis of large cohort studies conducted worldwide. In particular, systolic BP predominantly affects cardiovascular events in elderly people [4], [5]. The main symptoms are as follows: Pronounced heartbeat, dizziness, headache, difficulty breathing, lethargy, fatigue, nosebleeds, and swelling of the legs. In cases, where the tension rises excessively, then the patient may have double vision, numbness of the tongue, or a tingling sensation in the body. *Myocardial infarction* usually occurs as a result of atherosclerosis of the coronary arteries. Many patients who experience myocardial infarction are over 65 years old. Men are more affected than women before the age of 60. After this age the risk is the same, this happens due to lack of estrogen. After menopause estrogen decreases significantly in women. Women are more prone to complications and death after a myocardial infarction than men [6], [7], [8], [9], [10], [11].

### **The most common orthopedic problems**

Falls and fall-related injuries are common, particularly in those aged over 65, with around one-third of older people living in the community falling at least once a year. Falls prevention interventions may comprise single component interventions (e.g., exercise), or involve combinations of two or more different types of intervention (e.g., exercise and medication review) [12], [13], [14]. Falls are a major health problem for older adults. Various reviews and meta-analyses have estimated that 30% of people over age 65 [14], [15] and 50% of people over age 85 [15], [16] who live in the community will fall at least once. *Falls and Fractures* occur in about 20–30% of older people in the community each year, but an even higher percentage of falls are in older people in care homes. These falls are associated with fractures, soft-tissue injuries, and psychological problems of independence. The risk of falling increases with the number and type of chronic disability present and the number of medications taken. Falls are the main risk factor for fractures and are even more important than decreased bone mineral density or osteoporosis, as indicated by the fact that 80% of low trauma fractures

occur in people who do not have osteoporosis and 95% of hip fractures result from falls. Overall, significant injuries occur in 4–15% of falls and 23–40% of injury-related deaths in older adults are due to falls [17], [18], [19], [20]. *Arthritis and back pain*, mainly caused by degenerative osteoarthritis, are the two most common causes for limiting physical activity in people over the age of 65. Exercises to relieve strain and pain, and to strengthen muscles accompanied by analgesic medications as needed, are the first line of treatment for symptomatic arthritis. Compression fractures, which usually involve those in the thoracolumbar area, are painful and can lead to kyphotic deformities. Treatment includes pain relief and a measured correction of mobility. [19], [20]. *Osteoporosis* is a very disturbing disease, which is not always treated and managed in time, there are even cases that are not treated, even when we have fractures associated with osteoporosis, the worst is that often in such cases, the fracture is managed, but not the underlying problem – osteoporosis. The primary osteoporosis can be postmenopausal osteoporosis, which occurs after menopause in women, and senile osteoporosis, which occurs in older men. Secondary osteoporosis is presented as associated with other diseases, specifically this type of osteoporosis is a secondary problem of an underlying disease, whether acquired or inherited. Due to the lack of adequate and timely diagnosis of osteoporosis, a large number of people end up with serious consequences, such as loss of bodily abilities and pain which can often be unbearable [21], [22].

### **The Most Common Neurological Problems**

Older people face special physical and mental health challenges which need to be recognized. Over 20% of adults aged 60 and over suffer from a mental or neurological disorder and 6.6% of all disability among people over 60 years is attributed to mental and neurological disorders [1], [23], [24]. *Depression* recognizing and diagnosing old age depression can be difficult. For the assessment of depression in old age, symptoms that should be considered are as follows: Decreased mood, social attraction, weight change, sleep disturbances, psychomotor delay or agitation, fatigue loss of energy, decreased concentration, attention and memory, thoughts persistent death or suicide, etc. Specific geriatric questionnaires for depression help to assess depression in elderly patients, because they rely more on questions related to moods than on reporting symptoms, which may be related to chronic medical illnesses [1], [25], [26]. *Parkinson’s disease* is a degenerative condition which causes generalized movement and posture abnormalities. Disabled manifestations include trembling hands, crawling of the legs with a tendency to fall, and numbness of the intellect [26], [27].

## Methods

The method of data collection in this study was conducted through a questionnaire to the elderly in private geriatric centers in Tirana, Albania. The study includes data on patients during the period April–June, 2020. Patients participated voluntarily in the study after being informed in advance about the purpose of the study.

## Results

Data were observed on 300 elderly persons of whom 100 persons or 33% were female and 200 persons or 67% were male. The mean age of patients was  $90 \pm 65$  years. These elderly people were given information about living conditions, social problems, diseases they had, etc. The most common pathologies of these elderly people studied were cardiovascular problems 25%, orthopedic problems 31%, and neurological problems 43%.

In this study, 300 elderly people were surveyed, of which 33% or 100 people were female and 67% or 200 people were male (Figure 1).

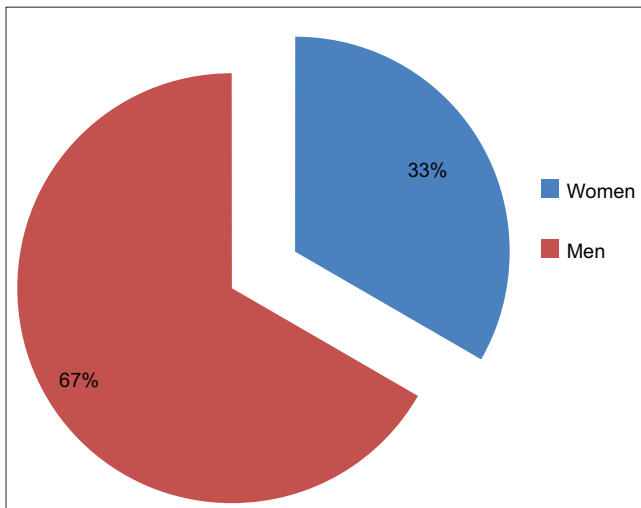


Figure 1. Report of Women and Men

Out of 300 elderly people who have been studied with cardiovascular problems are 90 people or 26% of them, with orthopedic problems 110 people or 31% of them and with neurological problems 150 people or 43% of them (Figure 2).

We see that women are more predisposed to cardiovascular problems in 66% of cases compared to men in 34% of cases; most predisposed to orthopedic problems are again women in 55% of cases compared to men in 45% of cases and more predisposed to neurological problems are men in 60% of cases and women in 40% of cases, it is significant ( $p < 0.001$ ) (Figure 3).

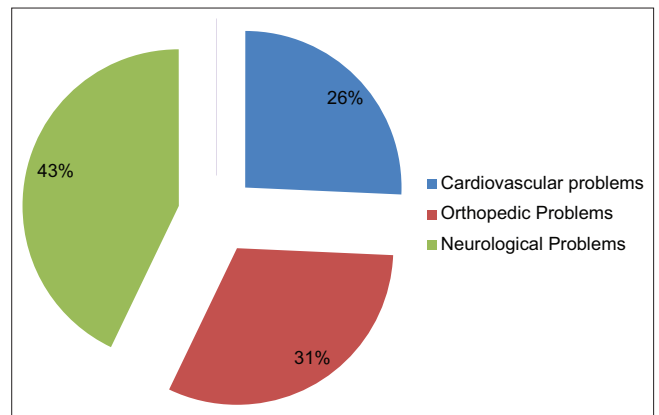


Figure 2. Relationship between Pathologies of the Elderly

We see that with age the susceptibility to these pathologies is ever higher and the age most affected by pathologies is 80–90 years old women in 33% of cases and men in 30% of cases; we also see that women of the same age as men have a higher susceptibility to these pathologies, it is significant ( $p < 0.001$ ) (Figure 4).

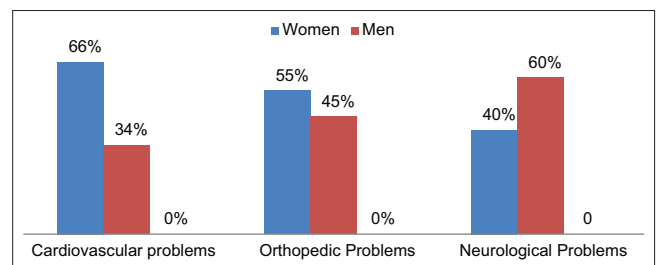


Figure 3. Influence of Pathologies in the Women & Men

## Discussion

The world's population is ageing rapidly. Between 2015 and 2050, the proportion of the world's older adults is estimated to almost double from about 12% to 22%. In absolute terms, this is an expected increase from 900 million to 2 billion people over the age of 60 [1].

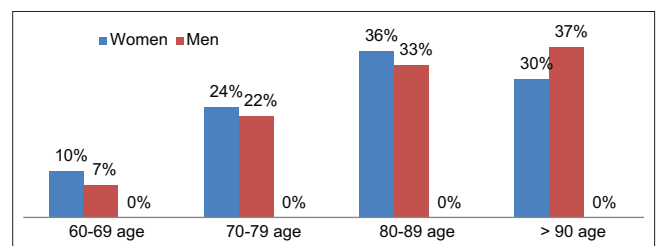


Figure 4. Increasing age Increases Susceptibility to Pathologies

The health problems of old age, in addition to being purely medical, constitute a complex and quite acute social, economic, psychological, and spiritual problem, which is growing unstoppably everywhere in the world. The elderly are a heterogeneous group affected by health and non-health factors. This problem

is emerging with increasing dimensions in our country. Furthermore, there are more and more people who live long without complaints and problems, although with age their risk of diseases increases more and more [2], [3].

Data were observed on 300 elderly persons, of whom 100 were female and 200 were male. The mean age of patients was  $90 \pm 65$  years. These elderly people were given information about living conditions, social problems, diseases they had, etc. The most common pathologies of these elderly people studied were cardiovascular problems 25%, orthopedic problems 31%, and neurological problems 43%.

We see that with age the susceptibility to these pathologies is ever higher and the age most affected by pathologies is 80–90 years old women in 33% of cases and men in 30% of cases; we also see that women of the same age as men have a higher susceptibility to these pathologies.

We see that women are more predisposed to cardiovascular problems in 66% of cases compared to men in 34% of cases; most predisposed to orthopedic problems are again women in 55% of cases compared to men in 45% of cases and more predisposed to neurological problems are men in 60% of cases and women in 40% of cases, it is significant ( $p < 0.001$ ).

Heart failure occurs more in the elderly, and its prevalence increases with age. Heart failure is more common in men than women. *Hypertension* is called the “silent killer,” so the vast majority of the elderly have no complaints [4], [5].

Many patients who experience myocardial infarction are over 65 years old. Men are more affected than women before the age of 60. After this age the risk is the same, this happens due to lack of estrogen. After menopause estrogen decreases significantly in women. Women are more prone to complications and death after a myocardial infarction than men [6], [7], [8], [9], [10], [11].

Falls and fall-related injuries are common, particularly in those aged over 65, with around one-third of older people living in the community falling at least once a year.

Falls prevention interventions may comprise single component interventions (e.g., exercise), or involve combinations of two or more different types of intervention (e.g., exercise and medication review) [13], [14].

Falls are a major health problem for older adults. Various reviews and meta-analyses have estimated that 30% of people over age 65 [14], [15] and 50% of people over age 85 [15], [16] who live in the community will fall at least once.

Statistics go so far as to say that every third woman over 65 will experience vertebral fracture. The risk of experiencing life-long fractures of the coxofemoral joint, joints, or vertebrae is about 40% in women and 13% in men. Secondary to osteoporosis, more than 500,000 vertebral fractures occur annually in

elderly patients in the United States. Vertebral fractures occur more frequently than fractures of the proximal femur or distal radius in women older than age 65. In fact, one-third of women in this age group sustain a vertebral fracture. By age 75, 90% of the population will have had plain radiographs demonstrating vertebral body compression [1], [7], [8], [9], [10], [11].

Self-reported arthritis with restriction of activities occurs in 12% of persons 65–74 years and 20% of those 85 years [1], [8], [9], [10], [11].

Older people face special physical and mental health challenges which need to be recognized. Over 20% of adults aged 60 and over suffer from a mental or neurological disorder and 6.6% of all disability among people over 60 years is attributed to mental and neurological disorders [1].

These disorders in older people account for 17.4% of years lived with disability. The most common mental and neurological disorders in this age group are dementia and depression, which affect approximately 5% and 7% of the world's older population, respectively. Anxiety disorders affect 3.8% of the older population, substance use problems affect almost 1% and around a quarter of deaths from self-harm are among people aged 60 or above [23], [24], [25], [26], [27], [28].

### **Health education and nursing care**

The best and most effective way to protect and promote the health of older people is through health education. With a good health education can be influenced not only in terms of maintaining good health, changing the style and quality of life, but also the life expectancy of the population and reducing spending on health protection of society as a whole. Therefore, this is one of the main activities of the nurse.

The nurse communicates with the elderly by giving advice and messages on healthy living, extensive information on prevention and worsening of the condition, implementation of therapy, where the nurse tells the patient what are the main signs of the disease, examinations, methods of cure, etc.

The nurse assists the patient in designing the plan to achieve the optimal level of performance of activities within the limits of cardiac, neurological, and orthopedic functions.

The nurse emphasizes that the medication should be administered according to the doctor's prescription and when the treatment is over we turn to the doctor again.

The nurse should explain the purpose of the therapy to the patient. However, over time, living conditions, socio-economic circumstances and living environment change, and health education should be a continuous and dynamic process throughout life.

## Recommendations

- Social support from state institutions for the elderly;
- Construction of housing facilities for the elderly;
- Training of nurses and other health personnel for health care for the elderly;
- Using walking as a key factor in maintaining health.
- Providing a better society, in a way to get rid of boredom and remove the feeling of “excess.”

## Ethical Approval

The method of data collection in this study was conducted through a questionnaire to the elderly in private geriatric centers in Tirana, Albania. The study includes data on patients during the period April–June, 2020. Patients were provided with anonymity and each of them gave verbal consent to participate in the study.

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