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Factors affecting fall prevention in acute care

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Laurea University of Applied Sciences **Abstract**
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The purpose of this study was to explore the current state of fall prevention in an acute care ward. The aim was to find out what factors promote fall prevention and what type of assessment protocol could be executed in an acute care environment.

Literature searches revealed that nurses tend to rely on their own knowledge and experience concerning fall prevention. Studies showed education and raising awareness to be key factors in developing fall preventative interventions. IKINÄ - a project for fall prevention in Finland carried out by Institute for Health and Welfare (THL), had a central role in this thesis.

The study was conducted in Haartman Hospital ward 5. A qualitative study method was applied. A group of nurses (n=4) was interviewed in a semi structured group discussion. The data was analysed with an inductive method.

Findings suggest that factors affecting fall prevention are: nursing knowledge, nursing interventions, equipment and existing protocols. The nurses used their own experience and knowledge as a tool in implementing fall preventative measures. Nurses knew many ways of delivering interventions to reduce the risk of falling. Other factors to prevent falls were resources such as equipment available and existing protocols. However, if the patient with a risk of fall had not been not duly identified, no interventions for fall prevention was effectively applied.

As a product of this study, a fall risk assessment tool (FRAT) was created to support nurses in identifying high risk patients. It was produced in English, Finnish, Russian and Swedish to support international nurses. Future studies are needed to reveal the accuracy of the FRAT and to develop ways of fall prevention of cognitively impaired patients.

Keywords: Acute ward, fall prevention, FRAT, patient safety

Laurea-ammattikorkeakoulu **Tiivistelmä**
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Kaatumisen ehkäisyyn vaikuttavat tekijät akuutilla vuodeosastolla

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Opinnäytetyön tarkoituksena oli kuvata kaatumisen ehkäisyn nykytilaa akuutilla vuodeosastolla. Tavoitteena oli löytää tekijöitä, jotka edistävät kaatumisen ehkäisyä sekä selvittää millainen arviointiprotokolla olisi toteutettavissa akuutissa hoitoympäristössä.

Kirjallisuuskatsaus paljasti, että sairaanhoitajilla on tapana luottaa omaan tietoon ja kokemukseen kaatumisen ehkäisyssä. Tutkimukset osoittivat, että sairaanhoitajien koulutus ja tietoisuuden lisääminen ovat avaintekijöitä kaatumisen ehkäisyn keinojen kehittämiseksi. Terveyden ja hyvinvoinnin laitoksen (THL) IKINÄ-kaatumisen ehkäisymalli oli keskeisessä roolissa opinnäytetyössä.

Opinnäytetyö toteutettiin Haartmanin sairaalan osastolla 5 laadullista tutkimusmenetelmää soveltaen. Ryhmää hoitajia (n=4) haastateltiin käyttäen puolijäsennettyä ryhmäkeskustelua. Aineisto analysoitiin induktiivisella menetelmällä.

Tuloksena huomattiin, että kaatumisen ehkäisyyn vaikuttavat tekijät jakautuivat neljään kategoriaan: hoitajien tieto-taitoon, hoitotyön toteutukseen, apuvälineisiin ja olemassa oleviin protokolliin. Hoitajat käyttivät omaa kokemusta ja tieto-taitoaan kaatumisen ehkäisyn välineenä. Hoitajat tunsivat monia hoitotyön keinoja vähentää kaatumisriskiä. Muut tekijät kaatumisten ehkäisyyn olivat resursseja, kuten saatavilla olevat apuvälineet ja olemassa olevat toimintatavat ja -ohjeet. Jos potilasta, jolla oli alttius kaatumiseen ei tunnistettu asianmukaisesti, ei kaatumisen ehkäisykeinojakaan käytetty tehokkaasti.

Tulosten perusteella luotiin mukaeltu FRAT-lomake hoitajille auttamaan korkean kaatumisriskin omaavien potilaiden tunnistamista. Lomake on käännetty englanniksi, ruotsiksi, suomeksi ja venäjäksi tukemaan vieraskielisiä sairaanhoitajia. Jatkotutkimukset ovat tarpeen FRAT-lomakkeen käytettävyyden selvittämiseksi sekä kaatumisen ehkäisykeinojen kehittämiseksi potilaille, joiden kognitiiviset kyvyt ovat heikentyneet.

Asiasanat: Akuutti vuodeosasto, FRAT, kaatumisen ehkäisy, potilasturvallisuus

Table of contents

1 Introduction

Personal experience concerning patient falls is the principal reason for choosing this topic. In the hectic environment of an acute ward, nurses have to continuously multitask to deliver high quality care. Along with directly taking care of patients, nurses have to remember vast amounts of information concerning every patient they are taking care of, they need to handle important paperwork, and fulfill other duties during their shift. Taking this into consideration, it is inevitable that some indicators of a patient being at high risk of falling go unnoticed. When this happens, it is the nurse who takes responsibility for the patient's fall and is often held accountable for the consequences.

Mistakes can happen at any stage when delivering nursing care. For example, a patient might stumble because the patient room lighting is dim or new medications are introduced and supervision over the patient becomes an afterthought during a busy shift. Often it is also about the flow of information, communication deficiencies and problems. Understanding the risks of human activity and identifying the situations where there is an elevated level of danger involved is every health care professional's responsibility. (Terveyden ja Hyvinvoinnin Laitos 2014) The first few days in unfamiliar surroundings requires staff vigilance. It is of the utmost importance to make every effort to prevent falls. Systematic prevention requires involvement and commitment to safe practices by all professional groups. (Inkinen 2012)

The main concepts of this thesis are nursing knowledge, fall prevention in different settings, education and patient empowerment, as well as a team work. The IKINÄ- project by the National Institute for Health and Welfare (Pajala 2012) has played a big part in the theoretical support of this study. The Ikinä -project maps the aging person's sensitivity to falls due to nutrition, exercise and medication, in addition to presenting solutions to different situations.

This study is conducted to determine the status quo in fall prevention interventions at Haartman Hospital ward 5 from the nurses' perspective. This study utilises qualitative methodology.

Haartman Hospital is a Helsinki city hospital. Ward 5 treats patients with medical conditions such as infections, disorientation, arrhythmia, congestive heart failure etc. As a special feature, the ward cares for patients carrying or being exposed to multi-resistant bacteria (MRSA, ESBL, VRE etc.). The ward is an acute ward and patients usually stay a short time, (typically a week) therefore situations change quickly. Patients are admitted around the clock from accident and emergency (A&E) and other Haartman Hospital wards. A multiprofessonal team is involved in the care of every single patient. (Hakala 2013)

Amongst other findings, this research found that nurses are heavily dependent on their own experiences in fall prevention. Some believed that their own experience is sufficient and they do not need any further education concerning this matter. Yet, there is important evidence contained in the literature reviewed stating that educating all health care staff and setting a standard in fall prevention is one of the key factors effecting the success of fall prevention interventions. (Dacenko-Grawe & Holm 2008)

As a product of this thesis, a Fall Risk Prevention Tool (FRAT) is included to address the issues between who to apply actual fall preventative interventions to, and to support nurses in determining who is more likely to fall, i.e. who has a high fall risk. The FRAT s are delivered in multiple languages, English, Finnish, Russian and Swedish, to support international nurses of this field.

The IKINÄ–project (Terveyden ja Hyvinvoinnin Laitos 2012) is the basis of fall prevention material the Hospital District of Helsinki and Uusimaa (HUS) modified for use in their hospitals; Haartman Hospital adopted parts of this further for their own use. As such, the material does not particularly serve it's purpose chiefly because all acute wards are not identical.

Acute wards should have clear procedures and information for patients concerning measures aimed at preventing accidental falls and promoting patient safety, because patients should take an active role in their own safety and care. These include general fall prevention instructions such as putting on shoes or non-slip socks, specific fall prevention instructions given to every person with a high fall risk, informing the staff in case they see some other patient in danger etc.

Finland is becoming ever more multicultural, therefore it is important to be able to provide guidance in a variety of languages to meet the patients' needs, taking into account the different hues of their languages. Multicultural patients and also any foreign health care staff would benefit from this material.

Further research topics could delve into how to promote fall prevention with cognitively impaired patients and to develop a more flexible toolkit for acute care which could be easily modified to meet the needs of wards with different patient profiles. Additonally, the FRAT produced could be researched further to test if it is appropriate to other acute care wards.

2 Theoretical background

The health care system in Finland has embarked on an extensive reform already in 2001, and in the spring of 2002 principle decision was made to safeguard the future of health care. Achieving these goals has required extensive and versatile co-operation between the key areas of development, such as health promotion and application in practice. (Finlex HE 90/ 2010)

From a national economic point of view, geriatric accidental falls are a major cost item. Currently 18% of the population in Finland is over 65 years of age. By 2060 29% of the population is estimated to be over 65 years of age. (Pajala 2012)

With age, the body cannot withstand falls in the same way as the young and the risk of fractures increases. The recovery time is longer and functional capacity will decrease significantly already in a shorter hospital stay, as well as the actual fracture which requires a longer course of treatment. Impaired functional capacity and greater need for care indicate an increased risk for falls and thus particular attention should be paid to adhere to measures to prevent accidental falls, especially in acute wards. Discharge processes may otherwise be delayed or even completely cancelled, if the patient falls in the hospital due to deteriorating health. (Pajala 2012)

2.1 Definition of a fall

Several definitions exist to describe a fall. It is important to consider falls in the context of healthcare, because it is elements (health care staff, layout of the wards, mobility aids etc.) that can ultimately be changed to impact fall prevention in this environment.

In the health care setting a fall is “unintentionally coming to rest on the ground, floor, or other lower level, but not as a result of syncope or overwhelming external force.”(Agostini, Baker & Bogardus 2001) While this definition is very broad, it fails to take into consideration the complexity of the patient as a ‘holistic being’ and the environment in which they occupy, all of which are important to consider in good nursing care.

The American Nurses Association (ANA) National Database of Nursing Quality Indicators (NDNQI) expounds on this definition: a fall is “an unplanned descent to the floor (or extension of the floor, e.g. trash can or other equipment) with or without injury. All types of falls are included, whether they result from physiological reasons or environmental reasons.” (Currie 2008)

Currie (2008) goes on further, citing Morse (1997), to classify patient falls into three categories: “accidental falls (derived from extrinsic factors, such as environmental considerations), anticipated physiologic falls (derived from intrinsic physiologic factors, such as confusion), and unanticipated physiologic falls (derived from unexpected intrinsic events, such as a new onset syncopal event or a major intrinsic event such as stroke).”(Table 1)

In conclusion, a fall in an acute hospital environment is:

- Unintentional
- From a higher height to a lower height without regard to cause, whether it be environmental or as the result of the patient’s health status.

Type of fall	Definition	Example
Anticipated physiological fall	Falls that affect patients that meet criteria for being at risk of falling	“history of falling”
Unanticipated physiological fall	Falls caused by unprecedented physiological reasons	“fainting”
Accidental fall	Caused by accident. Often caused by the environment	“slipping, tripping or having a mishap”

Table 1. Types of falls according to Morse (2009, p9-12)

Haartman Hospital, where research is conducted for this study, is an example of an acute ward. Prevention of Falls Network Earth (ProFaNE 2007, pg 9) defines acute ward as “licensed establishments primarily engaged in providing diagnostic and medical treatment (both surgical and non-surgical) to in-patients with a wide variety of medical conditions.”

According to Butcher (2013) the categorization of fall types is important because it helps the ward to identify the root cause of the fall, and if many falls are classed as accidental falls, as opposed to a physiological reason, then the environment can and should be changed to be safer.

It is important to note that falls during physiotherapy sessions and in psychiatric wards are not usually evaluated in studies due to their nature: physiotherapists encourage patients in activities that may lead to posture imbalances which in turn make patients prone to falling. On the other hand, in psychiatric wards the characteristics of falls are very different from somatic wards: specific medicines typical to these types of wards in turn make patients’ postural balance instable (orthostatic hypotension, extrapyramidal side effects etc.). (The Truax Group Healthcare Consulting Services: Patient Safety Solutions 2013)

2.2 Risk factors

A *risk* of falling is defined as "Increased susceptibility to falling that may cause physical harm."(NANDA International 2011). This compliments the definition of a fall, in that it does not necessarily need to cause harm. The risk of falling is the increased likelihood that this might happen to a person in a certain situation or environment.

Who do falls concern in terms of the patient population? Factors commonly linked to falling and the aging are in fact present in the "ill patient population regardless of age." (Hitcho, Krauss, Birge, Dunagan, Fisher, Johnson, Nast, Costantinou & Fraser 2004). In his research for the World Health Organisation (WHO) Kronfol (n.d) has shown that age itself should not be considered as a risk factor. These findings indicate that all patients who are ill should be considered at risk of falling.

This is not to rule out the aging population as the biggest risk group of falls. Butcher (2013) discusses that "the challenge of fall prevention is increasing as the inpatient population ages." This is because as age increases health tends to decline, meaning a greater number of medications which often affect balance. Further studies corroborate that age is a risk factor concerning falls and that geriatric wards show a trend for higher fall rates than other acute wards (Dykes, Carroll Hurley, Lipsitz, Benoit, Chang, Meltzer, Tsurikova, Zuyov & Middleton 2010). Haartman Hospital is an acute medical ward typically, although not exclusively, treating elderly patients with infections. This finding would suggest that the patient profile tends to be risk prone.

An important point to note is that patients already with a history of falling and need for assistance in moving around are more likely to fall (The Cochrane Collaboration 2013). A study conducted in one hospital had a fall rate of 45.2% occurring when trying to use the bathroom (Dykes et al. 2010). In another study, half of falls were elimination related (Hitcho et al. 2004). This alarmingly large percentage indicates a greater need for nursing vigilance and aid in activities of everyday living.

Furthermore, being female (osteoporosis is a common condition affecting post-menopausal women and increases the chances of fractures), poor balance and coordination, low body mass index, and having two or more medical conditions all increase the risk of falling. (Hitcho et al. 2004)

Surprisingly, The No-Fall Zone (Butcher 2013) found vital information that 70% of falls happened in the day shift (when more staff are on shift) and that most of these patients were in fact "alert and oriented". This contradicts previous perceptions which suggest that it is the

disorientated and ‘neglected’ (in terms of the amount of staff accessible- such as night and weekend shifts) who are fall prone. This finding suggests that perhaps health care staff are desensitized to the risks when more workers are available.

To summarise, falls concern those of “…increased age, [the] male sex, higher care classifications, incontinence, psychoactive medication use, previous falls and slow reaction times.” (The Cochrane Collaboration 2013).

Potential consequences of the patient falling in the hospital:

- For the patient: Fear of falling again which will lead to limited mobility, which in turn will lead to deteriorating condition of the locomotor system. Patients will lose independence at least for the time of healing. In the best case scenario the patient will have to stay in bed for only a couple of days. In the worst case scenario, the patient will be bedridden for a long period of time. This might even lead to moving to a nursing home or other facility, which is not always welcome.
- For the family: A new load of work due to limited mobility of the patient.
- For hospital staff: Feelings of guilt that will help neither the patient that has just fallen nor the staff themselves. Feeling guilty may lead to overprotecting and over caring about the patient leading staff to assist every patient with their daily activities, even those capable of doing it for themselves. This will in turn take the resources away from other patients and the staff will be over worked.
- For the hospital: Cost of staff time for completing incident report and follow-up activities/public reporting of falls.
- For the payer: Cost of diagnostic tests and extended stay in the hospital. (Dykes, Hou I-Ching, Soukup, Chang & Lipsitz 2007)

One other unpleasant consequence is a ‘revolving door system’. It is the phenomenon in which a patient is transferred back and forth between home, hospital and health centres and will have to wait for an opening in an appropriate facility in several different locations. This rotation in the system is laborious for an infirm person. (Pajala 2012)

2.3 Fall prevention

“Fall prevention is simply the process of taking steps to prevent falls from occurring.” (Fall T.I.P.S 2014) Fall prevention is also a nursing intervention, one that relies on the cooperation and participation of a multi-professional team (Ignatavicius 2014).

In the past, fall prevention was enforced through the use of restraints (Dacenko-Grawe & Holm 2008). While this presumably had good results its focus was not on patient rehabilitation. Although, patient restraints might prevent the fall in the short term, in the long term it has a huge negative impact: the patient does not know how to cope when they feel 'shaky' leading to a decrease in muscle tone and worsening of the likelihood of falling.

Other previous methods relied heavily on communication to relay high fall risk patients from shift to shift. The problem therein lied with the quality of nursing communication and therefore prevention was ineffective. (Dykes, et al. 2010)

The independence of a patient who has fallen is lessened as they begin to fear to fall again. Patients are more reluctant to perform activities of everyday living and in self-preservation, avoid these tasks which pose the risk of falling. Functionality is then reduced and, in a spiral of decline, falls become more likely. (Dacenko-Grawe & Holm 2008)

Falls negatively affect patient independence and can be costly as hospital stays are lengthened and resources are needed to deal with injuries arising from falls. Even the smallest injury can have a big impact on rehabilitation and confidence in one's body and abilities. Fall prevention is crucial in order to promote rehabilitation and to avoid patients ultimately being moved into care homes. (Oliver & Healey 2009)

On the other hand, fall prevention needs to be approached in the right manner. If falls are considered "indicators of the quality of nursing care", health care staff may be less likely to report falls and therefore the figures might not accurately represent the situation in a ward and patients go without the tools necessary to promote a safe environment. (Oliver & Healey 2009)

There is no definitive way to prevent every fall, but research shows that using more than one method of prevention to be most effective as falls generally have numerous contributing factors, therefore multiple interventions are needed (Butcher 2013; The Cochrane Collaboration, 2013). In this way, fall prevention protocols account for the variety of different situations that might occur in the acute ward, the varying levels of mobility and ability of the patients etc. to be most effective.

A powerful tool in fall prevention is the nurses' own experience and intuition. Meyer 2009 reports that there was no difference in fall rates with those that used fall risk assessment tools and those that did not and relied on their own judgment. (The Cochrane Collaboration, 2013) Because there is not one singularly proven fool-proof method of preventing falls, a multi-faceted approach is needed.

A major problem with current fall prevention protocol is that hospital statistics may not accurately represent the true number of falls, as falls not resulting in injury don't tend to be reported (Hitcho et al. 2004). This phenomenon may occur because healthcare professionals are afraid of being blamed and being accountable for the consequences (paying for the expenses, losing their job etc.), hospitals might not want to have data on low patient safety or simply healthcare professionals do not see the significance in reporting.

Between 2005-2008 the Technical Research Center of Finland (VTT) developed an electronic accident reporting system called HaiPro. The programme was offered to be trialed in health care organisations in 2007. (Kinnunen & Peltomaa 2009, 121-122) The main reason for developing this application was improving the patient safety in hospitals. The report is anonymous as no name is required by the system; entering one's job title is sufficient. Those that report through this system need to write what happened, when it happened, what were contributing factors and what could have been done to avoid the accident. Beside accidents that occurred, one can (and is encouraged to) report the 'near miss' accidents so that they would be prevented. (Kinnunen & Peltomaa 2009, 121) Haartman Hospital has been using the HaiPro accident reporting system for many years.

Hitcho et al. (2004) suggest that patient education is important in fall prevention. If the patient is orientated to a new environment and made aware of the impact a different state of health and medication can bring, falls can be reduced. This is especially true for those with "no cognitive impairment" (The Cochrane Collaboration, 2013). Educating the patient to help themselves sets good foundations for rehabilitation.

From the nursing perspective, education about fall prevention is vital. One study concerning nurses' understanding of what constitutes appropriate patient footwear showed differences in understanding, therefore nurses had to depend a lot on their own knowledge and experience to guide them in implementing fall prevention as no clear guidelines and definitions existed (Borland, Martin & Locke 2009). Nursing education helps the nurse to know the risks factors that cause falls, help them know the appropriate way to implement fall prevention and to know exactly what is expected of them to promote good patient care.

Nurses bear the most responsibility and guilt when patients fall. Yet, rarely the reason behind a patient falling is something that only a nurse could have prevented. The reasons behind a fall could be due to medication, gait instability, environment, diet etc; and it is doctors, physiotherapists, occupational therapist and many others who have the power, knowledge and responsibility to affect these factors. It is of utmost importance for multiprofessional teams to be involved in fall prevention. Numerous studies have proven this approach to be

more effective than single interventions delivered only by nurses (Oliver et al. 2009; The Cochrane Collaboration, 2013).

The IKINÄ guide is a product of a project targeted at health care professionals caring for the elderly. It was developed 2009-2013 by THL as part of a patient safety project. The guide is designed to utilize current studies in order to promote more effective interventions and prevent falls. (Pajala 2012) Haartman Hospital currently uses a modified version of this guide, in the form of a blue piece of paper with instructions concerning fall prevention placed on each patient's bedside table and one A4 sheet of instructions for nursing staff in orientation file.

The significance of the IKINÄ -project is that it is one of a kind in Finland. Before, healthcare professionals had to depend on studies and guidelines from other countries alongside their own experience. This guide integrates real numbers and rates of falls from Finland, lists risk factors and contributors, lists different means and ways of developing the gait stability of elderly through nutrition, exercise and making the environment safer. In this guide only five pages are dedicated to fall prevention in hospitals.

Throughtout Finland many homecare and nursing homes have started discussions on a local level about fall prevention. Some of these institutions started testing the IKINÄ fall prevention model in their wards. Unfortunately, on the acute side of healthcare institutions the adaptation of the model has been slower. Right now, only HUS hospitals use the IKINÄ model consistently.

2.4 Multiculturalism in Finnish healthcare

Over the past 10 years Finland has become increasingly multicultural, especially since joining the European Union in 1995. Currently around 140,000 foreigners (not including those who acquired Finnish citizenship) reside in Finland. Russians, Estonians, Swedes and Somalis form the biggest groups of foreigners in Finland. (Koivukangas 2002) This makes the patient profile increasingly international. In Haartman hospital the number of patients and nursing staff whose mother tongue is neither Finnish nor Swedish has increased. (Hakala 2012)

Finnish law states that a patient must be able to receive care in their mother tongue. This creates a demand for language skills and a need for a multicultural work force. Religion and culture also make up a different dimension that a nurse needs to understand and respect to deliver good nursing care (Korpela 2008). Currently fall prevention information slips given to patients at the Haartman Hospital ward 5 are produced only in Finnish.

TEHY (terveydenhuoltoalan koulutuksen saaneiden terveyden- ja sosiaalihuollon tehtävissä työskentelevien ammattilaisten etujärjestö - the Union of Health and Social Care Professionals) sent questionnaires to 329 branches of TEHY and members whose mother tongue is not Finnish or Swedish in order to ascertain the work related issues multicultural health care professionals face. Some of the nurses informed that they translated patient documentation into their mother language in order to understand what was written better. It was proposed that language abilities should be resolved without compromising patient safety (Markkanen & Tammisto 2005).

As Ageeva & Jaanisalo (2013) found during the interview for their bachelor's thesis, foreign nurses are worried about the affect of their language skills on patient safety, especially when documenting and reporting.

2.5 Fall risk assessment tools

Fall risk assessment tools (FRATs) are tools used to "identify both persons at risk of falls and their specific risk factors and to allow for cost-effective targeting of fall prevention strategies." FRATs assign numerical values to certain criteria concerning the patient, which can then be interpreted as the likelihood of that patient falling. Nurses can focus on fall prevention of these high risk groups. (Shee, Phillips & Hill 2012)

In addition, FRATs are reliable tools in acute care wards where there are many temporary workers and changes in workers, in that FRATs do not rely on personal judgment and experience (Hitcho et al. 2004).

On the other hand, FRATs may not be consistently reliable in all health care environments. Firstly, the toolkit in the ward where it was developed may not be suitable to another ward treating different illnesses. Surprisingly, effective fall prevention can also affect the reliability of the predictive tool by desensitizing the nurse to the risks. (Shee et al. 2012) Also, a patient's condition may change daily, thus making previous assessments void.

It is important to note that "fall risk assessment in itself is not an intervention and must lead to meaningful actions to prevent falls." Effective fall prevention is the result of a combination of suitable predictive tools and effective nursing intervention. (Shee et al. 2012)

FRATs aim to increase patient safety, minimize errors and harmonize patient follow-up care in handover situations and, hence, improve the quality of nursing care. The list standardizes communication and ensures the flow of information. Working becomes easier as the employee does not have to rely on memory. (Helovuo, Kinnunen, Peltomaa & Pennanen 2012, 208) The

checklist also eases the temporary staff's work. They may not be familiar with the ward reporting protocol, the practice and the related information as well as permanent employees are. Review procedures are meant to secure operations by minimizing mistakes and lapses in memory. (Helovuo et al. 2012, 13)

The effects of reducing patient morbidity through implementing a checklist presented by the World Health Organisationin 2008 on surgical safety is a very good example of how having a standardized checklist might be handy to healthcare professionals; it helps by backing up the knowledge of the nurse and the interventions they perform yet might forget in a hectic situation. (van Klei, Hoff, van Aarnhem, Simmermacher, Regli, Kappen, van Wolfswinkel, Kalkman, Buhre & Peelen 2012)

Different checklists are already used in many hospital wards to support the memory. The list contains items the nurse should remember to do, for example, when patient arrives at the ward, is discharged, or being prepared for a procedure. Haartman Hospital has introduced the ISBAR (Identify, Situation, Background, Assessment, Recommendation) -method for reporting when the patient is transferred from A&E to the ward.

3 Purpose and aim of the study

The purpose of this study is to explore existing fall prevention material available and, by interviewing a group of nurses (n=4) working at Haartman Hospital ward 5, to gather information on what they feel is important in preventing falls in acute care.

The aim of this study is to identify the factors that promote fall prevention in acute care and consequently produce a fall risk assessment tool for acute care ward.

Research question(s): What are the factors that affect fall prevention in acute care? What type of assessment protocol could be executed in an acute care environment?

4 Study method

Qualitative research has been chosen as a methodological approach for this research. In qualitative research the behavior, feelings and experiences of people are explored. The foundation in qualitative methodology is in its interpretive approach to social reality. Qualitative methods are utilized to understand, describe and interpret social occurrences as perceived by individuals, groups and cultures. The researcher is placed in the role of research tool due to the close and equal human bond between the researcher and participants. (Holloway & Wheeler 2010, 3-4)

In qualitative research data has a priority. Data produces new theoretical concepts and assists in revising existing theories or reveal the essence of phenomena. The theoretical framework of the research project is based on incoming data, as opposed to being predetermined. This data may affirm or challenge existing assumptions and theories. The approach is inductive, moving from the specific to general, from the data to theory or analysis. (Holloway & Wheeler 2010, 4)

Often professionals who conduct the research are part of the setting they study. Being too familiar with the surroundings may lead to oversight and therefore it is possible to miss some valuable information. As a result, the researchers should be cautious of the role they play. Acting like a tourist while examining the setting and challenging one's own surmises and making the familiar strange leads to rich data acquisition. (Holloway & Wheeler 2010, 5)

A qualitative approach offers through experience and observation a view of participants' world. As participants have their own understanding of reality and explanations of events and actions therefore the researcher has to be empathetic when exploring the situations, events and actions from the participants' point of view. The conditions in which the data is gathered, the place, time and history as well as the events and actions as they happen in real life, are regarded. When the context is understood, the actions and perceptions of individuals can be located and the meanings that they communicate are obtained. Organizational context and group membership are significant issues in the application and use of the research in health care settings. Trust in the relationship between the participant and the researcher is essential. The researcher's extensive knowledge of the participants' situation generates reliable data. (Holloway & Wheeler 2010, 5-7)

Triangulation was used to collect data from different sources, not only from the group interview, but also through observation at the ward, previous studies and tools available for fall prevention that are already in use in Haartman Hospital ward 5. Triangulation is a method where the topic is examined from several perspectives and it is a strategy to establish validity for the study as well. (Holloway & Wheeler 2010, 308) In this study 'within-method' triangulation was applied. The method entails that the data was acquired through a semi-structured group interview, observation and directions and guidelines in effect at the ward.

4.1 Participants

Fall prevention has been especially focused on during 2012-2013 at Haartman Hospital ward 5. The ward manager presented the thesis idea in a semi-annual meeting where all thesis plans for the following year are presented. She also provided information on how to choose the participants for the focus group interview in the form of discussion. The selection of participants

was based on the length of experience in the field of nursing. The schedule of the interview set some limitations as to who was invited to join the interview as well. The four selected nurses shared a total of nearly 100 years of work experience between them. The ward manager made the work shift arrangements to accommodate time set for the interview.

The participants were two registered nurses and two practical nurses: all senior members of staff with decades of experience in acute care. The group discussion session was held on January 15th, 2014 and it lasted 45 minutes. All participants were actively involved and contributed by sharing their experiences. The following week one of the practical nurses wished to share some additional information relating to fall prevention actions taken a few years back.

One of the researchers is working full time at the ward. She has access to the ward's orientation manuals and fall prevention material. She has been able to observe the daily activities and the practices whether the current fall prevention procedures are in action. Another of the contributing researchers has completed a five week placement in the same ward. This is significant in the triangulation method which gathers information from many sources.

4.2 Data collection

The semi-structured focus group interview was suggested as the data collection method by the ward manager of ward 5 at Haartman Hospital. The reason behind this type of a data gathering is that the group interview would encourage the participants to take part more actively and therefore produce rich and detailed information. The participants included both registered nurses and practical nurses. Fall prevention as a subject involves both groups and is an essential part of everyday nursing care. The participants were pre-chosen by the ward manager and the selection was primary based on their work experience in acute care.

The aim of the group interview was to produce information on how familiar the staff is with fall prevention protocol at the ward, how they take advantage of the instructional material available at the wards and find out what experience/knowledge the staff has on fall prevention methods. The question list was prepared beforehand ant it was based on risk management, key concepts and ideas identified in literature searches, and observations at the ward. Questions were open ended to allow the participants to naturally expound on their ideas. The ward manager approved of the list of questions which were the framework of the group discussion.

The raw data material in qualitative research can be close to anything which holds human experience, in visual form, video-recordings, photographs, drawings and paintings, or text,

such as interview transcripts, notes taken during focus groups, diaries and letters. However it is imperative to produce good quality data by systematic and valid data collection so that the research subject would make sense. (Boeije 2010, 57)

Focus group interviews take place under the guidance of a moderator who generates qualitative data obtained from the interaction happening in the group setting. As a focus group is a social setting, the data reflects 'reality' better than the data collected in a non-social setting. (Boeije 2010, 64-65)

The main instrument in a qualitative interview is the researcher. The tool is a list of topics or questions. The interviewer must observe and listen to the participants in a delicate way in order to extract valid data. At times the sequence of the questions may have to be changed there and then, maybe even be re-formulated to keep the conversation inside the subject. However, sometimes it is essential to let the participants spend more time on certain issues. (Boeije 2010, 62-64)

Data collection was conducted by semi-structured group interview at Haartman Hospital ward 5 conference room. The data was prepared for analysis by transcribing and sorting. Sorting consisted of extracting relevant sentences and assigning them a code. This helped to translate the raw data into generalizations to describe the phenomenon and answer the research question. The audio taped interviews were transcribed verbatim to ensure the fullest and richest data. The observation notes were combined with the transcript to include the currently applied protocols and instructions at the ward.

4.3 Data analysis

"Data analysis is the process of systematically searching and arranging the interview transcripts, field notes and other materials that you accumulate to increase your own understanding of them and enable you to present what you have discovered to others. Analysis involves working with data, organizing them, breaking them into manageable units, synthesizing them, searching for patterns, discovering what is important and what is to be learned, and deciding what you will tell others." (Bogdan & Biklen 1992, 153)

In qualitative research the data can be collected and analyzed simultaneously. Researchers begin the process of analysis while recording and transcribing the initial data by reflecting upon them. Analysis is an iterative activity where the researcher moves back and forth from collection to analysis and refining the questions that are asked from the data. (Holloway & Wheeler 2010, 281)

The prepared data is segmented and in disassembling the data it becomes clear what topics appear in raw data. During the analysis the material is cut into pieces and then the pieces which seem to belong together are combined. The fragments are given a summarizing label i.e. code. The researcher decides which codes will be ascribed to which categories. (Boeije 2010, 77-79)

The transcribed raw data was cut into small pieces. The pieces of statements were reduced and combined under sub-categories and in return assembled under generic categories. An inductive approach was applied in data analysis due to looking at the factors affecting fall prevention from a different perspective. In addition, the raw data was in textual form and it had to be condensed into a brief summary format to show evident links between research question and the findings. The participants often replied in a way that did not mention the key words in the question and so if the sentence was taken out of context without the question attached, it would not be possible to know what they were referring to. The content analysis yielded a report on measures and factors how to prevent falls in acute care. Data analysis was conducted in the way that the essential content was kept as invariable as possible.

5 Ethical principals and considerations

“Beneficence is considered an umbrella principle that refers to maximum good outcomes for science, humanity, and individual research participants while avoiding or minimizing unnecessary harm, risk or wrong.” (Boeije 2010, 45) Three dimensions: informed consent, privacy, confidentiality and anonymity are derived from the beneficence principle when it is converted into practice.

Voluntary informed consent is an important general ethical requirement. The participants are given the information on risks and benefits of the study and then the power to decide whether they want to be involved. The informed consent may be an ongoing process in some cases. As the participants may have concerns only after the study is well under way, they have the right to refuse or pull back from the study at any stage. That right must be made clear to the participants. (Boeije 2010, 45)

Privacy in social science research projects is seen important due to the private nature of the accessed areas. Individuals have the right to decide to whom they surrender delicate information about themselves and that the researcher may not disclose such information to anyone. Principles of confidentiality usually deal with informed consent where, the data handling is clarified to the participants. Anonymity is connected to confidentiality. No personal details which may reveal the identity of the participants are included in the research paper. Only the research team will be able to identify the participants. There are, however, some individuals

and organizations that may wish recognition of their contribution in the study. (Boeije 2010, 46)

All participants were given, by the ward manager, the outline of the group discussion a week prior to the event to give them an opportunity to decide whether they wanted to be part of the interview session. However, submitting the group discussion outline to prospective participants may have compromised trustworthiness of their contribution and even influenced their decision to attend the group discussion. It may have been promoting factor as well, allowing some time to reflect on one's experiences and therefore may have produced more valid information. Before the discussion, all participants signed a release form to allow the gathered material to be used for the empirical part of the thesis. In case any of the participants had second thoughts on contributing their views, they were verbally informed that their consent can be withdrawn at any time. None of the invited participants did refuse to attend the group interview, nor did they withdraw their consent.

6 Findings

In this section, the process of handling and categorizing data is shown. Generic categories are nursing skills and abilities as human resources and resources available in hospital; each of them divides into categories and sub-categories. The process of handling and interpreting the raw data from the group interview is shown in Figure 1.

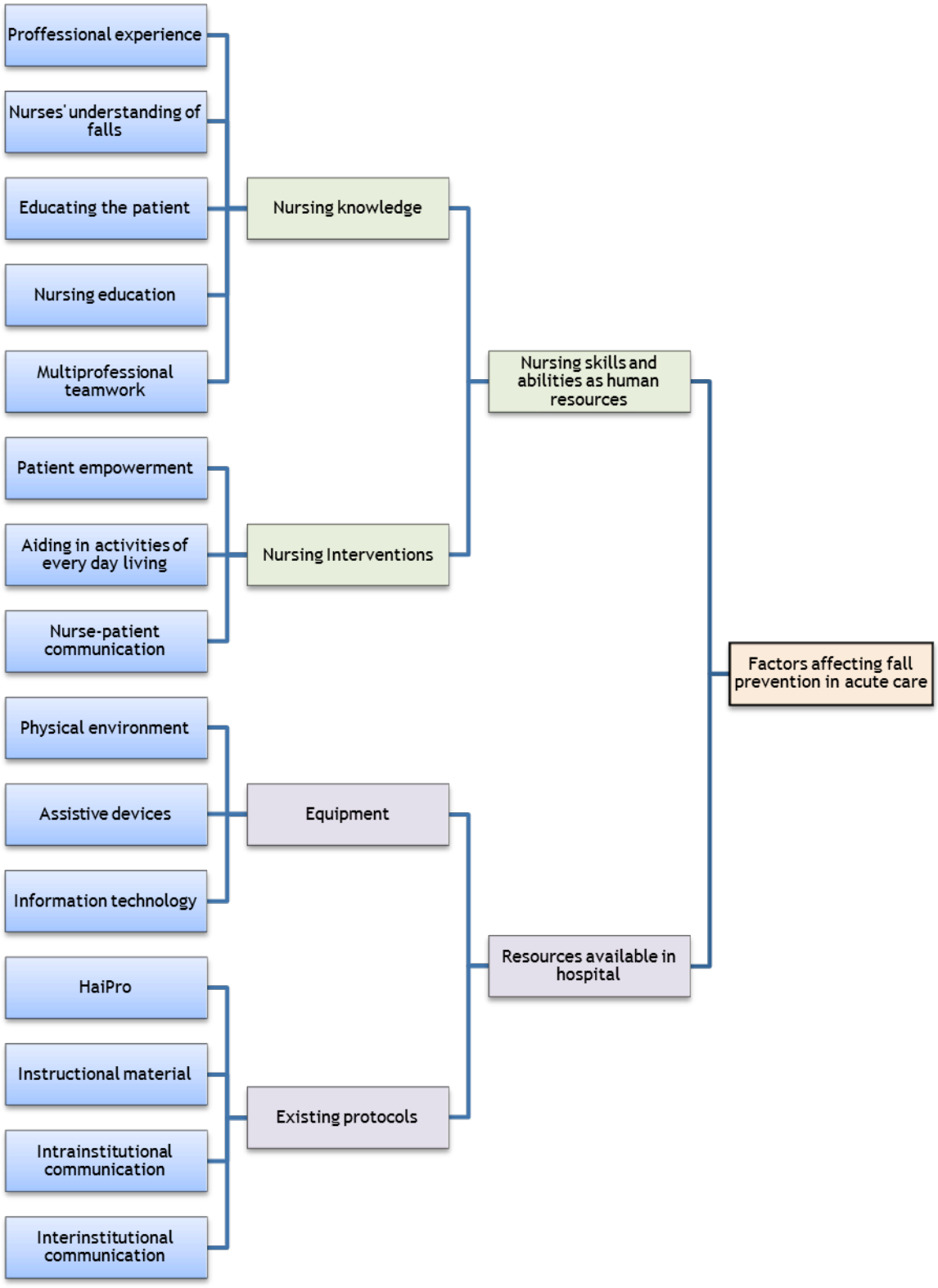

Figure 1: Process of handling and interpreting the raw data from the group interview.

6.1 Nursing knowledge

Nursing knowledge is made up of five sub-categories: professional experience, nurses' understanding of falls, educating the patient, nursing education and multiprofessional team work. (Figure 2)

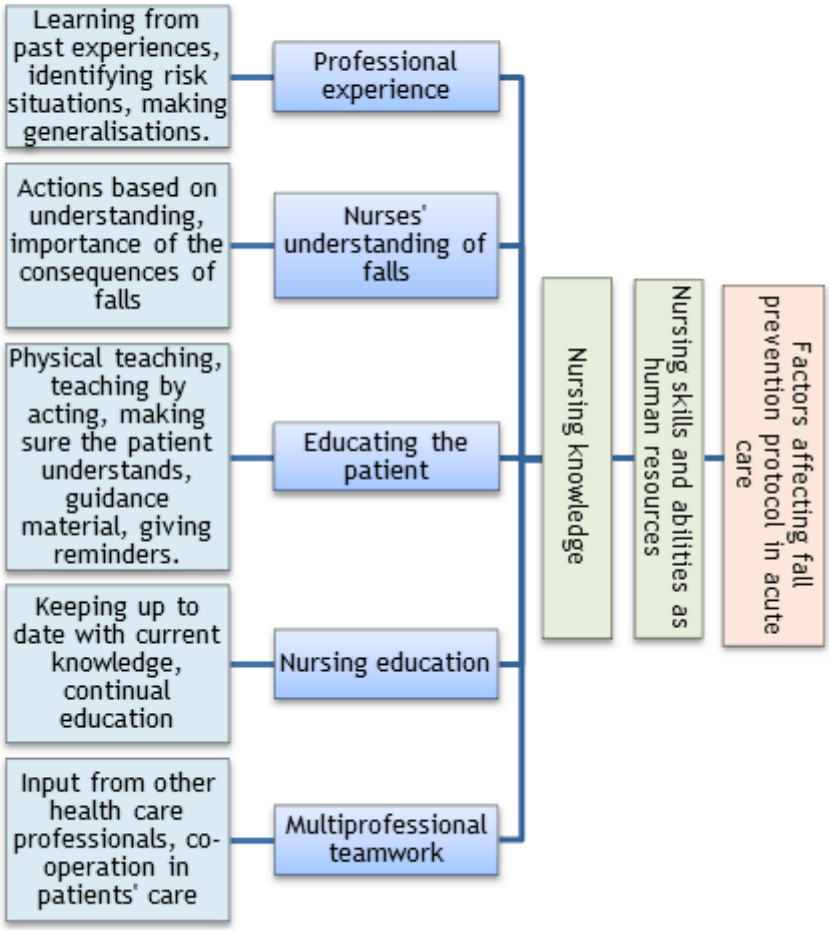

Figure 2 : Nursing knowledge category

6.1.1 Professional experience

Findings show that experiences gained contribute a lot to nurse's knowledge and the way they handle fall prevention. Every nurse has their own professional tips and tricks that they feel are crucial to preventing falls and they will follow these to a greater extent than guidelines or other protocol to guide nursing actions and interventions.

> *"Unfortunately, it is practice that teachers the best. You learn to identify the risk situations through practice when it happens once."*

"In the nightshift there are more confused patients; at least that is what I have experienced myself."

"You could say that those that have fallen I have found to be older people – not those around 40 years old."

6.1.2 Nurses' understanding of falls

Through the group interview, the data collected showed that the nurses' understanding of what constitutes a fall is one factor that affects fall prevention in Haartman ward 5.

"The patient fell on their backside onto the floor when I turned my back to do something. I didn't report anything, because no injury occurred."

This goes into the category nursing knowledge, because the nurse's understanding of the definition of a fall is part of the nurse's knowledge. Nurses believe that by definition a fall is when injury occurs.

6.1.3 Educating the patient

Patient education is a factor in fall prevention. The nurse teaches from her own knowledge to help the patient.

"I focus on this kind of physical teaching that is concrete…Time to time with this kind of patient I say, 'Now put this hand now there and that there and do it in this way and hold onto that.' I remind them."

"It isn't sufficient that it [the guidance information on falls] is put there on the table, but you need to go through it with the patient"

"We put on the patient's table this blue piece of paper which all the relatives can read…[about what to do to prevent falls]"

"Continually remind the patient to wear slip proof socks, remember to put shoes on your feet, hold on to anything you can for support if you don't use a walker."

The nurse cannot be in the patient's presence all the time. By educating the patient, they can help the patient to be vigilant about their own safety and to know that there is a way to

go about moving, such as putting on anti-slip socks or using the stroller correctly to minimize the risk of falling.

6.1.4 Nursing education

Nursing education falls under nursing knowledge, due to how the education a nurse receives builds on and adds to her knowledge base in order to prevent falls, whether it is fall prevention they have learnt in school or through continuous training in the ward.

> *'When something new comes, we need to talk about it and for us to be educated, for example if there would come some of those assistive devices.'*

> *'…What guidance is needed? I don't think that any [guidance] is missing...'*

6.1.5 Multiprofessional team work

Fall prevention is not just a nursing effort but a multi-professional effort, because a multi-professional team is involved in the treatment of the patient. Fall prevention requires expertise of different health care professionals.

> *"When we had the on-call doctor discharge a patient he absolutely wanted the physiotherapist's evaluation on the patient's mobility."*

> *"Once a week we have a rehabilitation meeting in which we [doctor, physiotherapist, social worker, occupational therapist, nurse] go through every one of these things."*

> *"...If I lift someone alone and I need help. To me the physiotherapist is good in these situations."*

> *"That yes, for sure consult with the physiotherapist quickly if you feel there is that kind of patient. Then he will test their balance and if there is that sort of falling risk and that if there is a tendency of falling. It depends a bit too on what diseases they have."*

6.2 Nursing interventions

Nursing interventions as a category comes under nursing skills and abilities as human resources. The interventions carried out as a part of the nurse's inventory of skills, and the ef-

fectiveness in which they are carried out, are affected by the skill of the nurse. Nursing interventions are made up of three subcategories, patient empowerment, aiding in activities of daily living and nurse-patient communication. (Figure 3)

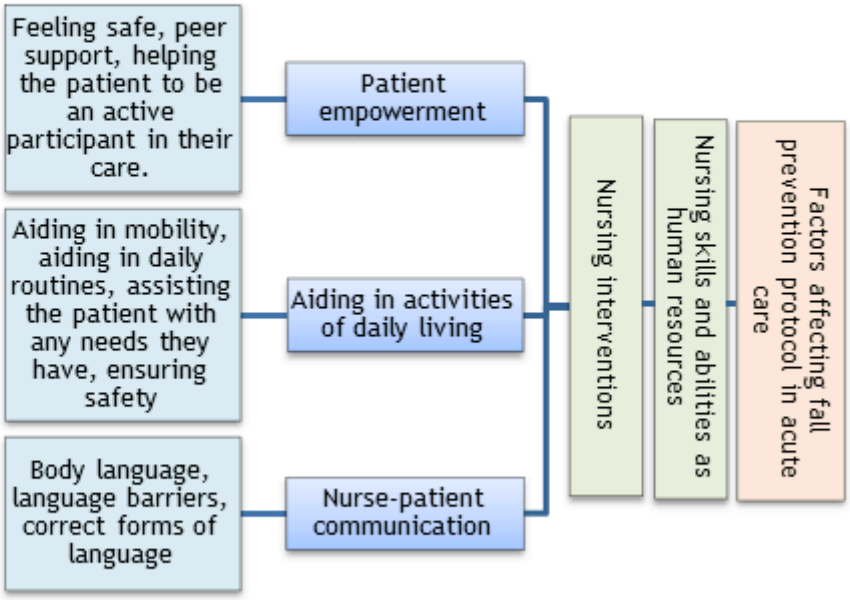

Figure 3: Nursing interventions category

6.2.1 Patient empowerment

Empowering the patient is an intervention the nurse can perform to prevent falls.
One of the methods of fall prevention is having patients of the same age group or with similar health conditions in the same room, creating 'room buddies'.

> *"You try to match the patients…the whole ward can't be everywhere at once, but there is one example of how to prevent falls, that they feel safer."*

> *"They can give peer support to one another…they feel safer when there is a similar type of friend in the room."*

The nurse cannot be continually with the patient, and if the patient is with someone in a similar condition they can feel empowered in the abilities they do have and often look out for one another. This is significant for isolation rooms where the nurse does not enter the room as often as other rooms in the ward.

The category ‘patient empowerment’ also encompasses ethical issues.

> *“Many relatives don’t approve of restraining.”*

> *“In principle it is an ethical question that where do you go and where is the line when it comes to restraining? But is it better that the patient doesn’t hurt their head and have a brain haemorrhage or that they have a belt on and you see that person?”*

6.2.2 Aiding in activities of daily living

Nursing interventions concern helping in activities of daily living with the patient. For example, the nurse helps the patient to put on slip-proof socks and hip protection pants to go to the bathroom and, depending on their functionality, will also aid there.

> *“When I get the patient up, I see that they have shoes on their feet.”*

> *“I use everything possible that I , if the patient for example is able to walk with just one nurse, I take hold of the patient and say ‘hold onto the sink and hold onto the door and we can make it to the bathroom.’”*

> *“I always ask, when I interview the patient, do you want rails up or down.”*

6.2.3 Nurse-patient communication

Communicating with the patient helps the nurse to deliver interventions to the patient; for the patient to understand what is going to happen and why.

Communication can show respect and develop trust between the nurse and patient. In terms of fall prevention, this trust built through communication can e.g. help the patient to ask for help by ringing the bell.

> *“Some like it when they use ‘te’.”*

Multiculturalism is also a big factor in nurse patient communication:

> *“Once I had a Russian speaking patient that I didn’t even understand when they spoke Finnish.”*

“We didn’t understand each other at all…So I watched how he moved and waved them to come sit in a chair.”

“If you don’t know how to communicate in their language it is very difficult. If you know how to communicate in the language then there shouldn’t be a problem.”

If the nurse and patient cannot understand one another it can increase the risk of falling; the patient does not understand the instruction for how to move safely from one place to another.

6.3 Equipment

Equipment concerns tangible resources to prevent falls. (Figure 4)

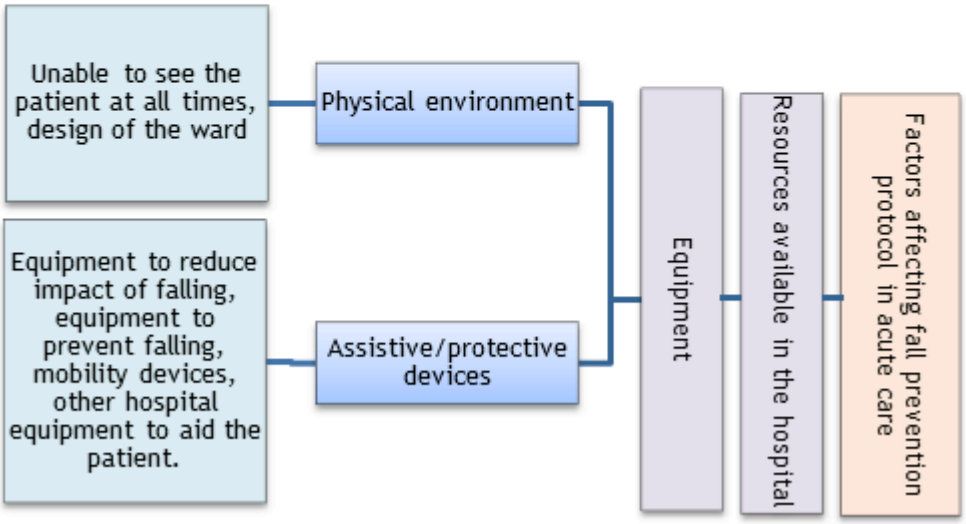

Figure 4: Equipment category

6.3.1 Physical environment

Under physical environment statements were gathered concluding that equipment in the patient room is used to prevent falls, such as cameras, doors, size of the patient room. The main idea is patient visibility when the nurse is not present in the room.

"Cameras yes, would be best of all."

"…there has been these doors that you can see through into the room."

"…before were big patient rooms and the neighbouring patient can ring the bell."

6.3.2 Assistive/protective devices

These devices prevent from falling and in case of a fall reduce the risk of getting an injury. They also aid in mobility.

"Those [slip proof socks] too are good."

"Those hip protection pants are very handy."

"…assistive devices [walker, wheel chair] need always be close by."

"…we put the seatbelt on when they are in the wheel chair..."

'Rails up on the side of the bed.'

6.4 Existing protocols

This generic category depicts fall prevention protocols currently used. It entails four subcategories HaiPro –incident reporting system, instructional material given to patients, intra-institutional communication and inter-institutional communication. (Figure 5)

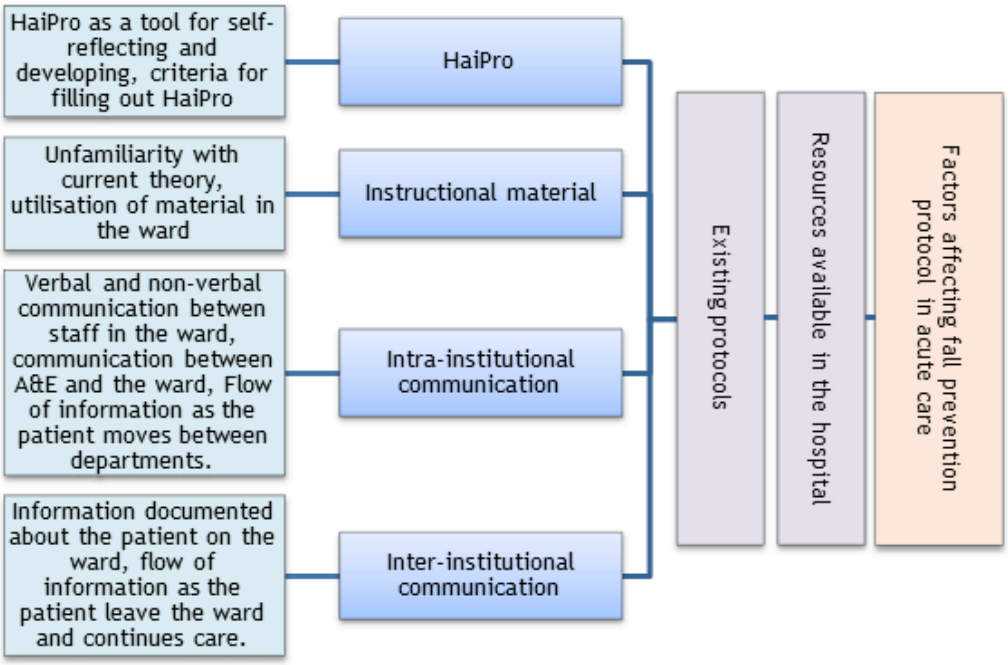

Figure 5: Existing protocols categories

6.4.1 HaiPro

HaiPro exists as a subcategory because it has a role in patient safety. It is a special application for incident reporting in the hospital setting. It affects fall prevention by giving real numbers of accidents which then identifies the state off all prevention in the hospital. Once a month in Haartman, a meeting is organised where staff goes through every accident and possible improvements are discussed. This in turn brings development in fall prevention.

Nurses did not have a clear understanding whether near misses should be reported in HaiPro. However, HaiPro was found to be a useful method in drawing attention to fall prevention and encouraging to self-reflect on the nurses' work methods. They commented that they are waiting for the data from HaiPro to bring new tools to the ward and create new ideas to prevent falls.

> *"I did not report anything because no injury occurred."*

> *"It is at least something useful when it draws attention to falls - when you do it in HaiPro."*

"I would say that probably not [serve it purpose well enough] if it is supposed to bring concrete results and more apparatus to the ward."

"When you fill it [HaiPro] out, it makes you think what you could have done differently and it leads to more thinking."

6.4.2 Instructional material

The ward's own instructional material is an extract from HUS –material, which is in turn an abridged version of the IKINÄ–project. Not all nurses were fully aware of the IKINÄ–project. The patients receive a piece of paper on their bed-side table where they are instructed to wear shoes and ring the bell to get assistance.

"I am not familiar with it [IKINÄ –project]."

"I have seen this [IKINÄ-project] on the internet."

"We put on the patient's table this kind of blue paper in which reads…[about what to do to prevent falls]."

6.4.3 Intra-institutional communication

Patients in the Haartman ward 5 are transferred from the A&E department in the same hospital. Nurses need to have a clear picture of the patients' functional capacity on arrival. Communication between wards has been described as a problem contributing to falls.

"I don't necessarily tell it [fall risk], but I write it in the text, for example, that the walking was a bit shaky."

"…When the patient comes you should always put on the first page if they are a fall risk."

"It also happens often that a patient is coming from A&E and many don't write anything about if the patient is mobile or what kind of mobility...that mobility has not been tested yet..."

6.4.4 Intra-institutional communication

Some of the patients continue their rehabilitation in different hospitals, whilst some of the patients are home care clients and some have further monitoring at their own health cente after discharge. This requires communication between institutions so that all parties involved would have a clear picture of the patient's change in health and abilities, as well as any incidents, however significant, concerning falls.

> *"The end report is usually like that when we have followed the activities to continued care. Normally I write in there do they move with aid of a walker, or aid of a nurse..."*

> *"If there is something special, then for sure [give practical advice further]."*

7 The modified Fall Risk Assessment Tool

Based on research in elderly homes Meyer, Köpke, Haastert and Mühlhauser (2009) claim that there is no significant difference in the clinical outcome between the nurses' clinical judgment alone and the standardized FRAT. They suggest that FRATs should be discontinued as they have "limited accuracy". By analysing in more detail the studies conducted on this topic, results show that all of the critics and supporters agree on one principle point: for maximum accuracy, appropriate FRATs should be adapted based on the patient profile and care given in the ward.

It is important to remember that a FRAT is not designed to be used instead of a nurse's own judgment, but to support it and be used as a checklist so that no major risk factor would go unnoticed. Also, it sets a standard for fall risk evaluation and prevention programs.

The FRAT formed as a product of this thesis has been informed by literature reviews, taking into consideration important concepts in predicting falls and those at risk in acute care, as well as data analysis from the group interview. Important concepts, such as time constraints and the need of the FRAT to be quick and easy to fill in were taken into consideration to make the FRAT appropriate for acute care. The suitability of this FRAT in acute care was evaluated on feedback from staff in Haartman Hospital ward 5.

7.1 FRAT parameters

The FRAT contains parameters used in the short FRAT suggested by Pajala (2012, 147-148), Schmid FRAT for acute care (Alberta Health Services 2009), Morse Fall Scale (Network of Care

2009), STRATIFY (Oliver et al. 1997) and a FRAT developed by Peninsula Health Falls Prevention Service, Australia (Department of Health 2011). FRATs were chosen that meet the needs of an acute ward (quick, easy to use and no prior education to use it needed) and are widely used.

FRATs proposed by Pajala (2012) are not suitable for many reasons. The long version contained in the IKINÄ guide is not appropriate as it is 4 pages long with an additional page of references (Pajala 2012, 149-153). On the other hand, the short version does not suit an acute ward as a Mini Mental State Examination (MMSE) score must be filled out and this is not calculated on a regular basis (Pajala 2012, 147, 148). Additionally, it lacks elimination problems as a risk factor which has been proved to have impact on almost 50% of falls (Dykes et al. 2010).

We included seven parameters to the FRAT: reason for admittance to hospital, previous fall history, elimination, mobility, mental/psychiatric state, medication and one immediate high-risk indicator: dizziness or orthostatic hypotension.

Age was excluded from the risk factors as in numerous studies it has been proven that even though risk of falling increases with age (Dykes 2010), age itself is not a risk factor (Kronfol, n.d.). Rather, it is the aggregation of the health issues coming with higher age that makes a person prone to falls.

‘Reason for admittance to the hospital’ holds key information on the mobility and balance of the patient: if the patient is admitted to the ward because of falling, the reason behind this may still be present, thus odds of patient falling again are high. Also, recent change in health status, such as general weakness might contribute to the future falls. General weakness can refer to infection, anemia, neurological disease etc; most of these make a patient fall prone.

‘Previous fall history’ as a criteria for fall risk assessment indicates that there is something wrong either with the gait balance; medicines affecting the patient; or the flooring is inappropriate, to name a few reasons. After the first fall(s), the elderly in particular fear falling again and as such refrain from carrying out daily activities in the same way. As a result, their social relations and mobility decrease (Boyd & Stevens 2009). By attempting to prevent another fall from occurring by ambulating less, the risk of falling is increased enormously (Boyd & Stevens 2009) as muscles weaken.

Mobility may be the most straightforward parameter of the FRAT: gait disturbance and use of an assistive devise are not only indicators of a risk of falling, but also risk factors themselves. Not to forget that mobility not only includes moving around but also participating in other

activities such as using the bathroom, putting on clothes, opening doors etc. Mobility is also related to the environment in which the patient occupies, so if they are in a hospital that is crowded with wheel chairs and assistive devices becoming obstacles in their path, this will increase the risk of falling.

Elimination problems (incontinence, diarrhea etc.) are not risk factors on their own; they force patients move back and forth to the toilet, thus raising the activity level. Dykes et al. (2010) refer to Tzeng in 2010 in finding that "45.2% of falls were related to toileting". This means elimination problems have a huge impact on the patients' wellbeing at the hospital. Some nurses might underestimate the significance of this finding. As an example a frail, elderly person that receives diuretics intravenously (meaning the need to urinate will increase suddenly and significantly) has the urge to go to the toilet. In a rush to get there the patient will forget precautions, such as put on slippers, grab the walker correctly, move slowly and with a steady step etc., and thus the fall risk will increase dramatically.

Haartman Hospital ward 5 regularly treats patients intoxicated with drugs, alcohol or both. Long term misuse of these substances leads to neurological disturbances resulting in gait disturbances. Moreover, often patients go through withdrawal symptoms during the hospital stay as they can't get the desirable drug/alcohol and therefore become very agitated, which is then treated with sedatives. The drowsiness from the sedatives affects gait stability significantly increasing the likelihood of falling. Nevertheless, in the group interview nurses claimed that nothing significant comes as a result of an intoxicated patient falling as they are 'used to it' and 'professionals at falling'. Contrary to this expressed opinion, every single fall is at risk of potentially serious consequences.

Pajala (2012) details an extensive list of medicines that increase the fall risk, of which the average patient in ward 5 takes two or more. These medications can result in drowsiness, sleepiness, orthostatic hypotension, lessened cognitive abilities etc. Beside that, especially in acute wards due to the amount of work, registered nurses do not have time to announce everyone who is getting medication affecting their psychomotor abilities; this checklists comes in handy in ensuring the flow of information.

Scoring methods relating to each of the factors was chosen based on the Schmid FRAT (Alberta Health Services 2009) and the short FRAT suggested by Pajala (2012, 147-148) as, out of the many FRATs available, these had some of the simplest ways of scoring. As previously discussed, risk factors included in this FRAT are ones that have the most effect on falling. Most of these factors were viewed as equally important, yet some had to be given more weight. For example, history of multiple fallings in the past three months is much more significant than one fall in the last 12 months. Therefore, it gets more weight i.e. a higher score.

Concerning utilisation of this FRAT, one must remember that in the process of writing this thesis it was not possible to test the scoring of the risk factors and to score the criteria in the most relevant way possible. Scores have been given based on findings in literature searches, data analysis and personal experiences.

The FRAT is produced in four languages to support international nurses; these are in Finnish, Swedish, English and Russian. Despite nurses in the interview claiming that foreign nurses' languages skills are good, a multicultural approach is still needed and could be nothing but beneficial. As discovered from literature searches, international nurses, especially at the beginning of their carreer in Finland, are worried about the affect of their language skills on patient safety (Ageeva & Jaanisalo 2013). Furthermore, TEHY's survey discovered the need to solve difficulties arising from language skills without compromising patient safety (Markkanen & Tammisto 2005). Selection of languages was informed by the most common languages of foreigners in Finland (Maahanmuuttovirasto 2012).

7.2 The FRAT trial in ward 5

As discovered earlier, one significant problem lies in the assessment of a fall risk when the patient is arriving at the ward. The FRAT proposed by (Pajala 2012) was modified to meet the needs in an acute ward. A modified FRAT, as a product of this research, was tried out in Haartman Hospital ward 5 for one week in February 2014 to help evaluate every incoming patient's risk for falling. The response rate was 19 forms, so not every single patient was evaluated for one reason or another. Nine patients out of 19 were determined to be at high risk for falling, and the status was marked as agreed in the patient's nursing care plan and the patient list.

During the week long trial, the experiment clearly highlighted the assessment of risk for falls and the staff discussed the issues informally on a daily basis. The staff paid more attention to the patient's mobility and assistive devices. It can be concluded that, although the response rate was not the initially agreed 100%, patient safety and especially fall prevention was in focus and the nursing staff will certainly remember to be more vigilant concerning fall prevention. Unfortunately, the nurses' feed back did not yield results in terms of propositions on how to improve the FRAT form, however the nurses who actually did use the form to assess the fall risk, felt that it was short enough and did not take too much time to fill in.

8 Discussion

The purpose of this thesis was to find factors that affected fall prevention in acute care and then to produce material suitable for the ward in which the research was conducted based on

the findings obtained. The findings interpreted from the data show that fall prevention in acute care is dependent upon resources available, more specifically human resources such as nursing skills and abilities, such as the knowledge of the nurse and how they perform fall prevention interventions and physical resources available in the hospital, such as equipment and protocol already in effect.

The group interview suggested that experience gained through work and real life situations is valued most by the nurses. This experience guides their interventions to prevent falls and informs their judgment about who is at risk of falling and how best to prevent it. Nurses rely on their own judgment and experience more than any hospital guidelines to prevent falls, but literature searches show that a nurse's own experience might not be true in every situation.

To elaborate, theory shows that falls are more likely to occur in the daytime, especially during shift changes due to less vigilance and insensitivity because more staff are available (Butcher 2013). During the group interview, one interviewee stated that according to their experience most falls happen in the night. Generalizations of nurses based on their professional experience could be a contributing factor to falls, but on the other hand can be a resource to prevent falls, for example from nurses' experience they expect the elderly to be more likely to fall.

Professional experience has taught the interviewees that everyone could be at risk of falling, but certain conditions make it more likely.

This study concluded that there is a gap between theory, intervention and assessing the risk of a patient falling. Extensive knowledge concerning fall prevention is useful only if it is translated into intervention, and interventions are only effective if they are targeted at the right people.

Studies define a fall as not just resulting in injury, but if the patient comes to floor level unintentionally without injury it is still a fall and significant. These falls still need to be reported because this patient could be at risk of falling again. The data collected showed that nurses did not have the same definition in mind, and considered a fall only significant if injury occurred. The implications of this finding show that many falls could be occurring and not being reported as it is easier to dismiss when there is no visible injury and they are not required to report or account for the fall. This means many fall prone patients can be at risk of falling again and no preventative measures are taken.

Part of the nurses' role is to help the patient to help themselves. For any intervention to be fully successful the patient needs to be an active participant in their own care. Naturally this

can only be obtained with fully cognitively aware patients. Patient empowerment is a useful tool in fall prevention. Nurses can educate the patient about fall prevention, for example showing physically how to properly use assistive devices, navigate the ward, cope with an altered state of health and to continually remind about the things that have been taught. The nurse cannot be continually in the presence of the patient, and so this is why it is such an important tool.

In Haartman Hospital ward 5, the current protocol is for patients at risk of falling to have guidelines on their bed-side table about how and what they need to do so that they do not fall, but this is not effective in preventing falls unless the patient has been given a fall risk status to begin with. Data also shows that not all the nurses are going through the tips with the patient, and it is just being left on their bed-side table.

Additionally, ways of preventing falls are continually being developed and the nurses in the interview felt it was important to be educated on the new equipment that comes and new guidelines developed so that they can do their best to prevent falls. Some nurses also felt that they did not lack any education in preventing falls, and this links back to the value put on the nurses' own judgment and experience. The analysis of succesful fall prevention stories by Dacenko-Grawe (2008), Butcher (2013) and others, show that staff education was one the most important points concerning this matter. Nurses need to know every step in the sequence of events leading to a fall and its consequences.

Ethical questions were raised in the group interview concerning restraining the patient to a chair to prevent falling. Is it ethical if the patient is forcefully prevented from falling by being strapped into a chair, or is it more important the patient is empowered to feel free and independent? These are difficult questions to answer, but is an important factor in fall prevention as how far does the nurse need to go in order to prevent falling? Nurses need to use their discretion when performing this intervention of using the seatbelt on the wheelchair and weigh up the benefits; for some patients this might be the safest way to prevent them from falling, but for others who have some functional capacity it could lead a higher risk of falling if they are not permitted to try to walk themselves and gather strength and balance through rehabilitative interventions.

Concerning patient empowerment, other less forceful ways of preventing falls were mentioned in the interview. One of them was trying to match similar patients in the room, so that they could give peer support to one another and feel safer. The nurses emphasized that they cannot be with the patient constantly and that roommates could help ring the bell for one another if something did occur or if they see that their roommate is wandering without assist-

ance. While this does not in itself prevent falls, it helps the nurse to know when a fall has occurred or potentially could.

Nursing interventions were emphasized in the interview and corroborated with fall prevention ideas in the background research conducted. These were discussed as if they were common knowledge, such as putting shoes on the patient before they get up to prevent slipping, putting rails up to prevent the patient rolling out of bed etc.

Finland is becoming more multicultural than in the past decades and this was raised in the interview when the participants commented on language problems they had encountered. This naturally impacted on empowering the patient to be careful in order to prevent falls and it affected the ways in which nurses carried out their fall preventative interventions. One nurse stated they could still communicate with body language, but it was not sufficient to relay the message fully. One of many steps in the fall prevention programme of Dacenko-Grawe and Holm (2008) was translating bed-side fall prevention notes into multiple languages. We believe that the same intervention should be performed in Finnish hospitals.

Communication between the nurse and the patient is a vital tool in creating trust, and through trust the patient can be empowered and feel less scared to rely on the nurse to aid them in mobility if so needed.

It was predicted that increasing multiculturalism in Finland, and especially with the influx of foreign health care professionals, would impact on the ability of foreign nurses to communicate with colleagues and patients if their mother tongue was not Finnish and consequently affect patient safety. Contrary to this assumption, the interviewees were unanimous that they have never encountered any problems with foreign staff and their communication relating to fall prevention. The nurses had only praise for their foreign colleagues' language abilities. However, foreign nurses might not have raised any issues concerning linguistic difficulties.

The nurses in the interview were very forthcoming with ideas relating to fall cessation. Some of these ideas included: installing cameras in rooms so that they could see the patient when they were not in the same room, ways of incorporating FRATs into the existing documentation software Pegasos, and installing doors with windows to the isolation rooms. Currently the doors are windowless and it is impossible to see the patient without entering. This is often time consuming and difficult for the nurse to do because they need to put on protective clothing and go through hand hygiene to just enter the patient room. The fact that nurses have thought about different ways to improve the situation and prevent falls shows that fall

prevention is not as effective as it could be in the ward and that improvements could be made.

The interviewees have access to many tools and assistive devices. It was not common knowledge but some nurses in the interview discovered that many tools such as slip proof socks had come to the ward as a result of falls reported through HaiPro in an effort to prevent accidents. HaiPro as a tool for preventing falls is useful because the health care professionals of the ward meet monthly to discuss accidents that occurred and how to improve. This continual self-development is a means of learning and improving to be better at preventing falls and identifying factors that affect them.

A common theme that arose, which was also reflected in the background theory as being crucial to fall prevention, was multi-faceted interventions through a multi-professional approach. This communication and cooperation means that knowledge from different areas of expertise can support one another and that every health care professional in the ward is orientated to preventing falls. Fall prevention is not solely a nursing intervention. Satisfaction in team work in Haartman Hospital ward 5 was expressed during the interview.

IKINÄ is the most current knowledge on fall prevention compiled into a guide. The material used in the ward, and given to the nurse to educate the patient, is extracted from this model. However, none of the nurses were familiar with this guide, which makes having this guide available in the ward ineffective in its purpose. We believe that this guide has not been 'marketed' properly among nurses.

Through observations in the ward, it has been noted that nurses do not always know when to put fall risks in the nursing care plan because strict criteria, to guide this decision and evaluate the fall risk, do not exist. This is a big issue in communication within the ward and is linked to the nurse's own judgment and professional experience. However, communication within the hospital is also flawed when insufficient information is passed along with the patient when they are transferred from A&E to the ward. Upon arrival at the ward, the nurse must then find out through communicating with the patient, their own judgment or through experience what the capacity of the patient is and whether they are at risk of falling.

This having been said, the same also applies for inter-institutional communication: the ward needs to pass along vital and detailed information about the patient and the changes in their condition and anything relating to perceived risk of falling or any incidents that occurred in the ward.

In their randomised controlled trial into the effectiveness of targeted falls prevention programmes in subacute hospital settings Haines, Bennell, Osborne and Hill (2004) found that the effectiveness of the fall prevention programme implemented (that did not include FRAT measurements) was “most obvious after 45 days of observation”. This finding might discourage some healthcare professionals from attempting to make changes in acute wards. However permanent efforts and implementation plans, including engagement of all of the staff, continuous education and reminders, are key factors to benefit the patient.

One week long trial and feedback of nurses show that the FRAT proposed is suitable concerning time constrains. It also raised awareness of fall prevention among the staff. Due to the fact that not everyone gave feedback, and no suggestions for improvement were made, it could be hard for nurses to implement this FRAT permanently and consistently in ward 5.

9 Limitations

While every effort has been made to give this study integrity and reliability, unavoidable limitations as such exist.

Qualitative research, as a method of interpreting and handling data, comes with its own limitations. “When they are taken up, they are obviously reinterpreted and picked to pieces: “Science no longer produces ‘absolute truths,’ which can uncritically be adopted. It furnishes limited offers for interpretation, which reach further than everyday theories but can be used in practice comparatively flexibly.” (An Introduction to Qualitative Research UWE Flick 2014, 14) When the raw data is taken and handled, generalisations are made when dealing with deconstructed sentences.

There are also no such things as ‘objectively true sentences’ and the data is informed by the interviewees and their experience. Qualitative data is open to interpretation of its meaning and may be interpreted differently by others. (An Introduction to Qualitative Research UWE Flick 2014, 14) In addition, qualitative research relies on the skills of the researcher and can be influenced by personal biases, due to the fact that the researcher is necessary to conduct and guide the interview (Anderson 2010).

Every attempt was made to remain unbiased, but the experience of two of the researchers having done practical placements in Haartman Hospital ward 5, one of whom is now a permanent member of staff helped identify patient falls as a problem in this ward.There were, however, some occasions when fall prevention as a subject came up that the nurses responded to the researcher’s presence in terms of what might be called ‘ethical correctness’. Some ward directions were followed meticulously when the researcher was on duty and still it

was common knowledge that at times, due to overly heavy work load, the same directions were overlooked

Limitations also arise in the scope of project. While the findings are appropriate to Haartman Hospital ward 5, the findings may not represent factors that affect fall prevention protocol in all acute wards. The FRAT (designed as a product of the research conducted) was made specifically for Haartman Hospital ward 5. Reliability comes from FRATs made for specific wards they will be used in, and as such this FRAT may not be reliable in other acute wards. Similarly, the conclusions made from the data gathered may not give the same results for other acute wards.

Furthermore, both practical nurses as well as registered nurses were interviewed to give a broader perspective on fall prevention in acute wards as these two professions work closely together. From the research, fall prevention relies on multi-professional co-operation, and the interview did not include doctors, physiotherapists, occupational therapists etc.

Also, not every member of staff was interviewed and the opinions and experiences shared in the group interview may not represent the fullest extent of every worker's opinions of fall prevention in ward 5. Also, since the multicultural aspect of fall prevention was included in the thesis, foreign nurses' perspectives would have contributed to a better picture of the situation. Sample size could be increased to gain further data.

Other limitations encountered were a lack of previous research relating to multiculturalism (in terms of patients and nursing staff) in Finland. The research conducted showed communication to be vital in fall cessation and further research could be done to gather data on how multiculturalism effects communication relating to fall prevention in Finland, as no research was found concerning this topic.

Despite assured confidentiality in the interview, by the nature of having a group interview, some interviewees may have felt like they could not express problems relating to fall prevention in their work place, or problems with foreign staff, therefore limiting the data. This may not have been the case, but it is still an important point to consider when discussing limitations of the study.

Finally, limitations also lie with the expertise of the nursing staff chosen to participate in the study. The participants appeared to take certain knowledge as a given, such as basic interventions to prevent falls and so did not go into detail specifically about these.

10 Trustworthiness and authenticity

Credibility is the most important aspect of trustworthiness. The people that are under study recognise the meaning they have given to a situation and the truth is connectable to their own social context. (Holloway & Wheeler 2010, 302) The trial experiment of FRAT in the ward did show the nursing staff understood the importance of assessment tool and recognized their contribution for the research project had not been tampered with.

Authenticity is achieved by staying true to ideas presented by the participants. The strategies which are used fill the criteria of presenting new insight into the concept under study. The study is authentic when it brings improvements into participant's lives and is applicable with similar groups as well. (Holloway & Wheeler 2010, 304) The product of the thesis, the FRAT form, is an assessment tool that can be implemented in other Haartman hospital wards as it is and it improves the quality of the nursing care. The assessment tool eases the nurses' decision making whether there is a fall risk or not.

11 Conclusion

A lot weighs on the shoulders of the health care professional; the longer a patient is hospitalized the more expensive it becomes and depletes resources. This increases the pressure for health care staff to help patients to rehabilitate as soon as possible, sometimes before they are ready. (Oliver, Britton, Seed, Martin and Hopper 1997) It is important that a hospital is a safe place where a patient can rehabilitate and get better, not a place for injuries to occur and for hospital stays to be unnecessarily lengthened.

Further research topics could be developing a flexible fall prevention toolkit for acute care to accommodate the needs of cognitively impaired patients. Nursing care staff would benefit as well from concise manual where the restrictions in resources, for example lack of time, are taken into consideration. Another proposed area for further study, could into the relationship between communication and falls, specifically in Finland which is becoming increasingly multicultural, as no research was found covering this area.

12 References

Ageeva, Y. & Jaanisalo, A. 2013. Lived Experiences of Immigrant Nurses in Finland. BBA. Degree Programme in Nursing. Tampere University of Applied Sciences.

An Introduction To Qualitative Research UWE Flick. 2014. 4th Edition. London: Sage publications.

Agostini, J.V., Baker, D.I. & Bogardus. S.T. 2001.Prevention of Falls in Hospitalized and Institutionalized Older People. The Agency for Healthcare Research and Quality.Accessed 2 January 2014.http://finland.fi/Public/default.aspx?contentid=160125&nodeid=37598&culture=en-US

Alberta Health Services. 2009. Accessed 1 November 2013.
http://www.albertahealthservices.ca/ps-1051701-fpp-schmid-risk-ass-tool.pdf

Anderson, C. 2010. Presenting and Evaluating Qualitative Research. American Journal of Pharmaceutical Education. Accessed 24 February 2014
http://www.medscape.com/viewarticle/731165_3

Boeije, H. 2010. Analysis in Qualitative Research. London: Sage Publications Ltd.

Bogdan, R. & Biklen, S. 1992. Qualitative Research for Education: An Introduction to Theory and Methods. MA: Allyn and Bacon.

Borland, A., Hollins, C. & Locke, J. 2013.Nurses' Understanding of Suitable Footwear For Older People. International Journal of Health Care Quality Assurance, 26(7), 653-665.

Boyd, R. & Stevens, J. A. 2009. Falls and Fear of Falling: Burden, Beliefs and Behaviours. Oxford Journals. Accessed 4 March 2014
http://ageing.oxfordjournals.org/content/38/4/423.long

Butcher, L. 2013.The No-Fall Zone. Hospitals & Health Networks, 87 (6), 26-30.

Currie, L. 2008. Fall and Injury Prevention. In: Hughes, R.G. (ed.) Patient Safety and Quality:

Dacenko-Grawe, L. & Holm, K. 2008. Evidence-Based Practice: A Falls Prevention Program that Continues to Work. MEDSURG Nursing, 17 (4) 223-227.

Department of Health. 2011. Falls Risk Assessment Tool (FRAT). Accessed 18 November 2013.
http://www.health.vic.gov.au/agedcare/maintaining/falls_dev/downloads/b2b_1a_frat.pdf

Dykes, P.C., Hou I-Ching, E., Soukup, J.R., Chang, F. & Lipsitz, S. 2007. A Case Control Study to Improve Accuracy of an Electronic Fall Prevention Toolkit. In: AMIA 2012 Annual Symposium. Informatics: Transforming Health and Healthcare. Accessed 7 November 2013.http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3540550/

Dykes, P.C., Carroll, D.L., Hurley, A.,Lipsitz, S., Benoit, A., Chang, F., Meltzer, S., Tsurikova, R., Zuyov, L. & Middleton, B. 2010. Fall Prevention in Acute Care Hospitals: A Randomized Trial. Journal of American Medical Association, 304 (17) 1912–1918.

Finlex. Hallituksen Esitykset. HE 90/2010. Accessed 24 March 2013
http://www.finlex.fi/fi/esitykset/he/2010/20100090?search%5Bpika%5D=HE%2090%2F2010%2C%2039%20§%20&search%5Btype%5D=pika#id1960729

Haines, T.P., Bennell, K.L., Osborne, R.H., Hill, K.D. 2004. Effectiveness of Targeted Falls Prevention Programme in Subacute Hospital Setting: Randomised Controlled Trial. British Medical Journal, 328 (7441) 676.

Hakala, S. 2013. Haartmanin Sairaala os 5 Perehdytyskansio. Helsinki.

Helovuo, A., Kinnunen, M., Peltomaa, K. & Pennanen, P. 2012. Potilasturvallisuus. Helsinki: Fioca Oy.

Hitcho, E.B., Krauss, M. J., Birge, S., Dunagan, W.C., Fischer, I., Johnson, S., Nast, P.A., Costantinou, E. & Fraser, V. J. 2004. Characteristics and Circumstances of Falls in a Hospital Setting a Prospective Analysis. Journal of General Internal Medicine, 19 (7), 732–739.

Holloway, I. & Wheeler, S. 2010. Qualitative Research in Nursing and Health Care. 3rdedition. Chichester: Wiley-Blackwell.

Ignatavicius D. 2000. Do You Help Staff Rise to the Fall-Prevention Challenge? Nursing Management. 31(1), 27-30. Accessed January 31, 2014.
http://www.ncbi.nlm.nih.gov/pubmed/10818937

Inkinen, R. 2012. Kaatumisten Ehkäisy Sairaalassa, Hoitolaitoksissa ja Kotona on Kaikkien Etu. Teemakatsaus 2/2012. Accessed 3 November 2013. http://www.thl.fi/thl-client/pdfs/e79b90ea-7d88-4225-bc09-6d10816a4fd1

Kinnunen, M. & Peltomaa, K. 2009. Potilasturvallisuus ensin. Helsinki: Edita Prima Oy.

Koivukangas, O. 2002.The Need for Multicultural Approach in Finland. Turku: Siirtolaisuusinstituutti. Accessed 4 January 2014.
http://www.migrationinstitute.fi/articles/045_Koivukangas.pdf

Korpela S. July 2008. Finnish Healthcare Goes Multicultural. This is Finland. Finland Promotion Board.

Kronfol, N. No Date. Biological, Medical and Behavioral Risk Factors on Falls. Accessed 8 February 2014.
http://www.who.int/ageing/projects/2.Biological,%20medical%20and%20behavioural%20risk%20factors%20on%20falls.pdf

Maahanmuuttovirasto. 2012. Maahanmuuton Vuosikatsaus 2012. Accessed 14 March 2014.
http://www.migri.fi/download/43811_43667_Maahanmuuton_tilastokatsaus2012_web.pdf?91caae8e92fbd088

Markkanen, K. & Tammisto, S. 2005. Maahanmuuttajat Hoitoalan Työyhteisöissä. Tehyn Selvitys Monikulttuurisuudesta, Julkaisusarja B: Selvityksiä 3/2005. Accessed 15 March 2014.
http://www.tehy.fi/@Bin/45363/Maahanmuutto.PDF

Meyer, G., Köpke, S., Haastert, B. & Mühlhauser, I. 2009.Comparison of a Fall Risk Assessment Tool With Nurses' Judgement Alone: a Cluster-Randomised Controlled Trial. Age and Ageing, 38 (4), 417-423.

Morse, J.M. 2009. Preventing Patient Falls. Establishing a Fall Intervention Program. 2nd edition. New York: Springer

NANDA International. 2011. Nursing Diagnoses : Definitions and Classification 2012-14. Chichester: Wiley-Blackwell. Book from EBL. Accessed 18 November2013.
http://www.laurea.eblib.com/patron/

Network of Care. 2009. Accessed 4 November 2013.
http://cf.networkofcare.org/library/Morse%20Fall%20Scale.pdf

Oliver, D. & Healey, F. 2009.Falls Risk Prediction Tools for Hospital Inpatients: Do They Work? Nursing Times, 105 (7), 18-21.

Oliver, D., Britton, M., Seed, P., Martin, F.C. & Hopper A.H. 1997. Development and Evaluation of Evidence Based Risk Assessment Tool (STRATIFY) to Predict Which Elderly Inpatients Will Fall: Case Control and Cohort Studies. British Medical Journal, 315 (7115), 1049–1053.

Pajala, S. 2012. Iäkkäiden Kaatumisen Ehkäisy. Tampere: Juvenes Print - Tampereen Yliopistopaino Oy.

ProFaNe. 2007. Manual for the Fall Prevention Classification System Version 1 (4th April 2007). Accessed 7 November 2013.
http://www.profane.eu.org/documents/Falls_Taxonomy.pdf

Shee, A. W., Phillips, B. & Hill, K. 2012. Comparison of two fall risk assessment tools (FRATs) targeting falls prevention in sub-acute care. Archives of Gerontology and Geriatrics 55 (3), 653–659. Article from ScienceDirect. Accessed 20 November 2013
http://www.sciencedirect.com/

Terveyden ja Hyvinvoinnin Laitos. 2013. Ulkomaalaistaustaiset Lääkärit ja Hoitajat Suomalaisessa Terveydenhuollossa. Haasteet ja Mahdollisuudet. Accessed 7 November 2013.
https://www.julkari.fi/bitstream/handle/10024/104416/URN_ISBN_978-952-245-857-5.pdf?sequence=1

Terveyden ja Hyvinvoinnin Haitos. 2014. Potilasturvallisuus. Accessed 20 January 2014.
http://www.thl.fi/fi_FI/web/potilasturvallisuus-fi/potilasturvallisuus

The Cochrane Collaboration. 2013. Interventions For Preventing Falls in Older People in Care Facilities and Hospitals (Review). Accessed 30 October 2013.
http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD005465.pub3/pdf

The Truax Group Healthcare Consulting Services: Patient Safety Solutions. 2013. Falls on Inpatient Psychiatry. Patient Safety Tip of the Week, January 15. Accessed 20 November2013.http://www.patientsafetysolutions.com/docs/January_15_2013_Falls_on_Inpatient_Psychiatry.htm

van Klei, W. A., Hoff, R. G., van Aarnhem, E. E., Simmermacher, R. K. J., Regli, L. P. E., Kappen, T. H., van Wolfswinkel, L., Kalkman, C. J., Buhre, W. F. & Peelen, L. M. 2012. Effects of the Introduction of the WHO “Surgical Safety Checklist” on In-Hospital Mortality: A Cohort Study. Annals of Surgery, 255 (1), 44-49.

13 Appendices

13.1 Appendix 1: Group discussion consent form

Opinnäytetyö: **KAATUMISEN EHKÄISYYN VAIKUTTAVAT TEKIJÄT AKUUTILLA VUODEOSASTOLLA**

Emma Lumerto, Inara Mammadova ja Birgitta Tetri
Laurea Ammattikorkeakoulu, Degree Program in Nursing

Ryhmähaastattelu **ke 15.1.2014 klo 13.00** Haartmanin sairaala os 5, neuvotteluhuone

Tilaisuudessa käymme läpi kysymyksiä ja mietimme vaihtoehtoja järkevän ja toteutettavissa olevan ohjeistuksen löytymiseksi kaatumisen ehkäisyyn ja kaatumisriskin arviointiin.
Keskustelu on luottamuksellinen ja osallistujien henkilökohtaiset mielipiteet/kokemukset eivät tule valmiissa työssä esiin niin, että yksittäinen vastaaja olisi tunnistettavissa. Keskustelu nauhoitetaan ja litteroinnin jälkeen audiomateriaali hävitetään.

Annan suostumukseni ryhmäkeskustelun nauhoittamiseen sekä materiaalin käyttämiseen opinnäytetyön empiirisen osuuden pohjana.

Helsingissä, 15.1. 2014

13.2 Appendix 2: Group interview questionnaire

1. Do you know how many falls occurred in the ward during 2012-2013? If not, why?
2. What is the reason behind the majority of falls? Is there a certain situation, place, time of the day?
3. Do you report every fall via HaiPro?
4. Do you think HaiPro is useful? How has it helped you to prevent falls?
5. Do you use the current fall risk prevention guidelines? If not, why?
6. Has one of your patients ever fallen during your shift and how did you react in that situation?
7. When you are responsible for a patient who could potentially fall, have you urged the patient to ring the bell to have safer ambulation?
8. Do you pass the information about patients at risk of falling to the rehabilitation center? Do you give these institutions practical advice concerning specific patients?
9. Do you think that you have adequate resources for preventing falls? If not, what would you need?
10. In your opinion, what age group is susceptible to falling? Why?
11. Do you feel that you need extra guidance in predicting fall risks? Have you got any guidance?
12. Are you familiar with the IKINÄ-project? Have you used it in fall prediction? If yes, do you think it is helpful? If not, what do you think should be changed?
13. If it could be made and available in the ward, would you use an electronic fall assessment kit for for every patient?
14. If you have worked in other acute wards, what fall preventative methods do they use that are not used here?
15. How do you relay information concerning a patient's likelihood of falling? For example, orally or written in a nursing care plan?
16. What do you do personally to prevent falls?
17. Do you feel that you do enough to prevent falls?
18. Have you experienced challenges regarding fall risk prevention and patient guidance with foreign patients or foreign nurses? How?
19. What kind of experiences do you have concerning multiprofessional team work in fall prevention? Does this multi-professional co-operation work?

13.3 Appendix 3: Fall Risk Assessment Tool in English

DATE: _____ PATIENT'S AGE: _____

		Score
Reason for admittance to hospital	Fall	1
	General weakness	1
	Other	0
Fall history in the last 12 months	0	0
	≥ 1 in the last 12 months	1
	1 in the last 3 months	2
	> 1 in the last 3 months	3
Mobility	Ambulates with no gait disturbance	0
	Ambulates or transfers with an assist-ive device	1
	Ambulates with an unsteady gait and no assistance	2
	Unable to ambulate or transfer	0
Elimination (First two not to be marked in case of patient having a Foley catheter)	Urinary incontinence	1
	Diuretics used	1
	Diarrhea	1
Mental/psychiatric state	Alert, oriented	0
	Under effect of a substance	1
	Agitated	1
	Confused (sometimes/all the time)	1
	Comatose/unresponsive	0
Medication (Pain medication, sedatives, anti-depressants, anti-Parkinson's, anti-hypertensives, sleeping pills):	0	0
	1	1
	2	2
	>2	3

TOTAL:_____

0-4 pts = LOW fall risk
5 pts and over = HIGH fall risk → "Fall Risk" stated in nursing care plan

Automatic high-risk status:
- Dizziness/orthostatic hypotension → "fall risk" to the nursing care

References: IKINÄ -guide

13.4 Appendix 4: Fall Risk Assessment Tool in Finnish

PVM: _____ POTILAAN IKÄ:_____

		Pisteet
Tulosyy	Kaatuminen	1
	Yleistilan lasku	1
	Muu	0
Kaatumisia 12kk aikana (Tulosyy/ potilastiedoissa)	0	0
	≥ 1 tai useampi 12kk aikana	1
	1 viimeisen 3kk aikana	2
	Useampia kaatumisia 3 kk aikana	3
Liikkumiskyky (Päivystyksen antama tieto)	Liikkuu vaikeuksitta	0
	Liikkuu apuvälineen turvin	1
	Liikkuu epävarmasti, ei apuvälinettä käytössä	2
	Vuodepotilas	0
Erittäminen (Kahta ensimmäistä kohtaa ei merkitä, jos potilaalla on kestokatetri)	Inkontinentti	1
	Diureetti käytössä	1
	Ripuli	1
Psyykkinen tila (Päivystyksen antama tieto)	Hereillä, orientoitunut	0
	Päihteiden vaikutuksen alainen	1
	Levoton	1
	Sekava (ajoittain/jatkuvasti)	1
	Tajuton/ ei heräteltävissä	0
Lääkitys (Kolmio/pkv -kipu-, rauhoittava-, masennus-, Parkinson-, verenpaine- ja unilääkitys): (Lääkelistalla)	0	0
	1	1
	2	2
	>2	3

Pisteet yhteensä _____

0-4 p. = MATALA kaatumisriski
Yli 5 p. = KORKEA kaatumisriski → "kaatumisriski" hoitokertomukseen

Automaattinen korkean riskin potilas:
Huimaus/orthostaattinen hypotensio → "kaatumisriski" hoitokertomukseen

Lähde: IKINÄ -guide

13.5 Appendix 5: Fall Risk Assessment Tool in Russian

ДАТА: _____ ВОЗРАСТ БОЛЬНОГО: _____

		Очки
Причина прибывания в больнице	Падание	1
	Общая слабость	1
	Прочее	0
История падения в течении последних 12 месяцев	Никакой	0
	Одно или более за последние 12 месяцев	1
	Одно за последние 3 месяца	2
	Более одного за последние 3 месяца	3
Подвижность:	Передвижение без каких-либо нарушений походки	0
	Передвижение или перемещение с помощью вспомогательного устройства	1
	Передвижение нетвердой походкой самостоятельно	2
	Не может передвигаться или перемещаться без посторонней помощи	0
Испражнение(Не отмечать первые два в случае использования катетера Фолей)	Недержание мочи	1
	Употребление мочегонных средств	1
	Диарея	1
Психическое состояние во время пребывания	В сознании/ориентируется	0
	Под воздействием вещества	1
	Возбужденный	1
	Растерянный (иногда/ во время пребывания больнице)	1
	В коматозном не реагирующем состоянии	0
Принимаемые лекарства: (Болеутоляющие, седативные, антидепрессанты, лечение Паркинсона, гипотензивные средства, снотворное)	0	0
	1	1
	2	2
	>2	3

Общее количество очков _____

0-4 очков = НИЗКИЙ риск падения
5 и более очков = ВЫСОКИЙ риск падения → " риск падения" в план за уходом
Автоматический статус высокого риска:

- **Головокружение / ортостатическая гипотензия → "риск падения" в план за уходом**

Ссылка: IKINÄ -opas

13.6 Appendix 6: Fall Risk Assessment Tool in Swedish

Datum: _____ **PATIENTS ÅLDER:_____**

		Poäng
Orsak för ankomst	Vurpa	1
	Sänkning i kompetens förmåga	1
	Annat	0
Antal vurpor under de senaste 12 månader	0	0
	1 eller flera inom 12 månader	1
	1 inom 3 månader	2
	Flera inom 3 månader	3
Rörelse kapacitet	Gång utan svårigheter	0
	Gång med redskap	1
	Osäker gång, inga adekvata redskap i bruk	2
	Säng patient	0
Urinering och avföring (De två första alternativen inte märkas vid patient med en Foley kateter)	Inkontinent	1
	Diuretikum	1
	Diarré	1
Mental status (Mer än en option kan väljas)	Vaken, orienterad	0
	Under påverkan av berusningsmedel	1
	Upprörd	1
	Förvirrad (tidvis/beständigt)	1
	Medvetslös/ ej väkbar	0
Medicinering (Analgetika, lugnande, depression, Parkinsons sjukdom, blodtryck eller narkotika)	0	0
	1	1
	2	2
	>2	3

Total poäng _____

0-4 p. = LÅG risk för vurpa
Över 5 p. = HÖG risk för vurpa→ ”risken för vurpa” skrivs i vård plan
Automatisk högrisk patient:

- Yrsel/orthostatisk hypotension → “risken för vurpa” skrivs i vård plan.

Källa: IKINÄ -guide