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Guidance through rehabilitation of hip fracture patients at Armila hospital via caring-TV

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GUIDANCE THROUGH REHABILITATION OF HIP FRACTURE PATIENTS AT ARMILA HOSPITAL VIA CARING-TV©

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The purpose of this thesis was to provide guidance through rehabilitation to hip fracture patients returning home after surgery. The guidance was aimed at controlling infection in their home environment to enhance healthy living. This study was carried out under the umbrella of the Going Home Project which aimed at developing and producing guidance and counseling service concept based on caring-TV. The implementation of the guidance provision was through two interactive medium within three sessions via caring-TV.

The informants were hip fracture patients in Armila hospital Lappeeranta, Finland who were returning home after surgery and needed guidance on infection control in their home environment to help sustain the rehabilitation which began in hospital.

Inductive qualitative content analysis was used in analyzing the data which came from hip fracture patients and written narratives after the sessions.

The findings suggest that the usefulness of caring-TV in providing guidance to elderly patients is gaining more grounds as well as diminishes when employed to clients who have problems with cognitive comprehension. It also indicates guidance provision can be more productive and or enhanced by proper training, appropriate skills and good communication.

The findings can be used to focus research and development of providing health care services using caring-TV to clients or patients with potentially higher productivity.

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Opastus kuntoutuksen potilaille jälkeen lonkkamurtumaleikkaus

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Tutkimuksen tarkoituksena oli tarjota leikkauksen jälkeistä ohjausta kuntoutuksessa oleville lonkkamurtumapotilaille, jotka olivat kotiutumassa sairaalasta. Tavoitteena oli ehkäistä infektioita kotioloissa, ja siten edesauttaa paranemista. Tutkimus tehtiin Kotiin-Hankkeen avustuksella, jonka tavoitteena on kehittää sekä tuottaa ohjaus- ja neuvontapalvelukonseptiin perustuvaa Hyvinvointi-TV:tä. Toteutuksen ohjaus tapahtui käyttämällä Hyvinvointi-TV:tä kolmella erillisellä interaktiivisella kerralla.

Tutkimusryhmänä käytettiin Lappeenrannan Armilan sairaalan lonkkamurtumapotilaita. He olivat leikkauksen jälkeen kotiutumassa, ja tarvitsivat ohjausta infektioiden hallinnassa kotiympäristössä, jotta aloitettu kuntoutus pystyttiin ylläpitämään.

Tiedon analysoinnissa käytettiin induktiivista laadullisen sisällön analysointia, johon saatiin materiaalia lonkkamurtumapotilailta sekä istuntojen jälkeen tehdyistä muistiinpanoista.

Löydökset viittaavat Hyvinvointi-TV:n hyödyllisyyteen. Sen vanhemmille ihmisille tarjoama opastus on saamassa yhä enemmän perusteita. Hyvinvointi-TV:n hyödyllisyys kuitenkin vähenee, kun sitä käytetään asiakkaiden kanssa, joilla on ongelmia kongnitiivisen ymmärtämisen kanssa. Tämä viittaa siihen, että ohjaus voisi olla tuottavampaa. Sitä voisi parantaa oikeanlaisella koulutuksella, taidoilla sekä hyvällä viestinnällä.

Tutkimuksen löydöksiä voidaan käyttää keskitettyyn tutkimukseen sekä terveydenhuollon palvelujen kehittämiseen käyttämällä Hyvinvointi-TV:tä asiakkaille tai potilaille, joilla on mahdollisesti korkeampi kannattavuus.

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1. Introduction

The primary key focus of this thesis project is to provide guidance through rehabilitation of hip fracture patients after surgery when returning home from Armila hospital in Lappeenranta via caring-TV (www.lauria.fi). The prime cardinal target is healthy living that is derived from controlling infection in their home environment. It is aimed at providing face to face television interphase interaction that serves as enablers to patients. The enablers interwoven with guidance plays a vital role as patients recovers to maintain optimum safe living in their home environment.

This project is part of an important constituent of the broader Armila project (www.activelifevillage.fi). It focuses on a group of patients based in Armila Hospital, Finland whom upon surgery from hip fracture would be returning to their homes. The project emphasizes the basic resources needed by these returnee patients from hip surgery to attain an optimal level of infection prevention in their home environment. It is an important project to foster bearing in mind that these resources seek to complement those that were offered during their rehabilitation before and after their surgery by the medical staff of the surgical ward in Armila hospital.

The concept of home environment associated infections (HEAI) is an implication to preventing infection to hip surgery patients. Home environment associated infections are infections transmitted to patients as a result of impediments to healthy living. Research has indicated that there has been increase awareness that makes nursing staffs to give detailed information leaflets and explanation to patients when going home. Home environment associated infections are mostly caused by bacteria. Bacteria can exist harmlessly in people, for example on the skin or in the gut. However, some types of bacteria can cause HEAI when they enter the body, for example through wounds or when the body's natural balance is disturbed. Many of the bacteria have developed resistance to antibiotics and this can make infections harder to treat.

Caring-TV as a concept and method to provide guidance through rehabilitation to hip fracture patients in this thesis project is a technological innovation developed by Laurea's Well Life Centre "Coping at Home" project (2006) that takes into consideration the elderly people's home environment that is interwoven with physical, social and symbolic environment. It applies Lauri Rauhala (1989) "*concept that human being exists as an organic, conscious, situational and spiritual being.*" , which was delineated with Raij and Piirainen (2006) that describes elderly person as an environment of knowledge, skills, abilities, values and experiences.

It applies four key processes that targets to maintain and promote wellbeing in elderly people living at home, provide new models of wellbeing and technology based products which support living at home, two way interactive channel to offer guidance and support services for elderly people and their significant others at homes and finally quality measurement tools of welfare services which support living at home (Raij & Piirainen, 2006).

The project is planned as an enabler to give guidance through rehabilitation to elderly hip fracture patients. In this thesis project, study review would be sorted from literature research as well as feeds from the participants (hip surgery patients) through open ended questions. Pontifically, the videotape, three group narrative memo, and feedback questions formed our major source of data that employs inductive reasoning in its analysis within the hemisphere of qualitative research method.

2. The purpose Statement

Main Project Purpose:

(a) The core objective and purpose of Armila project is to research and develop a model for safe living which is modifiable to the changing situation of life of the elderly people with hip fracture in hospital and those of their families.

Group purpose statement:

(b) The purpose of this thesis is to provide guidance through rehabilitation to hip fracture patients returning home after surgery from Armila Hospital, Lappeenranta, on control of infection in their home environment through caring-TV.

Our motivation for doing this project was inspired by the inclusion of TV in the caring process, when the project was presented on 7/11/2007 and we took special interest in infection control.

Our resolve for this has also been motivated as a result of experiences gained during practice placement in hospital, and nursing homes.

Keywords: - Hip fracture patients (HFP), Rehabilitation, Guidance and Caring-TV

Concepts:-

- Guidance of hip fracture patient

- home environment & safe living

- infection control

- personal hygiene

3. Guidance through rehabilitation of HFP on infection control in home environment

3.1 Rehabilitation of hip fracture patient

The process by which a person regains lost skills from an illness or injury in order to sustain maximum self-sufficiency and function in a normal way or as near as possible is known as rehabilitation (MedicineNet.com, 2003). In rehabilitation, treatment is designed to facilitate recovery and restoration of functionalities to normal.

In other scholastic definitions of rehabilitation, there is consensus on the intent to restore good health or useful life with support, therapy and learning or education (Buddy, 2008). The availability of rehabilitative services in the process of achieving independence is an important parameter in the assessment of recovery after hip fracture survival. The patient benefits more from rehabilitation if the physical, emotional and functional aspects are factored into the treatment regime.

3.1.1 Physical Rehabilitation

This type of rehabilitation ensures physical recovery and adjustments to changes that have been incurred from the hip fracture. Gaining physical fitness, carving a regular pace to an optimal activity load in time is a good measure upon which the rest of rehabilitation is dependent. In this phase of rehabilitation, the patient is subjected to perform activities that aim at strengthening muscles e.g. short walks with breaks in between, flexing and stretching of the limbs, exercises on sitting and standing, folds and turns etc. These also help improve movements of the joint. It is essential in improving upon balance, coordination and in pain management.

In physical rehabilitation, the effects of inactivity are minimized or compromised with physical activities. Patients, who sustained more physical rehabilitation in the start of their treatment more than once daily, recover faster than those whose regimes were less physical and sustained at a less frequent interval (Edward, Gitendra & Rama, 2009).

Research findings substantiate good outcomes from early introduction of physical therapy in the hospital wards after hip fracture surgery. In a research published on Institute of health Journal on physical therapy and mobility two months and six months after hip fracture, findings suggested that for patients who engaged in physical therapy two earlier in the wards upon discharge had better mobility than those who started six months after discharge from hospital. Their association with better mobility is reflective of improved physical state of health and effective adjustments to post hip fracture rehabilitation (Geriatr, J. Am., 2004).

3.1.2 Functional and Occupational Rehabilitation

Occupational therapy helps the patient to cope better in managing normal daily tasks. It is therapy which may be prescribed for patients who have undergone a traumatic incidence (amputation, hip fracture, spinal cord injuries and other traumatic brain injuries). In this part of rehabilitation, the occupational therapist assists the patient to restore old skills. New skills are taught, learned and adjustments to disabilities supported with use of adaptive equipment as well as if necessary modifications of patient's home environment. For example, training on the use of assistive walking devices, roller walkers after hip fracture is part of occupational therapy. Moving around without necessarily walking is important in the beginning. The therapist helps identify with the patient, limitations on what can be done, and things the patient should do less or avoid doing entirely. Factors like age, state of physical health and nature of injury sustained determines the duration of the occupational therapy (Host, Sinacore, Bohnert, Stegar-May, Brown & Binder, 2007).

In functional rehabilitation, the intent is to restore functional stability and to return activity to pre-injury levels. The patient trains to fortify agility, improve their proprioreception and neuromuscular control (Lephart, Henry 1995).

Memories of traumatic experiences can be lasting. Hence, pose emotional problems which in turn demands rehabilitation. The seriousness of the injury may evoke fear, a sense of helplessness and horror. These mental and emotional processes build up with time, and set in depression. The elderly people are amongst the most vulnerable group to post traumatic stress disorders. Emotional rehabilitation is designed to relief the pressures, impact of the traumatic experience, calm down a heightened vigilance or arousal that is associated with depressions and post traumatic disorders from injuries like hip fracture (Ehlers, et al., 2003).

Recovery from hip fracture injury is associated with emotional feelings on how the patient can cope with his or her level of injury. In the patient's mind, perception of him/herself

and how they are perceived by the world in their new status of injury shifts. The shift is usually a negative label. The patients feel themselves different and stigmatized. These emotional interplays are to certain people heavier and more stressful than the road to full physical recovery.

Emotional rehabilitation is essential in that, it focuses on the patient's attitude towards themselves and their post traumatic disorder symptoms. The rehabilitation reassures the patient about normalcy of these reactions after sustaining the injury, and that with time treatment will improve upon situations. This can be achieved through sympathetic listening, practically helping, comforting and reassuring the patient (Elhers, et al., 2003).

3.1.3 Hip Fracture Patient

Hip fracture patients are people who suffer from orthopedic problems such that they have either been subjected or are to be subjected to procedures to prevent or correct injuries and disorders of the skeletal system of the hip.

A hip fracture is a broken bone in the hip. It is a very common and key health problem amongst elderly people, resulting from a fall or traumatic incidence that puts unbearable pressure directly on the hip bone whose strength has been compromised by prolonged osteoporosis. The knobby end of the hip is the part which is most commonly broken (Kannus 2000, 1506-1513; Rubinstein 2000, 1562-1563).

 In elderly people, osteoporosis is the main risk factor for bone weakness, which leads to a fall and hence hip fracture. In America, it accounts for the cause of over 300,000 hip fractures per year (National Osteoporosis Foundation, 2004). Therefore, early diagnose and treatment of osteoporosis is vitally important in addressing reduction in possible falls, and hence the occurrence of hip fractures.

After the diagnosis of a hip fracture injury by the doctor, options on the best possible treatment come into play. A majority of fracture treatment is through surgery. This procedure however, usually depends on important factors like type of fracture sustained, the general health status of the patient, the orthopedic surgeon's first choices and age of patient (Lu-Yao et al., 1994). According to the American Journal of Public Health, between 1986-9, arthropasty was the form of treatment for 64% of femoral neck fractures and over 90% of petrochanteric fractures were treated with internal fixations (Lu-Yao, Baron, Barrett, Fisher 1994).

The risk of a hip fracture maybe increased by several underlying factors such as a chronic medical condition, the sex of the individual, his or her heredity, load of physical activity,

age, use of alcohol and tobacco, medication and not forgetting environmental hazards. The probability of getting a hip fracture increases (Kannus, 2000, pp-1506-1513) with age. In other words, the older one gets, the more likely it is to have a hip fracture injury. 85 year olds are ten times to fifteen times more likely to suffer a hip fracture than people within the ages of 60-65. With increase in age, bone strength decreases, reflexes and reaction times slow. Vision or sight, orientation on balance and posture do not function at optimal (Scott, 1990). In women, especially those above menopause, there is even a more increased risk as the hormone estrogen level (regulates bone density) drops. These further reduce bone density and hence increase risk of hip fracture (Lekamwasam, Sarath, 2008).

Nutrition and generic heredity are other important risk factors. Inadequate and sometimes lack of vitamins D and calcium in diets at during our younger ages, decreases peak bone mass, hence increases ricks for fractures in later life. Eating disorders like anorexia and bulimia can cause a lack of important food nutrients needed by the body in building and strengthening bone tissues. Also, genes influence bone size, their mass and density. A lineage of osteoporosis in a family history is predictive of low bone mass. However, the consumption of food rich in calcium and vitamins D, and generally a balanced diet are very helpful in reducing the effects (Lombardi-Boccia, Ginevra, 2003).

Protracted use of some medications like corticosteroids like prednisone may accelerate bone loss, hence increasing risk of osteoporosis and hip fracture. Other medicines which may cause calcium loss and drop in vitamins D if used for a long time increased risk of hip fracture include anticonvulsants, thyroid medications and certain diuretics (Pernow, Ylva, 2009). In addition, excessive alcohol consumption and smoking may interfere with bone construction processes and reformation leading to loss of bone mass.

Recovery from a hip fracture is gradual, takes times and requires steady effective post surgery rehabilitative regimes. Physical therapy is started after surgery. In this phase of rehabilitation, the patient learns to sit, stand and walk without reinjuring the hip. The patient may feel pain in walking or moving. To effectively ensure and speed up full recovery upon return home, the patient needs help from patient's own nurse, physiotherapist and sometimes from family members. While the patient is still unfit, has difficulties in walking, perfoming basic daily tasks such as cooking, bathing or washing can be very difficult. A supportive family member or nurse can be very helpful in this situation (Miller, Ballew, Shardel, Hicks, Hawkes & Resnick, 2009).

Severe life-threatening complications can also arise from a hip fracture. Patients who are immobile over a long period of time, and those who are in traction have a high risk of developing a deep vein thrombosis. This is a complication in which blood clots in one of the deep veins in the body. Broken up clots which are carried in the blood circulatory system could block vessels in the lungs to cause pulmonary embolisms (YW, Lim et al.,

2004; pp-235-238). Immobility may cause pressure sores. Morbidity and distress from the surgery put pressure on the patient's resources. Other complications like urinary tract infections arise from poor hygiene. Patients with difficulties in performing basic daily tasks of cleaning, showering or washing and lack help have poor sanitary conditions. These are potential breeding areas for infectious bacteria.

3.2 Guidance of hip fracture patient

Guidance is one of the most important roles of the nurse that encompasses the concept of patient education. The goal of client education is to assist individuals, families, or communities in achieving optimal levels of health (Edelman and Mandle, 1998). In today's health care arena, clients know more about health and want to be involved in health maintenance. To meet this need, the nurse needs to provide education to clients in convenient and familiar places.

The client education will be one of the most important roles in nursing, regardless of the health care setting. Factors such as shorter hospital stays and the increased demand on nurse's time can complicate the ability to provide client education. As the nurse tries to find the most effective way to educate clients, health care consumers have become more assertive in seeking knowledge and understanding of their health and the resources available with the health care system. Providing your clients with needed information for self-care is necessary to ensure continuity of care from the hospital to the home (Chachkes and Christ, 1996).

Patient education is practiced by a process of diagnosis and intervention. The needs-assessment phase determines the nature of a need and motivation to learn, and goals are usually set with the patient. The intervention is constructed to provide instructional stimulation for the exact learning needs that patients have. Evaluation occurs throughout instruction, summarized at periodic intervals to determine whether the outcome goals are being met. Re-teaching is frequently necessary because it is not possible to accurately predict which instructional intervention will yield the desired learning by a particular patient. In most instances, follow up reinforcement and re-teaching are needed over time, particularly for patients who are managing chronic health problems or learning how to prevent them (Barbara K.R., 2007).

The nurse has many roles in the teaching and learning process. For example, answering the client's questions, providing information based on your client's health needs or treatment plans etc. To be an effective educator, you must engage the client as a partner in learning and not merely pass on facts (Hinchliff, 1999). Carefully determine what your clients need

to know and find the time when they are ready to learn. When client education is valued and implemented, clients can become better prepared to assume health care responsibilities. The relationship between client education and favourable client outcomes is important in nursing.

To teach effectively and efficiently, the nurse must first understand how people learn. Learning depends on the motivation to learn, the ability to learn, and the learning environment. The ability to learn depends on physical and cognitive attributes, one's developmental level, physical wellness, and intellectual thought processes. The environment also affects the ability to learn. A comprehensive assessment of learning needs incorporates data from the nursing history and physical assessment and addresses the client's support system. It also considers client characteristics that may influence the learning process: readiness to learn, motivation to learn, and reading and comprehension level, for example, assessing a personas stage of change and any barriers to change is also important and often overlooked. The nurse's own knowledge of common learning needs required by clients experiencing similar health problem is another source of information. Learning needs change as the client's health status changes, so nurses must constantly reassess them (Barbara, K., 2004).

Not all clients fully recover from illness or injury. For example, the hip fracture patient must learn to cope with permanent health changes. New knowledge and skills are often needed for clients to continue activities of daily living. In this work guidance is one of the main concepts and objective of this programme. The client education may focus on assisting clients with health care management.

3.2.1 Control of Infection in home environment

Home environment is a place where an individual or a group of persons live. It has important attributes of physicality, dwelling, sociality and some degree of security. Putting the definition into context suffices to encompass the perception of home environment as a place, country, city, town or area where habitation has been protracted or occurred over a long period. The modern day institutionalization of care for the elderly categorizes the dwellings the home environment of the inmates, giving motivation to the notion of home environment as a place where a person or people live in over a long time.

The control of infection through hygiene has a long erratic history. Personal hygiene and hand washing was less appreciated in the past, since it was not known that invisible organisms could spread from apparently clean hands and surfaces. The role of a hygienic home environment received little attention until the 19th century. Since then, the modern

tradition of hygiene has served us well, with improved water and drainage developing alongside vaccination, antibiotics, water purification, improved food production and hygienic food preparation and storage. Two major epidemiological trends are relevant to hygiene perspectives: the decline in the morbidity and mortality from infection, and the transition towards higher levels of chronic or debilitating disease. While mortality from some infections has decreased, communicable disease is no less prevalent. Infectious intestinal disease is still unacceptably high in both developed and developing countries. The control of infection within the home needs to take account of changing epidemiological trends, emphasis on evidence-based approaches and loss of public awareness of the role of hygiene. Many years ago, lack of research on the home environment prevented sufficient attention to infection transmission in the domestic setting. Recent research has demonstrated how microbial contamination can be transmitted by activities in the home. Application of this knowledge could significantly reduce the continuing impact of infectious diseases in our communities (Int'l Journal of environmental health research, 2003).

Philosophers through the ages have concluded that forgetting the lessons of history can limit progress or, at worst, lead to a repeat of mistakes made in the past. The historical development of attitudes to hygiene provide an understanding of how it is both perceived and practiced in our own era, and also provides insights into whether the current focus and guidelines are appropriate. To our ancestors, hygiene had a broader meaning that affected the person's whole life, incorporating habits, cleanliness, fresh air, exercise and the general regulation of health. This was partly due to a lack of understanding of the causes of infection and other diseases. Instead, there was a general notion that disease was caused by a number of factors, such as bad air or a 'miasma' – toxic vapors found near rivers or in poor housing. The poor were thought to have a higher level of disease because they lived in closer proximity to the miasma. Disease was also believed to be caused by an imbalance in 'humors' in the body, an idea developed from Arabic and mediaeval medicine.

This archaic idea of the associations of disease persisted for many centuries and elements of the miasma theory persist today. During the latter half of the 19th century, several of the pioneers of public health and reform, such as Edwin Chadwick, William Farr, Florence Nightingale and John Simon, were miasmatists for all or most of their careers. Chadwick believed that intense smells were diagnostic of acute disease, while Simon thought that fevers became epidemic in 'unhealthy places and among the sickly classes' (Porter, 1997).

The microbiological discoveries that established the germ theory gradually, but not entirely, replaced these concepts. Ironically, many of the reforms to sanitation, which made such an enormous impact on infection morbidity and mortality, were prompted by

the belief in miasma. Globally, escalating treatment costs and growing awareness of the unpredictable nature of microbes suggest that hygiene may be the most economically sustainable prevention strategy. While provision of good quality water and efficient sanitation are vital factors, it is now recognized that the health gains will only be commensurate with investment if steps are taken also to improve standards of hygiene practice within the community. This depends primarily on the development of effective guidelines for home hygiene, in turn dependent upon an understanding of the infection potential within the home. To be effective, 'Home Hygiene' must cover all aspects of intestinal disease prevention, including food and water hygiene, personal hygiene, general hygiene and hygiene related to the care of preventable groups. In developing countries, guidelines for home hygiene must also address peri-domestic sanitation and disposal of human excreta and other waste.

The current media coverage of hygiene is generally negative, linking a presumed over-enthusiasm with hygiene with rising trends of eczema, hay-fever and asthma. Suggestions that hygiene and cleanliness can be relaxed are a powerful influence, associated with the idea that the exposures in a traditional rustic life – such as close exposure to farm animals and mud – are needed for robust immune systems. The hygiene hypothesis is still being investigated, with research being carried out into the other possible influences on allergy, such as diet and reduced exercise. Meanwhile, there is no doubt that the media coverage has undermined confidence in hygiene practice and education on avoidance of infection.

The hygiene debate has helped to show that there is a need for an evidence base to demonstrate when and where particular hygiene practices are needed. The evidence base must include further study of infection in the home environment, as well as trials of specific interventions. Most of these interventions are inexpensive and simple, with the principles of eliminating pathogens well established for over a century. The fact that infectious disease is still a major problem in both developed and developing countries demonstrates that the lessons of history are quickly forgotten. Educational initiatives need to take account of modern perspectives, lifestyles and behaviors: the responsibility for this must be shared between governments, health agencies and individuals.

 A hygienic home is an achievable aim without damaging the overall microbial environment, if the focus is re-directed to where hygiene needs are currently unmet or not specifically targeted. The changing patterns in demography and chronic disease suggest that appropriate use of hygiene is an urgent worldwide priority. Two and a half thousand years ago, Hippocrates wrote that: Infection potential and hygiene in the home ''*Whoever wishes to investigate medicine properly should proceed thus . . . When he comes into a strange city, he ought to consider its situation, how it lies to the wind, the sun and the*

waters which the inhabitants use and the mode in which the inhabitants live . . .''
(translated by Adams 1939).

Some lessons from history bear the test of time and of scientific advances. The importance of environmental and social context described by Hippocrates has been rediscovered in public health and in gene–environment interactions in our times. Let us also continue to remember, and to build on, the historic role of hygiene in preventing infection. Drawing the generality of this outcome to a focus, in the outlook of the environment, hygiene may best be described as those practices that are significant to providing a healthy environment. In this context, it entails safety, environmental comfort and stimuli, and finally infection control. The nurse educator has certain responsibilities to inform and educate the clients on good hygiene and how to control infection in home facility's general environment as well as their immediate surroundings within the vicinity. This is the case because maintaining cleanliness not only provides for clients comfort and a positive stimulus, it also impacts on infection control.

3.2.2 Sources of infection

Domesticated pets are a source of pathogen-acquired infection. For example, cats are often portrayed as clean because they are always washing and preening their fur. In fact their fur may be heavily contaminated with salmonella and other micro-organisms (Bruner and Gillespie, 1966; Morse 1976; Moreno et al., 1993; Cefai et al., 1994): cats and other domestic pets also excrete Campylobacter (Harrison, 2000). Pet-handlers often forget that animals are a reservoir of infection and that their pets are the cause of infections in the home, particularly during high-risk activities, such as clearing up pet faeces, when hygiene precautions are essential.

In the home, viruses are also a cause of concern. Viruses are shed in very large numbers by those infected, and only a few viral particles may be needed to produce infection. For example, the projectile vomiting associated with NLV (Norwalk-Like Virus) infection can potentially infect everyone in the immediate environment: survival of the virus on carpets and other surfaces has been shown to cause outbreaks in people exposed to the environment long after the vomiting episode. Known as 'winter vomiting' in temperate countries, the Norwalk-like agent was recently implicated as the cause of a disruptive outbreak in troops in Afghanistan, and research suggests that over 1500 more cases occur than are recorded in national statistics in England (Cowden, 2002).

Respiratory infections, such as colds and influenza, also have a hygiene element in their spread: in a recent study of naval recruits in the USA, a controlled hand-washing regime

was estimated to have prevented 45% of upper respiratory tract infections in those following the regime (Ryan et al. 2001). Individuals can easily inoculate themselves, and others through transfer of viruses sneezed or coughed into their hands as well as into the general environment. Sustaining hand-washing programmes in hospitals, as well as in community settings such as day nurseries, is a contemporary challenge, with no evidence that people have become overzealous in this regard in recent decades, as has been suggested in some media critiques of hygiene.

Flies and other insects remain an important source of infection transmission. Studies have demonstrated that fly control can reduce the incidence of diarrhoea in warm climates (Cohen et al., 1991; Chavasse et al., 1999; Emerson et al., 1999). Research studies focusing on the home now provide a better understanding of how, and to what extent, infectious disease agents are spread. Although such data come largely from typical home settings in developed countries, the principles are applicable to all home environments.

Finally, it is important that all health care personnel and especially nurse educators realize and respond to the vital importance of the home environment in the total health guidance plan for each client. Nurse educators who provide health care guidance, regardless of the setting where it is provided, must be directed towards maintaining, promoting, and restoring health. Clients seeking assistance in a health care promotion facility must be protected from additional injury, disease, or infection. Additionally, attention to clients' personal and home environmental hygiene not only protects against further injury, but also constitutes the first step in controlling the presence, growth, and spread of pathogenic organisms.

In conclusion, the public of the current dispensation is very much aware of the environment and its effects on the health and comfort of human beings. The healthcare service setting is a unique environment and has a distinct character of its own. It must provide and be aware of that character and ensure that the environment is one that will support the optimum in health maintenance, care, clean environment, and rehabilitation.

3.2.3 Personal hygiene

Personal hygiene pertains to hygiene practices performed by an individual to care for one's bodily health and well being through cleanliness. Motivations for personal hygiene practice include reduction of personal illness, healing from personal illness, optimal health and sense of well being, social acceptance and prevention of spread of illness to others.

Personal hygiene is the self-care by which people attend to such actions as bathing, toileting, general body hygiene, and grooming. Hygiene is a highly personal matter determined by individual values and practices. It involves taking care of the skin, hair, nails, teeth, oral and nasal cavities, eyes, ears, and perinea-genital areas (NANDA International., 2003).

Individuals have different attitudes towards washing their bodies. Cultural and social differences exist and patients must have their right to consent to treatment respected. The nurse should conduct a full assessment of the patient's current health status which should include the level of independence plus any special needs, such as cultural washing practices. In addition, the nurse must act as a member of a caring team and be sure that the choices she offers to the patient are reasonable, safe, effective, and therapeutic (Miller, M.F., 2009).

Because of the known under-ascertainment of infectious diseases, there are varying estimates of the frequency of home environment acquired, although most sources suggest a high proportion throughout the European region (Schmidt, 1998). A detailed study of salmonella infections in England and Wales produced an estimate of 86% home-acquired salmonellosis (Socket et al., 1993), while estimates across Europe range from 50% to 80%: for example, Scuderi et al., (1996) estimated that 74% of salmonella cases in Italy could be linked to infection within the home.

The emphasis, therefore, has shifted away from regarding food poisoning as a restaurant acquired infection, and this pattern seems to be repeated in many parts of Europe. Surveillance systems are biased towards the food poisoning component of home environment, partly because food poisoning is statutorily notifiable in many countries: yet detailed studies have demonstrated that much of home environment is not associated with a recognized food poisoning incident (Wheeler et al., 1999; Le Baigue et al., 2000).

Food hygiene is nevertheless an important component of preventing infection within the home. The Food Standards Agency, a relatively new agency in the UK, estimates that up to 50% of cases of infection are food borne (Food Standards Agency, 2002). The hygiene significance is emphasized by studies demonstrating the persistence of salmonella in a kitchen environment long after the food has been prepared (Humphrey et al., 1994; Cogan et al., 1999).

Inappropriate hygiene practice – such as failure to wash hands or to clean high-risk areas – has also been identified as a contributing factor to outbreaks. For example, in a study of sporadic infections of Escherichia coli O157 due to homemade hamburgers in the USA, it was estimated that hand hygiene could have prevented 34% of the infections, in addition to the proportion preventable by cleaning work surfaces (Mead et al., 1997).

It is particularly important in maintaining personal hygiene to promote a viable and healthy skin. The skin is one of the body's first defenses against injury and infection and without it the body would not survive for more than a few minutes. The skin is a complex organ, consisting of different structures, tissues and glands, many of which have exceptional protective properties. If the skin is allowed to become dirty and infected, or if damaged areas are not treated or areas of risk exposed to excessive or prolonged pressure, the skin may break down (Rosdahl, C.B., & Kowalski, M.T., 2007).

Feeling clean contributes to people's sense of well-being, comfort, and dignity, particularly those who are ill. This content describes how to assist clients to meet this hygiene need in the daily's life.

 In drawing the lines to a close aesthetically and aseptically, an uncluttered look is far more appealing to the eye than an untidy one. It is important that the nurse educator understand the effects of the home environment on the client. Some clients are more sensitive to excessive stimuli in the home environment when they are ill or have undergone surgery in this case and as a result become irritable and unable to cooperate during programs in their care because of these excesses. This is because their body is already under stress due to their surgery and does not have the energy to cope with additional stimuli. Thus advocating cleanliness is a major responsibility of the nurse educator in the health care team regardless of their position in the team.

4. Plan for the guidance program

It was well understood that a meaningful success of the program is hugely dependent on a good realistic plan. Caring-TV, a new information technology interphase was set to be the medium of contact with the hip fracture patients in Armila Hospital who were returning home upon surgery. Firstly, it was important to familiarize ourselves with the new technology of the caring-TV. This was necessary to facilitate smooth implementation of the program's content during contact sessions with our hip fracture patients in Armila Hospital. The schedule for contact session with clients was set to three. Also, literature search was done to get clarity on hip fracture as a whole and control of infection in home environment. This constituted the content of the guidance program.

More so, encountering the hip fracture patients had to happen during the implementation stage through the caring-TV contact sessions. Pre knowledge on other aspects of the patients' health status was not known. Mindful that the maximum contact sessions with the clients via caring-TV was limited to three, the essence to know more about our clients

through stimulations with interactive open questions was fostered while proceeding with the information giving part of the guidance simultaneously.

The main program goal was set to teach the client on ways of preventing and controlling infection in their home environment. Regaining the health status prior to the traumatic hip fracture would besides other factors, require adequate sanitation, use of client's own abilities together with assistance from own nurse or other close family relations in the post operative rehabilitative phase of treatment (Ehlers A., et al., 2003).

4.1 Goals for the guidance program

The main goal of the guidance program is to teach the hip fracture clients from Armila hospital Finland who are returning home upon surgery, on ways of preventing and reducing the spread of infections in their home environment. Clients receive information on precautions against possible infectious sources and how in their current state of ill health they can be active towards making their home environment as clean as possible.

More so, as much as the program seeks to empower clients towards independence, it also recognizes that the clients have to work in close collaboration with their home nurses and other related carers. They can request for assistance, ask questions when they are confronted with difficulties to their home nurses and active in describing how effectively coping has proceeded.

Teaching the clients on signs of infections and ways to respond is also a key to the guidance program. When infections are targeted and their treatment initiated at early stages, there is a higher chance to get them under control (Mayhall, 2004).

Guidance aims to clarify and provide information on patient's care. It seeks to give a clear picture of the kind of care the client receives, set goals of the treatment, a clear commitment of both caring staff, patients and sometimes their extended family or loved ones. Clients are encouraged to ask questions and bring up issues of importance related to their care which need to be discussed and clarified.

As part of the rehabilitation of hip fracture patients returning home upon surgery, guidance is used to empower them so that they can better cope and manage in their home environment. The guidance requires a sustained effort to help control infections in their home and immediate surroundings. Autonomy, independence and control of oneself are congruent in our existence as human beings. As such, in the rehabilitation process of these clients or patient, the nurse in guiding seeks to provide necessary tools with which the

patient can improve upon their life quality and strive for the optimal levels of autonomy, independence and self control (Smith, 1999).

4.2 TV as a tool for guidance

Caring-TV is a two channel, interactive and participative TV system. The technology allows patients or private customers to communicate remotely with public sector professionals easily and securely. The guidance and support services are given as various participative programs to improve and promote the capacities of elderly people living at home.

Caring-TV as tool in rehabilitation, the content of guidance and support services and participative programs are planned together with the supervision of experts. In planning these services an elderly person is taken into account as an active partner and as a holistic being with his or her own knowledge base, skills and abilities, values and experiences.

The goal of the caring-TV services is to have an impact on senior citizens' ability to cope at home, and to reduce the need for institutional care. Caring-TV has given us valuable knowledge of how to introduce a new technological innovation to an end user by proceeding from a user centric to a user driven action model. In the future, the development of caring-TV opens new doors and gives us valuable knowledge on how to proceed towards the development of a virtual clinic (www.pohjois-pohjanmaa.fi).

4.3 Content of the guidance program

The content of the program came from literature search on guidance, rehabilitation, hip fracture patients, infections related to their care, and ways to control these infections in their home environment. It was important to structure the content in a fashion that endeavors to meet the needs of the patients.

4.3.1 Importance of a clean environment

The confines within which people live, reside and engender consistently over a period of time refers to our home environment. During the discussion session with the clients in Armila, emphasis on the need for them to ensure their living area and its immediate surrounding is cleaned as regularly as possible was made. A clean home environment ensures that the home is free from bacteria, pathogens, microbes or even just flora at

relatively substantial amounts capable of compromising their already vulnerable defense mechanisms. For example, advice on cleaning dishes after meals with soap and water, wiping tables and other surfaces with disinfectant liquids on a clean cloth are helpful measures. Also it is important to clean the toilet seat, the inside and the hand washing basin first with water and detergent, then later with the disinfectant liquid. The discussion also highlighted the need to regularly put to laundry dirty sheets and clothes. Ironing helps complement the dress washing process so that microbes, bacteria and other pathogens are killed or destroyed in the process. It is also important to note that the form and shape of clothing after ironing is neat, more appetizing for dressing. A clean home environment is good for our social and metal wellbeing as well (Carl, 2003).

4.3.2 Hand washing and Skin care

The skin is the body's primary defense against disease and infection. If this defense system is to be effective, it must remain unbroken and unirritated. The skin also helps regulate body heat. A break in the skin could upset that balance. When giving nursing care, observe for any signs of skin irritation or lack of skin integrity (Rosdahl, C.B., & Kowalski, M.T., 2007).

Frequent and effective skin care is essential to keep the skin intact and to remove dirt, excess oil, and harmful bacteria. Feeling clean also enhances the client's self-esteem. If the skin is oily, regular cleansing is needed. If the skin is dry, a daily bath may be harmful. However, everyone's face, underarms, skin folds, and perinea area need daily cleansing (Rosdahl, C.B., & Kowalski, M.T., 2007).

Hand hygiene refers to removing or killing microorganisms (germs) on the hands. When performed correctly, hand hygiene is the single most effective way to prevent the spread of communicable diseases and infections.

The skin on the hands carries both resident and transient microorganisms. The resident microorganisms are normally located on the skin, whereas transient microorganisms are those that can survive for a limited amount of time on the skin and are readily removed by hand washing. Resident microorganisms rarely cause infections unless they enter the body through an invasive procedure, such as during the placement of a peripherally inserted central catheter (Rhinehart, E., & Friedman, M.M., 1999).

Hand washing with plain soaps or detergents and water will not remove resident microorganisms in the deep epidermal layers, but will remove many transient microorganisms. Only hand washing with antimicrobial agents can kill or inhibit resident

microorganisms in the deep epidermal layers. Staphylococcus aurous is an example of a resident organism. Home care staff members may carry staphylococcus aureus on their hands and can spread the infection to the home care patient if the micro-organisms come in contact with a portal of entry e.g. Non-intact skin, urinary drainage system, etc (Rhinehart, E., & Friedman, M.M., 1999).

A dilemma for home care staff members is when to use an antimicrobial agent and which agent to use. The choice of using plain soap, an antimicrobial agent, or a waterless hand washing product should be based on the degree of hand contamination, whether it is important to maintain a minimal number of resident microorganisms or to decrease the number, and whether it is important to remove the transient microorganism mechanically (Rhinehart, E., & Friedman, M.M., 1999).

4.3.3 Mouth care and Bathing

Bathing remove waste products of perspiration, stimulate circulation, and refresh the client. A complete daily bath is not essential or even advisable for every client. The client's personal bathing habits influence the frequency of health care agency baths (Kozier, B., 2004). Consider the client's comfort and personal preferences, rather than agency routine.

Three types of cleansing baths are the shower, tub bath, and complete or partial bed baths. A bed bath is the least tiring for the client but is indicated only when the client is unable to leave the bed because of his or her condition or when the client is receiving specific treatments. Showers and bathtubs equipped with self-help devices allow clients to bathe themselves or to be bathed with nursing assistance. Lifting devices can assist in transferring clients with limited mobility from a wheelchair or stretcher into a tub. Remember to allow the client to perform as much of his or her own bath as possible, within the limits of the client's ability (Kozier, B., 2004).

A shower or tub bath is the most refreshing type of bath. The client who has been ill usually welcomes it. Bathing the entire body and stimulating the skin is best accomplished with a soak in a bath or a shower. Bathing stimulates circulation. A warm or hot bath dilates superficial arterioles, bringing more blood and nourishment to the skin (Kozier, B., 2004). Avoid giving a bath or shower immediately after a meal because the warm water of the bath will draw blood to the skin and away from the client's digestive organs.

Bathing produces a sense of well-being. It is refreshing and relaxing and frequently improves morale, appearance, and self-respect. Some people take a morning shower for its refreshing, stimulating effects. Others prefer an evening bath because it is relaxing.

Bathing removes accumulated oil, perspiration, dead skin cells, and some bacteria. Excessive bathing, however, can interfere with the intended lubricating effect of the sebum, causing dryness of the skin. This is an important consideration, especially for older adults, who produce less sebum (Kozier, B., 2004).

Frequent mouth care benefits everyone. Encouraging the client and giving them opportunity to brush his or her teeth before and after each meal and in the evening. When caring the mouth, observe the condition of the gums, tongue, mucous membranes, and teeth. Nurse should note on the health record any factors such as missing teeth, unusual redness, unusual tenderness, sensitivity to hot or cold, pain, bleeding, swelling, or odor. If the gums or teeth are unusually sensitive to touch or temperature changes, use applicators or a tongue depressor wrapped in gauze, rather than a toothbrush, for oral hygiene.

It is important to floss between the teeth, to promote healthy gums. Flossing also removes debris than could cause tooth decay and offensive breath odor (Rosdahl, C.B., & Kowalski, M.T., 2007). The client who wears dentures needs the same mouth care as the client who has natural teeth. Specially designed brushes and preparations for soaking dentures are available to remove deposits (Rosdahl, C.B., & Kowalski, M.T., 2007). Brush dentures in the same manner as natural teeth. Be sure to rinse them because the denture cleaner may have a disagreeable taste.

4.3.4 Foot care

The feet are essential for ambulation and merit attention even when people are confined to bed. Healthy feet remain relatively unchanged during life (Kozier, B., 2004). However, the elderly often require special attention for their feet. For example, reduced blood supply and accompanying arteriosclerosis can make a foot prone to ulcers and infection following trauma.

Each foot and toe is inspected for shape, size, and presence of lesions and is palpated to assess areas of tenderness, edema, and circulatory status. Normally, the toes are straight and flat. Common foot problems include calluses, corns, unpleasant odors, plantar warts, fissures between the toes, and fungal infections such as athlete's foot (Kozier, B., 2004).

Because of reduced peripheral circulation to the feet, clients with diabetes or peripheral vascular disease are particularly prone to infection if skin breakage occurs. Many foot problems can be prevented by teaching the client simple foot care guidelines.

4.4 Plan for guidance implementation and schedule

The Armila caring-TV project was presented on the 7th November 2007 with rehabilitation as the core concept idea. Our study centers on this concept with guidance, infection and hygiene in focus.

A careful literature review was done and key content areas were identified that would enable rehabilitation. The content was discussed with teachers responsible during project meetings on 4th March 2008, some corrections were made and the content of the plan were approved and validated.

The programme was originally in English but later translated into Finnish language to enhance communication between presenters and the clients. A copy was sent to Armila hospital nurses to enable them have first hand information on the content and idea of our presentation and also to prepare the clients before-hand. Having been given a maximum of three contact sessions for the program implementation, we had to book time with the caring-TV staff. Three different sessions were arranged on separate dates, and each session lasting for a maximum of thirty minutes.

The structures of the presentation were agreed upon with the coordinators and a time table was set in place in the Well Life Center, Otaniemi with dates thus:

Dates and place	Time	Contents of the guidance programme
06.3.2008, Laurea Otaniemi	12.30.13.00	Personal hygiene: Hair care, Dental care. Physical care: Body cleaning & Shaving, Washing face & armpits, Trimming nails. Hand washing techniques: Soap and water. Evaluation: Questions
18.3.2008, Laurea Otaniemi	12.30.13.00	Preventing infection in home environment: House cleaning, Clean and disinfect surfaces, Keep pets healthy, get immunized, Handle and prepare food safely, Use antibiotics appropriately as recommended by doctor, Avoid contacts with wild animals, Care agreement. Evaluation: Questions
28.3.2008, Laurea Otaniemi	12.30.13.00	Patients' guidance relating to wound care: Recognizing signs of infection Evaluation: Questions

Table 1 Implementation schedule

In the process of the caring-TV thesis, agreement was reached on the mode through which data would be collected which included open ended questions between and at the end of the presentation, personal and group diaries from the presenters, feedback during presentation and videotaping of the presentations. Material evidence gathered during the sessions will be analyzed using an inductive method. The inductive method, also referred to as the scientific method, is a process of using observations to develop general principles about a specific subject.

With a total of ninety minutes allocated for our program implementation and the availability on only thirty minutes per session, it was precociously necessary to further plan the usage of one session's time. Bearing in mind that there was no pre-existing

information about the clients prior to the start of the guidance program implementation except about them having been in hip surgical operation, seven to ten minutes was allocated for short introductions and presentation of main goal of the session. The next ten to twenty minutes was used on the contents of the session and the rest set for interactive discussions facilitated with simulative open-ended questions.

5. Plan for guidance evaluation

Part of the plan of evaluation is reflective of the content and arrangement of flow of evens during the presentation sessions. It was planned in the sessions to embody not only a flow of information from the presentation, but also from the clients keeping in mind that their answers, suggestions and feedbacks on our presentations, information giving and use of TV as a medium to give guidance would be useful in the final evaluation.

This thesis project applied the use of stimulating questions to arouse the clients' active engagement in the guidance process so that assessment of guidance via caring-TV could be measured. The plan encompassed the possibility to solicit the indulgence of the patients into providing possible suggestions on ways in which the caring-TV program can be improved upon through our guidance program.

5.1 Method of guidance evaluation

In this thesis, qualitative research method was put into use. The essence is to produce knowledge through guiding hip fracture patients who have undergone surgery and are returning home on infection control in their home environment. These hip fracture patients in Armila hospital represent our informants. By adopting a qualitative method, interactive discussions revealing insights on the patients' experiences would be facilitated and also stimulated with open-ended questions.

Qualitative research is a broad cover term for many different research traditions concerned with the study of human experiences in and in relation to the natural contexts within which they occur for the purpose of understanding persons' responses and the meanings they bring to the experiences. Lincoln and Denzin (2000) describe qualitative research as a "humanistic commitment — to study the world always from the perspective of the gendered, historically situated, interacting individual". In a field that cannot be described in terms of a single specific epistemological orientation, theoretical perspective, or methodology, these types of definitions provide a general introduction.

Through the planned contents of the programme, the nursing students played a role of a teacher by giving rehabilitative guidance on skin care, hand hygiene, and foot care to patients in Armila hospital. The support from education, which begins as soon as the client's needs are identified and willingness of family and friends to help is identified before they discharge to home. During the caring-TV sessions guidance contents were discussed interactively and the participants were given a chance for questions and to give feedback. The patients were requested to opine on the effectiveness of the program which in turn would constitute part of data collection upon which findings and deductions would be based.

5.2 Plan for data collection

Action research is normally associated with 'hands-on', small-scale research projects. Its origins can be traced back to the work of social scientists in the late 1940s on both sides of the Atlantic, who advocated closer ties between social theory and the solving of immediate social problems. More recently, action research has been used in a variety of settings within the social sciences, but its growing popularity as a research approach perhaps owes most to its use in areas such as organizational development, education, health and social care. In these areas it has a particular niche among professionals who want to use research to improve their practices (Denscombe, M., 2007).

In this thesis, members agreed to use stimulating open ended questions to sustain dialogues during the program implementation from which data could be collected from the informants. It was also agreed to use video tape to record the presentation and group diary written in form of personal narratives at the end of each presentation.

5.2.1 Patient's evaluation

At the end of each session, the hip fracture patients in Armila was asked how they perceived the subject of the presentation, their opinion on how effective the program was executed and about their willingness to participate in future presentations. The experience from receiving valuable care-related information on their health through caring-TV was teachable to the clients and aroused desire to attend future sessions.

5.2.2 Self evaluation

The nursing students also wrote on their experiences on how the presentation session went through at the end of the each session. More so, answering questions on whether the patients' interest and participation was aroused or subjective during the presentation gave useful insights. The planning of the implementation was written to cover all sessions irrespective whether implemented or not, especially because some sessions were marred with total absence of patients from Armila to participate in the presentations. Ways upon which to improve use of caring-TV to provide guidance was also documented.

6. Guidance program implementation

The Laurea Educational system for degree program in nursing in English is structured to encourage students to participate in one of many on-going projects of interest as part of their study curriculum and hence may proceed with such to the level thesis. The Armila project was one of such projects. The idea and essence is to use the new technology of caring-TV to provide care to clients in different places other than where the caring-TV is based. In this project, the group chose to work with hip fracture patients who have undergone surgery in Armila hospital in Lappeenranta in Finland and were returning home.

Firstly, it was important to understand how the caring-TV is operated, how it works and briefings on its newness and the intent to develop and test further its usefulness. Participation in the project also aimed at testing the provision of care using the caring-TV and finding new ways to improve upon using the caring-TV to provide care.

Bearing in mind the clients have problems related to hip fracture, relevant literature on hip fracture was searched and read extensively. Also, the same was true for infection control and home environment. The searched literature was useful in the preparations of the program.

The project implementers constituted a group of three nursing students with immigrant background participating in this part of the project, and the patients that serve as informants are Finnish elderly people based in Armila Hospital. There was then a need to sustain the possibility of giving the patients guidance through caring-TV by using a common language that is comprehensible to the nursing students and the patients in Armila Hospital. In the end, the text of the guidance program had to be translated from English to

Finnish and also the implementations through sessions with the patients via caring-TV were to be done in Finnish. Translating the text and preparing the program in Finnish language was possible with the help of a co-student, and it was crucial for the entire project.

Group member shared equally tasks amongst themselves to help make the program and its implementation a reality. Tasks were divided and each member giving a time frame within which the task was to be completed. Planning on how members introduce themselves to informants on presentation day was also done.

6.1 Implementation of interactive session

Armila caring-TV presentation dates.

Final preparation and meeting with teacher on 4.3.2008 time 1500hrs-1600hrs

Presentation dates:

06.3.2008	time: 1230-1300	No feeds received [Technical difficulties]
18.3.2008	time: 1230-1300	Presented with participants in session
28.3.2008	time: 1230-1300	No patient available [Room empty]

Informants were patients between the ages of 50-60 years old and above staying in Armila Hospital in Lappeenranta. In the beginning of the preparation and of this presentation, the group worked very hard to get the materials ready as was expected both from Armila Hospital and the teachers responsible. During this period in time, all the group members were in their respective practical placements, and this made it difficult to schedule meetings and group discussions to suit individual placement demands. Most interesting to note was the last minute rush, a day prior to the scheduled presentation as a result of Armila hospital's demand that the presentation must take place as their clients were ready and would not want to be disappointed. As such, the group did their utmost to step up efforts to get the material translated and ready for presentation. Copies were sent to the teachers concerned and to Armila Hospital in Lappeenranta.

The group arrived earlier as expected at the caring-TV room, to prepare logistics for the presentation. The expectation was to get access to the TV settings and environment, so that group members present in a relaxed and cordial atmosphere. Unfortunately, accesses were given to the TV room, in our opinion, a little later than expected. In spite, the project stayed in focus and view with readiness to proceed with the presentation. With the help of the TV room staff, the group got familiarized with the common settings and some

highlights on how previous presentation and earlier sessions had proceeded. A separate video camera was mounted, from which it would be possible to have available feeds of the presentation that would act as a data collection for the evaluation of the guidance project.

During the discussions, aspects on house cleaning, the handling and preparation of food safely, immunization to protect against common diseases amongst others were addressed. Intermittently, questions were posed to the participants and their feedbacks received. It was a positive experience, first of all to finally be in contact with the project participants from Armila Hospital. Discussions began with introductions from both the nursing students from Laurea University of Applied Sciences and patients in Armila Hospital. Discussion of subject matter with patients was in focus, immediate outcome suggested that their knowledge on these aspects were quite basic, and in certain circumstances quite blank. However, they were quite engaged and active throughout the discussion, as they listened and answered questions.

In re-watching the presentation through video feeds, and compiling the narratives it was observed that in the beginning there was a gap in communication as a result of the group's inability to use Finnish language effectively. Usually, they inferred the subject or questions based on the basic words that were used. By so doing, they misunderstand the key idea that was in focus. This can also be attributed to perhaps a decrease in orientation as to time and place, also by virtue that they are relatively old people with a multiplicity of ageing problems. More so, it was deduced that the participants seemed quite uninformed about the subject of our presentation and its related themes as it concerns them. Perhaps, they were not adequately briefed on our presentation by the nursing staffs in Armila Hospital prior to its start.

In reflecting this scenario, it is similar to that in which the patients were just brought into the presentation hall by the staff in Armila without any pre-information and guidance. Besides, it was expected that the staff would introduce the patients to the nursing students and prepare them for the presentation. In spite of the odds, positives were drawn from the presentation. There was a willingness and desire on the part of the elderly participants to actively engage and involve themselves in the discussions. Drawing from the proceedings in guiding the patients through the caring-TV interactive interface, it was possible to give our clients guidance on preventing infections in the home environment. This was deductive from their responses and show of interest, as well as from key criteria that forms the perspective through which the nursing students with the empowerment from our theoretical frame work formulated the guidance for the caring-TV session.

6.2 Implementation of evaluation plan and data collection

Denscombe quoting Lewin stipulated that action research is essentially practical and applied. It is driven by the need to solve practical, real-world problems. It operates on the premise, as Kurt Lewin put it, that 'Research that produces nothing but books will not suffice' (Denscombe, 2007).

There were three presentation planned originally, the first phase were to guide on personal hygiene, and second phase were to guide on home environment & infection control and third phase were to guide on patient guidance relating to wound care, but in all, only one succeeded. The first presentation was in full set but the technical crew could not receive feeds hence technical difficulties between Armila Hospital and Well Life Centre.

The content of the first phase were moved forward to the second phase because of the group's inability to present with minor changes made in the texts. In the beginning of the phases, the methods of data collection were decided strictly on videotaping of the presentations, feedback during presentation. The questions asked to participants, it was agreed that instead of asking participants questions at the end of each phase, it would be rather asked at the end of each sub-title treated. The reason is that if asked at the end of the phase, the clients been old in age might have forgotten what were discussed earlier. In other to get the facts when their mind is still fresh with the subject matter at hand, it was agreed to ask the questions right after each sub-title. It was also agreed that the presenters were to write a group diary from the scenario at the end of each phase with strict adherent to personal experiences whether the group presented or not.

The second phase of the plan were videotaped but the first and third phase were not because the first phase were riddled with technical hitches and the third was that the patients did not show up at the caring-TV room therefore the presentation was cancelled.

Summarily, the videotape, three group memo diary and feedback questions formed our major source of data. Inductive method of data analysis was used. Key phrases were underlined in the three diaries which were then grouped on the basis of similarities and differences.

6.3 Data analysis

Data analysis in this work applied inductive reasoning. Inductive reasoning which is a way of thinking (a logical mental process) that begins with observation of patterns or repetitive occurrences and systematically formulates conclusions about what probably or possibly is going on, that is what those observations may signify. Thus, conclusions are reached by moving from lower to higher levels of abstraction. In contrast, in deductive reasoning, conclusions are reached by moving in the opposite direction (higher to lower), beginning with a theory about what is going on and applying it to various propositions (e.g., through hypothesis-testing). Inductive methods are common in qualitative research where data analysis is an iterative process that also involves reflection, intuition, and introspection. It should be understood, however, that although research designs may be strongly associated with a certain style of reasoning, it is impossible to conduct any sort of scientific inquiry without the use of both approaches (Powers & Bethel, 2005).

The data acquired from the nursing students in form of narratives, patients who participated in the programme was analyzed by reading the transcript, watching the video tape. The valuable data was gathered in this qualitative study by the nursing students in Laurea University of Applied Sciences through the caring-TV project with the clients in Armila Hospital.

As Miles and Huberman (1984) point out, qualitative data comes in the form of words rather than in numbers. They suggest that data analysis consists of: three concurrent flows of activity: data reduction, data display and conclusion drawing /verification. Qualitative researchers have to show how the (theoretically defined) elements that they have identified are assembled or mutually laminated. The distinctive contribution qualitative research can make is by utilizing it theoretical resources in the deep analysis of usually small bodies of publicly shareable data.

The analysis of transcripts of tapes is used in data collection. Certainly, depending on our memory, we can usually summarize what different people said. But it is simply impossible to remember (or even to not at the time). By studying tapes of conversations, which are able to focus on the "actual details" on aspect of the project and the analysis of conversations does not require exceptional skills.

Using research interviews (or focus groups) involves actively creating data which would not exist apart from the researcher's intervention. By contrast, observation or the analysis of written tests, audiotapes or visual images deals with activities which seem to exist independently of the researcher (David Silverman, 2001).

Sacks recognized some of the undoubted technical problems involved in camera positioning and the like if you were to use videos. These are the very issues that have been addressed, if not resolved by more recent work based on video-recorded data. In sack's sense, means repeated, careful listening to your tapes. As you listen, you build an improving version of a transcript (Sacks, H., 1992).

In this thesis project, the presentation is recorded by the videotape and the tapes preserved to enable transferring of information into written form. In this form of recording the researcher records a description of the interaction in his or her own words. Usually, s/he makes brief notes while observing the interaction and soon after the observation makes detailed notes in narratives form. In addition, some researchers may interpret the interaction and draw conclusions from it. The biggest advantage of narrative recording is that it provides a deeper insight into the interaction. Besides the data included in the audio tape, non verbal communication was taken into consideration. This includes gestures, nodding, change in emotion and also instances when the participants responses were not loud enough to be heard by the researcher (Ranjit Kumar, 1996).

A large amount of the information in conversations come from non-verbal cues such as facial expressions and body gesture. These cues are lost when we don't communicate face-to-face. But face-to-face communication doesn't have to happen in person. With video communication we can at least deliver information about the facial mimic and some gestures. Observation is one way to collect primary data. Observation is a purposeful, systematic and selective way of watching and listening to an interaction or phenomenon as it takes place (Ranjit Kumar, 1996). According to Kumar, there are many situations in which observation is the most appropriate method of data collection, for example when you want to learn about the interaction in a group, study the behavior or personality traits of an individual etc. In summary, when you are more interested in the behavior than in the perceptions of individuals, or when subjects are so involved in the interaction that they are unable to provide objective information about it, observation is the best approach to collect the required information (Ranjit Kumar, 1996).

The term observation is used in two different senses in nursing theory and research. One meaning refers to a procedure for gathering data that requires the investigator to witness and record certain behaviors (Powers & Bethel, 2005).

The project is also used as a narrative content to identify data consisting of words and /or images which have become recorded without the intervention of the research. In qualitative research, texts are sometimes only important as background material for the real analysis. Where texts are analyzed, they are often presented as official or common-sense versions of social phenomena, to be undercut by the underlying social phenomena

apparently found in the qualitative researcher's analysis of her interviewees' stories (David S., 2001).

Summarily, in this thesis work, the project applied a method of objectively and systematically analyzing communications and written documents by creating categories and sub-categories to classify qualitative information paradigm which were addressed originally in six criteria with the assumption that words and phrases mentioned most often are those reflecting important concerns in every communication.

1. Which data was analyzed?

2. How were they defined?

3. What was the population from which they were drawn?

4. What was the context relative to which the data were analyzed?

5. What were the boundaries of the analysis?

6. What was the target of the inferences? The act or process of deriving logical conclusions from premises known or assumed to be true. The act of reasoning from factual knowledge or evidence.

At the level of findings, it was resorted to use sub-categories which were further broadened to superior categories, reflective of their inferior subject content and majors in the groupings. This helped simplified and eased the analysis of the data. Eight sub-categories were derived. They included cognitive development, environmental background, professional knowledge, co-operation and co-ordination, patients' guidance, healthy living, patients' interpersonal rapport and nursing students' interpersonal rapport. These eight sub-categories further gave rise to four major categories like patients' coping skills, the nurse's competence, communication and content of the program.
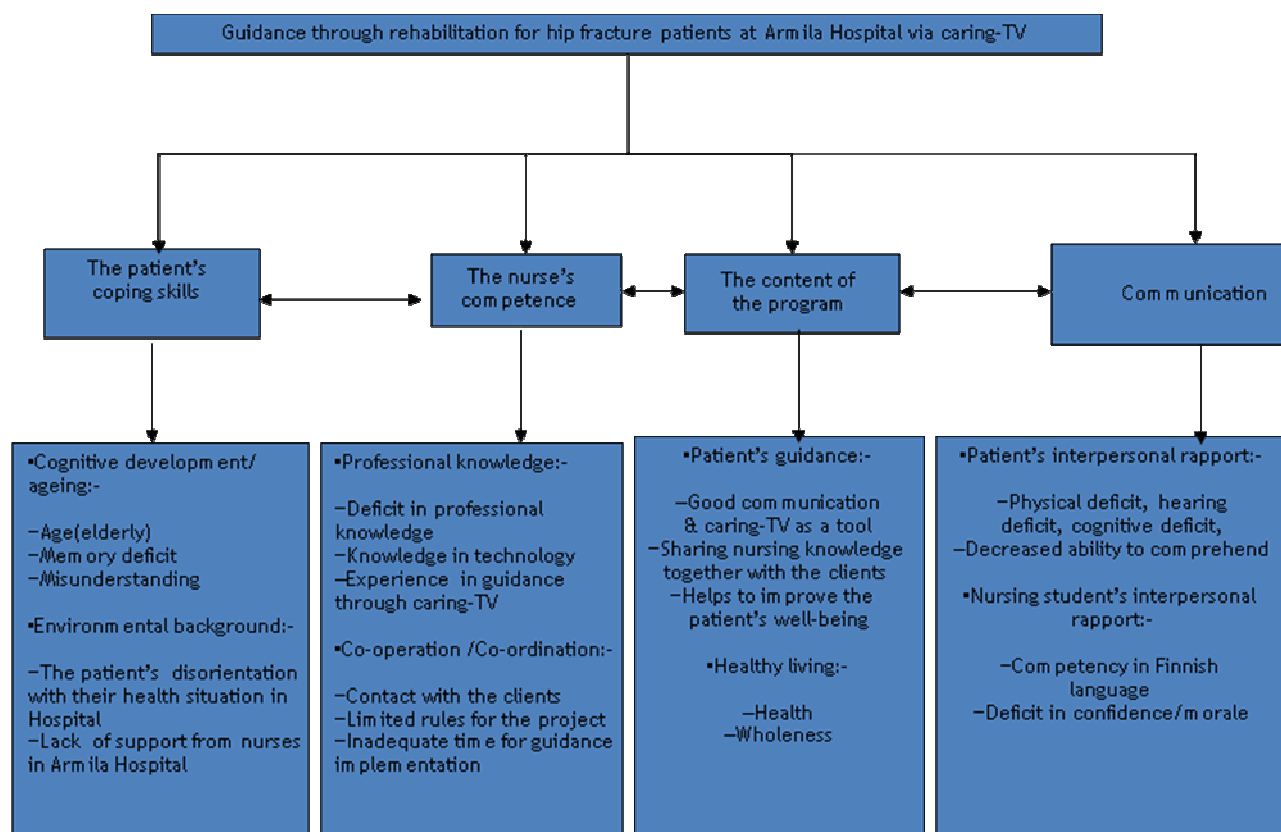
Figure 1. Categories and sub-categories of the findings

7. Findings

7.1 The patient's coping skills

This category's derivation arose from two sub-categories; cognitive development and environmental background. These two sub categories were indicating in the derivation of the main category that the patient's ability to manage better at home would be dependent on their coping skills.

7.1.1 Cognitive development and ageing

There is a general loss cognitively as people move closer to old adults. Older adults tend to take in information more slowly, and are less strategic in their use. Slower processing speed means there will be less retained information from the current activities. Hygiene is

very simple and common topic in people's life when it comes to health. In the project, guidance on hygiene was planned and offered to the clients in the presentation. Follow-up questions were used to test their understanding and application. During the guidance implementation stage, it was clearly evident that simple questions were challenging to the elderly. Some responses were disjoint and totally incoherent with the subject in question. Rather, the clients used other subject matters of their choice to express aspects related to their feeling. At the end of the program, the group's members discussed and gave their own feedback of the activities. This defect or deficit of comprehension definitely affected the co-operation of these elderly people with regards to providing answers consistent with the subject in question. The professional knowledge of guidance in hygiene was offered to the clients using the new innovation of caring-TV; as such, this innovation was deemed not suitable for the elderly who have deficit in cognitive comprehension due to ageing.

7.1.2 Environmental background

According to the nursing students' observation, combined with the evaluation of whole activities; the environmental background of the clients is considered a factor that affects the clients to understand the guidance of hygiene by the nursing student. Delirium, or acute confessional state, is a common complication among hospitalized older patients. Delirium is characterized by a sudden onset and fluctuating course, inattention, altered level of consciousness, disorganized thought and speech, disorientation, and often behavioral disturbances. As with other common geriatric syndromes, the etiology of delirium is multifactor. Some predisposing and precipitating factors reflective of this guidance program include older age, cognitive or sensory impairments, dehydration, specific medication usage (e.g., psychoactive drugs), concurrent medical illness, and sleep deprivation. During the implementation program, the nursing students asked the clients how they often keep their personal hygiene and cleaning at home. One of the clients answered *"the nurses helped to do everything for us in hospital",* when the student actually asked how they keep their home clean? For example, do you clean your fridge and room at your home? The client became angry and answered that *"now I am in hospital not at home".* The other client answered that *"her husband will do everything at home, because I am at hospital".* It is difficult to evaluate these answers. The nursing students also wondered why the clients had this kind of behaviors and reactions. Finally, the nursing students considered that environmental background is one factor that affects the patients in Armila Hospital.

7.2 The nurse's competence

This category was sort from two other sub-categories which were professional knowledge and co-operation/co-ordination. Proper training, hence competence was reasoned as important in shaping the outcome of the guidance implementation.

7.2.1 Professional knowledge

Caring-TV is quite new technique which is used in nursing care. It can be a challenging experience to use the caring-TV to guide clients in nursing. Nursing students had a short time to learn and or train on how to use the technology to offer guidance in nursing care. Inadequate training on the use of the equipments involved weakens the effectiveness of conducting quality presentations, teachings, education and guidance. During the program, it was important to know how to manage the technology. For example, in the beginning, while talking with the patients, it was noticeable that they were not answering and as such not participative and even when they do, it was without voice. At times, the working staff helped us to solve the problem. As nursing students, it is familiar to guide the clients by face to face in the practical placement. With the use of the new technology of caring-TV, it is more difficult to assess whether the client has got the nursing information that was intended for them to know especially after having been through a traumatic incidence as hip surgery and being an elderly person.

7.2.2 Co-operation/Co-ordination

As part of testing the new caring-TV technology by using it to provide guidance to clients, there is a great need of ensuring the co-ordination, co-operation between the parties involved, in this case the clients, Laurea University as an educational institution and Armila Hospital, this is vital and valuable and guidance cannot progress without its sustainability. During the implementation of the program, there were times when nursing student were available to provide guidance with the use of caring-TV while the client's at Armila Hospital were either not present or were in anticipation of taking part of the program at a later time. It squared to the groups conclusion in the analysis of using caring-TV moving forward that, not only do the nurses have to be there to offer assistance, but also structuring of activities and planning of sessions should ensure that the clients are available and notified prior to the start. Both institutions where nurses are based and the

places where clients are located need to have good co-ordination so that using caring-TV proceed with little and no time consuming delays.

7.3 The content of the program

This category was derived from sub-categories of patients' guidance and healthy living. The content of the guidance program contained tools for patient empowerment with regards to control of infection in home environment and was therefore used not only to engender the development of delivering health care services using caring-TV but also as a view point in arriving into some key findings.

7.3.1 Patients' guidance

The program was fashioned to teach ways of controlling infection in home environment. It is important for occupants of each home to understand basic yet specific techniques that if applied would be important in the effort to provide an optimal living environment. In the Armila project, the nursing students support the rehabilitation by providing guidance to the clients who have been in hip fracture surgery prior to returning home. Patient's guidance is essential in nursing. Some patients may be at risk for complications from relatively common infectious diseases. For example, influenza, tuberculosis and methicillin-resistant staphylococcus aureus infection which can lead to illness and even death in elderly. In the content of the program, optimizing hygiene is seen as a tool to help prevent infections to the clients. For example, the art of hand-washing is the single most important action that will reduce the development of infection. Maintaining good personal hygiene is vital in the development and control of the spread of infection. Caring-TV as a tool is a good method to giving the nursing guidance to the clients. In the content of program, the ultimate goal of patient guidance is to support the patient, and to empower him/her to regain or better as much health as possible to the level prior to the trauma.

7.3.2 Healthy living

The overall condition of humans at a given time referring to soundness, especially of body or mind, freedom from disease or abnormality, a condition of optimal well-being, a

preventive care that is a valuable tool in maintaining good health. Healthy living and wholeness as applied to ageing elderly with hip surgery is delineated to be the extent of continuing physical, emotional, mental, and social ability to cope with one's environment and change. During the implementation of the program, emphasis was made on the intent to promote healthy living. In this regard, contextualizing the understanding and meaning of healthy living ensured that in spite of the trauma and its effects, a thorough sustainable process of rehabilitation can be useful in replicating functionalities, survival and or coping reflective of qualities of healthy living. In the discussions that ensued, the clients talk about their health with demeanor reflective in their tone of voice, facial expressions, gestures and carriage. Some perceive progress, improvement and changes in certain degrees on in a slow gradual process. Therefore, to them, health is continuous. This conclusion is congruent of effort of the entire rehabilitative regime which if well pursued would give the clients an opportunity to experience health in a better way in comparison to how they were perceived in the early after the trauma.

7.4 Communication

Communication as a category in the findings was perceived from a derivative of sub-categories which were separated into nursing students' interpersonal rapport and patients' interpersonal rapport. The extent to which the outcome of the guidance provision is meaningful depended greatly on the communication.

7.4.1 Nursing students' interpersonal rapport

Communication skills played an important role in nursing guidance. Good communication helps to build good relationship and trust between the nursing students and clients. In this program, the language of communication being Finnish by default, posed a huge challenge as it was neither the nursing students native speakers nor did their mastery of the language excellent. During the preparation of the guidance plan, it was difficult to translate the content from English to Finnish language; Hence the need to seek external support. Facts were organized in simple, short and understandable sentences. In addition to translation of content to Finnish, support was also required from the external source during the presentations and dialogues in case the group were confronted with a situation which needed help with spoken Finnish. In the beginning, the process went on well by the basic language skills. But when the clients started to work out on some of the topics, it was perceived that language has an effect in the communication with the clients.

However, the group resorted to communicate by demonstrating, hence emphasizing more on the use of non-verbal communication skills with the clients that proved to be more efficient and effective. For example, it was shown how to correctly wash hand to the clients. The non-verbal (gesture) communication looks better than the verbal communication skills.

In a nut shell, the nursing students' interpersonal rapport with regards to good communication in proving guidance has to be emphasized in using caring-TV in the future. The language used should be familiar to those implementing the program or providing the guidance, so that they can be more effective in teaching, answering and asking questions. The provision of guidance is less meaningful when the provider has a rather below par of the language grasp involved in the delivery and this is a fact derived from the experience of this project.

7.4.2 Patients' interpersonal rapport

Verbal communication can be difficult with a mentally or physically impaired person. In the program, the patients were encouraged to be participative and interactive. Some of the clients had little or no response for discussing the topic. That can stem from the fact that his or her understanding of the subject is poor, and also that the interphase natural contact which is common in day to day communication. For example a client with a weak voice poses a challenge for the nursing students to understand what s/he is talking. At time, more careful listening was necessary and more attention needed to comprehend or understand the patients. Much was not known about some of the clients' communication problems and their causes prior to the implementation. From a nursing students point, it was appreciated of the fact that the clients liked and were happy to share their overall information relating to the guidance program. Apparently, the defects from the physical trauma coupled with the mental stress involved in a rehabilitation of this type put a heavy burden on their resources. To some of the clients who were less responsive, nursing student supported with encouragement.

Findings indicate that caring-TV was viewed in these context two folds: (a) It is a useful means of long distance guidance and support (b) It is less effective in providing guidance to patients confronted with this kind of trauma who are also relatively elderly and ageing. In future uses and application, a proper verification of background and understanding of client's physical, mental status and level of communication skill be measured prior to the planning of the program. This enables the care, rehabilitation and content of the guidance

program to be structured in the way that is suitable to their level of understanding, communication and degree of comprehension.

8 Discussions

8.1 Ethics

Fry & Johnstone (2002) refers to ethics as a form of philosophic inquiry used to investigate morality and helps in resolution of moral dilemmas. Collecting data from people during research obviously leads to issues that can be resolved and challenged in ethical parameter.

When the largely procedural requirements are perceived as ineffective in improving protections, some investigators might avoid submitting research protocols to disclose certain aspects of the protocol (Ferraro et al., 1999; Liddle and Bracalton, 1996), behavior that could place participants at risk and compromise public trust in the oversight system.

Protecting the rights and welfare of research participants is the major ethical obligation of all parties involved in the oversight system, and to provide these protections ,all parties must be able to demonstrate competence in research ethics-that is, conducting, reviewing, or overseeing research involving human participants in an ethically sound manner.

Research participants must be treated equally and with respect. Whenever possible, research should be designed to encourage the participation of all groups while protecting their rights and welfare. No one should participate in research without giving voluntary informed consent. Investigators must make appropriate disclosures and ensure that participants have a good understanding of the information and their choices, not only at the time of enrollment, but throughout the research.

Informed consent should be an active process through which both parties share information and during which the participant at any time can freely decide whether to withdraw from or continue to participate in the research. The process of informed consent to ensure that information is fully disclosed, that competent participants fully understand the research in order to make informed choices, and that decisions to participate or not are always made voluntarily.

The ethical considerations as a major aspect while dealing with participants were first handled by the school board (Laurea University of Applied Sciences) with the nursing

student's project plan. The project coordinators sought informed consent from the participants with relevant information that the project will be carried out by nursing students from Laurea University. The participants understood clearly and were not forced to participate in the session since they were informed in advance about the details of the project, caring-TV.

Privacy and confidentiality is complex and poorly understood concepts in the context of some research. Privacy refers to the ways and circumstances under which investigators access information from participants. Because privacy concerns vary by type and context of research and the culture and individual circumstances of participants, investigators should be well informed and mindful of the cultural norms of the participants. In addition, investigators should be aware of the various research procedures and methods that can be used to respect privacy.

The research was done by an international group of nursing students and this means that different viewpoints abounds. But the participants privacy is preserved since none of them have names mentioned in this thesis. During this project, the participant's cultural background was also considered by the investigators.

8.2 Trustworthiness

Caring-TV is an innovation technology that was used to collect the data of the project as a tool. With the professional staffs help, the process of the whole session was successful. Before the project proceeded, the plans with its contract were informed detailing the aims of the study that it is for research purposes and not for general public use. The data analysis was tried and mirrors as true as possible the original materials collected from the participants from Armila hospital.

The findings of the thesis were created by the data at hand and the literature. The nursing students were active and positive when guiding with professional knowledge to the hip fracture patients with caring-TV. It was important that the nursing students understood clearly the purpose of the study and the research questions throughout the process of data collection and data analysis. During the whole process, the consultation and guidance were operated between the teaching tutors and the nursing students.

The attitude and the behavior of nursing students play an important role in maintaining trustworthiness between the researcher and the informant. Professional knowledge was shared and discussed by the good co-operation skills in the group. Ethical issues are

considered in the sessions. For example, this is observed by respect and protecting the anonymity of the participants if they do not wish to be identified by the public.

8.3 Discussion of findings

The caring-TV project was presented for the first time on 7.11.2007. The core objective and purpose of the project instituted at Laurea University of Applied Sciences Otaniemi Espoo, Finland is to collaborate with Armila Hospital in Lappeenranta, Finland to research and develop models for safe living which is modifiable to the changing situation of life of the elderly people.

Resources within the contents of our caring-TV project were planned to meet the needs of hip surgery patients in Armila Hospital that are part of the participants in this programme. While planning the contents of the guidance in rehabilitation for hip surgery patients, the needs of the patient was a central focus and the aim of the nursing students was to offer knowledge that would be useful for the patients participating in the going home project. A thorough literature search was carried out in advance during the programme preparation and presentation and these provided the basis for designing the programme. It is therefore important to state that the participants acknowledge the relevance of the programme in supporting the rehabilitation process in helping them develop and make progress in their recovery and coping skills.

On coming to the end of this long research on caring-TV project, it has become evident to reflect on the path followed to the final crown of this academic excellence. It is the group understanding and hope that this work will bring to the reader the most important things which were learnt about the caring-TV project. Embarking on this project was very enriching, yet it was challenging and not an easy task. The procedural chain of actions from the beginning to the end of this research gave grounds upon which reflection on the path followed are based.

More than a generation ago, Marshall McLuhan, a Canadian educator, philosopher and scholar known for the expressions "the medium is the message" and "global village" predicted that television would bring us together into a "global village". Today, with satellites and other technologies making it easier for television to cross borders, we are closer to that vision than ever. Our world is more and more a single "information society", and television, as the world's most powerful medium of communication, is a key part of that society.

Caring-TV can be a tremendous force for good. It can educate great numbers of people about the world around them as happened during the caring-TV project presentations as there were participants from various cities across Finland taking part at the same time. It can show us how much we have in common with our neighbors near and far as most elderly participants learned during the presentation and discussion among them. And, it can shed light on the dark corners, where ignorance and unhealthy living fester. Nurses using caring-TV as a tool to deliver care is also in a unique position to promote mutual understanding and tolerance -- with content that tells and relates to the people in focus and to the majority of the world's elderly population to whom this caring-TV project was started in Finland.

Television has become one of the most influential forms of media in our present time without which the Armila project would not have been possible. It is the arena where images, forms, styles and ideas surrounding the human existence are mobilized. Television makes its mark as the most popular medium for communication and information because of the considerable convenience it offers to its audience worldwide, of all ages, nationalities and social status. Television does not require literacy and presents information in audiovisual form requiring no extra skills for comprehension. But in spite of these, presenting, interaction, feedback and caring-TV are intertwined to the implementation of the programme. It is therefore important and required to implement the programme carefully and support participants to be active and share. The nursing students need to know and be at best with the contents of the tasks at hand and the target group to maximize effectiveness and efficiency.

The caring-Television project organizers (Armila Hospital and Laurea University of Applied Sciences) recognizes the significance of television broadcasting as a primal means of communication and a standard gateway of information for the masses, most importantly the focused group, lonely elderly as well as surgical elderly patients returning home from Hospital. Therefore, caring-Television plays an effective role in disseminating information and knowledge and serves a powerful tool for reflecting and shaping human conditions and aspirations as they tend to cope and recover from illness.

The findings suggests an enormous strength in fostering freedom of expression and increasing cultural diversity in the caring-TV media, particularly by improving the endogenous production capacities and supporting the distribution of quality audio-visual programmes are highly prioritized when in this case the presenters were nursing students of immigrant background which aroused the interest and curiosity of the elderly participants.

Findings indicates in the direction that caring-TV in the future will be part of public service broadcasting (PSB) as a unique service providing universal access to information

and knowledge through quality and diverse content reflecting the needs, concerns and expectations of the various audiences, especially the disadvantaged individuals and communities.

The outcome of the project also illuminates how care focuses on enhancing the utility of televisions as an educational, rehabilitative, guidance and cultural vehicle with which the nurses competent skills in care are interwoven; on advising elderly, mentally challenged children, regulatory institutions etc , on major issues that affect healthy living.

Findings point the creation and dissemination of local content reflecting the values and experience of elderly residents of local communities and cultures is necessary for the preservation of cultural diversity. The creative content of the programmes strives to achieve not only quality television programming but most importantly, enhanced local content production reflecting such values as patient wholeness holistically.

The programme strategy must be carried out by providing training, funding local productions and establishing platforms for local content dissemination for nurses who authors, produces and broadcasts the guidance. The nursing students in this portion of the project strongly believes that sustaining high quality caring television programming results to a well-informed, enlightened public not just only elderly with the ability to participate in public debates and struggle for political and health issues of common interest, hence emphasizing the crucial role of television in promoting healthy living among the elderly and the populace.

8.4 Reviewing major ideas on process description

The caring-TV project is part of Laurea's effort to foster research and development in nursing sciences. It employs the use of modern technology to reach certain health targets on the support and wellbeing of elderly people that would otherwise have been more difficult to achieve without. The provision of important health care services to the elderly people and their significant others at home through guidance using a two way interactive medium is the major goal of the caring-TV project. With this in mind, the group took part in the project with support from our teachers to engender this research and developmental effort by providing guidance on infection control in home environment to patients in Armila hospital who were returning home upon hip fracture surgery.

The group's participation in the project in providing guidance was made possible by the collaboration between Armila Hospital staff and that of Laurea University of Applied Sciences. The groups were three students of foreign background who participated in the

caring-TV project. Mindful that the guidance provision was supposed to be offered using Finnish language, translation of the texts was needed. Therefore, it was agreed to seek support from a native speaker who was willing to be of assistance. Plans were made to encompass aspects on infection control in home environment as the main subject using three scheduled presentation sessions that were allocated to the group. Each presentation session had to last for not more than thirty minutes.

Preparations for our presentations were made and Armila hospital was informed about the schedules as well as previews in order to ensure readiness of participants (hip fracture patients returning home from surgery). In this project, data was gathered from observations through interactive discussions with the patients in Armila via caring-TV, their response to posed questions, group written narratives after each session, and partly from recorded video of one of the sessions. The use of video recording was to serve as enabler during data analysis to review the presentation session once more in other to further assist the group make observations and deductions that might have gone unnoticed during the live session. Considering that there is the needed to create or generate knowledge based on people's responses to questions on their life experiences and by observation, the data was analyzed using inductive analysis. Besides, there were barely any uses of numbers. According to Seidel (1998), while qualitative data analysis embodies processes with characteristics of interactive and progressive, recursive and holographic, it is in simple term about noticing, collecting, thinking through interesting things and then writing a report.

The first session, as much as it was anticipated didn't proceed as expected. The nursing students were ready for the presentation and were present in the TV room on time to start. The staff of the TV room placed several calls on the caring-TV network to establish connection with Armila Hospital in order to start the session to no avail. In spite of trying for more than twenty minutes, connection with Armila could not be established. A direct phone call was then placed to the Armila staff in which they confirmed their unpreparedness and unreadiness for that day's session. The group resorted to writing a narrative based on the happenings of the first day.

In the second presentation day, contact was established with hip fracture patients in Armila via caring-TV. The group was able to provide guidance topics related to infection control in the home environment. During the discussions, aspects on house cleaning, importance of clean environment, foot care, hand washing, bathing and mouth care were presented. Intermittently, questions were posed to the clients and their feedbacks received. It was a positive experience.

It was important to have finally been in contact through the caring-TV interphase with the project participants from Armila hospital. Discussions began with introductions from both

the nursing students from Laurea University and patients from Armila hospital. As the group discussed out guidance subjects, it was evident that their knowledge on these aspects were quite basic and in certain circumstances quite blank. However, they were engaged and active throughout the discussion as they listened and answered questions.

The third presentation proceeded almost entirely like the first. Phone calls via caring-TV were placed to Armila hospital and they all failed to establish contact between the patients in Armila hospital and nursing students in caring-TV room in Laurea University. The group decided to write a narrative based on the happenings of the day of the third session. The provision of health care services has in recent years encountered the use of better modern technologies which aim to deliver these services in ways that most often guarantee better outcomes. When scientific tests and trials are conducted on a consistent basis, the possibility of using these technologies to find new grounds, improve upon delivery and results in health care is sustained. The events that transpired as the project proceeded helped to highlight certain key areas wherein the plight of further testing and developing the delivery, use and productivity of caring-TV, would demand improvements. Amongst them are coordination, planning, communication and commitment. In a nut shell, despite the short comings during the project implementation, the studies engendered forward the development of caring-TV.

9. Learning by developing caring-TV on the basis of findings

Caring-TV is a two-way channel system, interactive and participative TV system through which guidance and support service to improve and promote the capacities of elderly people living at home. During the project, the nursing students were excited to guide the clients of infection control in nursing by the innovative technology. In the sessions, the nursing students noted that some lapses affect the quality of nursing guidance by caring-TV. It was nice to share the opinions that could be used in developing caring-TV as a guidance tool in nursing according to the findings. In general, the session showed that caring-TV as a tool of guidance seems to be successful in improving the well-being of elderly people living independently at home.

The programme should be organized well by Laurea University and Armila Hospital. As an innovation technology, the nursing students were excited and worked hard to prepare the relevant materials for guidance to the clients. Poor organization of the project led to the nursing students lost opportunity to have contact with the clients.

Before carrying out this project, it would be good for the nursing students to meet the clients first to interview them. Because the client's background helped the nursing

students to find out about their goal and expectation of guidance and also make suitable topic for them. If the clients were interested about the topic, they will be eager to learn the knowledge and get more benefit from the topic.

In this project, the time of presentation is limited. Half an hour is too short time to guide and share the nursing knowledge with the clients together. Especially with the elderly who is suspected of having cognitive ageing difficulties and physical problems such as hearing deficit. The use of simple and short knowledge in guidance requires lengthy time sessions; the clients in this case had no reaction with our topic or probably because of misunderstanding. The group asked the permission to continue the programme to finish our plan but it is not possible because there is the need to give the caring-TV room to others to run the next programme. It is considered that the project can be implemented better with support from the nursing staff in Armila Hospital. Because client's background was not properly defined and known, it affected the nursing students confident to guide the clients.

However, the programme would probably implement better if the language of interaction is familiar to all participants of the projects. Language was one hampering aspect and although one of the group members was a native speaker, it compromises the aspect of interaction which was meant to be essence of the programme. Misunderstanding and not understanding the language may affect the patient to have faith and trust in the guidance although competence plays a major role as well. It showed that communication skills play important role in the guiding programme; it is nice that the nursing students were familiar with the client's background and be able to communicate with the clients in different situation. Of course, the nurse's professional knowledge is also considered in the professional nursing guidance.

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