

# Nurses Approaches to Improving the Quality of Life of Alzheimer's Disease Patients in Iran

Pham Trang  
Takiwaa Emelia  
Khanlari Zahedeh

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Abstract  <p>Alzheimer's disease (AD) is possibly the supreme danger to public health in the 21st century. The disease affects the victim's dependency in so many ways. This study aimed to find out ways and means nurses use to help Alzheimer's disease patients to improve their quality of life. The purpose is to provide information for nurses who are taking care of Alzheimer's disease patient to serve these patients better.</p> <p>The study was done through qualitative research approach by systematically collecting data in the natural setting of the nurses. Six nurses including two male nurses and four female nurses were interviewed. All the participants have had at least five years working experiences of caring for Alzheimer's disease patients. The data was recorded and content analysis was used to analysis the data.</p> <p>This paper found several methods that nurses use to improve the quality of life of Alzheimer's patients. These include recreational activities, health checkups, exercises and group activities to improve patient's functional activity. Finally, the findings were grouped into four main categories. These includes: intervention to maintain physiological function, intervention to maintain psychological function, intervention to maintain cognitive function and intervention to maintain social functioning.</p>		
Keywords Alzheimer disease, nursing home, quality of life , nurses roles, Iran, cognitive function		
Miscellaneous Thesis data sheet as an appendix from page 34 to 36.		

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## 1 INTRODUCTION

Population aging is a universal phenomenon in many countries, including Iran. The elderly suffer various chronic illnesses which decrease their independency. Alzheimer's disease is one of such, which affects the elderly's independence, making them being burden on the society. (Thompson, Hayasahi, Dutton, Chiang, Leow, Sowell, Zubicaray, Becker, Lopez, Aizenstein & Toga 2007)

Alzheimer's disease (AD) is possibly the supreme danger to public health in the 21st century. Dementia doubles in occurrence each 5 years subsequent to the age of 60 tackling 1% of 60-64 years old but 30-40% of persons aged 85 years and older. In the midst of the size of the elderly inhabitants growing radically and frequency and dementia also escalating there is comprehensible caution of nearing a socioeconomic tragedy. (Thompson et al. 2007)

Alzheimer's disease creates a great load on health care professionals and the health care resources as well. The increasing ring has cause for it crucial to deepen a research into the means to improve the quality of life of clients and treat the disease. (The Editorial 2014) The aim of the study is to establish how nurses help Alzheimer's disease patients to improve their quality of life. The purpose is to help nurses to be better able to serve these patients.

Iran is experiencing elderly population in a high rate at the moment. The situation has raised concern about quality of life for elderly, who suffer from Alzheimer's. The population of seniors without children or those having only one child is expected to grow in the near future. There are around 700 000 Alzheimer patients in the elderly population of Iran. In order to respond to these care needs, developing and implementing health and social care systems with consideration of relevant factors is necessary. The goal is to improve the quality of life among this population (Adaryani, Nastran, Naser 2013, 43- 53)

## 2 ALZHEIMER`S DISEASE

Alzheimer's disease is a degenerative brain disease. The actual cause is not yet identified. It is considered the commonest form of dementia, which mostly affects people of late middle age or in old age. The results are progressive amnesia, impaired thinking, disorientation, and changes in personality and mood. These lead to complex issues of deep decline in cognitive and bodily performance, and result in histological by the deterioration of brain neurons particularly in the cerebral cortex and by the presences of neurofibrillary tangles and plaques containing beta-amyloid.(Terveyskirjasto 2014)

The US national institution in ageing defines it as “an irreversible, progressive brain disease that slowly destroys memory and thinking skills and eventually even the ability to carry out the simplest tasks”. In general, AD starts to show first symptoms among the 60 years old age group. Hence, a majority of patients with AD are 65 years old or older. However, it would not be correct to refer to AD as a disease of old age. The fact is that it affects up to 5% of patients in their 40s or 50s. This is known as younger-onset. (American Alzheimer Association 2014)

Alzheimer's disease was first discovered in 1906 by Dr. Alois Alzheimer. Hence it is named after the respected doctor Alois worked with a patient who demonstrated symptoms of dementia. When Alois examined patient's brain after her death, he found abnormal changes in the brain tissues. These changes were abnormal clumps and tangled bundles of fibres. The clumps are known as amyloid plaques and the bundles are called neurofibrillary tangles. Since then, science has proved that plaques and tangles in the brain are two of the main features of Alzheimer's disease. The loss of connections between nerve cells (neurons) in the brain is considered the third feature of the disease. (US National Institute on Ageing 2014)This conduction makes becoming old a bitter drug that no one would want to swallow.

## 2.1 The Causes of Alzheimer's and Changes in the Brain

As mentioned earlier, the actual causes of AD remains a mystery for scientists (Terveyskirjasto 2013.) However, several factors have been identified to contribute to the progress of diseases and causes of symptoms. Plaques and tangles are thought to damage and kill nerve cells. They tend to spread through the cortex as Alzheimer's progresses. Plaques are deposits of a protein fragment called beta-amyloid that builds up in the spaces between nerve cells. Tangles are twisted fibres of another protein called tau that builds up inside cell. The present of plaques and tangles are demonstrated in the below figure

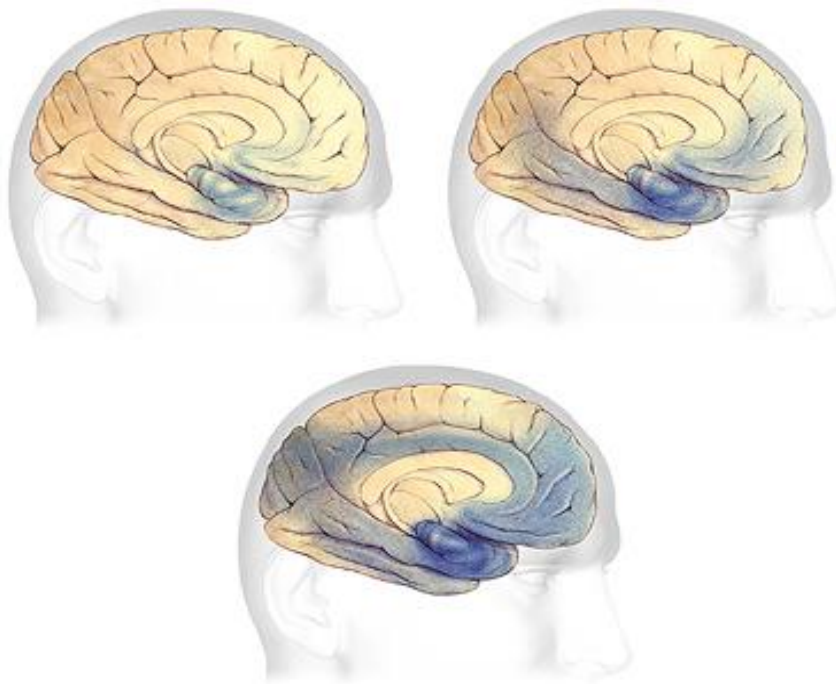


Figure 1: Examples of plaques and tangles (America Alzheimer Association 2014)

As people age, plaques and tangles develop at certain level. However, those with Alzheimer's tend to develop far more than the normal case. Moreover, in AD patient, plaques and tangles tend to develop in a predictable pattern, which is beginning in areas important for memory before spreading to other regions. (America Alzheimer Association 2014)

According to researchers of American Alzheimer Association, plaques and tangles play a critical role in blocking communication among nerve cells and disrupting processes that cells need to survive. Additionally, it has been observed that changes and damage in brain starts a decade or more before problems become evident. During the preclinical stage of Alzheimer's disease, affected people show no symptom, even though toxic changes are already taking place in the brain. These abnormal deposits of proteins form amyloid plaques and tau tangles throughout the brain. The brain has approximately 100 billion nerve cells, known as neurons. Each nerve cell connects with many others to form communication networks. Groups of nerve cells have special jobs. Some are involved in thinking, learning and remembering. Others help us see, hear and smell. The spread of plaques and tangles affects the healthy neurons and decreases neurons ability. As the process continues, neurons fail to function and communicate with each other. Eventually, they die. The continuing spread of plaques and tangles affect the hypothalamus, an essential part of the brain in forming memories. As a result of increasing neurones lost, affected brain regions begin to shrink. By the final stage of Alzheimer's, as damage is widespread, brain tissue has shrunk significantly. (America Alzheimer Association 2014)

Brain cells operate like tiny factories. They receive supplies, generate energy, construct equipment and get rid of waste. Cells also process and store information and communicate with other cells. Keeping everything running requires coordination as well as large amounts of fuel and oxygen. Scientists believe Alzheimer's disease prevents parts of a cell's factory from running well. Though the process is unclear, it is understood that one affected area will cause problems to other areas. As damage spreads, cells lose their ability to do their jobs and, eventually die, causing irreversible changes in the brain. (American Alzheimer's Association 2014) The affected brain has been shrunk much smaller than the normal, healthy brain.

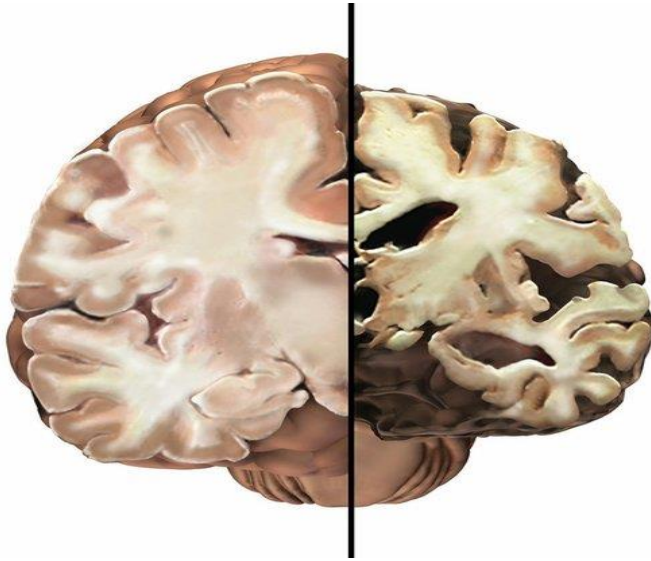


Figure 2: Normal Brain compare to Alzheimer's Brain. (American Alzheimer's Association 2014)

## 2.2 How Alzheimer's disease affects Patient's Health and Life

Once diagnosed with Alzheimer's disease, patient face many problems, the biggest of all is losing the independence. Furthermore, physical and mental changes from Alzheimer's disease can affect patient's mood and the way they behave. This reduces positive self-image and lower self-esteem, leading to social isolation. (Medan 2005, 33-36)

Alzheimer's disease will affect the ability to function and get around at home. Confusion, as well as feeling confused and unable to make sound decisions, may require the patient to modify the work activities and environment. Because the Alzheimer patients are unable to work, they will face financial problems due to the rising costs of care. Alzheimer's patients have trouble doing the ordinary everyday activities such as driving a car, cooking a meal, or paying bills. Sometimes they ask the same questions again and again, get lost easily, lose things or put them in odd places, and find even simple things confusing. Some patients get worried, angry, or violent. On top of all this, the patients might find that his or her moods go up and down and that he feels angry, depressed, confused, lonely, and frustrated, especially when they first get the diagnosis of having Alzheimer. They are normal to feel, but if



they interfere with the patient's ability to enjoy life and do the things they normally do, and then need to contact their doctor, and the patients and the doctor can come up with some options. (NIH Senior health 2012)

A person with Alzheimer's diagnosed shouldn't give up on the activities that he or she loves. Many activities can be modified to the person's ability. Furthermore to increase the quality of life, activities can reduce behaviours like wandering or agitation. (American Alzheimer's association 2014)

Common behavioural symptoms of Alzheimer's include sleeplessness, agitation, wandering, anxiety, anger, and depression. Scientists are learning why these symptoms occur and are studying new treatments—drug and non-drug—to manage them. Treating behavioural symptoms often makes people with Alzheimer's more comfortable and makes their care easier for caregivers. Health related quality of life is known as an important factor in the total factors of evaluation of health and used more often these days to reflect patient's perspective in researches of medical treatment outcomes. (Ware 1995, 327-354)

### **2.3 Stages of Alzheimer's disease**

#### **First Stage of Alzheimer's disease**

This stage is marked by mild symptoms that may also appear in the general population. It is hard to make diagnosis of the disease in the beginning.

Loss of memory and not remembering details such as phone numbers and street addresses, problems with finding the right word during a conversation and making wrong decisions such as wearing inappropriate clothing for the weather conditions are some signs of the first stage of Alzheimer's disease. The patient is able to cope in familiar surroundings but usually confused when away from home.

They might wear the same set of clothing over and over again and the moods can change easily, the patients have no interest in hobbies and are tired. (Smith, Kenan & Kunik 2004)

### **Second Stage of Alzheimer's disease**

As the patient enters to this phase, the symptoms which were in phase one become quite visible. The patient's family needs to make decision for him or her to either stay with them or with a care giver at home or in especial places to take care of Alzheimer disease patients. Forgetfulness is increased where they cannot remember a conversation from a few minutes previously, the patient is not able to perform simple mathematical calculations and the tendency to withdraw socially is increased. This is accompanied by a lack of interest in other people. In the second stage of Alzheimer's disease the patient inability to plan or perform complex behaviors such as driving increases and personal hygiene may be neglected as they forget to take care of their personal hygiene. Sleep problems and restlessness are other signs of this stage. Wandering away from home and getting lost, even in familiar surroundings is one of the important signs of this stage. (Smith et al. 2004)

### **Third Stage of Alzheimer's disease**

When the disease has reached this stage, the needs for more care and supervision is necessary. If left alone, their health will suffer and they may endanger themselves and others without realizing it. Impaired judgment leading to irrational acts such as giving away valuable possessions, loss of understanding of time and place or deterioration of speech and language skills, telling the same story or asking the same questions over and over again without realizing it. Also increased confusion, lethargy and restlessness are the main signs of the stage 3 of Alzheimer's disease. Paranoia, aggression, hostility and delusions are seen in this phase. The patient needs

assistance with personal hygiene and care furthermore needs 24 hour supervision and care. (Smith et al. 2004)

#### **Fourth Stage of Alzheimer's disease**

This stage is totally hard for the family members and friends to cope with both physically and emotionally and the person may need to be handed over to a home where they can be supervised round the clock. Further or complete loss of language skills to the point where the person cannot understand verbal or written language, repetitive actions such as rocking or tapping inability to recognize anyone including themselves Confusion, aggression, delusions and violent outbursts, withdrawal and apathy, physical problems with eating, chewing, bladder and bowel control and walking and seizures are common signs of the last stage of the disease.

Alzheimer's disease progresses at different rates in different people but will generally follow the four basic stages over a period of years. It is extremely difficult for family members to watch the deterioration but understanding the stages can offer some peace of mind as they plan for their loved one's future. (Smith et al. 2004)

### **3 INTERVENTIONS TO IMPROVE THE LIFE OF ALZHEIMER'S DISEASE PATIENTS**

Due to the cognitive impairment experienced by Alzheimer's disease patients, they demonstrate difficulties memorising things, resulting in neglect of taking quality care of themselves and taking part in events that can make them happy. This leads to advancement of depression which turns out to limit quality of living. Consequently, they sometimes need care givers to support them to engage in activities. (Welton 2002) The study by Logsdon, McCurry and Teri (2005), has also shown that, specialized trained professionals ensured the quality of life of Alzheimer patients by taking them to their home for visit on regular intervals, calling them on phone and counseling them improved the dementia level and the quality of life of the patients also increased. (146-153)

Several interventions that could enhance the quality of life of Alzheimer patients have been identified in literature. These include: Behavioral Therapy Intervention, Progressively lowered stress threshold intervention, Physical Strength and Mobility Intervention, and intervention to Maintain Activities of Daily Living. (Welton 2002)

#### **3.1 Intervention to Maintain Social Function**

Behavioural disturbances and depression is one of the major problems in Alzheimer's disease (Taylor, Cable, Faulkner, Hillsdon, Nartet & Van 2004, 703-725.) According to JAMA (2003), behavioural therapy and exercise improve Alzheimer's patient's behavioural destruction level. Education of care givers on how to take care of behaviour symptoms enables the nurses to provide better services to the patients and hence improve the outcome of patient demented level. According to the study, after three months of continues home exercise with Alzheimer's disease patient of about 60minutes exercise in one month, 95% of the patients had their behaviour

disturbances improve as well as their physical activity level also improved in comparison to patients who received only routine medical treatment.(2015-22)

Establish routine programme to help patient deal with social and mood problems such as exercise, regular visit to family members, education on social behaviours, attending family gathering and reminding the patient in a nice way when they forget some socially accepted behaviour more often when necessary. Group therapy improves patient's social and intellectual level as they communicate with each other and in a long run improves patient's level of life. The nurse has to work close with the family members and create alliance with other professional whose work contribute to the health of the client. (Medan 2005, 33-36)

### **3.2 Intervention to Maintain Psychological Function**

As dementia progresses, the patient ability to adapt to environmental and interpersonal stresses reduces. This approach focuses on training caregivers on how to manage patients to adapt to the environment and also manage the stress of the patients by using planned activities to modify the environment in which the patients are within. This help caregivers to identify problems and use planned activities to solve them. (Huang, Shyu, Chen & Lin 2003)

According to Gerdner, Buckwalter, and Reed (2002), every stress has a cause and therefore, dealing with the causes can help the patients. When care givers use these interventions such as protocol music for patients and planned schedule for sleeping as well as managing patient pain and dealing with fear in patient can improve the cognitive function of the patient. (607-618) Also engaging patient in activities that they enjoy and letting them know how important they are improves their cognitive function and reduce aggressive level and in effect reduce also the pressure on caregivers as well (Gerdner 1999,10-16.)

### **3.3 Intervention to Maintain Physical function**

Occupational therapy improves Alzheimer's disease patient's activities of daily life (Gitling, Corcoran, winter, Boyce & Hauck 2001, 4-14.) They found that patients on environmental skilled programs were found to need less care than the group with usual treatment. Patients who undergone environmental skill programmes (EPS) gained more independence, reduced aggressive behaviour and improve the daily activity level. (Vu, Weintraub & Rubenstein 2005, 582-587)

NICE (2006) claims there should be individual training plan for patients. Care givers should document patient's activities and also focus on patient's preference to improve their physical health. As patients has their individual deference's, it is of best to be client centred and interventions like massage, music and dance, animal assisted therapy and multi-sensory stimulated therapy should be used to improve patients physical health.(6.1)

Medan(2005) noted that planned walking, social interaction, functional skill training, pet therapy, music and visual barriers, an attention focusing programmes and exercise are helpful strategies in improving agitated, disrupted and aggressive behaviours(33-36). Moreover, self-care ability, day-night disturbances, social interactions, wandering and physical mobility are also improved. (Vu, et al. 2005, 583-587.)

### **3.4 Intervention to Maintain Cognitive Functioning**

Cognitive decline is a significant symptom in Alzheimer's disease which affects the thought process and the memory aspect of the patients. People with dementia may

react in different ways and therefore nurses have to identify these in order to help them. Good communication is a very good psychological intervention treatment. It is good for care givers to find out patients preference and history as well. Patients should be engaged in a planned cognitive stimulating activity and enjoyable social activities with supervision of well trained professionals. (NICE 2006, 6.1)

Study has shown that, music therapy improves Alzheimer's disease patients cognitive functioning. According to the writer, music helps the patient to remember past events and bring back familiar memories and reduce the level of aggression and anxiety as well as depression. Most of the patients who attend all the planned music programme sections run in 10 weeks were able to remember something that was related to them in the past and shared it orally. Their depression level reduces and even some mentioned that they were relaxed. (Alexander 2001, 91-94) Music also in a way reduces the work load on the care givers. He also makes emphasis on the reduce level of these patients to the medical treatment. The therapy proved to have stimulated the cognitive functioning of these patients. (Brotons & Koger 2000, 183-195)

Another intervention for cognitive functioning is pharmacological treatment. This treatment entails the use of the three acetylcholinesterase (AChE) inhibitors: donepezil, galantamine and rivastigmine. These can be used in treating Alzheimer's patients with mild to moderate level of the disease cognitive function but with a physician order. Memantine can also be used to treat the cognitive functioning of Alzheimer's disease patient who fall under the moderate level and are intolerant to the AChE inhibitors at the severe level of the disease. (NICE 2011)

#### **4 AIMS, PURPOSES AND RESEARCH QUESTIONS**

The aim of the study is to find out interventions nurses use to help Alzheimer's disease patients to improve their quality of life. The purpose is to provide information for nurses who are taking care of Alzheimer's patient to be better able to serve these patients.

In order to achieve the aims and purposes of the research the following question is addressed:

1. What are the approaches nurses use to improve the quality of life of AD patients?



## 5 METHOD OF IMPLEMENTATION

### 5.1 Methodology

In this study, the researchers adopt qualitative research approach. This is because qualitative data is a key source of evidence to information in nursing practice. (Coates 2004, 329-334) The researchers adopt this method since the study want to find out information from the nurses concerning the methods they are using to care for Alzheimer's disease patient.

Qualitative research is concerned with developing explanations of social phenomena. It means that qualitative research method is focusing on helping to understand the world in which we are living and why things are the way they are. Understanding a given phenomenon requires asking questions that begin with; why? How? And in what way?. (Hancock 1998, 2002, 1-4)

Moreover, the researchers have used this approach because they wanted to find out the methods that the nurses are using which was achieved by asking questions which begin with why, how and in what way the nurses were using these methods.

Furthermore, the research aims at establishing 'depth' rather than 'breadth' understanding of the means of nurse's interventions which make qualitative method the best approach for this study. Normally qualitative research take place in a natural setting and the researcher's wanted to conduct interview in the natural setting of the nurses to allow them to have their freedom of expression and comfort ability. (Graneheim & Lundman 2004, 105-122)

With regards to why qualitative research is considered important in nursing, Coates (2004) provide the following justification for the strong connection between Nursing and qualitative research. This study is interested in holistic understanding of the interventions nurses use to improve the quality of life of people suffering from Alzheimer's disease and have focused on the participants but not the researcher's views. This made the researchers choose qualitative method. (329-334)

## 5.2 Setting and Participants

**Setting:** The research was conducted in Tehran city capital of Iran with a population of around 8.3 million and surpassing 14 million in the wider metropolitan area, Tehran is Iran's largest city and urban area, and the largest city in Western Asia. There are about 700 000 Alzheimer patients in Iran and the age of the patients starts from 60 years old who need to receive specialized health service. (Kian, Ali, Bagher, Eysa & Gholamreza 2003)

About 40 percent of the patients have also mild depression. There are totally 2500 elderly residents who have Alzheimer disease in 44 nursing homes both in private and local sector in Tehran. In the elderly home where the interview was made, there were 1700 elderlies which 450 of the residents were Alzheimer patients and 1300 nurses in the nursing home. The place is located in south of Tehran. The nursing home was established in 1971. The area is 28000 m<sup>2</sup> and there are different departments in the nursing home, Such as medical, recreational and cultural departments. The researcher chose this nursing home because it is the biggest nursing home that takes care of Alzheimer patients in Tehran and which has specialized nurses in Alzheimer care. (Kahrizak Charity Foundation 2014)

**Participants:** The participants were 6 nurses from an elderly home in Tehran city. During the period of summer 2014 the interview was done. The participants were both male and female nurses and all have had at list 5 years working experience of caring for Alzheimer's disease patients. Participants were selected by purposive sampling technique. The reason for the technique was to select participants whose main work is caring for Alzheimer's disease patients because they have relevant theoretical and practical knowledge about key quality interventions approaches for Alzheimer patients. Therefore, they are the group that are in better position to describe interventions they have been adopting in their institutions to ensure the

quality of life of Alzheimer patients. In other words they can make relevant discussions. (Marshall 1996, 522-525; Ma 2007)

A formal permission letter to perform research was send to the institutions for approval (see appendix 1).All participants had full information about the aim, purposes and the procedures for the research and sign consent form to ensure their anonymity and confidentiality. Furthermore, the letter had informed them about their right to participate or withdraw at any time they want. In other words their participation was voluntary. (Burns & Grove 1993, 80-106) (See appendix 3)

### **5.3 Data Collection**

The data collection method was face to face interview with notes taking by one of the researchers. Face to face interview was used because personal experiences and testimonies gives the researcher more and detailed information. (Polkinghorne 2005, 137-145)

These face-to-face encounters grant the researcher the opportunity to critically reflect on what the nurses has shared. The interview was conducted by one of the researchers in the nursing home in a room which was quiet and free from disturbance. Each participate had 20 minutes, one on one discussion with the researcher. The interview was recorded and note was taking at the same time in Persian language for comparison and clarification during translating and transcription.

The Semi-structured open questions interview was used for collecting data in this research. The questions were created by the researchers considering what will aid them to find answers to the research question. Characteristics of Semi-structured interviews includes, engaging both interviewers and responders in a formal interview and using semi-structured interview questions as an organized guidance for the interview. (Cohen& Crabtree 2006)

The interview had clear instructions for participants and it provided reliable and comparable qualitative data. Furthermore, this allowed the interviewee a degree of freedom to explain their thought and make more emphasis on important information about their expertise and area of interest which enables certain responses to be questioned to greater depth to reveal contradictions and solutions. (Horton, Macve & Struyven 2004) (See appendix 2)

The whole interview was recorded with a tape recorder in order for the researcher to play participants responses later on to make transcript. This transcript is the main source of data for the study.

#### **5.4 Data Analysis**

Recorded data was played several times, listed, wrote down, read through and transcribed into English on A4 sheet of 15 pages with the Calibri body, font size 12 and 1.5 spacing. The transcribed work was checked with the notes that were taken during the interviews. The part of information which were revealing the identity of participants were taking out to ensure confidentiality (Burns & Grove 1993, 80-106).

Qualitative analysis involves a lot of work to organize by making sense of information collected from all the materials used in the research to reduce data for reporting purposes. To analyze the data, the researchers deem it suitable to use content analysis method for the study. Content analysis is organization of raw data by using open coding method. (Polit & Beck 2010) The data analysis was classified base on the following predefined categories: intervention to maintain social function, intervention to maintain psychological function, intervention to maintain physical function and intervention to maintain cognitive function.

The transcribed work was read through several times to get the meaning. The researcher then highlighted the important information with colored pen and focused on nurse's interventions and suggestions. The data was read through several times to

get deeper understanding. Then the researcher use same color pen to highlight information of similar responses and wrote titles and headings on top of similar contents.

Those colored with same color were group under same headings, the researcher then group the data and reduce the number by combining and grouping them together in to similar categories or themes formed from the theory. Through this the researchers generates more knowledge and increases their understanding of the material. (Hall 2013)

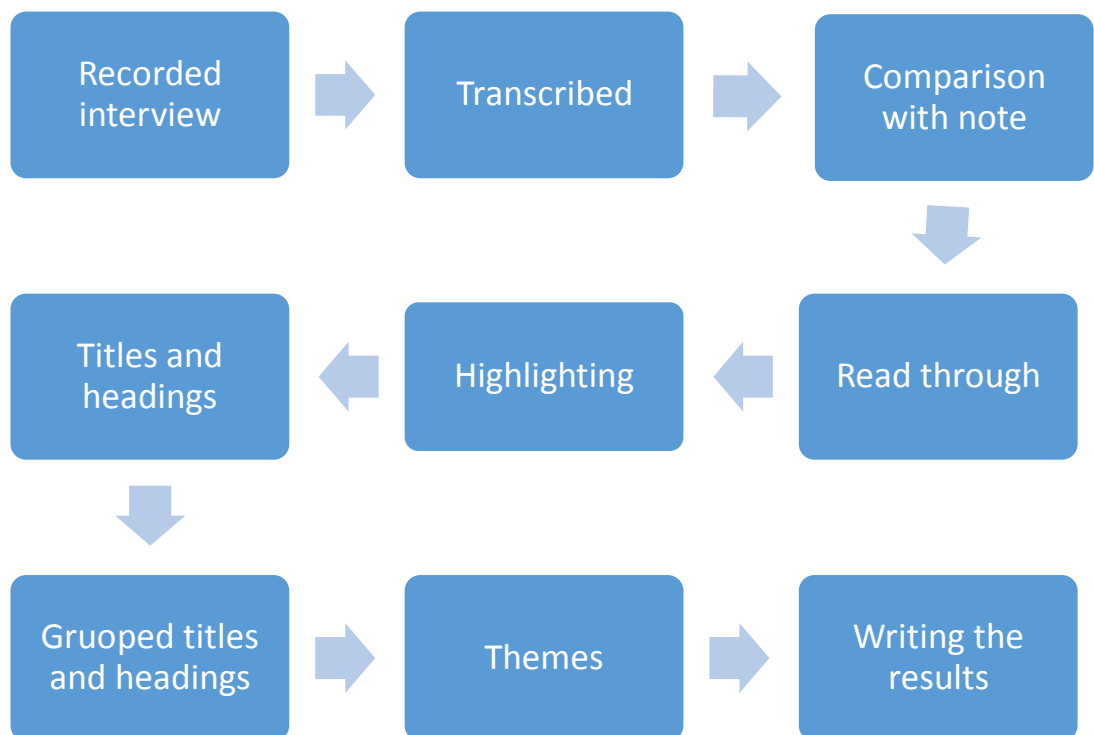


FIGURE 3. Graphical Presentation Data Analysis

## 6 RESULTS

Six nurses participated in the interview. All of them have had at least 5 years of experience in working with Alzheimer's patients. The result could be categorized into four main themes. These are: intervention to maintain social function, intervention to maintain psychological function, intervention to maintain physical function and intervention to maintain cognitive function

### **Intervention to Maintain Physical Function**

According to the participants, Alzheimer's disease patient in the nursing home, receive regular health check up with doctors and nutritionist. This help to maintain their physical function. Patient's physical health and nutritional status are important factors that need to be maintained and if possible, improved in the participants' opinion.

*"To increase their quality of life and the quality of care giving, we also have routine weekly checkups with doctor and they have physiotherapy sessions if needed"*

Moreover, the participants mentioned that, exercise is another important activity which helps to maintain the patient's physical function. The participants said standing balance exercise is a great way to help and maintain a person with balance challenge in Alzheimer's disease in the nursing home. The nurses said that, they start this activity by asking the patient to pick items from various surfaces. The exercise is performed multiple times with rest breaks as needed.

*"We have a good team of nurses and physiotherapists and a psychologist"*

*"In this center we have one nutrition professional so usually their diet is controlled; the food is scheduled with her control and opinion"*

### **Intervention to Maintain Social Function**

In the course of the interview, socialization as a problem and means to improve socialization was raised. According to the participants, Alzheimer disease patients

are the group of patient who has difficulties in socialization. It is therefore important to have some activities to integrate them in the society. The nurses explained that there are variety of methods they use to maintain the patients' social function including games playing, cooking and park-theater visiting. They stated that most of the activities are done in groups of 4 to 5 while others are done alone depending on the patient condition level. These in their opinion give patients opportunities to receive social interaction and also activate their thinking process. They sometimes make friends among their group members and hence improve their socialization said by the nurses.

*“These patients do not even remember who their family members are and do not take part in any social activities”.*

*“They play games with Legos and simple construction games. Some of the activities are done in groups of 4 or 5 and some are individual activities.”*

*“Painting and listening to music and playing games and even cooking something in the New Year time”*

*“We have park going activities and we take them for a theater or something once in a while”*

### **Intervention to Maintain Psychological Function**

Informants expressed that Music has power—especially for individuals with Alzheimer's disease and related dementias. They claim it can affect the outcomes even in the late stages of the disease. In this nursing home singing and listening to live music activities are organized for the patients according to the participants. Furthermore, the nurses indicated that other forms of arts such as drawing, painting are also used to entertain patients. The participants think that music in a way also calms down the patients. By listening to music sometimes patients recalled memories of the past and get emotionally sad or happy or even angry. So identifying the effect of the type of the music bringing those emotions, help the nurses to calm the patients down and bring happiness to them. There is always a need to find out the preference of the patients and play for them when necessary.

*“We have nice recreational activities such as listening to live music twice a week and drawing and painting”*

*“Once after a music and dance, one patient said she remembers when she was 20 years old with her first boyfriend”*

*“Sometimes the patients are very angry and say many bad words to nurses or even hit them but we need to stand it and be patient because this job is really challenging”.*

### **Intervention to Maintain Cognitive Function**

The informant also talks about the difficulties patients faced when it comes to cognitive functioning and the importance of maintaining and improving the cognitive functioning. The participants emphasized that, Alzheimer’s patients have cognitive function problem which have much effect on their quality of life. Due to this, their memory is limited hence it is difficult to take care of them. The nurse needs to repeat to them everything all the time and in soft tone to avoid making patient angry. The challenging part in the participants’ opinion is that they may not understand you are willing to help them and might refuse to co-operate.

*“Taking care of Alzheimer patients' needs a lot of energy and patient. If I had the authority I would employ more nurses here”.*

To maintain cognitive function, remaining active physically, mentally, and socially is necessary mentioned by the nurses. In the nurses’ opinion, co-ordinate activities such as carpet making and plying normal simple task games can help improve the coordination between the brain and muscles and can be beneficial for cognitive function. The informant also made emphasized that, it is important to remind the patients all the time about who they are and how important they are in other to avoid getting the patient angry and agitated.

*“They play games with Legos and simple construction games”*



*“We have nice recreational activities such as listening to live music twice a week and drawing and painting and carpet making”*

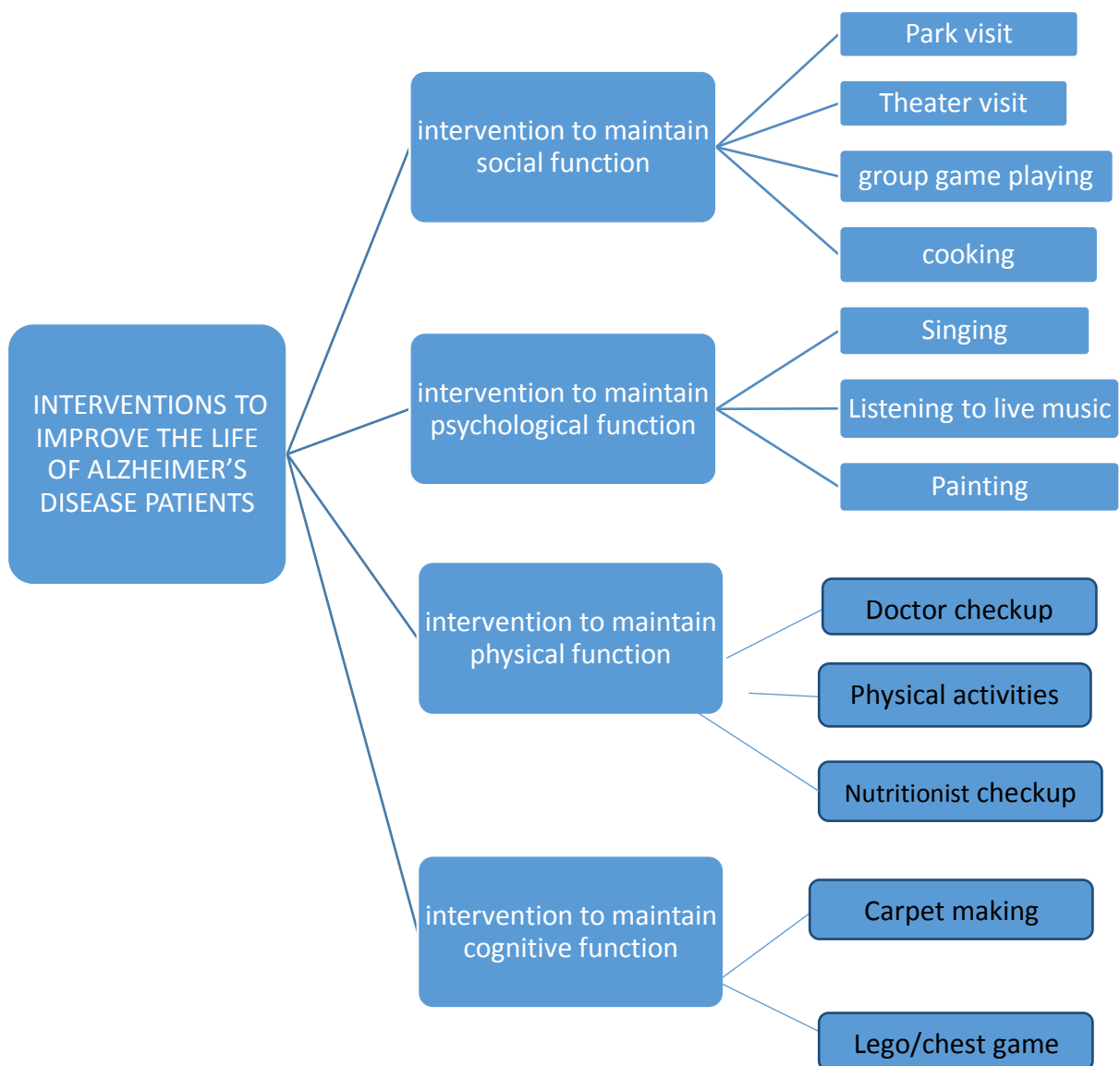


FIGURE 4. Graphical Presentation of the Results

## 7 DISCUSSIONS

It was found that there are several methods that nurses use to improve the quality of life of Alzheimer's patients life. These include recreational activities, health checkups, group activities and exercises to improve patients physiological, psychological, cognitive and social functioning as studies shows in the theory part, certain methods have been implemented in the health care sector. According to existing theory recreational activities such as music improves the cognitive functioning of Alzheimer's disease patient as was also find out in the study. (Logsdon, McCurry & Teri 2008, 391-398)

The results of the study shows that, music is used to calm down patients suffering from Alzheimer's disease as it brings familiar memories back to them and reminds them of the past. This is also proven by several theories (Brotons & Koger 2000). Study has shown that, music therapy activates patients suffering from Alzheimer's disease cognitive functioning. According to the writer, music helps the patient to remember past events, bring back familiar memories and reduce the level of aggression and anxiety as well as depression as the nurses have mentioned during the interview. After attending planned music sections, most of the patients who attend all the music programmed sections were able to remember something that was related to them in the past and shared it orally. Most often their depression level reduces and even some of them made mentioned that they were relaxed. (Alexander 2001; Vu et al 2005)

NICE (2006) says, individual care plan for activities such as music and exercises improves patients physical functioning which was also revealed in the findings of the study. Since individuals have different preferences at different stages of the disease it is important to focus on the individual needs and plan for their care in order to improve their quality of life. Moreover group therapy as mentioned earlier on in the findings of the study can also be found in existing theories that it improves patients social functioning. Medan (2005) find out that group therapy improves Alzheimer's

patients social functioning and intellectual level as they communicate with each other. During the interview, the participants mentioned that, group activities such as game playing and park visiting including four to five people are used to improve patients social functioning as patient make friends among themselves.

Occupational therapy is also another activity use to improve Alzheimer`s disease patients physical activity. The respondents revealed that, they use recreational activities such as painting and carpet making to maintain patient`s physical activities as well as exercises. This is supported by Gitling et al. (2001) who indicated that Alzheimer`s disease patients have difficulties engaging in activities they therefore lose their muscle tone and physical functioning. It is therefore important to improve their physical functioning by using exercise such as standing balance as well as recreational activities to improve the patient`s physical functioning. Alzheimer disease patients who attained environmental skilled programs were also found to need less care than the group with usual treatment. Furthermore, the patients gained more independence, reduced aggressive behavior and improve the daily activity level. (Vu et al. 2005)

During the interview, the nurses has suggested that it is important to have one nurse for one patient which would help the nurses to know patients better because it is difficult to care for these patients. NICE (2006) support this idea that, to improve the quality of life of Alzheimer`s patients, care givers have to know the health history of the patient this is because patients have problem of memorizing and therefore the nurses or care giver has to serve as the reminder of the client.

Last but not the list, every stress has it cause and therefore, dealing with the causes can help the patients. The informants in this study indicated that interventions such as preferred music for patients and planned schedule for sleeping as well as managing patient pain and dealing with fear in patient can improve the cognitive function of the patient. Similarly, Gerdner (2002) recorded that engaging patient in activities that they enjoy and letting them know how important they are improves their cognitive function and reduce aggressive level and in effect reduce also the pressure on caregivers as well.

The only significance difference between this study findings and the literature review is that, patients have regular health check up with doctors and nutritionist to maintain their physiological and psychological condition according to the respondents which the researchers did not come across during the literature review part of the study. According to Welton (2002), Alzheimer's patients lose their cognitive function and therefore have problem in remembering events. Due to this problem, they might not be eating well which can lead to nutritional problems. It is therefore important to consider the regular health checkups with doctors and nutritionist to improve their quality of life.

### **7.1 Ethical Consideration**

To conduct a nursing research, expertise and diligence are not the only things required but also honesty and integrity. Researchers and reviewers have an ethnical responsibility to protect the human rights of the participants. The human rights that require protection in the research includes: Privacy, Anonymity and confidentiality to ensure this, a letter to ask for consents of participations was send to the institution where the interview was conducted. (Burns & Grove 1993, 80-106)

The participants had full information about process of the study and how the interview was to be conducted. The aims and purposes of the study were mentioned in the letter. The number of participants needed were mentioned and assurances of privacy and right to participate or redraw at any point in time during the interview was allowed. We made mention in the letter that, the study was for academic purposes only. The consent was confirmed by signing a permission agreement. The data was collected without identification of personality. Our own ideas were not added to the data collected or change the data.

The recorded voices were destroyed immediately after the data has been process.

Plagiarism and ethical deception has been avoided by referencing the original source where literature was obtained and credits have been giving to original authors. The Researchers did not turn in someone's work and made it their original work.

(Plagiarism 2013)

## 7.2 Credibility, Dependability and Transferability

**Credibility:** According to Pratton (2006), the elements involved with credibility when doing a research includes techniques of collecting and analyzing the data in high quality data. Furthermore training of researcher and experiences of researcher's presentation skills must be addressed to establish the investigator's credibility. In this research, the data collection was done by both electronic voice recording and note taking during the interview. Since it is difficult to jot down notes while conducting the interview, voice recording was used to capture the interview. The voice recordings are part of our evidence for the research done and proof of no distortion made when transcribing and reconciling notes. (Cohen & Crabtree 2006)

**Dependability:** The study was conducted by three investigators; the whole process of the research was well organized before implemented. The same questions were provided to all participants. Honesty is an essential element to conduct a research; the researchers have adherence to this principle by providing the process used in getting the data and also provided the findings of the research. All source of the information are also provided for readers or anyone who is interested to follow the same approach to get similar results. The collected research data was organized right after the interview. The process of data interpretation right after the interview is a way to avoid a bias design or addition of the researchers' personal objective opinion. (Graneheim & Lundman 2004, 105-122)

**Transferability** refers to extend to which the results of this study can be applied in another setting or group (Graneheim & Lundman 2004, 105-122). In this study, the

characteristics of the participants are clearly defined. Moreover, the process of data collection and analysis is also provided. All the other parts of the study are also clearly stated which means that the same approach and results can be obtained when the research is carried out in another locality.

### **7.3 Limitation, Recommendations and Conclusions**

#### **Limitation**

The survey was done in only one city, Tehran. This is the limit of the survey. Because of the small scale and limited participants, the result of the survey cannot be analyzed to represent a majority. It is important to note that nursing practice vary from region to region, country to country. The research only reflexes the nursing care of the specific studied institution. Moreover, the method of the study was face to face, open-ended questions interview. Though it brought about an open, in-depth discussion, it also could be biased. Usually, the answers in this kind of study are heavily influenced by participant's views, emotions as well as his/her personal preferences.

As mentioned earlier, the aim of the study is to establish how nurses help Alzheimer's disease patients to improve their quality of life. The purpose is to help nurses to be better able to serve these patients. The drawback of the purpose is that it could be very complex and too large to be deeply studied in one thesis research. The research has established the methods nurses in Tehran recruited in caring for their patients. Moreover, it has identified how nurses think the work can be improved. However, it has not fully studied the solutions for the concerns. Some suggestions were mentioned by interviewed nurses, but how the suggestions can be implementing and possible results are not studied

#### **Recommendations**

From the result, it could be believed that the research has succeeded to a certain level in studying the methods for nurses to improve quality of life of Alzheimer's patient. The study revealed the concerns that are affecting quality of care. Some participants have also suggested solution for certain concerns. This is very interesting because the suggestions are implementable and could bring about help for nurses. The research has given a base for further studies. Those interested in the topic could look further into these concerns and do research on resolutions for the concerns. The research question can also be used by health care institutions caring for Alzheimer's patients to evaluate how their nurses feel about the institution's quality of care and how it could be improved. Nurses caring for Alzheimer's patients can also use the findings in caring for their clients. Hopefully, Government and health care institutions would use the results from this research, as well as other research of similar topic to improve their strategy for health care sector, hence, improve Alzheimer's patients' quality of life

## **Conclusions**

This paper set out to demonstrate methods and roles nurses play to improve the functional ability of patients suffering from Alzheimer's disease. The study did this through collecting data in the natural setting of the nurses. The researches gather the data by using a systematic research approach known as qualitative method.

The chief finding of this paper was put into four main categories which include: Interventions to maintain physical function: that is checkups with doctor and nutritionist as well as exercise. Intervention to maintain cognitive function: this is through carpet making, playing Lego and chest game. Intervention to maintain psychological function: this is by singing, listing to live music and painting. Finally intervention to maintain the social function: This is through park visiting, theater visiting, playing group game and cooking. There was also nurses concern about how difficult it is to take care of Alzheimer's disease patients.

Taking the above into consideration, health care professionals taking care of Alzheimer's disease patients can use the information in their care for patient. It can be suggested that, further study should be conducted on the topic nursing Alzheimer's disease patients and stress as most of the participants have shared.



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## APPENDICES

### Appendix 1: Permission to perform the research

Helvintie 2H A5  
40500 JYVÄSKYLÄ FINLAND

Tel: +358468429623/+358466320712

Email G1417@student.jamk.fi

5<sup>th</sup> May 2014

Head of Nursing Department,

Dear sir/ madam,

#### PERMISSION TO PERFORM RESEARCH STUDY IN YOUR NEGIN NURSING HOME

We are bachelor degree student of JAMK University of Applied Sciences, and studying degree programme in Nursing. We are writing our Bachelor's thesis on the topic ``Nurses Approaches to Improve the Quality of Life of Alzheimer's disease Patients'' A qualitative research approach will be used to conduct the research in your Negin nursing home in Tehran.

The objective of the study is to establish how nurses help Alzheimer's disease patients with coping strategies. The results of the study will be used by nurses to improve the quality of life of Alzheimer's disease patient. We are requesting your kind permission to collect data from your Negin Nursing home between the month of May and June 2014.

The data collection method will be interviewing about 5 to 7 nurses caring for Alzheimer's disease patients who are willing to participate and share their experiences. The information will be collected and used for research purposes only and will be treated confidentially. We are convinced that this request will meet your contemplation and endorsement we look forward to a complimentary respond. Thank you.

Yours Sincerely,

EmeliaTakyiwaa

-----

Pham Trang -----  
 Zahedeh Khanlari -----  
 Head of Nursing Department -----

## Appendix 2: Interview Questions

1. What interventions do you implement in your nursing home to improve the quality of life of AD patients?  
 Consider the following domains:
  - a. Physical
  - b. Psychological
  - c. Social
  - d. Cognitive
2. How do you feel about implementing those interventions?
3. What would you do differently in your nursing home to improve the quality of life of AD patients?

## Appendix 3: Letter of Information

JAMK University of Applied sciences,  
 School of health and social studies,  
 Jyväskylä, Finland.

Tel: +358468429623/+358466320712

Email G1417@student.jamk.fi

5<sup>th</sup> May 2014

Dear participants,

### LETTER OF INFORMATION

We are bachelor degree student of JAMK University of Applied Sciences, and studying degree programme in Nursing. We are writing our Bachelor's thesis on the topic ``Nurses Approaches to Improving the Quality of Life of Alzheimer's disease Patients'' A qualitative research approach will be used to conduct the research in your nursing home.

The objective of the study is to establish how nurses help Alzheimer's disease patients with coping strategies. The results of the study will be used by nurses to improve the quality of life of Alzheimer's disease patients.

We are requesting for nurse participants, who have experiences in caring for Alzheimer's disease patients. This is because we want nurses to share their experiences and useful techniques for improving the quality of life of Alzheimer disease patients. We will conduct the research interview between the month of May and June 2014. Participation is voluntary and there are no known risks to participate in the study.

The interview will last for approximately 40-60 minutes and there is no remuneration for taking part in this research. Participants can share their personal opinions freely and are not obliged to answer all questions during the interview. The interview consists of 3 semi-structured topic related questions. We will have three researchers participate in this interview and note taking as well as voice recording will be used to collect the information. Collected data from participants will be used only for the purpose of this research and your confidentiality and anonymity is guaranteed.

Each participant is required to sign a consent agreement to confirm his or her consent to the interview before the interview meeting. Participants may contact the researchers or the head of Department of Nursing if they have any concerns or questions.

Thank you for your participation!

Yours Sincerely,

Emelia Takyiwaa -----

Khanlari Zahedeh -----

Pham Trang -----

Tel: +358468429623/+358466320712

Email G1417@student.jamk.fi