Nurses' experiences from communicating with hearing impaired patients

Camilla Mattjus

Degree Thesis for Bachelor of Health Care (Nursing)

Degree Programme in Nursing

Place and year: Vaasa 2012

BACHELOR'S THESIS

Author: Camilla Mattjus

Degree Programme: Nursing

Specialization: General Nursing and Perioperative Nursing

Supervisors: Nina Vestö

Title: Nurses' experiences from communicating with hearing impaired patients

Date 2.11.2012 Number of pages 46 Appendices 6

Summary:

The aim of this study was to find out nurses' experiences from communicating with hearing impaired patients. For this thesis the respondent employed a qualitative approach as well as content analysis in order to identify prominent themes and patterns among the themes. The theoretical framework used was Mishel's *theory of uncertainty in illness*, Kolbaca's *theory of comfort* as well as Swanson's *theory of caring*. The theoretical background contains information about different hearing impairments and the most common hearing aids as well as information about how common hearing impairments are today.

The study indicates that nurses are not so familiar with how to communicate with hearing impaired patients and that there are deficiencies in the nursing education as there is nothing about hearing impairment or how to communicate, in the current curriculum. It also turned out that there is an interest in learning more about hearing impairments, how to communicate and to get more information about the hearing aids used and, according to the study, there is a need for it.

Language: English
Key words: hearing impairment, communication, experience

EXAMENSARBETE

Författare: Camilla Mattjus

Utbildningsprogram och ort: Degree Programme in Nursing, Vasa

Inriktningsalternativ/Fördjupning: Allmän sjuskötare samt Perioperativ profilering

Handledare: Nina Vestö

Titel: Nurses' experiences from communicating with hearing impaired patients

---

Datum 2.11.2012 Sidantal 46 Bilagor 6

Sammanfattning

Målet med den här studien var att ta reda på sjukskötares erfarenhet av att kommunicera med hörselskadade patienter, respondenten använde för denna examensarbetet en kvalitativ metod samt innehållsanalysför att kunna identifiera framträdande teman samt mönster bland de teman som identifierades. Det teoretiska ramverket som användes var Mishels *theory of uncertainty in illness,* Kolbacas *theory of comfort* samt även Swansons *theory of caring*. Den teoretiska bakgrunden innehåller information om olika hörselskador och om de vanligaste hörapparaterna samt om hur vanligt det är med hörselskador idag.

Studien indikerar att sjukskötare inte är så bekanta med hur man kommunicerar med hörselskadade patienter, samt att det finns brister i sjuksköterskeutbildningen eftersom det inte finns något om hörselskador eller kommunikationsteknik i den nuvarande läroplanen. Det visade sig också finnas intresse bland sjukskötarna att lära sig mera om hörselskador, hur man kommunicerar samt önskemål om mera information om hörapparater och enligt studien så finns ett behov av det.

Språk: Engelska
Nyckelord: Hearing impairment, communication, experience

Table of Contents

Introduction

Communication is one of the main keys when it comes to giving good care, as the communication between nurses and other staff within health care is important in order to be able to give the patient a sense of caring. Not only communication between health care staff is important, but also the communication between nurses and the patients in order to be able to handle the patient in a good way and make the patient feel safe while in care. The question then is does everyone get the same opportunities when communicating? It seems like there are still things to improve when it comes to communicating with a hearing impaired patient, as the communication technique with hearing impaired patients are not really understood. Both nurses and patients lose their patience when neither the patient nor the nurse can communicate which is creates obstacles where both the nurse and the patient will feel like they have failed, and neither of them will feel good. The nurse might feel she is not giving good care and the patient, on the other hand, might feel he is not getting help and that he is not understood which might lead to further problems. Like the nurse might get more stressed and the patient might take longer time before actually recovering due to unhappiness.

The number of hearing impaired people in the Nordic countries is increasing, as the age of the population is getting higher for every year since people live longer and there are fewer births than before (Norden, 2010) . But it is not only in the Nordic countries the number of hearing impaired people is getting higher. According to The World Health Organization, hearing loss is one of the most prevalent sensory disabilities globally and over 275 million persons in the world are hearing impaired or deaf (WHO, 2012). People who are affected by their hearing loss are 800 million and the number is estimated to rise to 1.1 billion by 2015 which is about 16% of humankind. (Phonak, u.d.) These numbers shows the importance of knowing how to communicate with hearing impaired patients, not only in Finland but worldwide.

In this thesis there is a study about “Nurses’ experiences from communicating with hearing impaired patients” that shows us the importance of getting more information about hearing impairments in nursing schools. Also, there are almost no studies done on this particular subject, which supports the idea of why this

particular subject is so important. The study is showing an indication of what knowledge nurses have and what experience they have of hearing impaired patients and the communication with them. The thesis also contains information about different hearing impairments. The thesis will function both as an enlightening study as well as raise awareness of the need for getting more knowledge in nursing schools both for the future hearing impaired patient's sake and also for future nurses to be able to avoid stressful situations when the communication might be difficult.

The respondent for this thesis has a history of hearing impairment since birth and can understand the world of the hearing impaired and see the problems that occur for the hearing impaired in daily life. Furthermore, the respondent has been a patient herself and therefore knows how difficult it is to experience good communication between the nurse and the patient, as well as to feel safe. The respondent is also familiar with the nursing profession and has seen the lack of knowledge about the hearing impaired patients, and problems in communicating. Furthermore, the respondent has fundamental assumptions about nurses' experiences from communicating with hearing impaired patients that are believed to be true without any proof or verification, based only on experience.

1. The aim of the study

The aim of this study is to find out nurses' experiences from communicating with hearing impaired patients. The intention is to find out the existing knowledge of how to communicate with hearing impaired patients. The respondent will, as a product of the thesis, develop a plan of lectures that is attached in appendices as appendix 5. The following questions were formulated.

1. What experiences do nurses have from communicating with a hearing impaired patient?
2. Do nurses feel they are able to provide comfort and prevent uncertainty for the hearing impaired patient?
3. How do nurses provide good care for the patient in their communication?
4. Can there be improvements in the communication between nurses and their hearing impaired patients?

The respondent will get answers for these questions by interviewing five nurses using interview questions that are designed to give answers based on the aim of the study.

2. Theoretical background

Hearing impairments are, according to Kronberg, today so common that the World Health Organization is referring to it as one of the greatest public health problems. (Kronberg, 2007, p. 1) As it is classified as one of the greatest public health problems, it, furthermore, indicates how common it is with hearing impaired people, and still there is not so much understanding for hearing impaired people, due to a great lack of knowledge. About 15% of the grown up population are considered to have some kind of hearing impairment. The hearing impaired people are a heterogeneous group with different kinds and degrees of hearing impairments like tinnitus, Ménière's disease and hyperacusis (Svenska Hörselförbundet, 2010, p. 6). The respondent believes it is important to know about the different hearing

impairments and to know the numbers of hearing impaired, in order to be able to get some understanding of it. In Finland, approximately 300 000 persons of the Finnish population are hearing impaired which is around 10% of the population and further on, about 150 000 persons in Finland are using hearing aids (Marttila, 2005). The question that arises is, are nurses able to help hearing impaired patients to care for their hearing aids? The respondent would believe that there are those who are not able to do so, due to lack of knowledge.

2.1 One of our most important senses – hearing

Hearing is, after sight, one of our most important senses (Anttila, et al., 2009, p. 60) and it is the way we mainly communicate with each other, as we hear; we can get the language and then learn how to talk. Human communication skills are developed in accordance with biological heredity and under the influence of the environment (Anttila, et al., 2009, p. 61). That shows how important it is to hear, in order to be able to communicate, to be able to keep our social capital alive. "Hearing is the deepest, most humanizing, philosophical sense man possesses… " (Konradsson, 2011, p. 5)

Hearing is used for communication. With our hearing we receive information, even about events outside our field of vision, like from other rooms and also from TV, radio speakers etc. With the sight we can only get information about events or objects within our restricted field of view (Huttunen, et al., 2007, pp. 64-65).

2.2 The physiology of the ear – Normal hearing

When communicating with other people, the voice is not the only tool we use; we also use nonverbal communication, like gestures, facial expressions, and our behavior also showing what we say through the nonverbal communication. Even though sight is important, especially for hearing impaired people, hearing is still probably the most important sense when it comes to communication (Konradsson, 2011, p. 19). From that text we can conclude that since hearing is important in

communication, we need to change the hearing possibilities so the ones we communicate with actually can hear us and thereby communicate. A hearing impaired person uses the sight a lot in order to interpret the sound they hear when communicating - in order to hear they need to also see, while a person with normal hearing also uses sight but not in the same way as a hearing impaired person does. It is also important to understand that sounds that usually do not disturb a normal hearing person, can disturb a hearing impaired persons listening a lot, as the sound of someone pressing a pen on and off or the sound of chairs moving or the sound of papers being twisted, or a TV that is on, makes the hearing situation even more difficult.

The ear works in the way, that the ear conch catches and directs the sounds towards the auditory meatus and the tympanic membrane, which is oscillated and whose mechanical movements then are transmitted to the ossicles. In the ear canal and the middle ear, the vibrations are intensified on their way to the cochlea. The vibrations are then transmitted into neurotransmitters in the inner ear and then moves through the auditory ear. The hearing cores, consequently, get stimulated in the brain stem, and neurotransmitters cross over to the other side of the brain stem and reach through the auditory pathways and at last to the hearing center in the temporal lobe (Konradsson, 2011, p. 26). In figure 1 below you can see the physiology of the ear and how the sounds are moving.

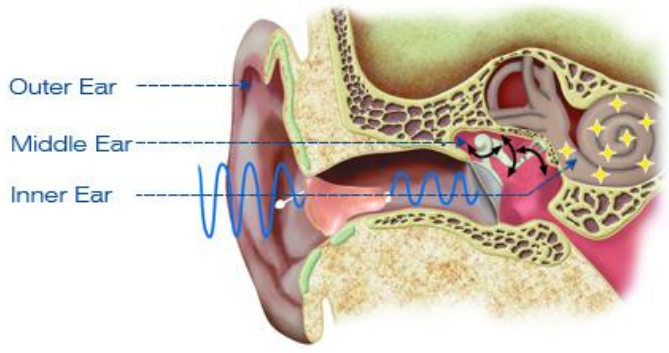

Figure 1. The sound's path, the outer and inner ear (London Hearing, 2010).

2.3 Classifications and types of hearing impairments

Hearing impairment or hearing loss as well as disabilities are defined as the limitation or barriers that prevents the person, as a result of an injury or illness, from performing an activity in the manner, or within the limits, that are considered as normal (Konradsson, 2011, p. 37).

In figure 2 The World Health Organization classifies the different grades of hearing impairment. Grades 2, 3 & 4 are classified as disabling hearing impairment. The audiometric ISO values are averages of values at 500, 1000, 2000, 4000 Hz. (World Health Organization, 2012). In the table, the different grades of hearing are classified as the following, as well as showing how high the audiometric ISO value (Hz) has to be in order for the hearing impaired person to hear. Grade 1 refers to a slight impairment where a corresponding audiometric ISO value of 26-40 dB is needed for the person to hear. Grade 2 refers to a moderate impairment where a corresponding audiometric ISO value of 41-60 dB is needed for the person in order to hear. Grade 3 refers to severe impairment and a corresponding audiometric ISO value of 61-80 dB is needed in order for the person to hear. Grade 4 refers to a profound hearing impairment including deafness, and a corresponding audiometric ISO value of 81 dB or greater is needed in order for the hearing impaired person to hear.

The WHO (and other organization's) grades of hearing impairment

Grade of Impairment	Audiometric ISO value	Description of the impairment	Recommendations
0 – No impairment	25 dB or better (better ear)	No or very slight hearing problems. Able to hear whispers.	
1 – Slight impairment	26-40 dB (better ear)	Able to hear & repeat words spoken in normal voice at 1 meter.	Counseling. Hearing aids usually recommended
2 – Moderate impairment	41-60 dB (better ear)	Able to hear & repeat words spoken in raised voice at 1 meter.	Hearing aids usually recommended
3 – Severe impairment	61-80 dB (better ear)	Able to hear some words when shouted into better ear.	Hearing aids needed If no hearing aids Available, lip-reading & sometimes signing essential.
4 – Profound impairment including deafness	81 dB or greater (better ear)	Unable to hear understand even a shouted voice	Hearing aids may help understanding words. Additional rehabilitation needed. Lip-reading & sometimes signing essential.

Figure 2.

2.3.1 Individual hearing impairment

It is important to understand that hearing impairments are never the same, there are different kinds of hearing impairments and every hearing impaired person is experiencing their hearing different. A key to the communication with a hearing impaired person is actually to ask the person what to think about when talking to the person. Hearing impairments can cause distortion of different degrees and different characteristics of the sound patterns and, in that way, aggravates its interpretation (Huttunen, et al., 2007, p. 64). This emphasizes the importance of looking at each and every of the hearing impairments as an individual impairment and not just see them as a hearing impairment that is the same way for everyone. Important to remember is also that hearing impairments are not related to age, they

are found in every age. This is mainly visible in working life, where hearing impairments are a growing problem (Kullman, 2006-2009, p. 25).

2.3.2 Different kinds of hearing impairments

A hearing impairment can be noticed when one can no longer hear in bigger crowds, when one cannot hear the doorbell or cannot hear when the phone is ringing. Furthermore, it can also be when one cannot really understand what the clerk in the store or what the bank officer says. Hearing impairments can be due to different conditions like: Méniéres-disease, tinnitus, otosclerosis, age-related, congenital, physical harm, hyperacusis, noise damage, and drugs (Svenska Hörselförbundet, 2011). Hearing impairments can also be due to several different things, like changes in the ear or changes in the auditory system's central pathways caused by abnormalities, impairments or illnesses. That can lead to hearing loss (Arlinger, et al., 2007, p. 245).

A series of simple concepts are often used in order to be able to describe the level of the hearing impairment and what impact it has for the hearing impaired person. A hearing impairment can be mild, moderate or severe - these descriptions are used as a first way of describing, even that it is a rough description. (Elberling & Worsøe, 2006, p. 26). These descriptions are there in order to create a better understanding of how the hearing impaired patient is hearing, but of course one will not understand to the fullest. As earlier mentioned, every hearing impaired person experiences their hearing different, some might be described as having a severe hearing impairment, but they might not experience it as severe, while others might be described as having a mild hearing impairment, which they actually experience it to be severe. These ways of describing the hearing impairment are actually just guidelines, so that people can get some understanding of the hearing impairment.

A mild hearing impairment is usually between 25 to 40 dB, a moderate is between 40 to 60 dB and an expressed hearing impairment is between 60 to 80 dB while a severe hearing impairment often is more than 80dB, which often is referred to as 'deaf' (Elberling & Worsøe, 2006, p. 26) On figure 3 in appendices there is an

audiogram of what we hear at a certain dB (decibel), which will increase the understanding of what it means to have a mild, moderate or severe hearing impairment. The picture also shows were the normal level is for a normal hearing person.

An audiogram is a graphic presentation of hearing ability, showing frequency levels attained at a hearing exam (Vasa Hörselteknik, 2012).

In figure 4 one can see examples of what an audiogram look like for a hearing impaired and what it look like for a normal hearing person. The higher up the line is the better hearing. When testing the hearing, this audiogram will be filled in and then it will be a line showing where the hearing is, the lower the line is on the audiogram, the higher sound was needed in order to be audible. When comparing the audiograms between the normal hearing and the impaired hearing one can conclude that the impaired hearing needed a sound level of at least 30 dB to hear, while normal hearing picks up everything.

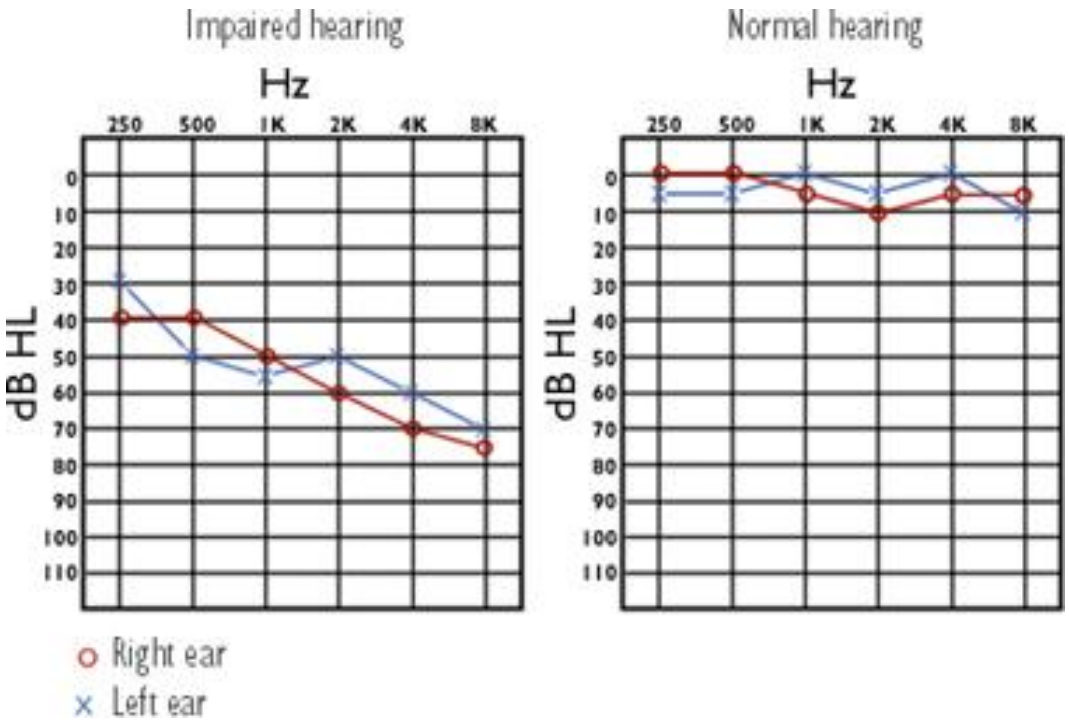

Figure 4. The differences between impaired hearing and normal hearing (Vasa Hörselteknik, 2012). *Published with permission from Vasa Hörselteknik.*

Some people believe that hearing impaired people have just lost their sensitivity for volume, and, thereby, they believe that if the hearing impaired person get every sound louder, they will have normal levels of hearing, but that is of course not correct as there are more characteristics that deteriorates (Elberling & Worsøe, 2006, p. 43). A lot of people misunderstand and believe that if they shout or raise their voice to a higher level, then the hearing impaired person will hear better, that is eventually not the case. Instead it will be more difficult to hear and distinguish what the person is saying. That is why it is important to know the correct communication technique.

Furthermore, hearing impairments are seen as severe when the average of the speaking area's hearing threshold is 60-70 dB or more. In practice, one hear nothing (is deaf) when the same speech is 80-90 dB or more (Saloranta, 2009, pp. 12-13).

2.3.3 Tinnitus

Tinnitus is usually defined as the perception of sound in the absence of external stimulation; the definition is partial as tinnitus is difficult to understand as a phenomenon. It can also be called phantom sound and then it is compared to phantom pain, which is a common phenomenon in people that have an arm or leg that is amputated. Everybody can notice tinnitus at times, but it is only a minority of people that is very bothered by constant tinnitus (Andersson, 2000, pp. 11-14). In Finland at least 500 000 people that suffer from tinnitus and 1-3% of these are bothered a lot by the sound. Tinnitus is a national disease, but a lot of people are suffering from it, in silence (Pyskosociala förbundet rf & Svenska Hörselförbundet rf, 2009, p. 7). Tinnitus is a very common condition as one in ten is having tinnitus and 3% of the population suffer from tinnitus that is bothering them, it is also said that even children can suffer from tinnitus and women often have more complex tinnitus sounds than men (Andersson, 2000, pp. 23-26).

The reasons for tinnitus are several, some are known, while plenty reasons still are unknown. But in most cases there is some hearing impairment involved. Hearing impairment and tinnitus are strongly related to each other, and hearing impairment

is a universal phenomenon, at least among elderly people in the western world. For most people, it is possible that noise will lead to a temporary hearing impairment as well as temporary tinnitus. Also, there is a condition called vascular condition, where the sound of the blood pressure is distressing and thereby causing tinnitus. Furthermore, there is another condition called otoacoustic emissions that consists of signals sent by the cochlea and that can be measured with a little microphone. It can either be spontaneous or if the ear is stimulated by sounds. When it comes to heredity then nothing has been identified, it is known that hearing impairment can be hereditary, but not with tinnitus (Andersson, 2000, pp. 26-32).

Some people that suffer from tinnitus do not have any other problem with their hearing. But still, as mentioned before, the most common cause for tinnitus is hearing impairment (Andersson, 2000, p. 39).

Tinnitus is a hearing impairment that causes sounds without any external source of sound. The sound often gets worse when tired, stressed or depressed. Somatic tinnitus is referring to tinnitus that is connected to bodily problems: erroneous bite, tensed jaw muscles or problems with neck and shoulders. Depression- and anxiety related tinnitus is common; it disturbs the sleep as well as the ability to concentrate. The first period of time with tinnitus is the acute phase; it can last some months up to one a half year. After that period of time the chronic phase starts and then the risk is high the tinnitus will remain. It is not possible to completely cure tinnitus, but it is possible to alleviate the perception of the sound with the help of different treatments. When having tinnitus related to hearing impairment, it could help to use hearing aids, in somatic tinnitus it is important to investigate the reason for the tinnitus and get treatment and rehabilitation. In depression- or anxiety related tinnitus, the depression or anxiety needs to be treated in a psychologically oriented tinnitus treatment, group discussions or rehabilitation. Other treatments are: cognitive behavioural therapy, relaxation as well as acupuncture and herbal medicines are becoming more common (Pyskosociala förbundet rf & Svenska Hörselförbundet rf, 2009, pp. 3-5). Below is a table where the grading of tinnitus is described according to Klockhoff and Lindblom (1967).

Grading of tinnitus, by Klockhoff & Lindblom (1967).

Grade 1	A sound that is not always present. One can without great difficulty disconnect the thoughts of it when it occurs.
Grade 2	A sound that is always present. You can in some situations disconnect the thoughts of it, but in other situations (e.g. when going off to sleep) it is hard or impossible to stop thinking of the tinnitus.
Grade 3	A sound that is always present. You can never disconnect the thoughts off the sound, without constantly being bothered by tinnitus.

Figure 5. (Andersson, 2000, p. 57).

2.3.4 Morbus Ménières

This specific impairment was presented by the Doctor Prosper Ménière in Paris in 1861, since then it has been called Morbus Ménières. It is a complex syndrome with connection to the internal ear that includes dizziness, changes in hearing as well as tinnitus. The typical course of the disease in the beginning includes symptoms where rotatory vertigo and nausea as well as vomiting have been dominating. The attacks can occur suddenly and rapidly even during night, and can last for a couple of hours and then calming down spontaneously. After the attack the rotatory vertigo will disappear as well as the tinnitus and the hearing will become normal (Arlinger, et al., 2007, p. 269).

The cause of Ménières is unknown, it is possible that several factors might be the cause, but any genetically cause is not proved and at times several cases will be caused or worsened by stress, it is therefore important to keep the stress level low and the causes under control (Arlinger, et al., 2007, p. 270). Although, there are many indications that the illness might stem from an imbalance in the inner ear's fluid system – an excess in the endolymph is affecting the balance- and hearing organ (Konradsson, 2011, p. 106).

Examples of treatment could be to: reduce the intake of sodium as it could alleviate the symptoms, to eat malted oats, to go for physical therapy as special balance training could help the brain to coordinate the sight better and improve the balance organs so it will compensate the loss of function in the inner ear. Also pressure therapy that is intended to suppress or remove the symptoms by reducing the pressure of the liquid in the inner ear. Saccotomi, which is an ear surgery where a plastic pipe is put in the inner ear that will regulate the liquid in the inner ear, and Gentamicin that is a very strong antibiotics that knocks out the balance cells of the ear, it is injected through the ear drum (Svenska Hörselförbundet, 2006, p. 3).

2.3.5 Otosclerosis

The most common cause for progressive conductive hearing threshold reduction is otosclerosis, which means that there is a pathological growth of bone tissue in the bone capsule of the inner ear. The disease usually occurs in young adults and very seldom among teens. The development of the impairment is very slow, usually during a period of 20-30 years. Tinnitus is quite common and at times some dizziness and balance problems can occur as well (Arlinger, et al., 2007, p. 272).

The cause of otosclerosis is not clearly identified, for some people, around 60% of the cases heredity is the cause, while for others there is no explanation to the disease. The disease occurs more often among women than in men. With surgery treatment, including stapes surgery, it is possible to restore the sound transmission from the anvil to the oval window. If surgery is not an option then the patient could be helped by hearing aids. Sometimes, attempts have been made to prevent the pathological bone process by fluoride treatment (Arlinger, et al., 2007, pp. 272-273).

2.3.6 Hyperacusis

Hyperacusis means extreme sensitivity for daily life sounds, e.g. the washing machine, paper rustling, the vacuum cleaner, children's cry and others, causes strong discomfort or pain. People with hyperacusis can have different problems with different sounds, the ones who suffer from hyperacusis also other have tinnitus (Svenska Hörselförbundet rf, 2006, p. 1).

The causes of hyperacusis are to some extent known, but there are still some question marks. Some theories claim that hyperacusis is due to an imbalance in the hearing system of the brain, which makes it difficult for the brain to catch the signals from the hair cell of the ear. Some occupational groups are especially exposed, e.g. musicians, teachers, construction workers and also the staff in kindergarten. Symptoms of hyperacusis can occur or worsen in connection with e.g. hearing impairment, noise damage, virus infections, malfunctions or diseases of the ear, head injuries, stress and depression, insomnia or due to some medicine or drugs as well as autism (Svenska Hörselförbundet rf, 2006, p. 1).

Treatments for hyperacusis do not really exist, but there are people whose symptoms of hyperacusis have diminished after a period of time. Examples of treatments could be: *TRT, tinnitus retraining therapy* that was developed to treat tinnitus but showed to have an impact on hyperacusis. One uses a sound stimulator that stimulates the ears with a "white" hum, the ears are consequently trained to stand the sounds it is oversensitive for. *Cognitive behavioural therapy* aims at changing the perception of sound, so the distress of the hyperacusis will either diminish or disappear. *Audiological treatment* which is used in hyperacusis caused by hearing impairment can help change the settings of the hearing aid(s) so the unwanted sound will disappear. *Physical therapy*, naprapathic treatment as well as yoga, can support relaxation that, in return, can alleviate hyperacusis, and, at last, erroneous bite- and jaw surgery. Treatment of erroneously bite and jaw problems can help to remedy tensions and, in that way, diminish hyperacusis (Svenska Hörselförbundet rf, 2006, p. 2).

2.3.7 Congenital hearing impairment

Most of the severe hearing impairments are genetical or has some other congenital reason. There are about 400 different syndromes that can include reduced hearing (Saloranta, 2009, pp. 12-13). It is estimated that 2/3 of the cases of hearing impairments have a congenital background (Arlinger, et al., 2007, p. 248).

Non-syndromic hearing impairments comprise e.g. autosomal dominant progressive sensorineural hearing loss. This kind of hearing impairment is having its' onset in child age with abruptly treble sound reduction that is changing overtime and can in the end, end up to be a minimal hearing impairment. *Syndromic cases* display hearing impairments plus other anomalies and can therefore more easily be diagnosed. Abnormalities can occur in different organs and tissues like: the skin, the concha, other skeleton parts, kidneys, eyes, and the heart. Examples of syndromes are: Wardenburg's syndrome, Treacher-Collin's syndrome, Branchio-oto-renal syndrome, Goldenhar's syndrome, Crouzon-syndrome, Klippel-Feil-syndrome, Wildervanck's syndrome, Pierre Robin syndrome, Usher's syndrome, Norri syndrome, Pendred's syndrome, Hurler Hunter's syndrome, Alport's syndrome, Muckle- Well's syndrome, Jervell and Lange-Nielsen's syndrome, Noonan's syndrome, Down's syndrome and Turner's syndrome (Arlinger, et al., 2007, pp. 248-257).

2.3.8 Age-related hearing impairment (Presbyacusis)

Presbyacusis is a hearing impairment that occurs with age. It is difficult for science to answer the question why we lose our hearing when ageing. Sometimes it can be explained to be due to noise, pollution in water and air, smoking, or food as it might be the environment that is harmful for our ears. The reasons for why we lose our hearing when ageing consists of several factors; the tissues lose their elasticity with age and earlier ear infections or injuries do also have an impact on the ear. The movements of the ear drum and the ossicular chain decline and there are also indications that hair cells of the hearing organs die little by little from the age of 20. There is also a new study made in USA that shows that there is a connection

between hearing impairment among elder people and dementia. The situation is quite complicated when we are getting old, it is unreasonable to expect that a hearing aid would fix everything and restore the hearing as it used to be (Konradsson, 2011, pp. 99-100).

2.3.9 Noise damage

Noise damage refers to hearing impairment results from exposure to high noise levels. It is the second most common reason to hearing impairment and it is primarily a mechanical phenomenon as it occurs due to a powerful noise impulse. The most common cause of noise damage is noise from different work places (Konradsson, 2011, pp. 101-102). Noise damage is at risk to occur when there is an equivalent sound level higher than 85 dB based on an exposure time of 8 hours per day or 40 hours per week. The noise load in the inner ear is seen to cause primarily metabolic changes in the hair cells. The cells do not get the time to recover from the metabolic load and, finally, it causes structural changes. After rest the cells will function as normal, but if the load is too great it will cause permanent hearing impairment (Arlinger, et al., 2007, p. 264).

2.3.10 Ototoxicity

The concept ototoxicity refers to some form of chemical substance that is potentially poisonous for the ear. It can stem from some medicines, or foods or something that we eat or inhale. The substance can be poisonous in itself or in combination with other substances. The symptoms are usually a sensory hearing impairment, on the inner ear both with and without tinnitus. The most common ototoxic substances are medicines, so it can be good to check if new medicines can have an impact on the hearing. One of our most common pain relieving substances; acetylsalicylic acid, can cause tinnitus, the problems are temporary and depending on the amount of the dose. Antibiotics like erythromycin and diuretics are often used without considering the ototoxic effects. The side effects are not

only hearing loss, but also tinnitus and hyperacusis (Konradsson, 2011, pp. 106-107).

2.4 Hearing aids

Hearing aids are used by approximately 15 000 people in Finland (Marttila, 2005), which indicates the need for understanding the most common hearing aids, what they are, and how to care for them. When talking to hearing impaired people, one often notices that raising one's voice will help in order for them to hear. Therefore, it is logical to assume that a hearing impaired person should be offered an audio amplifier or a hearing aid. The hearing aids of today have a microphone, which is catches the sound in the surroundings, as well as an amplifier. The acoustic amplified sound is conveyed to the ear via a small speaker that is as close as possible to the tympanic membrane (Konradsson, 2011, p. 79). Something that every hearing aid has in common is that the amplification is fitted for the patient with a hearing impairment. Important to remember is that a hearing aid can never restore hearing to what we call normal hearing (Konradsson, 2011, p. 80). The respondent has chosen to bring up the three most common hearing devices used, and the care for the hearing aids can be found in appendix 3.

2.4.1 BTE (behind-the-ear) device

The most common hearing aid is the behind-the-ear device or BTE device. It consists of the hearing aid itself that is situated behind the outer ear or between the outer ear and the head. In the ear canal you have a custom-molded insert positioned that is connected to the hearing aid with relatively rigid plastic tubing. The BTE device can handle all kinds of hearing impairments that can be treated with a sound amplifier (Konradsson, 2011, p. 80).

2.4.2 In-ear device

Another type of ear device is the in-ear device. Today we still can see the connection between the grade of hearing impairment and the size of the hearing aid when one is suffering from a severe hearing impairment. Greater components as microphones, batteries, and amplifiers can be needed in order to get amplification. In a mild hearing impairment one can get by with smaller components. In hearing aids, used for treatment for milder hearing impairments, the aid constituents can be molded into a shell that will be situated in the outer ear or in the ear canal; in this case the custom-molded insert is the hearing aid itself. A common problem with hearing aids that are situated tightly in the ear canal is that sounds become trapped in the ear canal, the so called occlusion effect (Konradsson, 2011, pp. 83-84).

2.4.3 Cochlear implant (CI)

Cochlear implant is a great invention, with which one can stimulate the auditory nerves with the help of electric impulses. CI can be used for people who suffer from sudden deafness that can be caused by e.g. meningitis. Newborn babies where deafness or severe hearing impairment has been found after a hearing screening or the hearing impaired person can find it helpful to use a CI if they have a very severe hearing impairment on both ears. Unfortunately, there are people who do not benefit from CI as the conditions for it to work is that the inner ear is working and sends sound information to the nervous system via the auditory nerve (Konradsson, 2011, pp. 88-92).

2.5 Previous research

The respondent has been trying to find studies about the subject or studies showing the importance of correct communication technique when talking with a hearing impaired patient. Unfortunately no studies done on this particular subject were found. The respondent found related studies that has been done, but there are few of them as well. Also some enlightening articles related to the issue, were found.

The articles that were found to support the study on how important it is with proper ways of communication are six different articles. In order to find articles there was an article search on Ebsco and Cinahl was conducted, with the key words hearing loss, hearing impairments and nurses' experience of hearing impaired patients. Out of about 6000 articles, when browsing through them, these six articles had some actual connection with the thesis and the study, since the other articles had some sub connections or no connection at all. That is the reason why these six particular articles were chosen. Otherwise there are almost no studies done on this particular subject, which supports the idea of doing a study to find out the need for more knowledge among nurses in nursing schools about hearing impairments and these the needs of these patients. The respondent will present three studies and three articles that are related to the respondent's own study.

First of all, it is important to know and understand that nurses get in touch with hearing impaired patients, mostly in elderly care, but also, that it will become more common with younger hearing impaired patients than before. This is due to the increased use of portable devices like mp3, iPods and etc. that can cause hearing loss. (Widex, u.d.). The following articles describes the different studies done and the articles all point out the importance of communication and understanding of the hearing impaired.

The first study the respondent chose to address is a study about "vision and hearing impairment and their association with falling and loss of instrumental activities in daily living in acute hospitalized older persons in five Nordic hospitals" (Grue, et al., 2009). The aim with the study was to find out the prevalence of vision and hearing impairment and their associations with loss of

instrumental activities in daily living and risk of falling. The target group consisted of patients aged 75 years or older, admitted to a medical ward in an acute hospital in each of the five Nordic countries. The study was an observational study that was conducted by the Nord Resident Assessment Instrument. Patients were recruited from January 2001 to April 2002. In total 707 patients were included, patients that were discharged after 24 hours or were critically ill or transferred to a surgical unit within 48 hours. The validation method was the MDS-AC Canadian Version 1.1. The result they got from the study was that the majority of the participants were women that were living alone. Hearing loss was found in 48.4% of all the patients. They also found out that hearing impairment is related to falling. In their discussion they also discussed the fact that hearing and vision difficulties may result in problems in communicating, which limits going out and causing isolation, which furthermore leads to reduced physical performance. In the conclusion of the study they stated that hearing and vision impairment and the combination of the two were common in older patients that were acutely admitted to medical wards (Grue, et al., 2009).

The second study the respondent includes is a study about tinnitus "more than ringing in the ears: a review of tinnitus and its psychosocial impact". This article provides an overview of the study, current management and its psychosocial impact when it comes to offering strategies for managing chronic and acute tinnitus in practice. In the review, the respondent found information saying that tinnitus is very common, but that nurses lack knowledge about it. Data had been compiled from different databases like Cinahl, EBSCO, and Sciencedirect etc. in order to be able to undertake a broad review of descriptive, empirical and theoretical material. The findings they got in the study are that tinnitus is a symptom not a disease and that is sometimes referred to as a phantom sensation. Also 40% of all sufferers from tinnitus are associated with hyperacusis, and intolerance to environmental sounds. Some tinnitus might be permanent or temporary and then caused by ototoxic medications. Furthermore, it is said that hearing aids might reduce tinnitus. It is also a goal to enhance understanding as well as encourage patients to pay their tinnitus less attention and gain control rather than allowing the tinnitus to get control. In the discussion part it was said that nurses are in a strong position to assess levels of distress as well as to help patients find ways of coping with tinnitus. Words of reassurance as well as

empathy can go a long way in order to reassure those who are distressed and sense their fears. These patients that suffer from tinnitus often feel that neither professionals nor others understands their condition and that makes them feel isolated. They also revealed, in the discussion, that patients who suffer from tinnitus and are admitted to a hospital might be exposed to more stress, tinnitus and hyperacusis which can make the situation intolerable causing more pain, anger and tension. Furthermore, it was concluded that affected patients need much more than just a physical evaluation or diagnosis, they need advice on health care options and encouragement to try different kinds of treatments and if the nurses do this successfully then there is no need for them to ever again tell the patients that there is nothing that can be done about it.

The third article that the respondent found that was related to her own study was a study about "attitudes towards people with physical or intellectual disabilities: nursing students and non-nursing peers" (Klooster, et al., 2009). The aim with the study was to investigate the attitudes nursing students have towards people with physical or intellectual disabilities. In the paper it is said that disabled people often identify inappropriate staff attitudes and behaviours as the biggest barriers when it comes to using health care services. Furthermore, it is said that this is why it is important to develop or maintain positive attitudes towards people with disabilities early in their nursing education. The design of the study was a cross-sectional study that was conducted in 2006 by using a survey to collect the data. The participants were a group of first- and fourth year nursing students as well as a group of non-nursing controls. Questionnaires were used and they consisted of two sections. The first section contained demographic items and general questions assessing the respondent's personal experience with disabled people. The second section contained three standardized scales that were measuring attitudes about either physically or intellectually disabled persons. The data analysis used was SPSS 16.0 for Windows. The variables were tested with the Kolmogorov-Smirnov test. The attitude scale was assessed by intercorrelating the scales and calculating the Cronbach α coefficient for the respective scales in the total sample. The results concluded that of those who participated, 78 were nursing students and 43 were non-nursing peers. As expected by the researchers, nursing students had worked with disabled people to a higher degree than the non-nursing peers had. The study showed that nursing students had a more positive attitude towards disabled persons

than the non-nursing peers. In the discussion they say though even that the study showed that the nursing students had a more positive attitude it does not necessarily imply that attitudes are overall positive and supportive. It was also concluded that educational programmes or interventions aimed at actually improving the attitudes towards disabled persons (Klooster, et al., 2009).

According to studies that has been done, hearing impairment and illness have a connection, as seen on the statistic below. The first column in every category always represents people that have no hearing loss, the second column always represents people that can hear conversations with the help of hearing aids and the third column represents people that find it difficult to follow conversations. The different categories, translated into English and in the same order are the following: fatigue, severe insomnia, impaired psychological well-being, suicidal thoughts, suicide attempt, poor physical health, severe neck pain, severe back pain, severe pain in the locomotion as well as stomach/intestinal problems. The percentages are presented to the left.

The statistics, based on Berth Danermark's presentation (Danermark, 2011), inform the respondent that the physical problems is being found least for people that have no hearing loss, and it occurs the most for people that have difficulty following the conversations. People that hear conversations with the help of hearing aids can be found in the middle in every category, except the category about suicide attempts, where suicide attempts is the least visible. These statistics indicate that hearing impairment, to have difficulty in following conversations, can affect physical health.

One has to consider these results just as a small guideline, as not every hearing impaired person has health problems, even though they do not use any hearing aids. But the statistic also favors the idea of taking care of the ears, to e.g. help the patients with their hearing aids in order to prevent some illness or improve their health.

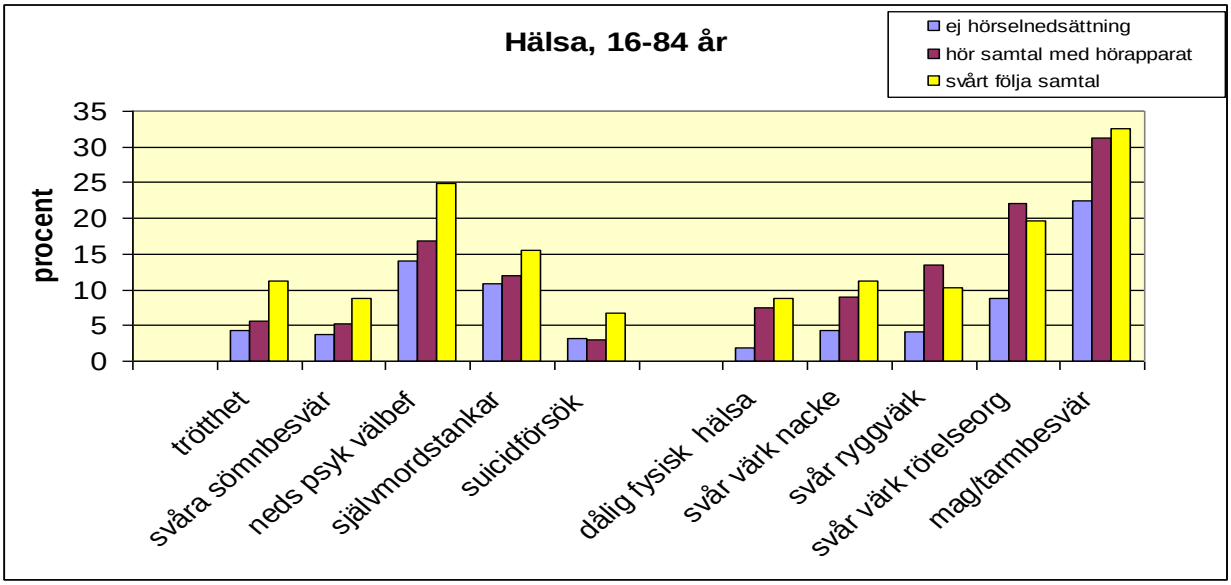

Figure 6. Health 16-84 years old. (Danermark, 2011) *Published with permission from Berth Danermark.*

Furthermore, the respondent also has an article that is about the selective hearing for a normal hearing person and a person with hearing loss. In the article it is described how a person with normal hearing hears, because in the article they said, that in order to get any understanding how the situation is for hearing impaired persons, one has to understand the normal hearing person first and what they (the normal hearing persons) find difficult and how they do when listening in different surroundings. For a person with normal hearing it is easier to sort out the sound sources and concentrate on the person speaking if it, e.g. several people are talking in the same room, while a hearing impaired person cannot sort out the sound in the same way, as they do not have the same way of selecting hearing, as some hearing is lost. (Shinn-Cunningham & Best, 2008).

Another article that, according to the respondent, supports the importance of good communication is an article about communicating care, where they address the key components of communication and the important things to have in mind when communicating. They also state that no matter what disability (including hearing impairments) one shall have the right to good communication with the nurse. They said that every intervention needs to be shaped so that it suits the individual's needs. The article remind nurses, that lack of time is never an excuse for not taking

time to provide good communication, as it in the end might be saving time, if you take the time for good communication and take the patient's needs into consideration so no misunderstandings occur (le May, 2007).

Furthermore, as mentioned earlier, hearing impairment are mostly seen in elderly patients, the next article is therefor quite suitable as it addresses the importance of understanding the ear and also the importance of understanding that hearing loss can lead to misunderstandings. The article, additionally, tells us about the responsibility of the nurse, and how he or she should learn how to educate the e.g. older adult in taking care of their ears. The nurse might need to send the patient to a hearing therapist so they can get some help in understanding their hearing and maybe also help the patients to attend some lip reading courses, which could improve the communication for the hearing impaired person. It is also mentioned in the article that the case should be that all nurses, especially those who work with older adults, should have attended an approved ear care course so they will be able to promote their ear health. They should also be able to care for the hearing aids and how to use them properly (Harkin & Kelleher, 2011).

2.6 Theoretical framework

Middle range theories will be used in this thesis, as they are the least abstract which makes them suitable for practical nursing. Middle range theories are specific in different practice outcomes and also specify certain characteristics of nursing situations. The following concepts that are usually brought up in middle range theories are these: client population or age-group, the situation or health condition, the location of the area of practice e.g. community and the action of the nurse or intervention and also the patient outcome that is expected (Alligood & Tomey, 2010, p. 579). The theorists and the theories that will be used are: Merle H. Mishel and her theory of uncertainty in illness theory, Katharine Kolbaca's theory of comfort as well as Kristen M. Swanson's theory of caring. These theories where chosen for this thesis as communication is a part of caring and Swanson as well as Kolbaca is discussing important things about comfort and caring which is actually connected to communication. Furthermore, Mishel's theory of uncertainty in illness is a good theory to use in order to prevent

uncertainty by using a good communication. Communication is the key in this thesis, and how to communicate with your hearing impaired patient is to be seen in appendix 4.

2.6.1 Merle H. Mishel's theory of uncertainty in illness

Mishel's theory can be applied to both research and practice and has been used to explain clinical situations and design interventions that lead to evidence-based practice. Existing as well as future nurse scientists have and will continue to extend the theory to different kinds of patient populations. This theory is said to have the potentials to change health care (Alligood & Tomey, 2010, p. 599). According to Mishel, uncertainty occurs when a person cannot accurately categorize or structure an illness-related event as there is a lack of sufficient cues and further on uncertainty can take the form of ambiguity, lack of inconsistent information, complexity or unpredictability (Alligood & Tomey, 2010, p. 605).

According to Mishel, uncertainty is defined as a cognitive state that results from insufficient cues with which to form a cognitive schema, or meaning of a situation or event. Furthermore Mishel proposes that managing uncertainty is critical to adaption during illness and the theory explains how individuals cognitively process illness-associated events and construct meaning from them. The concepts of the theory are organized around three themes as following 1) antecedents of uncertainty, 2) cognitive appraisal of uncertainty and 3) coping with uncertainty. Mishel's theory provides a model for practitioners to view the experience of chronic illness and to develop and deliver interventions to promote optimal adjustment (Bailey Jr, et al., 2007, pp. 735-736).

2.6.2 Katharine Kolbaca's theory of comfort

Kolbaca's theory addresses the importance of providing comfort to patients and their families. Kolbaca is saying that comfort is an antidote to the stressors inherent in health care situations today and that when comfort is enhanced then both patients and their families will be strengthened for the tasks that are coming and that will further lead to more satisfied nurses, as they feel they gave better care to their patients (Alligood & Tomey, 2010, p. 706). At the beginning this theory of comfort has been focusing on what the discipline of nursing is doing for patients, and these days the theory has evolved and is now also including broader meanings like cultural and spiritual comfort, but the basic format still remains. This concept has some connections for practice and can easily guide nurses in the designing and planning of the nursing care in any settings (Alligood & Tomey, 2010, pp. 716-717).

Comfort is defined as the satisfaction of the basic human needs of ease, relief and transcendence that are arising from health care situations that are stressful. Ease is here defined as a state of calm contentment, relief is defined as the experience of having a special need met and transcendence is defined as the state where ordinary powers are enhanced. Comfort is according to Kolbaca a desirable outcome for nursing care as it facilitates gains in physical or/and psychological performance. Other contexts within comfort are the following contexts that are derived from the nursing literature about holism, the first context are physical, having in view bodily sensations. While the second context is psychospiritual, having in view the internal awareness of self, which is including esteem, meaning in one's life, sexuality, and relationship to a higher order or being. Furthermore, the third context is social that is having reference to interpersonal, cultural relationships and family (Kolbaca, 1994, pp. 1178-1179).

2.6.3 Kristen M. Swanson's theory of caring

Swanson is saying that "caring is a nurturing way of relating to a valued other toward whom one feels a personal sense of commitment and responsibility" (Alligood & Tomey, 2010, p. 741). Swanson also defines nursing as an informed caring for the well-being of others (Alligood & Tomey, 2010, p. 745). This means that nurses get knowledge on how to give good care, which benefits for the patients. Swanson's model describes quite well a structure of caring where nursing as informed caring for the well-being of others which includes: maintaining belief, knowing, being with, doing for, enabling and then the intended outcome should be the well-being of the client (Alligood & Tomey, 2010, p. 746).

Swanson was empirically developing a theory of caring that offered a clear explanation of what it means for nurses to practice in a manner of caring. Swanson underlines that the goal of nursing is to promote well-being. Her theory of caring was generated from a phenomenological study of women who miscarried. Swanson claims that the caring process has been applied in diverse nursing settings (Swanson & Wojnar, 2004, p. 46).

3. Method

This chapter introduces the method, manner of data collection and analysis as well as interview method that was used in this study.

3.1 Qualitative method

The method that will be used for this study is qualitative, as *"the use of qualitative research method shows great potentials to explore new areas of knowledge and to gain fresh perspectives about traditional and new views of the nature of nursing"* (Leininger, 1984, p. 22). Qualitative research is about an investigation of phenomena (Polit & Beck, 2008, p. 489) in this case the respondent want to find

out the experience nurses have of communicating with hearing impaired patients. Questions have been raised whether qualitative studies can be scientific and according to K.Dahlberg (1993, p. 105-106) they are said to be based on too small amounts of data, but on the other hand the studies are often smaller and can be seen in a general way since the small studies are analyzed carefully and it is also safer if the starting point, from which the question will be asked, will be more precise. Also the purpose of the qualitative research interview is to understand the subject from the lived everyday-life from the perspective of the interviewee (Kvale & Brinkmann , 2009, pp. 84-85).

Qualitative research often takes places in the field (like the natural settings of the phenomena). According to Polit & Beck, 2008, p.15, the qualitative research is when *"human beings are used directly as the instrument through which information is gathered, and humans are extremely intelligent and sensitive-but fallible-tools"* – therefore qualitative research is suitable as the respondent will be able to interview the people that have the information wanted about the raised issue.

3.2 Data collection

The qualitative data collection is usually more fluent than in quantitative research and decisions about what to collect evolve in the field. The initial method of collecting qualitative data is by interviewing study participants but observation is also used in many qualitative studies (Polit & Beck, 2008, p. 532). Data is collected in this study by interviewing the study participants. It is not an easy task to do qualitative data collection as the researcher cannot get emotionally involved with the study participants. The researcher has to stay neutral in order to gain more correct information (Polit & Beck, 2008, p. 534). To prepare for the data collection, the researcher has to plan ahead what way they will record and store the data (Polit & Beck, 2008, p. 534). In this study the interviews will be recorded and also some notes will be taken in order to help the researcher to understand and transcribe the recorded data properly.

3.3 The interview

The interview technique will be a mix of focus interview, facts interview and depth-interview, since focus interview is when focus is on the interview and in this study the respondent want to focus on the experience that nurses have in communicating with hearing impaired patients. The facts interview consists of finding out facts like where they have got knowledge in how to communicate with a hearing impaired patients and if they find any difficulties etc. Depth interview is when one tries to focus the interview on certain points; one is looking for more depth than width in the information gathered from the interviewee (Carlsson, 1991, p. 25).

Carlsson (1991, p. 34) says that qualitative studies are more usable the more unstructured and free the interviews are. Qualitative interviews are to some extent more difficult than quantitative interviews concerning how to describe the procedure of the interviewer (Carlsson, 1991, p. 31). When it comes to research interviews, the interest is primarily the interviewer's rather than the interviewee. This can make it difficult for the interviewee to understand why she or he should set up for an interview that involves personal sacrifice of e.g. time (Carlsson, 1991, p. 34).

A suitable start of the interview could be to tell why this research is done and what the end product is to be, like e.g. In this study the aim is to raise awareness of the nurses' experience in communicating with hearing impaired patients. The end product of the study will be used by the hearing association.

For this study five nurses from different wards will be interviewed about their experiences from communicating with hearing impaired patients in order to find out about their knowledge and how they feel about caring for a hearing impaired patient. The interview questions are attached as appendix 2.

3.4 The data analysis

Qualitative content analysis was used in order to analyze the thesis research. This is the analysis of the content of narrative data in order to identify prominent themes and patterns among the themes. It involves three main stages: breaking down data to smaller categories, coding the categories, and naming the categories according to the content they represent, which follows to group the coded material based on shared concepts (Polit & Beck, 2008, p. 564). Further on, content analysis is the process of integrating and organizing material from documents, often narrative information from a qualitative study, according to key concepts and themes (Polit & Beck, 2008, p. 723).

Content analysis is used within many studies in nursing science as it is a process that can be used when analyzing documents both objectively and systematically. It is also known as a method of analyzing documents (Kyngäs & Vanhanen, 1999, p. 3). Analysis of the content is very much connected to communication theory and it can be studied in particular in the communication process. Within content analysis one can analyze diaries, letters, reports, speeches, dialogues, books, articles and other written material (Kyngäs & Vanhanen, 1999, p. 4). Kyngäs & Vanhanen say that in content analysis one is studying documents that tell us something about the communication process (Kyngäs & Vanhanen, 1999, p. 11).

The respondent was, with the help of content analysis, analyzing the data gathered by breaking down data to smaller categories and then naming the categories according to the content they represented. The respondent then got a good overview of the data gathered and the result of the study.

4. Conduction of the study

In order to conduct the study, data was collected by interviewing five different nurses, who were selected as they were willing to attend an interview and all have different work experience and work in different areas of the hospital. The respondent got in touch with the interviewees as they live in the same area and are familiar with each other. The respondent has also been working with some of the nurses. The criteria for the respondent were that the interviewees would have a nursing degree and have worked as a nurse. The respondent consciously chose nurses that works in different areas in order to get a view of how the nurses from different areas experience communication with their hearing impaired patients as well as that had different long working experience and some of them had been working both in Sweden and in Finland. One of the nurses that was interviewed had been working as a practical nurse before she became a nurse. The nurses that were interviewed had different lengths of time since they were in school, which would give us a picture of the nursing education in Finland these last 30 years.

The interview questions were designed so that the respondent could get answers based on her intentions with the study, to find out the nurses' experience in communicating with hearing impaired patients. The questions had to bring in the different theories used in the thesis as well. A pilot survey were done in order to find out if the questions were suitable and could be understood, after the pilot survey the questions were corrected a bit in order to be more suitable.

The interviews were read through several times after being transcribed, in order to find the themes and to be able to break down the interviews into smaller categories and from there to be able to interpret the result.

5. Presentation of the results

In this section the results of the study is presented, the interviews have been analyzed and broken down to smaller categories which are named the following: the experience of hearing impaired patients, the communication with hearing impaired patients, to prevent uncertainty for hearing impaired patients, comfort for hearing impaired patients, good care by communicating well with hearing impaired patients, the communication technique, and improvement for hearing impaired patients. The study is illuminated in the different categories with quotes from the nurses that were interviewed, the quotes are in cursive.

Five nurses were interviewed and all of them had been working as a nurse between 1 ½ years up to 30 years. They are all in different ages and therefore got different education within nursing as the curriculum has changed over the years and also have different experiences. The nurses that were interviewed have worked or are working within the areas like: Geriatric care, maternity hospital, gynecological ward, internal medicine and surgical wards as well as neurological and rehabilitation wards.

5.1 Nurses' experience of meeting the hearing impaired patient

The nurses who were interviewed all said they have some experience of hearing impaired patients, both younger and older. Some have suffered from slight hard of hearing while others have had severe hearing impairment, someone also had some relatives or friends from school as well as colleagues in work that had some hearing impairment and some of them have also had deaf patients. But all of them have some experience of hearing impaired patients and have met hearing impaired patients at every work place. But the interviewed nurses said that they have mainly encountered older patients that are having some kind of hearing loss or using hearing aids. One nurse also noted that the older the population gets in Finland, the more people will have hearing loss.

"..especially the older the population becomes the more, the more have hearing loss of different grades.."

"..in that way I have been in touch with pretty many, but they have been older all of them, and it is like, they have had hearing aids and that is pretty common so in that way.. yes.."

5.2 Nurses' communication with hearing impaired patients

The nurses were saying that the communication with hearing impaired patients are difficult, hard, demands more consideration of the patients' needs like eye contact and speaking clearly, some said the communication with hearing impaired patients were depending on the severity of their hearing impairment, that slightly hearing impaired patients were not so hard while severely impaired patients were difficult. They were all saying that one needs to consider the patients' needs more, to consider from where to communicate and how to communicate. One nurse even said that she found it so difficult, that she cannot even remember having learnt anything about this in school, even though questions about earlier education have not been discussed yet. They also said they feel stupid at times when they do not know how to communicate with the hearing impaired patients, as it is so difficult. They also found it difficult as they do not know if the hearing impaired patients understand them. One nurse said that sometimes the patient's hearing impairment can lead to funny situations where both the patient and the staff is laughing because the patient heard something wrong, while other times it is more difficult when a hearing impaired patient might have so severe hearing impairment that one has to scream out loud in order to be heard.

".. hard, very hard. I can't remember we would have had anything at all in school about it.."

"..a patient with very severe hearing impairment, which I found very difficult, I felt very stupid.."

"..it is difficult, since you have no clue if they understand what you are trying to tell them.."

"..sometimes it can lead to funny situations when both the patient and the staff are laughing, when the patient heard something wrong.."

"..almost have to scream out loud, that can be tricky.."

On the question if the nurses have learned how to communicate with hearing impaired patients most of them were saying that they either do not remember if they learned any in school, or they did not learn anything in school. Some of them said they have learned the main points when caring for hearing impaired patients and one nurse out of those interviewed had learned some in school like articulating well when speaking to the hearing impaired person, lowering the tone of the voice and speaking at a slow pace as well to try to be as clear as possible when talking.

".. I cannot remember that we would have had anything else than this general about the anatomy of the ear and hearing, but nothing really about how to communicate with hearing impaired patients.."

".. when I was studying they brought up how to communicate, it is all about articulating well, to lowering the tone of one's voice, to use an adequate vocabulary and to speak at a slow pace and to try to be as clear as possible.."

"..when meeting hearing impaired patients one has learned a little, but at least nothing in school.."

"..no I haven't actually, we haven't learned any in school. In that case it's in the contact with hearing impaired patients that one has learned a little.."

5.3 Nurses' prevention of uncertainty for hearing impaired patients

The nurses mostly said that they believe and hope that they can prevent uncertainty but that it might be a bit more difficult to prevent it for younger patients as one is used to that older patient do not hear. They believed they could be better, but also that they are doing the best they can. One nurse also said that she believes she is quite good and that she is good in questioning and following up that the patient did hear, but that it is not always done if it is a lot of stress at work and lot of other tasks to complete. Another nurse said that she does not think she has got the education so she can feel secure in preventing uncertainty, but common sense is perhaps helping a lot and the same nurse is feeling that she did not really get tools to prevent uncertainty.

"..well, I think I can do it.."

"..probably, one could be better, but you do your best.."

"..I do not think I have got enough education to feel secure in doing it.."

"..I hope I can do it.."

On the question how the nurses prevent uncertainty they said they do it in the same way as they take care of hearing patients, by answering questions and asking follow up questions and taking time for the patients. Also by being calm with the patients and having eye contact and speaking clearly with them, furthermore they also believed they could prevent uncertainty by eliminating additional background noise and by helping, especially elder patients, with their hearing aids. They also tried to check if the patients have understood what will happen and what the doctor said etc. and to read the patients' facial expressions and see from there if the patient can hear you, as well as repeating everything to the patient until one knows it was understood. Furthermore, they stress the importance of showing consideration to the hearing impaired patient and being keen and by showing respect. They also thought that maybe the patient him-/herself could tell them how to best prevent uncertainty.

"..try to act as normal as possible so they won't feel discriminated.."

"..to reserve more time for the patient.."

"..by being calm and speaking clearly to them.."

"..by avoiding additional background noises.."

"..sometimes these elder patients have difficulties in putting their hearing aids on, then one has to see if they are even wearing their hearing aids.."

"..maybe the patient himself, can tell something how to do it for them.."

5.4 Nurses comforting hearing impaired patients

When it came to the question if the nurses feel they can provide comfort for their hearing impaired patients they were saying that they believe they can do it and are hoping that they are able to provide comfort for their hearing impaired patients. In general they feel they are being good in providing comfort but if there are lots of stress then it might be more difficult, but they are trying their best to do so and by being responsive and showing respect in order to prevent uncertainty.

"..yes, I believe so, I hope so, I hope so, but I do not know if I can.."

".. you are doing your best to do so, but if it is lots of stress on your ward then it might be difficult, but if it is calm on the ward then one has time.."

When asked how they are providing comfort for their hearing impaired patients they were saying they do it by trying to act as normal as possible so the patient will not feel discriminated against and by giving the hearing impaired patient more time, to check that they do hear. Also by trying to tell the patient what one is doing, repeating what one is saying and by trying to remember they cannot hear so well and being clearer when communicating and caring for the hearing impaired

patients as any patient. Furthermore they also believe showing respect being responsive by taking wishes into account were important in preventing uncertainty.

"..by acting normal, so they will not feel discriminated.."

"..by being more carefully in telling what I am doing.."

"..by considering that one has to be more clear in the communication.."

5.5 Nurses giving good care by communicating

When it came to the question if the nurses feel they can give good care by the way they communicate they said they were not as good as they wished to be, they are trying to give good care by communicating but it might be that the patients miss some information at times and do not get the care they need when it comes to communication. They are trying to give good care by communicating in the ways of using e.g. pen and paper and giving more time. One nurse said she did not think she has got enough education about it.

"..not as I wish, I do not think so.."

"..if the patient cannot really hear everything, then it might be they do not get the good care as they should get.."

The way the nurses give good care by communicating were by using e.g. signs to support the talk, which they wish they knew how to do, also by being clear and repeating, and taking time for the patients, to check if they have understood what one meant. Further on, by knowing the techniques of the hearing aids and knowing that they work. Taking into regard the patients' needs, and also showing respect.

"..maybe some sign support or something maybe.."

"important that you as a caregiver knows about the hearing aids and the techniques and that you know they are working.."

"..it is important to check that they do hear.."

5.6 Nurses' communication technique

The nurses believed that they could improve their communication technique with hearing impaired patients, by e.g. knowing sign language or signs to support and by using paper and pen in order to be clearer. They also believed they could improve by reserving more time for the patients and by having patience and by eliminating all additional background noises so the environment is more silent.

"..yes, absolutely, I think I could do that.."

"..yes probably you would need some. Of course you are trying at times but I cannot sign language, but you can always show gestures and so on.."

"..by eliminating all disturbing background noises.."

The ways the interviewees believed they could improve their communication technique was e.g. by learning signs to support the talk, and by knowing more about different hearing impairments, education and by actually observing these questions about hearing impaired patients, by showing pictures to patients as a support to the talk, to reserve the time to practice patience and, furthermore, to eliminate all disturbing background noises.

"..well, that I would know some support, support signs maybe.."

"..by getting education and learn more.."

".. to take the time to practice, to practice patience.."

5.7 Nurses improving in the care for hearing impaired patients

The nurses were finding it very good if someone would come and tell them about hearing impairments, hearing loss, how to act when meeting hearing impaired patients and how the hearing impaired patients would like to be treated when considering their impairments and also some practical education, so one can use it in work. Furthermore, they wished to know how to care for the hearing aids and the other hearing techniques that are used by the hearing impaired patients.

"..it would be great if someone would come and tell, someone who is hearing impaired, how one should act, how a hearing impaired person would like to be treated.."

"..how to tend and care for these mechanical, like hearing aids, there are people using it here.."

The suggestions for improvements, that the nurses had, were e.g. to invite people from different hearing associations in order to get some information as this is a group of people one as a nurse, will meet. They also suggested the opportunity for the hearing impaired patient to have an interpreter in those situations where the communication is difficult or impossible. They also wished for smaller rooms for patients in order to eliminate disturbing sounds and another another suggestion was to educate the nursing students and practical nurses in school, about hearing impairments and how to communicate with a hearing impaired person, so when they graduate they can respond to their hearing impaired patients without feeling insecure.

"..to invite people from associations of the hearing impaired.."

"..it would be effective to already from the beginning get some good education so one would feel safe in the meeting with hearing impaired persons, that would be the most effective.."

6. Discussion

The discussion part in the report of a qualitative study is not really designed to give meaning to the results, but in order to summarize them and link them together to other research or to suggest their implications for research, theory, or nursing practice (Polit & Beck, 2008, p. 690). Therefore, the respondent will summarize the result given as well as connect them with the studies that were found to be related to the thesis. The respondent will also connect the result with the different theories used as well as discuss the study that was done.

The aim of this study was to find out what nurses experience the communication with hearing impaired patients to be like, if there are any obstacles when communicating and if there is, why is that? Do nurses and patients experience mutual difficulties when communicating? From the study we can also understand that nurses do meet hearing impaired people no matter where they work, which increases the understanding of why every nurse should know how to communicate with hearing impaired patients. The interviewees had all of them met both young and older hearing impaired people, both in work and in private life. The respondent found in the literature that hearing impairment is increasing worldwide (Phonak, u.d.), which also supports the idea that it is not only nurses who stay in Finland that need to know how to communicate, but also nurses that go abroad. It is important to have some kind of understanding for the hearing impaired patient's experiences it, and the respondent believes this is a great lack of in the nursing profession. There could be more knowledge among nurses and other health care professions, but this is not possible before there is an understanding of the need of the knowledge.

From the interviews one can draw the conclusion that the communication between nurses and hearing impaired patients could be improved. The interviewees were hoping they knew how to communicate in a good way and all of them agreed on the fact that their communication techniques could be improved. They were mostly hoping that they could provide comfort and prevent uncertainty for the hearing impaired patients, and give them good care in the way they communicate. Furthermore they were saying that when there is a lot of stress at the wards then it is difficult to give the time needed for the hearing impaired patients, and to

communicate in the best way possible with the patients. While le May (2007, p. 366) says that more effective communication can save time in the long run as well as making the patients happier and addressing their needs more effectively. Better communication would, also make the nurse feel better and safer in the communication with the hearing impaired patient. This would also make the hearing impaired patient feel better, having a feel of comfort and uncertainty would be prevented and they would probably experience a better care as they are able to communicate and actually hear what the nurse is saying and thereby knowing what is happening around them.

The study was done by interviewing five nurses, which the respondent consciously chose, in different ages, working in different areas, and had working experience between 1 ½ years up to 30 years. The questions that were used in the interviews were designed to answer the questions that were based on the respondent's intentions with the study, to find out the nurses' experience in communicating with hearing impaired patients. The interview questions also reflected the underlying theories. A pilot survey was done in order to find out if the questions were suitable and understandable; it showed that the questions needed deconstructing, which the respondent did. The questions were intertwined, which was necessary to get a more correct understanding of the result. The study also indicates; as the number of interviewees was only five that nurses do not have so much education about the issue and do not really know how to communicate with hearing impaired patients. The good things found in the study were that the nurses are aware of their communication deficiencies and that lack of time is a problem. Also they are interested in getting to know more about hearing impairments and especially about the technique of the different hearing aids that exists. The negative things found in the study indicates that nurses do not really know how to communicate as well as that the nurses do not feel they can provide comfort to the fullest and prevent uncertainty for the hearing impaired patient. The nurses believe their education did not really contain any information on how to communicate or how to take care of different hearing aids.

Mishel's theory of uncertainty in illness is significant as hearing impaired patients can easily face uncertainty, it could therefore be used for appraisal of uncertainty and, furthermore, on to get help to start coping with the uncertainty. The

interviewees were not sure they could always prevent uncertainty of the hearing impaired patient. Then it is also important to remember that the hearing impaired person, needs to be fully concentrated to hear what people say, they are not only listening, but also looking at gestures and facial expressions in order to interpret what people say. Then when it comes to the hearing impaired patient, one has to remember that the illness can make it difficult for the patient to actually focus on every sound and gesture the nurse do, as a result the patient will not hear so much, which supports the idea of being even clearer in communication with hearing impaired patients.

If this theory is brought into the area of hearing impaired patients, we can see that both the hearing impaired patient and their family can get this feeling of uncertainty, because they cannot rely on that the patient has heard and understood correctly the information that was given by the doctor or the nurses. So the nurse has to provide information that both the patient and the family can take part of, without misunderstanding. The patient's family can also support the patient and also ask questions about the illness or whatever that might create some uncertainty.

Furthermore, we can also see that Kolbaca's theory of comfort could be applied for the nurses caring for the hearing impaired patients, they would start to feel more secure, and comfort the hearing impaired patient. This would mean that they e.g. simply have a better communication that will give more comfort for the patient as well for the nurse. Both sides will understand each other.

That means, that in theory it could be applied to practice, in order to improve the nursing care. So if nurses feel unsecure whether they succeeded in comforting their e.g. hearing impaired patients, then they can use this theory to get some evaluation, which they can use when designing and planning their nursing care for the hearing impaired patients.

When looking at Swanson's theory of caring and the results of the interviews, one get the understanding that nurses feel they can give good care in the way they communicate. Most of them said, they believed they could improve the

communication techniques in order to give good care for hearing impaired patients. By using the concepts of Swanson which are: maintaining belief, knowing, being with, doing for, enabling and the intended outcome together with the idea of giving good care in the way one communicate. The nurses will be able to maintain belief by being able to communicate with their patients and then knowing is referring to the informed understanding of the hearing impaired patients' situation, while being with is the message the nurse conveys to the hearing impaired patient, doing for is what the nurse do for the patient e.g. making sure it is a good hearing environment by eliminating sounds while enabling is to e.g. make it possible for the patient to hear and get information and furthermore, the intended outcome is e.g. that the patient is satisfied with the care, and do not have any feeling of uncertainty.

When taking this theory into consideration, we can understand that caring is one of the key concepts in nursing and in order to follow Swanson's model; the structure of caring, one needs to keep the concepts mentioned in mind, as that is the way of keeping a good relation to the patient and seeing the patient's needs. With a hearing impaired you need to keep up the communication in a correct way in order to get the intended outcome which is a good well-being of the client. Caring is, according to Swanson, the way of being responsible for and feeling commitment to another person, in this case, for the patient.

Furthermore, the studies that was found by the respondent clearly bring up that hearing impaired elderly people are often admitted to acute medical wards or surgical wards as a result of their fall, and their fall is seen as a result of bad physical condition that could be a result of the elderly isolating themselves as they find it difficult to communicate due to their hearing impairment. This is also indicating the importance of actually understanding the patient's obstacles in communicating and encouraging them to seek help. Also it was said that patients that suffers from tinnitus feel that nurses have a lack of knowledge when it comes to tinnitus. These patients may actually experience more anger, pain, tension and stress than other patients, which also indicates that nurses need to have knowledge in order for the patient to feel better and more understood. While on the other hand, it was said also that disabled patients often identify inappropriate staff attitudes as well as behaviors as the biggest barriers when it comes to use health

care services. In one study it was shown that educational programmes or intervention actually improved the attitudes towards disabled people, which indicates the importance of having education concerning hearing impairment as attitudes will improve. The statistics in the literature review also shows the importance of understanding hearing impairments and how to communicate with hearing impaired people, as hearing impairment can affect physical health.

7. Critical review

The respondent has chosen to use the framework of Lincoln and Guba in order to check the trustworthiness of the qualitative study. Lincoln and Guba have suggested four criteria in order to develop the trustworthiness of the data which are: credibility, dependability, confirmability, and transferability. Credibility refers to confidence in the truth of the data and interpretations of them, while dependability is referring to the reliability of the data over time and conditions, confirmability on the other hand refers to objectivity, the potential for congruence between two or more independent people about the data's accuracy, relevance or meaning, and at last transferability refers to the potential for extrapolation, the extent to which findings can be transferred to or have applicability in other settings or groups (Polit & Beck, 2008, pp. 584-585).

The respondent claims that there is credibility in the study as the nurses that were interviewed voluntarily participated in the study and therefore they had no reason to lie. They all had different experiences, working in different areas with a working experience of 1,5 years up to 30 years and they still managed to encounter hearing impaired patients in every area. The thesis has been documented word by word by the respondent. The dependability in the study is confirming it is nothing that changes so much overtime, when looking at the results from the study not so much have been changed over 30 years and will probably not change unless there are massive changes. The confirmability is also good as the respondent has been striving to be as objective as possible as she suffers from hearing impairment herself and tried to not interpret anything as a hearing impaired person but as a

nurse. The transferability indicates that the data can be used within any area and it is also needed within the education.

8. Ethical consideration

The study has been done in an ethical way. The nurses interviewed were voluntarily in the study and the questions asked were designed to be ethical, to not reveal who the nurses are or where they work. The nurses were all assured of staying anonymous, no names have been written down or recorded.

9. Conclusion

The information the respondent has received by looking at the analysis and the discussion makes the respondent draw the conclusion that there are improvements that could be made, in order to ameliorate the communication between nurses and their hearing impaired patients.

The respondent found out that the interviewees did not feel so secure in the communication with their hearing impaired patients, but all of them were hoping they could, to some extent, give good care. They were also saying they could improve their skills. And the majority said it would be interesting and good to actually have some courses or lectures, where e.g. a hearing impaired person would come to tell them about the life of a hearing impaired in order to, increase the understanding for the hearing impaired peoples' situation, and also to improve the nurses' knowledge about hearing impairments and the communication techniques. The lack of knowledge were pretty high and the respondent therefore believe that there is an emergent need to introduce students in nursing schools, as well as staff in hospitals, to the subject, as the amount of patients with hearing impairments are growing.

The respondent finds that the nursing education has educational disadvantages as not really anything is brought up about hearing or hearing impairments, or how to communicate with a hearing impaired person. The respondent has therefore developed a suggestion for lectures, based on the thesis, aimed for both nursing students and nurses. The lecture plan can be found in appendix 5.

References

Alligood, M. R. & Tomey, A. M., (2010). *Nursing theorists and their work.* 7th ed. Maryland Heights: Mosby Inc., an affiliate of Elsevier Inc..

Andersson, G., (2000). *Tinnitus orsaker, teorier och behandlingsmöjligheter.* Lund: Gerhard Andersson och Studentlitteratur.

Anttila, K. et al., (2009). *Vård och välbefinnande.* 2nd-4th ed. Tammerfors: Esa Print Oy.

Arlinger, S., Jauhiainen, T. & Jensen, J. H., (2007). *Nordisk Lärobok i Audiologi.* 1st ed. Bromma: C A Tegnér AB.

Bailey Jr, D. E., Wallace, M. & Mishel, M. H., (2007). Watching, waiting and uncertainty in prostate cancer. *Journal of Clinical Nursing,* Issue 16, pp. 734-741.

Carlsson, B., (1991). *Kvalitativa forskningsmetoder; för medicin och beteendevetenskap.* 1st ed. Falköping: Bertil Carlsson och Almqvist & Wiksell Förlag AB.

Dahlberg, K., (1993). *Kvalitativa metoder för vårdvetare.* Lund: Karin Dahlberg och Studentlitteratur.

Danermark, B., (2011). *Hörselnedsättning och Hälsa.* Vasa: s.n.

Elberling, C. & Worsøe, K., (2006). *När ljuden blir svagare - om hörsel och hörapparater.* Herlev: 'Videnscenter för døvblevne, døve og høörehæmmede' & Bording A/S, DK-2730.

Grue, E. V. et al., (2009). Vision and hearing impairments and their associations with falling and loss of instrumental activities in daily living in acute hospitalized older persons in five Nordic hospitals. *Svandinavian Journal of Caring Sciences,* Volume 23, pp. 635-643.

Harkin, H. & Kelleher, C., (2011). Caring for older adults with hearing loss. *Nursing older people,* 23(9), pp. 22-28.

Hearing, A., (2009). *Active Hearing: Digital hearing aids, Hearing tests and Tinnitus relief, Reading, Berkshire, UK.* [Online]
Available at: http://www.active-hearing.com/hearing-loss-audiogram.asp
[Accessed 12 July 2012].

HiA-Hörselskadade i Arbetslivet, (2011). *HiA - Hörselskadade i Arbetslivet.* [Online]
Available at: http://hia.horsel.fi/tips trix/
[Accessed 30 October 2012].

Huttunen, K. et al., (2007). *Nordisk Lärobok i Audiologi.* 1st ed. Bromma: C A Tegnér AB.

Karolinska Universitetssjukhuset, n.d. *Hörsel.info , Hörapparatsguiden.* [Online]
Available at: http://horsel.info/
[Accessed 19 5 2012].

Klooster, P. M. t. et al., (2009). Attitudes towards people with physical or intellectual disabilities: nursing students and non-nursing peers. *Jorunal of Advanced Nursing,* 65(12), pp. 2562-2573.

Kolbaca, K. Y., (1994). A theory of holistic comfort for nursing. *Journal of Advanced Nursing,* Issue 19, pp. 1178-1184.

Konradsson, K. S., (2011). *Hörseln, Det Första sinnet.* Mölnlycke: Elanders Fälth & Hässler.

Kronberg, B., (2007). *Handlingsprogram 2008-2010.* [Online]
Available at:
http://www.horsel.fi/Site/Widget/Editor/173/files/Interna%20sidor/handlingsprogram/Handlingsprogram_2008_2010TRYCK.pdf
[Accessed 14-16 September 2007].

Kullman, J., (2006-2009). *Jag drar mig undan, projektet Anti Depp.* 2nd ed. Helsingfors: Svenska Hörselförbundet rf & Finlands Svenska Psykosociala Centralförbund rf.

Kvale, S. & Brinkmann , S., (2009). *Den kvalitativa forskningsintervjun.* 2nd ed. s.l.:Studentlitteratur AB.

Kyngäs, H. & Vanhanen, L., (1999). Sisällön analyysi. *Hoitotiede,* 11(1), pp. 3-12.

le May, A., (2007). Communicating care. *Nursing & Residential Care,* 9(8), pp. 363-366.

Leininger, M. M., (1984). *Qualitative research methods in nursing.* Philadelphia: Leininger.

London Hearing, (2010). *London Hearing: How your ear works.* [Online]
Available at: http://www.londonhearing.co.uk/index.php?main_page=page&id=9

Marttila, T., (2005). *Duodecim, Terveyskirjasto.* [Online]
Available at:
http://www.terveyskirjasto.fi/terveyskirjasto/tk.koti?p_artikkeli=suo00037
[Accessed 25 May 2012].

Norden, (2010). *Norden.* [Online]
Available at: http://www.norden.org/sv/fakta-om-norden/befolkning
[Accessed 1 October 2012].

Phonak, n.d. *Phonak: Fakta och siffror.* [Online]
Available at:
http://www.phonak.com/se/b2c/sv/hearing/understanding_hearingloss/facts_and_figures.html

Polit, D. F. & Beck, C. T., (2008). *Nursing research, generating and assessing evidence for nursing practice.* Ninth ed. s.l.:Polit & Becka.

Pyskosociala förbundet rf & Svenska Hörselförbundet rf, (2009). *När tystnaden väsnas.* Helsingfors: Psykosociala förbundet rf & Svenska hörselförbundet rf.

Saloranta, K., (2009). Grava och ovanliga hörselskador. *Vi hörs,* Issue 4, pp. 12-13.

Shinn-Cunningham, B. G. & Best, V., (2008). Selective Attention in Normal and Impaired Hearing. *Trends in Amplification,* 12(4), pp. 283-299.

Sideri, N., (2011). *Hearing aids Boston MA: Understanding your audiogram|Boston MA.* [Online]

Available at: http://hearing-aids-boston-ma.com/understanding-your-audiogram/
[Accessed 10 March 2011].

Svenska Hörselförbundet rf, (2006). *Hyperakusi, ljudöverkänslighet.* Helsingfors: Svenska Hörselförbundet rf.

Svenska Hörselförbundet, (2006). *Ménières sjukdom.* Helsingfors: Svenska Hörselförbundet.

Svenska Hörselförbundet, (2010). *Svenska Hörselförbundet rf: Handlingsprogram 2011-2013.* [Online]
Available at:
http://www.horsel.fi/Site/Widget/Editor/173/files/Interna%20sidor/handlingsprogram/Handlingsprogram2011-2013_BaettreLjudmiljoe.pdf
[Accessed 17-19 September 2010].

Svenska Hörselförbundet, (2011). *När hörseln blivit sämre?.* Lovisa: Svenska Hörselförbundet rf.

Swanson, K. M. & Wojnar, D. M., (2004). Optimal Healing Environments in Nursing. *The Journal of Alternative and Complementary Medicine,* Volume 10, pp. 43-48.

Vasa Hörselteknik, (2012). *Vasa Hörselteknik: Audiogram.* [Online]
Available at: http://www.horselteknik.se/information/faktasidor/audiogram/
[Accessed 2012].

WHO, (2012). *World Health Organization: Prevention of blindness and deafness.* [Online]
Available at: http://www.who.int/pbd/deafness/en/
[Accessed 3 March 2012].

Widex, n.d. *Widex Sverige.* [Online]
Available at: http://www.widex.se/sv-se/hearing/hearing/
[Accessed 1 October 2012].

World Health Organization, (2012). *World Health Organization; Prevention of blindness and deafness; Grades of hearing impairment.* [Online]
Available at:
http://www.who.int/pbd/deafness/hearing_impairment_grades/en/index.html
[Accessed 2012].

Appendix 1

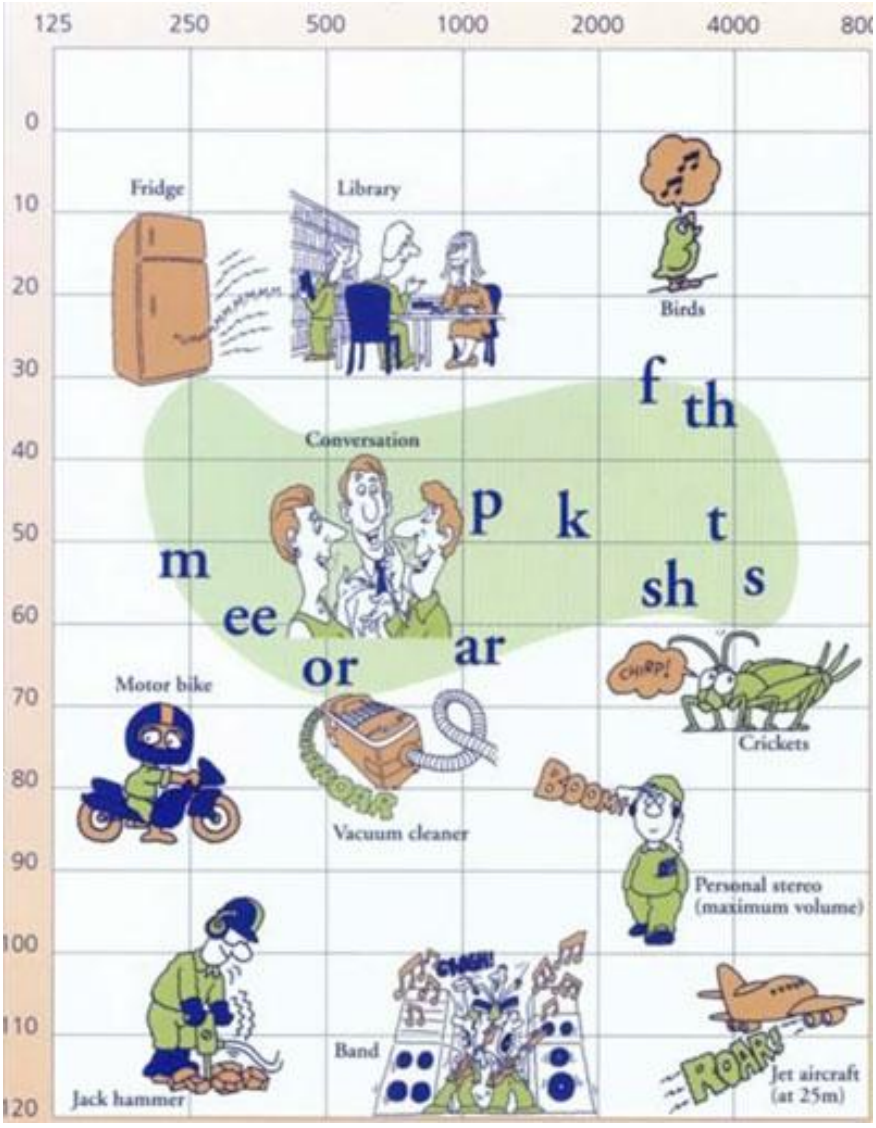

Figure 3. Understanding your audiogram and what you hear at what dB. (Hearing, 2009). *Published with permission from Active Hearing and Phonak.*

Appendix 2

Interview questions, English version

1. How long have you been working and within what area have you been working?
2. What experience do you have of hearing impaired patients?
3. How do you experience communication with a hearing impaired patient?
4. Have you learned somewhere how to communicate with a hearing impaired patient?
5. Do you feel that you are able to prevent uncertainty for the hearing impaired patient?
6. How do you prevent uncertainty for the hearing impaired patient?
7. Do you think you are able to provide comfort for the hearing impaired patient?
8. How do you provide comfort for the hearing impaired patient?
9. Do you think you are able to give good care to a hearing impaired patient in the way you communicate with them?
10. How do you give good care to a hearing impaired patient by the way you communicate?
11. Do you believe you could improve your communication technique to a hearing impaired patient?
12. In what way could you improve your communication to a hearing impaired patient?
13. What kind of training/courses would you wish, to increase your knowledge of hearing impaired patients?
14. Do you have any suggestions how you could improve the care for hearing impaired patients?

Interview questions, Swedish version.

1. Hur länge har du jobbat och var har du jobbat?
2. Vad har du för erfarenheter av hörselskadade patienter?
3. Hur tycker du det är att kommunicera med en hörselskadad patient?
4. Har du lärt dig någonstans hur man skall kommunicera med hörselskadade patienter?
5. Känner du att du klarar av att förebygga osäkerhet/otrygghet hos den hörselskadade patienten?
6. Hur förebygger du osäkerhet/otrygghet hos den hörselskadade patienten?
7. Tycker du att du klarar av att ge välbefinnande till din hörselskadade patient?
8. Hur ger du välbefinnande till en hörselskadad patient?
9. Tycker du att du kan ge god vård på det sätt som du kommunicerar med din hörselskadade patient?
10. Hur gör du för att ge god vård på det sätt du kommunicerar med en hörselskadad patient?
11. Tror du att du kunde förbättra din kommunikationsteknik till en hörselskadad patient?
12. På vilket sätt skulle du kunna förbättra din kommunikationsteknik till en hörselskadad patient?
13. Vad skulle du önska dig för typ av fortbildning/kurser för att öka din kunskap om hörselskadade patienter?
14. Har du några förslag på hur man kunde förbättra vården för de hörselskadade patienterna?

Appendix 3

How to care for hearing aids

Hearing aids are used by approximately 15 000 people in Finland (Marttila, 2005) which is indicating the need of knowing how to care for the hearing aids. The following guidelines are based on different sources as well as the respondent's experience.

Batteries

When it comes to how often one shall change batteries, it is recommended to change every second week and in order to have a long life in the batteries one shall check the best before date of the batteries when buying them, they should preferably be two to three years ahead of time. Otherwise it means that the batteries have been in storage for years and the storage conditions are not always the best (HiA-Hörselskadade i Arbetslivet, 2011).

Furthermore when changing the batteries and taking away the protection tapes, one should let the battery lie and aerate for 15-20 seconds before locking it up in the device. Then the battery will last longer (HiA-Hörselskadade i Arbetslivet, 2011).

BTE (behind-the-ear) device

The care for the BTE device is as following: one need to keep the custom-molded insert clean as it otherwise can cause skin irritation in the ear canal or earwax. The hearing aid cannot handle water but can be kept clean by wiping it off with a damp cloth, while the custom-molded insert shall be cleansed regularly with water.

Clean the custom-molded insert by disconnecting it from the hearing aid and putting the insert in lukewarm water with some mild soap, then cleanse the ducts in the insert with an interdental brush, then rinse the insert under running water. After that one eventually has to blow out water that may have accumulated in the ducts or the tubing.

The final step is to wipe off the insert with a soft cloth and let the insert air dry for a couple of hours, e.g. overnight. Connect it with the rest of the hearing aid. Good to remember is that some hearing aids may have microphone filters that need to be changed, read the manual that belongs to the hearing aid(s).

In order to change the tubing one has to disconnect the custom-molded insert from the hearing aid, then carefully remove the old tubing from the insert, after that one has to measure the old tubing with the new tubing, then add approximately 2 mm before cutting the new tubing. Put on the new tubing with the insert and then connect to the hearing aid (Karolinska Universitetssjukhuset, u.d., pp. 5-6).

In- ear device

The in-ear device shall not be cleansed with water as the technique is sensitive for moisture. Let the hearing device lie for a while so that eventual wax can stiffen.

Then wipe off the hearing aid with a soft, dry cloth. If the wax is soft it is high risk of it to get stuck in the wax filter or the microphone.

In the manual for the hearing aid one can find information about how to change the filter (Karolinska Universitetssjukhuset, u.d.).

Appendix 4

Points to consider when communicating with hearing impaired patients

- Receive the hearing impaired patient's attention before speaking
- Make sure that you can be seen clearly
- Reduce unnecessary noise e.g. TV & radio
- Face the light and patient at all times; do never stand in front of the light so that it is lighting up your back.
- Keep your head, if possible, still when talking
- Do not hide your mouth when talking, behind e.g. your hand or a paper
- Talk straight to the hearing impaired patient
- Do not have a conversation with other people on the same time as you are dealing with your hearing impaired patient
- Speak clearly and not too fast, and repeat or rephrase if necessary
- All important facts should be written down
- Do never shout into someone's ear or hearing aid
- Remember that a hearing aids do not cut out back ground noise completely
- Use the telecoil/loop system where ever it is available
- Be patient

(Harkin & Kelleher, 2011, p. 27)

Appendix 5

Lecture plan

The communication with - and care of the hearing impaired patient

Objectives

The aim with the course is to increase the knowledge of hearing impairments and communication technique with the hearing impaired patient, as well as to increase the knowledge for the participants in how to care for hearing aids as well as how to use them. The scope of the course is approximately 3-4 hours.

Content

- What is hearing, normal hearing and how do we hear
- Classifications and types of hearing impairment
- Different hearing impairments
- Different hearing aids and important things to know when caring for the aids
- How to communicate with a hearing impaired person
- Findings from the thesis
- Important to think of when caring for a hearing impaired patient
- General hearing care advices

Teaching methods	Lectures and demonstration
Attendance	Compulsory for medical students
Literature	Thesis: Nurses' experience in communicating with hearing impaired patients, by Camilla Mattjus (2012) Konradsson, Konrad S. *Hörseln det första sinnet* (2011)

Appendix 6

YRKESHÖGSKOLAN NOVIA

UPPDRAGSAVTAL FÖR LÄRDOMSPROV MELLAN STUDERANDE OCH UPPDRAGSGIVARE

UPPGIFTER OM STUDERANDE

Namn Camilla Mattjus

Adress Malmögatan 2B7, 65100 Vasa

Telefon 0504126672

E-post camilla.mattjus@novia.fi

Utbildningsprogram Nursing

LÄRDOMSPROV

Arbetsnamn Nurses' experience in communicating with hearing impaired patients

Tidtabell

UPPDRAGSGIVARE

Företag/organisation HiA- Hörselskadade i Arbetslivet

Handledare/kontaktperson Eivor Larpes

Adress Bölesundsvägen 62A

Telefon 044-3310338 E-post eivor@speres.fi

HANDLEDARE FRÅN YRKESHÖGSKOLAN NOVIA

Handledande lärare Nina Vestö Nina Vestö

Telefon E-post nina.vesto@novia.fi

Yrkeshögskolan Novia
PB 6, Fabriksgatan 1
65201 Vasa
Tfn (06) 328 5000 (växel)
www.novia.fi

Avtalsvillkor för examensarbete

Avtal mellan studerande och uppdragsgivare.

1. Handledning och ansvarsfördelning
Studerande ansvarar för examensarbetets genomförande och resultat. Yrkeshögskolan Novia ansvarar för att studerande får såväl ämnesmässig som vetenskaplig handledning. Ifall uppdragsgivaren önskar konsultation av handledaren kommer man överens om detta separat. Uppdragsgivaren ansvarar för att studerande får behövligt material, information och eventuellt övrigt stöd som behövs i processen.

2. Upphovsrätt
Studerande har upphovsrätt till sitt examensarbete i enlighet med Lagen om upphovsrätt (8.7.1961/404).

3. Offentlighet samt affärs- och yrkeshemligheter
Ett godkänt examensarbete är offentligt och bör sammanställas så att det inte innehåller affärs- och yrkeshemligheter eller andra sekretessbelagda myndighetshandlingar enligt Lagen om offentlighet i myndigheternas verksamhet (21.5.1999/621). Affärs- och yrkeshemligheter samt sekretessbelagda uppgifter ska sparas som bakgrundsmaterial så att man vid vitsordsbedömning kan beakta såväl den offentliga som den sekretessbelagda delen av examensarbetet.

Studeranden och uppdragsgivaren förbinder sig att hemlighålla all sådan konfidentiell information samt alla sådana affärs- och yrkeshemligheter som framkommit såväl före, under och efter uppdraget. Sekretessen gäller även dokument och myndighetshandlingar. Sekretessplikten gäller i 5 år.

Studerande har ansvar för att uppdragsgivaren bereds tillfälle att bekanta sig med det färdiga examensarbetet minst 14 dagar före publicering. På basen av denna förhandsgranskning ska uppdragsgivaren avge en skriftlig redogörelse för de delar i examensarbetet som inte får publiceras.

Presentationstillfället för examensarbetet är offentligt. Studerande har tillsammans med uppdragsgivare ansvar för presentationens innehåll.

Studerande bär ansvar för att det godkända examensarbetet överlåts till uppdragsgivaren i önskat format samt att examensarbetet lämnas in i elektronisk format till Novias bibliotek för uppladdning till yrkeshögskolornas webbibliotek Theseus.

4. Arbetsförhållande och ersättning
Om uppdraget innefattar ett eventuellt arbetsavtalsförhållande med tillhörande lön och/eller annan ersättning, bör studerande och uppdragsgivare avtala separat om detta. Ifall det inte finns ett arbetsavtalsförhållande med uppdragsgivaren har den studerande en olycksfallsförsäkring via Yrkeshögskolan Novia.

5. Tillämpad lag och konfliktlösning
Tillämpning av detta avtal enligt gällande lag i Finland och tvist rörande tolkning och/eller tillämpning av detta avtal avgörs av

tingsrätt.

VI HAR GEMENSAMT KOMMIT ÖVERENS OM ATT LÄRDOMSPROVET FÖRVERKLIGAS PÅ DET SÄTT SOM BESKRIVS OVAN

15 / 5 20 12 Camilla Mattsson
Studerande

15 / 5 20 12 Elvor Larpes
Uppdragsgivare

BILAGA/ARBETSPLAN FÖR LÄRDOMSPROV ☐

Yrkeshögskolan Novia
PB 6, Fabriksgatan 1
65201 Vasa
Tfn (06) 328 5000 (växel)
www.novia.fi