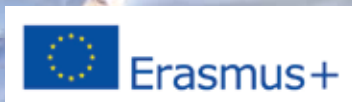


HEALTHY LIFESTYLE FOR AGING WELL



ABOUT THE PROJECT

Population ageing is a long-term trend, which began several decades ago in the EU. As a result, the EU will, in the coming decades, face a number of challenges associated with an ageing society, which will have an impact on a wide range of areas (labour markets, pensions, provisions for health care etc.). Population change and the structure of the population are gaining importance in the political, economic, social and cultural context of demographic behaviour. One of the fields that is, and will be even more affected by the population ageing in the upcoming years, is the health care system, and that is why it is necessary (for the long-term stability of the health care system) that people have the best possible chance to remain healthy stay active and independent as they become older. One of the crucial roles in this effort will be assigned to nurses and that is why it is important to raise awareness among them and among the students of nursing, as they represent the future of this profession.

Based on these facts, a partnership of four higher educational institutions was formed. The participating institutions are:

- The College of Nursing in Celje, Slovenia (coordinating organisation);
- Medical University of Lublin, Poland;
- University of Oulu, Faculty of Medicine, Institute of Health Sciences, Finland and
- Cooperativa de La Superior Politecnico e Universitário – CESPU, Portugal.

These institutions have set a goal to contribute to the development of this field, and through different project activities try to make a difference and raise awareness of the importance of aging well and staying active as we get older. With this goal in mind, our partnership successfully applied for the Erasmus+ tender, Key Action 2: Strategic Partnerships in Higher Education and implemented the project **Healthy Lifestyle for Aging Well (HLAW)**.

HLAW is an innovative project, through which we have aimed to:

- Additionally educate, engage, activate and raise awareness among students of nursing in the field of healthy lifestyle of the elderly and active ageing.
- Contribute to the raised awareness among the elderly and to increase their health literacy in order to improve their quality of life as well as their health.

- Help the elderly to function as active members of the society, and help them to stay active in the society as long as possible.

This project offers an international and interdisciplinary (nursing, medicine, sociology, psychology, physiotherapy, social gerontology and occupational therapy) approach in highlighting the importance of healthy lifestyle for aging well.

The main target groups, which were included in the project activities were the nursing students, higher education teachers and researchers and the elderly. In addition to these, the project also addressed other interested parties who wished to obtain and share knowledge, ideas, practical experience and examples of good practice from the areas under consideration among different institutions (especially higher education institutions) and different countries.

In the context of the project, two intensive programmes (summer schools) were implemented at the College of Nursing in Celje. The first summer school took place from May 25th until June 5th, 2015, and the second one took place from May 23rd until June 3rd, 2016. At the summer schools, we enabled active participation to 36 foreign students and to 22 foreign higher education teachers as well as to 18 students and to 8 higher education teachers of the College of Nursing in Celje. In the framework of the intensive programme the students were able to:

- gain new expertise, ideas and experiences and share them with the domestic and foreign students and lecturers,
- participate actively through the implementation of various workshops and do fieldwork,
- socialize with the elderly and raise their awareness about a healthy lifestyle,
- strengthen their intercultural competences.

An important part of the project were also various research activities, which enabled the students to critically and analytically research the field with the help of higher education teachers and to compare and share the knowledge, ideas, and examples of good practices with the participants and participating countries.

In the first phase of the research activities, we focused on literature review of health literacy and physical activity of the elderly in the participating countries. We also conducted review of the current situation and tried to find some examples of good practices in this field. With this phase, we set theoretical foundations for the next phase of the research activities which was conducted simultaneously in all four participating countries from October 2015 until June 2016.

The main results of the project were/are:

- A new Web portal, which is devoted to the health literacy of the elderly in all the languages of the participating countries;
- 5 new optional study subjects,
- Recommendations for further work in the field of healthy lifestyle of the elderly,
- Guidelines for ethical conduct in care for the elderly,
- Guidelines for the development of new programmes for the healthy lifestyle of the elderly,
- DVD with footage of physical exercises (with instructions and recommendations) in all languages of the participating countries as well as in English,
- A brochure, in which all the main results of the project, recommendations and guidelines are collected.

Besides that, the project also contributed to:

- increased healthy lifestyle literacy of the elderly
- a raised awareness of this thematic field,
- strengthening partnership between partner institutions,
- greater quality of teaching and learning,
- greater international mobility of students and lecturers.

The project emphasises five crucial fields regarding healthy aging: physical activity, healthy nutrition, mental health and safe environment for the elderly.

PHYSICAL ACTIVITY

The **World Health Organisation** estimates that around 3 % of the disease burden and 1.9 million deaths in developed countries are caused by physical inactivity. Lifestyle factors will be responsible for 70% of all illnesses in 2020.

Physical activity has been defined as: „Any force exerted by skeletal muscle that results in energy expenditure above resting level” and includes: “The full range of human movement, from competitive sport and exercise to active hobbies, walking and cycling, or activities of daily living”.

Physical activity in older adults is beneficial for managing stroke, peripheral vascular disease, heart disease, arthritis, obesity, type 2 diabetes and depression. It may help in the management of some cancers (colon, breast), neurological diseases (Parkinson’s, dementia and Alzheimer’s), disability and sleep disorders. Appropriately planned physical activity reduces falls, fractures, improves mood and the feelings of well-being, and promotes independence.

Remember

Before starting to exercise regularly, the elderly should consult a doctor to make sure what kind of sport (physical activity) is most suitable for them. Especially, if they have not been physically active for a long time, it is very important to find the type of sport that suits them best.

Important tips

- The type of physical activity someone chooses should positively affect the basic elements of his/hers physical health, i.e. to improve aerobic fitness (aerobic), muscle strength, flexibility, balance and coordination.
- It is recommended to exercise regularly (preferably daily), and to experience positive feelings during/after exercising (relaxation, pleasure, satisfaction).
- The emphasis should be placed on simple and moderately difficult forms of physical activity such as walking, marching, dancing, cycling, bowling, gymnastics, exercises on a chair or in bed, swimming and so on.
- The simplest forms of exercise are safe for anyone who does not have specific contraindications to exercise.

Three types of exercises recommended for seniors are:

- **Aerobic (endurance)** - three times a week for 20-30 minutes: walking, running, swimming, gardening, cleaning the yard, mountain climbing,
- **Power (resistance/ strengthening)** - twice a week for 20-30 minutes: push-ups, sit-ups, light weight lifting, squats,
- **Stretching (flexibility)** - 10-15 minutes each day: gymnastics, Tai, chi, yoga, dance, pilates

Minimum activity for achieving important health benefits is:

- Two hours and 30 minutes (150 minutes) of moderate-intensity aerobic activity (i.e., brisk walking) every week and muscle-strengthening activities on 2 or more days a week that work on all major muscle groups (legs, hips, back, abdomen, chest, shoulders, and arms).
- One hour and 15 minutes (75 minutes) of vigorous-intensity aerobic activity (i.e., jogging or running) every week and muscle-strengthening activities on 2 or more days a week that work on all major muscle groups.
- An equivalent mix of moderate and vigorous-intensity aerobic activity and muscle-strengthening activities on 2 or more days a week that work all major muscle groups.
- The elderly need to stop an activity and consult a doctor if they experience: shortness of breath during exercise, pain and tightness in your chest, dizziness, sudden fainting, or if arthralgia, cyanosis or pallor develops.

Moderate Intensity

- Walking briskly (3 miles per hour or faster, but not race-walking)
- Water aerobics
- Bicycling slower than 10 miles per hour
- Tennis (doubles)
- Ballroom dancing
- General gardening
- Marches
- Chair-based activities

Vigorous Intensity

- Race walking, jogging, or running
- Swimming
- Tennis (singles)
- Aerobic dancing
- Bicycling 10 miles per hour or faster
- Heavy gardening (continuous digging or hoeing)
- Hiking uphill or with a heavy backpack
- Endurance, aerobic or cardio exercise
- Work in the garden (eg. raking leaves)
- Going to the store
- Fun with grandchildren
- Yard work

Strengthening or resistance exercise

- Work in the garden (eg. mowing grass, clipping the hedge)
- Care of young children (carrying)
- Bringing shopping home
- Cleaning (moving objects, buckets)
- Opening heavy doors
- Recreational activities such as volleyball

Flexibility and balance exercise

- Putting on shoes, socks
- Household chores eg. making the bed
- Going upstairs and downstairs
- Picking up an object
- Clipping toenails



HEALTHY (BALANCED) NUTRITION

Healthy balanced nutrition involves safe, calorically balanced and protective food, that maintains and strengthens an individual's health. A healthy nutrition regime should become a spontaneous way of life of every elderly.

Particularities in the nutrition of the elderly

Due to physiological changes that the old age brings, the elderly are recommended to:

1. Divide their daily food intake into several smaller, more frequent daily meals in suitable time intervals, the breakfast is as important as for the general population, dinner/supper should be taken early (at least two hours before sleep) and should be light.
2. After each meal, a shorter nap is recommended.
3. Foodstuffs that each meal consists of, should be carefully chosen in a way that ensures the high intake of nutrients and controlled energy intake - the intake of nutritionally rich and energetically balanced high-quality varied foods is important, predominantly foods of plant origin should be consumed, the energy density of food should be between 1,5 and 2 kcal/ml (when there is no malnutrition), with enough of dietary fibre especially through the inclusion of fruits and vegetables, and the adequate intake of liquids. When choosing suitable nutrition, physiological capabilities, and from any pathologies arising limitations of an individual should be taken into consideration, also the technology of food preparation should be adapted to it - recommended is the consumption of food that is prepared in a healthy way- steamed, cooked or baked without fat, with only little of fried and grilled food;
4. For healthy nutrition of the elderly it is of extreme importance that they eat in a relaxed manner and enjoy their food - in peace, no noise, sitting down, in a pleasant company. The same holds true for exercising - let it be a joy, relaxing and fun.

Energy needs in the elderly

As we get older, the energy needs get smaller. The reduced energy needs are the consequence of two main factors:

1. the reduced basal metabolism, which is to a large extent caused by the reduced muscle mass in our body, and to a lesser extent by the reduced basal metabolism activity in all other body tissues, and
2. to the reduced physical activity.

Table 1: Energy recommendations for the elderly

Age	Basal metabolism	Physical Activity
		For sports activities or for strenuous activities in our free time (30–60 minutes, 4–5-times per week) 0,3 of PAL ¹ unit should be added per day
	kcal/day	kcal/day
Men		
51-65	1.580	2.050
65 and above	1.410	1.830
Women		
51-65	1.270	1.650
65 and above	1.170	1.520

¹ PAL = (physical activity level) the average daily energy needs for physical activity as a multiplier of basal metabolism.

Through the entire period of adulthood, the energy needs get reduced for approximately 20 %, due to the reduced basal metabolism, as well as due to the reduced physical activity.

Body Mass in the Elderly

Body Mass Index (BMI) is an anthropological measurement, defined as body mass in kilograms, divided by the square of the body height in meters; for instance the BMI of a 172 cm tall person, whose weight is 65 kg, is calculated in the following way: $65/(1,72)^2=22$

The research shows that it is optimal for an elderly person to have the BMI in the range between 25 and 30.

An important risk factor is also the increased body waist circumference. People with an increased body waist circumference are four times more likely at risk for the development of chronic diseases than those with the normal body waist circumference. Body waist circumference and body weight are frequently closely interlinked. Waist circumference above 80cm is hazardous for the health of the woman, whereas the circumference above 88cm is considered very hazardous. For men it holds true that the circumference of 94 cm is hazardous, whereas the circumference of 102 cm is very hazardous. Especially dangerous is the slow, but constant increase in the circumference of the waist.

Unsupervised deliberate loss of weight (slimming) can in the elderly lead to muscle loss, to bone fragility and to rapid exhaustion during any disease.

Food Supplements

If the nutrition is balanced and contains also enough fruit and vegetables, as well as the olive oil, which is characteristic for the Mediterranean diet, food supplements are not necessary.

Water and liquids

The recommended daily intake of liquids and water is related to the calorie intake, which is 1 liter of water per 1000 kcal, in an elderly adult the recommendation is even a bit higher. Considering the calorie intake, this means a minimum of 1.5 liters of liquids per day, drinking water and herbal teas are especially recommended, whereas in the case of malnutrition also natural fruit juices with a higher level of sugars are recommended.

Milk and dairy products count as foodstuffs, and are not considered as drinks.

It is important to know, that the percentage of water in our bodies also decreases with age, which means that an elderly person has a smaller “reservoir” and smaller safety boundaries of hydration. At the same time the feeling of thirst gets reduced with age. Both of the above can lead to a mild or also severe form of dehydration. Dehydration in an elderly adult can more frequently cause urinary tract infections, pneumonia, confusion and disorientation as well as bedsores.



ETHICAL GUIDELINES

PRINCIPLE I.



EVERY ELDERLY SHOULD BE PERCEIVED AS A UNIQUE PERSON WITH SPECIFIC PHYSICAL, PSYCHO-SOCIAL, CULTURAL AND SPIRITUAL NEEDS

PRINCIPLE II



EVERY ELDERLY SHOULD HAVE THE ACCESS TO HIGH QUALITY NURSING CARE

PRINCIPLE III



EVERY ELDERLY'S AUTONOMY AND THE RIGHT TO MAKE INFORMED DECISIONS SHOULD BE RESPECTED

PRINCIPLE IV.



EVERY ELDERLY'S DIGNITY AND PRIVACY SHOULD BE RESPECTED

MENTAL HEALTH

Getting older is a dynamic and progressive process characterized by morphological, functional and psychological changes. Each people integrate this process in a singular way. It is a complex and diversified process.

The mental health status of older persons is not always under control. Frequently these people have chronic diseases which are often associated with vision and hearing losses, memory commitment and other abilities. These commitments are responsible for mental health disorders. To improve the mental health is one of these challenges and sometimes the disabilities which can mean “mental health commitment” are not well considered.

Facts

With the age the mental health may be compromised due to changes and losses during the lifespan.

The commitments of mental health are not always recognized. Their impact on ageing tends to be less valued than the physical consequences. The signal and symptoms presented by the people are justified by the number of years (less active and participative are consider as consequence of the number of the years and physical disease).

The mental health commitments that are recognized as the most frequent diseases are dementias and depression.

Dementia

Dementia is a complex manifestation with memory, thought and behaviour deteriorations with repercussions on the capacity to perform daily activities.

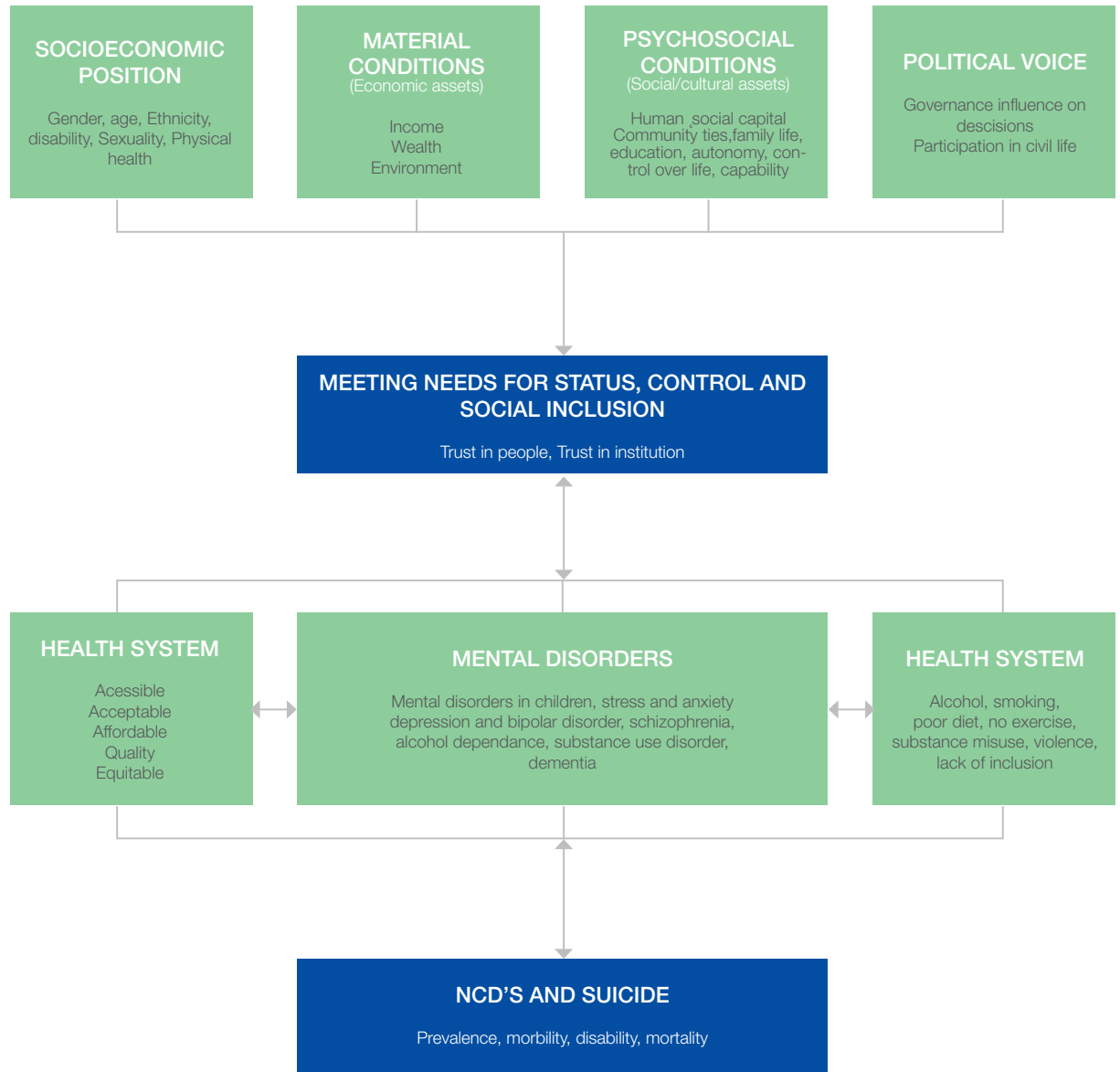
Although dementia is common it is not part of normal aging.

Depression

It is a mental health disease related with no specific factors. People under this condition experience a deep feel-



The cycle of mental well being



ing of sadness and the commitment of their capacities to perform daily activities due to the suffering they fell. May be associated with a physical disease special those who are related with pain and sleep disturbances.

Depression affects 10 -15 % of persons over 65 years old. Symptoms are: sleep disturbance, lack of energy and interest, feeling of guilt and worthlessness, decreased concentration, and loss of appetite.

The depression symptoms on adults, with more years, are often neglected and not well treated. They can easily be confused with other common issues in this age-group (isolation and loneliness).

Determinants of mental health in later life

The person's social differences and material resources have interference on mental health. Each person evaluates in a different way the consequences of these factors on their life experience.

The mental health cycle is influenced by many factors that may be committed with the process of getting older. On the figure bellow you can see these interactions and relations with cycle of mental-well-being.

Getting old also compromises cognitive functions. Sometimes older people forget the importance of the dimensions which interfere in daily activities and in the interpersonal relationships.

ATTENTION:Decrease in vigilance performance (ability to retain attention longer than 45 min). The elderly are more liable to distract (divert) attention by irrelevant information and stimulation. Deficit in attention may affect learning and memory.

LEARNING:The ability to learn and retain new information remains unaltered particularly when mind is stimulated. The ability to solve complex problems decline with age. Hearing and visual deficits related to aging can affect learning.

Getting older also introduces several social changes. Some older people can be more sensible to these silence manifestations than others. The most important changes that affect the elderly are: retirement, widow-

hood, loneliness, role change and multiple losses which means that aging is associated with major physical, psychological and sociological losses as well as a reduced ability to adapt and compensate for stressors.

The most common PSYCHOLOGICAL PROBLEMS, which arise from that, are:

- Poor adjustments to role changes,
- Poor adjustment to lifestyle changes
- Family relationship problems,
- Low self-esteem,
- Anxiety and depression,
- Aggressive behaviour,
- Loneliness,
- Isolation,
- Problems with sexuality,
- Elderly abuse,
- Withdrawing and having a negative attitude towards life in general.

Reccomendations for good mental health for the elderly

- Be involved on the issues related with the age-group of the elderly.
- Take part in activities that are planned to the elderly age-category.
- Maintain social relations and improve relationships between young and older people; the intergenerational solidarity bring earns to all.
- Be interested by all the learning activities that are helpful to be in contact with others and with the world.
- Use digital connections in a harmonized approach; it doesn't replace all interpersonal relationships gains by face to face contact.
- Be informed about the social issues; keep connected with the previous profession to be up-date about the changes.
- Attend to scientific and cultural programs of someone interest or related with his/her past career.
- Be available in the community to teach about the experience, formally or informally.
- Be available as a volunteer for a cause he/she believe in or were he/she can be helpful.



SAFE ENVIRONMENT FOR THE ELDERLY

The desire for seniors to age at home increases, so it is important to learn and understand the ways that can keep them safe and healthy at home. There are certain concerns that should be considered in order to maintain a safe home environment.

Different changes are part of the aging process. Age-related sensory loss such as declining vision, hearing or smell can increase the risk of injury. Also for example various diseases and medicines or bone density can increase the risk. Injuries can bring many problems for elderly because takes longer to heal and recover from injury. Because of this, physical environment has a remarkable influence on personal mobility, safety, security and health behavior.

Researches show that 33 % of senior's trips to the hospital are caused by falls and other accidents at the home and that 48 % of home accident experienced by seniors could be prevented. The very serious risk factors for injuries or accidents at home include:

- poor eyesight,
- balance issues,
- mobility problems,
- impaired motor skills,
- dementia.

It is very important that adult children perform a safety check of their aging parent's homes once each year and invest in basic home safety modifications such as:

Installing assistive equipment in the bathroom:

- place a non-slip rubber mat or adhesive strips on the floor of the bathtub or shower,
- handrails should be installed around the bathing area as well as grab bars on the walls around the toilet,
- it may also be considered removing the lock on the bathroom door to prevent an elderly from accidentally locking the door.

Stairways:

- install handrails on stairs,
- stairs should be well lighted,
- the floor and walkways should be free of rugs, shoes, newspapers, etc.,
- solid colour for floor coverings should be used.

Furniture and electric wires:

- arrange the furniture so that the person has a clear, unobstructed path from one place to another and remove furniture that is not being used;
- remove furniture or other objects with sharp corners or pad the corners to reduce potential for injury,
- keep the cords of electrical wires bound together and tucked away so that they do not create a fall risk.

Smoke alarms:

- smoke alarms should be installed outside of each bedroom and in the kitchen,
- check the batteries frequently and replace them every six months whether they need or not,

Improving lighting:

- it is very important to have plenty of well positioned and well-diffused lighting,
- increase light levels and use daylight where it is possible,
- minimise glare, reflection and shadows,
- lighting should be uniform across any space and pools of light and sudden changes in light levels should be avoided;
- leave a light on in the toilet or bathroom during the night.

Preventive measures:

- personal emergency response system provides an easy way for an older person to call for help in an emergency. When the system is activated, the signal goes to a monitoring center where a specific set of actions is set in motion (the provision of emergency medical services, the fire department or police),
- the list of most important telephone numbers should be available all the time by the telephone,
- it is recommended to put the chain on the front door to prevent undesired visitors.

Seniors want to remain independent for as long as possible. Keeping these precautions in mind will significantly increase safety in the home environment and ensure a happy, healthy individual.

More information is available at:

- Making Home Safer for Seniors (caregiverstress.com):

<http://www.caregiverstress.com/senior-safety/making-home-safer/>

- Falls and Older Adults Home Safety Tips (youtube.com):

https://www.youtube.com/watch?v=3EJEjWJR7_A



SUMMARY OF RESEARCH FINDINGS REGARDING HEALTH LITERACY

An important part of the project were also research activities regarding healthy literacy. And these are the main results of that research:

In all three countries (Poland, Slovenia, Portugal) the older adults, who have participated in the research, have achieved in the field of healthcare, disease prevention, health promotion and in the field of general health literacy **limited (problematic) health literacy**. The exception is Portugal, where older adults have in the field of general health literacy achieved **insufficient health literacy**.

In Portugal as much as 93,3 % of all participants in the survey, **have limited health literacy** (46,3 % insufficient and 32,9 % problematic) in the field of general health literacy, whereas none of the surveyed older adults in Portugal have achieved excellent level of health literacy in the field of general health literacy. The lowest level of limited health literacy in the field of general health literacy has been achieved in Slovenia, where the **limited level of general health literacy is 79,2 %** in older adults; whereas **17,1 % of older adults have sufficient level** of general health literacy. The highest share of the participants in our research who have achieved **excellent level of health literacy** in the field of general health literacy is in Poland, their share represents **9,2 %**.

The best results in the field of health literacy in the field of healthcare have been achieved by the older adults in Slovenia, among whom there is the lowest share of individuals with **limited health literacy in the field of healthcare**, which is **64,4 %**, and the **highest share** of those with **sufficient health literacy**, which is **27,0 %**. The highest share of the participants of our research among those with **excellent health literacy** has been achieved in Poland, the share is **12,4 %**. In Portugal **89,2 %** of all older adults, who have participated in the research, have **limited health literacy**.

In the field of disease prevention, the lowest share of the surveyed older adults with **limited health literacy**, which is **67,5 %**, was established in Poland, as much as **24,5 % have achieved sufficient**, and **8,4 % have achieved excellent health literacy** in the field of dis-

ease prevention. The worst share of excellent health literacy in the field of disease prevention was achieved by participants in Portugal - **only 0,5 %** out of all participants. **87,9 % of participants in Portugal have limited health literacy** in the field of disease prevention.

The best results in the field of health literacy in the field of health promotion have been achieved by participants in Slovenia, among whom there is the lowest share of those with **limited health literacy** in the field of health promotion, which is **69,8 %** and the highest share of those with **sufficient health literacy**, which is **25,8 %**. The highest share of older adults with excellent health literacy in the field of health promotion was achieved in Poland, their share is **6,7 %**. In Portugal **92,3 %** of all the participants in the survey, **have limited health literacy** in the field of health promotion.



RECCOMENATION FOR FUTURE WORK IN THE FIELD OF HEALTHY LIFESTYLE FOR AGING WELL

1. MUCH ATTENTION SHOULD BE GIVEN TO QUALITY OF THE HEALTH INFORMATION PRESENTED IN THE MEDIA
2. HEALTH EDUCATION AND HEALTH MATERIALS SHOULD BE SIMPLE, WITHOUT MEDICAL JARGON/DISCLOSURE HEALTH INFORMATION IN EASY – FRIENDLY FORMATS AND CHECK IF THAT INFORMATION WAS PERCEIVED AND RECALLED.
3. HELP PEOPLE WITH LIMITED HEALTH LITERACY TO DECODE, APPRAISE AND APPLY HEALTH INFORMATION
4. DESIGN AND IMPLEMENT HEALTH EDUCATIONAL AND DISEASE SELF-MANAGEMENT PROGRAMS/ACTIVITIES TAILORED TO POPULATION NEEDS AND HEALTH LITERACY LEVELS
5. FOSTER HEALTH KNOWLEDGE AND BEHAVIOURS ON CHILDREN SO THAT THEY WILL BE ABLE TO ACHIEVE EXCELLENT HEALTH LITERACY, BE EMPOWERED CITIZENS AND ACHIEVE GOOD HEALTH AND WELLBEING
6. EDUCATION – HOW TO TAKE CARE OF HEALTH OF NURSES WHEN THEY WORK WITH ELDERLY PEOPLE
7. QUALITATIVE RESEARCH SHOULD BE MORE ENCOURAGED TO FIND OUT WHAT CAUSES DIFFICULTIES AND LIMITATIONS IDENTIFIED



Coordinator of the project:



Partners of the project:



**HEALTHY
LIFESTYLE
FOR AGING WELL**