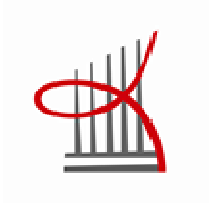

PREPARATION FOR COLONOSCOPY – INSTRUCTIONS FOR NON-FINNISH SPEAKING PATIENT

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ABSTRACT

Tampereen ammattikorkeakoulu
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KEISALA, JEREMIA & HEIKKILÄ, YANA:
Preparation for Colonoscopy – Instructions for Non-Finnish Speaking Patient

Bachelor's thesis 35 pages, appendices 2 pages
October 2014

The purpose of this Bachelor's thesis is to produce patient instructions for non-Finnish speaking patients who are undergoing colonoscopy. The instructions are done for medical ward B4 at Hatanpää hospital in Tampere. The instructions explain the colonoscopy procedure, why it is done, and what kind of preparations the patient has to consider before the examination.

This thesis is a functional thesis including a product and a literature review. It is based on research information which is gathered from reliable sources such as peer-reviewed articles from CINAHL, EBSCO e-books, MELINDA, Duodecim, and books related to the topic. The theoretical framework consists of two main concepts: colonoscopy and patient education. The product of the thesis is the written patient instructions, which are based on the results of the literature review and the interview with a professional nurse in B4 ward.

It would be valuable for further research to make patient instructions in English also for a gastroscopy procedure. Besides the mentioned language, there is also a need for patient instructions in other languages as well, such as Russian or Arabic.

Key words: colonoscopy, colonoscopy examination, colonoscopy procedure, patient, patient education, patient counseling, written instructions, written material, patient-nurse relationship.

TIIVISTELMÄ

Tampereen ammattikorkeakoulu
Hoitotyön koulutusohjelma
Sisätauti-kirurginen suuntautumisvaihtoehto

KEISALA, JEREMIA & HEIKKILÄ, YANA:
Valmistautuminen paksusuolen tähystykseen – Ohje potilaille, jotka eivät puhu suomea

Opinnäytetyö 35 sivua, joista liitteitä 2 sivua
Lokakuu 2014

Tämän opinnäytetyön tarkoitus on tuottaa potilasohje potilaille jotka eivät puhu suomea ja ovat valmistautumassa paksusuolen tähystykseen. Ohje tehdään Hatanpään sairaalan sisätautien osastolle B4. Potilasohje kertoo potilaalle mikä paksusuolen tähystys on, miksi se tehdään ja kuinka potilaan täytyy valmistautua siihen.

Tämä on toiminnallinen opinnäytetyö sisältäen tuotoksen ja kirjallisuuskatsauksen. Työn sisältö perustuu tutkittuun tietoon, jota on kerätty luotettavista lähteistä kuten CINAHL-, EBSCO e-books-, MELINDA-, Duodecim- tietokantojen artikkeleista ja aiheeseen liittyvistä kirjoista. Teoria koostuu kahdesta pääkäsitteestä, jotka ovat paksusuolen tähystys ja potilasohjaus. Potilasohje on tehty kirjallisuuskatsauksen ja asiantuntijahaastattelun tietojen perusteella.

Lisätutkimuksia ajatellen olisi hyvä tehdä potilasohje myös mahalaukun tähystyksestä. Englanninkielen lisäksi olisi tarvetta tehdä potilasohjeita myös esimerkiksi venäjän ja arabian kielellä.

Asiasanat: paksusuolen tähystys, kolonoskopia tutkimus, potilas, potilasohjaus, kirjalliset ohjeet, kirjallinen materiaali, potilas-hoitaja suhteet

TABLE OF CONTENTS

1 INTRODUCTION

Finland is a well-developed Nordic country with a stable economy. For the past 20 years, the country has been introduced to active immigration unseen in its history before. During the last ten years, the number of immigrants has almost doubled, reaching close to 200,000 people (Migration Department 2012, 1). At the moment, the number of people choosing Finland as their second home continues to grow (Ministry of the Interior 2013, 1). Appendix 1.1 demonstrates the growing population tendency in Finland. Therefore, the demand for services in other languages has been rising in the country steadily. The main need has been for English services, but there is a rising demand for other languages as well, for example Russian (Migration Department 2012, 1).

In the healthcare field, nurses find it challenging to communicate and instruct patients who are not native speakers of Finnish. Problems rise especially in cases where the nurses must give precise information about a certain procedure, such as colonoscopy. (Tulijoki, 2014.)

In Hatanpää hospital, colonoscopy is performed daily and it is considered a common procedure (The city of Tampere, 2014). It is a sensitive and intimate medical procedure, and therefore nurses have a major role in the patient's instruction and education (Jones et al. 2004, 54).

Emotional support is crucial when caring for patients undergoing colonoscopy. For example, according to Jones et al. (2004, 54) and Munoz Sastre et al. (2006, 119), patients, especially females, can experience a moderate amount of anxiety about interventional procedures and previous painful experiences seem to increase the fear of them. It becomes even harder when there is a language barrier between the health care professional and the patient. In such situations, the hospital must provide educational material about the procedure and needed instructions (Hammar 2011, 9). Nurses play a major role in patient education and they require cognitive, psychomotoric, social, moral, and personal skills (Bastable 2013, 71).

The topic for this thesis, “Preparation for colonoscopy – instructions for non-Finnish speaking patient”, was suggested by the nurses from ward B4 in Hatanpää hospital because of the need of English written material about colonoscopy preparation for the non-Finnish speaking patients.

2 PURPOSE, TASK AND ULTIMATE GOAL

The purpose of this thesis is to create written instructions for non-Finnish speaking patients who are preparing for colonoscopy.

The task of this thesis is to answer the following research questions:

- What are the key points nurses have to consider when counselling a patient who is undertaking a colonoscopy?
- What are the major points in patient education?
- What is a good written patient instruction like?

The ultimate goal is to improve medical care for patients undergoing colonoscopy by creating a clear material which contains written instructions in English language. The material is beneficial for both the patient and the nurse. (Tulijoki 2014.)

3 THEORETICAL STARTING POINTS

There are two main concepts in this thesis. The first one includes information about colonoscopy and its importance. The second one concentrates on patient education. Under the topic of colonoscopy, there are explanations about the procedure, its importance, contraindications, pain assessment, and the required preparation for examination. Under the patient education topic, there are definitions about factors affecting patient education and how to improve it.

Two main areas were chosen for creating written material for the patient. In order to analyse the colonoscopy examination, accurate information should be gathered about the medical procedure. The main task of the patient education part of this thesis is to answer the research questions: “What are the major points in patient education?” and “What is a good written patient instruction like?”. The main concepts will be explained in the following sections.

3.1 Colonoscopy

Colonoscopy is a relatively new examination. A flexible colonoscope has been developed in Japan nearly fifty years ago by Matsunaga and Hirosaki. (Messmann 2005, 11.) Nowadays yearly in the USA alone, over fifteen million colonoscopies are conducted. Those numbers are mirrored in other nations as well. (Waye 2013, 10.)

In 2011, colon cancer was the third most common cancer among Finnish men and the second most common among Finnish women (Finnish Cancer Registry 2013). According to the research done by Zauber et al. (2012, 687), colonoscopy helps to decrease the number of deaths. The results of the study suggest that colonoscopy and the removal of polyps reduced colorectal cancer-related deaths by 53 percent (Zauber et al. 2012, 687).

3.1.1 Examination and its importance

Optical colonoscopy is the most important method for examining the diseases of the colon, although the technologies of virtual colonoscopy and so-called capsule colonoscopy have lately improved (Ylinen 2010, 16). The increased incidence of colon cancers increases the need of colonoscopies (Ristikankare 2006, 1094-1098).

Nowadays, colonoscopy has become a routine procedure (Tulijoki 2014; The City of Tampere, 2014). Colonoscopy is an examination which uses a flexible fiber-optic video endoscope to enable the visual examination of the intestine (McCann 2003, 511). The whole large intestine as well as the distal part of the small intestine can be examined (Ylinen 2010, 16). The same procedure also allows therapeutic procedures to be done. For example, the removal of polyps, sample taking, the coagulation of bleeding, and the removal of a foreign item from the bowel are possible. (Färkkilä, Isoniemi, Kaukinen, & Puolakkainen 2013, 451.)

In addition to these procedures, colonoscopy has other indications as well. Table 1 has a summary of the most common indications for examination.

Table 1. Indications for examination (Cotton, Williams & Messmann 2005, 12)

- Diarrhea
- Abdominal pain
- Bleeding per rectum, unexplained anemia, weight loss
- Constipation
- Postpolypectomy surveillance
- Prevention/aftercare colorectal carcinoma
- Pathological thickening of the colon wall detected be other imaging procedure
- Primary tumor search with metastasizing malignancy, if resulting therapeutic measures

In addition, colonoscopy is used as a diagnostic examination, for example in unclear iron deficiency anaemia, chronic diarrhoea or inflammatory bowel disease. For patients who have had adenoma polyp, chronic colitis, or operated colon cancer, colonoscopy is prescribed as a follow-up examination. Besides, the procedure is used as a screening examination for colon cancer. (Pikkarainen, Karvonen & Kunnamo 2002, 121.) In Europe alone, colorectal cancer (CRC) is the second most frequent malignant disease. Yearly, over 412 000 people are diagnosed with the condition. In the past few years within European Union, colonoscopy has been introduced as a screening method for colorectal cancer. (Zavoral 2009, 7.)

3.1.2 Contraindications and risk factors in colonoscopy

It is possible to divide contraindications into two groups: absolute and relative. The first one would include toxic megacolon, fulminant colitis, colonic perforation, and a situation where the patient cannot cooperate or refuses from the procedure. The relative contraindications group (table 2) consists of the risk of perforation, vascular necrosis, or resent colonic surgery. In some cases, pregnancy is associated as a risk factor for colonoscopy procedure. (Messmann 2009, 2; Waye 2013, 28.) According to Waye (2013, 28), the risk to the fetus is the highest during the first and third trimesters. However the procedure could be performed as long as benefits outweigh the risks (Waye 2013, 29).

The patient’s overall condition is always assessed by a medical practitioner in order to determine whether he/she could tolerate a physical preparation for colonoscopy. Possible conscious sedation is also included in the assessing process. (Messmann 2009, 2; Waye 2013, 3.)

Table 2. Contraindications for colonoscopy (Messmann 2005, 17).

- Perforated intestine
- Acute diverticulitis
- Deep ulcerations
- Severe ischemic necrosis
- Fulminant colitis
- Cardiopulmonary decompensation

The patient should always be informed by a medical practitioner about possible risk factors and contraindications associated with colonoscopy. However, it is highly important to underline the meaning, importance, safety, and effectiveness of the examination. (Waye 2013, 17.)

3.1.3 Pain assessment during colonoscopy

Macmillan English Dictionary defines the word pain as "highly unpleasant physical sensation" (2007, 1021). This work concentrates on the physical aspect of pain. However, the patient's own fears, anxiety, and predispositions towards the examination might increase the level of physical pain (Pohjala et al. 2007, 224).

Colonoscopy might be an embarrassing and painful examination. For some patients, the induction phase, when the scope is inserted and the bowel is filled with air, could be considered painful. (Cotton & Williams 2003, 56.) The procedure is a sensitive and intimate medical practice (Jones et al. 2004, 147). Patients, especially females, can experience a moderate amount of anxiety about interventional procedures, and previous painful experiences seem to increase fear towards them (Jones et al. 2004, 148; Munoz Sastre et al. 2006, 93). It is important to create a trustful patient-nurse relationship. For instance, the promotion of psychological comfort and relaxation has a positive effect on building it. (de Jong et al. 2007, 149.)

Noticeably, the procedure is better tolerated by older adults rather than young. Technically, it is more demanding to perform the examination to a female patient due to

the tendency of having a longer colon. It could be considered a predisposition for the colonoscope to make painful loops. (Froehlich 2003, 166; Takatashi et. al. 2005, 1295.) To reduce the number of loops, feelings of discomfort, and pain are the essential techniques in performing a successful examination (Waye 2004, 101; Benjamin 2007, 34).

As a nurse, in order to find out the patient's pain and discomfort levels, pain scales could be used. The health practitioner's assessment is based on the patient's own experience and tolerance of pain. (Tulijoki, 2014.) Visual Analogue Scale (VAS), Verbal Rating Scale (VRS), Numerical Pain Scale (NPS), or Numeral Rating Scale (NRS) can be used as a tool in assessing the patient's pain level. (Bijur 2001, 1154; Johnson 2005, 43; Skovlund et al. 2005, 293; Pesonen et al. 2008, 268.) In Appendix 1.2, all scales mentioned above are presented.

3.1.4 Patient preparation for colonoscopy

Before the examination, a patient should be informed by a health care professional about the procedure and possible complications, such as perforation (Messmann 2005, 36). Correct bowel preparation for the examination plays a vital role in a successful colonoscopy. The patient has to follow a certain diet before the procedure. (Tulijoki, 2014.) Although instructions differ between medical units, all of them have the same main goal: to empty the intestine in a correct way. A common method for emptying the bowel is to drink polyethylene glycol-electrolyte solution until the intestinal fluid is clear one day before the procedure. The amount to drink is usually 3-4 litres. An alternative method is two days liquid fasting and using an enema 1-2 hours before the procedure. Before the examination, the patient's diet should not include seeds of fruits or berries in order to avoid blocking the scope or its view. In addition, dairy products such as milk or cream should be avoided. (Pikkarainen et al. 2002, 119; Färkkilä et al. 2013, 451.)

Before the examination, it is important to take into account the patient's medications. According to Tulijoki (2014), a common practice is that the patient has to stop taking iron medication one week prior to the procedure. This medication may have an effect on

the results of colonoscopy by discolouring the intestine. Furthermore, taking an anticoagulant medicine, such as Marevan, should also be stopped two days before the procedure in order to minimise the risk of bleeding. The patient is asked to bring all his/her medicine prescriptions when coming to the ward in order to ensure that all medications are safe to use before the examination. (Tulijoki 2014.) In order to summarise the information, table 3 presents the knowledge in a structural way.

Table 3. Bowel preparation for colonoscopy (Pikkarainen et al. 2002, 119; Messmann 2005, 37; Färkkilä et al. 2013, 451)

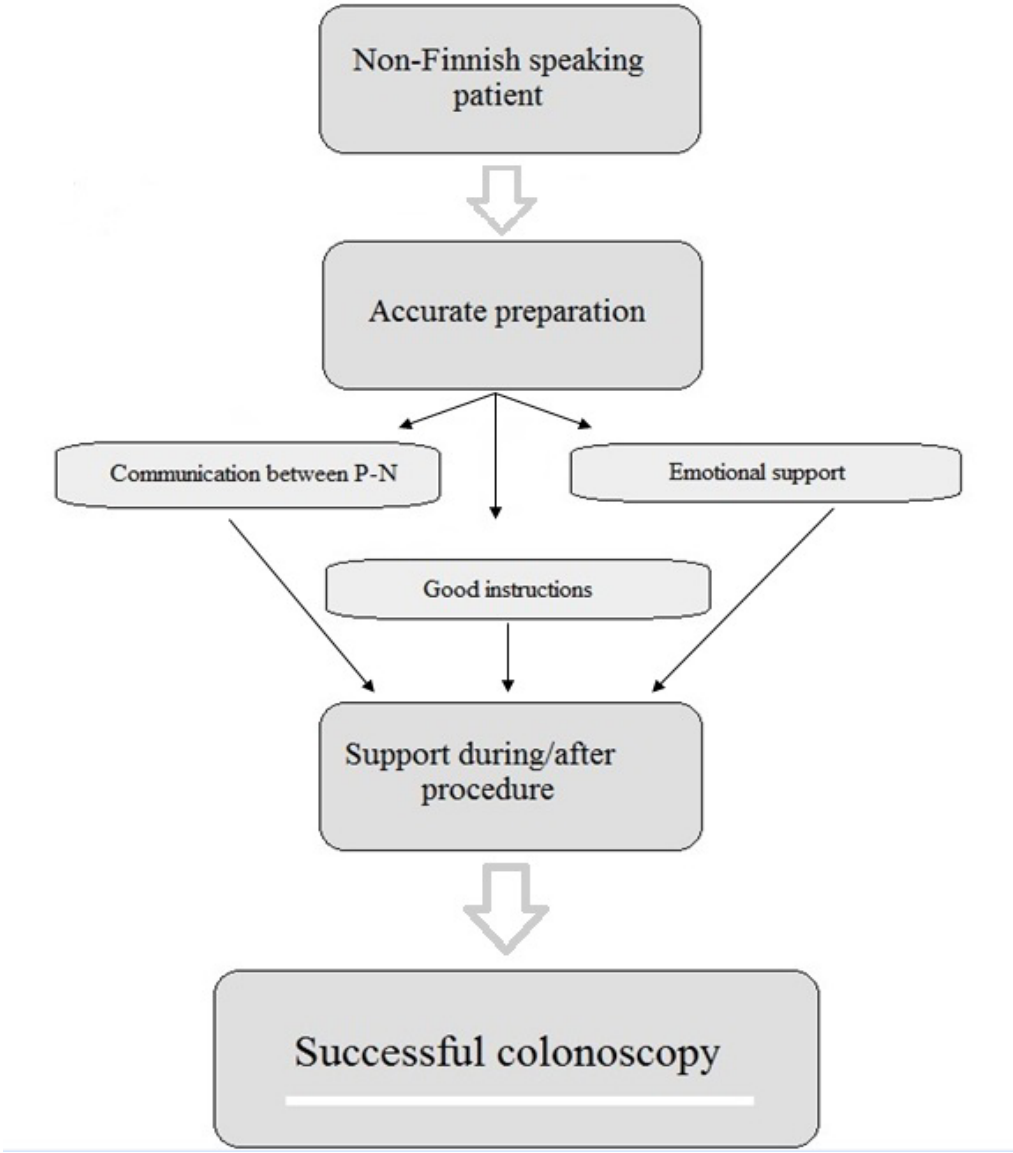
Bowel preparation for colonoscopy		
Type	Preparation	Comments
Diet	1) Iron supplements must be stopped until after the procedure 2) From one day and up to a few hours prior to the procedure, consume clear liquids only 3) Avoid dairy products such a milk or cream 4) A few days before the preparation, avoid eating food which contains seeds, seeds of fruits and berries, nuts, skins, and any other insoluble fiber	Those recommendations may vary depending on the health care unit recommendations and the patient's health condition
Polyethylene glycol-electrolyte solution	1) The electrolyte-balance solution 2) The amount to drink is 3 to 4 litres of the solution 3) The patient should consume enough solution until the intestine fluid is clear 4) Depending on the time of examination, drinking the solution could be divided into 2 portions: consuming 3 litres of the solution the night before colonoscopy and 1 litre the next morning	The salty solution pushes a large amount of liquids through the bowel pushing out the waste as well. The brand name of the solution may vary depending on the health care unit.
Enemas	1) Restricted diet 2) Two days liquid fasting and using an enema 1-2 hours before the procedure	Alternative method

3.1.5 Nurse's role in colonoscopy

As already mentioned before, nurses play a vital part in the patient education process (Lipponen 2006, 22-24; Kääriäinen & Kyngäs 2006, 6). The colonoscopy procedure has risks as it was previously discussed in section 3.1.2. Therefore, patient education is crucial and can be seen as part of the examination. (Messmann 2009, 2; Waye 2013, 28.)

The nurse is prepared to provide necessary information and educate the patient before, during and after the procedure. The examination has to comprise the major parts of preparation, instruction and observation. A successful colonoscopy depends on the doctor's skills and nurses' readiness to provide the support for the patient throughout the process (Waye 2004, 101; Benjamin 2007, 34). Based on the gathered information about colonoscopy, a summary of the knowledge is presented in figure 1. It visually clarifies the main parts in successful colonoscopy: instruction, preparation and observation.

Figure 1. The patient's pathway in the colonoscopy procedure
* The abbreviation *P-N* in the chart means *patient – nurse*.



Each of the blocks of the chart plays an important role in performing a successful procedure. By removing or skipping one part, for example *communication between patient and nurse* or *support during the procedure* would have an effect on the patient's experience and the outcome of the procedure. (Fitzpatrick and Hyde 2006, 674; Kääriäinen and Kyngäs 2006, 7; Mattila et al. 2010, 735.)

3.2 Patient education

The patient education process has been regulated by law. The Act on the Status and Rights of Patients (785/1992) state that the patient has the right to receive information

of his or her health status, alternatives of the care, and reasons for the care. Health care professionals are obliged to give this information in a way that the patient comprehends it. The patient has a right for an interpreter if he/she and the caregiver do not share the same language. Besides language, the patient's individual needs and culture must be taken into consideration during the medical care. (Act on the Status and Rights of Patients 1992/785.)

Patient education is described as a step by step process. Nurses play a vital role in ensuring that the process succeeds. The education is based on the patients' individual needs, assessments, diagnoses, and the evaluation of their condition. Patient education plays a vital role in a health care process. It provides information about the health status and the needs which this status creates. (Balestra 2013, 8.) According to Sonninen, Kinnunen and Pietilä (2006, 20), good patient education is a part of high-quality care and it improves the patients' commitment to their self-care. Further, Balestra (2013, 8) states that nurse practitioners have an important role in helping patients to understand their illness. Uncertainty about the disease brings anxiety and fear. The more patient knows about his/her illness, the easier it is to live with it. (Finnish Heart Association 2014.) Thereby, patient education is an essential part of patient care and nursing. In order to promote the patients' and their close ones' wellbeing, counselling should be provided in a correct way (Kääriäinen & Kyngäs, 2006, 6).

The term patient education has been used a great deal in nursing science. However, its use and meaning is unclear (Kääriäinen & Kyngäs, 2006, 6-7). Patient education has many synonyms which have been used in nursing science. There are terms such as education, counselling, teaching, and giving information. It is difficult to distinguish these terms from each other. Kääriäinen and Kyngäs (2006, 6-7) explain differences between these concepts. Patient education is active and goal-oriented action in which the patient and the nurse together are clarifying the patient's situation. It helps the patient to create his/her own line of action to solve the problem. Teaching is a system of planned actions which influences the patient's behaviour, whereas counselling means that the nurse gives advice and helps the patient make choices. Giving information includes less interaction between the patient and the nurse, but more use of written material comparing to education and counselling. (Kääriäinen & Kyngäs 2006, 6-7.) In this thesis, the terms patient education and patient counselling are used as synonyms.

3.2.1 Factors affecting patient education

According to Kääriäinen and Kyngäs (2006, 7), patient education is based on the nurse's and patient's background. Background factors are divided into physical and mental features and social and environmental factors. Physical factors, such as age, gender and education, have an effect on the nurse's attitude toward patient education. Fitzpatrick and Hyde (2006, 674) also state that the quality of patient education is highly influenced by the nurse's knowledge and experience. According to their study, experienced nurses have more confidence to engage in education and also give patients a chance to ask questions (Fitzpatrick and Hyde 2006, 674).

In addition, the patient's counselling needs and the ability to receive information is affected by the nature and duration of the disease. The nurse has to take into account the patient's mental factors as well. The patient's motivation towards receiving counselling is important. The nurse has to find out how to motivate the patient towards his/her own care. In addition, the nurse's attitude and willingness to support the patient's motivation is essential for successful patient education. Furthermore, the patient's beliefs and previous experiences affect patient education. (Kääriäinen & Kyngäs 2006, 8.) As social factors, Kääriäinen and Kyngäs name both the patient's and nurse's culture, language, religion, and ethical understanding. Besides them, the patient's and nurse's values influence their approach on issues to be discussed in the educational process. It is also important to clarify the patient's relationship with his or her relatives and find out if the patient wants his or her relatives to be counselled as well. (Kääriäinen & Kyngäs 2006, 8.)

Besides other background factors, Kääriäinen and Kyngäs (2006, 8-9) mention environmental issues. The environment in which education takes place has to be peaceful in order to ensure the participants' concentration on the issue. Any distraction or object in a counselling situation can harm the process. If the environment raises negative feelings in the patient, he or she may also experience the received patient education negatively. (Kääriäinen & Kyngäs 2006, 8.)

According to Kääriäinen and Kyngäs (2006, 8), patient education requires two-way interaction in order to take into consideration both the nurse's and patient's background

factors. It is not only monologue by the nurse but the patient is listened to, encouraged to tell about his or her reasons and motivations and give feedback as well (Kääriäinen and Kyngäs 2006, 8). Mattila et al. (2010, 734) add that the nurse must give both informational and emotional support to the patient. It is important to provide the support and counselling for each patient's individual needs and life situation. In order to do that, it is required to clarify the patient's background factors by two-way interaction (Mattila et al. 2010, 734).

Two-way interaction enables a trustworthy relationship between the nurse and the patient in which they set goals and plan care together. It requires that both participants respect each other's expertise and opinions. The patient is always the expert of his or her own life and the nurse is the expert in the education process and interaction. Furthermore, two-way interaction requires that both the nurse and the patient are actively participating. Even though the nurse is the expert of patient education and nursing, the patient has to be motivated to take care of his or her own action. The nurse's role is to encourage the patient to take responsibility. (Kääriäinen & Kyngäs 2006, 8-9.)

3.2.2 Improving patient education

Sonninen, Kinnunen and Pietilä (2006, 18) state that patients need a holistic education in which their life situation is also taken into consideration. The given information about the disease is often highlighted. However, Sonninen et al. (2006, 18) write that more attention should be paid to deal with the patient's resources, individual needs and concerns, which the disease raises. New health policy guidelines also stress that more attention should be paid on the individual's self-care, lifecontrol and health promotion. (Sonninen et al. 2006, 18.) In addition, Mattila et al. (2010, 734) stress the importance of emotional support. Without a doubt, providing information has an essential meaning, but patients also expect to receive empathy and caring from nurses and that they are listened to (Mattila et al. 2010, 735).

When patients face a new disease, it changes their life and they need support with lifecontrol. Sonninen at al. (2006, 18-20) studied what kind of opinions a particular

patient group had about the ways of improving patient education which supports the patients' lifecontrol. According to the results, patients wish to receive education consisting of information which supports their daily living, encouraging counselling, and individual counselling. (Sonninen, 2006, 19-20.) Mattila et al. (2010, 734-735) also state that the patients' informational needs are most often met but they expect more support, understanding and encouraging from the health professionals.

Information which supports daily living includes knowledge about the disease, what it causes, what the symptoms are, what kind of care is available, and what the prognosis is. It should also include information about how to seek treatment and how the disease affects the daily living. (Sonninen et al. 2006, 19.) Sonninen et al. also write that this kind of patient education helps patients to control their disease and cope with it in daily life. Naturally, patients want to discuss other topics besides the disease. In order to motivate and promote counselling, a discussion about the patient's coping methods and treatment options can be used. Furthermore, the nurse can encourage the patient by promoting hope and clarifying the factors that help the patient cope with the disease, such as family, hobbies, friends, and peer support. (Sonninen et al. 2006, 19-20.)

Most of the patients want individual, personal counselling. They hope that nurses have empathy and the ability to recognise their individual needs. Even though the nurse has a professional role, the patient and the nurse are equal in an educational situation. When talking about the patient's personal issues, the nurse should be truly interested about his or her concerns and the discussion should take place confidentially between the participants. However, often the patients' issues are discussed in a common room and open spaces. Therefore, it affects the patient's ability to explain private issues and concerns. (Sonninen 2006, 20; Mattila et al. 2010, 734-735.)

According to Sonninen et al. (2006, 20), before developing patient education, an understanding should be gained that education is a part of the patients' care. In addition to that, nurses have to improve their educational skills and attitude towards education. Nurses have to estimate the patient's ability to receive information and act according to that. The basis of well-organised and prepared patient education is a confidential and equal relationship between the patient and the nurse. When that relationship is created, the patient has courage to bring up his or her concerns and questions. (Sonninen et al.

2006, 20.) Mattila et al. (2010, 735) state that each patient should have an “appointed nurse”, who would be in charge of the continuity of care during the shift. This way, both sides would benefit from creating individual relationships (Mattila et al. (2010, 735).

However, creating trustful relationships with patients may be challenging for nurses. Lipponen (2006, 23) states that due to the nurses’ considerable workload, they have less time for a proper educational process. In addition, Friberg, Granum and Bergh (2012, 180) write that counselling is very time consuming. They agree on the fact that health care professionals do not have enough recourses to complete the education process correctly. Lipponen claims that in order to use the nurses’ time effectively, patient education policy should be standardised and the given patient education should be recorded (Lipponen, 2006, 23). Furthermore, Friberg, Granum and Bergh write that health care organisations must support nurses in performing high quality patient education. They must value the patient education process, create clearer guidelines for it, and allow time for nurses for adequate counselling. (Friberg, Granum & Bergh 2012, 180.)

3.2.3 Nurse’s educational skills

Nurses and their counselling skills are in a great role in patient education. In order to develop patient education, nurses have to develop their own skills (Lipponen 2006, 22.) Lipponen (2006, 22-24) studied the surgical nurses’ capabilities to counsel patients. According to the study results, the nurses’ readiness to give patient education is mainly good. The nurses’ knowledge about diseases, procedures and care is good. Their knowledge about follow-up care, medication, treatment options, recovery time, and the diseases’ effect on the patient’s relationship and family is moderate. Instead, their knowledge about the patients’ social benefits and rehabilitation services is worse than moderate. According to the nurses’ answers, they prepare the patient well for a procedure or examination and estimate the patients’ counselling needs. However, they are not successful in analysing the counselling situation and guiding the patient to use peer support. (Lipponen 2006, 23.)

Additionally, the use of research information and different patient education methods is scarce (Lipponen 2006, 23). According to Lipponen (2006, 23), the nurses' most used patient education methods are verbal, written and individual patient education. As opposed to them, group, video and audio tape assisted patient education are less used. That may be due to the fact that the time available for patient education is not enough. (Lipponen 2006, 24.) According to Kääriäinen and Kyngäs (2006, 6), treatment times have become shorter which makes patient education challenging. The nurses' workload is often large, which makes counselling situations busy. In addition, facilities and resources may not allow the nurses to use all kind of patient education methods. Despite the fact that nurses are busy, their attitude toward patient education is good. They are motivated to give patient education and consider it an important part of their work. (Lipponen, 2006, 24.)

Even though the study shows that the nurses' attitude toward patient education is good, the results bring up some challenges as well (Lipponen 2006, 23). The nurses' knowledge gaps, which were mentioned above, should be filled. The nurses answer that the knowledge they use in patient education is mostly based on work experience, the ward's patient education policy, and nurse education (Lipponen 2006, 24.) Friberg, Granum and Bergh (2012, 179) state that patient counselling is based on the nurses' personal experience rather than evidence-based practice. Nurses do not consider scientific research, professional magazines or additional education important (Friberg, Granum and Bergh 2012, 179). However, Lipponen (2006, 23) states that additional education is the most used method to raise the level of competence. Lipponen also admits that the nurses' workload is large and they do not have enough time for patient education. In order to use the nurses' time effectively, the patient education policy should be standardised and given patient education should be recorded (Lipponen, 2006, 23).

3.2.4 Patient education material

Knowledge about the disease influences how the patient copes with his/her disease at home. In addition, the patient's relatives need information about the disease in order to support the patient. (Eloranta & Routasalo 2006, 25.) Patients and their relatives receive

this information when nurses are giving patient education. The nurses' patient education method is mostly verbal counselling. However, the second most used method is written patient education material. (Lipponen 2006, 23.) According to Lipponen, patients want to receive written introductions of their care. In addition, Sonninen et al. (2006, 20) state that patients want that a nurse goes through the written material and explains what it concretely means. In order to do that, Paul, Hendry and Cabrelli (2004, 401) state that nurses must become familiar with patient education material. Then they are able to go through the material with patients and to ensure that verbally given information is in line with written information.

According to research made by Sonninen et al. (2006, 23), patients feel that they have received enough written patient material, but nurses do not have enough time to go through it with the patient. Furthermore, patients said that the amount of information they received at one time was too much and difficult to understand (Sonninen et al. 2006, 20). Paul, Hendry and Cabrelli (2004, 397) state that patients easily forget verbally given information especially at the time they are transferred to another ward. They also say that written patient material, such as booklets and leaflets, can enhance the communication between patients and nurses.

However, written patient education material is a great tool for nurses in patient counselling. Eloranta and Routasalo (2006, 25) state that written patient education material supports verbally given education. Written material is a needful information source, because it allows patients to obtain more knowledge about their disease or upcoming procedure. It also allows the patients' relatives to receive information. Shortening treatment times cause the patients to have to take more responsibility of their care. Nurses do not have so much time to counsel patients but written patient education material is available for patients to obtain information (Eloranta & Routasalo 2006, 25.) Hoffmann and Worrall (2004, 1166) claim that when written material is used as a supplement for verbal counselling, it maximises the patient's knowledge and adherence to treatment. Patients cannot remember everything they have been told in a counselling situation. Therefore, written patient education material is good, because it is available for patients to refresh their memory. (Eloranta & Routasalo 2006, 27; Hoffmann & Worrall 2004, 1166.) Other advantages of written patient education material are its

reusability, portability, and that it is easy to update and economical to produce (Hoffmann & Worrall 2004, 1166).

There are, however, some challenges in the use of written patient education material. Paul, Hendry and Cabrelli (2004, 397) state that a nurse should not distribute any patient education material before ensuring that the information is up-to-date and reliable. Hoffmann and Worral (2004, 1167) add that written patient material works effectively if it is well designed. In order to maximise the effectiveness of written material, it needs to be noticed, read, understood, believed, and remembered by patients. Hoffmann and Worrall state that often patients do not understand the message of the material, because it is too hard to read. Therefore, when developing written patient materials, patients should also be involved in designing and testing them. (Hoffmann & Worrall 2004, 1167; Paul, Hendry and Cabrelli 2004, 399.) There are several factors which need to be taken into consideration when designing written patient material. These key factors are introduced in the following sections and summarised in table 4 below them.

Content

Hoffmann and Worrall (2004, 1167) emphasise the importance of the content in written material. In order to obtain the reader's attention, the purpose of the material must be obvious and clearly stated. Information has to be updated and accurate. It must be targeted to a specific target group. Written patient education material must contain information which improves the readers' well-being, answers their questions, and helps them solve their problems. In addition, information in the material must be honest, and benefits, risks and references to sources must be included. An important aspect is also that the patients' different cultures are taken into consideration; there cannot be judgement or inappropriateness in the content of written material. (Hoffmann & Worrall 2004, 1167.) Kyngäs et al. (2007, 126) state that written patient instruction must clearly state to whom the instruction is intended for and what is the aim of it. It must also include clear and concrete instructions of what a patient has to do and how he/she can receive more information (Kyngäs et al. 2007, 126).

Language

Written patient material must be written simply so that people of all literacy levels are able to understand it (Hoffmann & Worrall 2004, 1167; Paul, Hendry & Cabrelli 2004, 400). Hoffmann and Worrall claim that if the readability of the text is good it can be read faster. That increases the probability that the text will be read. Readability affects also the comprehension of the text. The language used in the text should be as simple as possible, still maintaining the accuracy of the information. Readability can be improved by using short sentences and short words. Sentences should contain 15 words in maximum and only one idea should be introduced in one sentence. Hoffmann & Worrall (2004, 1167) also recommend that common words should be used instead of jargon. However, if it is necessary to use medical terms, their meaning should be clearly explained. This is also the case with abbreviations; if they cannot be avoided, they should be thoroughly explained. (Hoffmann & Worrall 2004, 1167; Paul, Hendry & Cabrelli 2004, 400.)

The comprehension of the text can also be improved by using examples (Hoffmann & Worrall 2004, 1168). Furthermore, Hoffmann and Worrall state that written patient material should be written in a conversational rather than a factual style, because it makes the material more interesting to read. Kyngäs et al. (2007, 127) recommend the use of active form instead of passive. Paul, Hendry and Cabrelli (2004, 400) also write that by using active form it is easier to keep sentences short and the text is more understandable. In addition, the text can be personalised by writing in the second person. It is also more interesting for the reader if negative sentences are avoided in the text. (Hoffmann & Worrall 2004, 1168.)

Organisation

Comprehension of the written patient education material can also be improved by good organisation (Hoffmann and Worrall 2004, 1168). Hoffmann and Worrall (2004, 1168) write that when the content of the written material is well organised, it is more likely to capture the reader's interest and it is easier to understand. They claim that more important than the logical order is the fact that the information which is most useful to the reader is presented first. Furthermore, one should be able to read the text quickly and the main points should be found easily. The reader must receive an understanding of the content at a glance. That can be ensured by using organisers, such as subheadings

and bullet points. They make written material more clear and comprehensible. (Hoffmann & Worrall 2004, 1168; Kyngäs et al. 2007, 127.)

Layout and typography

Comprehensible written material has a clear font type with an adequate size. A font size smaller than 12 points should not be used. (Hoffmann & Worrall 2004, 1169; Kyngäs et al. 2007, 127.) Hoffmann and Worrall also recommend that capital letters and italics should not be used, because they hamper reading. However, bold type and underlining are recommended to be used in headings and highlighting keywords. Other highlighting techniques such as colours and text boxes can also be used. (Hoffmann & Worrall 2004, 1169; Kyngäs et al. 2007, 127.) Comprehensibility of the written patient material can be also improved by using charts and tables. However, they can also hamper reading if they are not accurate and easy to understand. (Kyngäs et al. 2007, 127.)

Illustrations and cover

Hoffman and Worrall (2004, 1169) state that when using illustrations it is important to ensure that they improve the understanding of the written material rather than hamper it. They also state that illustrations can make written material more attractive. However, the nature and placement of pictures must be taken into consideration. Each picture must have a caption which explains its meaning. Furthermore, text and the picture which refers to it must be placed side by side. As all content of the written material, pictures must be culturally appropriate and sensitive. Additionally, the cover of the written patient material is important. It must attract reader's attention and clearly show the title and purpose of the material. (Hoffmann & Worrall 2004, 1169.) In addition, Hoffmann and Worrall (2004, 1170) recommend writing the patient's name on the cover, as it personalises the material and makes the patient value it more. Table 4 has a summary of the key factors affecting patient education.

Table 4. Summary of key factors in patient education material

Key factors in patient education material	
Factors	*Explanation*
Content	- A clearly stated purpose of the material.

	- Updated and accurate information. - Intended to a specific target group. - Information must improve readers' well-being and answer their questions. - Patients' different cultures taken into consideration.
Language	- As simple and understandable as possible. - Short sentences and short words. - Only one idea introduced in one sentence. - Jargon and abbreviations avoided. - Active form used instead of passive. - Negative sentences avoided.
Organisation	- Most useful information presented first. - Subheadings and bullet points used. - Information presented so that the reader can obtain an understanding at a glance.
Layout and typography	- Clear font type with adequate size, at least 12 point. - Use of capital letters and italics avoided. - Keywords can be highlighted with bold type and underlining. - Colours and text boxes can also be used as highlighting techniques.
Illustrations and cover	- Can make written material more attractive. - When using illustrations make sure they improve the understanding of the written material rather than hamper it. - Meaning of the pictures must be explained. - Pictures must be culturally appropriate and sensitive. - The cover of the written patient material must attract the reader's attention and clearly show the title and purpose of the material.

4 METHODOLOGICAL STARTING POINTS

The main source of information for the written material is the literature, such as peer reviewed articles, in order to increase the trustworthiness of the work (Polit & Beck 2012, 174-175). Materials provided by the ward professionals and an interview with an expert nurse from Hatanpää hospital ward B4 were also part of the methodological starting points.

To be able to understand the concept of colonoscopy as examination and patient education, the authors have done a thorough literature review. The information used in the thesis has been retrieved from electronic databases such as CINAHL, EBSCO e-books, MELINDA, and Duodecim. The main key words used in the searches were "colonoscopy", "colonoscopy examination", "colonoscopy procedure", "patient", "patient education", "patient counseling", "written instructions", "written material", and "patient-nurse relationships". In order to narrow the results, the authors chose articles written in either English or Finnish, and books which were published after the year 2003. However, an exception was done to a few books and one article which were published before the year 2003. It was done due to the fact that there are no recent studies on the subject. To collect the statistical information of the dynamic population growth in Finland, official reports from the Finnish Immigration Service were used. Articles and books which were irrelevant based on their abstracts and not meeting the selecting criteria were excluded.

4.1 Functional thesis

The aim of a functional thesis is to make a product which benefits the working life. It must be based on research information and initiated by the needs of the working life. The product of a functional thesis can be for example a booklet, video, portfolio, CD, or an event. (Vilkka & Airaksinen 2003, 9-10.) In this functional thesis, the aim was to produce instructions for non-Finnish speaking patients who are preparing for colonoscopy. The aim of the instructions is to help patients understand the examination

and counsel them to prepare for it. Thereby, it also helps nurses when they are explaining the procedure to patients (Tulijoki 2014).

The idea for conducting this functional thesis originated from our working life connection ward B4 at Hatanpää hospital. There was a need for written patient material for non-Finnish speaking patients (Tulijoki 2014). The authors decided to make the product in English, because it is widely used all over the world and can work as a common language. At the beginning of the process, the authors planned to create a booklet which would have contained more thorough information about colonoscopy, its indications, and how the patient has to prepare for the examination. However, the working life connection instructed the authors to make the product as simple as possible and present the information concisely so that it would fit on one A4 page. The reason for that was that these instructions are meant for patients who are old and come to the ward the evening before the operation. Emptying the intestine is then carried out in the ward and for that reason, patients do not have to take care of many things compared to patients who come to the colonoscopy procedure straight from home.

Information for the product was gathered from an expert interview as well as from different literature sources. The instructions were done based on the findings from the research regarding how to make good quality patient education material. Table 4 introduces a summary of the features of well-prepared written patient material. The content was kept as concise as possible so that a reader would easily understand it. Due to limitations received from the working life connection, the instructions should be simple and short. Great attention was paid to the language. Studies recommend using active form instead of passive (Kyngäs et al 2007, 127; Cabrelli 2004, 400). However, due to the intimacy of the topic, some sentences were decided to be written in passive form, even though active form was mostly used (Jones et al. 2004, 148).

The text of the instruction was organised to small paragraphs, consisting of short comprehensible sentences. Subheadings, underlining, bullet points, and a bold type were used as highlighting methods. The visual appeal was taken into consideration by using an appropriate text size and allowing enough white space between the paragraphs (Bastable, S. 2013). A clear font type and size of 12 points was decided to be used. Any illustrations or colours were not added despite the fact that they can make material more

appealing to the reader. (Hoffmann & Worrall 2004, 1169-1170; Paul, Hendry & Cabrelli 2004, 400; Kyngäs et al. 2007, 126-127.) Reason for not using illustrations was orders of the ward. The official template for patient education material was received from Hatanpää hospital B4 ward. It directed the layout mostly. It includes a logo and a simple figure for the main title. The final product is part of the thesis and it is presented as a separate document.

4.2Trustworthiness

This Bachelor's thesis is a functional thesis with a product. The theory part supports the information written in the product. The knowledge for the work is gathered from reliable sources and interpreted in a way that the trustworthiness of the work is maintained. To maintain the ethics of scientific reporting, authors have used the most recent and valid studies when gathering the theoretical knowledge. Only peer-reviewed research articles have been used. (Polit & Beck 2012, 174-175, 585.) Furthermore, some topic-related books were needed in order to explain the colonoscopy procedure. Those books were, however, reliable and up-to-date. In addition, an expert interview was conducted, which increases the validity and supports the theoretical background and the need for the thesis. The credibility of the thesis is also increased by marking references accurately and paying great attention to avoid plagiarism of the source material. (Polit & Beck 2012, 175.)

Ethical considerations play an important role when conducting the expert interview. Authors had to consider if the interviewee's name and title can be mentioned when referring to the interview. The permission to record the interview and use it as a source in the thesis was also granted to the authors. Furthermore, the interviewee had to be informed about what topics are covered in the interview and how the information is used in the thesis beforehand. (Polit & Beck 2012, 541-544.) The conversation was carried out using both English and Finnish language. That fact might cause slight misunderstanding between the interviewee and authors. However, the possibility of misconception is minimised by carefully listening to the record of the conversation afterwards and in that way ensuring that the information is right. After the interview, the authors also contacted the interviewee by email to clarify some details.

5 DISCUSSION

5.1 Evaluation of the thesis

The process of conducting this Bachelor's thesis started in autumn 2013 by selecting the topic. The authors were offered the chance to make English patient instructions for colonoscopy and gastroscopy. To combine two different examinations in one thesis seemed to expand the subject of the work without adding quality to it. The final decision was to produce instructions only for colonoscopy. The next step of the process was to create a five-page plan. It structured the authors' understanding of the process and gave a clear image about what the thesis must contain.

The authors gathered the theoretical background information mostly separately. It seemed to be beneficial for the thesis process, since both writers brought a new point of view from the literature on the subject. After critically evaluating each other's work, the texts were modified in order to create a thesis which would seem like it is written by one person. The working life connection played an important role throughout the process. The level of communication between the workers of the ward and the writers was very professional and satisfying. The authors felt that support and information from the ward was a great help for conducting the thesis. In addition, the writers acknowledge all the mental support from the fellow students and valuable feedback from supervisor teachers and thesis' opponents.

5.2Further study suggestions

When deciding the topic of the thesis, the personnel from ward B4 asked the authors to make patient instructions for both colonoscopy and gastroscopy. The writers decided to choose only colonoscopy. However, for further study, it would be beneficial to make patient instructions in English also for gastroscopy. In addition, there is a need for patient instructions in other languages as well. According to the Finnish Immigration Service (2014), approximately 24% of citizenship applications were made by people

from the Russian Federation. For that reason, there is a high need for patient material especially in Russian. It would also be beneficial to produce written materials in Arabic as well (Tulijoki 2014).

6 CONCLUSION

The aim of this functional thesis was to create English patient instructions for colonoscopy for medical ward B4 at Hatanpää hospital. In order to produce the patient instructions, background information about colonoscopy and patient education was gathered. Written patient material is a great tool for nurses in patient education. The ultimate goal of the produced material was to help patients understand the colonoscopy procedure and help them prepare for it. In the thesis, the aim, purpose, research questions, task and ultimate goal were answered.

Medical ward B4 at Hatanpää hospital received the final version of the written material for patients in advance. By their approval and satisfying feedback on the product, the written instructions were finalised and attached as part of the thesis.

REFERENCES

Act on the Status and Rights of Patients 17.8.1992/785.

Balestra, M. 2013. Clinical Patient Education Challenges and Risks. The Nurse Practitioner 12/2013, 8-11.

Bastable, S. 2013. Nurse as Educator: Principles of Teaching and Learning for Nursing Practice. 4th ed. Burlington, MA.

Bijur P.E., Silver, W. & Gallagher, E.J. 2001. Reliability of the Visual Analogue Scale for Measurement of Acute Pain. Academic Emergency Medicine 8 (12), 1153-1157.

Cotton, P.B. & Williams, C.B. 2003. Practical Gastrointestinal Endoscopy: The Fundamentals. 5th edition. Backwell Publishing, Malden, MA.

DeYoung, S. 2009. Teaching Strategies for Nurse Educators. 2nd ed. Upper Saddle River (N.J.). Prentice Hall.

Eloranta, S. & Routasalo, P. 2006. Kirjallinen potilasopas Parkinsonin tautiin sairastuneelle ja hänen omaiselleen. Sairaanhoitaja 79 (10), 25-27.

Froehlich, F. 2003. Rectal Air Suctioning to Reduce Patient Discomfort After Colonoscopy. Gastrointestinal Endoscopy 58 (1), 166.

Finnish Cancer Registry. 2013. [Statistics]. Updated 05.09.2013. Read 14.11.2013. http://www.cancer.fi/syoparekisteri/tilastot/ajantasaiset-perustaulukot/koko-maa/

Finnish Heart Assosiation. 2014. Mitä sydänkuntoutus on? [Webpage] Read 29.3.2014. http://www.sydanliitto.fi/kuntoutus2#.Uzap7_l_s0Q

Färkkilä, M., Isoniemi, H., Kaukinen, K. & Puolakkainen, P. (ed.) 2013. Gastroenterologia ja hepatologia. Second edition. Helsinki: Duodecim.

Hoffmann, T. & Worrall, L. 2004. Designing Effective Written Health Education Materials: Considerations for Health Professionals. Disability and Rehabilitation 26 (19), 1166-1173.

Hammar, A-M. 2011. Kirurgian perusteet. 1st edition. Helsinki: WSOY.

Johnson, C. 2005. Measuring Pain. Visual Analog Scale Versus Numeric Pain Scale: What Is the Difference? J Chiropr Med. 4 (1), 43-44.

Kääriäinen, M. & Kyngäs, H. 2006. Ohjaus - tuttu, mutta epäselvä käsite. Sairaanhoitaja 79 (10), 6- 9.

Kyngäs, H., Kääriäinen, M., Poskiparta, M., Johansson, K., Hirvonen, E. & Renfors, T. 2007. Ohjaaminen hoitotyössä. Helsinki: WSOY.

Lipponen, K. 2006. Kirurgisen sairaanhoitajan valmiudet potilaan ohjaamisessa. Sairaanhoitaja 79 (10), 22–24.

McCann, J. 2003. Handbook of Diagnostic Tests. 3rd edition. United States of America: Lippincott Williams & Wilkins.

Messmann, H. 2005. Atlas of Colonoscopy: Techniques, Diagnosis, Interventional Procedurers. Germany: Thieme Medical Publishers, Incorporated.

Messmann, H. 2006. Atlas of Colonoscopy: Examinations Techniques and Diagnosis. New York: Stuttgart.

Ministry of the Interior. Migration Department. 2012. Annual Report on Immigration.

Ministry of the Interior, 2013. Annual Report on Foreign Citizens in Finland 2005-2013.

Pesonen, A., Suojaranta-Ylinen, R., Tarkkila, P. & Rosenberg, P.H. 2008. Aplicability of Tools to Assess Pain in Elderly Patients After Cardiac Surgery. Acta Anaesthesiologica Scandinavica 52 (2), 267-273.

Pikkarainen, P., Karvonen, A. & Kunnamo, I. 2002. Endoskopistin käsikirja. 1st edition. Helsinki: Duodecim and Finnish Society of Gastroenterology.

Pohjola, V., Lahti, S., Vehkalahti, M.M., Tolvanen, M. & Hausen, H. 2007. Association Between Dental Fear and Dental Attendance Among Adults in Finland. Acta Odontologica Scandinavica 65 (4), 224-230.

Polit, D. F. & Beck, C. 2012. Nursing Research: Principles and Methods. 6th edition. Lippincott Williams & Wilkins, cop, PA.

Ristikankare, M. 2006. Rauhoittava lääkitys paksusuolen tähystyksen yhteydessä. Duodecim 9, 1094-1098.

Rundell, M. 2007. Macmillan English Dictionary for an Advanced Learners. 2nd edition. Bloomsbury Publishing Plc.

Sonninen, E., Kinnunen, P. & Pietilä, A-J. 2006. Elämänhallintaa tukevan ohjauksen kehittäminen - Tulehduksellista suolistosairautta sairastavien potilaiden näkemyksiä. Sairaanhoitajalehti 79 (10), 18-21.

Skovlund, E., Bretthauer, M., Grotmol, T., Larsen, I.K. & Hoff, G. 2005. Sensitivity of Pain Rating Scales in an Endoscopy Trial. The Clinical Journal of Pain 21 (4), 292-296.

Takahashi, Y., Tanaka, H., Kinjo, M. & Sakumoto, K. 2005. Prospective Evaluation of Factors Predicting Difficulty and Pain During Sedation-free Colonoscopy. Diseases of the Colon and Rectum 48 (6), 1295-1300.

The City of Tampre, 2014. Hatanpää hospital. Updated 2.1.2014. Read 14.10.2014 http://www.tampere.fi/english/healthservices/hospitals/hatanpaa.html

Tulijoki, P. Expert nurse. 2014. Interview 16.6.2014. Interviewer Keisala, J & Heikkilä, Y. Hatanpää hospital, City of Tampere. B4 ward.

Vilkka, H., & Airaksinen, T. 2003. Toiminnallinen opinnäytetyö. Helsinki: Tammi.

Waye, Jerome D., Aisenberg, J. Rubin, P. 2013. Practical Colonoscopy. Oxford, UK.

Ylinen, E-R. 2010. Patients' Pain Assessment and Management During Medication-free Colonoscopy. Kuopio: University of Eastern Finland, Department of Nursing Science.

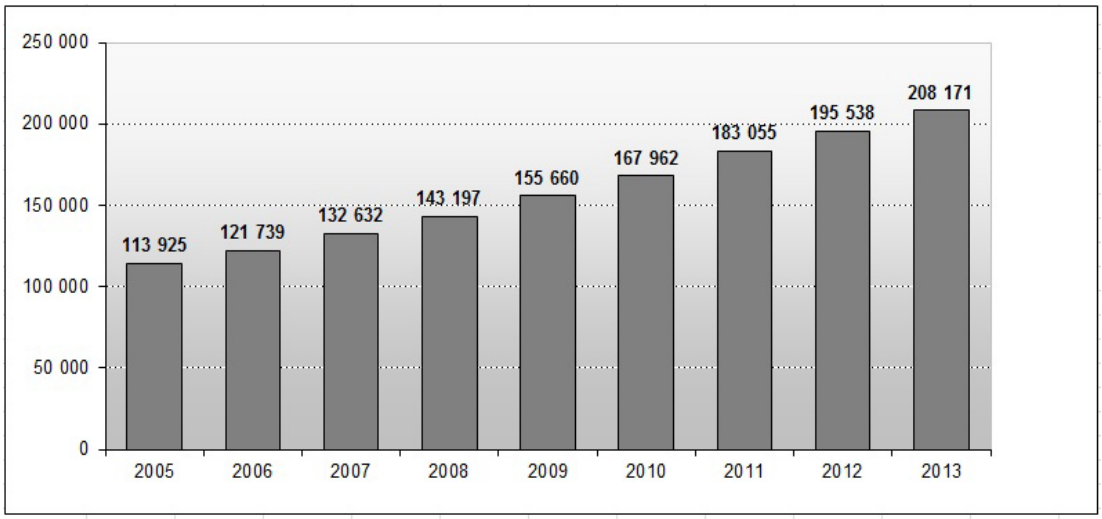
Zauber, A., Winawer, S., O'Brien, M., Lansdorp-Vogelaar, I., Ballegooijen, M., Hankey, B.,Shi, W., Bond, J., Schapiro, M., Panish, J., Stewart, E. & Waye, J. 2012. Colonoscopic Polypectomy and Long-term Prevention of Colorectal Cancer Deaths. The New England Journal of Medicine 366 (8), 687-696.

Zavoral, M. & Suchanek, S. 2009. Colorectal Cancer Screening in Europe. World J Gastroenterol 15(47), 7-15.

APPENDICES

Appendix 1. Foreign citizens in Finland starting from year 2005.

(Ministry of the Interior, 2013. Annual report on foreign citizens in Finland)



Appendix 2. Examples of pain scales used for adult patients

Numerical Rating Scale (NRS)

No pain 1 2 3 4 5 6 7 8 9 10 Worst pain

Numerical Pain Scale (NRS)

Visual Analogue Scale (VAS)

0-10

Verbal Rating Scale (VRS)

0-4

0 no pain
1 slight pain
2 moderate pain
3 severe pain
4 unbearable pain