MEETING A HEARING IMPAIRED PATIENT

Guide for Nursing Students

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ABSTRACT

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Hearing impairment is a common problem, which affects 360 million people worldwide and approximately 750,000 people in Finland. Studies indicate that deaf and hearing impaired people encounter several problems while using health care services, and thus are less satisfied with them. Therefore, health care staff needs more knowledge and skills in order to meet hearing impaired patients successfully.

The purpose of this functional thesis was to create a guide for nursing students about meeting a hearing impaired patient. The theoretical information was collected through a literature review, and it consists of the key concepts of hearing impairment, interaction, and the specific needs of hearing impaired patients. Our ultimate goal was to increase the amount of knowledge of nursing students in order to improve the quality of care provided for hearing impaired persons.

The results revealed that already small changes and attentions made by health care staff can significantly improve the interaction with hearing impaired patients. By enhancing communication, it is possible to meet the specific needs of the patients, but also to provide safer and more effective care.

In the future, it would be beneficial to investigate the specific problems that hearing impaired individuals meet when they use health care services in Finland. In addition, creating completely new ways to enhance interaction between the health care staff and hearing impaired patients would benefit both the nursing field and the patients.

Key words: Hearing impairment, deafness, communication, interaction, nurse-patient relationship, nursing student, guide.

TIIVISTELMÄ

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Kuulovammaisuus on yleinen ongelma, joka koskettaa 360 000 miljoonaa ihmistä mailmaanlaajuisesti. Suomessa kuulovammaisia henkilöitä on arvioitu olevan noin 750 000. Tutkimukset osoittavat, että kuurot ja kuulovammaiset potilaat kohtaavat useita ongelmia käyttäessään terveydenhuollon palveluita. Tämän vuoksi he ovat usein myös tyytymättömämpiä saamaansa hoitoon. Lisäkoulutus on tarpeen, jotta hoitohenkilökunta voisi kohdata kuulovammaiset potilaat onnistuneesti.

Tämän toiminnallisen opinnäytetyön tarkoituksena oli luoda sairaanhoitajaopiskelijoille ohje kuulovammaisen potilaan kohtaamiseen. Opinnäytetyön teoriapohja kerättiin tutkimalla kirjallisuutta keskittyen kuulovammaisuuteen, vuorovaikutukseen ja kuulovammaisten potilaiden erityistarpeisiin. Tavoitteenamme oli lisätä sairaanhoitajaopiskelijoiden tietoisuutta aiheesta, jotta he voisivat tarjota laadukkaampaa hoitoa kuulovammaisille potilaille.

Tutkimustulokset osoittivat, että jo kiinnittämällä huomiota pieniin asioihin ja toimintatapoihin voidaan merkittävästi parantaa vuorovaikutusta kuulovammaisen potilaan kanssa. Onnistunut kommunikaatio mahdollistaa, että potilaiden erityistarpeisiin pystytään vastaamaan ja samalla tarjoamaan turvallisempaa sekä tehokkaampaa hoitoa.

Jatkossa olisi hyödyllistä tutkia, mitä erityisiä ongelmia kuulovammaiset potilaat kohtaavat käyttäessään terveydenhuollon palveluita Suomessa. Lisäksi täysin uusien vuorovaikutusmenetelmien kehittäminen hoitohenkilökunnan ja kuulovammaisten potilaiden välille hyödyttäisi sekä hoitohenkilöstöä että potilaita.

Asiasanat: kommunikaatio, kuulovamma, kuurous, ohje, sairaanhoitajaopiskelija, vuorovaikutus

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1 INTRODUCTION

Hearing impairment is a problem that affects both children and adults. 360 million people worldwide suffer from disabling hearing loss. This is around five percent of the world's population. (World Health Organization 2013.) It is estimated that in Finland there are 750,000 people with some degree of hearing impairment (Sorri, Huttunen & Rudanko 2008).

Research shows that deaf and hearing impaired people are less satisfied with their health care than healthy people (Iezzoni, Davis, Soukup & O'Day 2002, 376). According to UK Council of Deafness & Royal National Institute for Deaf People (2006), 42% of deaf and hearing impaired patients have faced problems when trying to communicate with health care professionals in hospital, when visiting there without emergency situation.

In Finland, legislation ensures that all the people receive adequate health care. This means that patients are treated with respect, taking into account their mother tongue, individual needs and culture when possible. (Act on the Status and Rights of Patients, 785/1992.) Additionally, Constitutional Law of Finland (731/1999) states that people using sign-language, and those who need to have interpretative and translating services, have the right to receive them. Despite of that, hearing impaired patients tend to find communication with hospital staff difficult (UK Council of Deafness & Royal National Institute for Deaf People 2006, 4). Thus, it is important that nurses and nursing students have skills to communicate with these people in health care settings.

In the curriculum of Tampere University of Applied Sciences (TAMK) for nursing students, there is only a four-credit study module about professional interaction. It is stated in the description that this study module includes information about for example how to meet aggressive patients, patients with dementia, and multicultural patients. People with disabilities are not mentioned in the description. (TAMK 2013.)

To enhance the abilities of nursing students, we created a guide which contains basic information that is needed when communicating face-to-face with hearing impaired

adults. The guide is written in Finnish for Tampere University of Applied Sciences. It is meant to be used as additional teaching material for first year nursing students. Situations where an interpreter is present are excluded from this thesis.

2 PURPOSE, TASKS AND OBJECTIVE OF BACHELOR'S THESIS

The purpose of our thesis is to create a guide about how to communicate with hearing impaired adults in health care settings. The guide will be in electronic form, which allows it to be modified and printed out when needed.

The objective of our Bachelor's thesis is to help nursing students to meet the patients suffering from hearing impairment in an appropriate manner.

We hope that by increasing the amount of knowledge it is possible to provide better care for hearing impaired patients and increase the quality of nurse-patient relationships. This acts also as our ultimate goal.

In our thesis and with our product, we will answer the following research questions:

1) What is hearing impairment and its origins?
2) What kind of problems hearing impaired people meet when using health care services?
3) What to take into account and how to enhance communication between hearing impaired adults and health care professionals?

3 THEORETICAL STARTING POINTS

3.1 Hearing impairment

"Hearing impairment" as a term means total or partial hearing loss and it can vary from mild to severe (Kuuloliitto ry / The Finnish Federation of Hard of Hearing 2013). The person may have been born with hearing loss or may have become hearing impaired at some stage of his life (Jauhiainen 2007, 98). Alternatively, the expression "hard of hearing" can be used.

According to Kuuloliitto ry (2013), "deaf" as a term refers to total inability to hear. When a person has become deaf after learning to speak, the term "deafened" is used. The greatest difference between a hearing impaired and a deaf person is that a deaf person has not learned Finnish, which is the spoken language in Finland. Instead, his/her mother tongue is sign language. (Mikkola 2005, 2.)

When a person suffers from social hearing impairment, it means that he/she has a partial hearing loss, but he/she is able to manage in situations with the help of lip-reading and hearing devices. He/she can hear speech, but still needs aids for interaction. (Kuuloliitto ry 2014.)

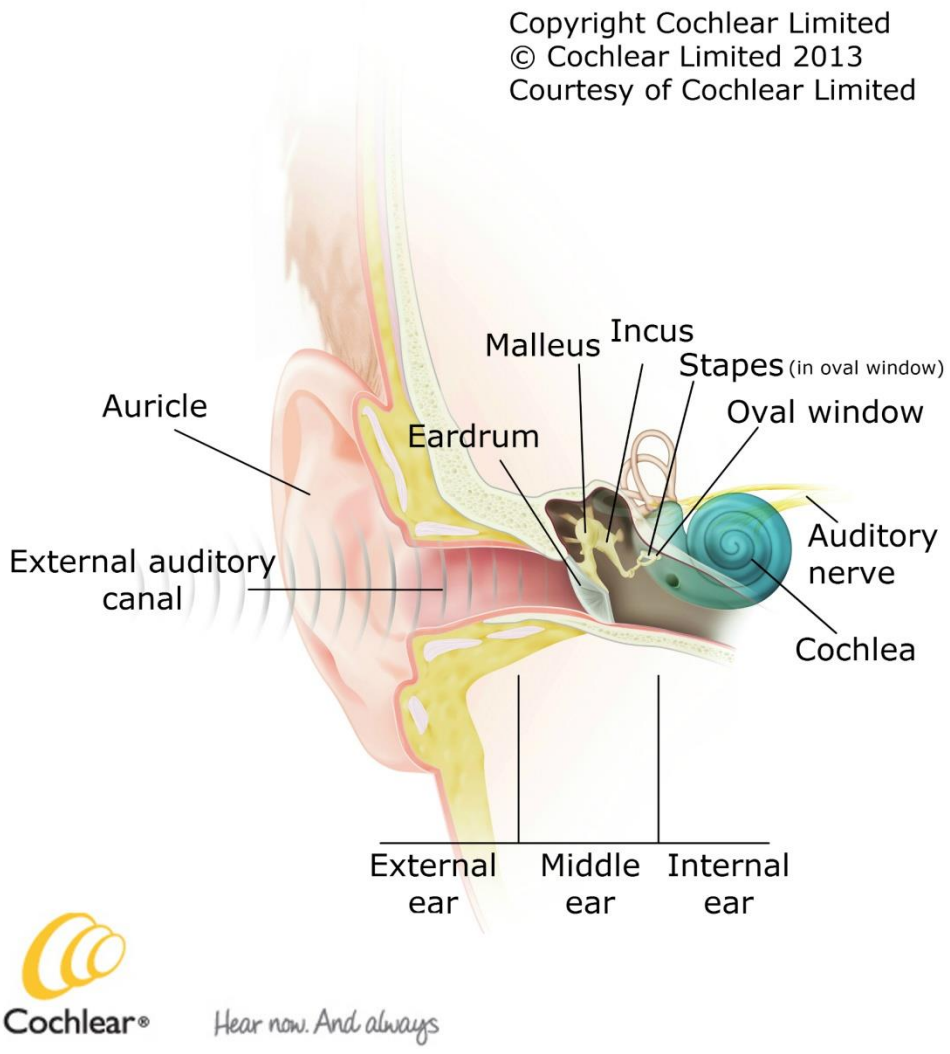
In this thesis, we will focus on hearing impaired adult patients A person over 18 years of age who is capable of handling one's own business is considered an adult in this thesis.

3.1.1 Anatomy of the ear

The normal anatomy of the ear and the functioning of the brain's hearing system enables the ability to hear. However, many times the hearing impairment occurs because of the illnesses or injuries of the ear. (Jauhiainen 2007, 39.) Thus, it is important to have an understanding of the ear's anatomy.

The anatomy of the ear can be simply divided into three different main parts. The first one is the external ear, consisting of the pinna or auricle and the external auditory canal. (Kuuloliitto 2014.) Its main function is to collect sounds and lead them to the middle ear, which is the second main part of the ear (Tortora & Derrickson 2011, 658).

The middle ear consists of the ear drum and the auditory ossicles. The ossicles are called malleus, incus and stapes. (Kuuloliitto 2014.) Sound waves travel through them and are conveyed to the oval window. From the oval window, vibrations of sounds are lead to the fluid and membranes in the internal ear, which is the third part of the ear. It consists of a complicated series of canals, and there lies the receptors for hearing and equilibrium. Additionally, the cochlea is located there, which is the place where sound waves are transformed into nerve impulses. After that, these nerve impulses travel to the cerebral cortex. As a result, the perception of sound and its qualities occurs. (Tortora & Derrickson 2011, 660-665; Kuuloliitto 2014.)



PICTURE 1. Anatomy of the ear (Photo: Cochlear limited 2013)

3.1.2 Types of hearing impairment

Hearing defects can be categorised according to the anatomic part where the problem lies in. Four different types of hearing impairment have been recognised. (Kuuloliitto ry 2014.)

Conductive hearing loss occurs when sound waves are not conducted to the inner ear. Reasons can be various. For example a malformed outer auditory canal or problems in the middle ear's auditory ossicles can result in conductive hearing loss. With this type of hearing impairment, a person is unable to hear for example speech correctly. (Kuuloliitto ry 2014.)

Sensorineural hearing loss occurs when there is either damage in the inner ear or in the nerve pathways going into the brain. With this type of hearing impairment, a person can hear speech, but has difficulties to hear and interpret words correctly. (Kuuloliitto ry 2014.)

It is also possible that a person suffers from a combination of conductive and sensorineural hearing loss. This condition is referred to as mixed hearing loss. (Lucas & Matthews-Flint 2003, 32hn1.)

In central hearing loss, the reason behind the problem lies in the central nervous system. It can mean that no signs of hearing impairment are found when the ability to hear is tested, but the problems are revealed when it comes to understanding what has been heard. (Kuuloliitto ry 2014.)

3.1.3 Degrees of hearing impairment

The World Health Organization (2014) has divided the degrees of hearing impairment into four different categories. The severity of hearing impairment is determined by audiometric ISO value and expressed as decibel values (World Health Organization 2014). Hearing is considered to be normal when a person can hear 10-20 decibels (Kuuloliitto ry 2014).

The term “auditory threshold” means the lowest level of sound a person is able to hear (Kuuloliitto 2014). When the person is able to hear 26-40 decibels with his/her better ear, it is considered slight hearing loss. Impairment is considered moderate when an individual can hear only 41-60 decibels. (World Health Organization 2014.)

If the auditory threshold of a person is 61-80 decibels, his/her hearing impairment is considered severe. If a person cannot hear sounds of 81 decibels or greater, it means profound impairment or deafness. When referring to disabling hearing impairment, degrees of hearing impairment from moderate to profound are included. (World Health Organization 2014.)

Figure 1 illustrates the auditory thresholds from different degrees of hearing impairment (left margin), and gives examples of decibel values from everyday life (right margin).

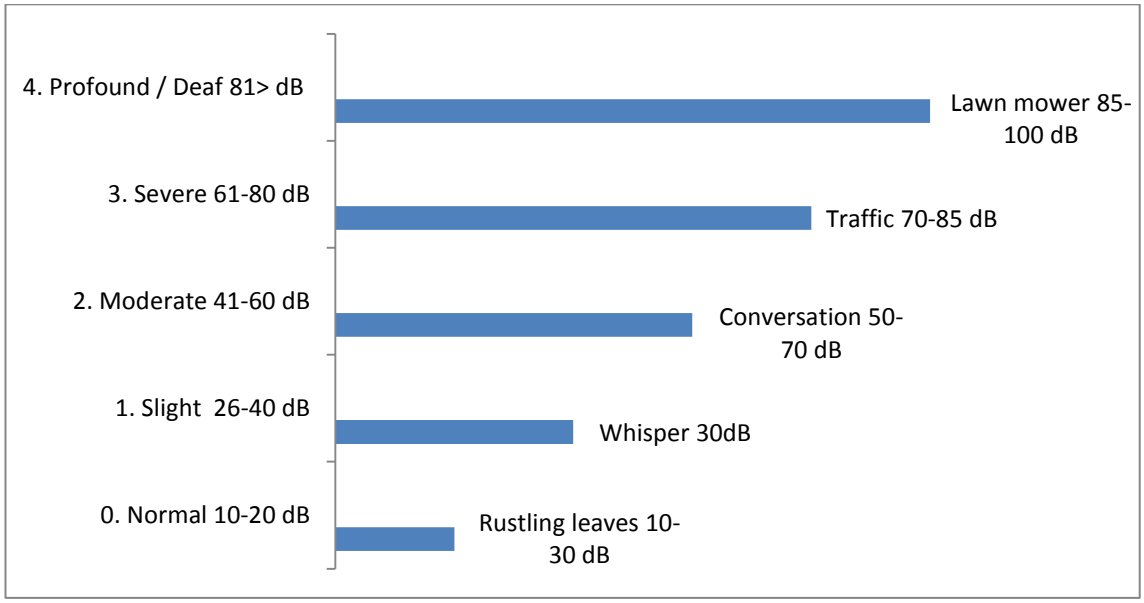


FIGURE 1. Degrees of hearing impairment and noise levels (Maol taulukot 2005, modified)

3.1.4 Reasons behind hearing impairment

Problems in hearing can result from various factors. The reason might lie in the genes, in the environment, or it might be age-related. In addition, infections can cause hearing impairment. (Sorri et al. 2008.)

In Finland, 0.1-0.3% of the population suffers from congenital hearing impairment. Often there is one gene mutation behind the hearing impairment in children. (Marttila 2005.) Other reasons can be jaundice and hypoxia during the prenatal phase or infections like rubella or syphilis during the pregnancy. In some cases, the reason for hearing impairment in childhood can remain undetected. (Sorri et al. 2008.)

Two percent of Finns have an acoustic trauma resulting in hearing impairment. Dangerously loud noises can be encountered in the work place, but also in free-time activities. (Marttila 2005.) A trauma can be caused for example by a sudden loud explosion or it can develop during years of constant exposure to loud noises (Kuuloliitto ry 2014). An instant trauma is caused to the ear when a sound exceeds 140dB (Maol taulukot 2005, 90).

According to Sorri et al. (2008), age-related hearing loss is the most common reason for hearing impairment in Finland. It is estimated that 6–10% of Finnish population suffers from it, and the pace of its progress is individual. On average, 0.5dB from the auditory threshold is lost per year. Genetic factors are associated with the progress of age-related hearing loss. (Marttila 2005.)

Previously, infections were one of the most important reasons behind hearing impairment, but nowadays the situation is different. This is because of the advances in treating infectious diseases. (Sorri et al. 2008.) However, around one percent of the population still suffers from hearing impairment as a result of chronic otitis and its sequelae. Five percent of the people who have had meningitis develop some degree of hearing impairment afterwards. (Marttila 2005.)

Other reasons behind hearing impairment in Finland are otosclerosis, Méniér's disease, and tumours in the auditory nerve (Marttila 2005). Otosclerosis is a progressing disease

of the auditory ossicles, leading only rarely to total deafness. In otosclerosis, the stapes becomes incorrectly attached to the oval window between the internal and middle ear, causing problems with the conduction of sounds. (Jauhiainen 2007, 47.)

Méniér's disease is a problem of the internal ear, and it causes episodes of impaired hearing, vertigo, and even tinnitus (ringing of the ears) (Jauhiainen 2007, 48). These attacks can last from 20 minutes even to hours (Kotimäki 2013). The symptoms and their strength vary a great deal between the episodes (Jauhiainen 2007, 48).

3.1.5 Hearing and its tasks

Hearing as a sense has many different roles. It is an important part of everyday life, because the ability to hear is strongly linked to language development, social interaction, and even a person's safety.

Different kinds of sounds are constantly around all of us, and people are used to recognising and perceiving them. For example the tone, rhythm and loudness of the sounds are constantly evaluated. Many of the sounds are already familiar, and it is possible to make assumptions where they came from. (Jauhiainen 2007, 11.) When a person has a hearing impairment, certain experiences related to hearing may be lacking. Such experiences can be for example music and sounds of nature. (Kuuloliitto ry 2014.)

Hearing is closely linked to spoken language as well as to written language. They act as a basis for thinking, learning, reading, and writing. In addition, searching information and communication are based on language. (Jauhiainen 2007, 10.) Through hearing, the universe is experienced and sounds give us emotions and mental images (Burkey 2003, 85). These are issues that may be taken as self-evident by persons who do not have problems with their senses.

The ability to hear is also related to the production of speech. It helps to form and regulate speech, its loudness and tone. By hearing, people are then able to recognise also the non-verbal messages transmitted by for example a rhythm of speech. This may have an effect when forming opinions or making decisions. (Kuuloliitto ry. 2014.)

Speaking, as well as hearing, has a crucial part in social interaction. For a person with normal hearing, listening is usually easy, and the ability to perceive even the most silent sounds exists. The sounds can be separated also in a noisy environment. However, for a hearing impaired person even following a normal discussion may cause significant problems. (Jauhiainen 2007, 13.)

Hearing also affects the safety of a person. The ability to recognise the direction of the sound is important, since it enables the person to make perceptions about the surroundings and orientate to it. Thus, the information gained from the environment can significantly increase the safety for example in the traffic. (Kuuloliitto ry 2014.) This is also true at home, since hearing sounds such as the fire alarm can be considered very important (Burkey 2003, 92).

3.2 Living with the hearing impairment

Problems with hearing among the population of Finland are increasing, partly due to the change of age structure in Finland. However, the care of hearing impaired people has not been developed accordingly. As a health problem, hearing impairment seems to be invisible. It usually does not cause other physical problems or mortality, and it cannot be seen outwards just by taking a look at a person. (Jauhiainen 2007, 6.)

It has been studied that hearing impairment can affect the quality of life in different ways. Problems can arise in everyday situations where the ability to hear is needed. To ease these situations, different kinds of devices and methods for communication exist. At the same time, deaf people have created their own culture and language, usually not having difficulties to accept their impairment.

3.2.1 Social aspects of hearing impairment

The ability to hear is an important part of people’s everyday lives. During the past decades, the world has changed and technology developed so that speech

communication is present everywhere. People are talking on a phone, watching television on their leisure time, going to negotiations and trainings at work and so forth. (Jauhiainen 2007, 5.) Therefore, hearing impairment affects the life of a person in numerous ways. Hearing is an essential part of social interaction, but it also affects performance and working order strongly. (Burkey 2003, 84.) Impaired hearing has effects on how a person views his environment and himself as a person (Jauhiainen 2007, 10).

People with hearing impairment experience their condition and the degree of harm caused by it differently. For example age, personality, background, and culture can act as influencing factors. Someone may be completely satisfied even though the ability to hear is lowered, while a similar kind of hearing impairment may be experienced as very limiting by someone else. (Jauhiainen 2007, 68.)

All the social problems related to hearing impairment can cause issues with self-confidence, and thus a need to withdraw from social situations (Burkey 2003, 85).
Therefore, being aware of how hearing impairment may affect a person's life is also important for nurses. However, for some persons, hearing impairment is a congenital, everyday issue and they are used to it. Problems arise especially when the ability to hear disappears gradually or suddenly, since adapting to the new situation takes time. (Jauhiainen 2007, 14.)

Actual limitations due to hearing impairment are related for example to the working life. Some occupations require normal or at least moderate hearing, so choosing a profession demands more planning. On the other hand, gradual hearing loss related to age or some other reason may make the person unproductive in his profession. Using a hearing aid may be helpful. (Burkey 2003, 84.)

Social interaction is easily affected when the hearing is impaired. The problem does not only concern the person, but also his/her family and friends. For a hearing impaired person, it may be hard to maintain and create personal relationships, as well as to develop them. (Burkey 2003, 84, 98.) Following discussions is hard, so it is sometimes necessary to withdraw from a conversation. Jauhiainen (2007, 14) compares this to following a conversation spoken in a foreign language. The person may hear and

understand parts of the discussion, but otherwise it may be just “laughing when the others do so”, even though the joke was not totally understood. Struggling to hear is not only stressing, but also very exhausting and even embarrassing. The person may for example need to stare at the others all the time while trying to read from their lips. (Burkey 2003, 86, 91.)

Problems with hearing may also cause misunderstandings between persons (Jauhiainen 2007, 64), and willingness to drop out for example of family meetings and activities that require social interaction (Burkey 2003, 88). Everyday places like grocery stores, movies, cars, theatres, churches, and meetings may be very problematic, and talking on a phone almost impossible (Jauhiainen 2007, 63).

3.2.2 Devices for hearing and communication

Different kinds of helping devices are essential for people suffering from total or partial hearing loss. The reason is simple: aids allow a person to cope in everyday life even without a full capability to hear. People with hearing impairment need helping devices also for communicating with others. (Huhtikangas 2012.) Being able to communicate makes it possible to be independent and to run personal errands (Kuuloliitto 2009).

However, devices such as hearing aids will not provide perfect hearing. Their main task is to help to compensate a hearing loss and decrease the amount of limitations a person may have due to it. (Burkey 2003, 84.) The devices available for hearing impaired persons can be divided into three groups. There are aids for hearing, aids for text-based communication, and aids for alarming. (Jauhiainen 2007, 74.)

A hearing aid is one of the most important personal devices for a hard of hearing person. It will not bring the hearing back, but exploits the ability to hear that is left. (Kuuloliitto 2009.) The mechanism of all hearing aids is similar: they amplify sounds and direct them straight to the outer auditory canal of a person (Jauhiainen 2007, 75).

The most common type of hearing aids is placed behind the auricle, while the earpiece goes to the outer auditory canal. They are called behind the ear aids (BTEs). There are

also smaller in the ear aids (ITEs) which are placed in the auditory canal. However, the person can also choose a device which is held in a pocket and used together with the earpiece, or a device that is attached into the frame of eyeglasses. However, they are not widely used anymore because of their impracticality. (Kuuloliitto ry 2009.) Nowadays, there are hundreds of different models of hearing aids with different outlook and qualities available. Thus, the device is chosen according to the needs of a user, and produced individually to fit the ear canal. (Jauhiainen 2007, 79.)

Sometimes the usage of a normal, personal hearing aid is not possible for some reason, for example if the person does not want to use it. In those situations, communicators with a headset can be utilised in communication. (Jauhiainen 2007, 78.)

Hearing devices are also available for watching television or listening to radio. A person may receive an audio induction loop, which transfers the sound straight to the hearing aid through a magnetic field. A certain type of induction loop can be used with a mobile phone to enhance hearing and communication via telephone. Some public places, such as auditoriums, classrooms, conference rooms, and restaurant halls may also be equipped with the induction loop. This enhances hearing with hearing aids. (Kuuloliitto ry 2009.)

The normal hearing aid is not enough if the person is born deaf, deafened later or if his hearing impairment is severe. In this case, the cochlear implant (CI) may be an option. It is a special device which is surgically implanted in the inner ear of a person. It works by electrically stimulating the nerves which are related to hearing, and thus creating the sense of hearing. (Kuuloliitto ry 2009.) Cochlear implants are especially used with children, because they allow moderate hearing and therefore support speech acquisition (Jauhiainen 2007, 82).

Different kinds of alarming devices are available for deaf and hard of hearing people to help them with everyday activities and safety. Such devices usually work by either amplifying the alarm sound, vibrating or sending light signals, which draw the attention of a person. These techniques can be utilised for example in alarm clocks, fire alarms, or doorbells. (Kuuloliitto ry 2009.)

Sometimes also a specially trained dog can assist a hearing impaired person with his/her daily issues. It is taught to recognise the sounds, such as a ringing phone and alarm clock, and then to notify the owner of them. A properly trained hearing dog is a diverse helper and supporter for a hearing impaired person, and is many times considered to increase the quality of life too. (Suomen kuulo- ja tukikoirat ry 2014.)

3.2.3 Sign language

A hearing impaired person does not usually consider himself as impaired or disabled. Especially deaf people rather feel belonging to a linguistic minority, and they also have their own culture. (Mikkola 2005.) The status of sign language has been protected in the Constitution of Finland, and it was recognised as a mother tongue for deaf people in 1995. It is mainly used by the people who have been born deaf or deafened before learning to speak. Actually, deaf people may consider the usage of the term "deaf-mute" insulting, since learning to speak without an ability to hear is very hard. (Mikkola 2005.)

Learning sign language takes as much effort as learning spoken languages. However, the visuality of it is important. Facial expressions and gestures, places and directions of signs are all significant. In addition, the movements of lips, "silent speech", are connected to the signs made by hands to allow reading from lips. (Mikkola 2005.)

Sign language is not international; instead, different languages have their own sign languages too. Dialects exist as well, and the language has its own specific grammar and structure. Thus, Finnish language can be considered a foreign language for deaf people, which may make it hard for them to communicate for example by writing. Using an interpreter is important when communicating with deaf patients. (Mikkola 2005.)

3.3 Interaction and related problems in nursing

In nursing, theorists view interaction as a fundamental part of providing care. Interaction between the nurse and the patient focuses on the prevention of distress and helping the patient to manage his/her own life. (Meleis 2007, 115-118.) In order to

succeed in interaction with hearing impaired patients, it is necessary to first understand which issues are related to it. Gaining knowledge of different communication skills and methods is needed too. However, problems in the interaction process can still occur, so it is important to anticipate possible problems in advance.

3.3.1 Components of good interaction and ways to achieve it

Interaction is a process of sharing, producing and interpreting information between people. Communication in turn can be seen as a process of information change, as a part of interaction. (Kielijelppi 2014.) It is a multidirectional process, meaning that when a message is sent, at the same time the other person is already interpreting and decoding the message (Hill & Cox 2010, 102-108). Communication can be divided into verbal and non-verbal communication (Kielijelppi 2014).

Verbal communication includes the tone of the voice, volume and pitch used as well as the resonance (Hill & Cox 2010, 106-108). They account for 38% of the communication. Additionally, the words used are part of verbal communication. However, they constitute only seven percent of the communication. (Donnely & Neville 2008, according to Hill & Cox 2010, 102.)

Facial expressions, gaze, posture, gestures, and touching are all parts of non-verbal communication. In addition, being present in the situation without talking all the time is part of it. It is studied that body language constitutes 55% of communication. (Donnely & Neville 2008, according to Hill & Cox 2010, 102.) All these factors affect how the speech of a nurse is interpreted by the patient and vice versa. For example constant staring can be threatening for the patient. (Hill & Cox 2010, 103-106.)

Active listening is one of the most significant skills while interacting with patients (Hill & Cox 2010, 108). It is mentioned also in the list of future nursing competencies (Massachusetts Department of Higher Education Nurse of the Future Competency Committee 2010, 28). Active listening is not only a break from talking. Instead, it happens when a person is actively paying attention on what the other person is saying. (Hill & Cox 2010, 108.) Nurses and nursing students can show that they are actively

listening for example by engaging eye contact with the patient and making acknowledging comments. Furthermore, reflecting back some important words or phrases and paraphrasing one's words are parts of active listening. (Niven 2006, according to Hill & Cox 2010, 108.)

Anthropologist Edward T. Hall (1968, 92-93) created the concept of personal space. Understanding the concept and its meaning is important for nursing students, because an invasion in personal space can cause unpleasant feelings for patients (Hill & Cox 2010, 105). Hall (1968, 92-93) found out that the size of a personal space varies from 0.45m to 1.2m depending on a person. Culture can affect the size of personal space, and unpleasant feelings caused by breaching it can be eased for example by appropriate speech, gestures and facial expression. (Hill & Cox 2010, 105.)

Nursing students also need to acknowledge possible prejudices or stereotypes which they might have towards the patient in order to communicate effectively. This is because if a nurse holds a generalisation of a patient based on earlier experience, it can affect negatively the communication process taking place at that time or later on. (Hill & Cox 2010, 98.)

The Nurse of the Future Competency Committee of the Massachusetts Department of Higher Education (2010, 27-28) has listed competencies that the future nurses should have when communicating with patients. Competencies are based on the idea that a nurse knows the principles of effective communication. Part of this is creating a mutual respect and rapport between the nurse and patient, taking into account also the culture and individuality of the patient. After that comes knowing the language, its spelling and health care related vocabulary. Another part of nurses and nursing students' competence is being capable of using different types of communication. This means that they do not only use auditory, but visual and tactile means too when communicating with patients. In order to manage all these skills, nurses and nursing students have to continuously evaluate their patient's preferences and abilities, and choose a proper time and environment for communication. After that comes choosing the best communication methods for the individual patient. (Massachusetts Department of Higher Education Nurse of the Future Competency Committee 2010, 27-28.)

Because good communication involves both the nurse and the patient, it is important that the nurse creates space for the patient's questions and comments (Massachusetts Department of Higher Education Nurse of the Future Competency Committee 2010, 28). Questions should be asked from the patient too, and they can be open or closed depending on the situation (Hill & Cox 2010, 107).

In order to become better in interaction, reflection on one's behaviour is a usable tool. It can be only personal reflection on a paper or in one's own mind, or done together with the colleague. (Hill & Cox 2010, 99.)

3.3.2 Existing problems in interaction between hearing impaired individuals and health care professionals

Several studies have revealed that interaction with hearing impaired individuals is inadequate in health care (Hines 2000, 35; Reeves, & Kokoruwe 2005, 95; Pereira & De Carvalho Fortes 2010, 33). This is due to lack of knowledge among health care professionals (Hines 2000, 33). For example, physicians quite often ask hearing impaired patients to use a communication method that is insufficient for their needs (Iezzoni et al. 2004, 358). It is stated that education concerning adequate communication skills is needed through all staff levels (Hines 2000, 33).

Problems in interaction with hearing impaired patients can have actual consequences. Leaving the doctor's office unsure what was going on, or worrying if a correct medicine was ordered are troubles that worry hearing impaired people. A patient can also feel that he/she could not explain his/her medical history understandably to the doctor, which can then affect the future diagnosis. When communication is limited, the patient can understand medication instructions wrong, which can lead to the patient taking an incorrect amount of medicine. These issues put hearing impaired patients at risk for receiving low-quality or even dangerous care. (Reeves, & Kokoruwe 2005, 95-96.) Also missed appointments and misunderstandings with diagnoses can occur because of insufficient communication (Schreier 2009, 6).

Deaf people have also faced underestimation of their capability to understand health information given by health care providers (Lieu et al. 2007, 240). They even feel that some physicians do not value their motivation and desire to participate in their care (Iezzoni et al. 2004, 357). This should not happen, because Ethical Guidelines of Nursing (1996) state that nurses have to make sure that every patient has the chance to participate in his/her own care.

Health care professionals are obliged to arrange translation services for the patients that need them (Constitution of Finland 731/1999). Nevertheless, at least abroad where similar regulations exists, it is common that interpreter is not present in the meetings. Instead, the relatives of a patient are used for interpretation.Using a relative as an interpreter is an issue of confidentiality. There is also a risk that information from a doctor or a nurse is only partially translated to the patient. For these reasons, relatives should not be used as interpreters. (Lieu et al. 2007, 240-241.)

Interaction with patients can also take place on the phone instead of the nurse's office. According to Iezzoni et al. (2002, 375), people with hearing impairment reported dissatisfaction with access to health care information via phone. Hearing impaired people had also concerns about hearing the information correctly over the phone and booking appointments. Problems were reported especially when the person in the other end was not speaking clearly and slowly enough. In addition, complicated automatic telephone systems made the access difficult. (Iezzoni et al. 2004, 360.) One way to solve these problems could be for example reviewing the telephone services and adjusting one's speech to meet the individual's needs (Iezzoni et al. 2004, 358).

3.4 Ways to promote interaction with hearing impaired individuals

Because problems in the interaction between hearing impaired patients and health care staff are present, a need for improvement is evident. There are several areas where problems can occur, so a great deal of knowledge is needed in order to enhance communication. Depending on the situation, interaction can be enhanced by taking into account simple things in the environment or by paying more attention on one's own way to interact with the patients.

3.4.1 Taking into account environmental issues and devices for communication

The degree of hearing impairment has an effect on the patient's ability to hear speech correctly (Jauhiainen 2007, 65). This is why it is important that all the professionals participating in care are informed about the patient's hearing deficiency and possible hearing aids. Even if the patient has a hearing aid, it does not guarantee normal hearing (Lucas & Matthews-Flint 2003, 32hn1.) Naturally, in order for hearing aid to help, it has to be turned on and the patient has to wear it.

When meeting a hearing impaired patient, taking the environment into account is important. This is because distinguishing speech from other noises becomes harder when the background is noisy. (Jauhiainen 2007, 66.) The main idea is that the place for meeting is as peaceful as possible. It can be achieved when noises in the background are eliminated. Echo should also be minimised for example by using carpets on the floor if that is possible. (Spydridakou 2012, 20.)

Hearing impaired individuals benefit if the environment where interaction occurs is well lit. However, there should not be glare in one's eyes when watching towards the nurse. This can be avoided for example by guiding the patient to sit his back towards the window. These actions allow a better view for a patient towards the nurse. (Lieu, Sadler, Fullerton & Stohlman 2007, 242.)

Problems in communication occur also in waiting rooms. The study of McAleer (2006, 51) shows that hearing impaired patients miss appointments because they do not hear the health care professional calling out their name. This might be the reason that hearing impaired individuals wish that some non-auditory means would be used to call patients in to the nurse's or doctor's office. For example vibrating pagers could be used for that. (Iezzoni et al. 2004.)

In radiology units, hearing impaired patients have had problems to follow instructions when the technicians have disappeared without instructing patients clearly enough. As a solution to this, hearing impaired individuals suggest for example lights to signal when

to act as instructed. Hearing impaired people also felt discomfort when the physician disappeared from their sight during examinations. (Iezzoni et al. 2004, 358-359.)

Hearing impaired and deaf people have pointed out more aspects regarding the environment and better interaction in a semi-structured interview. Their wish was that the physical environment is safe and contains clear and well lit instructions for example for exiting the building in emergency. They also wished that nurses and physicians would know the services available for communication in their community. Being competent to use for instance a telecommunicator or teletypewriter is a skill they hope that health care professionals would have. (Iezzoni et al. 2004, 358.)

3.4.2 Issues related to the interaction process

The base for good interaction with hearing impaired individuals is thinking through and planning the situation in advance (Iezzoni et al. 2002, 370). The next step is to ask which method of communication is preferred by the patient. Depending on the patient, lip reading, writing, hearing aid, or telecommunication services can be the desired method. (Lucas & Matthews-Flint 2003, 32hn2.)

Before starting to talk to a hearing impaired patient, a nurse has to make sure that he/she has the patient's attention (Lucas & Matthews-Flint 2003, 32hn2). This is because the listener's alertness, motivation and ability to concentrate affect how well the speech is heard (Jauhiainen 2007, 65). Eye contact has to be established too in order for the patient to know that speech is directed towards him/her (Lieu et al. 2007, 242). It is also important that the patient can see the nurse's face, because it enables lip reading. (Lucas & Matthews-Flint 2003, 32hn2.) Even for patients that cannot read speech from lips, a clear view to the nurse is important. This is because the body language and gestures that the nurse makes also gives a frame in which the patient can view the situation. (Lieu et al. 2007, 242.)

When talking to the patient, it is important to know that shouting, accent or dialect can make it harder for the hearing impaired patient to understand what has been said (Hines

2000, 35). In addition, crazed voices cause problems, because they make it more difficult for patients to recognise the qualities of speech (Jauhiainen 2007, 62).

When interacting with hearing impaired individuals, a nurse should have patience and avoid speaking too fast (Spydridakou 2012, 20). Slowing down the normal pace of speech makes it easier for the patient to hear speech correctly (Jauhiainen 2007, 66). A nurse should be prepared to repeat things in order to make sure that the patient understands issues correctly (Spydridakou 2012, 20).

If a hearing impaired patient has chosen lip reading as a preferred method for communication, a nurse can make it easier for the patient if he/she speaks clearly. Shouting needs to be avoided, as well as over-enunciating. Here the environmental issues, such as good lightning, are important to take into account too. (Lieu et al. 2007, 243.) It is crucial that the nurse does not cover his/her mouth by hands or a surgical mask while talking to the patient (Schreier 2009, 7).

If writing is the method chosen by the hearing impaired individual, the nurse should aim at writing things down with simple words and phrases. Writing as clearly as possible is a good thing too. Other visual aids can also be used. For example, videos or photos can describe some phenomena better than spoken words. (Lieu et al. 2007, 243.)

One of the most important things to remember in interaction with hearing impaired individuals is to make sure that the patient has understood correctly all the instructions and issues discussed. This can be done for example by asking the patient to repeat issues discussed in his own words. In fact, patients themselves desire health care professionals to do this. (Iezzoni et al. 2004, 358-359.) In addition, asking questions and writing down some key aspects can be used to confirm patients' understanding (Hines 2000, 36).

Hearing impaired people have made some more suggestions to improve communication. They have suggested that a notification about their disability should be placed in their medical files in a way that all the professionals taking care of them would be able to see it. They also wish that protocols for good communication for the staff to follow would be developed for specialised facilities such as emergency rooms. A periodical review of

the quality of communication was suggested, and nurses should acquire ideas for improvement straight from patients. Explaining upcoming treatments or examinations in advance and informing patients before touching them was hoped as well. In addition, hearing impaired patients pointed out that all the people entering the room should be introduced to them. For home and examination situations they wished to receive some simple written instructions that they can follow, to ease their participation in the care. (Iezzoni et al. 2004, 358.)

3.5 Good teaching material

Our Bachelor's thesis is a productive one, and its final product is meant to be used as a teaching material in TAMK. Therefore, it is important to take into consideration the qualities of good educational material.

The motivation to learn has a key role in a learning process. Thus, making the subject as interesting and beneficial as possible increases the willingness to acquire the information. (Kupias & Koski 2012, 39). In general, providing a wider understanding about why certain things are done is considered more far-reaching and economical than just offering the ways to act. It is more motivating as well. (Kupias & Koski 2012, 32.)

According to Race (2007), handouts should be learning tools instead of just a collection of information. It is necessary that the reader obtains understanding of what one should achieve by reading the material (Race 2007, 101). Since the meaning of educational material is to support learning (Kupias & Koski 2012, 74), it is important that it is conceived according to the target group (Vilkka & Airaksinen 2004, 129). Vilkka and Airaksinen (2004, 129) suggest that the target group's state, age and previous knowledge about the topic are taken into consideration when planning the final product of a Bachelor's thesis.

The content of educational material should be relevant, up-to-date and fundamental, and the concepts in it must be clearly presented (Race 2007, 102). The level of language and the content should meet the readers' level of knowledge. If the educational material is meant for self-studying, it is necessary that it is understandable without explanations

and teaching. (Kupias & Koski 2012, 74, 81.) However, it is useful to mention some sources of further information, in case someone wants to read more about the topic (Race 2007, 104). In addition, linking the subject somehow to the topics taught before or to the topics that will be covered in the future is considered useful. It helps the reader to understand the issue by making him/her think about the relevance of the topic. (Race 2007, 102.)

The appearance of teaching material, for example a handout, is crucial too. The layout must be professional-looking, attractive, clear, and simple enough (Race 2007, 102, 103). The material must not include too much text or too complicated diagrams, since they are hard to read (Kupias & Koski 2012, 77, 82). On the other hand, clear graphs and pictures increase the visual outlook of the material. Leaving some white space on the handout not only makes the appearance clearer, but also allows the reader to make notes and write additional information about the topic. (Race 2007, 102, 103.) Dividing the text into smaller sections and using appropriate headings helps the reader to parse the information (Race 2007, 102).

While producing the final product of a Bachelor's thesis, it is important to receive feedback. Vilkka & Airaksinen (2004, 129) suggest that the practicality of the material would be tested with the target group during the writing process. Additionally, the feedback from opponents is useful in order to create good quality educational material.

3.6 Summary of theoretical starting points

As stated previously in this thesis, professional communication is an integral part of communication with hearing impaired individuals. Therefore, problems existing in communication raise the need to improve it to a good quality level. Adequate communication and elements of good teaching material are brought together at the end to form a product, which is a guide for nursing students. In figure 2, we demonstrate how our theoretical starting points are linked together. In the end of the flow chart, there is our ultimate goal, enhanced communication skills, which we hope to achieve by creating the guide.

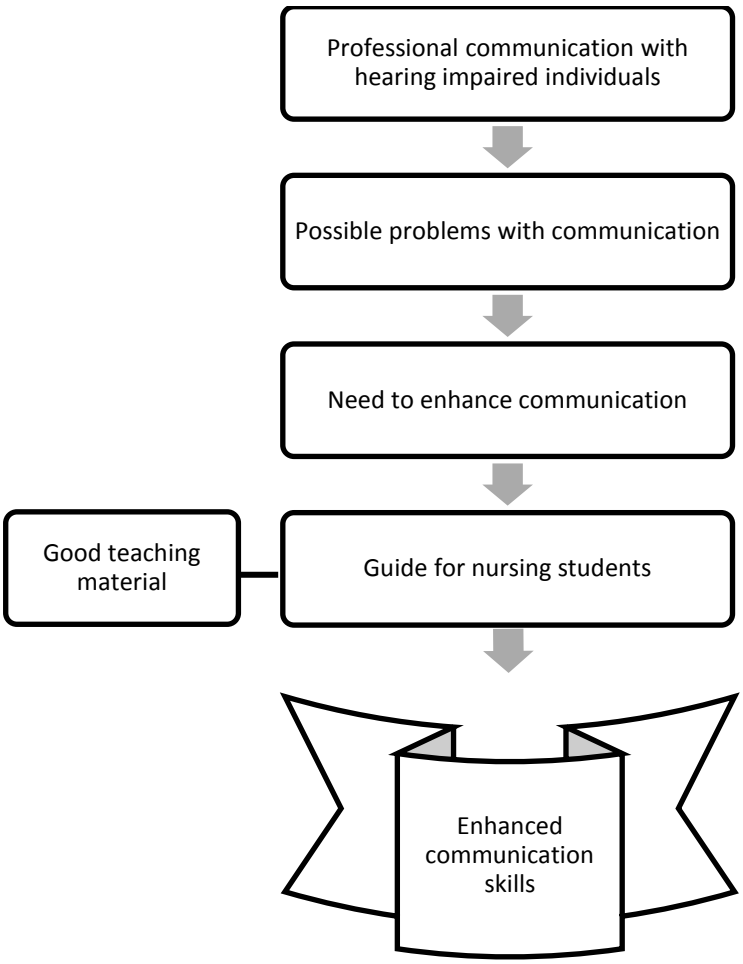


FIGURE 2. Summary of theoretical starting points

4 METHODOLOGY

In this section, we describe the process of creating a Bachelor's thesis. Writing itself is only a part of it, since planning and thorough information search must be done before that. The last part of the project is to form an electronic guide based on the information gathered during the process.

4.1 Beginning of the Bachelor's thesis process

The first step in a Bachelor's thesis process is to select a topic that is interesting and motivating (Vilkka & Airaksinen 2003, 23). From the beginning, we had the idea of creating a study material for the nursing students, and TAMK had a need for material that takes into account the needs of disabled people. We thought that hearing impaired people are one patient group that nursing students will meet already in their first practice, and noticed that more education would be beneficial in order to enhance communication with them. This is how Tampere University of Applied Sciences became our working life connection.

The next step in the process is to create an action plan. The purpose of it is to clarify the topic for the authors more, and plan how to proceed with the idea. It is important to find a fresh view on the subject and create something new in the field. Already at this point, it is necessary to consider what kind of information is needed and how to gather it. Making a working schedule is also a part of the plan. (Vilkka & Airaksinen 2003, 27.) In order to create the plan, we started the information search in autumn 2013. Our five-page plan was done according to the guidelines we received from the university. In the plan, we stated that our thesis will be a functional thesis with a product. We also defined our target group, purpose and goal for the thesis and created three research questions. The plan was accepted in the end of January and after that we applied a permission for our study from TAMK.

Functional thesis can be anything from a written instruction to organising an event. Its purpose is to guide, rationalise and organise actions inside the specific field it is created for. (Vilkka & Airaksinen 2003, 9.) It consists of the reporting part and the product. The

reporting part of the thesis explains what has been done and why, how the authors have proceeded, and what has been found. The product then conveys the needed information to the target group. (Vilkka & Airaksinen 2003, 65.) In our Bachelor's thesis, the theoretical starting points form the reporting part of the thesis. The product is a guide for nursing students to direct their actions with hearing impaired patients.

4.2 Process of literature review

Good theoretical background and investigation is shown to be a helpful tool in a functional thesis process (Vilkka & Airaksinen 2003, 41-43). For our information search, we used the steps suggested by Polit and Tatano Beck (2008, 107-117) as a basis. The first step in the literature review process is to formulate research questions that guide the information search. The next step is to create a search strategy, and then begin to investigate what kind of information is available about the subject. (Polit & Tatano Beck 2008, 108.)

We aimed our information search to answer our research questions and created different kinds of key words to be used in searching. We used the following keywords: hearing impairment, deaf, deafness, communication, nurse-patient relationship, nursing, student, teaching, teaching material, guiding, and booklet. These words were used alone and in different combinations.

We used databases suggested in Polit & Tatano Beck (2008, 111-114), such as CINAHL and PUBMED, but also databases EBSCO HOST and Terveysportti. We also used books found in the library of Tampere University of Applied Sciences, and e-books found in EBRARY and eBook Collection. Recent information from the websites of trustworthy organisations was utilised too. The web pages of World Health Organization and Kuuloliitto ry were used the most.

We targeted our search by adding limitations to it when it was possible. Only peer-reviewed, full text articles from years 2000-2014 were accepted. These conditions also acted as our exclusion criteria. The reason for choosing only peer-reviewed articles was that their credibility is considered high, since they are reviewed by several experts (Polit

& Tatano Beck 2008, 706). Year limitations were set because it is reasonable to use the newest information possible to retain the reliability of our research (Vilkka & Airaksinen 2003, 72-73). However, we decided to include also Hall's (1968) research article despite of its publication year. The reason to do so was that in the article Hall created the idea of personal space, which was used in our thesis.

Further evaluation of the articles was based on their abstracts. We decided to include only the articles that discussed either ways to communicate with hearing impaired or deaf people, or articles that presented problems they face in health care services. The others were discarded. On the other hand, reading source materials led our investigation to new tracks too. This is called an ancestry approach, which means that references from relevant study can be used to find some earlier studies related to the subject (Polit & Tatano Beck 2008, 108-110).

We decided to also use some books as a reference. One of the most utilised ones is written by Jauhiainen (2007), docent of audiology. The other one is the book by Hill and Cox (2010), senior lecturer and professor of nursing. In the book, they reference several articles, which they have found trustworthy.

One of the final steps in a literature review process is to criticise the studies found (Polit & Tatano Beck 2008, 108). Our critique was based on Vilkka and Airaksinen's (2003, 72-73) suggestions. Publication year, quality and credibility of the articles and the author's expertise are factors that should be assessed when selecting trustworthy articles. The way the article is written can also give an indication if it is trustworthy or not. Selecting as recent material as is available is recommended. (Vilkka & Airaksinen 2003, 72-73.)

4.3 Creating the product

After gathering information needed to write the theoretical starting points, we started to plan the product. At first, we had to consider the qualities of good teaching material and based on them, we started to plan what to include in the guide. In the end, we decided to include some basic information about hearing impairment and how it affects a person's

life. In addition, some basics about communication with a patient are discussed, and in the end there is a checklist that presents all the important things that need to be taken into account when interacting with hearing impaired patients. For further information, we included some useful and trustworthy Internet links.

In the beginning of the process, we were thinking to create the guide in booklet form to be printed out, but we decided to discard the idea. This is because we came to the conclusion that an electronic PDF file is likely to be more utilised by the students. Still printing the guide is possible for those who prefer reading from a paper.

Because we wanted our product to be appealing for the students, we paid attention to the appearance. We chose a clear font type, and made it big enough so that it is easy to read. To add some interesting detail, we decided to take a photograph that presents our topic.

After we finished the guide in Microsoft Word format, we converted it to PDF format, so that it is easier to read from the computer screen. Because the product is in electronic form, it can be updated if needed.

5 DISCUSSION

Ethical considerations, trustworthiness, and limitations are issues that need to be addressed when writing a Bachelor's thesis. This way the whole thesis gains more trustworthiness. Part of the process is also to point out where more research is needed and write recommendations for future studies. Reflection of the whole Bachelor's thesis process is necessary too. These issues are covered in the discussion section of the thesis.

5.1 Ethical considerations

The Ethical Guidelines of Nursing form the base for good nurse-patient relationship and communication (Sairaanhoitajaliitto / The Finnish Nurses Association 1996). Because our Bachelor's thesis focuses on these issues, ethics has to be present through the research process. This way we make sure that the students that read the guide receive ethical and trustworthy information.

Several local and national regulations guide research ethics. Their purpose is to ensure that research is conducted with respect towards ethics, and at the same time reliable research and results are accomplished. In general, research ethics is all about how to make ethically acceptable and reliable research. (Leino-Kilpi & Välimäki 2014, 363.)

In Finland, Finnish Advisory Board on Research Integrity (2014) has given guidelines to bring ethics to the research process. Integrity, meticulousness, and accuracy are values that guide the research process. This means that an ethical way of conducting research is present from the start, through the information search process, until reporting and presenting results. (Finnish Advisory Board on Research Integrity 2014.) Throughout the thesis process, we have followed these values.

Applying needed permissions is part of research ethics too (Finnish Advisory Board on Research Integrity 2014). This is why we applied a permission for our study from TAMK in the beginning of the process. We also wanted to make our text of the anatomy of the ear even more understandable, so we decided to add a picture to this part of the

thesis. In order to do this, we applied for a permission from Cochlear Limited (2013), and after that we modified the picture to be informative for the readers.

Accuracy in referencing others research is important, in order to give the credit to the person who has originally done the work. This is part of good scientific practice too. (Finnish Advisory Board on Research Integrity 2014.) In this thesis, we have followed TAMK's guidelines when marking the references.

Financial sources and possible conflicts of interests have to be clearly stated when research is published. This is important in order to meet good scientific practice principles. (Finnish Advisory Board on Research Integrity 2014.) In this thesis, all the expenses are covered by the authors and no conflict of interests is present.

5.2 Trustworthiness

Even though every study aims at avoiding mistakes and ending up obtaining reliable results, problems with trustworthiness may still exist. Thus, it is important to evaluate the research process thoroughly. (Hirsjärvi, Remes & Sajavaara 2009, 231.)

Reliability as a term means the accuracy and stability of the study. It also considers how reliably the research method measures the subject studied, how repeatable the study is, and how non-random the results are. In order for a study to be considered reliable, it should be possible to repeat it and still end up having the same results. (Hirsjärvi et al. 2009, 231.) Validity, in turn, means the competence of research. It considers how well the research methods apply to the studied subject; in other words, whether the study actually investigates what it was supposed to investigate. (Hiltunen 2009.) Both of the concepts should be evaluated, taking also into consideration credibility, which is the confidence in the truth when it comes to research data (Polit & Tatano Beck 2008, 751).

Our Bachelor's thesis is a functional thesis and it is based on literature review. This means that we have done our study based on existing research articles and other literature, instead of conducting a new study by ourselves. Therefore, being precise

about the information used as well as appreciating it and other researchers has been in an important role in our study process.

In the beginning, the Bachelor's thesis was planned carefully in order to find the suitable research methods and structures for the study. We designed three research questions and aimed at answering them, which eventually happened while conducting the literature review. Thus, we were studying what we planned to study, which supports the validity.

Throughout the information search process, a careful consideration of the data and the decided inclusion criteria was employed. We strived to use as valid and recent information as possible, favouring peer reviewed research articles, material written by experts of a certain field and web pages of trustworthy foundations. The results we found from different sources support each other and were presented truthfully in our Bachelor's thesis. This increases the reliability of our study. Plagiarism was avoided, since it is not only ethically wrong but also illegal (Hirsjärvi et al. 2009, 122). In fact, strict research ethics has been present throughout the whole Bachelor's thesis project, since it is an important part of every study.

Finally, the results of our Bachelor's thesis were presented truthfully, avoiding misleading and without modifying them. The references, which all are considered trustworthy, were carefully marked down to enhance the credibility, but also the reliability of our study.

5.3 Limitations

As all research projects, also this Bachelor's thesis has some limitations in it. First of all, neither of the authors is a professional when it comes to interaction with hearing impaired individuals. Another limitation is that we were unable to find a study conducted in Finland that answers our research questions. It would have revealed if there were some specific problems that hearing impaired patients face in Finnish health care system. On the other hand, we believe that issues presented in this thesis are universal.

Finally, even though the articles we used were critically evaluated before using them as a reference, all of them had also limitations in them. This naturally affects our work too.

5.4 Recommendations

In the future, a study focusing on problems that hearing impaired individuals face in health care settings in Finland would be beneficial. In addition, new ways to improve interaction between the nurse and hearing impaired individuals would benefit the nursing field.

5.5 Progress in Bachelor's thesis process

This Bachelor's thesis was done as a pair work. We decided to share some of the work load, and thus some of the sections were written individually, whereas others were written together. We had meetings regularly, in which we went through the individually written texts and modified them. Google Drive and e-mail were utilised in the writing process to keep both of the authors up to date all the time. In the end, the timetable presented in the plan of Bachelor's thesis held well, which enabled us to have time for writing and corrections.

During the process, we also had regular meetings with the representative of our working life connection. In those meetings, we received support and guidelines for what to include in and exclude from the thesis. Minutes of meetings were handed for all the participants in order to have common agreements for the thesis process in written form.

Peer support was in an important role in the Bachelor's thesis process. We had thesis seminars at the university, in which the group, as well as opponents and teachers, gave us feedback for our work. Help and tips for the problematic situations in the thesis process were available there too.

All in all, we found the Bachelor's thesis process successful and useful for our learning experience. The individual goals and timetables we set for the process were met. We also succeeded to answer our research questions and managed to create the product as planned.

In the beginning we decided an objective, which was to help nursing students to meet hearing impaired patients in an appropriate manner. It is hard to say whether our objective will become fulfilled, but at least we believe that our thesis has all the necessary conditions to do so. If the objective is reached with the nursing students at TAMK, the study has been beneficial for the nursing field.

6 CONCLUSION

This Bachelor’s thesis process has been conducted in order to give nursing students some preparedness to meet hearing impaired individuals in health care settings. The process has taken over one year, and resulted in the end as an informative guide. This thesis benefits not only the nursing students, but also patients in the long run when the practises that we have identified during the process are applied into the everyday practise in the nursing field.

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