The ageing populations health circumstances in Finland and Malta

An investigative thesis

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Abstract:
This thesis was specifically requested by Arcada University of Applied Sciences and conducted to stand as a base for future collaboration between Arcada University of Applied Sciences and Malta University. An investigative method with empirical mapping was used. The aim was to find out as much as possible about the elderly living circumstances, elderly health and elderly care in Finland and Malta. The research questions were: "Which are the most common elderly diseases and disorders in Finland and Malta?", "How does Finland and Malta care for their elderly?", "How are Finland and Malta promoting health?" and "Which are the differences in the elderly's situation in Finland and Malta". References consist of material from databases, search engines, statistic centrals, government webpages and organizations. The results show that apart from differences in climate and socioeconomic status Finland and Malta are quite similar. The most common elderly diseases were the same in both countries with few minor differences. Both countries also struggle with falls in elderly. Their health recommendations were also based on the World Health Organizations guidelines. The health care system is based on taxes in both countries. The biggest difference found was the age limit in age-related issues, in Finland it was 75 years old and the comparable in Malta was 60 years old. Despite the lack of statistical information about Malta online the thesis can be used as a general guide about the elderly's health circumstances in Finland and Malta.

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Sammandrag:
Detta examensarbete utfördes på förfrågan av Arcada som en grund för samarbetet mellan Arcada och Malta University. Metoden som användes är utredande med hjälp av empirisk kartläggning. Målet var att ta reda på så mycket information som möjligt om äldres boende omständigheter, äldres hälsa och äldres omsorg i Finland och Malta. Forskningsfrågorna var: ”Vilka är de vanligaste sjukdomarna och besvären bland äldre i Finland och Malta?”,”Hurdan är äldreomsorgen i Finland och Malta?”, ”Hur promoterar Finland och Malta hälsa?” och ”Vad är skillnaderna i äldres situation i Finland och Malta?”. Källorna består av material från databaser, sökmotorer, statistikcentraler, statliga websidor och organisationer. Bortsett från skillnader i klimat och socialekonomi antyder resultaten att Finland och Malta är ganska lika. Med små skillnader var de vanligaste sjukdomarna samma i båda länderna. Fallolyckor bland äldre är också ett stort gemensamt problem. Båda ländernas hälsorekommendationer är baserade på World Health Organizations riktlinjer. Omsorgssytemet baserar sig i båda länderna på skatter. Den största skillnaden mella länderna var åldärsgränsen för omsorgsrelaterade frågor, i Finland är åldersgränsen 75 år medan motsvarande i Malta är 60 år. Trots bristfällig statistik om Malta på nätet kan detta arbete gott användas som generell grund för äldres hälsorelaterade omständigheter i Finland och Malta.

Nyckelord:	Äldre, hälsa, Finland, Malta, besvär, riktlinjer
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CONTENTS

FORWORD

I would like to thank my supervisor Camilla Wikström-Grotell for giving me good advice and help when needed. Even though she was around the world on business trips she always managed to reply to all my emails the same second she got them. For that I am forever grateful. A big thank you also goes to Göta Kukkonen and Anne Kokko who always help me out and try their best to answer all my rather urgent questions. Last but not least I would like to thank my two oppositions Linda Wilén and Erica Wiik for helpful feedback.

1 INTRODUCTION

This study compares the differences in the living arrangement for people aged 75 and over living in Finland and Malta. The population is growing and getting older and we are now faced with the dilemma of how to care for all elderly. The main issue is that society does not have enough funds for everybody to receive the proper care they need (O'Brien 2012). That is where the author comes in, as a physiotherapist, a health professional it is her duty to provide the nation with a healthier population or at least give elderly the opportunity to stay healthier for longer so that they can live in their own homes for as long as possible.

In the developed countries we offer great elderly services and most of them vary between short term and long term. In this study they are divided into three categories, home care, service home and nursing home. Which means that both temporary and extensive cares are in the same categories. This study will explain the situation in both countries and also what they are doing to promote healthy living for elderly and how they are making it possible for elderly to live at home for longer. First we will talk about each country separately and at the end there will be a comparison between the two countries.

At the moment there are about 7 billion people living on this earth and if population keep increasing at the same speed it is estimated to have increased by 2.3 billion people in 2050. In Europe the proportion of elderly over the age of 65 is projected to rise by 11.1% between 2010 and 2050 (Ezeh & Bongaarts & Mberu 2012). In five years time there will be, for the first time in all time history, more elderly over the age of 65 than children under the age of 5 (World Health Organization 2012).

Non-communicable diseases are the biggest worldwide threat to the older populations. The biggest causes of death in elderly over 60 years of age are stroke and ischaemic

heart disease. Some evidence indicates that only 4-14% of elderly in low-income countries receive effective antihypertensive treatment that could help prevent these conditions. More than 250 million elderly around the world experience moderate to severe disability. Most common are visual impairment, dementia, hearing loss and osteoarthritis. About 28-35% of all elderly are injured in falls each year. Malnutrition amongst elderly is also a big under-reported issue (World Health Organization 2012). Another worldwide health concern is the obesity rate. Around 1 billion of the world's population is overweight or obese (Keller & Lemberg 2003).

The fourth leading cause of death is physical inactivity. Collected data indicate that 31% of the world's population is not meeting the minimum recommendations for physical activity and in 2009 the global physical inactivity was 17%. Evidence suggests that 6-10% of all deaths from non-communicable diseases in the whole world can be attributed to physical inactivity. Specific diseases have an even higher rate and for ischaemic heart disease the rate is 30%. Thereby over 5 million deaths globally could have theoretically been prevented by physical activity (Kohl et al. 2012).

Dr William D Savedoff et al. has written a paper on political and economic aspects of the transition to universal health coverage. According to them, countries are likely to be more successful if they acknowledge that political action is necessary to direct future growth in health spending through pooled financing mechanism that make promotion of equitable and efficient health care possible. They also accentuate that health coverage does not have to be expensive. Good health can be low cost when countries assign resources towards more cost-effective care (Savedoff et al. 2012).

2 AIM OF THE STUDY

The aim of this study is to find out how two countries with completely different cultures, climates and economical situations are handling the growth of the elderly population. What the differences are between Finnish and Maltese elderly diseases, disorders, care, health promotion and health recommendations. The author hopes that the finished product will help Arcada University of Applied Sciences and Matla University to get a better understanding of this global dilemma so that they can work together and create a sustainable plan for the future.

The research questions are: “Which are the most common elderly diseases and disorders in Finland and Malta?”, “How does Finland and Malta care for their elderly?”, “How are Finland and Malta promoting health?” and “Which are the differences in the elderly’s situation in Finland and Malta”.

The author has limited the statistics of this study to elderly over the age of 75 and the recommendations from the age of 65. The reason being that most people aged 65 does not need any special assistance and elderly between 65 and 75 years old are not included in the ageing population problem. Why the author then uses recommendations for elderly over 65 years of age is because they need to prevent all diseases and disorders long before the problems arise. Some statistics could also only be found as groups starting with 65 year olds and in those cases the author has been forced to use that age bracket.

In the beginning the author was meant to address the problem in Finland, Malta, Ireland and Spain. Ireland was excluded when this thesis was removed from the AAL project and Spain got left out because of the lack of information in English.

To address the right problem the author has also chosen to leave out people with developmental disorders and mental illnesses.

3 METHOD

This is an investigative thesis using empirical mapping. Empirical means that a conclusion is based on experiences that has been researched and scientifically proven (Patel & Davidson 1991 p. 16). Since Arcada University of Applied Sciences requested this thesis the guidelines were already set before the author started the investigation. An investigative method has been used so that we would get a wider and better view of the elderly's situation in both countries. The whole thesis is based on mostly electronic references with some research articles to back up the facts. The author has used statistic centrals, government recommendations, organizations and other reliable sources. Non-public authors and sources have been ruled out. When the author has been in doubt about a reference she has always compared it to other sites to make sure she uses correct and up to date information. The author has always tried to use the newest available research, articles and statistics, there are no references that are more than nine years old. Below you will find a table of inclusion and exclusion criteria.

Table 1. The inclusion and the exclusion criteria

Inclusion criteria	Exclusion criteria
- Professional and scientific articles	- Specific American guidelines
- References between 2002 and 2012	- Priced articles and statistics
- References in English, Swedish or Finnish	- Mental illnesses
- Full text articles	- Developmental disorders
- National or world recommendations and guidelines	- Asian research

For this thesis the author has used search engines, PubMed and The Lancet, where the author has systematically worked her way through all the topics she want covered. In PubMed the author has used the advanced search option with the words "population",

"older", "problem" and "world". At The Lancet the author used the words "ageing well", "a global priority", "growing", "older" and "population". These words were combined in different ways to get the best results.

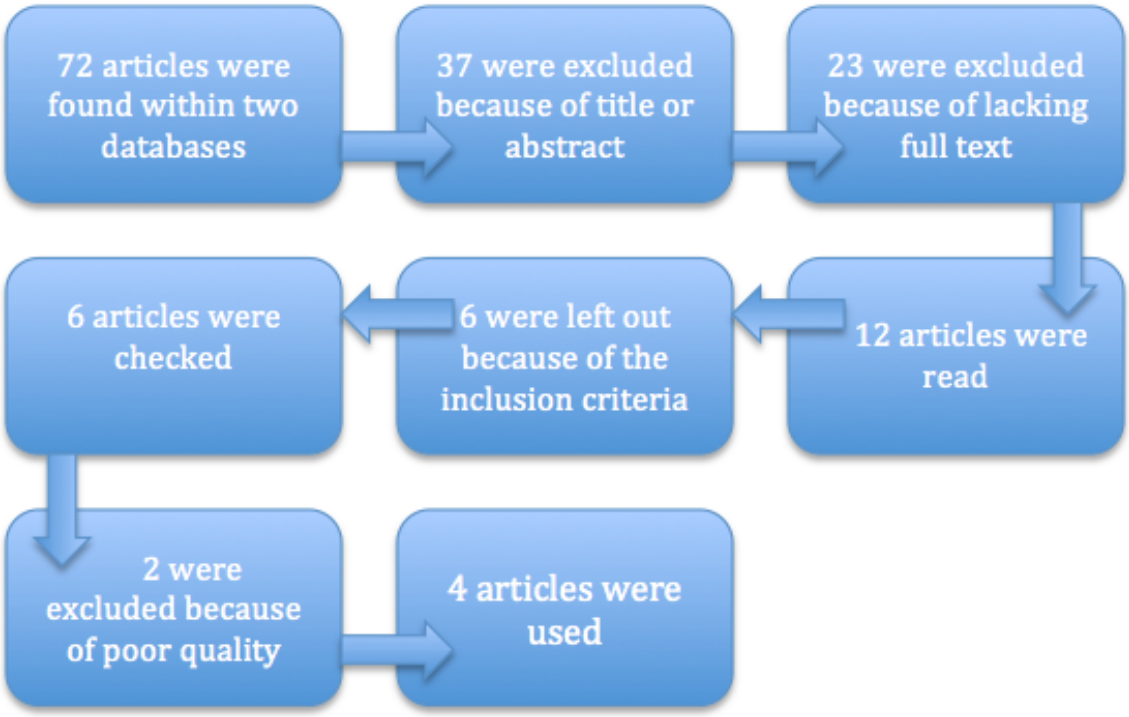

Figure 1. An example of the systematic research process of articles from PubMed and The Lancet

For the guidelines and recommendations the author has used an instrument called AGREE II that measures the validity and applicability of the guidelines. It is available for free online and has been translated into many languages. The author has chosen this method to make sure that the information used is trustworthy. The AGREE II consists of 23 items divided into six domains followed by two overall assessments. The domains are: scope and purpose, stakeholder involvement, rigour of development, clarity of presentation, applicability and editorial independence. Every appraiser within the item receives a score between seven and one. Seven being "strongly agree" and one "strongly disagree". The results are then added, multiplied, subtracted and divided so that the final score will be in percentage. For this thesis, guidelines that are in the bottom half has been excluded (*Appendix 1*). The following table has been copied from the Appraisal of

Guidelines for Research and Evaluation II (AGREE II) instrument (2009 p. 9) and will demonstrate how the calculations are executed.

If 4 appraisers give the following scores for Domain 1 (Scope & Purpose):

	Item 1	Item 2	Item 3	**Total**
Appraiser 1	5	6	6	**17**
Appraiser 2	6	6	7	**19**
Appraiser 3	2	4	3	**9**
Appraiser 4	3	3	2	**8**
Total	**16**	**19**	**18**	**53**

Maximum possible score = 7 (strongly agree) x 3 (items) x 4 (appraisers) = 84
Minimum possible score = 1 (strongly disagree) x 3 (items) x 4 (appraisers) = 12

The scaled domain score will be:

$$\frac{\text{Obtained score} - \text{Minimum possible score}}{\text{Maximum possible score} - \text{Minimum possible score}}$$

$$\frac{53 - 12}{84 - 12} \times 100 = \frac{41}{72} \times 100 = 0.5694 \times 100 = 57\ \%$$

Figure 2. How to execute AGREE II instrument calculations (Appraisal of Guidelines Research & Evaluation 2009 p. 9)

In the last chapters of this thesis the author has systematically compared the information gathered from both countries and analyzed the results. Based on the results a discussion has been formed. A demonstration of how this thesis was formed can be viewed below.

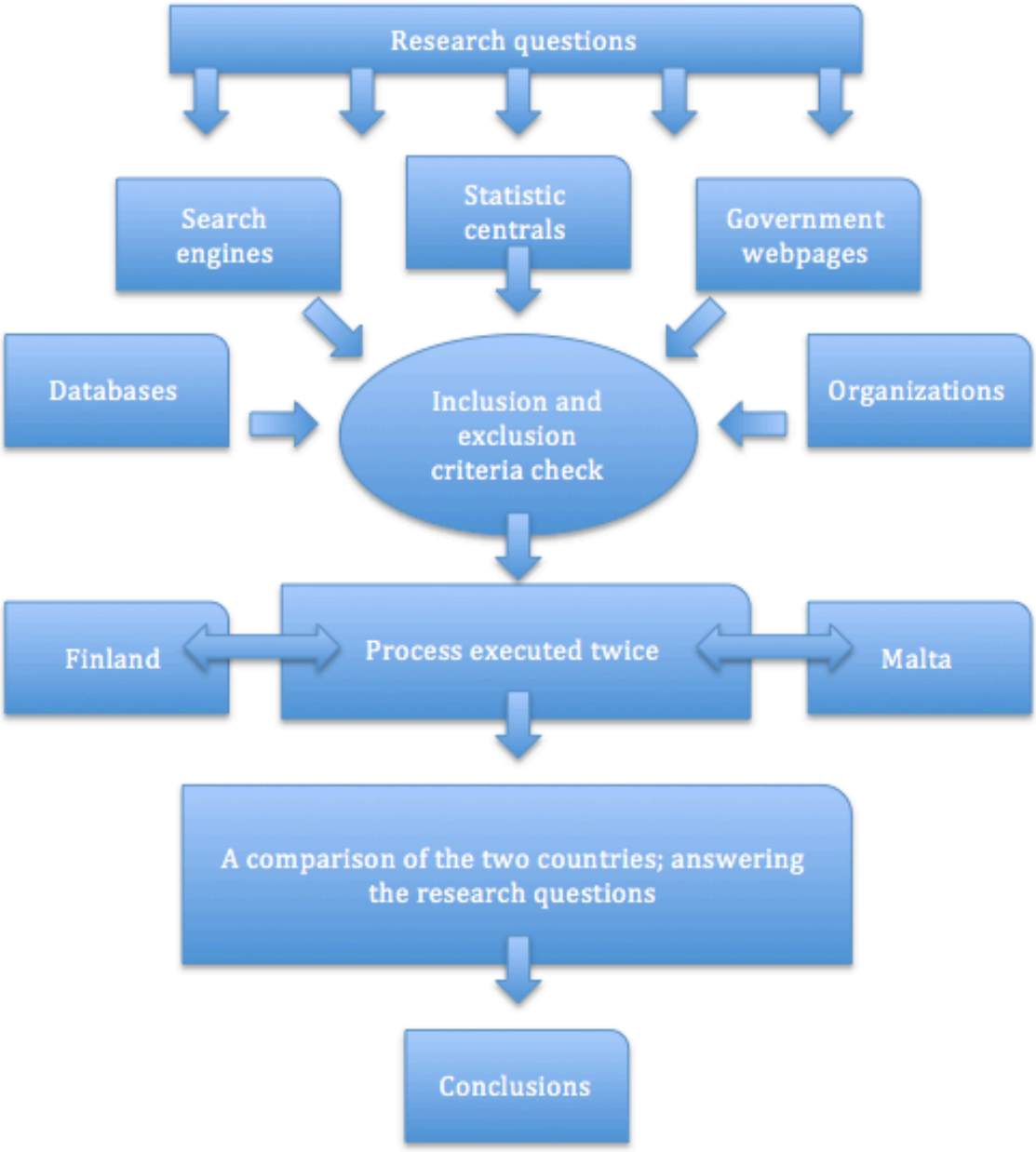

Figure 3. A demonstration of the thesis information gathering process and construction

4 RESULTS

4.1 Finland

On 31 December 2011 the population in Finland was 5401267, 2748733 female and 2652534 male. Since 2002 the population has grown by 194970 and out of them 83995 are over 75 years of age (Institutet för hälsa och välfärd 2012). In 2030 the prognosis is that there will be about 1.4 million people over the age of 65 living in Finland and 178000 out of them are over 85 years of age (Hynynen 2011). Finns can apply for their pension from 63 years of age to 68 years of age depending on their line of work (Varma 2012). Life expectancy for females is around 83 years and 76 years for males (Statistikcentralen 2009).

Finland is a Nordic country situated in northern Europe. We have four seasons, which means that temperatures vary greatly. In winter it can be as cold as -40 °C and in the summer it can be as warm as 35 °C. This brings a further challenge to elderly living in such climate. In winter when it is cold, snowy, icy and slippery there are a lot of fall injuries and in the summer people forget to hydrate and easily suffer from heat strokes.

Resent research indicates that it is more cost effective to invest in health promotion than to treat the health issues after they have arisen. A long-term health program "Hälsa 2015" has been developed based on this fact and is being executed throughout Finnish communities, organizations and the economy. Within the project eight guidelines have been set for various participants and everyday environments. The program is being followed-up by the public health delegation and the social and health care ministry (Perttilä 2012).

4.1.1 Common diseases and conditions

The three most common age-related diseases are cardiovascular diseases, type 2 diabetes and cancer. Other common age related diseases are memory disorders, epilepsy, eye disorders, chronic obstructive pulmonary disease (COPD), osteoporosis, arthritis/osteoarthritis (especially hip and knee) and elderly weakness, which is a relatively new diagnose (Suomi.fi 2011).

Cardiovascular diseases

The most common cardiovascular diseases are elevated blood pressure, coronary artery diseases, decreased heart function and disruption of cerebral blood flow. These are also known as lifestyle diseases. Usually with factors related to hormones, genes and gender. In 2009 there were 11671 people over the age of 75 suffering from a cardiovascular disease (Terveyden ja Hyvinvoinnin Laitos 2012).

To decrease the chance of getting a cardiovascular disease you need to live a healthier life. Eat healthier, stop smoking, reduce alcohol consumption, maintain healthy weight and exercise. Blood pressure is a good indication of health and should be measured regularly. You can either buy your own machine or measure it at your own health center, hospital or nearest pharmacy (Suomi.fi 2011).

Diabetes type 2

Type 2 diabetes is either when the body does not produce enough insulin or when the cells ignore the produced insulin. Without insulin the body cannot use glucose (sugar) for energy. In 2003 there were 103000 people over the age of 65 suffering from diabetes type 2 in Finland. 67000 out of them received medical treatment (Kallioniemi 2006). It most often affect adults and can be caused by overweight, old age, high blood pressure, smoking and metabolic disruption. It is also very genetic, there is a 40% likelihood of the disease passing on to a child with one parent suffering from diabetes type 2 and a

70% chance if both parents suffer from diabetes type 2. A lot of people suffering from this disease will not have noticed it before they go on a regular health check. It may be symptom free or appear as fatigue, low energy, melancholy, irritation, foot ache, blurred vision, frequent infections or numb hands or feet. It is a simple blood test to measure the blood glucose levels if you wish to find out if you have diabetes type 2 and it can be performed at your own health center or hospital. The most important treatment for diabetes type 2 is weight control by exercise and a healthy diet. In some cases medication may also be necessary (Suomi.fi 2011).

Cancer

The most common cancer for men is prostate cancer and for women breast cancer. In 2011 there were 12614 elderly over the age of 75 suffering from prostate cancer and 6872 suffering from breast cancer (Kela 2012). Genes, lifestyle, surrounding, hormones and virus infections can cause cancer but nobody really knows why yet. To be able to treat cancer the most important thing is to detect it early. That is why men aged 50 to75 are recommended to attend a regular prostate check (Cancerfonden 2010). It is done both by feeling the prostate and with a blood test. Women are recommended to check their own breasts by feeling for lumps and when they reach 40 years of age a mammography should be performed on a regular basis (News Medical 2008). Cancer treatments vary greatly depending on the size of the tumor and on the patient health status. They might surgically remove the tumor, use chemotherapy, radiation therapy, hormonal therapy or other therapies.

Memory diseases

Ageing can be visible in brain function through the loss of brain cells. Even though we lose brain cells the connections between the cells might increase and elderly might be able to solve extremely challenging issues. The loss of brain cells are first noticed in the decreased reaction time and whilst memorizing.

A memory check is recommended when you begin to forget peoples names, lose important objects, forget meetings, get confused about where you are headed, find learning new things extremely challenging or if you are hiding or ignoring your memory problem (Suomi.fi 2011).

The most common memory disease is Alzheimer's disease. In Finland there are about 70000 people suffering from this particular disease (AlzPoint 2012). Alzheimer's disease affects memory, thinking and behavior and gradually gets worse. Nothing can reverse or stop the disease so the main goal is to slow down the progression.

There is a big difference in memory disease and memory disorder. Diseases, tumors and external factors like stress or exaggerated alcohol consumption can cause memory disorders like dementia (Luc 2011).

Epilepsy

Following disrupted cerebral blood flow and dementia related diseases epilepsy is the third most common neurological disease for people over 65 years of age. Amongst others epilepsy can be caused by a disruption in the cerebral blood flow, infections, Alzheimer's or other dementia diseases and brain tumors. About 56000 people suffer from epilepsy in Finland and it is twice more common for elderly over 65 than for other age groups (Epilepsialiitto 2012). Epilepsy is disturbed brain activity that appears in the form of seizures or changes in attention or behavior. To determine the illness an EEG (electroencephalogram) is conducted. Other test will also be done to exclude other diseases (Luc 2012). Treatment may involve surgery or medication.

Eye disorders

Age-related macular degeneration (AMD) can cause blurriness, dark areas in the vision field or a permanent loss of central vision. It can be treated and rarely lead to blindness. Since the center of the vision field is useless it causes problems in all day life and can be a great problem.

Glaucoma is another eye disorder that often goes unnoticed but can cause permanent damage or blindness. That is why everybody over the age of 40 should get a regular eye check. It can be treated if it is diagnosed in time.

Grey star is in other words a murky lens that will make it hard for light to get through and vision is impaired. Since grey star nowadays can be easily fixed by surgery it is no longer considered an impairment (Suomi.fi 2011).

Chronic obstructive pulmonary disease

Chronic obstructive pulmonary disease (COPD) is a lung and airway disorder where lung tissue is destroyed and the airways are obstructed and inflamed. The symptoms are increased mucus, coughing and shortness of breath. It is commonly caused by excessive and long-term smoking and most people think it is only "smokers cough". Only one tenth receive it through something else (Suomi.fi, En adress för medborgartjänster). It is essential for people who have smoked for longer than ten years to undertake a spirometry assessment to find out the damage. The best treatment is to stop smoking but medication might ease daily living without treating the problem. In Finland there are about 200000 people suffering from COPD (Andningsförbundet 2011).

Osteoporosis

There are about 400000 people diagnosed with osteoporosis in Finland. It is a common condition that affects the bones, causing them to become weak and fragile. With weak bones a person is more likely to suffer fractures, most often in the wrists, hips or spine. Women who have experienced menopause have an increased risk of developing osteoporosis (Suomi.fi 2011). The diagnosis is give when a 25-30% loss of bone density is discovered. Preventative care includes 1 gram of calcium per day, 800 IU of vitamin D, exercise and quit smoking.

Arthritis

About a third of women and a fifth of men over the age of 75 have arthritis. It causes breakdown of cartilage in joints, most commonly of the knee and hip. This is the main reason for knee and hip prosthetics.

Arthritis will cause pain and stiffness in joints. The symptoms are worse in motion and eases off in rest, but the worst is usually to start moving after a long period of rest. Overweight, a physically challenging job, intense sporting, joint injury, inflammation and genes increase the risk of arthritis. It cannot be cured but treatment may include exercise, losing weight, pain treatment and surgery. A person with arthritis should avoid long periods of immobility and high impact exercise. Water aerobics is a great and less painful way to exercise.

People with arthritis might benefit from using a cane, walking stick or rollator. Pain can be treated with ice packs, painkillers and anti inflammatories. Some doctors might even recommend a cortisone or anesthetic injection (Suomi.fi 2011).

Elderly weakness

This is a relatively new syndrome that may occur with many different names (Suomi.fi 2011). It is a common disorder and cannot always be treated or diagnosed. Symptoms may include sudden weight loss, no apatite, decrease in exercise and a decrease in muscle mass. This is common amongst elderly in institutional care. It may be treated with exercise, strength training, nutritional care, hormones and medication.

Falls

Every third person over the age of 65 and every other person over the age of 80 falls at least once every year. 80% of all injuries over the age of 65 in Finland are fall-related. Half of the people that have fallen will fall again and 15% will fall more than twice. Death following an injury is most often caused by a fall in people over the age of 65.

65% of men and 77% of women that die from an injury is fall-related. In Finland there is about 1300 people over the age of 65 that die yearly from an injury (Pajala 2012).

Most injuries caused by falls are self-treated in their homes but as a person gets older the injuries get more serious and has to be checked at a health care center or hospital. Which is why falls are also getting very expensive for the community.

Elderly can suffer from many types of injuries by falling but the most common one is collum fracture. This may lead to a decline in the overall health and some may not be able to move back into their old environment.

4.1.2 Health care options

You can receive non-urgent care at the health care center nearest your home or in a community where you spend a lot of time. If you do spend a lot of time elsewhere you will have to inform the local health care center at least three weeks before the first visit. You will also have to bring your care plan, which has been formed at your own health care center.

There are rules that guarantee health care to everybody within a certain time frame. If you are in the need of urgent health care you have the right to visit any health center or hospital in Finland, no matter where you come from. A visit to a health care center is normally around 20 euros (Suomi 2011).

There are five university hospitals in Finland: Helsinki, Turku, Tampere, Kuopio and Oulu. These hospitals provide care almost within every field. Central hospitals are a bit smaller and then regional hospitals are the smallest.

In bigger cities you can get health advice via phone. The number can be found on the community website or through the city switchboard. For real urgent emergencies only the Finnish emergency number is 112.

Dental care, home care, rehabilitation, laboratories, mental care and addiction care are also public health services that you can receive through a health care center. If you do not want to wait you can always get care through the private sector. You will get care quickly but it will be three to six times more expensive than public health care.

In Finland we have a great health care insurance system that makes it really easy for Finns to receive proper health care. It runs with taxes withdrawn from every person's wages and that is how the cost of public health care can stay low. The institution is called FPA (folkpensionsanstalten) in Swedish and Kela (kansaneläkelaitos) in Finnish. Everybody has got a Kela-card that authorizes them to a discount on prescribed medication and private health care. If you do not have the card on you, you can apply to get a refund through Kela.

The cost of every public health care service a person receives is documented and if it reaches a certain amount then all the health care for the rest of the year within the same area is cheaper or free depending on the community legislation. This usually occurs to individuals in the need for constant care like home care, rehabilitation or institutional care (Suomi 2011).

Home care

Home care means that a person is living in his or her own home and gets health care or supportive care by health professionals. Such care can consist of anything from transfers, feeding, cleaning and hygiene to medical assistance. On 30 November 2010 there were 51820 people out of 432815 over the age of 75 using home care services (Institutet för hälsa och välfärd 2012). Home care staff may also in cooperation with a physiotherapist or occupational therapist organise a home visit where they determine what kind of daily living aid the client might need. There are a lot to choose from and in most communities you can borrow them for free. The most common ones are shower stools, sup-

port handles/rails, ice picks, crutches, canes, rollators, furniture raisers, cushion risers, wheelchairs, transfer aids, reachers/grabbers, urinals, bed pans, bed covers and hospital beds. These can all be found in many different shapes and sizes (Helsingfors stad 2012).

To be allegeable for home care assistance you need to be over 75 years of age or get Kela's special needs assistance. In some areas a social worker will automatically call people over the age of 75 to arrange a home visit where they assess the need for home care. A decision has to be made within seven working days and in urgent cases it can be made over night (Suomi.fi 2011). The social worker will always customise a care plan for each individual and most often their child or other relative is present to approve the plan and even help the elderly with minor things around the home. Home care needs to be continuous for a certain period and is usually provided a couple times per day or once a week. If the need is less than once a week and family cannot assist, the community will redirect you to private companies. The community is responsible for providing health care to all citizens and there by they in cooperation with a doctor decide who is allegeable for what kind of care.

The cost of home care assistance varies between communities and is determined by each individual's income. As most things in Finland it is paid monthly and most often you can apply for financial support from the community. To provide you with an example of how this works: James income is 1000 euros per month. He gets home care assistance seven times per week and home care medical assistance two times per month. He is in the upper category that pays no more than 35%. According to this he will pay 1000 – 520 = 480 – 35%, which means that James will be paying 168 euros for home care assistance per month (Suomi.fi 2011).

Service home

When it is no longer possible for an elderly to manage on their own in their own home with home care they have an opportunity to apply for a space at a service home. There are both private and public service homes, which may have staff during days, evening

and nights. The idea with a service home is for it to be safe and at the same time as independent as possible. Every home arranges a customised care plan for each individual so that everybody receives the help they need. On 31 December 2010 there were 432815 people over the age of 75 living in Finland and 51395 out of them were living at a service home (Institutet för hälsa och välfärd 2012).

At a service home they can help you with cooking, health benefitting activities, disease treatment, cleaning, washing and spare time activities (HelsingforsRegionen.fi 2011). The cost of living at a service home varies between communities and is determined by each individual's income, in the same way as for home care assistance. In Helsinki the client has to have at least 20% or 250 euros left out of their monthly income after paying the service home fee. The pricing table can be viewed at each cities own website.

Nursing home

Nursing home is for individuals that can neither manage living in their own home with home care nor living at a service home. On 31 December 2010 there were 432815 people over the age of 75 living in Finland and out of them 26839 were living at a nursing home (Institutet för hälsa och välfärd 2012). At a nursing home you will get help with everything all around the clock, every day of the week. You will even get physiotherapy and occupational therapy to assist with rehabilitation and to uphold physical ability. There are both private and public nursing homes. The goal with living at a nursing home is to keep each patient as active as possible but sometimes a shortage of staff or lack of time compromises this. The shortage of staff is a direct consequence of the communities trying to save money.

A person whose carer is temporarily unavailable or a person who has had surgery and is healthy but cannot manage yet on their own might be moved to a nursing home for a short period of time. The cost of living at a nursing home is determined by your income,

in the same way as for home care and service home. Fees vary between communities and can be found on each cities website (Suomi.fi 2011).

4.1.3 Health promotion

Health promotion indicates ways to improve overall health in population. It can be executed through a campaign, an encouragement, an activity, a competition, a guide or many other ways. A guide named IKINÄ-opas has specifically been written to prevent falls in elderly. It was published in 2012 in Tampere, Finland, written by Satu Pajala in cooperation with Terveyden ja Hyvinvoinnin Laitos (THL) and is only available in Finnish. Another example of a health promotion is the yearly Hälsostegen by Folkhälsan. It is based on the recommendation that everybody should walk 10000 steps per day. Every club can sign up and the goal is 300000 steps in 30 days per each individual. Folkhälsan gives away 500 free step counters to new participants and at the end of every day everybody sing in online individually to register their steps. The winning club with the most steps will receive an activity day. The 2012 campaign is held in October (Folkhälsan 2012).

IKINÄ-opas

The 2012 IKINÄ-opas (Pajala 2012) is based on the previous edition published in 2005. The new edition has been improved and up-dated considering users criticism and is now used by professionals, elderly themselves and relatives and it is also used as study material. The guide is created to prevent falls in elderly by informing everybody involved what is important, what they should think about, what they should be doing, why and how.

IKINÄ has created a chart for fall prevention used by professionals during health checks. It can be used for all elderly regardless their surroundings.

Figure 4. The IKINÄ fall prevention chart (Pajala 2012 p. 16)

In the chart they begin by asking if you have fallen during the last year. Depending on the answer you either go to the right or downwards. If you said no then you go straight to general information about fall prevention. If you said yes then your balance will be checked and the likelihood of you falling will be assessed. After that you will receive the advice and help you need.

In IKINÄ-opas they talk a lot about the importance of physical exercise. Endurance training, strength training and balance training are all mentioned as equally important. There are instructions on safe exercise and safety equipment for all day living. Nutrition also has a chapter in the guide along with how certain medication can affect the body. The fear of falling is discussed and there is also a summery on common diseases and disorders. Different test are explained and all the forms are collected at the end.

4.1.4 Guidelines

Physical activity

The Finnish UKK institute has created two exercise charts. One for people aged 18-64 with a disease or disability that affects their training (Pajala 2012) and one for elderly over the age of 65 (UKK-instituutti 2012). The idea is the same throughout both charts but the form of exercise has been modified to suit the different age groups.

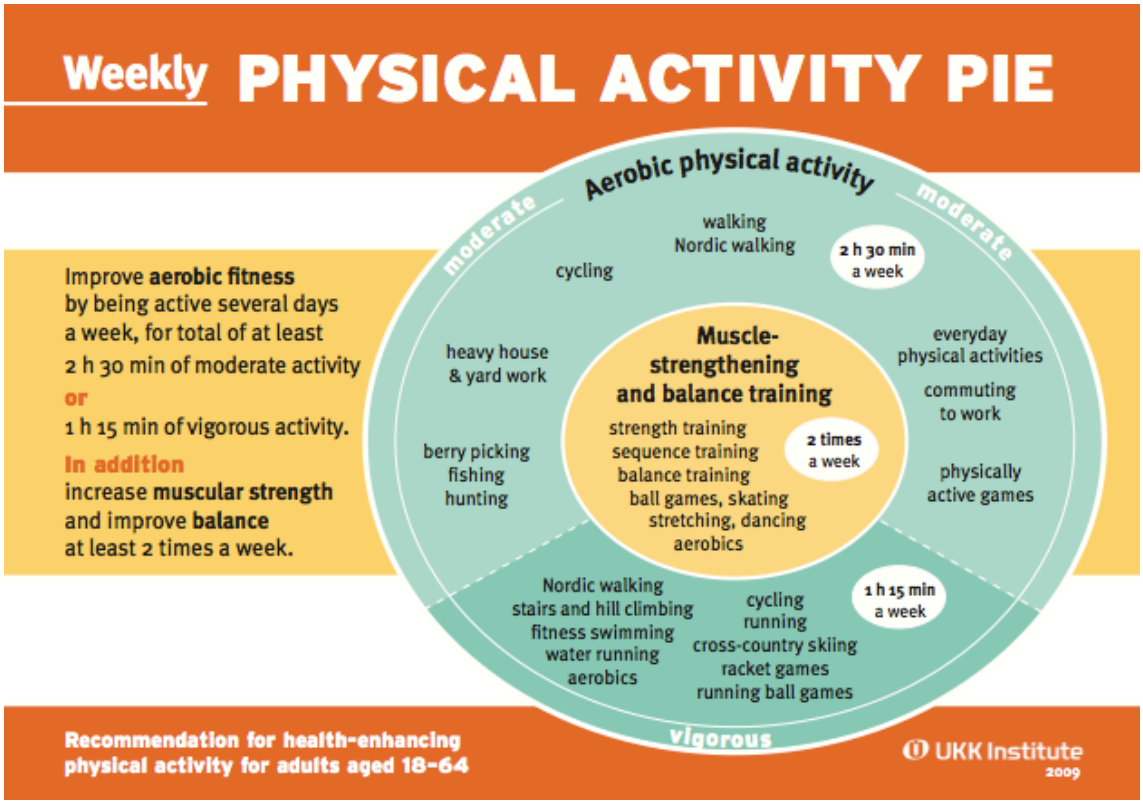

Figure 5. The UKK Institute's Physical Activity Pie for people aged 18-64 (UKK-instituutti 2012)

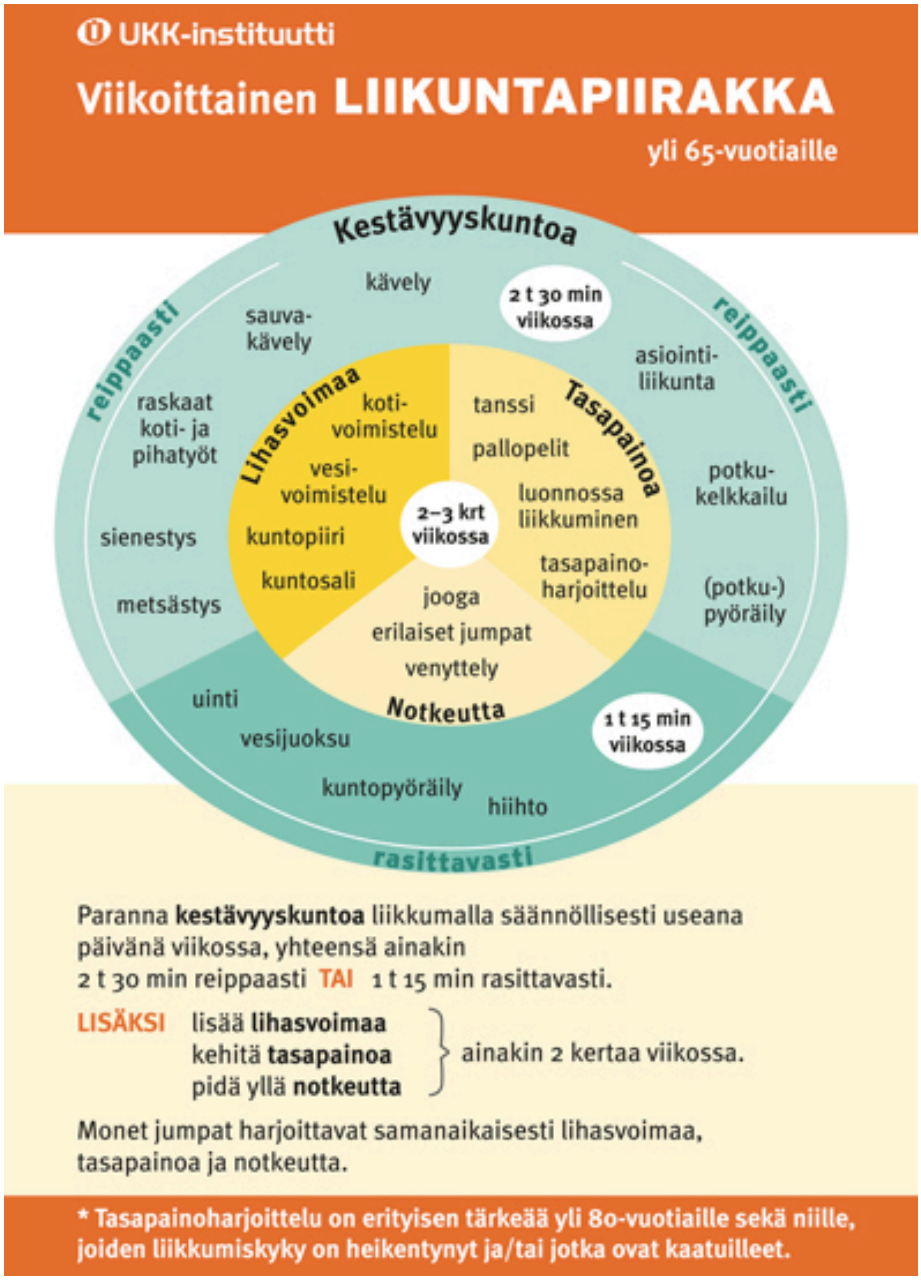

Figure 6. The UKK Institute's Physical Activity Pie for people over the age of 65 (UKK-instituutti 2012)

The second chart is designed for people over 65 years of age. Unfortunately it is only available in Finnish but as you can see they are very similar. According to this second chart people should be performing vigorous endurance training like swimming, water jogging, exercise biking or skiing for 1 hour and 15 minutes per week. If this is not possible the other alternative is moderate endurance exercise like walking, Nordic walking,

heavy house and yard work, mushroom picking, hunting, everyday physical activities, kicksledding or cycling for 2 hours and 30 minutes per week. On top of this they should be performing muscle strength training, balance training and mobility training 2-3 times per week. Examples of muscle strength training are gym exercise, circle training, water aerobics and home exercise. Under the balance title they mention dance, ball games, nature trailing and specific balance exercises. Yoga, different gym classes and stretching are examples of mobility training. It is highlighted at the bottom that balance training is especially important for elderly over the age of 80, elderly with a weakened physical state and for those who have already fallen.

To benefit the most from the exercise everybody should, at least to a beginning, be instructed on the correct techniques by a physical exercise instructor or a physiotherapist. This way the exercise will be both safe and effective. A physiotherapist will also be able to customize the training to all individuals and their needs in regard to their specific disability.

The motivation might be low, especially for those suffering from depression, pain, a weakened health status, a memory disease and for those who have never exercised before. In these cases it is imperative to find an exercise form that will suit every individual. For the exercise to be beneficial the person needs to be and stay motivated. If not, there is a big chance that they will give up. Some might prefer to train by them selves in their own home whilst others might need the social scene combined with an instructor to get motivated. The lack of knowledge often stops people from joining exercise groups or seeking exercise advice. Most people would rather do nothing than look stupid in front of others.

It does not take more than a short period of immobilization to weaken the all-round health of an elderly. If this is the case the most important thing is to get up, sit on the edge of the bed, stand up and take a few steps beside the bed. It might not seem like a lot but this will stimulate the balance system and the cardiovascular and respiratory sys-

tem (Pajala 2012). The stimulation will accelerate the recovery and enable the best possible outcome.

Nutrition

A versatile diet and plenty of fluid is the most important factor in elderly wellbeing and fall prevention. According to Pajala (2012) 14-39% of all elderly staying at a hospital or nursing home are malnourished or wrongly nourished. This can be the result of many factors. A disease can suppress appetite or make it hard to chew or swallow. Problems with teeth or the mouth in general might complicate eating and lead to elderly not eating enough. Depression, loneliness, laziness and a poor physical ability can affect the mental state, which could make it feel too hard to go grocery shopping and cook a meal.

Since nutritional problems increase the chance of falling, it is out of most importance to detect nutritional problems early. Besides the increased risk of falling there are other side effects from poor nutrition that might be easier to notice. For example dizziness, confusion, fatigue, decreased physical ability, loss of muscle mass, decreased body control, depression and apathy.

The easiest way of keeping track of somebodies nutritional status is to weigh them regularly. Pajala (2012) indicates that the BMI (Body Mass Index) of an elderly should not be less than 23. You should also be attentive to sign such as sudden weight loss, more than 3 kg per month might be a sign or if the person is not eating enough, has a poor appetite or is only eating mashed foods or fluids. Another sign might be reoccurring infections or pressure sores. Poor nutrition will also slow down the healing process.

In the IKINÄ-opas they list four key factors to a healthy diet. Consume enough energy, protein, fluids and vitamin D. Energy is measured in kcal (kilocalories) and can be found in all foods and drinks except for water. The greatest source of protein is meat and other animal products such as dairy and eggs. Another great source is soybeans. Water is the recommended source of fluid. If you have a fluid imbalance you should avoid alcohol, coffee and tea since they increase the excretion of water from the body.

Vitamin D is known as a vitamin but is really a steroid hormone. The greatest source is sunlight but it can also be found in small amounts in foods (Office of Dietary Supplement 2011). It is recommended that everybody consume a vitamin D supplement on a daily basis all year round.

Alcohol

Alcohol consumption is increasing amongst all ages and genders. Men still drink more than women and it is getting more common to ingest alcohol on a daily basis. Amongst elderly it is commonly used to relieve pain, symptoms caused by a disease, depression and loneliness. Studies show that a small amount of alcohol have a beneficial effect on health but when exceeded has dramatically negative effects. According to the IKINÄ-opas the top limit for consuming alcohol is two servings in one sitting and seven servings per week. One serving contains 12 grams of alcohol, which can be found in 33cl 5% beer (Finer 2011).

The risk of falling and sustaining an injury is increased by alcohol. Even a small amount of alcohol can affect elderly's central nervous system in a way that balance, attention and reaction ability is impaired. Alcohol also blocks the effects of certain medications and can lead to a drop in blood pressure, dizziness and feeling nauseous.

The health team should always be informed if a person is used to drinking increased amounts of alcohol and it should be a standard question on all health forms. When a doctor prescribes a medication he should always mention the effects it will have when consumed with alcohol. Some medications might even cause addiction or lead to death when mixed with alcohol (Pajala 2012).

Sleep

Over 50% of people over the age of 65 have experienced sleeping difficulties and every third has reported sleeplessness (Pajala 2012). Problems with sleeping are not a normal side effect of getting older. The reason why it affects elderly more is that they suffer from more diseases, pain, changes in health status, psychological changes and environ-

mental changes. When treating sleeping difficulties they should find and treat the reason instead of only prescribing sleeping medication.

There are many reasons to why sleep may increase the risk of falling. Poor or no sleep will cause tiredness, concentration difficulties, memory problems, mood swings, decreased physical ability and a poor quality of life. Also elderly that take naps during the day have an increased risk of falling by 30% (Pajala 2012). The connection has been confirmed but there are yet no answers to why. Since sleeping medication is designed to make people fall asleep their senses also weaken. The effect might last a couple of hours after the person has gotten out of bed and thereby increase the chance of falling. IKINÄ uses an example from an American study of elderly women using benzodiazepine. The study shows that these women are 50% more prone to falling than women in the same age group that does not use benzodiazepine.

To prevent sleeping difficulties you should have routines, a regular sleeping pattern, good sleeping environment, not use the bed for anything but sleeping, avoid coffee, tee, hot chocolate, alcohol, chocolate and cigarettes for a couple of hours before bedtime, not sleep during the day, exercise daily, get fresh air daily, not watch emotion triggering programs and movies before going to bed and when you experience sleeping difficulties you should get out of bed and have something to drink or something small to eat (Pajala 2012).

Fall prevention

Fall prevention has shown best results when started in good time. Especially for elderly it is much easier to maintain a good physique than to begin building one when they are in the risk zone of falling or already have fallen.

The exercise need to be versatile, effective, daily, continuous, gradually getting harder, individually customized, taking diseases and disabilities into consideration, clearly and properly instructed and safe.

Medication needs to be checked every six months and medications that can increase the risk of falling should be decreased. Vitamin D should be a part of the daily intake. In winter none skid soles are a must and ice pick canes might be a good option to preserve good balance on slippery surfaces. Elderly's homes should also be adapted to meet their requirements.

4.2 Malta

There were 412970 people living in Malta in 2009, 207551 females and 205419 males. 25973 out of them are over 75. The population has increased with 15674 people since 2002 and out of them 5103 are over the age of 75 (NSO, National statistics office Malta). The population prognosis for 2020 is 432943 people (Gazetteer 2012). At the moment the Maltese pension age is 60 years for females and 61 years for males. In the future the pension age will be 65 for both females and males due to the increase in life expectancy and decrease in birth rates (Ministry for Social Policy 2011). In 2005 the average government "two thirds pension" was 104.82€ a week and in 2006 the maximum government pension was 208.18€ a week (The Social Security Directorate General 2011). The average death age is 82.7 for women and 77.9 for men (The Times). Maltese climate is typical of the Mediterranean. The summers are hot with temperature max around 31°C and winters are mild with lows around 10°C.

In 2008 they estimated 15% of the Maltese population to be living under the poverty threshold. Amongst elderly over the age of 65 22% were considered to be at risk of poverty. The EU average is 17% (Sammut 2010).

The most recent Maltese health interview survey was conducted in 2008 and 2010. According to these surveys the major lifestyle risk factors are smoking, alcohol consumption, drug consumption, nutrition, physical activity and sexual health. By acknowledging these issues and finding solutions Malta is hoping to gain a better society for all parties. In the words of Dr. Joseph Cassar, minister for health, the elderly and community

care: “Apart from the obvious economic benefits, this is an investment in the life of every Maltese citizen – in ensuring that every Maltese citizen not only lives longer but also spends more years of life living in good health, reducing the years spent living with a disability to a minimum” (Departement of Health Information 2008).

4.2.1 Common diseases and conditions

The most common chronic diseases in Maltese elderly are diabetes, cardiovascular disease, arthritis, high blood pressure, cancer, poor vision, depression and kidney disease (Gauci 2006). According to Eurostat 21% of the Maltese female population are obese (BMI >30) and out of the male population 24.7% are obese (European Commission, eurostat). The highest obesity rate in females is found in the 65-74 age group and amongst males it is found in the 55-64 age group (Department of Health Information 2008).

In 2010 the main cause of death due to disease was in circulatory system. Ischemic heart disease, stroke and heart failure accounted for 38% of all deaths. Cancer was the second most cause accounted for 29% of deaths. In males the most common cancers are lung, colon/rectum and pancreas and in females the most common cancers are breast, colon/rectum and lung (Ministry of Health, the Elderly and Community Care 2010).

10% of the Maltese population suffered from diabetes in 2005, 9% out of them were diabetes type 2 and 84% out of them were overweight or obese (Townsend Rocchiccoli & O’Donoghue & Buttigieg). In 2010 there were 21.6% out of elderly over the age of 60 who suffered from diabetes (Ministry of Health, the Elderly and Community Care 2012).

1419 people were suffering from arthritis in 2009, which is the third lowest rate in the member states of the European Union. Even though, there are over 200 patients for every rheumatologist (Grech 2009).

In 2009 kidney diseases were noticed to be increasing. Between the year of 1999 and 2007 there were 97 kidney transplants in Malta. Because of other high-risk conditions only half of patients on dialysis are eligible for a transplant (Busuttil 2009). The kidneys' main function is exerting toxins and excess water from the blood. They also help control the blood pressure, produce red blood cells and keep bones healthy. Most sufferers are over 50 years old and the disease is nonreversible. Underlying causes that may speed the process are diabetes, high blood pressure, obesity and smoking.

Hypothermia can also be a danger for elderly since most homes are not properly insulated. When the body's internal temperature drops below 35°C it is called hypothermia and when left untreated could be fatal. This increases the risk of fall injuries and other injuries that might occur when the body, brain and pulse slow down. Severe hypothermia needs medical attention but first aid is warm liquid food, more dry clothes and a hypothermia blanket. Absolutely not a bath, heat packs, alcohol or a massage (Vella 2009).

4.2.2 Health care options

Malta's health care is divided into public and private health care. They have hospitals, health centers and clinics. All services are available in long-term or short-term. Other services offered to elderly are home care, day centers, night shelters, residential homes and long-term stay residential care facilities for those elderly who despite all the community support still would find it difficult to cope in their own home (Health, the Elderly and Community Care 2012). The public health care system is funded through taxation and national insurance. Care in private facilities is funded by private insurance or out-of-pocket payments (National Commission for Higher Education 2008).

Home care help service offers non-nursing, personal help and light domestic work. People over the age of 60 are eligible but elderly over 85 are prioritized. To apply you fill out a form at Community Care or the Department of Elderly. There is no administration

fee but the service itself costs 2.33€ per week for a single person and if there is more than one person benefitting from the services it will cost 3.49€. Preparation of meals are an additional cost of 1.16€ for a single person and 1.75€ for multiple persons. You can choose to go and pay the department or they can automatically take it out of your pension. In 2008 there were 3390 people over the age of 60 using these services. Other home care help services are telecare, meals on wheels, handyman service and incontinence service (Health, the Elderly and Community Care 2012).

Day centers help, prevent social isolation and motivate elderly to participate in activities. People over 60 years of age are eligible, they can apply by filling out a form and priority is given to those at risk of spending long hours on their own. The fee varies between 2.33€ and 5.82€ per month depending on how often the service is used. In 2009 1379 people over 60 years of age attended day centers (Health, the Elderly and Community Care 2012).

Night shelters offer a secure environment for elderly that live alone and feel unsecure. Preference is given to elderly women over the age of 60. To apply you fill out a form from the local council, the shelter itself or the Elderly Community Care Department. The fee is 2€ per night (Health, the Elderly and Community Care 2012).

Residential homes provide care consisting of a physically and emotionally safe and secure environment for people over the age of 60 that can no longer manage to live in their own homes. An application form can be filled out at the local council or at the care departments. Since 2004 the fee is 60% of the persons net income but the person cannot be left with less than 1397.62€ per annum at the resident's disposal. In 2009 there were 731 people over the age of 60 using these services (Health, the Elderly and Community Care 2012).

4.2.3 Health promotion

In 2012 Malta released a national strategy for a healthy weight. Citing Dr. Joseph Cassar in the foreword of this strategy, “It is clear that Malta, like many other countries in the world, is experiencing significant challenges to maintain a healthy weight across its population. This strategy seeks to address these challenges, in as comprehensive and as organized an approach as possible”.

Since overweight and obesity is a big problem in Malta there are many health promotions addressing this issue. Many of them are promoting physical activities in schools, which is a good place to begin preventing the issues before weight becomes a real problem.

MEHFA (Malta Exercise Health & Fitness Association) has in cooperation with the government and local councils managed to place free outdoor gyms all around Malta. MEHFA support these places through online personal training where they advice about which machine to use and how. They organize seminars for weight loss and inform the population how they can lose weight by walking, jogging and using the outdoor gym. The gyms are recommended for children from the age of twelve up to elderly (Malta Exercise Health & Fitness Association 2010).

The department for health promotion and disease prevention organized a free voucher that entitled anybody from the age of 14 and over to a free three-week gym membership at the Junior College gym in Msida. This campaign was in 2010 and based on the fact that physical activity is one of the primary factors that prevent people from getting sick with non-infectious illnesses. They also raised the fact that places for exercise should be easily accessible (Health Promotion Unit 2010).

The weight reduction service by the Health Promotion Department was first executed in 1995. It was a key breakthrough in services provided for free by the National Health

Service. By motivating patients to lose excess weight over a period of eight weeks they tackled the most prevalent non-communicable diseases. The contenders were self referred or advised to join by their doctor or other health profession. This program uses the cognitive behavioral model by Prochaska and DiClemente. Throughout the program each individual's progress is reported at every stage so that a facilitator can monitor outcomes and advice accordingly. The program encourages change in lifestyle. It focuses on healthy balanced meals, regular exercise and coping with inputs that might lead to binges on high calorie foods. The participants are weighed regularly during these eight weeks and depending on gender and the extent of the obesity they are put on a low calorie diet around 1200-1500 Kcal per day. They are placed in groups of 20 people and through group work they motivate each other so that they get the necessary psychological support. People under 25 years of age and individuals with a medical history unsuitable for the program are not allowed to participate. It is estimated that each individual that exercise 30 minutes three times a week and follow the diet will lose 3.5 kg during the eight weeks. The participants have been very pleased with the program and say it has affected their whole family in a positive way (Ellul 2007).

4.2.4 Guidelines

Nutrition

In the National strategy Malta has put up six guidelines and targets to reach by 2020. The first one is to reduce the frequency of intake of processed meat product. It currently stands at 15% per day and the goal is to reduce it by 5%. This is based on a association with a very high fat content. The second guideline is to increase the frequency of intake of fish. Currently 41.6% has reported that they never consume fish and the goal is to reduce it to 20%. The third target is to increase the population who eat vegetables on a daily basis by 25%. The goal is to eat five fruit and vegetables a day. Currently fruit consumption is 74% on a daily basis and vegetable intake is around 50%. The forth one is to reduce the intake of sweets, sweet pastries and sugared soft drinks by 10%. Currently it is being consumed on an average of six times per week. The fifth target is to

reduce salt consumption by 10%. 24% add salt at the table and 47% whilst cooking. It is to be reduced or substituted by low-sodium alternatives. Maximum consumption should be 5g per day. The last goal is to reduce the mean daily intake of animal fat per capita by 10%. In 2005 the mean daily intake per capita was 21.3g per person. A shift from oils high in saturated fats to healthier versions high in unsaturated fats is recommended (Superintendance of Public Health & Ministry for Health, the elderly and Community Care 2012).

Physical activity

According to a survey in 2008 about 18% males and 16.5% females between the ages of 65 and 75 participate in a moderate level of weekly physical activity. In the plus 75 years of age the rate for males were 9% and 11% for females.

Older adults over the age of 65 should follow the same guidelines as other adults but with due consideration for the intensity and the type of activity. This age group should specifically be focusing on strength, coordination and balance training. 30 minutes of moderate intensity physical activity 5 days per week will have the same health benefitting results as 20 minutes of vigorous intensity physical activity 3 days per week or a combination of moderate and vigorous intensity physical activity together with 8-10 muscular strength exercises at least 2 days per week. The recommended times can be split up but not for shorter periods than 10 minutes. 45-60 minutes of moderate intensity physical activity per day is necessary for many people to prevent weight gain or to reduce overweight (Superintendance of Public Health & Ministry for Health, the elderly and Community Care 2012).

Smoking

In 2008 smoking attributed to 372 deaths in Malta, 260 were males and 112 were females. The daily smokers decrease after the age of 54 for both genders. In 2008 25.2% of the population was smoking. Malta has got the fifth lowest rate of smokers within the European Union member states after Portugal, Sweden, Finland and Slovakia. The majority of non-smokers reported nearly never being exposed to passive smoking indoors. The most common places for being exposed to passive smoking indoors were public

places, public transport and indoors at work (Department of Health Information 2008). Smoking in enclosed public places was banned in 2004 but the law has been ignored, especially in the nightlife district. In 2013 the ban on smoking will extend further to all public places (Cooke 2010).

Alcohol

The lowest weekly consumption rate of alcohol is in those over 75 years of age but the daily consumption increases with age. The peak for men is in those over 75 years of age with 16% consuming alcohol on a daily basis. For women this peak is in the ages between 65 and 74 where the daily consumers are 4.1% (Department of Health Information 2008). The national agency against drugs and alcohol abuse is named Sedqa. They offer care services, primary prevention services, residential programs, community services, help-lines, intake assessment, outreach, crisis intervention, counseling, support for family and friends and secondary prevention services within primary and secondary schools and workplaces. Malta does not have any government recommended guidelines but the Sense Group (TSG) has put together a list to follow based on WHO's low-risk drinking definition. Women should not drink more than two drinks and men not more than three drinks a day on average. You should try not to exceed more than four drinks on any one occasion. In some situations when driving, if pregnant or in certain work situations alcohol is not to be consumed. It should also be abstained at least once a week (Alcohol in Moderation 2012).

5 CONCLUSIONS

Even though Finland and Malta have different climates and socioeconomics they are quite similar. When researching common diseases; diabetes, cardiovascular disease, high blood pressure, arthritis, cancer and poor vision all came up under both countries. There were some diseases that were only mentioned in one of the countries. Finland mentioned memory diseases, epilepsy, osteoporosis and elderly weakness. For Malta these were depression, kidney disease and obesity. This does not mean that the countries do not have all these diseases. It means that these were the most common diseases that the individual countries were focusing on. Both countries also discussed the danger of falls in elderly. Within guidelines and health recommendations both countries were focusing on exercise, nutrition and alcohol whilst Finland talked further about sleep and Malta about smoking. Many of the recommendations in both nations were taken straight out of the World Health Organization's guidelines.

Both Finland and Malta have a public health insurance that is based on taxes. The two countries have public and private health care, home care and nursing homes. The biggest difference found was that Malta also focus on institutions that only work as night shelters or day centers for all elderly, not only the diseased. The biggest difference in the whole thesis was the age limit for when elderly can apply for additional care services. In Finland you have to be 75 years and older and in Malta the limit is 60 years and older. If a younger person needs care services a doctor can arrange this in both countries.

Exercise is the main focus point for health promotion in both countries. Both countries follow the World Health Organizations guidelines so the recommendations are exactly the same in both countries. The two nations also organize different sized events with different time frames. The biggest difference here is that Malta can utilize the outdoors a lot more since Finland is covered by snow and ice for a long period of each year. The two countries have a slightly different view on nutrition. Finland is bringing up the problem with malnutrition whilst Malta is focusing on obesity, but in both countries el-

derly are not receiving the right amount of vitamins, minerals and other important nutrients.

The elderly situations in both countries are quite the same. There is a big problem with the ageing population, the cost of the elderly population and all elderly not receiving the proper care they need. Both countries are aware of this global problem and are tackling it on their own and together with the help of the World Health Organization. The two countries need to become healthier by exercising more and eating right. That way elderly will need less care and cost less for society. This is a long project and will need to be adapted by all parties in society worldwide.

6 DISCUSSION

The thesis is an investigative thesis using empirical mapping. This worked exceptionally well to answer all the research questions. It gave the thesis a systematic approach with a natural flow. The inclusion and exclusion criteria did not have to be altered and was easy to follow and kept the thesis on a straight line. The references used for this thesis are all reliable sources. The best references were singled out from databases, search engines, statistic centrals, government webpages and organizations. The goal was to use statistics and references from the last 10 years and the oldest reference used is nine years old. To check the validity of the guidelines found throughout the references an instrument called AGREE II was used. It is available for free online which makes it easily accessible for everybody and the instructions were clear and straightforward.

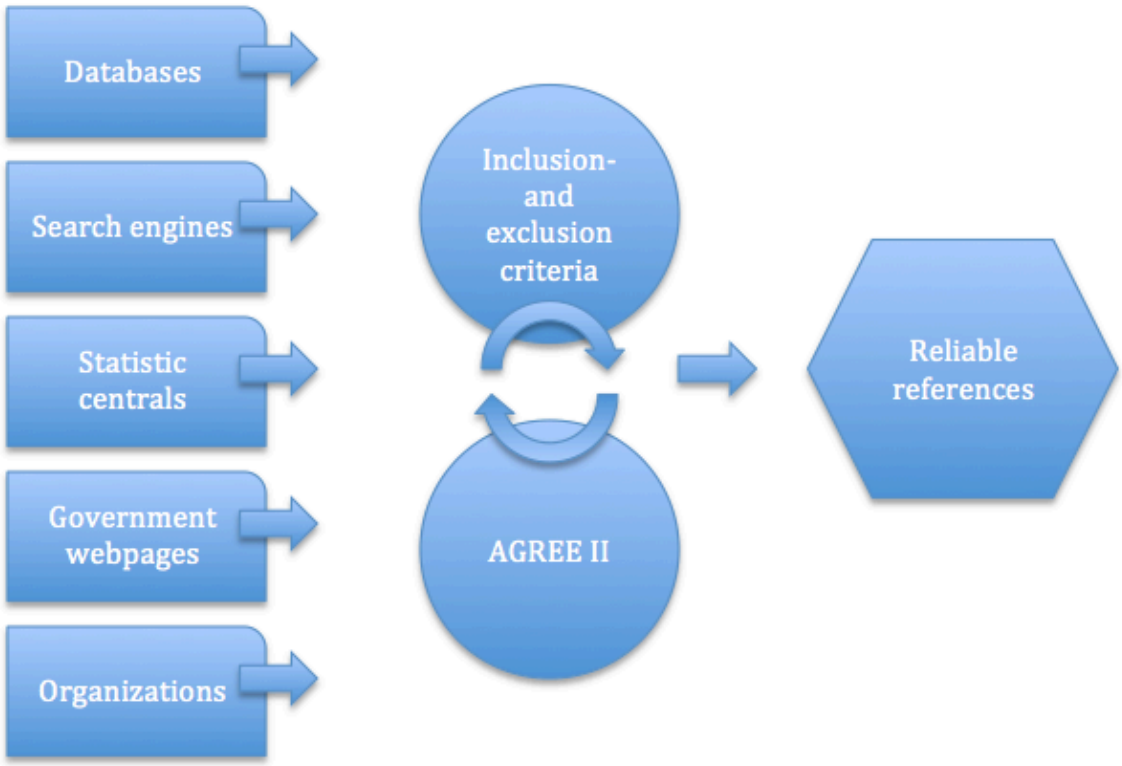

Figure 7. An illustration of the research process

Finland has got a lot of health-related information gathered within the same organizations and webpages, which made it easier to find correct information. It was much harder to find the right information about Malta, everything seemed to be spread out over

multiple webpages and for guidelines they often referred to American webpages. The Maltese health statistic central also had very limited information online. The results are great as an overall base for future projects but for more detailed information a more specific investigation should be conducted.

In relation to physiotherapy this is a very important and current topic. A large part of the physiotherapy clientele is elderly and most of them would not have the existing symptoms if they followed health recommendations set for their age group. It takes up a lot of time and government funds when it instead could be used for more serious disabilities. The problem is how to get everybody thinking about their health and preventing disabilities when they feel healthy.

According to the results we now know that Finland and Malta are pretty similar when it comes to health issues. We can use the same projects but with a slightly different approach to suit the climate and age differences. It is a great thing for two nations to be cooperating and the results will be much more adaptable to the rest of the world. For society this means that we can learn from other countries and use their ideas to create a more sustainable future. When it comes to physiotherapy we know have a better understanding of the health issues for elderly in Finland and Malta. We know which areas to focus on and that we need to address the issues before they arise. The worldwide problem is dealing with the issues after they have arisen when everybody should be focusing on preventative care. This thesis has pinpointed the major elderly health issues in Finland and Malta. We now know which issues to attack within preventative care and why this is important. Hopefully this will improve the cooperation between Arcada University of Applied Sciences and Malta University and make the way for a more sustainable future.

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APPENDIX 1

AGREE II

DOMAINES	Scope and purpose	Stakeholder involvement	Rigour of development	Clarity of presentation	Applicability	Editorial independence
IKINÄ	92%	97%	89%	94%	44%	75%
THL	71%	75%	60%	79%	24%	78%
UKK	89%	62%	45%	80%	45%	67%
National strategy for a healthy weight	94%	73%	91%	97%	52%	83%
National Strategy	84%	83%	81%	72%	49%	77%
Department of health information	92%	89%	62%	89%	43%	64%
WHO	73%	84%	85%	92%	52%	75%
Alcohol in moderation	75%	35%	28%	82%	30%	70%
Malta exercise health & fitness association	82%	93%	77%	82%	56%	78%
Health promotion unit	62%	75%	62%	84%	50%	69%