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**PROMOTING HEALTHY NUTRITION AMONG THE ELDERLY LIVING IN A SERVICE HOME** 

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# ABSTRACT

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the elderly living in a service home	e. The aim of this thesis was ealthy nutrition among the el	f promoting healthy nutrition in the care of s to explain how some basic nursing inter- lderly. The authors' intention was that this among the elderly.		
that included 6 open-ended question in Kuusikumpu Service Home. Th	ons. The questionnaires were ey included 2 registered nu	data was collected through questionnaires delivered to 10 nurses who were working rses and 8 practical nurses. Also 8 nurses icipants. The data was analyzed using in-		
The study indicated that the main factors of promoting healthy nutrition were improving meal preparation, planning individual nutritional needs, adequate fluid maintenance, nutritional assessment, staff training and information. Furthermore, there were some challenges that the nurses encountered in providing good nutrition to the elderly living in a service home. The results of this study will serve as supportive interventions for nurses when facing challenges in working with elderly to improve their nutrition.				
Key words Healthy nutrition, the elderly, nurse	es, nursing interventions. au	alitative research, content analysis		

# LIST OF ABBREVIATIONS

- BMI Body Mass Index
- E- SPEN European Society for Clinical Society and Metabolism
- MNA Mini- Nutritional Assessment
- MUST Malnutritional Universal Screening Tool
- MST Malnutrition Screening Tool
- PEM Protein Nutritional Malnutrition
- THL Terveyden ja Hyvinvoinnin Laitos
- WHO World Health Organization

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## **1 INTRODUCTION**

The elderly population is increasing dramatically worldwide. It has been estimated that during the years 2015 to 2050 the number of the elderly will double from 12% to 22% all globally. According to the World Health Organization (WHO), approximately 80% of the elderly will be living in low and middle income countries. In Finland alone, by the year 2040, the population of older people above 65 years will be more than one quarter of the entire population, causing greater public health challenges due to the increase in demand of health service provision. Therefore, the practice of proper nutrition is important for living healthy and especially so for older adults. The nutritional state of an individual affects his or her development from childhood to adulthood as well as in old age. In order to decrease physical and mental changes associated with aging, it is important early in life to acquire the habit of eating a nutritious diet, maintaining a healthy body weight and engaging in physical activities.

Healthy nutrition is essential in promoting healthy aging in the elderly. It has been found that nutrition plays an important role in the prevention and treatment of diseases in all aging. For instance, among the older people living in service homes, hospitals or the ones living independently. Besides, the changes in aging can influence the habit of eating healthy. As people get older their functional abilities are reduced and these affect the need of proper food intake in the elderly, increasing the risk of malnutrition. Therefore, neglecting nutritional care among the elderly can affect their health, living conditions and quality of life. Hence, to ensure successful aging and reduce the effect of diseases as well as disabilities in the elderly, good nutritional practices need to be implemented by health care professionals. For instance, dietary recommendations, culturally sensitive foods, nutrition services, physical activities and supportive nursing care need to be carried out.

The purpose of this study is to explore nurses' experiences of promoting healthy nutrition in the care of the elderly living in a service home. The aim of this thesis is to explain how some basic nursing interventions can be used to improve healthy nutrition among the elderly. The authors' intention is that this thesis could create an awareness of the importance of nutrition among the elderly. Interest in this subject was identified after the practical experiences the authors had during the practice in nursing homes. The authors realized that elderly persons' nutrition was inadequate due to insufficient knowledge and skills of nurses in providing good nutrition. The authors showed concern to find out what interventions can help to improve the nutritional care of older people.

### **2 THEORETICAL FRAMEWORK**

The theories and concepts in this study will be defined and explained in this section. Quality of life as well as nursing knowledge and skills will also be considered. Specifically, the theoretical framework is a thorough approach which will be used to serve as a guide for nurses in promoting good nutritional care for the older people.

# 2.1 Aging

Aging is the process of becoming old and a natural part of human development stages. On the biological level, it is inevitable and uncontrollable due to molecular and cellular damage, which may lead to a gradual decrease in physiological function. Aging is usually accompanied by physiological changes that can have a negative impact on an individual, although these changes might vary depending on how one approaches the situation. Nowadays people are expected to live longer due to the decrease in mortality rates among the old and the young. Since the aging population is increasing dramatically worldwide, it has been a great challenge to the health and social system to deliver services to every individual (WHO 2015, 3-13).

Gerontology is a human science that was developed in to study on physiological, social and biological human aging. Old people are of benefit not only to their own families but also to the community as a whole. Healthy aging is very crucial in every human development and every individual should practice good nutritional lifestyle in order to achieve optimal health. It is a state of having absence of chronic diseases. Moreover, it helps in developing and maintaining of functional ability to promote well-being in aging. (Nilsson, Bulowak & Kazemib 2015, 497) Multi- morbidity is quite common during old age. It is the presence of more than one chronic disease at the same time in an individual. As people age they tend to experience this situation, which causes functional decline and decrease in quality of life. Moreover, it may lead to increase in mortality rate due to high cost of treatment to the health care. Aging is associated with complex functional changes. The most common are, movement, sensory, cognitive, immune and skin functions. Professional education and training is encouraged for better understanding and differentiating of elderly aging process and challenges due to aging should be put into practice when providing functional and psychological care. (Ryan, Wallace, O 'Hara & Smith 2015, 1–12.)

#### 2.2 Healthy Nutrition and its importance in the elderly

Nutrition describes the process of obtaining the right amount of nutrients from healthy foods in the right proportions in order to develop and maintain good health. According to the World Health Organization "nutrition is the intake of food considered in relation to the body's dietary needs. Good nutrition is an adequate well balanced diet combined with regular physical activity which is the corner stone of good health" (WHO 2015). Davies (2011), defined healthy nutrition as "a form of diet which provides the body with the essential sources of food nutrients to maintain and improve the function of the body as well as reduce the risk of chronic diseases".

Nutrition contributes to the successful aging as food serves as a basic need in everyday life. The essential food nutrients needed in nutrition of the elderly can be divided into macro and micronutrients. The macronutrients include carbohydrates, proteins and fats while micronutrients are vitamins and minerals. The components of a health promoting diet are vegetables, berries, fruits, leguminous plants, whole grains, fish, vegetable oils, nuts, seeds, fat free and low-fat milk products. (THL 2014) As people get older, their bodies may acquire different needs and therefore, certain food nutrients may eventually be vital for good health. It has been found that fresh fruits and vegetables are essential for the elderly as different nutrients are obtained from them. Therefore, it is important that the elderly persons require adequate supply of fruits and vegetables in their daily diet to reduce the effect of chronic diseases. (Suominen 2007)

According to the Finnish Nutrition Recommendation (2014), the energy requirement for elderly people should be lower while the micronutrients needs to be higher. They emphasized that fat intake in the daily energy should be slightly raised while carbohydrates should be slightly lowered. In addition, higher fiber intake, low salt, reduce intake of fat and increase fluid intake in the elderly diet. The importance of healthy nutrition in the elderly is influenced by the role of sufficient micronutrients in the elderly's diet. Micronutrients such as vitamins and mineral supplements in elderly nutrition support in maintaining health and quality of life. Furthermore, the role that micronutrients play in elderly person's diet is the prevention of non-communicable diseases. The deficiency of micronutrients in older people's diet are usually common due to certain factors such as the reduction of food intake and inadequate variety of foods that they eat. For instance, the deficiency of Vitamin A in an elderly person's diet may lead to night time vision changes, chronic dry eye and eye debris. Institutionalized elderly persons such as those living in the nursing home do not have adequate exposure to sunlight. Therefore, they need sufficient

Vitamin D supplement in their diet. Their diet may be deficient from Vitamin D due to the intolerance to or dislike of dairy product. (Stanga 2009, 297-298.)

Another importance of healthy nutrition in the elderly is to help to maintain healthy bone functioning. Due to aging related factors, the older people may be affected by diseases which can affect their bone functioning and reduce mobility. Osteoporosis is one common age-related problem among the elderly that enhances the risk of falling. According to Davies (2011), osteoporosis "is a condition in which the bones become less dense and more likely to fracture, which in turn can result in significant pain and disability". Promoting the act of eating healthy food nutrients for example, sufficient Vitamin D in the elderly person's diet helps in the absorption of calcium which together support the older people against fractures and osteoporosis. Moreover, adequate Vitamin D in the diet of the older people helps in the proper functioning of the immune system, heart, brain and regulation of blood pressure. (Davies 2011, 45-46)

The importance of healthy nutrition can also improve healthy digestive system in the elderly. Bowel problems are usually common among older adults as many suffer from constipation due to inadequate intake of fiber and fluids. Therefore, the eating of adequate fiber foods such as whole grains helps to reduce constipation in elderly. Another important role of healthy nutrition among the elderly is to maintain a healthy body weight through physical activities. This can help to reduce obesity-related conditions such as hypertension, diabetes and heart diseases. Furthermore, healthy nutrition helps the body to receive adequate amount of oxygen and keeps the nervous system healthy. The food sources that perform these functions are iron and Vitamin B12. The sources of iron include liver, beef, ham and pork while some cereals, lean meat and fish are sources of both vitamin B12 and iron. However, many of the older people do not receive adequate amounts of these important nutrients in their diet. Lastly, healthy nutrition among the elderly helps to promote healthy mental functioning and wellbeing. (Montgomery, Streit, Beebe & Maxwell 2014, 435-437.)

#### 2.3 Malnutrition and Dehydration

Malnutrition is defined as "a state of nutrition in which a deficiency, excess or imbalance of energy, protein and other nutrients cause adverse effects on body form, function and clinical outcome" (Ray, Laur & Golubic 2014). It is a state of an individual being under nourished. Undernutrition is lack of intake of body's essential nutrients. Elderly individuals experience state of malnourishment or undernourishment because of physiological changes that occur during their aging process. However, elderly

people's nutritional status varies mostly with individuals. Adequate assessment of nutritional status of the elderly should be done appropriately, because it helps professionals in identifying those at high risk of developing malnutrition. Additionally, it helps in planning and implementation of individual nutritional needs. (Ray et. al 2014, 829- 834.)

Malnutrition and undernourishment have been found a common problem in the care of older people in all aspects of care settings. Malnutrition is considered the major cause of morbidity and mortality among the elderly. It has been realised that nursing staff play an important role in caring for the elderly who are malnourished or at risk for malnutrition. One vital factor hindering nurses from performing adequate nutritional care is low staffing ratio at the home care during mealtime. Personnel assume that they have limited time to complete the tasks for the day assigned to them. Therefore, spending much time on an individual during mealtime can consume their time without completing day's tasks. However, nurses in the care home have neglected the psychosocial aspects during mealtime. (Nieuwenhuizen, Weene, Rigby & Hetherington 2010, 160-167.)

The most common health problems contributing to malnutrition among elderly people are gastro intestinal symptoms, or metabolic disorders. Significantly, other chronic conditions can also alter food intake. It has been found out that anorexia alone can be the common cause for mortality in elderly population. However, Sarcopenia and cachexia can also contribute to malnutrition. Sarcopenia is the loss of skeletal muscles mass, strength and reduced physiological functionality due to aging. Whereas, cachexia is a lifelong disease that manifest in an individual with an ongoing illness. It is usually seen when there is a decrease in weight, lean and fat tissues or loss of appetite. Protein-Energy malnutrition (PEM) is common among elderly people. It is associated with decreases in protein-energy intake. Insufficient food intake or underlying diseases often cause this condition. Experiences of unexpected weight loss in elderly people, may lead to muscle and bone weakness. This can place them in a high-risk condition to falls, hip fractures, frailty or even death. (Puranen 2015)

Water is an essential source of basic need in human life. It consists of 50-70% of the human body weight which depends on the individual's age. The roles that water play in the human body include, regulating body temperature, controlling blood pressure, source of lubricant to the skin, conveying food nutrients, oxygen and waste. (Ruxton 2012) The absence or loss of water in the human body can lead to dehydration. Therefore, it is important to maintain an adequate fluid intake that is vital for health. The most common food source for water or fluids are fresh fruits and vegetables. However, beverages such as tea, coffee, fruit juices and milk products account more as fluid intake. The amount of fluid in the body tends

to decline from 70% to 50% during human aging process. Dehydration is described as the excessive loss of water from the body, which affects the normal body functions. It usually occurs when an individual loses more fluids than the intakes. According to Begum & Johnson (2010), dehydration is defined as "the depletion in total body water content due to pathologic fluid losses, diminished fluid intake or a combination of both".

Dehydration is a common nutritional problem among the elderly and can be caused by physiological and environmental factors that are associated with insufficient fluid intake. The physiological changes affecting dehydration in the elderly people are due to the lower amount of body mass fluid compared to young adults. Furthermore, some older people may experience physical challenges limiting them in their ability to access drinks. These can include the diminishing thirst sensation and problems with vision. Some others may also forget to drink due to certain memory problems, such as dementia. The environmental factors occur when the older adults are reluctant to drink or try to avoid drinking a lot of fluids because they worry about incontinence or about asking for help to visit the toilet. (Hooper, Bunn, Jimmoh & Fairweatherait 2014, 50-56)

According to National Nutritional Council (2014), it is recommended that an elderly person should drink 1 to 1.5 liters of fluids daily or 5 to 8 glasses of liquids. The total fluid intake should consist of normal water, beverages such as tea, coffee and cocoa. Tap water is preferable for drinking. However, any other bottled or packed mineral water can also be used as fluid need only if they do not contain any sugar products or teeth decaying acids for safety reasons. It is recommended that dairy products should contain fat free or 1 % fat milk or sour. An adult person should drink approximately 5 dl of milk product during mealtime. This is because it accumulates plenty of hard saturated fat in the diet. Alcoholic beverages should be limited for the older adults. This is because the alcohol is harmful to aging body due to reduced water content and slow metabolism. It is recommended that elderly people should not drink more than one serving of alcohol per day or not exceeding seven servings weekly. (Finnish National Nutrition Council 2014)

# **2.4 Nursing Interventions**

Nursing interventions are the care activities nurses perform during the treatment care plan of the patients. Nursing interventions involve four stages: assessment, planning, implementation and evaluation (Potter & Perry 2011). The primary elements in nursing interventions include counselling, referrals, patient advocacy, administering medication and performing minor medical procedures. Nursing interventions also form part of the role of the nurse in the on-going treatment of the patients. The nutritional interventions of the elderly involve the care activities that nurses perform to improve the nutrition of the elderly people. Nutritional counselling is one of the major aspects of nursing interventions to promote healthy nutrition among the elderly. It also forms the most effective intervention that should be developed in order to address the issue of malnutrition among the elderly living in a service home. (Nykänen, Rissanen, Sulkava & Hartikainen 2012)

According to Pedersen et. al. (2012), nutritional counselling is the process of setting supportive priorities, establishing goals and creating individualized action plans that support and encourage responsibility for self-care. This involves providing guidance to clients on how to maintain good nutritional care through the provision of dietary instructions and nutritional support which are adapted on individual preferences. The intended goal is to bring about a change in the elderly person's nutritional intake of energy, protein and micronutrients. Besides, teaching about nutrition to the elderly is an essential intervention in the care of the elderly people's nutrition. This is because once the nutritional concerns and risks factors have been identified, it is important to plan care regarding nutrition of the elderly people. Therefore, it is necessary to provide the teaching on what food in the elderly people's diet is healthy and should be maintained or replaced with other alternatives. (Wallace 2007, 129)

According to Potter & Perry (2011), during the planning in the nursing process, nurses select nursing interventions that are intended to improve the elderly people's nutritional status. However, certain factors need to be considered in the planning of the nutritional intervention. Individualized planning is very essential as this determines the effectiveness of the interventions. Nursing care should include a person-centred-care whereby the elderly people at the nursing home will be involved in their dietary care plan. However, nurses should pay attention of the physical, social and psychosocial environment in the elderly person's nutritional care. There should be mutual relationship between nurses and the clients and provide a nursing care environment which is similar as home to enable older people feel safe at the nursing home (Dunn & Moore 2014, 6-8).

Nurses need an adequate education on nutritional care before providing effective care to the elderly people. The nurses need to have knowledge and skills to effectively assess the elderly person's nutritional intake in order to improve nutritional status of the older people. Nurses also need regular training to empower them in raising awareness of nutrition risk factors and effectively provide care that focuses on the issue of diet, diseases prevention and general wellness. This will enable them to know when and

how to interact and consult with other professionals such as dietitians or nutritional therapists. (Hopkinson 2015 598-602). Educating clients and their relatives on the importance of healthy nutrition is very essential. Therefore, nutritional education plays an important role during the process of intervention in elderly person's nutrition. However, nursing homes need to be provided with resources such as training, staffing, and use of necessary equipment to ensure the implementation of guidelines to promote healthy nutrition practice. (Merell, Philpin, Warring, Hobby & Gregory 2012, 212-213).

Mealtime interventions also form an important part of the nutritional interventions in the care of the elderly persons' nutrition. These interventions focus on improving the mealtime routines, practices and the environment where food is consumed. The practices involved in the mealtime interventions are improving food, dining environment, changing in food services, providing feeding assistance and training of staff. (Whear, Abbott, Thompson-Coon, Bethel, Rogers, Hemsley, Stahl-Timmins & Stein 2014). It has been found that inadequate mealtime assistance affects the nutritional intake of the elderly. However, the protein and energy intake are increased in the elderly diet when healthcare professionals provide adequate feeding assistance to the elderly during mealtime. The feeding assistance helps healthcare providers to identify common eating problems such as swallowing and chewing difficulties and also to assess the amount of fluid intake of the elderly. Therefore, modifying food texture according to the chewing and swallowing abilities of the elderly people is very important in their feeding assistance. (Arvanitakis, Beck, Coppens, De Man, Elia, Hebuterne, Henry, Kohl, Lesourd, Lochs, Peper-sack, Pichard, Planas, Schinder, Schols, Sobotka & Van Gossur 2008, 481-488)

## **3 PREVIOUS STUDIES**

During the past years there have been several studies on the need to improve nutrition among the elderly people. Malnutrition has been the major factor of interest. One study conducted by Suominen et. al. (2014), addresses the nutritional guidelines for older people in Finland and determines the importance of nutrition in maintaining the health and functional ability of older people. The study design was a review of actual literature on older people's national needs and problems. A multidisciplinary expert panel were involved in the outline of the guidelines which was later approved by the National Nutritional Council in Finland. They applied the most relevant, preferable and recent research. The research explained that the current general nutritional recommendations were only focused on healthy elderly people and did not conform to the specific needs of heterogeneity of older adults. It was concluded that depending on the frailty, disability status and health risks, the nutritional care of the elderly can be classified according to their nutritional needs. In addition, other large scale epidemiology studies have also been carried out in Finland, which clearly show the problems and challenges in the nutritional status and care of the older adults. For instance, in the research carried out in Finnish service houses, it was revealed that the intake of protein and other nutrients were inadequate especially among the oldest and frailest individuals. Moreover, the importance of physical activity during the stages of aging was also emphasised and older adults' nutrition need to be given more attention. (Suominen, Jyvakorpi, Pitkala, Finne-Soveri, Hakala, Mannisto, Soini & Sarlio-Lahteenkorva 2014, 862–863)

According to a research carried out in Wales, United Kingdom, by Merrell et. al. (2012), the concern of malnutrition among the elderly people has been an important and progressing problem. Elderly persons at the risk of malnutrition in care homes have been neglected by health care providers. This raised a concern that the national guidelines regarding the nutritional care of older adults in residential care homes are not often implemented. A qualitative research was used to reveal the factors influencing the nutritional care provided to residents in two different types of public residential care homes. The findings indicated that staff should implement their care by responding to individual dietary preferences and provide person-centered care. In addition, the use of nutritional screening tools should be promoted and comprehensive assessments conducted to identify elderly at the risk of malnutrition. Mini-nutritional assessment (MNA) is the most known nutrition screening and assessment tool. MNA is a validated screening and assessment tool that was designed to determine malnourishment in elderly person's or those that are at high risk of being malnourished (Ongan 2015, 271-75). It is specifically targeted to the elderly because they can benefit from it and enables professionals to start early interventions to support

nutritional issues in the elderly for instance, during follow up of changes in nutritional status to avoid early hospitalization. The use of the assessment tool is highly recommended by European Society for Clinical Society and Metabolism (ESPEN). This is because it is reliable, precise, and inexpensive when compared with other nutritional assessment tools like Malnutrition Universal Screening tool (MUST) or Malnutrition Screening Tool (MST). Moreover, staff members and managers need to have adequate training and education on the importance of healthy diet for the elderly. (Merrell, Philpin, Warring, Hobby & Gregory 2012, 208-213.)

A study published in the Ageing Research Reviews by Abbott, Whear, Thompson-Coon, Ukoumuune, Rogers, Bethel, Hemsley & Stein 2013, 967), aimed to determine the effectiveness of mealtime interventions for older people living in residential homes and to identify which interventions will be more useful. The research was conducted as a systematic review, were several previous articles were used in the collection of data. According to Abbott et. al. (2013), there has been a need to improve nutrition among the elderly for many years. However, the way to achieve which type of interventions can be effective is the challenge to the care giver. The study explained that mealtime interventions could be one of the effective components to improve nutrition of elderly people living in a long-term care. Various aspects of mealtime interventions were included in the study. These were the way in which food was served to the residents, the nature of the room in which the elderly people ate, availability of food and choices as well as mealtime assistance.

The findings of the study categorised mealtime interventions into five groups namely: food improvement, feeding assistance, staff training, situation of dining environment and food service changes. The meta-analysis approach used in the study found the effects on the changes of body weight to food service, food improvement interventions and situations of dining environment to be inconsistent. However, observational studies indicated positive effects on food intake through all the intervention types. In addition, there was positive evidence on the effect of daily energy intakes during the dining environment interventions on the elderly people living in the residential care. The study concluded that mealtime interventions are effective methods to improve nutrition of elderly people living in a residential care home. (Abbott, et. al 2013, 967-981)

# **4 RESEARCH QUESTIONS AND OBJECTIVES**

The purpose of the present study was to explore nurses' experiences of promoting healthy nutrition in the care of the elderly living in a service home. The aim of this thesis was to explain how some basic nursing interventions can be used to improve healthy nutrition among the elderly. The authors' intention was that this thesis could create an awareness of the importance of nutrition among the elderly.

The following are the research questions in this study:

- 1. How do nurses provide good nutritional care for the elderly?
- 2. What are the challenges nurses face in promoting healthy nutrition?

# **5 METHODOLOGY AND DATA**

#### **5.1 Qualitative Research**

According to Holloway & Wheeler (2013), qualitative research is "a form of social inquiry that focuses on the way people make sense of their experiences and the world in which they live". When conducting qualitative research, the focus must remain on the specific factor that is the phenomenon or experience of the chosen subject of the study. In qualitative research, researchers normally gather data on a particular topic or experience to enrich their aim of understanding (Thomas & Magilvy 2011). The purpose of the qualitative research is not to generalise to other subjects. It is rather to analyse intensely a specific experience on which to form additional knowledge and develop more focus on patient-centred practice which will be relevant to the participants in the study (Ariela, Tamir & Man 2015). Qualitative research was used in the study to guide the authors in understanding the unique experience of the nurses through behavioural and social background in the working environment. This method also assisted the authors to discover how participants interpret situations in their own environment and what kind of perceptions they have on a particular problem area. The study focused on nurses' interventions in providing good nutritional care for the elderly people.

# 5.2 Data Collection

The study was conducted in Kuusikumpu Service Home in Kokkola. The study involved both registered and practical nurses. Questionnaires were used in the collection of data (Appendix 1). There were 10 respondents and 8 answered the questions representing 80%. The authors provided self- designed questionnaires based on a recent study of the national nutrition council of Finland (THL 2014). The questionnaires included 6 open-ended questions which were in both Finnish and English languages. The use of open-ended questions enabled the participants to express their opinions willingly without any limitations. The participants were given approximately two weeks to answer the questionnaires. Questionnaires were completed and collected on the exact time agreed between the authors and the participants. The participants provided their answers in Finnish and these answers were then translated to English. The information gathered from the participants were used in analysing, interpreting and drawing the conclusion of the study.

#### **5.3 Data Analysis**

Content analysis is a type of qualitative research method used for analysing and interpreting written and unwritten data (Elo, Käänäinen, Kanste, Pölkki, Utriainen & Kyngäs 2014, 1-2). There are two main approaches which can be used in content analysis. These are either inductive or deductive. Inductive content analysis is a type of approach which researchers use to establish theory and analyse the subject matter by studying documents, recordings, written and unwritten data. In both inductive and deductive approaches, the preparation phase involves collection of data for analysis, making meaning out of the data and choosing the group of analysis (Elo & Kyngäs 2008). The authors organized the data through open coding of the information, developing classifications and establishing abstractions from the data collected. This approach enabled the authors to identify the main themes in the area of interest regarding to the research topic. (Bengtsson 2016)

In this thesis, inductive content analysis was used by the authors to emerge the theme from the raw data collected from the participants. In the first phase, the authors read through the materials several times to attain the main content of the information needed for the study. The analysis process continued by reviewing the information gathered and identifying some statements in the text relating to the thesis topic. The statements found were grouped into sub-categories by identifying both similarities and differences. The number of sub-categories were reduced by combining similar headings to form main categories. This process enabled the authors to develop their knowledge and a deeper understanding of the information provided by the participants. Therefore, as a result of the content analysis, providing good nutritional care for the elderly and challenges in promoting healthy nutrition were formulated.

#### 5.4 Ethics

The ethical consideration of the study was maintained whereby the researchers avoided plagiarism in the study. Wallace (2015), defined plagiarism as "the act of using another person's word or ideas without giving credit to that person. The evidence-based materials from scientific sources were used to guide the authors while working on the phenomenal area related to the chosen topic. The results were analysed and concluded in a simple manner where authors used their own words to explain the concept of the study. This is to enable the reader to read and understand what is included in the study and hence, provide new knowledge and skills. Confidentiality was assured during the research process whereby acquired information was kept safe without disclosure to the third party and correct handling of the research

materials that was used in data collection. (Guraya 2014.) The data were collected and handled confidentially without exposure to the third party. Guraya (2014), broadly defines confidentiality as:

Nondisclosure of certain information except to another authorized person.

Anonymity was promoted for the safety of the participants' identity in the study. Additionally, the authors assured to protect the right and dignity of the participants in order to reduce any harm or risk during their participation in the study. A cover letter was attached to the questionnaires to seek consent of the participants and the authors maintained respect to the individuals (Gibson, Benson & Brand 2013, 19-20). The authors made visits to the institution where the study was being carried out and discussed about the intention of the study, where permission was granted by the manager of the institution for the study to proceed.

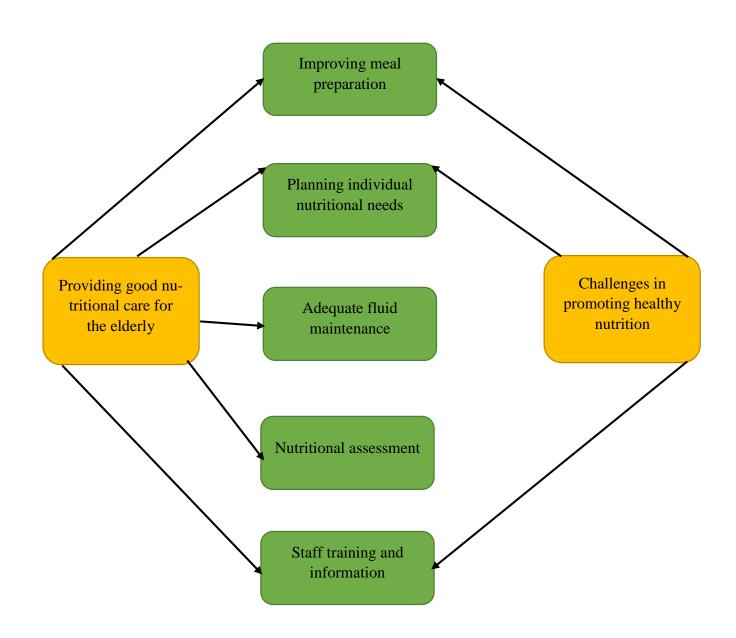
#### 5.5 Validity and Reliability

Validity refers to the degree at which a research result measures what it is intended to measure (Kimberlin & Winterstein 2008). The authors ensured to correlate the purpose of the study to earlier research that has been done before the study. The validity of the data collected in the study determined how the phenomenon of the study was clearly measured. According to Noble &Smith (2015), reliability refers to the consistency of a test conducted and its result remaining the same irrespective of the number of times repeated. The authors contacted the head of the service home by themselves after the thesis plan had been approved. The permission letter to conduct the study was applied and it was approved by the Town of Kokkola. The questionnaires were printed in both languages, enclosed in an envelope and delivered to Kuusikumpu Service Home. The cover letter was also attached, which explained clearly the reason for carrying out the study, handling of the data and further contact to the authors in case of any problems. The results were compared with previous studies as the questionnaires were translated from Finnish to English language. However, some meanings can be lost in the translation because the authors do not have Finnish language as their mother tongue.

# **6 FINDINGS OF THE STUDY**

During the data analysis, five main categories were found which were later grouped into two major categories that answered the research questions. The major categories were: providing good nutritional care for the elderly and challenges in promoting healthy nutrition. The process of the content analysis can be found in appendix 2. Graph 1 describes the major themes of the study.





#### 6.1 Providing good nutritional care for the elderly

The intervention of providing good nutritional care for the elderly at the service home was found to be an essential need as explained by the participants. The results revealed five main areas which were found to be relevant. These were: improving meal preparation, planning individual nutritional needs, adequate fluid maintenance, nutritional assessment as well as staff training and information.

#### **Improving meal preparation**

The participants expressed that improving meal preparation for the elderly can be done in diverse ways to increase resident's appetite for eating. It was explained that certain factors need to be considered in improving meal preparation at the service home. Also meals are prepared according to resident's wishes which is important to improve upon resident's eating habits. In addition, the nurses have varieties of food which they prepared and all are based on what the residents have in their fridges and what relatives have brought to them. The common meals prepared are porridge, coffee, bread, sandwich, yoghurt and quark. Breakfast, evening snacks and dinner are prepared at the home and only lunch is prepared by the food service. This depends on the meal time schedule. Moreover, the clients have the opportunity to eat in the dining hall during lunch. The residents sometimes prepare their own food with the exception of lunch. The participants also mentioned that other possible ways the residents can have appetite for food are by serving meals attractively and in good environment. Another point was that, when relatives and nurses are present during meal times they increase the elderly persons' appetite to eat well. Finally, the feeding assistance provided to the residents also helped to improve on their nutritional intake.

# Planning individual nutritional needs

Nurses expressed the planning of individual nutrition as an essential need in providing good nutrition to the elderly. They revealed that certain factors need to be considered in planning individual nutritional needs. The participants stated that the national recommendation on elderly people's nutrition is considered in planning individual diets. They also consider client's diseases such as insulin dependence for diabetes and gout. In addition, nurses considered possible allergies for instance, lactose intolerance before planning individual diet. Participants mentioned that the use of medication by clients such as Warfarin is also considered whereby notices are provided to the cook in the kitchen before meals are planned and prepared. They explained further that physical conditions for example, swallowing problems, dentures are also considered and texture of food such as pureed food are decided for such clients. Moreover,

participants mentioned that relatives are informed when buying and ordering food from grocery delivery service. They take into consideration resident's own food preferences before planning the individual meal. They also included that relatives sometimes buy food to clients and through that they can introduce client's wishes and what is needed to be done. The participants further described that the planning of the individual nutrition also depends on the ingredients the clients may have at stock which is the basis of the type of food to be prepared. They added that weight of the clients is an important factor to consider in planning of the meal.

### Adequate fluid maintenance

Participants revealed that it is important to provide adequate fluid maintenance in the care of elderly nutrition. They explained certain interventions which help them to provide adequate fluid to the elderly during the day. Some of the nurses described that they offer adequate drinks during their visits to clients. Other participants also mentioned that they leave fluid at the reach of clients and check also that the clients actually drink it. In addition, the nurses encourage and remind clients to drink as well. Furthermore, the participants specified that they usually provide assistance to residents who need help to drink in order to get adequate fluids. They also provide residents with different kinds of fluids during meal times such as soup, fruit soup, juices, milk, home-made beer and water. One of the participants stated that "I remember to put out into serving, and order soup and juices from delivery services". Another participant mentioned that "I take into account the amount of fluid at every meal". The participants described that other important elements that they followed to ensure adequate fluid maintenance were monitoring urine output and following the input by the use of fluid list. However, one of the participants stated that "generally the residents drink too little".

## Nutritional assessment

Majority of the participants felt that it is important to assess the nutritional status of the elderly during their care. They described that one of the screening methods that they used for their residents was by checking their weight conditions whether increasing or decreasing in order to identify any nutritional problems in the clients. Moreover, concerning clients with specific nutritional problems, the participants described that they use special screening tools such as BMI and MNA to assess any risk of malnutrition. They also followed that residents received balanced meal and checked on how they were eating and drinking as well as whether they had appetite to eat or not. One of the participants stated that "some clients do not have appetite and some do not want to waste money". The participants indicated that they that they that they appetite and some do not want to waste money".

also checked on the physical conditions of the clients such as skin colour to identify any changes relating to poor nutrition in the elderly.

Besides, they ensure that clients are having regular exercises to promote proper functioning of the body. They also perform regular checking of residents' elimination such as urine and stool which can also have an effect on their diet. Some of the participants expressed that the mental well-being of the client was also important to follow as they mentioned that clients with memory problems forgot to eat and drink. Therefore, their health conditions are assessed and treated by specialist before improving on their dietary conditions to reduce the risk of malnutrition in such clients. They also mentioned that many of the clients had one-sided diet for instance, sweetbread and cookies which made them receive insufficient diet although, some had versatile diet. The participants further explained that due to the one-sided diet and self-determination of residents, it was therefore difficult to influence their diet.

#### Staff training and information

Some of the nurses were satisfied that they received adequate information and training to support healthy nutrition among the elderly. They described the training and information on nutrition as important issues in the care. Moreover, other participants explained that more information was needed to update their knowledge and skills in the care of the elderly nutrition. Besides, one of the nurses expressed that "the internet has a wealth of information, the important is to pick the right and up-to-date information from there". Other participants' opinions where that the information on elderly people's nutrition needed to be updated to enable them receive current issues in the care of the elderly.

#### 6.2 Challenges in promoting healthy nutrition

The results indicated that there were many challenges that the nurses faced in promoting healthy nutrition among the elderly. These were improving meal preparation, planning individual nutritional needs as well as staff training and information. The participants stated that improving meal preparation was a challenge because in many occasions nurses were in a hurry to work and they only served the meals to the residents without being present when they were eating. Also they described that the residents felt so lonely in eating which lead to poor appetite and as the result poor nutrition was gained. Furthermore, adequate foods are ordered to the residents but the elderly do not eat them because nurses do not serve the food or put it at the reach of the elderly people. It was also indicated that planning individual nutritional needs was sometimes difficult to implement. The nurses mentioned that elderly people were sticking to their eating habits and did not want any change. They included that the food stuffs at home were often one-sided, fruits and vegetables were lacking from the elderly people's diets. Another factor which the participants expressed as a challenge was the health related problems affecting elderly people's eating habits. The nurses explained clearly that when memory deteriorates in elderly people, the sense of hunger diminishes and the residents may forget to eat. Besides that, when the older adults' physical conditions decline their appetite gets poorer. Therefore, these affect the nutrition levels and functional capacity.

Staff training and information was also a challenge to many nurses, although nurses got adequate information on nutrition. Some of the nurses stated that "we have had little training about nutrition". Another challenge which the participants expressed was that documentation on the part of the nurses was sometimes incomplete and some nurses do not consider it so important which makes it difficult to follow up on the resident's diet. In addition, nurses are in hurry to work and do not have much time to document.

#### 7 DISCUSSION

The purpose of this study was to explore nurses' experiences on promoting healthy nutrition in the care of the elderly living in a service home. The thesis focus was to find answers to the questions about the ways of providing good nutritional care for the elderly and the challenges in promoting healthy nutrition. The study indicated that improving meal preparation was an essential intervention in providing good nutritional care for the elderly. Improving meal preparation was one aspect which increased the nutritional intake of the older people. Some of the participants explained that providing food according to residents' preferences could improve nutrition. The study by Abbott et. al. (2013), emphasized on mealtime intervention as an effective measure to improve elderly person's nutrition. This study was in line with the thesis. Considering clients' food wishes, inviting relatives during mealtimes and allowing clients to eat together in groups create social interactions and reduce loneliness. In addition, serving meals attractively and in a good environment are some interventions that can improve older people's food intake. Moreover, if sufficient time is provided to some elderly during the feeding assistance this can promote good nutrition. Some also need to be provided with their own culturally sensitive foods to improve their eating habits.

The results suggested that planning individual nutritional needs was essential and certain factors needed to be considered. In planning individual nutritional needs it is important to consider client's diseases, medications, dentures and swallowing problems. These factors can help to determine the underlying cause of nutritional problems that may cause decrease in food intake. According to Suominen et. al. (2014), irrespective the elderly person's frailty, disability status and health risks, nutritional needs should be considered. In the thesis, the weight of the clients was also a significant factor to consider due to the risks of obesity and malnutrition among the older people. Moreover, relatives were included in the planning of the individual diet to enable good interaction of the family members in the care plan. The study agreed with Merrell et. al. (2012) that it is important to implement individual dietary preferences and provide person-centered-care (Merrell et. al. 2012). This shows that every individual experiences appetite changes in a different way and therefore nurses should identify these changes during planning nutritional care. Besides, nurses should educate the older persons towards the importance of nutrition in relation to their diseases which will be beneficial to elderly people's self-management and nutrition life-style changes.

Adequate fluid maintenance was emphasized due to its significance in providing good nutritional care for the elderly. In the results, participants explained some interventions they used in providing adequate fluids. These were encouraging clients to drink daily, assisting clients to obtain fluids and monitoring clients' input and output. As the consequences of dehydration in the elderly person several health problems can develop. It is important to maintain good hydration by the use of fluid list to ensure adequate fluid balance in the older adults. Consequently, it is necessary to reassure the elderly specifically about the issue of continence while encouraging them to drink regularly and this can help to reduce the risks of dehydration.

The study also identified weight management as an important element when assessing nutritional status of the older people. The results emphasized the use of screening methods and tools where, BMI and MNA were commonly used by nurses to assess the older people's nutritional status. It is therefore important to monitor physical conditions and ensure regular exercises in clients to promote functional abilities. Besides that, health conditions need to be assessed by specialist before improving dietary conditions and follow mental well-being of clients due to memory problems of some older adults.

The experiences of the nurses in the study were seen in both negative and positive aspects. The negative aspects were the challenges in promoting healthy nutrition of the elderly. Some of the participants mentioned challenges such as incomplete documentation on the part of nurses, hurry in work and the nature of the elderly persons' food been unflavored. In addition, some participants explained that they received little training on nutrition which was affecting in the care of older people's nutrition. A study by Merrell et. al (2012), revealed that it is essential to provide further training for staff in care homes regarding the importance of nutrition, sufficient knowledge on the use of screening tools and assessment in order to maintain the health of older people. The factor that can hinder the performance of nutritional care in service homes is the low staff ratio which does not allow the nurses to complete their daily tasks and therefore enhances the possibility of rush in the work. Positive attitudes on the part of nurses can have greater impact on the nutritional status of the older people. This is because as nurses are ready to increase their knowledge concerning the nutritional care of elderly and to change their attitudes towards work by spending sufficient time at the mealtimes with clients, it can help to reduce the challenges. Nurses also need to have adequate time to document and follow up all care plans which can improve the nutritional intake and reduce the risk of malnutrition among the elderly.

## Limitations of the study

There were few possible limitations in this thesis. The first one was the concentration on only the nurses which constituted a small sample size during the study. The authors also thought that the absence of the views of the elderly people was a contributing factor. Besides that, the authors do not have Finnish as their mother language during the translation of the questionnaires from Finnish to English. Therefore, we cannot generalize our results to all service homes in Kokkola. However, our findings were consistent with other previous studies.

### **Implications for practice**

The need to improve the nutrition of the elderly living in a service home is an important subject to consider by healthcare providers. Nursing care practices need to be effective in the care of the elderly persons' nutrition. Multi-professional cooperation is needed to recognize any nutritional problems and provide effective measures for nutritional support of the elderly. The person-centered-care approach should be a focus when implementing appropriate nutritional care for the older people. Moreover, educating the elderly and their family members about nutrition can help to improve dietary intake, food choices and nutritional status. This thesis indicates that further studies are important, particularly increasing the awareness of individual nutrition, enhancing motivation to eat and offer opportunity for the elderly to take their own actions towards nutrition.

#### **8 CONCLUSION**

The increasing in aging population has been one of the major concerns in the healthcare system globally. This is due to their demanding in health service provision. The normal changes in aging have been one of the significant factors influencing the health of the older people. The aging process is accompanied by a variety of changes that can influence nutritional status and increase vulnerability to poor nutrition of the elderly. Due to these factors, malnutrition has been a common nutritional health problem affecting the elderly. Improving the nutritional status by the using of appropriate screening tools during assessment can help to reduce any nutritional risks in older adults. According to the previous studies analyzed for this thesis, promoting healthy nutrition of the elderly has been found to be useful because nutrition plays an important role in the prevention of diseases and maintenance of health. Therefore, it is important for the nurses to support the elderly persons to adopt lifestyles and diet habits that prevent further deterioration of health and prevention of morbidity and mortality.

The thesis revealed numerous findings in regard to providing good nutritional care and challenges in promoting healthy nutrition among the elderly. The overall perception and attitude of nurses concerning promoting healthy nutrition among the elderly people in the service home was positive and overwhelming. This is because providing healthy nutrition to the elderly is an essential factor to improve the elderly's health and functional abilities in order to live a good quality life. Besides that, the study indicated some relevant interventions such as improving meal preparation, planning individual nutritional needs, adequate fluid maintenance, nutritional assessment, staff training and information. These interventions were significant to the thesis as they supported in providing good nutritional care for the older people.

Another relevant issue about the study was the experiences that the nurses faced in the care of the elderly nutrition. The nurses' experiences were based on the state of residents, staff and institution. Consequently, these experiences formed the challenges in promoting healthy nutrition. The issues of physiological, psychosocial and environmental factors associated with aging were some of the challenges in promoting healthy nutrition of the elderly. Furthermore, attitudes in nursing care, documentation, institutional management, staff ratio and training were also some factors relating to the challenges. Appropriate interventions to promote healthy nutrition for the elderly can be improved by effective nursing care practices and ensuring that elderly persons' nutrition is well managed and implemented.

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# APPENDICES APPENDIX 1

**1.** How are meals prepared at Kuusikumpu?

2. How do you plan a client's individual nutrition?

**3.** How do you ensure that the elderly get adequate fluids during the day?

**4.** In your experience do you get adequate information and training to support healthy nutrition in the elderly?

5. How do you assess the nutritional status of the elderly?

6. What are your general working experiences in the nutritional care of the elderly?

# KYSELY

1. Kuinka ateriat valmistetaan Kuusikummussa?

2. Kuinka suunnittelet asukkaan yksilöllisen ravitsemuksen?

3. Kuinka varmistat, että ikääntyneet saavat riittävästi nesteitä päivän aikana?

4. Saatko mielestäsi tarpeeksi tietoa ja koulutusta siitä miten vanhusten terveellistä ravitsemusta tuetaan?

5. Miten arvioit iäkkäiden ihmisten ravitsemuksellisen tason?

6. Mitkä ovat omat kokemuksesi ravitsemuksellisesta hoitotyöstä vanhusten kanssa?

# **COVER LETTER**

Norinda Boateng and Nancy Jeptanui Bachelor Degree in Nursing Centria University of Applied Sciences, Kokkola.

Thesis:

# Promoting healthy nutrition among the elderly living in a service home.

Dear recipient,

We are third year students from the Nursing degree programme in Centria University of Applied Sciences in Kokkola. We are writing our thesis about promoting healthy nutrition among the elderly living in a service home. The purpose of this study is to explore nurses' experiences of promoting healthy nutrition in the care of the elderly. The data will be collected at Kuusikumpu Service Home. The thesis will be completed in October 2016 and it will be available to the public on-line at Theseus.

The research method used in this thesis is qualitative. The questionnaire includes 6 open-ended questions which will take approximately 15-20 minutes to answer. The answered questionnaires will be handled confidentially and in a scientific manner.

Your participation in this thesis, by answering the questionnaires, will be highly appreciated.

Thank you very much.

Best Regards,

Norinda and Nancy.

In case of any questions or information about completing the questionnaire, please do not hesitate to contact us on:

E-mail: norinda.boateng@cou.fi or nancy.jeptanui@cou.fi.

OR our Instructor: Lecturer, Maria Björkmark.



#### TUTKIMUSLUPA-ANOMUS

Organisaatio, jolle anomus oso	KUUSIKUMPU	
Vastuuhenkilö organisaatiossa	KIRSI HYPPE	
Tutkimusluvan anoja(t)	NORINDA BOATENCY AND	
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#### KOKKOLAN KAUPUNKI Sosiaali- ja terveystoimi

Viranhaltija ja virka-asema Juola Maija Vanhustyön palvelujohtaja

#### VIRANHALTIJAPÄÄTÖS Tutkimusluvat

Päivämäärä / pykälä 23.2.2016 / § 24

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# **APPENDIX 2**

# TABLE SHOWING THE DATA ANALYSIS

Meaning unit	Condensed meaning of unit	Sub-category	Category	Main category
<ul> <li>"Nurses serve breakfast and evening snack according to resident's wishes".</li> <li>"Lunch comes from the central kitchen".</li> <li>"Food at home is often one- sided, hardly nay salads, also fruits and veg- etables are lacking from the diet".</li> </ul>	Meals are pre- pared according to resident's own wishes	Residents' meals	Home-made Food service	Improving meal preparation
"I take into con- sideration the clients' diseases when planning for the diet and also resident's own prefer- ences". "It is difficult to implement". "Relatives are informed if they are buying food"	Factors to con- sider in plan- ning individual nutrition.	Health condi- tions	Person-cen- tered-care	Planning Indi- vidual nutri- tional needs
"I serve ade- quate fluid to their reach, en- courage them to drink and moni- tor fluid list".	Assisting and motivating cli- ent to obtain fluids.	Providing fluids to clients	Fluid monitor- ing	Adequate fluid maintenance

"I take into ac- count the amount of fluid at every meal"				
"I have had in- formation and training on nu- trition but more update of infor- mation will be needed" "We have had little training about nutrition"	Information and training have been received.	Nutrition train- ing	Improving in- formation and training	Staff training and information
and document- ing is incom- plete"				
"By following the weight of the client" "I check the condition of the client how he or she has been eating and drinking"	Observing physical and mental well-be- ing of the client and monitoring eating habit.	Factors of as- sessment	Client's nutri- tional status	Nutritional as- sessment
"Many have one-sided diet, sweetbread, cookies, people with memory problems forget to eat".				