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Improving a staff strategic plan

Case: A Plastic Surgery Ward, Töölö Hospital

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Background:
Nurses' utilization of their working hours has been subject to discussion and criticism. Nurses are at times accused of spending limited time with their patients and too much time at their desks. As health care needs increase and budgets decrease, there is less flexibility in staffing and a greater importance is put in determining staffing needs. Care indicators are increasingly needed in nursing to ensure the quality of care, to help quantify the number of staff required to provide care that is safe for both the patients and the health professionals.

This study was carried out in the Plastic Surgery Ward in Töölö Hospital. The need for this study arose from the staff dimensioning challenges faced in the ward. The study was initiated by the Ward Manager of the Plastic Surgery Ward, but also because of the staff requests.

Objective and Aim:
The purpose of this study was to improve the staff strategic plan in the Plastic Surgery Ward. The objective of the current state analysis was to receive data regarding nurses' use of time. The analysis of the data suggested that the aim should be to adevelop functional and efficient staffing strategy for the ward.

Method:
An action research was conducted for this study. Quantitative method was used to collect the data. The Self-Assessment Form, based on The Nursing Activities Score Classification was used to estimate the time usage on direct nursing, indirect nursing, departmental work and personal time. The data was provided by Registered Nurses (RN) and Practical Nurses (PN), who were working at the ward in patient care, in the field. There were a total of 188 forms that were filled and returned, with a response rate of 94%.

Results:
It turned out that RNs generally use 55 % of their time for direct nursing and 30 % for indirect nursing. PNs use 62 % of their time for direct nursing, and for indirect nursing they use 22 %. Of all nursing activities, the RNs use most of their time in preparation and administration of medications (11.4 %), while the PNs use their time mostly in toileting and hygiene care of patients (12.3 %). Communication and nursing documentation together were also nursing activities where nurses use much of their time, with RNs' 20% and PNs' 17.3% respectively. RNs and PNs use a lot of time in cleaning and household management (23 min), equipment stocking and inventory (10 min), transferring patients (33 min), office work (11 min), waiting and searching things (12 min) and other activities that are not patient-specific or related to the patient care.

Discussion:
Nurses use much of their time on activities that are not related to nursing care, especially RNs. These activities should be decreased or even cut out totally by redelegating and by finding departmental efficiencies in uses of technology and improved workflow. Nurses should use more time with their patients to make sure the patient care is patient-oriented and high-quality.

Conclusion:
Special attention should be paid to Registered Nurses' job descriptions, as well as, well-assigned work tasks, targeting professional skills, hiring necessary staff and utilizing technology. These approaches can help the Ward improve its strategic goals so that it will be more efficient and effective.

Implications for nursing management:
This study presents suggestions how to improve staff strategic planning and staffing structure in a Plastic Surgery Ward. These proposed collaborative solutions can improve the quality of patient care and safety, a reduction in errors, cost-effectiveness, and patients' and nurses' satisfaction.

Keywords	*Staff strategic planning, Nursing activities, Direct and Indirect Nursing Care, Use of time, Workload, Nursing staff, Nursing Education*

Preface

"And once the storm is over, you won't remember how
You made it through, how you managed to survive.
You won't even be sure, whether the storm is really over.
But one thing is certain. When you come out of the storm,
You won't be the same person who walked in.
That's what this storm's all about."

~ Haruki Murakami

My thesis process was quite a storm, more like a thunderstorm. It was a long and disciplined way to go, but at last I have got the job done. I learned a lot about doing research during the process and received a lot of new information about nurses' staff dimensioning and its strategic planning in the organization.

*I want to thank my Lecturer **Marianne Pitkäjärvi**, for supervising my thesis. I have received a lot of guidance from her, particularly in the final stage of my work. I'm very grateful to **Saija Chadha** for the final corrections to my work. I also want to thank the Executive Director of Nursing **Terhi Mäkelä** and the Ward Manager **Eila Haaraniemi** of the Plastic Surgery Ward in Töölö Hospital, the Helsinki University Central Hospital District. They have enabled the implementation of this study.*

*I want to express my special gratitude to the respondents who participated in the survey, to **the Registered Nurses** and **the Practical Nurses** of the Plastic Surgery Ward, in Töölö Hospital. The extensive and versatile answers I received from them have helped me to write a comprehensive and interesting research about the nurses' use of time and staffing dimensioning. They brought valuable content to my work with their answers. They used to be my coworkers when I started this thesis process. I really miss those moments while I used to work with them in a plastic surgery patient care.*

My family was very supportive and patient during my thesis process and throughout my studies. I was going through some difficult times in my life, especially during the winter of 2017. The thing about the storms in our lives is that no matter how familiar they become or how many times we face them, sometimes the relentless battering of the waves just gets to us. I was so exhausted from trying to keep my head above the water that I was ready to give up and call it quits. I'm so blessed, that with my family's support and love, I was able to face those challenges and it made me a stronger person. It made me a survivor.

I want to thank my amazing sisters **Janna Nadav** and **Sanna Koponen** for your encouragement and support. Thank you for listening to all the phone calls while I was expressing my frustration to you. You two made me believe in myself. Thank you for being there for me. You both mean the world to me.

I also want to express my appreciation to **Ed Baines** and **Lila Levy** for allowing me to finish my studies and encouraging me to complete it. Thank you for walking with me through this storm. You guys are the best teachers I ever had. My knowledge of English language improved so much while spending time with you. Thank you for coming into my life, and being as amazing as you are. You two have a very special place in my heart.

Last, but most importantly, I want to thank my loving husband, **Aaron Narbonne**. You're my rock, my shield and my stronghold. I'm truly happy to have you as my best friend. Thank you for having all that patience for me, while I was doing my Master's studies. Also, **Hailey**, our lovely little daughter, who came into our lives during this storm. I humbly apologize for all the hours I had to spend studying. I would rather have had spent that time with you. I promise, I'll pay you back every second, my sweet little monkey. You're the light of my life.

During the thesis process I grew up, both, as a wife and as a mother, Obut most of all as a professional in the field of health business management. The last three years was a very hectic time in my life, while I was studying for my Master's degree. Now, that I'm at the end of the storm, I see my glorious rainbow. I feel quite proud of my accomplishment. Without my family and loved ones, I wouldn't be standing here. I'm so blessed having you all in my life and now, sharing this joy with me. I love you all so much. A million times thank you!

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List of abbreviations

HUH	Helsinki University Hospital
HUCH	Helsinki University Central Hospital
NIC	Nursing Interventions Classifications
PN	Practical Nurse
RN	Registered Nurse

Contents

Appendices

List of Figures used in this study

List of Diagrams and Tables used in this study

1 Introduction

Nurses' utilization of their working hours has been subject to discussion and criticism over the past years. Nurses are at times accused of spending limited time with their patients and too much time at their desk. (Lundgren & Segesten 2001.) According to Partanen (2002), it is important that the staffing is proper from the point of view of the quality and effectiveness of health care. As health care needs increase and budgets decrease, there is less flexibility in staffing and a greater importance is put to determining staffing needs. (Sawatzky-Dickson & Bodnaryk, 2009.)

There is evidence that patients would like to spend more time with nurses (Lundgren & Segesta 2001). Many studies (Sochalski 2004, Kalish 2006, Duffield et al. 2008, Furåker 2009, and Percey 2010) also show that nursing staff believe that their time has not had sufficient nursing care and patients are left behind. The time nurses and patients spend together is linked to a reduction in errors, improved patient outcomes, and greater patient and nurse satisfaction (Westbrook, Duffield, Li & Creswik 2011). Therefore, staffing plans need to be formulated and evaluated in order to ensure that patients receive the best possible care. (Sawatzky-Dickson & Bodnaryki, 2009).

Measuring the average nursing care time is an objective measure used to assess the quantity and quality of the nursing staff in hospitals. It allows hospitals to evaluate the condition of the existing human resources. (Kakushi & Evora, 2014). Units must have staffing goals that are linked to the best evidence in patient outcomes in order to facilitate ongoing staff planning. (Sawatzky-Dickson & Bodnaryki, 2009.) Kakushi & Evora (2014) continue, that identifying the nursing workload is key to determining the needed workforce of health professionals.

Care indicators are increasingly needed in nursing to ensure the quality of care, to help quantify the number of staff required to provide care that is safe for both the patients and the health professionals. (Kakushi & Evora, 2014). Kakushi & Evora (2014) continue that the instruments for assessing a patient's clinical condition and the required care needs have become indispensable in efforts to improve the cost-effectiveness of health care. The time that nurses use to provide patient care must be measured, and the tools used to measure the workload should also consider indirect care activities. (Kakushi & Evora, 2014).

The purpose of this Master's study is to provide information about evaluation and planning of staff dimensioning on the needs of the Plastic Surgery Ward. According to the results of the data the aim was to develop functional and efficient staff strategic approach in the Plastic Surgery Ward. The findings of the study will help to improve staff strategic planning, nurse scheduling and staffing structure in the Plastic Surgery Ward. The results can improve the quality of patient care and safety, a reduction in errors, cost-effectiveness, and patients' and nurses' satisfaction.

2 Theoretical background

2.1 Nursing education

According to Ministry of Education of Finland (2006), **a Registered Nurse (RN)** is an expert in nursing, whose role in society is patient care. The RN supports individuals, families and communities to define, achieve and maintain the health of the changing circumstances and different operating environments. The RN brings expertise by cooperating with multidisciplinary professions and between different administrative bodies, which requires responsibility and a clear vision of their own areas of responsibility. The RN is responsible for the professional skills and the development of the profession. The RN implements, manages and evaluates evidence-based nursing care and is responsible for the research based on the quality of nursing and its development. (Ministry of Education of Finland, 2006; Metropolia, 2018).

RN as a profession requires strong ethical and professional decision-making skills. The RN is able to acquire and critically evaluate information and use it to justify her or his activities and the work community development and assessment. The RN uses evidence-based nursing for the benefit of professional expertise, information and care/treatment recommendations, and research based on the patient's needs and experiences. The RN's work is based on nursing science. (Ministry of Education of Finland, 2006; Tehy, 2018; Sairaanhoitajaliitto, 2018; Metropolia, 2018).

Multidisciplinary knowledge bases are used in professional decision-making in nursing. Nursing expertise requires the RNs to have up-to-date theoretical knowledge based on research data produced by nursing science, medicine and pharmacology and social and behavioral medicine. Working in a nursing profession requires strong ethical and

professional decision-making skills. The RN is able to acquire and critically evaluate information and use it as the basis of his/hers activity and the development and evaluation of his/hers work community. The RN is responsible for developing his / her professional skills. He/she implements, leads and evaluates evidence-based nursing and is responsible for research-based nursing quality and its development. (Ministry of Education of Finland, 2006; Finnish Nurses Association, 2018; Tehy 2018, Sairaanhoitajaliitto, 2018).

According to Ministry of Education of Finland (2006), **a Practical Nurse (PN)** is responsible for the good basic care of the patients, which is an important part of the overall care and rehabilitation of the patient. Good basic patient care also prevents complications secondary to the initial conditions treated including pressure ulcers, skin problems and infections. The PN's work involves close cooperation with other professional groups. The tasks include patient guidance, preparing studies and measures, and monitoring them afterwards. Work requires flexibility and the ability to make quick solutions and act accordingly. (Ministry of Education of Finland, 2006).

It is demanding for PNs to work closely with the patient and his/hers relatives. This work is based on extensive knowledge and good interaction skills with different people. It requires knowledge of the professional laws, continuous maintenance of professional skills and the development of their own work and work habits. Ensuring patient safety is the core element of his/her work. The ethical principles of the PN in working are respect for human dignity and self-determination, justice, equality, responsibility and communality. Patient's ethical guidelines describe the social function of the profession and its ethical principles. These instructions will help a close relative to work in a complicated and sometimes very controversial environment. (Ministry of Education of Finland, 2006; Super, 2018).

A PN provides basic nursing care. Most of the time, this means keeping patients comfortable and happy as much as possible. Some of the typical duties of a PN include, but are not limited to, monitoring patient health by taking vital signs, maintaining patient health records and providing basic care, including bathing, toileting and feeding. A PN also provides basic nursing care, including the application of bandages and the insertion of catheters. Providing companionship is important, as well as explaining, discussing, and listening to patients about their conditions. (Ministry of Education of Finland, 2006; Super, 2018).

A PN works under the supervision of a RN in caring for patients. They assist RNs by performing basic medical procedures such as checking vital signs and giving medication, and can also supervise Nursing Aides. The major differences between an RN and PN is the level of education. Registered Nurses are trained in institutes of higher education and Practical Nurses graduate from vocational institutions. The Practical Nursing diploma is a broad-based social and health care programme. PN programs are much shorter in length than RN programs. The PN degree has 180 credit points and RN degree has 210 credit points. A Bachelor Science of Nursing program will usually take about three and half years to complete, while the PN program can take up to three years. RN education also focuses on team leadership, pharmacology, research, as well as legal/ethical issues. (Ministry of Education of Finland, 2006; Tehy, 2018; Sairaanhoitajaliitto, 2018; Super, 2018; Metropolia, 2018).

2.2 Direct care and indirect care interventions

At the department work, in practical nursing, nurses spend a lot of time in patient care, performing a variety of nursing functions. These nursing activities can be divided into direct and indirect care work. (Partanen 2002.) According to the Nursing Interventions Classification (NIC), direct care intervention is a treatment performed through interaction with the patient(s), direct social actions and counselling. (Kakushi & Evora, 2014). Partanen (2002) continues that, direct care is the performance that happens beside a patient. These functions include communication / control, medication, nutrition, excretion, hygiene, transportation, movement / posture therapy, medical rotations, observation, vital signs, the taking of samples and the nursing measures. (Partanen, 2002)

Indirect care intervention is a treatment performed away from the patient, but on his/her behalf or on behalf of a group of patients, where these actions support the overall effectiveness of direct care interventions. (Kakushi & Evora, 2014). Indirect nursing is nursing which does not happen in the immediate vicinity of the patient. These functions include recording, reporting, other communication, medications and preparatory measures, studies and analysis of their responses, patients' inputs and outputs and waiting / searching (a colleague, a physician, call, etc.). (Partanen, 2002.)

2.3 The dimensioning of the nursing staff in nursing care

Staff dimensioning in nursing refers to the production of nursing services by the persons who provide them. Services that include the nursing care are produced to the largest possible number of patients, in a cost-effective and humanly effective way so that desired results of patient outcomes will be achieved. This also ensures that the nursing staff satisfaction needs are met. (Partanen 2002, Morris et al. 2007.)

The aim of the staff dimensioning is to ensure that the quality of the service and the effectiveness are based on the number, competence and well-being of staff. (Partanen 2002, Morris et al. 2007.) Staff dimensioning is part of staff planning, which comprises most of the executive and managerial tasks in staff strategy and personnel action. It entails verifying such things as qualifications, well-being and work of the staff as well as continuously allocating staff to various tasks and work shifts. It can be said that one of the essential functions of staff planning is to ensure that the staff-related resources are properly tailored and targeted. (Kauhanen 2006.)

Devising a staff plan policy is a legal obligation for the employer, but it is also a reasonable personnel policy. Although the minimum content of the personnel planning is regulated by law, its exact form is determined by the needs of the organization. Staff planning policy is good to see as a genuine tool for better personnel policy implementation, and not only that the statutory minimum obligations are fulfilled. It is important to draw up concrete and goal-oriented plans to have a real impact in staff planning policy. (Skurnik-Järvinen, 2010.)

Staff dimensioning is considered to be successful when the patients' needs have been taken into consideration. Sufficient numbers of qualified staff must give appropriate care with high quantity, quality and effectiveness to the greatest possible number of patients, in as humanly as possible and in an effective way. (Partanen 2002, Morris et al, 2007) Sädevirta (1994) sums up that the human resources management aims at getting the people needed for the service of the organization, keeping the employees in the organization employed (motivation, encouragement), rewarding good performance, and also developing people and supporting the work ability. A key issue in staff dimensioning is to ensure that the right people are doing the right tasks, at the right time and in the right way. (Kauhanen 2004).

3 Purpose, aims and research questions

This study was carried out in a Plastic Surgery Ward in Töölö Hospital. The purpose of the study was to improve a staff strategic plan in the Plastic Surgery Ward. The point is that the nurses evaluate their own use of time at the direct and indirect nursing care by using a Self-Assessment Form **[Appendices 4&5].** According to the results of the data, the aim is to develop a functional and efficient staff strategic approach in the Plastic Surgery Ward.

Research questions:

1. How do Registered Nurses and Practical Nurses use their time in nursing care in the Plastic Surgery Ward?

2. How can the results of distribution of nursing care be used to improve nurse staff strategic planning in the Plastic Surgery Ward?

4 Methodology

The University of Applied Sciences' emphasis is linked to regional development and employment. Therefore, the purpose of studies carried out at Universities of Applied Sciences are to be professionally-oriented degrees. According to the law of University of Applied Science (351/2003), the higher education focuses on the demands of the working environment and its development requirements as well as on research and artistic premises-based teaching. The aim is to support the professional growth and placement of professional expert tasks of the individual. (Vilkka, 2005). An action research has been selected as a research method for this thesis, because its purpose is to reach ordinary people and their everyday activities. Action research provides a new kind of understanding of everyday life while striving to approach the development of working life professional practices. Action research can be defined as a process that aims to change and develop things even better in organization, says Vilkka (2005).

4.1 Action research

Action research is a process by which change is achieved and new knowledge about a situation is generated. These two objectives go hand-in-hand to a greater or lesser degree in most action research studies. It is difficult to change a situation without working to understand it more fully, and in trying better to understand things. During the process the possibilities for change often emerges. (Williamson, et al. 2012).

Action research has quite recently been adopted by healthcare professionals seeking to develop aspects of their practice and their organizations. It is not just a 'tool' for practice development or change in management. (Williamson, et al. 2012). Action research involves healthcare practitioners conducting systematic enquiries in order to help them improve their own practices. This in turn can enhance their working environment and the working environments of those who are part of it – clients, patients, and users. The purpose of undertaking action research is to bring about change in a specific context. (Koshy et al. 2011). Williamson, et al. (2012) continues that, action research can be highly effective as a tool for achieving organizational change in health care organizations.

O'Leary's cycles of action research shown in the *Figure 1* following, portray action research as a cyclic process which takes shape as knowledge emerges. Cycles converge towards better situational understanding and improved action implementation; and are based in evaluative practice that alters between action and critical reflection. Action research is seen as an experiential learning approach, to change, where the goal is to continually refine the methods, data, and interpretation in light of the understanding development in each earlier cycle. (Koshy et al. 2011).

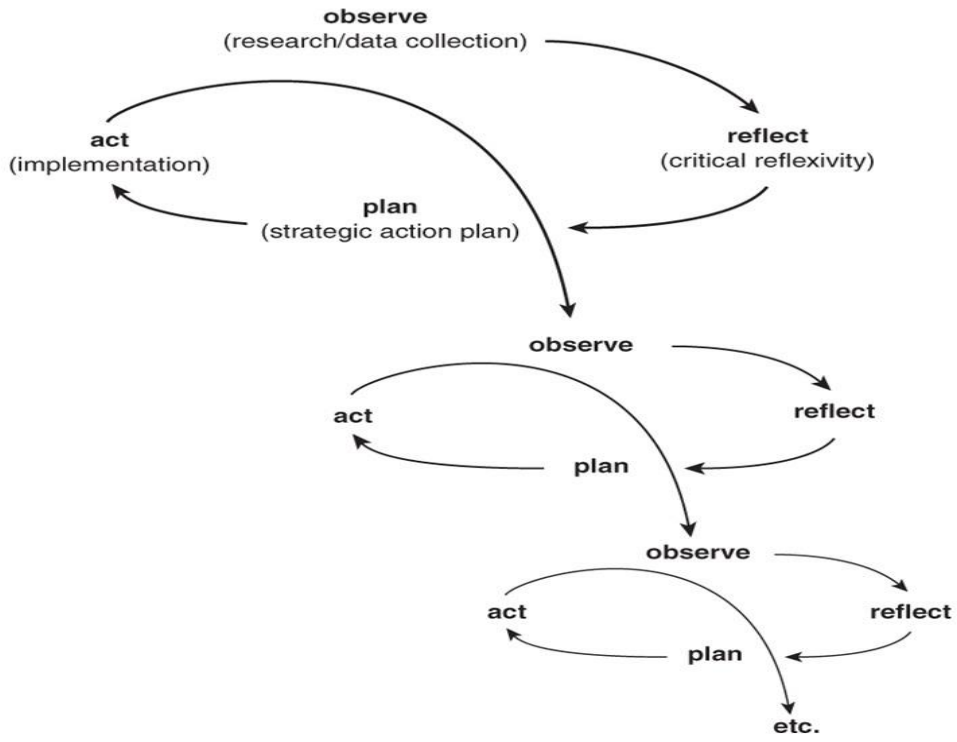


Figure 1 O'Leary's cycles of action research (adapted from Koshy, Heather, & Valsa, 2010)

Action research by its nature is process-like, for through cycles that follow each other, the operations of the business are subjected to ongoing development. (Kananen, 2013). This means that action research must have cycles that are workable. When observing action (or evaluating action), the outcomes of the action, both intended and unintended, are examined with a view to see: that the original reflection (can also be called constructing) is fitted; the actions taken matched reflecting; the action was taken in an appropriate manner; and what feeds into the next cycle of reflecting, planning and action. So the cycle continues. (Coghlan & Brannick, 2014. Koshy et al. 2011).

Reflexivity is important in action research. It is a continuous process undertaken by the researcher of reflecting on their actions and behaviour in relation to participants and the research process. (Williamson, et al. 2012). Coghlan & Brannick (2014) continues that reflection is a process of interiority and is normally explained as a process of stepping back from experience to question it, and to have insights and understanding with a view to planning further action. (Coghlan & Brannick, 2014).

In this study, action research was used as a research method, because it is usually used by healthcare professionals seeking to develop aspects of their practice and their

organizations. The purpose of undertaking action research is that it's reliable, but it also brings about change in specific context. Action research can be highly effective as a tool for achieving organizational change in health care organizations. The key concepts in action research include a better understanding, participation, improvement, reform, problem finding, problem solving, a step-by-step process, modification and theory building. (Koshy et al. 2011; Williamson, et al. 2012).

4.2 Using quantitative method in action research

Quantitative research requires theories or models of a phenomenon subject to research or an understanding of the phenomenon exists. (Kananen, 2013). Internal and external factors (variables) influencing the phenomenon are known because calculations for quantitative research cannot be conducted without knowing what is to be counted (what). (Kananen, 2013). When using a quantitative research, it provides answers to questions, how much, how often, and how many. The study illustrates how different things are different from each other and how they relate to each other. (Vilkka 2007: 13-14). At this study the quantitative approach suits the best when measuring time of use, to ensure that the data that has been collected is as reliable as possible.

Quantitative research is concerned with the measurement of external phenomena, using hypotheses to analyse variables with the help of structured instruments to collect data such as questionnaires, observation forms, interviews and rating scales. The research data is organized, classified and categorized into meaningful units of measurement which then is interpreted to answer the research question(s) at hand. (Williamson, et al. 2012; 32, Vilkka 2007).

4.3 Methods of collecting data for quantitative research

Workload measurement refers to all undertakings to assess the amount of nursing and / or its level. The workload of nursing care refers to all the activities that are caused by patients, colleagues, operational policies, procedures, practices or routines. (Partanen, 2002). Partanen (2002) continues, that the methods of workload or working time measurements are generally divided into two groups: methods based on an evaluation and methods based on data collection. (Partanen 2002). This study used both methods.

First, information was collected on a systematic data collection process, and then the data was evaluated.

The measurement of standard time usage is based on the assumption that most of the care work may be divided into discrete tasks or functions. The time used to perform them can be determined and that way standard (mean) times can be calculated for each tasks. (Partanen 2002). The use of activity-based calculating method is related to the determination of the average nursing care grade in specific time. The ultimate aim was originally to improve productivity through measurement and analysis work. (Partanen, 2002). Burke et al. (2000) continues, that use of a structured form is considerably increased reliability and usefulness of reporting, compared to the open reporting system. (Burke et al. 2000).

Partanen (2002) claims that employees' working time can be detected by using either a continuous detection or as the function of calculation - studies, intermittently, at regular intervals. Continuous observation, most commonly through an external observation is considered to provide the results to be produced, but it is laborious and time consuming, especially in the wider use. The staff self-made so-called self-reporting or self-observation data collection is another way to measure the average time. Self-reporting problems are: staff resistance and lack of motivation, laborious training, accurate recording of uncertainty, particularly in busy work situations and retrospective recognition memory. Also, the difficulty of consensus between the classifiers testing of difficulty is seen as a self-reporting problem. In fact, reporting the advantage of economy of the method is presented, as obtained from large data sets, minimal disturbance of patients and caregivers good knowledge of their own work. (Partanen, 2002). According to Rissanen, Toivanen & Miettinen (2005) the working time monitoring and analysis of the results in the work unit also allows for the development of the content of nursing.

The importance of planning cannot be over-emphasized. Aims must be made clear and objectives must be listed unambiguously. (Koshy et al. 2011). According to Kananen (2013) quantitative research produces numbers to structured questions. This way the action research cycles converge towards better situation understanding and improved action implementation. (Kanenen, 2013). The idea of this study was to create a better understanding of nurses' use of time in the Plastic Surgery Ward. When improving staff planning, it has a tremendous impact on the work of the entire ward. While using an action research in this study it has many benefits. It can help solving problems, by helping

to use researcher's own knowledge and skills to systematically forge better practice. It can empower researcher to be an ongoing problem solver and experimenter. It can help the researcher to use what she currently knows more effectively and expand and deepen it in an ongoing and powerful way. (Levin, 2006.)

The objective of the study was to collect data of nurses' use of time. The self-assessment form **[Appendices 4&5]**, based on The Nursing Activities Score classification **[Appendices 6&7]** was used to estimate the direct/indirect nursing care time, departmental time and personal time respectively. A similar kind of tool method has been used in several kinds of other research and there have been successful results. This tool was created specifically for nurses who were working in patient care. In this study, the data was collected only from the Registered Nurses and the Practical Nurses, who were working at the ward, specifically in the field (as opposed to other groups including administrative staff and other non-nursing staff, but also the polyclinic nurses). The research tool "The Nursing Activities Score Classification" was originally copied (with permission) from Partanen (2002) study, and it was modified to be more suitable for the Plastic Surgery Ward in the Töölö Hospital. The researcher sent 1) A Cover Letter for Nurses **[Appendices 2&3]**, 2) the Self-Assessment Form **[Appendices 4&5]**, and 3) the Nursing Activities Score Classification clarifications **[Appendices 6&7]** to the recipients. This allowed the target group to familiarize themselves with the Self-Assessment Form and to assist with answering the questions appropriately for the purposes of the study.

4.4 Methods of data analysis

The aim of quantitative research is to formulate a proactive research problem, to utilize the theory of measurement, and to find and explain differences. The purpose of quantitative research is to explain, describe, map, compare or predict natural phenomena or features and things that affect a human being. (Vilkka 2007, 18–19). The quantitative research method aims to find the variables arguments justified by numbers and statistical links. This is possible, when the research data is grouped into the table format as the observation matrix, i.e. the values of the variables containing data. Excel spreadsheet was seen as a best way to categorize all the results. The detection matrix is easy to make in an Excel spreadsheet because it is most commonly used by organizations and businesses and therefore easy to implement. (Vilkka 2015, 110–113.)

The Self-Assessment Form was the standardized survey used in this study to collect the research data. All forms were identical and had the same base. Data was gathered and collected systematically. The researcher got the results as check marks from the completed Self-Assessment Forms. The check marks that were on the forms were changed into minutes. One check mark meant 15 minutes of nurses' use of time in nursing care. After that the minutes were divided among all the shifts. The researcher got the average use of time how the typical nurse used his/her time in the specific shift. All the check marks had to be marked according to how the nurse spend his/her day during that shift, in 15 minutes periods. When the researcher had all the results evaluated, she made several diagrams and analyzed the results comparing the findings to one and other. Descriptive statistics (frequencies and cross tabulations) were used to analyse the data.

5 Research setting

The research was done at the Plastic Surgery Ward in Töölö Hospital. Töölö Hospital is part of Helsinki University Hospital (HUH). Orthopedic and traumatology, hand surgery, plastic surgery and neurosurgery patients are examined, treated and rehabilitated at the hospital. Töölö Hospital is the largest unit in the HUH area specializing in the treatment of trauma patients. Injured patients from Helsinki and patients with severe injuries from all across Uusimaa province are admitted for treatment. (HUH, 2017).

Plastic Surgery Ward in Töölö Hospital provides care for adult patients requiring demanding plastic surgery. Patients admitted to the ward typically suffer from acute or chronic ulcers, skin cancer or soft tissue sarcomas, or require delayed breast reconstruction or tissue defect reconstructions following an injury. Patients undergoing gender reassignment are also treated on the ward. (HUH, 2017). Plastic Surgery Ward has physically 33 patient beds at the ward. 26 of the patient places are officially in use. There are three six-bedded rooms, three four-bedded rooms, one double room, and two single rooms. (Stated as of 18th of April 2017).

At the Plastic Surgery Ward, there is one Ward Manager and one Ward Manager Assistant. At the ward, there are 9 permanent Practical Nurses (PN), 8 of whom work full time (100%, which is 38h in a week) and one at 75%. There are 15 Registered Nurses (RN) working with permanent contracts, while 8 of the RNs are working with temporary

contracts. 19 of all RN's work full time while 5 work part-time (3 at 78%, 1 at 65% and 1 at 35%). All in all, there are 9 PNs and 23 RNs who are working in the field in the Plastic Surgery Ward. (Stated as of 18th of April 2017).

The staff working on the ward is divided into three different teams. Sometimes there are only two teams, depending on the staff situation. Each team has about the same number of patients. A Ward Manager Assistant, who is a head nurse on the ward, divides the teams according to specific patient requirements, and how many experienced nurses are working during the shift. If the ward is divided in three groups, team number 1 has one six-bedded room, one four-bedded room and one single room. Team number 2 has two six-bedded rooms. Team number 3 has one double room, two four-bedded rooms and one single room. This is the usual arrangement in the ward. The ward is officially only for 26 patients, yet there are 34 beds for patients. One team is supposed to have a maximum of 9 patients, while the other two teams have only a maximum of 8 patients. There could be 12 patients or even more in each team depending on the situation. (Stated as of 18th of April 2017).

The Plastic Surgery Department is a multi-professional organization. In this study only those who work in nursing care have been selected for this research study. During the field work, a researcher of this study was counting how many PNs and RNs were working on each shift. The number of nurses during the shifts may affect the outcome of the results. The validity and the reliability of the research was considered during the study.

6 Results

6.1 Response statistics

The data in the time-tracking database consisted of Registered Nurses' and Practical Nurses' work-related monitoring of working time for two weeks at the Plastic Surgery Department between Monday morning 15th of May and Monday morning 29th of May, in 2017. Nurses were able to return their filled forms in the sealed boxes, which were placed in the staff room and in the staff office. The empty forms were located next to the boxes. There were a total of 188 forms that were filled and returned, with a response rate of 94%. (100% = 200 forms). According to all returned responses, RNs accounted for 116 and PNs accounted for 66 of all completed responses. This makes RNs response rate

92.1% (n = 116/126) and PNs 89.2% (n = 66/74). The proportion of those who did not report their professional name, date and/or time, so called 'unclassified', was only 3% (n = 6) of all responses. During this analysis those responses were not included in this study, this was because it was impossible to categorize them without the required parameters for classification. That being said, some of the nurses did not report their experiences, but because they provided the date and time information, they were included in this study. All the results with information regarding the nurses' experiences were included in this study even when the date or/and time was missing. This was because they were analyzed as all shifts together, not by the shift or the date they worked.

There were 126 (63 %) Registered Nurses and 74 (37 %) Practical Nurses working during the two-week study period. During those two weeks there were total 218 shifts together, when double shifts were counted as two shifts. 141 RN's shifts and 77 PN's shifts. *Table 1* following shows the number of RNs and PNs working in morning, evening, middle and night shifts during the two week period. In this study the middle shift was counted as an evening shift. It started from 10-11 a.m. and ended at 6-7 p.m. Morning shift typically started from 7:15-7:30 a.m. and ended anywhere between 1 p.m. to 4 p.m. Evening shift typically started around 1 p.m. and ended at 9 p.m. Morning- evening and middle shifts were usually 7-9 hours shifts, but mostly 8 hours shifts. However, night shift usually started at 8:30 p.m. and ended at 7:30-8:00 a.m. Night shift is 11 hours shift, and during the weekends 11 hours and 30 minutes shift. Double shift normally starts at 7:15 (7:30 a.m. at weekends and holidays), and ends at 9:00 p.m. It's almost 14 hours shift.

There were more RN's shifts on the first week. There were 76 RN's (=53.9%) shifts during the first week, and 65 RN's (=46.1%) on the second week. There was only 7.8 % difference between the two weeks of RN's shifts. There were more PN's shifts on the second week. There were 32 PN's (=41.6%) shifts during the first week, and 45 PN's (=58.4%) on the second one. This means that on the second week there were 16, 8 % more PN's shifts than the week before. There were always 3 nurses working in each night shifts; 2 RNs and one PN. During the whole week, there were 200 nurses working in every shifts. The statistical results was calculated and checked by the Ward Manager Assistant with the researcher of this study after the field work was done.

Table 1 *Number of nurses working in morning, evening, middle and night shifts during the two weeks period*

		MORNING SHIFT		DOUBLE SHIFT		EVENING SHIFT		MIDDLE SHIFT	NIGHT SHIFT	
WEEKDAYS	**DATE**	RN	PN	RN	PN	RN	PN	RN	RN	PN
Monday	8th	3	2	2	-	3	1	-	2	1
Tuesday	9th	2	1	2	-	2	2	1	2	1
Wednesday	10th	5	1	1	-	3	2	-	2	1
Thursday	11th	3	3	1	-	3	2	1	2	1
Friday	12th	5	1	-	1	3	2	-	2	1
Saturday	13th	3	2	1	-	3	1	-	2	1
Sunday	14th	2	1	2	1	2	-	-	2	1
TOTAL		**23**	**11**	**9**	**2**	**19**	**10**	**2**	**14**	**7**

		MORNING SHIFT		DOUBLE SHIFT		EVENING SHIFT		MIDDLE SHIFT	NIGHT SHIFT	
WEEKDAYS	**DATE**	RN	PN	RN	PN	RN	PN	RN	RN	PN
Monday	15th	4	2	-	1	3	2	-	2	1
Tuesday	16th	3	3	1	-	3	2	1	2	1
Wednesday	17th	4	3	-	1	2	1	-	2	1
Thursday	18th	3	2	-	1	3	2	1	2	1
Friday	19th	4	2	-	1	3	2	-	2	1
Saturday	20th	4	2	-	-	3	3	-	2	1
Sunday	21st	2	2	2	-	2	2	-	2	1
TOTAL		**24**	**16**	**3**	**4**	**19**	**14**	**2**	**14**	**7**

6.2 Results by nurses' work experiences

According to the years of work experience **Registered Nurses** had in the Plastic Surgery ward, RN used his/hers time in nursing interventions as follows: Direct nursing: RN with 5-10 years of work experience used 235 minutes (total 468) in direct nursing which was the lowest number, and also significantly lower than the other categories. Measuring it in

percentage terms it is 51 % comparing it to other nursing interventions, while RN with 1-5 years of work experience used 60 % (295/492 min) in direct nursing. Indirect nursing of all RNs had difference between 133 minutes to 166 minutes. This is 33 minutes difference. RN with 1-5 years experience had number of 27 % in indirect nursing when RNs with experience of 5-10 years, it was 33 %. Departmental work: RNs with 5-10 years of experience used 13 % of their time in departmental work. This number was very different than other nursing categories, which was between 7-9 %. Personal time: RN with 5-10 years of work experience spend only 3 % of their time in their personal time. This number was also very different than other nursing categories, which was between 6-7 %. *Figure 2* and *Diagram 1* following show the typical shift of RN categorized by experience what RN had in the Plastic Surgery Ward. *Table 2* below shows the statistics of RNs' shifts according to the experience in the Ward, which may explain the distribution of the results.

Table 2 *Statistics of the shifts of Registered Nurses according to their years of experience in the ward*

Total	Less than 1 year	1-5 years	5-10 years	Over 10 years
108	33	31	3	41

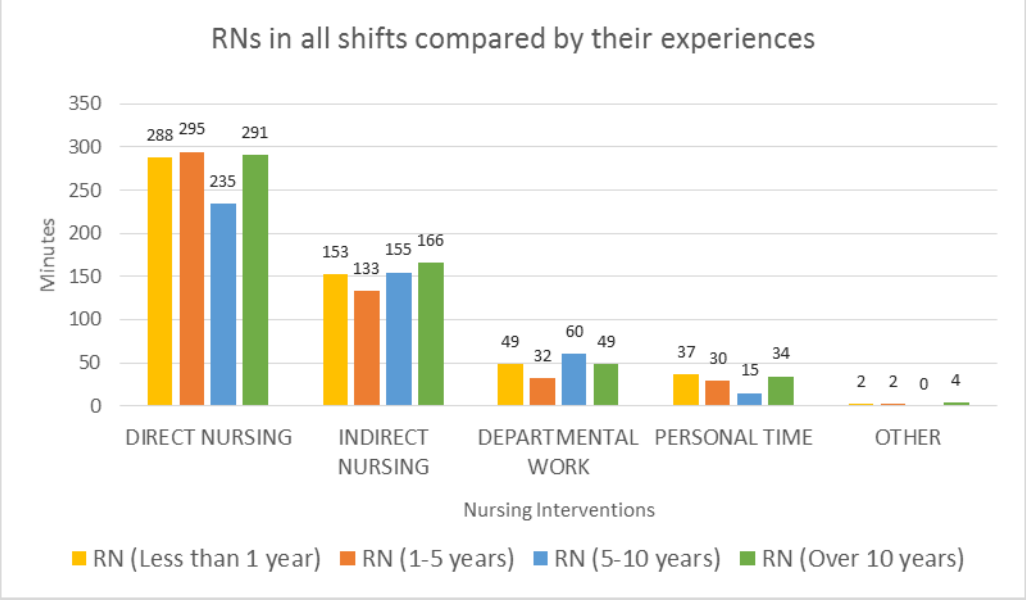


Figure 2 *Registered Nurses use of time in all shifts compared by years of work of experience*

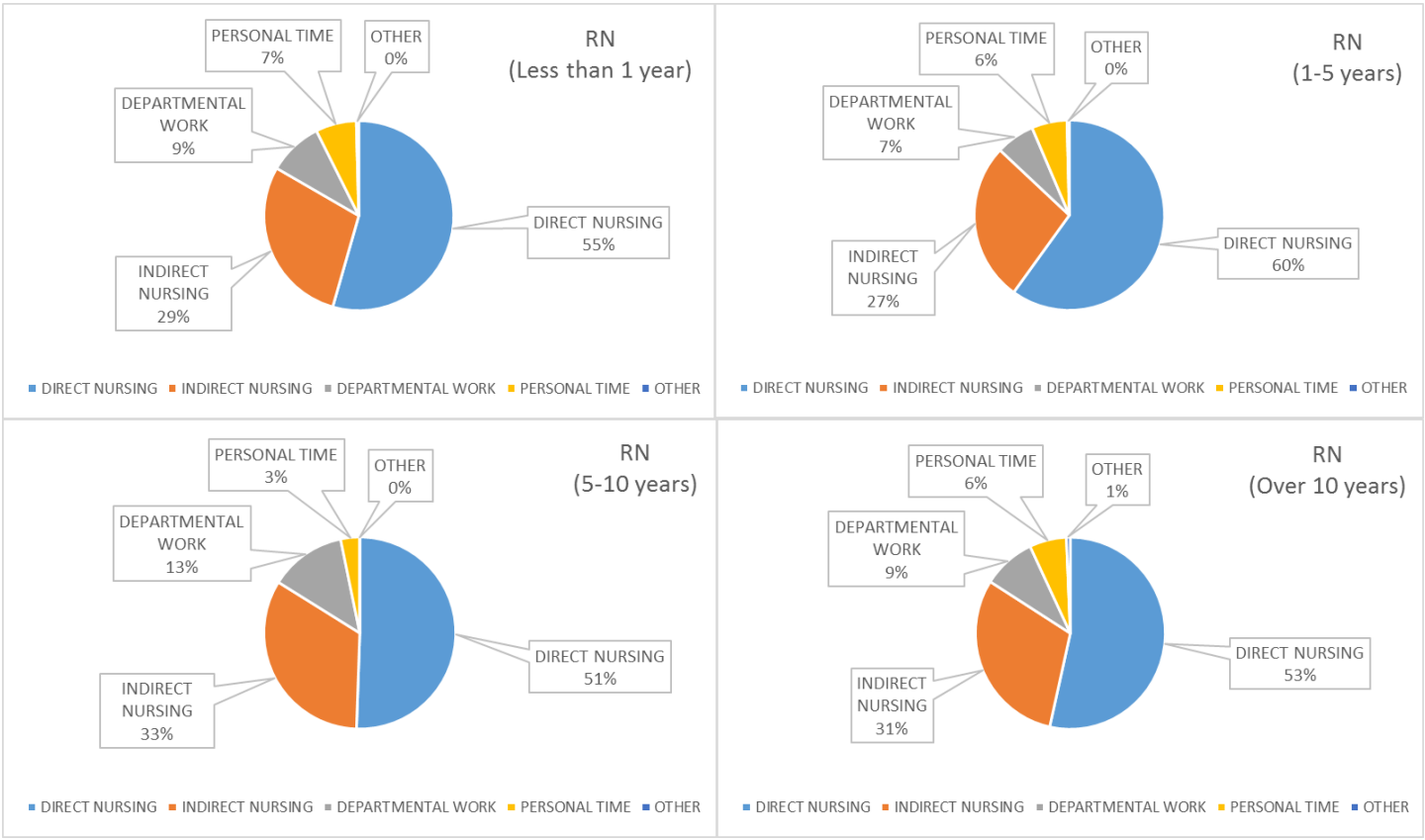


Diagram 1 *Registered Nurses use of time in all shifts compared by years of work experience in percentage terms*

Depending on the amount of work experience **Practical Nurses** have in the Plastic Surgery ward, PN used his/her time in nursing interventions as follows. Direct nursing: PN who had less than 1 year and 5-10 years of experience used less time (293–294 minutes) in direct nursing, than PN who had 1-5 years experience (323 minutes). The most time in direct nursing was used by PN who had over 10 years of experience (333 minutes). Indirect nursing: PNs with 5-10 years of experience used 128 minutes in indirect nursing, when the other groups used between 101 to 110 minutes. Departmental work: PN with 5-10 years of experience spend 68 minutes (13 %) of their time in departmental work. This number was very different than other nursing categories, which was between 35–47 minutes (7-9 %). Personal time: Time used for personal time by the PNs was distributed quite evenly, between 30–39 minutes (6-7 %). *Figure 3* and *Diagram 2* following show the typical shift of PN as categorized by years of work experience. *Table 3* shows the statistics of PN's shifts according to the years of work experience in the Ward, which may explain the distribution of the results. At the end, the *Figure 4* following shows both RN's and PN's use of time in all shifts categorized by nursing interventions compared by years of work experience in the Ward.

Table 3 *Statistics of the shifts of Practical Nurses according to years of work experience in the ward*

Total	Less than 1 year	1-5 years	5-10 years	Over 10 years
62	21	12	6	23

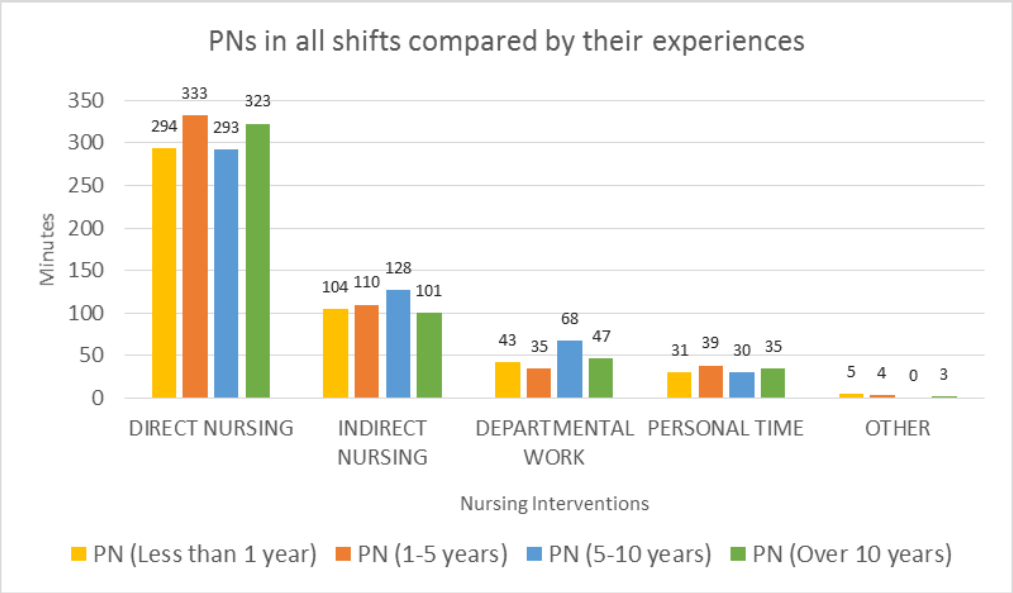


Figure 3 *Practical Nurse use of time in all shifts as compared by years of work experience*

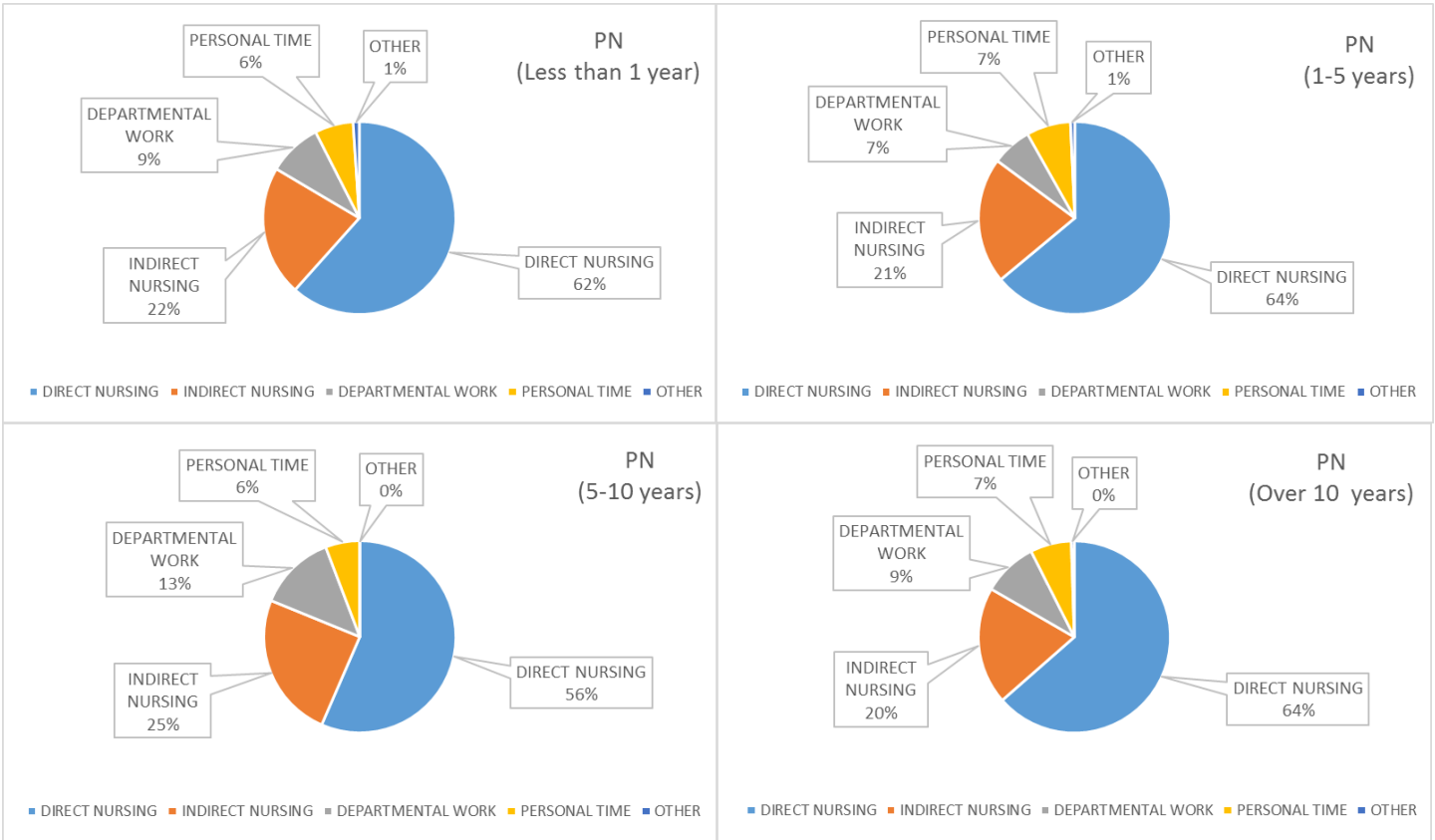


Diagram 2 *Practical Nurses use of time in all shifts as compared by years of work experience in percentage terms*

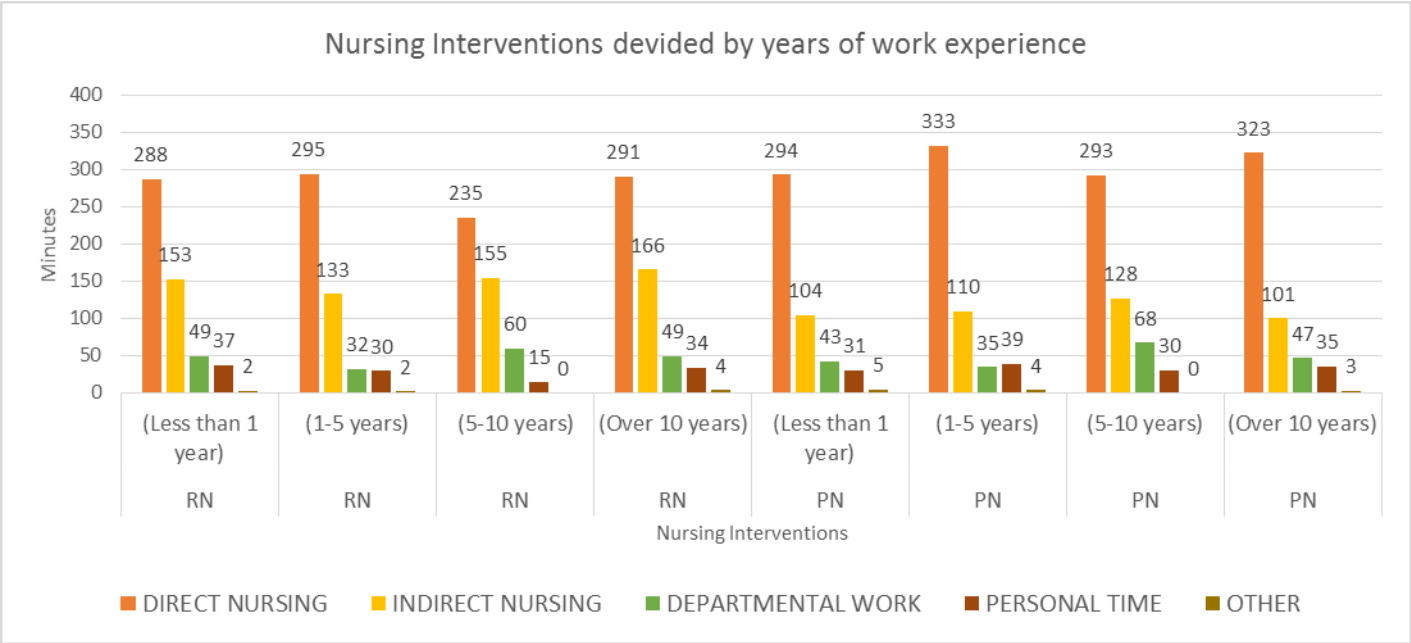


Figure 4 *Registered Nurse and Practical Nurses use of time in all shifts categorized by nursing interventions as compared by years of work experience in the ward*

6.3 Results by the shifts

6.3.1 Morning shift

In the morning shifts the Registered Nurse used his/her time in nursing interventions as follows: Direct nursing: 281 minutes (4h 41min). Indirect nursing: 125 minutes (2h 5min). Departmental work: 37min. Personal time: 29min. Other: 4min. All together: 476 minutes (7h 56min). *Figure 5* below shows the typical morning shift of RN.

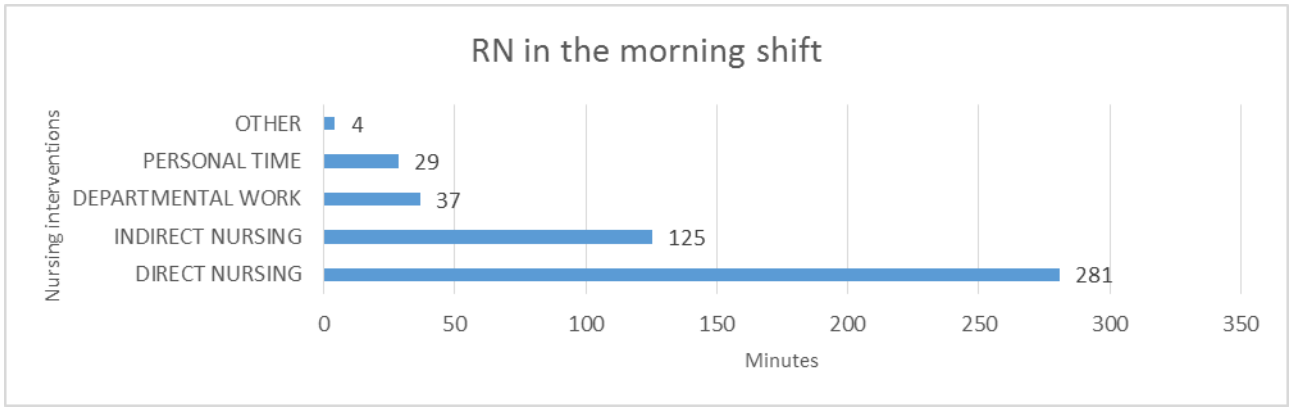


Figure 5 *Registered Nurse use of time in the morning shift categorized by nursing interventions*

In the morning shifts the Practical Nurse used his/hers time in nursing interventions as follows: Direct nursing: 323 minutes (5h 23min). Indirect nursing: 106 minutes (1h 46min). Departmental work: 29 min. Personal time: 36 min. Other: 3 min. All together: 497 minutes (8h 17min). *Figure 6* below shows the typical morning shift of PN.

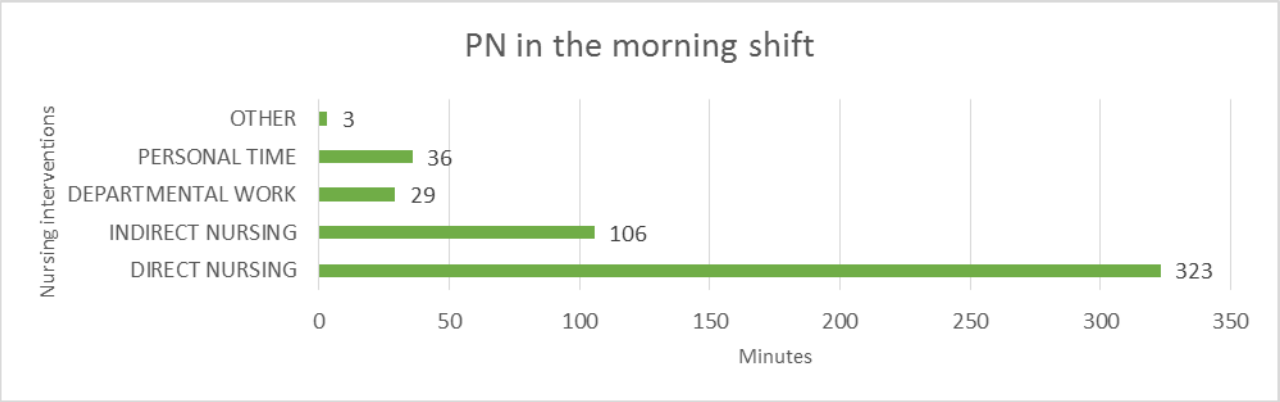


Figure 6 *Practical Nurse use of time in all shifts categorized by nursing interventions*

In the morning shift PN used 65 % in direct nursing while RN used 59 %. PN used 6 % more time for direct nursing than RN. On the other hand, RN uses 26 % in indirect nursing while PN used 21 %. RN used 5 % more time for indirect nursing than PN. RN used 8 % and PN uses 6 % in departmental work. For personal time RN used 6 % and PN used 7 %. Other time both used 1 percent. *Figure 7* and *Diagram 3* following show the typical morning shift of RN and PN.

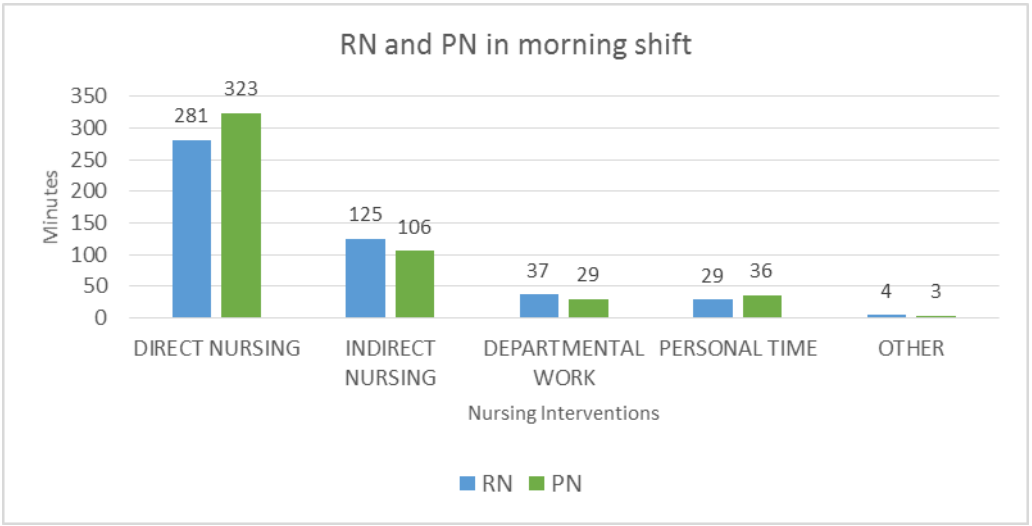


Figure 7 *Registered Nurse and Practical Nurse use of time in the morning shift categorized by nursing interventions*

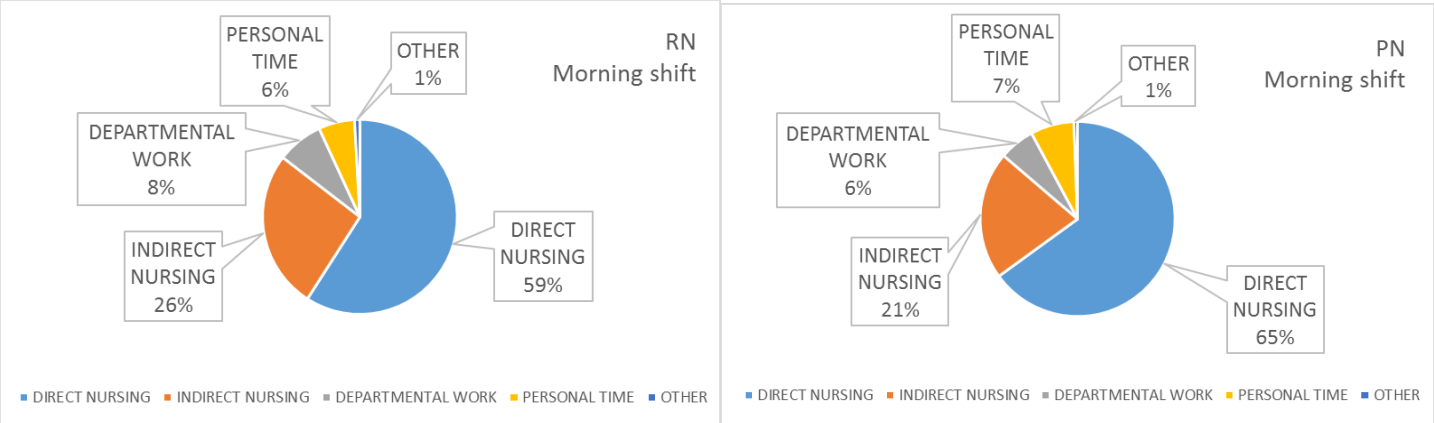


Diagram 3 *Registered Nurse and Practical Nurse use of time in morning shifts categorized by nursing interventions*

6.3.2 Double shift

In the double shifts RN used his/her time in nursing interventions as follows: Direct nursing: 435 minutes (7h 15min). Indirect nursing: 238 minutes (3h 58min). Departmental work: 82 min (1h 22min). Personal time: 50 min. Other: 0 min. All together: 808 minutes (13h 17min). *Figure 8* below shows the typical double shift of RN.

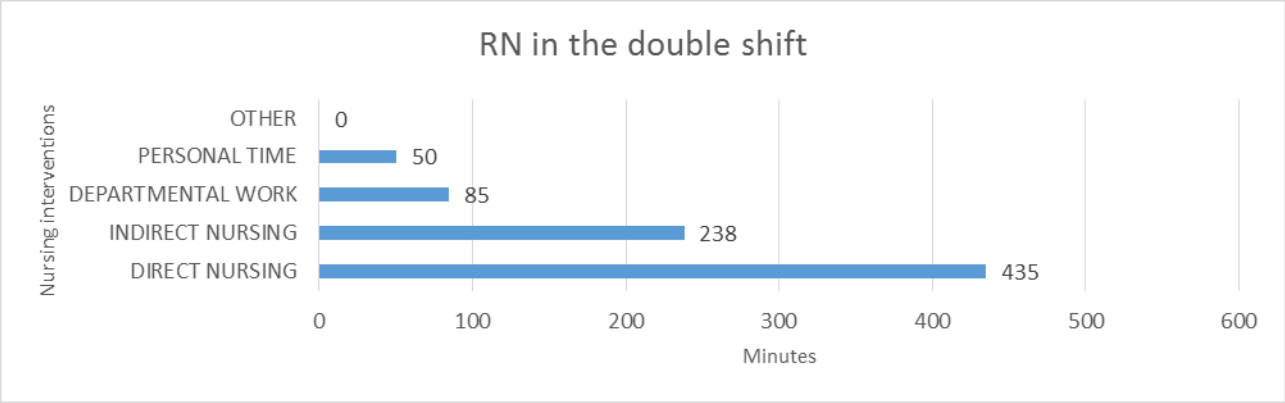


Figure 8 *Registered Nurse use of time in the double shift categorized by nursing interventions*

In the double shifts PN used his/hers time in nursing interventions as follows: Direct nursing: 522 minutes (8h 42min). Indirect nursing: 166 minutes (2h 46min). Departmental work: 82 min (1h 22min). Personal time: 54 min. Other: 0 min. All together: 824 minutes (13h 17min). *Figure 9* following shows the typical double shift of PN.

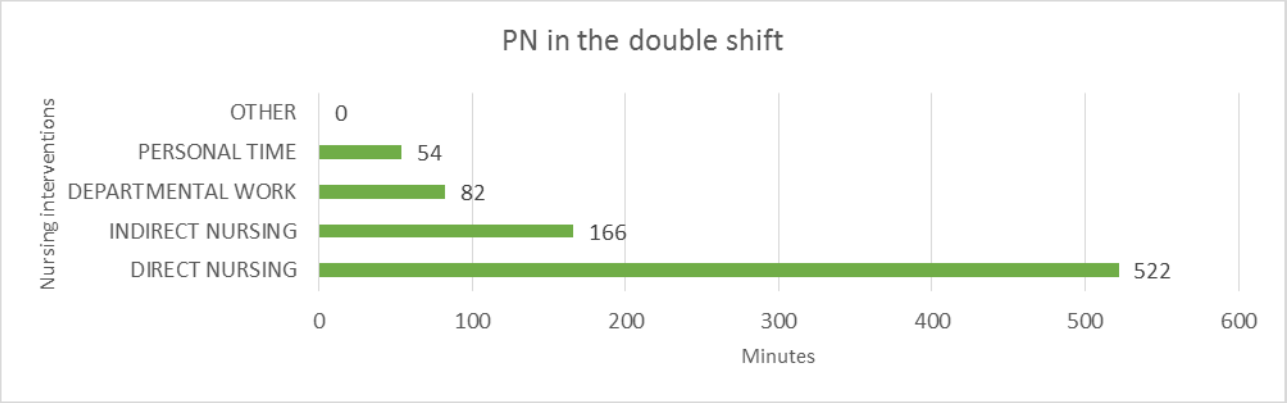


Figure 9 *Practical Nurse use of time in the double shifts categorized by nursing interventions*

In the double shift PN used 63 % in direct nursing, while RN used 54 %. PN used 9 % more time for direct nursing than RN. On the other hand, RN used 29 % in indirect nursing, while PN used 20 %. RN used 9 % more time for indirect nursing than PN. Almost the same results RN and PN got in departmental work and personal time. RN used 11 % and PN used 10 % in departmental work. For personal time RN used 6 % and PN used 7 %. Both used 0 % for other time. *Figure 10* and *Diagram 4* following show the typical double shift of RN and PN.

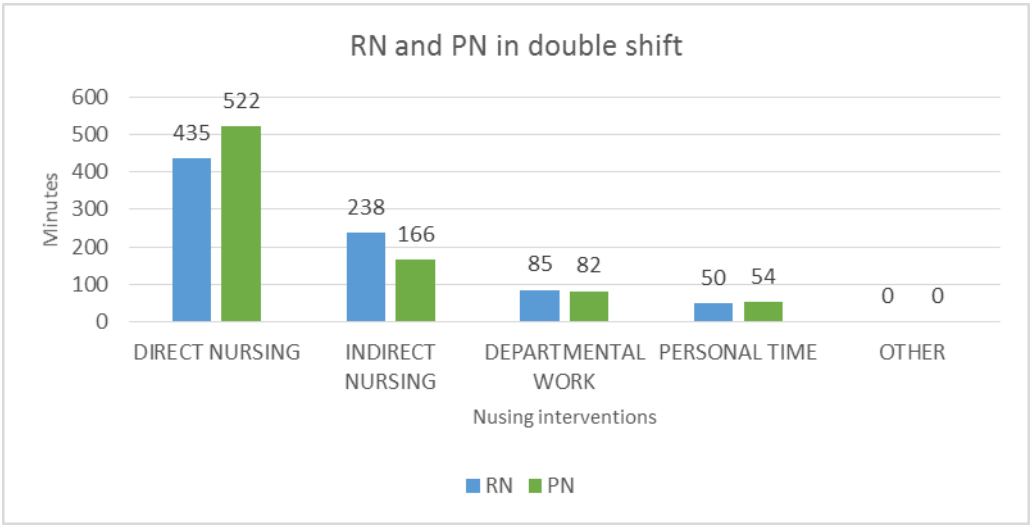


Figure 10 *Registered Nurse and Practical Nurse use of time in the double shift categorized by nursing interventions*

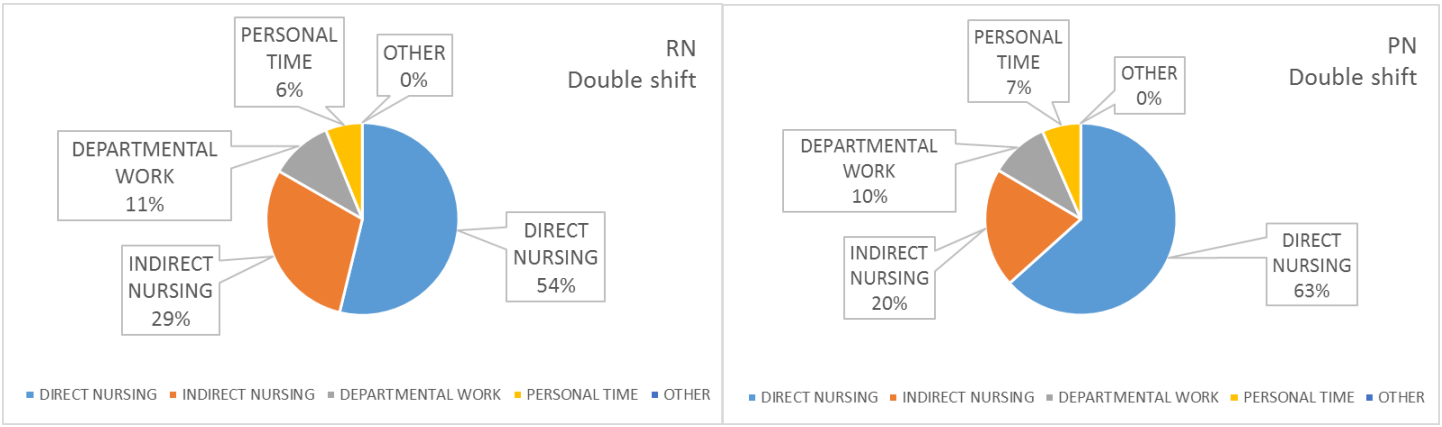


Diagram 4 *Registered Nurse and Practical Nurse use of time in double shifts categorized by nursing interventions*

6.3.3 Evening shift

In the evening shifts RN used his/hers time in nursing interventions as follows: Direct nursing: 240 minutes (4h). Indirect nursing: 166 minutes (2h 46min). Departmental work: 43 min. Personal time: 27 min. Other: 2 min. All together: 478 minutes (7h 58min). *Figure 11* below shows the typical evening shift of RN.

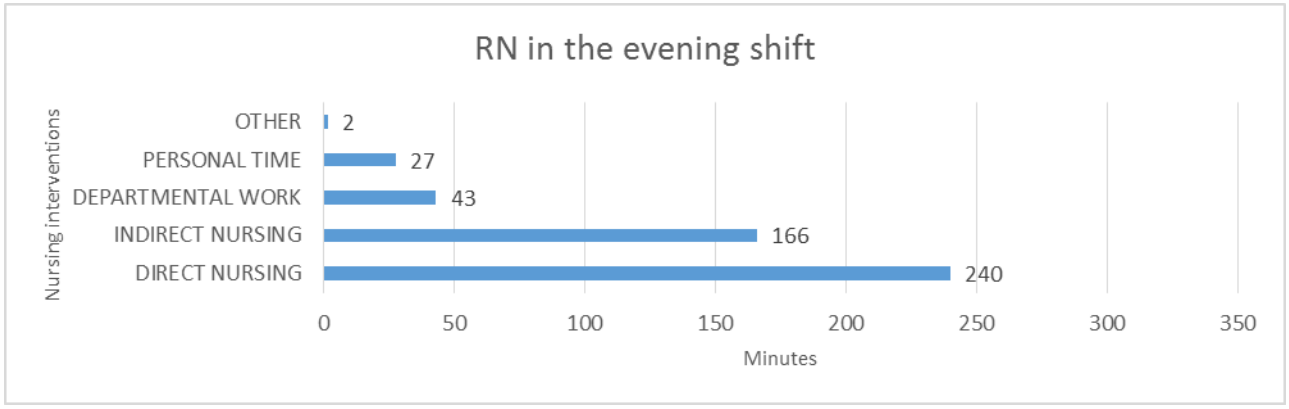


Figure 11 *Registered Nurse use of time in the evening shift categorized by nursing interventions*

In the evening shifts PN used his/hers time in nursing interventions as follows: Direct nursing: 261 minutes (4h 21min). Indirect nursing: 118 minutes (1h 2min). Departmental work: 44 min. Personal time: 31 min. Other: 6 min. All together: 497 minutes (8h 17min). *Figure 12* following shows the typical evening shift of PN.

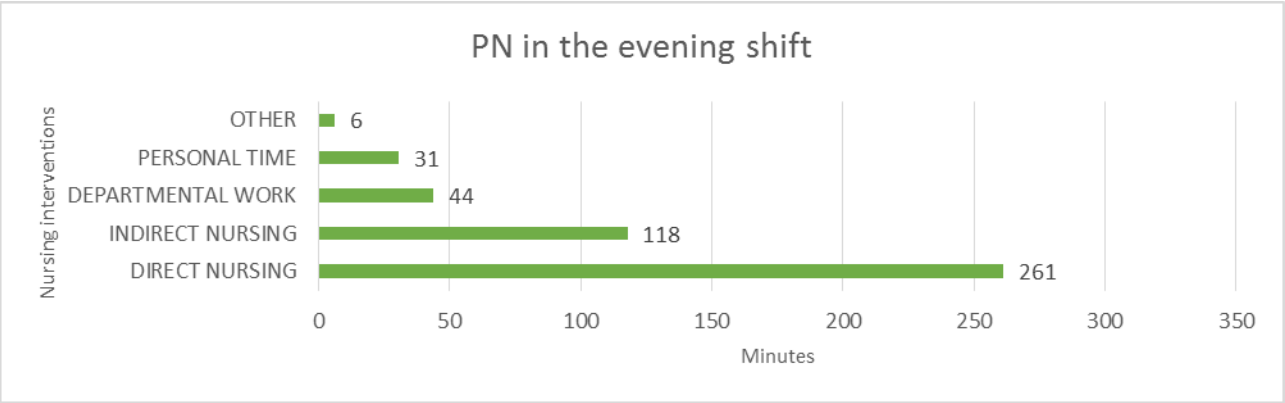


Figure 12 *Practical Nurse use of time in the double shifts categorized by nursing interventions*

In the evening shift PN used 57 % in direct nursing while RN used 50 %. PN used 7 % more time for direct nursing. RN used 35 % in indirect nursing while PN used 26 %. RN used 9 % more time for indirect nursing. Both, RN and PN spend 9 percent in departmental work. For personal time RN used 6 % and PN used 7 %. PN used 1 % in other time, when RN 0 %. *Figure 13* and *Diagram 5* following show the typical evening shift of RN and PN.

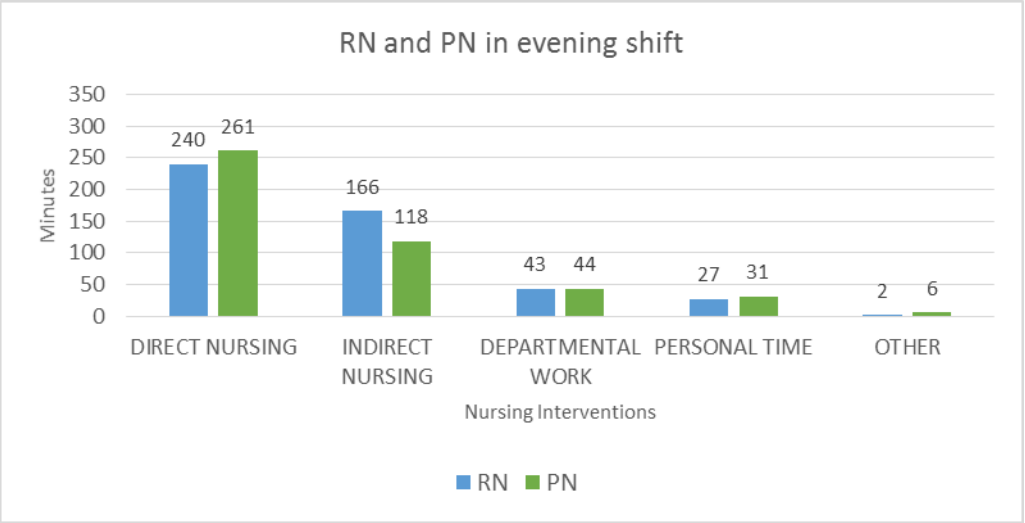
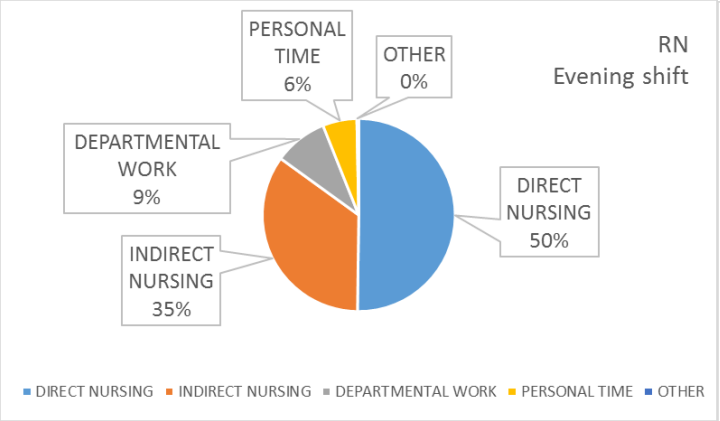


Figure 13 *Registered Nurse and Practical Nurse use of time in the evening shift categorized by nursing interventions*



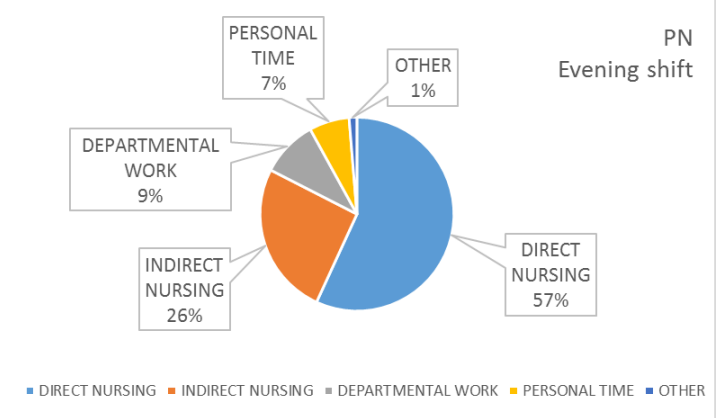


Diagram 5 *Registered Nurse and Practical Nurse use of time in evening shifts categorized by nursing interventions*

6.3.4 Night shift

In the night shifts RN used his/her time in nursing interventions as follows: Direct nursing: 367 minutes (6h 7min). Indirect nursing: 193 minutes (3h 13min). Departmental work: 58 min. Personal time: 49min. Other: 3min. All together: 669 minutes (11h 9min). *Figure 14* below shows the typical night shift of RN.

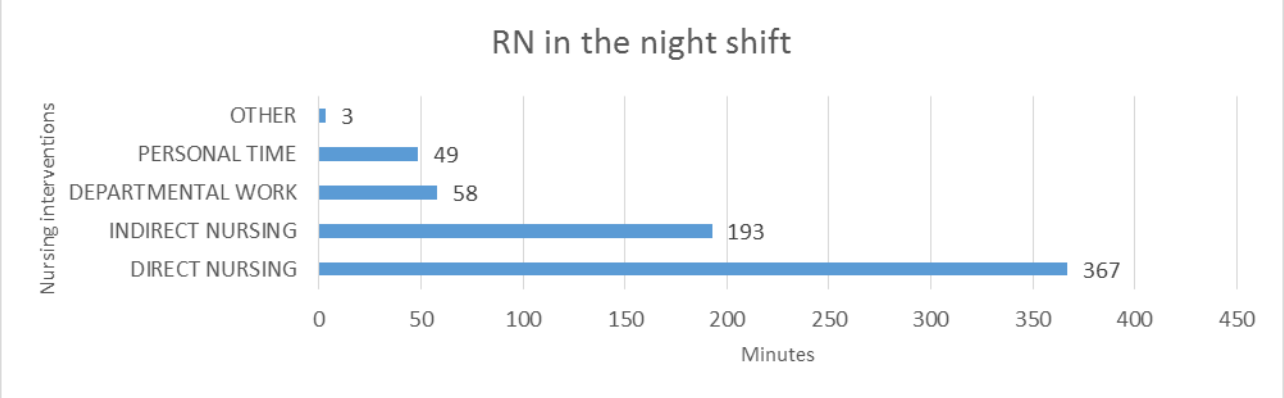


Figure 14 *Registered Nurse use of time in the night shift categorized by nursing interventions*

In the night shifts the PN used his/her time in nursing interventions as follows: Direct nursing: 416 minutes (6h 56min). Indirect nursing: 125 minutes (2h 5min). Departmental work: 75 min (1h 15min). Personal time: 48 min. Other: 2 min. All together: 667 minutes (11h 7min). *Figure 15* following shows the typical night shift of PN.

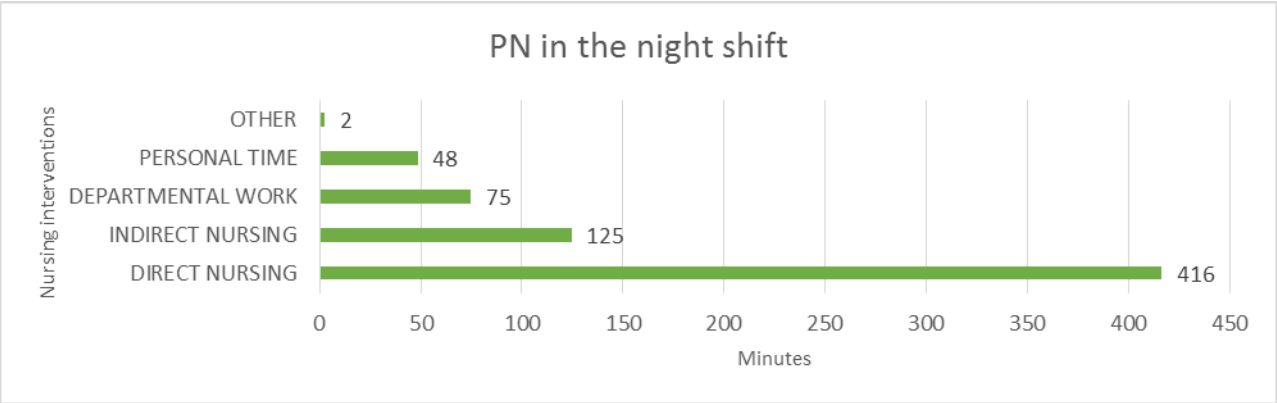


Figure 15 *Practical Nurse use of time in the night shifts categorized by nursing interventions*

In the night shift PN used 63 % in direct nursing while RN used 55 %. PN used 8 % more time for direct nursing than RN. However, RN used 29 % in indirect nursing while PN used 19 %. RN uses 10 % more time for indirect nursing than RN. RN used 9 % and PN used 11 % in departmental work. For personal time both used 7 percent. Also, for other time both got zero percent. *Figure 16* and *Diagram 6* following show the typical morning shift of RN and PN.

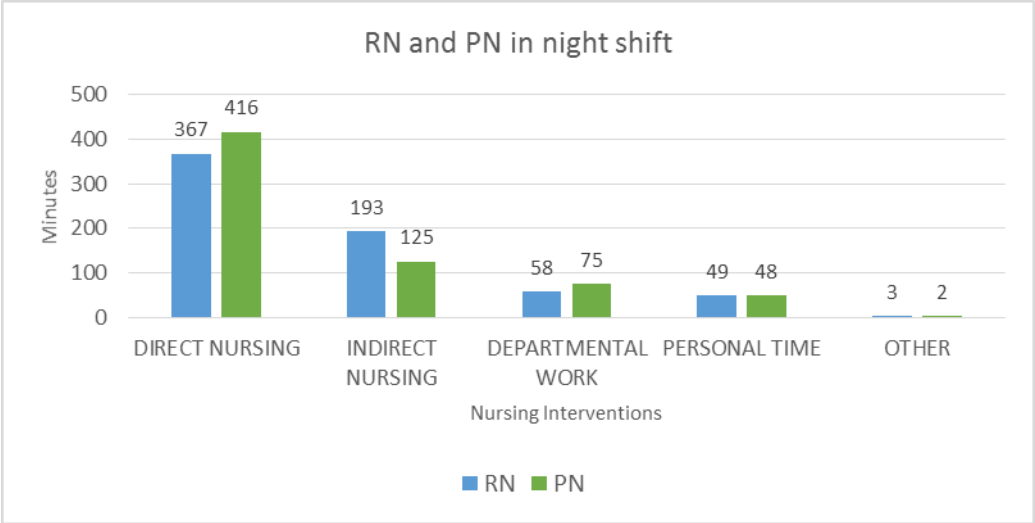


Figure 16 *Registered Nurse and Practical Nurse use of time in the night shift categorized by nursing interventions*

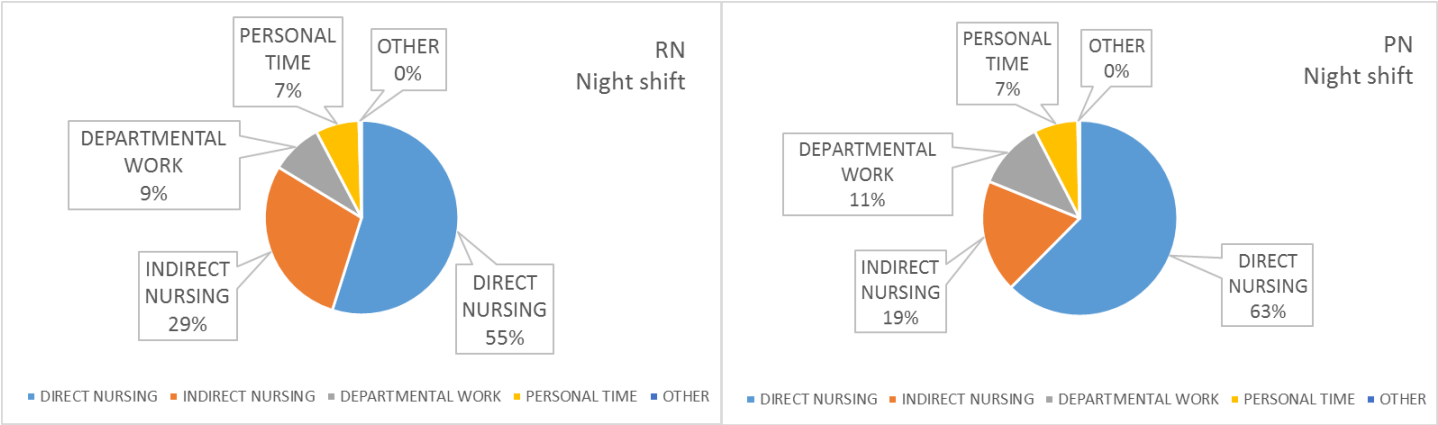


Diagram 6 *Registered Nurse and Practical Nurse use of time in evening shifts categorized by nursing interventions*

6.3.5 All shifts

Combining all shifts together the RN used his/her time in nursing interventions as follows: Direct nursing: 279 minutes (4h 39min). Indirect nursing: 150 minutes (2h 30min). Departmental work: 44min. Personal time: 33min. Other: 3min. All together: 509 minutes (8h 29min). *Figure 17* below shows the typical shift of RN.

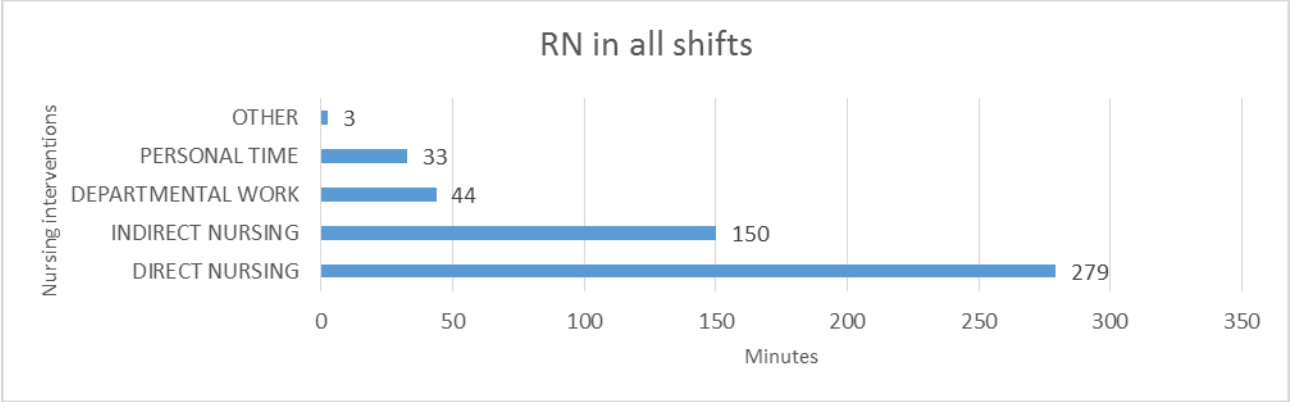


Figure 17 *Registered Nurse use of time in all shifts categorized by nursing interventions*

Combining all shifts together the PN used his/her time in nursing interventions as follows: Direct nursing: 308 minutes (5h 8min). Indirect nursing: 108 minutes (1h 48min). Departmental work: 44 min. Personal time: 38 min. Other: 3 min. All together: 497 minutes (8h 17min). *Figure 18* following shows the typical shifts of PN.

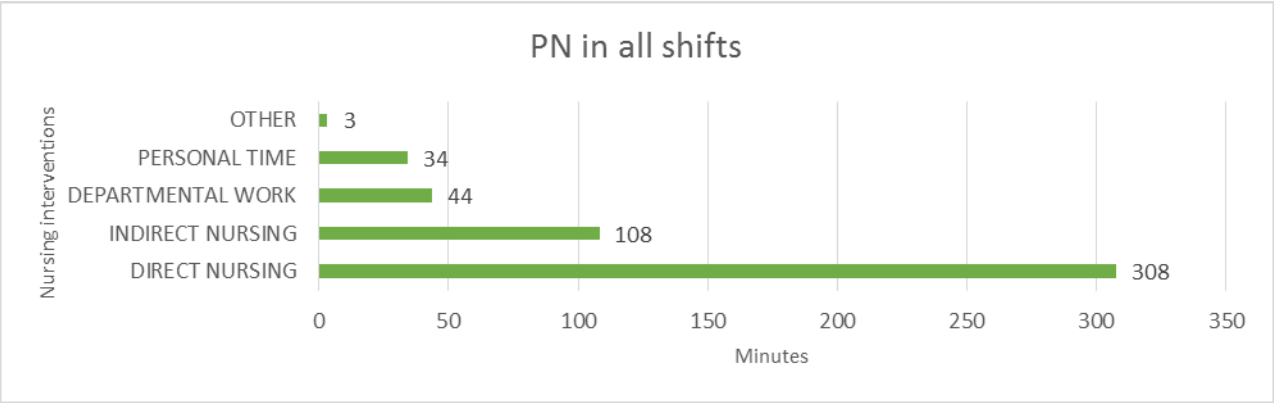


Figure 18 *Practical Nurse use of time in the double shifts categorized by nursing interventions*

Combining all shifts together, PN used 62 % in direct nursing while RN used 55 %. PN uses 7 % more time in direct nursing than RN. On the other hand, RN used 30 % in indirect nursing while PN used 22 %. RN used 8 % more time for indirect nursing than PN. With rest of the findings there are very similar results. For departmental work both used 9 percent. For personal time RN used 6 % and PN used 7 %. Other time both use zero percent. *Figure 19* and *Diagram 7* following show the typical shifts of RN and PN.

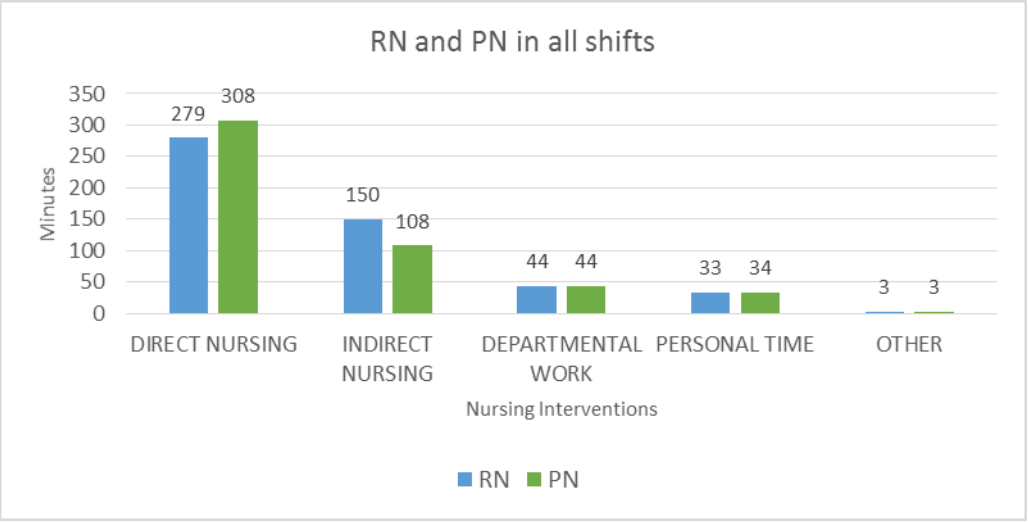


Figure 19 *Registered Nurse and Practical nurse use of time in all shifts categorized by nursing interventions*

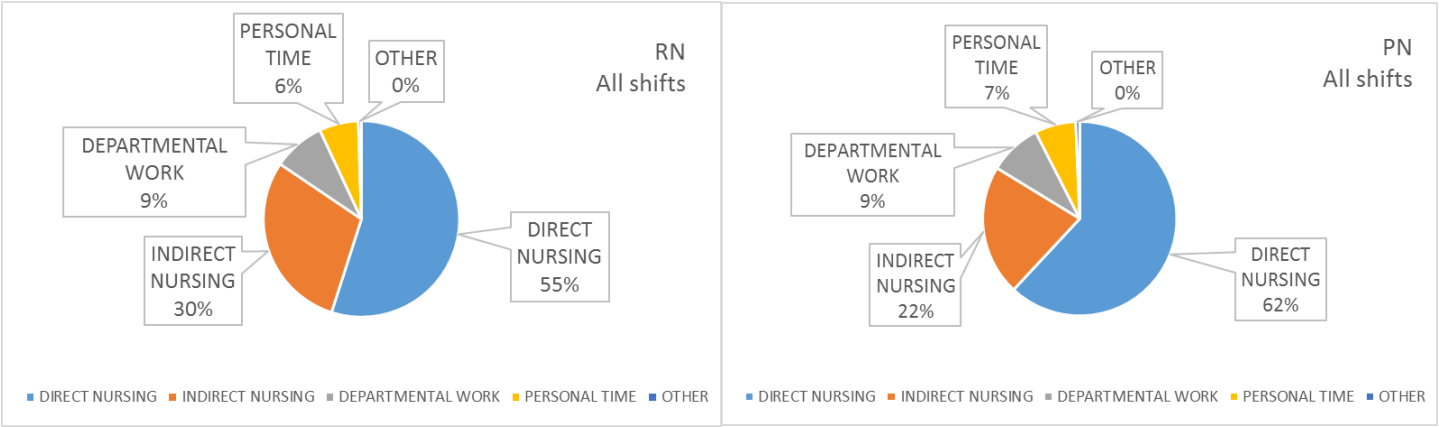


Diagram 7 *Registered Nurse and Practical Nurse use of time in all shifts categorized by nursing interventions*

6.4 Results by Nursing Interventions

6.4.1 Direct nursing

Direct nursing refers to the physical nursing care occurring with and for the patient. The PN used more time in direct nursing than the RN, regardless of the morning-, double-, evening- or night shift. Also, when compared by years of work experience PN used more time in direct nursing than the RN. According to all results, RN used **55 %** of the time for direct nursing, when PN used **62 %**. RN used 14 % (40 /279 minutes) of his/her time for giving medicine (1.3) to the patients in direct nursing, while PN used only 3 % (9 /308 minutes). PN used 20 % (61 /308 minutes) for toileting and hygiene (1.5) in direct nursing care, when RN only 11 % (30 /279 minutes). In wound care (1.12.1), both RN and PN used similar number of time, RN 18 minutes and PN 20 minutes, which is 6-7 %. *Figure 20* following shows the typical shifts of RN and PN in direct nursing.

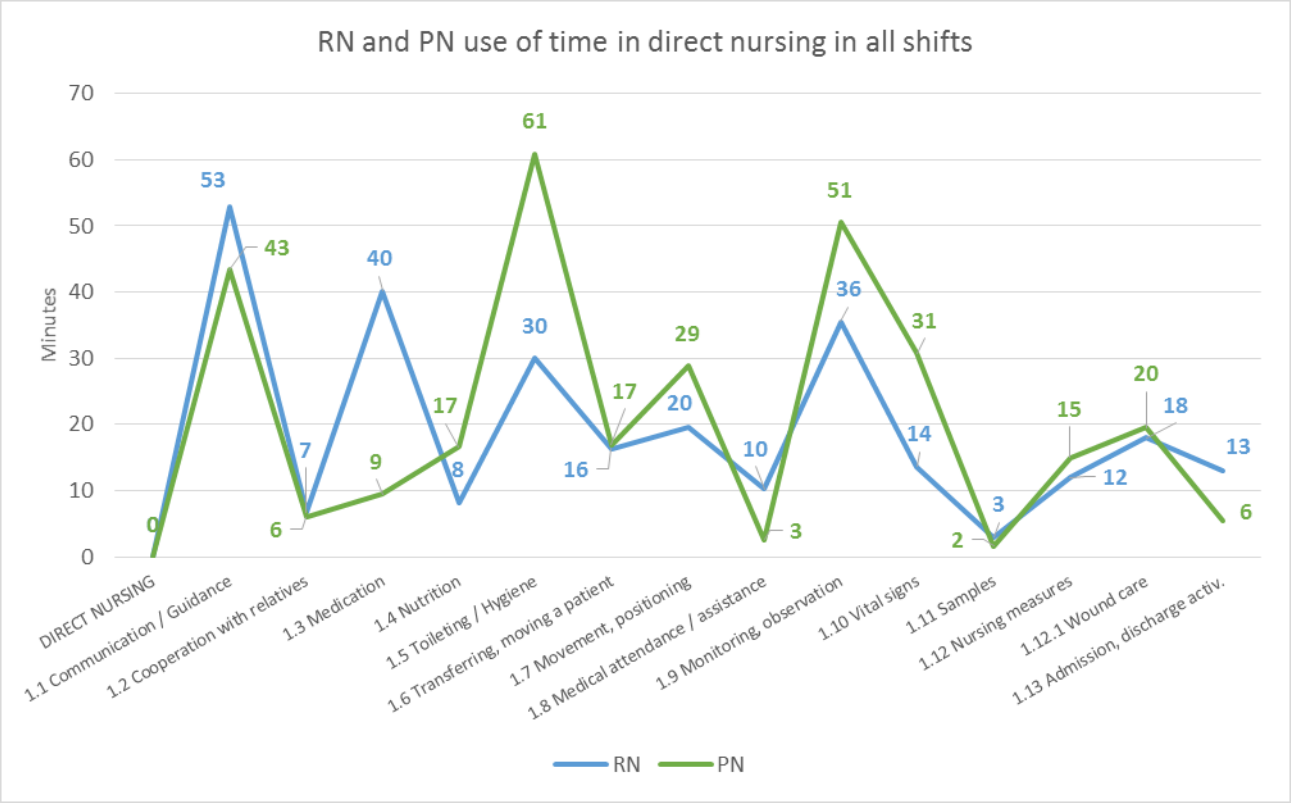


Figure 20 *Registered Nurse and Practical Nurse use of time in direct nursing*

6.4.2 Indirect nursing

Indirect nursing refers to the nursing care tasks done for patients in the ward, but indirectly. This means when nurses' are completing clinical nursing tasks such as medication preparation for patient use but while not physically attending to them. Unlike in direct nursing, RN used more time in indirect nursing than PN, no matter whether it was in the morning-, double-, evening- or night shift. Also, depending on the years of work experience PN used more time in direct nursing than RN. According to all results RN used **30 %** of the time for indirect nursing, when PN used **22 %**. The diagram of indirect of nursing between RN and PN is quite similar. The main difference is when PN used more time for treatment preparation and completions (2.5) than RN. That is the only activity in indirect nursing where PN used significantly more time than RN. PN used 17 % (18 /108 minutes) of his/her time for treatment preparations and completions in indirect nursing, while RN used only 10 % (15 /150 minutes). Another significant difference of use of time in indirect nursing is when RN used more time for preparations and completions of medicines (2.4). RN used 12 % (18 /150 minutes) of it, and PN only 2 % (2 /108 minutes). *Figure 21* following shows the typical shifts of RN and PN in indirect nursing.

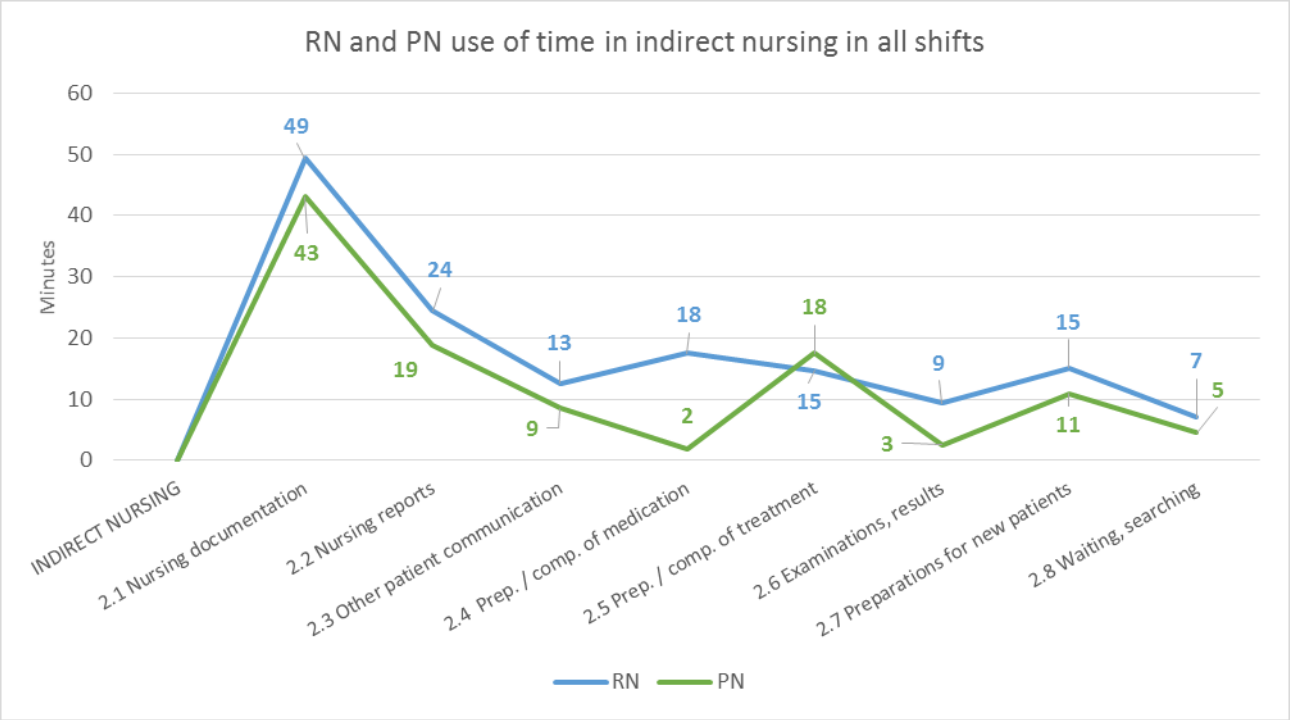


Figure 21 *Registered Nurse and Practical Nurse use their time in indirect nursing*

6.4.3 Departmental work

Departmental work refers to the functions and tasks that are related to maintaining the Department's operations. These activities are not related to the patients in the ward. According to all results RN and PN used **9 %** of their time for departmental work in all nursing interventions. That is 44 minutes of the 8 hour and 17-29 minutes shift. When it comes to cleaning and household management (3.1) in the ward, and equipment stocking and inventory (3.6), PN used more time for those activities. PN time is used for cleaning and household management in departmental work for 39 % (17 /44 minutes) while RN only 14 % (6 /44 minutes). Equipment stocking and inventory PN used 16 % (7 /44 minutes), while RN used 7 % (3 /44 minutes). On the other hand, RN used 18 % (8 /44 minutes) for supervising students while PN used 2 % (1 /44 minute). Other activities are quite similar between RN and PN. *Figure 22* following shows the typical shifts of RN and PN in departmental work.

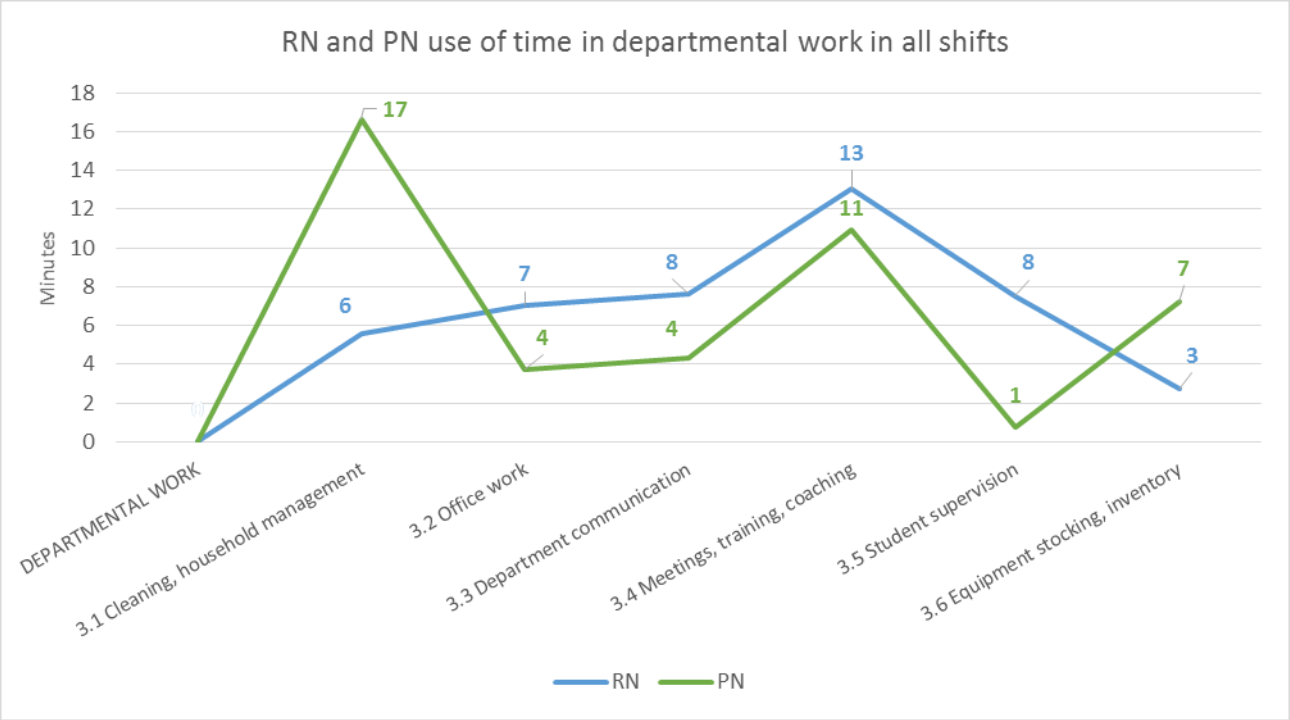


Figure 22 *Registered Nurse and Practical Nurse use of time in departmental work*

6.4.4 Personal time

Personal time is a function that is not related to patients or to departmental work. Personal time includes nutrition and personal hygiene breaks, managing personal matters and other non-work-related tasks. According to all responses, all RNs and PNs had similar kind of answers for personal time. There was no variance across different shifts. In total, RN and PN used **6-7%** (33-34 minutes) of their time for personal matters in all shifts.

6.4.5 Other

In this study, the nursing intervention of 'other' was an option if there weren't any other functions that cannot be placed on any of the categories. The participants were guided to briefly describe the operation or action. It was also guided that they would indicate whether the patient was present, whether it was related to the patients being treated or whether it was generalized or department specific. In the results of this study there were totally 34 check marks for this. 20 check marks from RNs and 14 check marks from PNs. As average time, that is 3 minutes (**1%**) for both, for RN and PN. Most of the check marks of functions 'other' were marked during morning shifts (47 %). Most of them were marked

during the second research week (74 %). 32 % of all answers were about ‘reading the work e-mails’, 24 % were about ‘filling the Self-Assessment Form of this study’ and 26 % were about ‘studying for / doing a test, related to the work’. One check mark was about ‘writing down a request of schedule’. Only 5 check marks (75 minutes) did not have any description about what they were.

6.4.6 Overall

According to the results PN used more time in direct nursing than RN, while RN used more time in indirect nursing than PN. There was no difference if it was the morning-, double-, evening- or night shift. Also, as compared by the years of work experience PN used more time in direct nursing than RN, while RN used more time in indirect nursing than PN. According to all results RN used **55 %** (279 /509 minutes) of the time for direct nursing, while PN used **62 %** (308 /497 minutes). RN used **30 %** (150 /509 minutes) of the time for indirect nursing, while PN used **22 %** (108 /497 minutes). Both, RN and PN, used **9 %** (44 /497-509 minutes) of their time for departmental work in all nursing interventions. RN and PN used **7 %** (33-34 /497-509 minutes) of their time in personal matter in all shifts. As average time, that was used for ‘other’ functions was only **1 %** (3 /497-509 minutes) for both, for RN and PN. Most of the answers about ‘other’ functions that were given were more suitable to the section 3.4 (Meetings, training, coaching), that is part of the Departmental work intervention.

The main differences of the nursing intervention functions is ‘toileting and hygiene’ (1.5), where PN used over 50 % more time than RN. PN used 12 % (61 /497 minutes) for secretion and hygiene in all nursing interventions, and 20 % (61 /308 minutes) in direct nursing. RN used more time for medications (1.3) and preparations and completions of medicines (2.4). For medications in direct nursing RN used 14 % (40 /279 minutes) and in all nursing interventions 8 % (40 /509 minutes). For preparations and completions of medicines in indirect nursing RN used 12 % (18 /150 minutes) and in all nursing interventions 4% (18 /509 minutes). Overall for medications in both in direct and indirect nursing RN used 14 % (58 /429 minutes) and in all nursing interventions 11 % (58 /509 minutes). During the morning shift RN used for medication 6.7 % (32/476 min), during evening shift 11.7 % (56/478 min) and during night shift 17.2 % (115/670 min). In all, RNs used 11.4 % (58/509 min) of their time in medication-related activities while PNs used 2.2 % (11/497 min). *Figure 23* following shows RN’s and PN’s typical minutes used in different functions of nursing interventions. *Figure 24* following shows RN’s use of time

in percentage of nursing interventions from each shifts and *Figure 25* following shows PN's use of time in percentage of nursing interventions from each shifts.

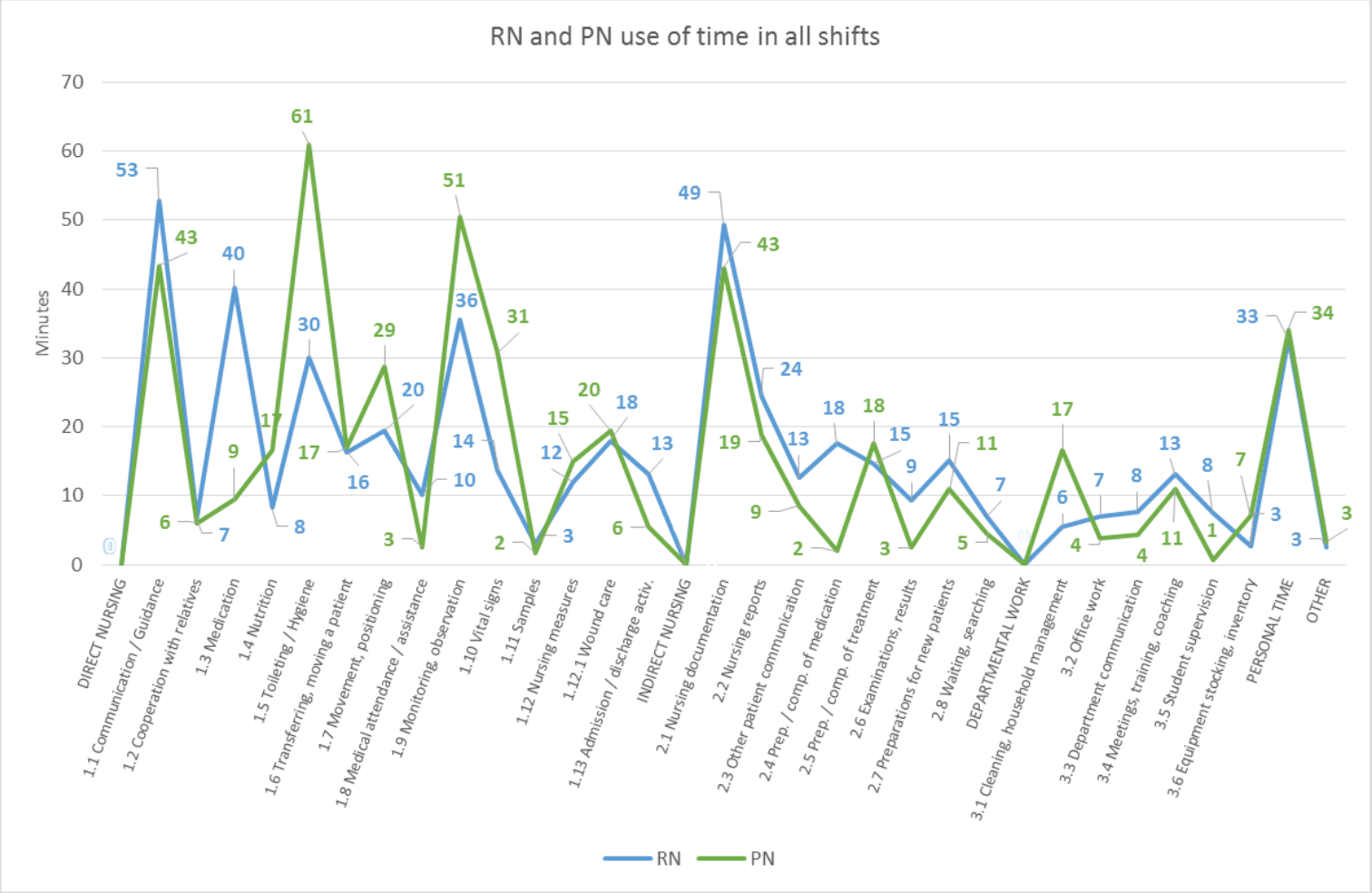


Figure 23 *Registered Nurse and Practical Nurse use of time categorized by nursing interventions*

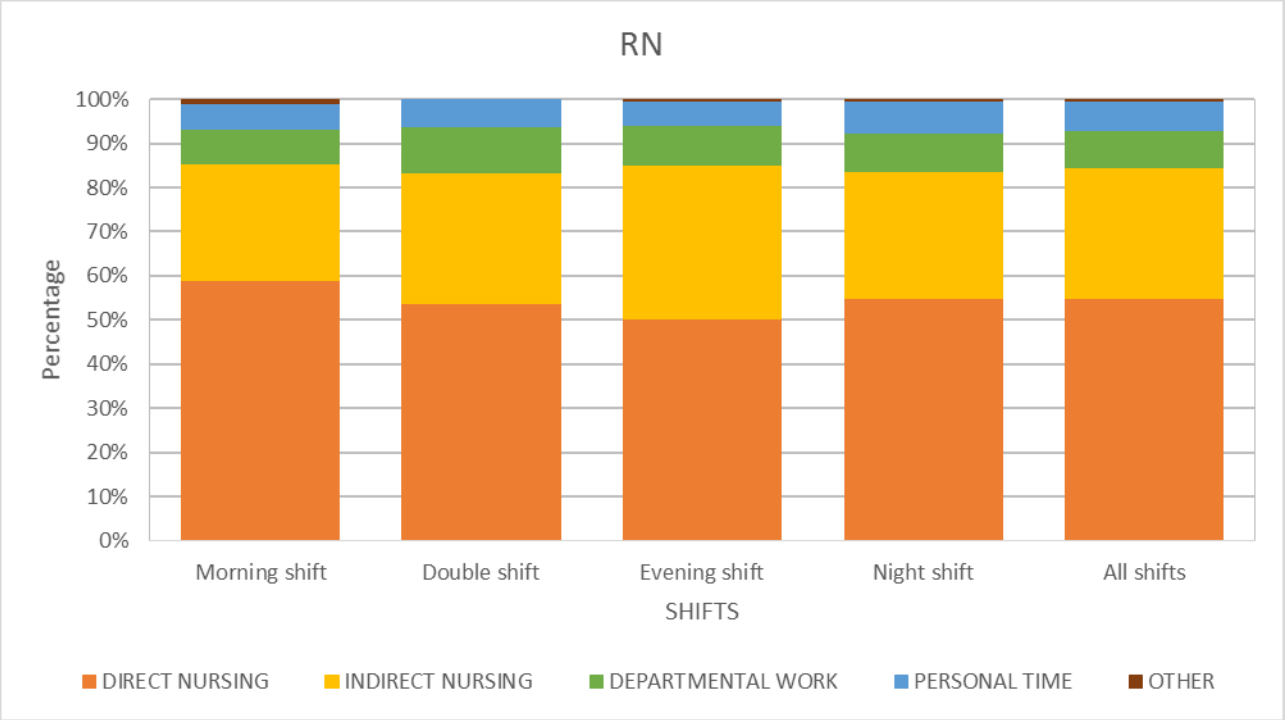


Figure 24 *Registered Nurse and Practical Nurse use of time categorized by shifts*

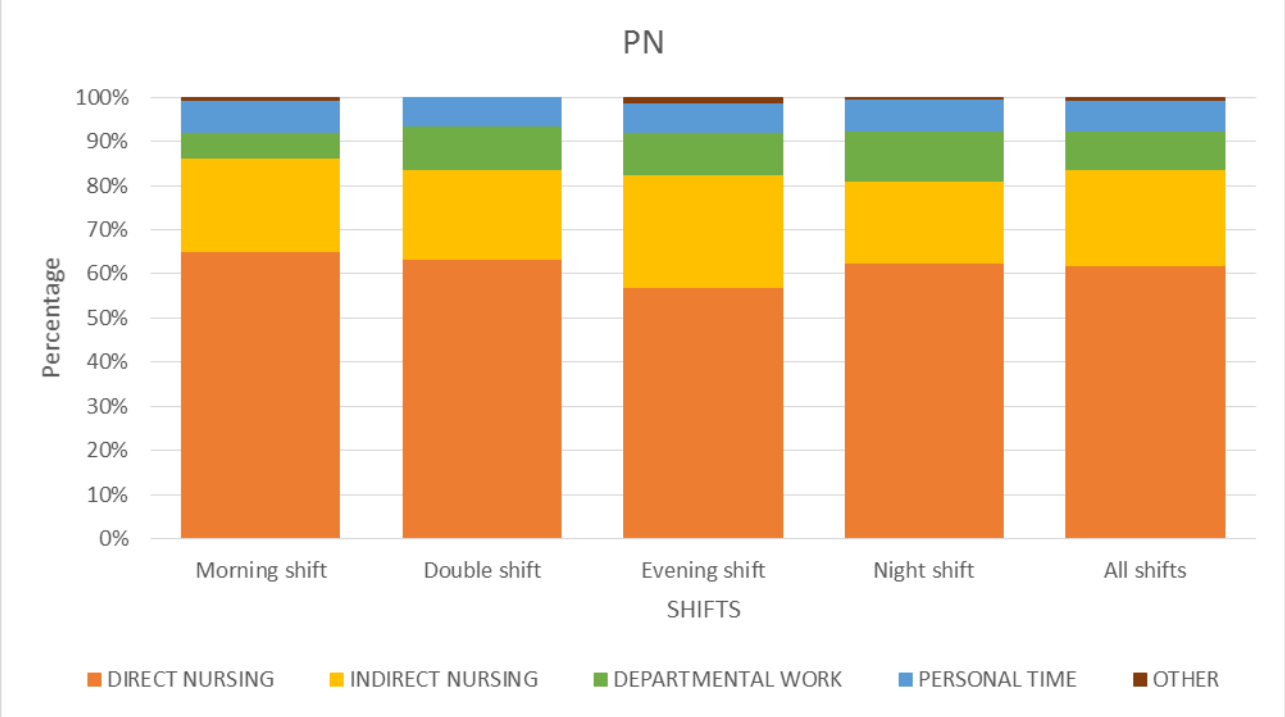


Figure 25 *Registered Nurse and Practical Nurse use of time categorized by shifts*

7 Discussion and conclusions

The purpose of the study was to improve the staff strategic planning and the structure of nursing staff dimensioning in the Plastic Surgery Ward. The aim was to develop a functional and efficient staff strategic approach. The findings of the study will help to improve nurse scheduling as well as the staffing structure and planning in the plastic surgery ward, so that the objectives for quality of care, patient outcome, error reduction, patient safety, cost-effectiveness, and patient' and nurse' satisfaction, are met.

Bellow, the researcher presents the summary of proposed collaborative solutions (7.1). Findings and theoretical contributions (7.2) are also discussed for theoretical facts and other studies to support the results of this study. Managerial implications (7.3) section explains the reasons why management has a major impact on staff dimensioning. When conducting a research, the researcher must do her best to ensure the credibility of the results, to ensure the reliability and validity of the research (7.4).

Limitations and recommendations (7.5) for further research are presented, as well as suggestions to the Plastic Surgery Ward. Finally, the researcher who was the researcher in this study wrote a final report of her learning outcome (7.6). The researcher compares the objectives that are set for the study with the achievements and with the outcome.

7.1 Summary of proposed collaborative solutions

Monitoring and measuring working hours are important for resource exploration and allocation. Without monitoring, it is not possible to quantify the departmental workflow needs. The basis for the design of the workforce cannot be the nurses' subjective experience of whether the department is in a hurry or not. The exact minutes of the duration of the various therapeutic measures tells how many ought to be hired for a professional group. However, in resource planning, there is a management measure with regards to time tracking, taking into account the tendency of nurses to make more work more freely when the department has a lot of staff. (Partanen, 2002).

Based on this study, the following proposed collaborative solutions are presented:

1. The job descriptions of Registered Nurses and Practical Nurses should have a broad focus on patient care activities in the Plastic Surgical Ward. In this study,

the fact that Registered Nurses' job descriptions should be afforded special attention, should be strongly emphasized. Their expertise must be expedient and well-aligned. Particular attention should be paid to those areas of activity that do not correspond to the level of education of RNs, particularly in: some of the departmental activities. There are legal restrictions on what different professionals are allowed to do in the ward. In this case, RNs are left with tasks that others cannot do. The working time of RNs is more expensive for the employer than the PNs, so it is important for use of time that RNs primarily take care of medical nursing and go to basic nursing only after that. However, the flexibility for the departmental workflow allocation is built in for positions suitable for both professional groups. This is why there should be also a clear division of work tasks between the differently skilled nurses.

2. One clerk should be working on the evening time, till 6 p.m., or even later. At the time of field work, there were 2-3 clerks working in the ward. The difference between morning shift and evening shift is that on evening shift, RN use 9% less time in direct nursing, and 10% time more in indirect nursing and departmental work. PN use 8% less time in direct nursing and 8% more time in indirect nursing and departmental work. These numbers are alarming. There should definitely be a clerk working on the evening time during the weekdays. If one of the clerks was moved to do an evening shift (e.g. from 11am to 7pm), it would be interesting to know whether the office work of nurses will reduce during the evening and night shifts. Nurses do most of the toileting, hygiene, nursing measurements and wound care jobs during the morning shifts. This means nurses spend more time next to the patients during that time. That also means, nurses have lots of reporting to do about their assignments they have done. Also, many patients go home during morning shift, which means this leaves, especially for RNs, lots of paperwork to be done. Why do nurses then spend more time for indirect nurse care and departmental work during their evening shifts, if they do not have as much work tasks to do as during morning shifts? Reason for this might be because patients usually come back to the ward during evening shift. The first moments with patients are critical especially after the surgery. The patient needs nurse to be nearby to feel safe. Not only PNs but also RNs should be able to spend their time next to the patients during that critical time. Nevertheless, nurses should always be able to spend their use of time next to the patient, depending on the shift they are working.

3. The time spent on medical therapy was significant in the nurses' use of time. There were Pharmacists working in the hospital, but in several different wards at the same time. The need for the work of Pharmacist at the ward is emphasized in this research as RNs use too much time with preparing medication, especially during the night shift. Having a dedicated Ward Pharmacist would allow for RN workload optimization, help reduce medical errors, and thereby help reduce operating costs while improving patient safety and staff satisfaction. Also, a proficient pharmacist has a benefit at the ward by supporting nurses' better knowledge of pharmacotherapy.

4. There are Department assistants working in the ward. There should be a clear job description drawn what work tasks belong to Department Assistants and which tasks are for RNs and PNs to complete. Department Assistants provide secretarial and administrative support for an entire department. They handle various departmental matters, as well as providing support, as needed, to nurses. Currently, RNs and PNs do many work tasks that are more appropriate for Department Assistants than educated nurses to do.

5. Registered Nurses and Practical Nurses do many work tasks that do not involve patient care or any kind of professional competence. For these tasks there should be hired a Nurse's Aide. Nurse's Aide does not have similar kind of job description than a department assistant, who is working at the ward. Nurse's Aides assists nurses not department. There should be at least one nurse's aide working as a full-time, in morning shifts. Nurses' Aides could be helping with transferring patients, taking samples to the lab and picking up something from the lab or other departments, searching missing items (rolls, wheelchair, auxiliary table, etc.). However, the nurses' aide takes care of the general clean-up duties and helps in the distribution of food. Nurse's Aide does not involve with patient care without RN's or PN's supervision. Nurse's Aide takes cares of basic job assignments that helps RN's and PN's to use their time more next to the patients and patients care.

6. Patient transportation service in Töölö Hospital should be expanded. There should be patient transfer attendants for use by the wards. These patient transfer attendants should be available 24/7. The need in the Plastic Surgery Department is greater in the morning time when elective patients are going to surgeries. During the night time, there are three nurses working in the ward, two RNs and

one PN. Because of heavy beds and patients required to be moved, usually two nurses leave the ward, which makes one nurse left in the ward alone for several minutes. This leaves all the patients in the ward subjected to a high safety risk. Also, nurses' safety is at high risk when they are left at the ward alone. That being said, there should be patient transfer attendants available (one or two in whole hospital), so that two nurses do not have to leave the ward, for the sake of patient safety and high quality care.

7. Nurses spend a lot of time in cleaning and household management (23 min), equipment stocking and inventory (10 min), transferring patients (33 min), office work (11 min), waiting and searching things (12 min) and other activities that are not patient-specific or related to the patient care. These activities should be decreased or even cut out totally. Nurses should spend more time with their patients to make sure the patient care is patient-oriented and high-quality. By utilizing technology nurses' use of time could be cut considerably for activities that are not patient-related. There should be more phones in hand for nurses and other staff. Every team manager at the ward should have their own mobile phone (or a pool of numbered portable phones with numbers assigned to them at start of each shift), to help reach nurses in the department. Unnecessary waiting and searching of others could be cut down. Also, every time a nurse have to make a phone call there shouldn't be any waiting of someone else finishing his/hers phone call. There should be more mobile tablets and computers for nursing use. This way nurses are able to spend their time more with the patient that leaving the patient rooms to go to their offices to do necessary paperwork. Technology development at the hospitals in general is very low. Utilizing technological advances is not just the future, it is very present.

8. Staff scheduling is important part of a strategic process. To ensure complex, highly skilled and motivated employees, a modern shift-based workplace has to have a good shift strategic plan. Making the right shift schedule is critical because it ensures the right resources are in the right place at the right time. It also impacts labour costs, productivity, and most importantly quality of care and patient safety. A well-planned schedule is necessary for the efficient operation of a business. A proper schedule planning will ensure that the right employees are scheduled for a particular shift and important tasks and high peaks are covered. There should be a smooth and steady flow when scheduling is happening to ensure success.

When scheduling nurses work shifts, there should always be enough RNs in every shift and in every team should have a minimum of 2 RNs. RN is always a team manager in his/hers own team, but also the most qualified nurse. By having two RNs in a team, while one RN is in the office doing paperwork, another one should be nearby the patients ensuring the patient safety and quality of care. Also, the patient continuity (same nurse returns to care for the same patient after time off) should be a factor in shift planning. It is shown to improve patient safety and nurse's and patient's satisfaction.

During the morning shift of weekdays there should be at least 2 RNs in every team. According to the results of the study there is lots of hygiene and toileting related activities, there should be at least one or two PNs in every team. In total there should be minimum 9 nurses working during the morning shifts on weekdays. The ideal number would be 11-12. This would ensure that as well as RN has a partner to work with him/her, also PNs should be able to work in pairs. Most patients are very laborious to be taken care just by one nurse.

During the evening shifts on weekdays there should be at least one PN in every team. According to the results of the study, RNs spend lots of time for indirect nursing, there should be more than one RN at least some of the teams. In total there should be minimum 7 nurses working during the evening shifts on weekdays. The ideal number would be 9 as measured in today's demands.

It is understandable that there are less nurses at work during the weekends. This is because there are not many elective surgical operations. However, the elective operations are done also on Saturdays, whereby proper staffing needs should be taken into account. Also, the fact that the perceived workload is "light" does not mean that nursing staff are doing their job with minimal staffing. In "hospital life", the staff should be prepared for every possible emergency. This ensures a greater degree of patient safety. During the morning shift of weekends (and holidays) there should be at least 5 RNs and 4PNs. In total there should be minimum 7 nurses working during the morning shifts on weekends. The ideal number would be 9. During the evening shifts on weekends there should be at least one RN and one PN in every teams. In total there should be minimum 6 nurses working during the evening shifts on weekdays. The ideal number would be 7. *Table 4* following shows the ideal number of nurses in morning and evening shifts on weekdays and on weekends. All suggestions that were given are based

on the results of the study and also on the researcher's own experiences and observations.

Table 4 *The ideal number of nurses in morning and evening shifts on week days and on weekends*

	SHIFTS	TEAMS	NUMBER OF NURSES	
ON WEEKDAYS	MORNING	I	RN	2
			PN	1-2
		II	RN	2
			PN	1-2
		III	RN	2
			PN	1-2
	EVENING	I	RN	2
			PN	1
		II	RN	1-2
			PN	1
		III	RN	1-2
			PN	1

	SHIFTS	TEAMS	NUMBER OF NURSES	
ON WEEKENDS	MORNING	I	RN	1-2
			PN	1
		II	RN	1
			PN	2
		III	RN	1-2
			PN	1
	EVENING	I	RN	1-2
			PN	1
		II	RN	1
			PN	1
		III	RN	1
			PN	1

9. SWOT analysis of the strategic planning of the Plastic Surgery Ward

The strategy, the values, the mission and the vision create the goals and the priority for the future. For companies in a competitive environment, internalizing these issues is the starting point for action. Employees are experts in the company, whose knowledge and skills must be able to effectively transform the organization's know-how and operations. Knowledge management is one of the most important processes of human resource management, with specific attention being drawn to the objective that everyone knows what is the company's mission, what the goals of the company are, how the feedback system works and what skills are needed. (Sydänmaalakka 2002, 75–78.) The purpose of this study is to give the Plastic Surgery Ward of the Surgical Department of the Töölö Hospital the chance to implement strategic planning in change management.

The situation of Plastic Surgery Ward has been analyzed in *Table 5* following. The aim of the analysis is to identify the strengths and weaknesses of the organization, and to examine these as part of the operating environment. This gives an idea of the

opportunities and threats of the movement. The results of the SWOT analysis support the strategy-based planning of activities, and the real benefit of it is when each of the strategic implications of the related detail is recognized, identified and shared. (Houni, Nupponen & Pakarinen, 2002; 13)

The greatest strength of the Department is the skilled and knowledgeable nursing staff. Plastic surgery in the surgical ward is used to treat diseases and provide treatment that cannot be obtained elsewhere in the country a.k.a. centralized to Töölö Hospital. The Ward's staff are therefore the developers and pioneers of their own field. In order to maintain the quality and efficiency of the ward, the weaknesses, opportunities and threats mentioned in *Table 5* below will need to be taken into account in the future.

Table 5 *SWOT analysis of the Plastic Surgery Ward in Töölö Hospital*

Strengths	Opportunities
Industry specialty Developer and pioneer of the industry Workmanship Skilled nurses High quality care	Well-assigned work tasks Targeting professional skills Effective change management Motivation of employees Hiring necessary staff Utilizing technology
Weaknesses	**Threats**
Working environments Staff dimensioning Human resource management Unclear layouts / divisions Utilizing skill targeting	Poor cost-effectiveness Attractiveness of work Reduction in quality of care Nurse' and patient' satisfaction Persistence and coping with increased strategic changes

The best practices can be found through the company and by mistake by studying and developing practical situations. Only routine working methods are not sufficient basis for today's constant increasing of changes and complexity, but it is necessary to able to apply them. When nurses are encouraged to evaluate their own activities, the best practices can be found in their own skills. The Warding Division should ensure the

commitment of nurses by developing nurses' expertise, knowledge, skills and motivation. Development needs to be continuous and credible for the department, and management and nurses have to discuss regularly with each other. When pursuing best practice in quality management, nurses must have the tools and resources to achieve the goals. (Borgman & Packalén 2002, 30–32).

In this study, nurses evaluate their own activities from the point of view of their time. The results of the research gave a very accurate insight into how nurses spend time in various nursing activities. When evaluating this study, and reviewing its functionality, conclusions should be drawn on the basis of which results from the point of view are effective or useful and on what basis. This research raises elements of power that are hidden in the language such as concepts of patient focus, strategic management, efficiency enhancement, or mission, include assumptions, beliefs, and values related to the economy. This research can be used to interpret these concepts to other meanings of the language as well as to the understanding of the economy. (Heikkinen et al., 2006; 157).

7.2 Findings and theoretical contribution

This division has also been the most commonly used in previous studies, even there are all kind of tool methods that have been used for measuring nurses use of time. (E.g. Hagarty & Chang 1985, Minyard et al 1986, Brown & Dawson 1989, Quist 1992, Linden & English 1994, Leidemark & Anund 1995, Ljungberg et al 1996, Urden & Roode 1997, Levenstam & Bergbom Engberg 1997, Partanen 2002, Hughes 2005, Gran-Moravec et al 2005, Furåker 2009, Defloor et al 2010, Westbrook et al 2011, Kaustinen, 2011, etc.). The studies used similar kind of research tool than this study. As following, their findings are compared to this study. Most of the other studies measured mostly Registered Nurses' use of time, that's why only RNs are compared here. Also, here are discussed registered nurses' use of time mostly in direct nursing.

Nurses' use of their working hours has been subject to discussion and criticism over the past years. Nurses are at times accused of spending limited time with their patients and too much time at their desk. (Lundgren & Segesten 2001.) In this study Registered Nurses used 55 % of their time in direct nursing. That is 4 hours 39 minutes next to the patients, of their 8 hours and 29 minutes shift. According to all nurses together, time used for direct nursing is 59 %.

According to Furåker (2009; 272), the average time needed for direct nursing was 3 hours and 11 minutes in a day. That is 38 % of the working day. Among nurses, direct nursing time ranged from 1 hour 40 minutes to 3 hours 25 minutes. In the study of Kaustinen (2011; 87), the nurses used from 49 % to 70 % in direct nursing care depending on the department, an average of 61 %. In Partanen's (2002; 100) research, nurses received an average of 40 % of working time for all nursing instructors. According to Westbrook et al. (2011; 3-6), the time spent on direct nursing at the third monitoring year (25%) had increased by almost five percentage points compared to the first follow up year (20%). In the first year, one hour, nurses performed 68.9 tasks, of which direct nursing represented 9.2 missions. In the third year, the nurse took 77.2 hours per hour, of whom 11.8 were in direct nursing.

Communication / guidance proved to be one of the most time consuming activities of direct nursing care in many other studies. (Partanen 2002; Gran-Moravec & Hughes 2005). In this study, Registered Nurses used most of their time with communicating and guidance patients in direct nursing care. It took 53 minutes (/279 minutes), which is 19 % of their time, when comparing it to all other activities in direct nursing category. When comparing it to all activities overall, it is 10 % (53min / 509min).

On the other hand, Kaustinen (2011; 87–89) found that the most nurses' time was used to care and treat for respiratory, circulatory and other symptoms, as well as assisting in washing, dressing and toileting. In this study, monitoring and observation took 36 minutes (13 %), which is the third most time-consuming activity. Toileting and hygiene was the fourth most time-consuming activity in direct nursing. Time for that took 30 minutes (11 %) of the Registered Nurses' use of time. In this study, the most time-consuming activity for the Practical Nurses was taking care of patients' toileting and hygiene, totaling 61 minutes (/ 308 minutes), which is 20 % of their time that they used in direct nursing.

In most cases, medication preparation and administration proved to be one of the most time-consuming activities of direct nursing in other studies. It included a lot of time regardless of the day. (Partanen 2002, Furåker 2009, Westbrook at 2011, Kaustinen 2011) According to the findings of Kaustinen (2011; 87) it took an average of 1 hour 36 minutes / day, ranging from 1 hour to 2 hours and 45 minutes. In Westbrook et al. (2011; 3-6) study, the time spent on medications management remained the same in all follow-

up years. In this study the RN used for medication administration 40 minutes (14 %), and preparing the medication took 18 minutes (12 %).

Specimen sampling took the least time of all nursing activities in direct nursing, both at all times and during the entire shift (Partanen 2002, 106). Also, this study used the least time to take samples, which was only 3 minutes (1%). Kaustinen (2011; 87-89) found out that the immediate time used on immediate nursing was spent with relatives. In this study, time used second with the relatives was 7 minutes (2%). There was a relatively little time used for transportation, in Partanen (2002) study, when in this study it wasn't little at all. RN used for transporting patients 16 minutes, which is 6 % of their time in direct nursing activities. This is 6th most time-consuming activity. *Figure 26* below shows RN's use of time in direct nursing.

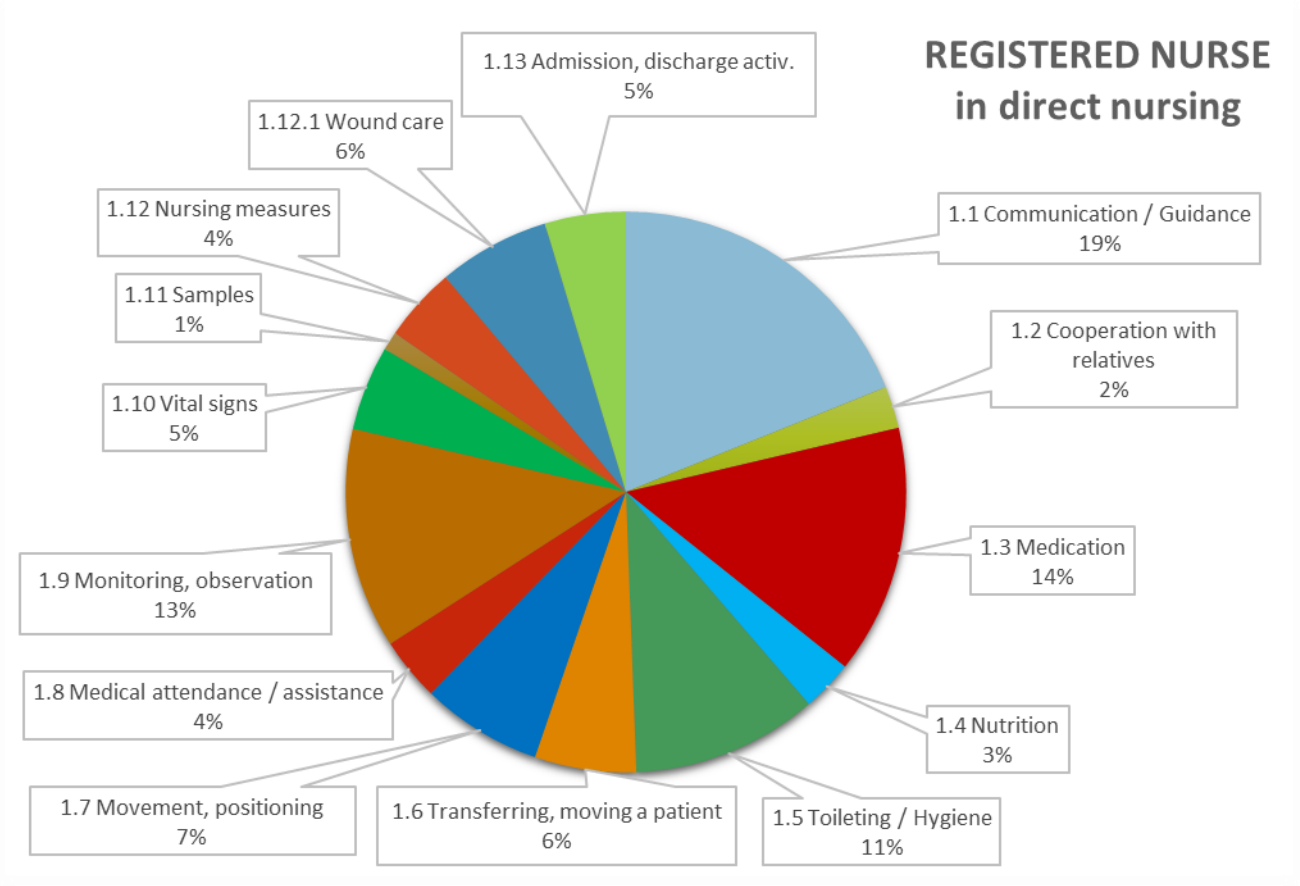


Figure 26 *Registered Nurse use of time in direct nursing*

In the Partanen research there wasn't significant difference between morning and evening shifts in the division of direct and indirect nursing. (Partanen 2002, 99). However, in this study the difference was significant. RN used 4 hours and 41 minutes (59 %) in

direct nursing during the morning shift. On evening shift, they used 4 hours (50 %) in direct nursing. In indirect nursing RN used 2 hours and 5 minutes (26 %) in morning shift, and in evening shift 2 hours and 46 minutes (35%). So, RN used 9 % (41 minutes) less time in direct nursing in the evening shift than in the morning shift, and 9 % (41 minutes) more time in indirect nursing.

According to other studies (Partanen 2002, Furåker 2009, Kaustinen 2011) implementation of medication took a lot of time, both day and night. In this study, RN used 27 minutes (10 %) for giving medication to patients in the morning shift. On the other hand, during the evening shift it took 39 minutes (16 %) and night shift 75 minutes (20 %). The percentage was calculated according to the direct nursing results. This means, during the night shift RN used twice as much time for giving medications to patients in direct nursing. If the indirect nursing would be counted in, which means the time that RN used for preparing the medication the results were similar. RN used nursing activity of medication (in direct and indirect nursing) in the morning shift 32 minutes (8 %) and in the night shift 58 minutes (14 %).

In this study, nurses' use of time has provided more detailed results and thereby greater insight than any other study. This study compared both RNs' and PNs' use of time, but also different shifts with one another (morning, evening, double and night). In this study, also the experience of the nurses was categorized and this is reflected in the results. Other studies' sampling was way shorter than what was done in this study, which was two-week period in all shifts. In this study, the differences can be seen between weeks 1 and 2. For details, see Appendix 8. There are no major differences between the two weeks, which proves the reliability of the study. *Table 6* following shows the total average number of minutes used in direct and indirect nursing in different shifts by RN. *Figure 27* and *Figure 28* following show the RN in direct and indirect nursing compared by shifts. *Diagram 7* following shows RN use of time in different shifts categorized by nursing interventions.

Table 6 *Registered Nurse use of time in direct and indirect nursing compared by shifts*

	Morning shift	Evening shift	Night shift
DIRECT NURSING	**281** min.	**240** min.	**367** min.
INDIRECT NURSING	**125** min.	**166** min.	**193** min.
TOTAL (in NIC)	**476 min.** **7 h 56 min.**	**478 min** **7 h 58 min.**	**670 min.** **11 h 10 min.**

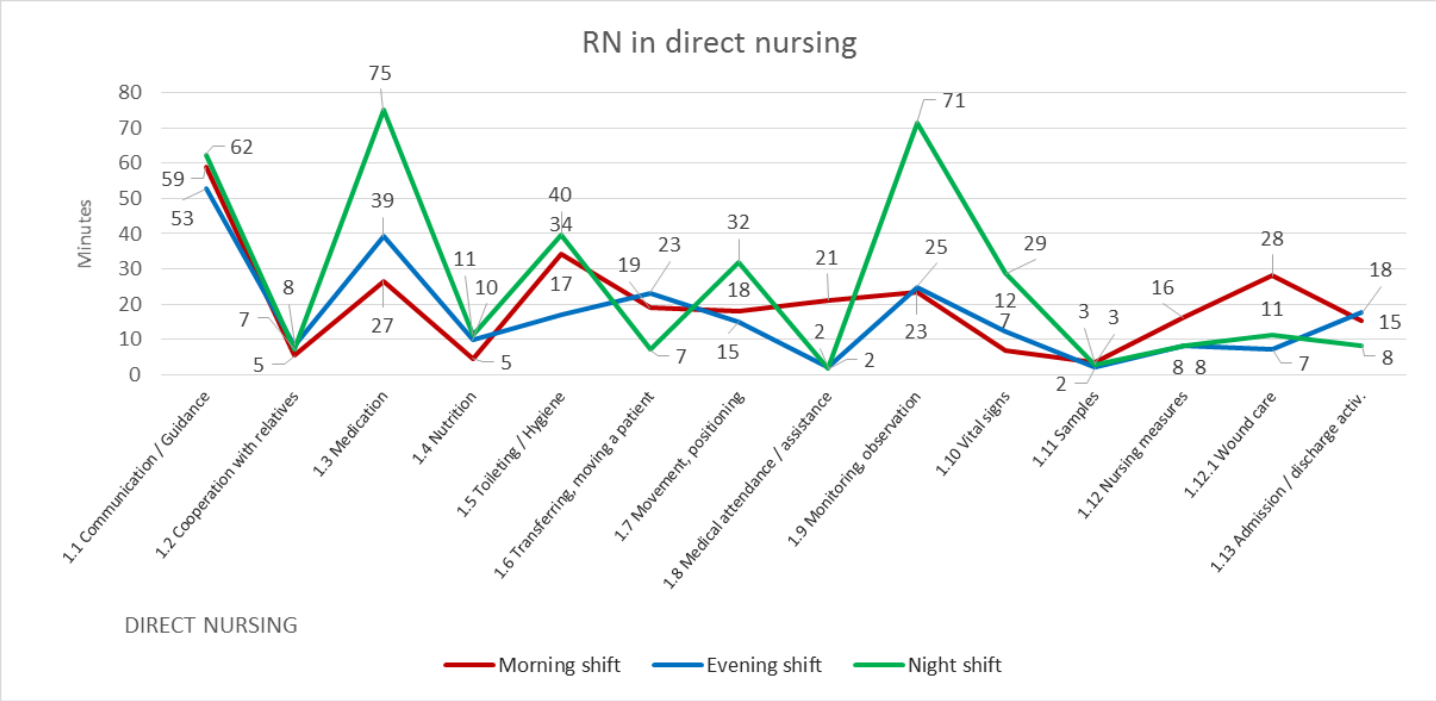


Figure 27 *Registered Nurse use of time in direct nursing compared by shifts*

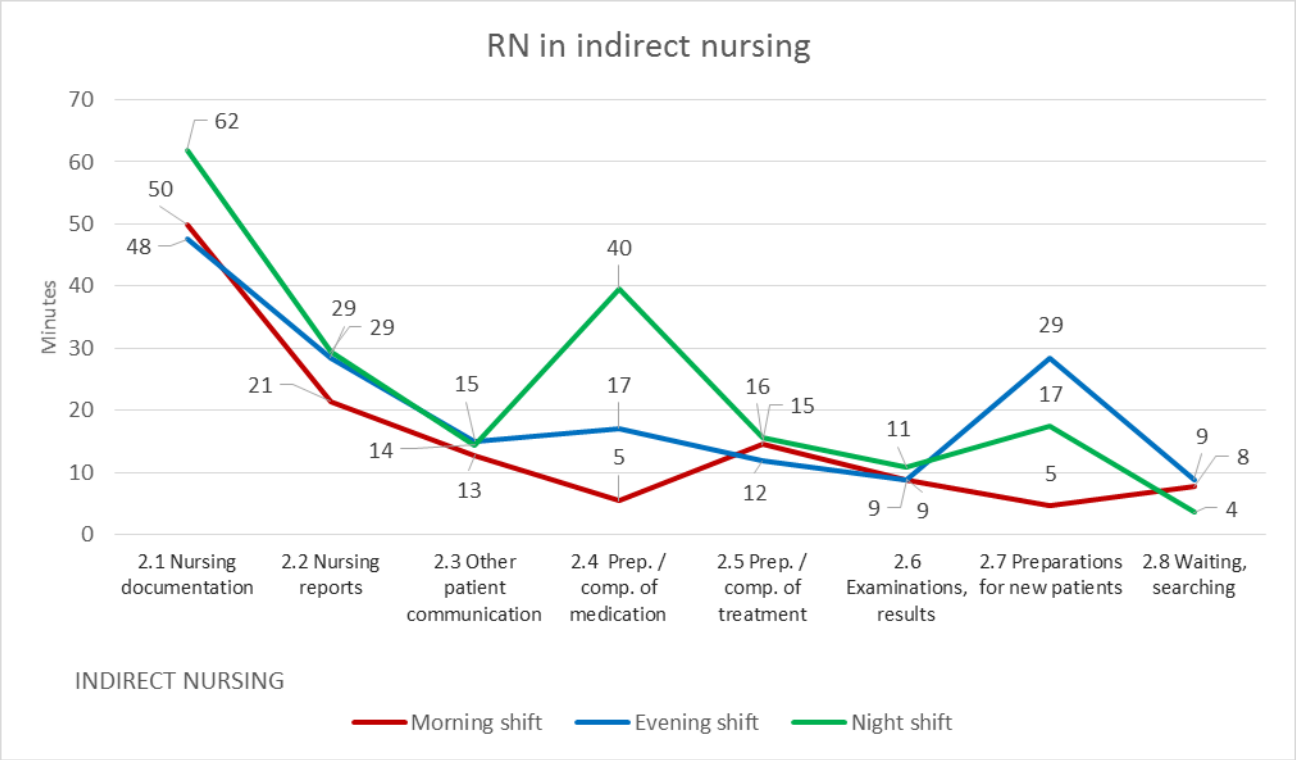


Figure 28 *Registered Nurse use of time in indirect nursing compared by shifts*

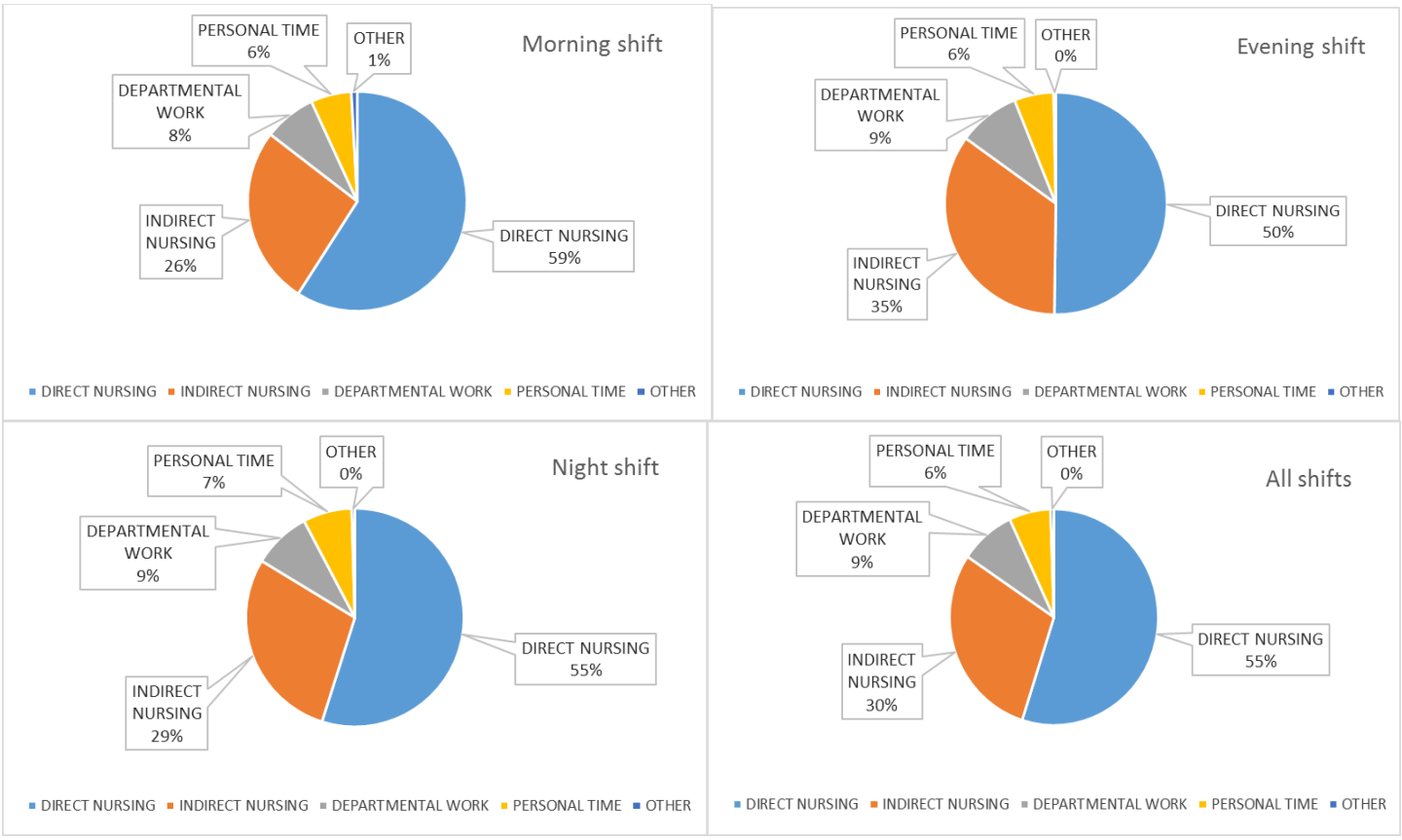


Diagram 8 *Registered Nurse use of time in different shifts categorized by nursing interventions*

7.3 Managerial implications

In Finland, working time is regulated by the General Working Time Act (Working Time Act 1996/605). Working hours include the time spent on work and the time the employee is required to be at the workplace for the employer. Workflow planning is a key part of the employer's right of management and business leadership. Workflow planning also means a work management plan that allocate staff to different job assignments. The Working Time Act defines the general rule of working time, and the period of working time for certain sectors as an allowable exception. The cycle of work time allows for a very flexible regular working time. Shift planning and arrangements deviate from the general rule. The main point for shift planning is that the staff is sufficient to perform the basic task. (Working Time Act 1996/605; Koivumäki 2006, 4; Finnish Institute of Occupational Health, 2012).

Irregular work shifts are common in the Plastic Surgical Ward and affect both the well-being of the patient and the health and performance of the nurses. Job satisfaction is related to many aspects of work, such as adequate staffing, participatory planning, management support and appreciation, career advancement, pay and benefits, working conditions, job assignments and shift arrangements. Managing working hours and schedules will improve job satisfaction. The design of work routines must take into account the efficient and appropriate organization of the operation. Good workflow planning is developmental and productive, unbiased as well as supporting staffs' wellbeing and ability to work.

Partanen (2002) claims that the workload of nursing - and thus the need for staff dimensioning - is influenced by other factors than just the patients' need for care. The so-called Operational factors include: the unit's meaning of the function - the need for services, medical and nursing methods, management style, nursing operational model, personnel planning methods, shift planning, priorities, traditions in personnel planning, unit structure, facilities and occupational skills of nursing staff (Partanen, 2002).

When designing the work, tasks and persons are coordinated both quantitatively and temporally. Workflow design is also a design dimensioning. Shift planning has traditionally been the task of a ward manager or a person authorized by him/her in municipal health care. The key to planning is the equity among the staff. However, it should be noted that the workplaces have workers in different life situations and have

very different working time needs. (Koivumäki 2006, 3) An important principle of staffing and shift planning is that the right number of people are working at the right time and in the right place, with functional peaks and quiet moments being taken into account. In addition, work progress and well-being at work are noted, when there is occasionally one or two person(s) over the minimum staff, for unexpected absenteeism or cumulative work. This is particularly important for high quality patient care, but also to guarantee patient safety.

It is understood that the company's most important asset is staff and this cannot be over-emphasized in the service industry. Human resources management and the importance of human resources are mixed together. Staff do not always try to promote and develop activities, but companies can also experience them as an obstacle. At present, it has become more common that efforts are being made to reduce the cost of staff and short-term human resource management. (Viitala 2007; 42–43, 320). This will make implementing staff very challenging. That is why management plays an important role in making a workable and safe staffing approach. Adequate staffing is linked to patient satisfaction and patient safety. The purpose of this research is to highlight these shortcomings and how to avoid them.

Human resources management aims at goal-oriented co-operation between the individual and the organization (Syväjärvi & Stenvall 2003). Sädevirta (2004, 23–24) says that human resources management aims primarily at productivity and efficiency, and secondly, the well-being of staff, and thirdly, the benefits of employers, management and staff. Human resources management is seen as a non-coherent activity that should focus on interaction and engagement and social skills. When acting as a manager, managers are guided by preferences rather than strategy and organizational interests. (Syväjärvi & Stenvall 2003, 347–348.). That is why it is especially important that the manager is required to have excellent knowledge of business management, but also exemplary social skills.

The development of working time and the introduction of new working time models have an impact on the work of the entire work community. The introduction of new working time models may give rise to suspicions as well as changes in all levels of activity. It is essential, however, that they are working with innovative work hours that they are designed in cooperation with the staff and that new work time solutions have significant positive effects on the work community as a whole. However, working on innovative

working hours always requires compromises. A wide-ranging discussion is in the making of compromise solutions where different parties in the work community will be heard. (Kandolin & Hakola 2000, 40–43.) Workflow planning is effective when it combines the interests of an organization, a work community and an individual. At best, workflow planning can support staff wellbeing at work and the work community's workability. (Finnish Institute of Occupational Health 2012.)

Leadership is an important issue in the formation of communality, and the superior's ability to interact with each other is central to the change (Heikkilä, 2006; 41). In the management of change, which is also a change in the shift planning practice, the supervisor requires a wide range of features. Key features include ability to conceptual thinking, good interaction skills, goal orientation, optimum working conditions, overall management, principlism, and renewal and making changes. Achieving these requires management support, experience, systematization, training, openness, respect for people and good communication skills. However, the change does not only depend on the characteristics of the leader, but the success of leadership depends greatly on the organizational change capability, which can be strengthened, for example, by perceiving, understanding and managing change response. (Virtanen & Stenvall, 2010; 209–221)

Change resistance is almost an indispensable part of the change. A changeover may arise from the fear of losing one's own power or fear of sanction in a situation where an employee does not succeed or adapt to a new situation or operating model. Fear of incompetence alone can evoke resistance. (Virtanen & Stenvall 2010, 211) Mattila (2006) argues that resistance can be avoided by strengthening trust and prosperity. The management of change requires proactive and long-term confidence building (Taskinen 2011, 164). The presence of a supervisor and a regular discussion with members of the work community allows for innovativeness and on the other hand supports the implementation of change (Finnish Institute of Occupational Health 2013).

Companies can improve their competitiveness by ensuring the adequacy, competence, commitment and well-being of the workforce. Personnel management also aims at the company's financial success, and to achieve it, one must appreciate and support what is the human in the company. This is why Change Management is a key ethical assessment (Ikola-Norrbacka 2010). Workflow planning is strongly linked to the realization of justice. In career routines, the manager has the right, as well as the obligation to exercise power, and how his power to exercise is a central ethical question.

In all supervisory activities, it is important that it is felt fair and that employees are given the opportunity to influence their own work and to reform it. (Kangasmäki 2007, 24)

This study originated from the requests of the nurses in the Plastic Surgery Ward to provide a picture of the current workforce utilization. In addition, the Ward Manager supported the initiative and was interested in the results of the nurses' use of time. With the goal of making workers more productive and productive, no major change challenge is seen as a powerful challenge. In this study, the implementation of the recommendations is seen as a more challenging issue for the decision makers. What makes this study extraordinary, is that it has risen specifically from so-called "grassroots level". The nurses in the Plastic Surgery Ward are skilled and experienced. This study highlights how the nurses use time and how to prioritize time use for different parties. In particular, in terms of the quality and efficiency of the organization, the skills of the staff should be targeted correctly. The fact that a highly trained nurse carries out job duties that do not require high-level expertise wastes valuable resources on the wrong target. This weakens the quality and effectiveness of the patient care.

Staff competence has a significant impact on how the company succeeds in its service relations. The most important asset of the company and of any organization, besides its staff, is its satisfied customers. From the point of view of leadership, it is important that every employee is motivated to do the work that he has assigned to him. The organization must have a clear vision of the future before competent management and motivated workers can jointly meet the requirements of internal entrepreneurship. (Heinonen & Paasio 2005, 9-11, 32.) In change management, it is important that employees be motivated by strong company values and the appreciation of their own work. They are not too restricted with instructions, but are respected for different achievements. Personnel must have an understanding of all work tasks and the results are monitored and measured regularly. (Grönroos 2001, 458).

In this study, a Self-Assessment Form was used as a measure of self-assessment, which the nurses filled in during the two weeks of the shift. The tool method is based on the Nursing Intervention Classifications **[Appendix 5]**. The Nursing Activities Score Classification was used to estimate the direct, indirect Nursing care time, departmental time and personal time. Equivalent indicators should be used in the department in order to obtain an accurate and thorough data base on the department's staffing. This will help

improve the department's operations and increase the satisfaction of nurses and patients, which also has a connection with the patient's safety.

Partanen (2002) notes that decisions on the use of personnel in dimensions or nursing resources can be examined at three decision levels. The attending nurse, next to the patient's bed, will decide what to do to the patient / with the patient, and how much time is spent for each patient. The Ward Manager's decisions concern the allocation of nurses in patient care. The Executive Manager of Nursing makes strategic decisions about the use of nursing resources. (Partanen, 2002). Strategic choices of business operations guide the management of human resources. Human resources are an important starting point for what kind of strategic choices can be made. Business and personnel management work as a common process and the situation factors affect the management's strategic and personnel decisions. (Viitala 2007, 24-25.)

In competing business situations and changes in strategy, the organizational skills needs are increasing. Managing change and managing competence require clear goals, motivating staff, maintaining work ability and competence, and ensuring the organization's performance. Research has shown that management of change situations improves when the focus on knowledge development and organizational learning, and people have been involved in the implementation of the change (Vähämäki 2008, 208-210.) In today's society, knowledge and know-how are the most important competing competences of organizations. According to traditional way of working performance-level employees have not opportunities for personal thinking and responsibility. This way of thinking has begun to shift to work organization patterns where members of the work community have the opportunity to develop and apply their own skills. (Koivuniemi 2004, 54)

In constantly changing organizations, the challenge is to increase production, reduce delivery times and improve competitiveness. (Ruohotie 2002, 17-29.) Strategic leadership scientists have argued that success is not achieved by analyzing the market but by managing their own resources. The organization must have specific skills that competitors cannot duplicate. Competitiveness is achieved through leadership in know-how: what is learned, how knowledge is used and how quickly new learning is learned. (Viitala 2007, 61, 170). In order to succeed, organizations must focus on motivating staff and capacity for continuous learning, and support and appreciate the learning and skills development of people of different ages (Otala 2008, 278-287).

In customer service, as well as in patient care, the purpose of the staff is to provide added value to clients (patients). From the Human Resources point of view, the key factors in generating this value include recruiting, introducing new people, targeting and development discussions, personnel development, and the physical and mental wellbeing of staff. Changes in the operating environment, products and information technology cause a constant need for development, where knowledge alone is not enough, but must be learned in practice. In the modern times, the pace of change is intense and, especially after the introduction of technology, keeps on producing its own challenges for the organization. (Halonen 2001, 78–80.) Knowledge and know-how do not bring value unless they are used to achieve the goals. Experience in producing knowledge provides the opportunity to learn. In order for an organization to learn from experience, leadership needs to understand the importance of interaction skills. (Ruohotie 1997, 43–67.)

It is also particularly important that staff have an understanding of the organization's strategic human resource management objectives. The nurses' work should not only consist of core nursing, often at excessive pace and intensity, but nurses should have the opportunity to actively participate in the strategic planning of the department. Also, there should be more ward-focused meetings where just nurses discuss how to improve the department's performance the best possible way. This kind of brainstorming is good for the Ward’s operations but also making the nurses’ workflow more effective.

7.4 Validity, reliability and ethical considerations

When conducting a research, the researcher must do her best to ensure the credibility of the results. Since it is truthfully impossible to know whether the answers in the research are right or wrong, the researcher can only reduce the possibility of getting wrong answers (Saunders et al. 1997, 100–101). Validity and reliability make the key notions related to the quality of research. (Yin 2003). There are three different types of validity defined in this research. These are *the internal validity*, *the external validity*, and *the construct validity* that are presented in the section 7.4.1. *The reliability* is presented in the section 7.4.2. Also, at the end is discussed shortly *the ethical considerations* of the study (7.4.3).

7.4.1 Validity in the study

There are different perspectives to evaluate validity. Internal validity refers to the level of control to what extent the conditions within the experiment are controlled. Internal validity may be influenced by study's design, administration of the study and the extent to which a researcher considers alternative explanations for any causal relationships. (Collis & Hussey 1997, 187). Quinton and Smallbone (2006) put it more simply saying that, internal validity means measuring what was actually meant to be measured when designing the research method. In other words, does the result found in the study, match the original questions asked. (Quinton & Smallbone, 2006).

The purpose of this Master's study was to improve the staff strategic plan at the Plastic Surgery Ward. The objective of the current state analysis was to receive data of nurses' use of time that were identified in Nursing Interventions. The Self-Assessment Form **[Appendices 4&5]**, based on The Nursing Activities Score classification **[Appendices 6&7]** was used to estimate the direct and indirect nursing care time, departmental time and personal time. This tool was created specifically for nurses who were working with patient care. In this study, the data was collected from Registered Nurses and Practical Nurses, who were working at the ward, specifically in the field. The research tool of The Nursing Activities Score Classification was originally copied from Partanen (2002) study. The researcher contacted Partanen by mail and asked a permission to use her tool in this study, and to modify it to suitable for Plastic Surgery Ward in Töölö Hospital. The permission was given by mail on 25th of January, 2017, before the research plan was made.

The first step in this research was to get an answer for the first research question. The first research question was:" *How do Registered Nurses and Practical Nurses use their time in nursing care in the Plastic Surgery Ward?"* By asking this question, the researcher got the answer for collecting the data for the present state analysis. This research question was requested by the Ward Manager of Plastic Surgery Ward. Nurses' use of time phenomenon was very present at that time. Also, the nurses in the ward were very curious to know in what nursing interventions they mostly used their time during their shifts. Validity means the ability of a tool to measure precisely that what is meant to be measured. Theoretical concepts have been changed the everyday language and those concepts have been transferred to a tool. (Hirsjärvi et al., 2007, 226; Vilkka 2007, 150).

When measuring time the universally preferred way is use a quantitative method. Quantitative research answers questions about where, when, how much and how often. What is important in a quantitative research method is that there is a sufficiently large and representative sample. In this way, the questions relating to numbers and percentages can be ascertained as accurately as possible. The study helps to find out the current situation. (Heikkilä 2014, 15 - 16) In a quantitative study the researcher gets a general picture of the differences and relationships of variables. The information is explored and examined numerically, either the research data comes in numbers or alternatively the researcher groups the qualitative material itself into numbers. (Vilkka 2007, 13 - 14).

The Self-Assessment Form was the standardized survey that was used in this study to collect the data. All forms were identical and had the same base. This meant that all the participants answered the same questions. Forms were answered by marking certain parts. The researcher carried out the research into her own workplace where the nurses were working. Forms were distributed personally to the office of the ward and in the staff room. The researcher told the purpose of the study, explained the questionnaire and answered the necessary questions. All the forms had the explanations of Nursing Interventions written into them, so the participants were able to check what the Nursing Interventions meant. Forms were returned to the agreed tray where no other readers could read others' answers. The researcher took and personally picked up the forms. At the end, the researcher checked how the forms were filled. (Hirsjärvi et al. 2009, 193 - 197)

In this research study, the researcher got the results as check marks from the Self-Assessment Forms. One check mark means 15 minutes of nurses' use of time in nursing care. If the nurse was working a shift that was 7 hours and 45 minutes, he/she put 31 check marks on the Self-Assessment Form. The Self-Assessment Form was made according to the Nursing Intervention Classifications. All the check marks had to be marked according to how the nurse spend his/her day during that shift, in 15 minutes periods.

The concept of validity refers to measurements, or research method's ability to measure what it is intended for. There is always a risk that measurements and methods used do not reflect the same reality that the researcher believes he or she is studying. The questions asked in the questionnaire may be falsely understood by the respondents and

the researcher still analyzes the findings according to his or hers own reflection. Thus the results cannot be held valid and credible. The measurement may distort the results. (Hirsjärvi & et al. 2009, 232.). To improve the validity in this research the researcher made sure that the target group was educated early enough what the whole study was about and how the participants had to answer to the forms. The researcher send A Cover Letter for Nurses **[Appendices 2&3]** in as an e-mails attachment several times before the field study. There were notes in the office and staff room about the study. Also, it was personally discussed with many nurses what the study was about. This way the target group was well informed and they knew how they had to answer to the forms.

To improve research quality and trustworthiness, research validity needs to be ensured. For this to be achieved, Baxter et al. (2008: 555-556) state that the research design needs to be appropriate for the research questions, data is gathered and collected systematically and finally that the data is analyzed correctly. In order to evaluate research quality, validity is used as one of the criteria. When the researcher had all the data in her hand the analyzing part started. By analyzing use of time and keeping the data saved, the best tool for that was to use Excel spreadsheet. The check marks that were on the Self-Assessment Forms were changed into minutes. After that the minutes were divided among all the shifts. This way, the researcher was able to get the average mean of the answers. This was because the researcher wanted to know, for example, how the typical nurse used his/hers time in the specific shift. Excel spreadsheet was seen as a best way to categorize all the results. It was also certain way to keep the results organized and safe so that they didn't get lost or vanish anywhere.

When all the data was collected and spread into an Excel spreadsheet program, the researcher was able to make diagrams that were able to describe the situation of nurses' use of time. After all the results of date were categorized and the results were able to be read, it was possible to go for the next step. The next step was to go for the second research question. The second research question was: *"How can the results of distribution of nursing care be used to improve nurse staff strategic planning in the Plastic Surgery Ward?"*

According to Eriksson and Kovalainen (2008: 305), validity is the extent to which conclusions are drawn in the research that give an accurate description or explanation of what is studied. In other words, validity is to say something is true and certain, meaning that the findings represent accurately the phenomenon referred to in the study, but are

also backed up by evidence. Validity aims to provide the guarantee of correctness of the report, which is established through analytic induction, triangulation and member check. (Eriksson & Kovalainen, 2008: 305). Research findings must accurately represent what is happening in a certain situation; the findings must reflect behavior in natural setting. Research errors can weaken the validity of the research. These errors can be for example poor research process and samples, or misleading measurement. It can occur that the measure does not reflect what the researcher is investigating. (Saunders et al. 1997, 101-102).

The researcher had the data from PNs and RNs separately among a 2 week period, from every shift, as well as separated according to the nurses' work experience. All the results that were counted showed that it's possible to be able to see the difference of the first and second week. The research environment and target group was very precisely described. When having the data, the environment and the target group so precisely described, it supported the validity (and the reliability) of improving process. When the data was analyzed the researcher was very precise when doing it, and she counted everything several times which made the data analysis such a time-consuming process. However, this way the researcher was able to make sure that there won't be any errors when analyzing the data. The only calculation mistake that may have occurred in this study was when the number had been rounded incorrectly. In any case, this kind of error is very small and it is about a minute or just a few seconds apart.

External validity means the extent to which the results of a sample can be generalized to a population. The population validity refers to the responses of the sample's participants and whether those responses represent an accurate assessment of the target population. Convenience sample is less likely to show population validity compared to random selection. (Burns & Burns 2008, 426-427.) External validity is the assessment whether the results are applicable in other situations and to what extent. (Quinton and Smallbone, 2006). Lincoln and Cuba claims (1986) that within the qualitative research paradigm, external validity is replaced by the concept of transferability. Transferability is the ability of research results to be transferred to situations with similar parameters, populations and characteristics. (Lincoln & Guba, 1986; 73-84).

The tool method (Self-Assessment Form) that was used in this research was modified specifically for nurses. That tool method can be used in any other department in the

hospitals. On the other hand, it is not suitable for use as a tool method in other professions, because it was specifically made for the nurses. That being said, there could be made similar kinds of forms that are modified to other professions. This way their job descriptions will be easier to classified and brought up. This similar kind of tool method has been used in several kinds of other research and there have been successful results.

According to Hirsjärvi et all (2010), it is important to describe the conditions and places where the data was collected as well as time used for the questionnaires, possible distractions, errors in the interpretations during the questionnaires and also the researcher's own evaluation of the situation. (Hirsjärvi, Remes & Sajavaara 2010, 232). The researcher's own evaluation of her learning outcome is presented in section 7.6.

Construct validity ensures that the researcher must be able to demonstrate that the research findings can be explained by the construct in question. (Collis & Hussey 1997, 186) The construct validity, which is related to the phenomena that are not directly observable. Examples of these are motivation or ambition. These are called hypothetical constructs, and they are assumed to exist as factors to explain the phenomena in question. (Saunders et al. 1997, 101-102). The target group was very motivated to participate in the research. The response rate was 94%. This is considered a quite high response rate in this kind of research. Some of the nurses came to tell the researcher the reason why they didn't answer the survey. It was because the shifts they had were so busy that they simply didn't have any energy to give for the survey. There were only two nurses who came to tell the researcher that they didn't participate into this survey at all in any of their shifts. One's reason was quite understandable, but other one's motive was unclear. If both of these nurses would have participated to this survey in all shifts, the response rate for this study would had been closer to 100%. That being said, this study was voluntary and it was informed to the nurses. Also, the researcher made sure that everyone knew that this study did not affect in any way for anyone's image, whether they participated in this survey or not.

7.4.2 Reliability in the study

The reliability of the data depends on its quality. Reliability is in that the operations of the study, the procedures, can be repeated and later investigations will end up with the same results and conclusions. For this purpose of ensured consistency the procedures need to be properly documented. (Hirsjärvi & Hurme 2001, 185; Yin 2009: 40, 45)

Regarding reliability, there might occur subject errors and biases, and observer errors and biases. Subject errors can occur when the respondents for example, answer to the questionnaire in different times of the day or week. This may affect the results. Subject bias can occur, for example, when people answer the questions in a way they assume that they are wanted to answer. Also, when they are, for example, afraid that they can be identified from the answers and therefore do not want to tell the truth. Observer error can occur, for example, when several people conduct the interviews; this may provide different approaches to the same answers. Observer bias can occur if several people interpret the results, in a different way. (Saunders et al. 1997, 101).

If the nurses answered truthfully or not, it's impossible to know. The way to ensure that most of the answers were answered truthfully, is that the results show, for example, that almost everyone marked two check marks in the personal time part. By law you are able to have only 30 minutes of break time per shift, and this part was answered truthfully by most participant. Personal time is set in the Working Hours Act. It have also been agreed on collective agreements. An employee is entitled to a daily personal time if his/hers shift is longer than six hours or if otherwise agreed in a collective agreement. In the Plastic Surgery Ward, where a worker does not have the opportunity to leave the ward for a meal break he/she has the right to a 20 minutes meal break. Coffee breaks have been agreed on by collective agreements, and it's usually 10 minutes. That being said, nurses have 30 minutes personal time during an 8 hour shift. During the double and night shifts the break is normally longer. (HUS, 2018; Tehy, 2018, Super, 2018, Working Hours Act, 2018).

Hirsjärvi & Hurme (2001, 185) state that the reliability of the data depends on its quality. It is important to avoid errors in research and due to this the reliability of the research needs to be evaluated. Reliability means repeatability in the results. In other words the results can be repeated and the results are not random. Reliability of the research can be stated in many ways e.g. if two researchers come up to the same result can the result be seen as reliable? If the same person would be studied two separate times with the same result could the result be seen as reliable? Reliability can also be understood so that if the same result will be achieved by using two different methods can the result be accepted as reliable. (Hirsjärvi & Hurme 2001, 186; Hirsjärvi, Remes & Sajavaara 2010, 231.)

According to Yin (2009; 40-41) reliability is in that the operations of the study, the procedures, can be repeated and later investigations will end up with the same results and conclusions. For this purpose of ensured consistency the procedures need to be properly documented. Reliability can be strengthened, for example, by using different data sources, using different data collection tools and/or collecting data at different time points (Quinton and Smallbone, 2006; 130). By using more than one data collection tool to answer the same research question is called triangulation which provides a stronger body of evidence and reinforce the research findings. By ensuring research reliability, research quality and trustworthiness are ensured (Baxter, 2008). In this study, the reliability was not able to be ensured by using more than one data collection tool. This was because of the lack of time, and because the self-assessment itself gave already a big enough data of nurses' use of time. When measuring time, the best way to measure it is to use a quantitative method. The other research tool methods were not seen as needed at this point. This research method, on the other hand, was used in many other quality studies with remarkable results.

What affected the reliability in this research was that, it took almost one year to go through all the data and categorize it so that the results were ready to be presented. All the check marks that were in the Self-Assessment Form **[Appendices 4&5]** had to be counted. They had to be categorized in the Excel spreadsheets. After that, there had to be several diagrams made. All that, took several days to complete. According to Thomsett (2002) even the most efficient, experienced, and capable researcher will be faced with serious delays. The delay itself is not a failure of the process; it simply is part of the team dynamic. The real test is found in how the management solves the problem when it does occur. (Thomsett, 2002). Even the timetable did not meet the original schedule plan. This was not because of the lack of capability to run time management, it was simply because of lack of time. Also, the researcher's personal issues had its own affect. This is presented in the chapter: Learning outcome (7.6). Nevertheless, the research result has certainly not changed much and is still very fresh.

7.4.3 Ethical considerations in the study

Defining the reliability of the research is central to the research ethics review. In a quantitative study ethics can be going in different ways. Ethics can be seen as a technically lucrative norm and attention is drawn information gathering, data collection and analysis methods trustworthiness, personal anonymity, and the presentation of

research results. Research ethics can also be seen as a methodological fact, when all the choices made in the study are moral choices. Making a survey ethics also interfaces with transparency. In the study it can be stated that the researcher's choices are based on the sources rather than on the researcher's own values. (Tuomi & Sarajärvi 2002, 125-126; Vilkka 2005, 170).

The research permission for this study was granted from HUCH and from Executive Director of Nursing *Terhi Mäkelä* **[Appendix 1]**. The research plan was approved and this study followed good ethical research values. Study did not affect patients or the patients' care in any way. That's why it is ethically very reliable research. The only thing that was questionable in this study in ethically matter, was how the research affected the participants and their work. That being said, the participation was voluntary and was informed in a separate letter to the nurses **[Appendices 2&3]**. The field study that was about to happen in the ward was informed many times via e-mails and there were notices on the wall in the office and in the staff room. So, this research did not come as a surprise to anyone. Also, everyone in the ward had enough time to get prepared for the study field. The Self-Assessment Form was already familiar to them.

The researcher informed the target group that they can also answer the Self-Assessment Forms **[Appendices 4&5]** after their shift was over. Some of the participants reported that it was easier for them to reply to the form on their way home or right after their working day was over. That's how they got a better overall picture of their working day. The participants were also telling that they were talking to other participants while filling the forms. They said that this way it was easier for them to answer correctly to the forms when they were able to get peer support from each other. That being said, they affirmed that they responded to the survey independently and only according to their own experience.

The researcher gathered all the forms that were returned, even if they were half filled. The researcher did not change any answers or add any text of her own. All orginal questionares were kept in safe and any of the date was not missing in any time of the process. The researcher did not destroy any of the data material until the study was finished and approved. This way the researcher ensured that the Nurses' anonymity was secured throughout the study, as well as the ethical considerations were taken into account.

The researcher rewarded the target group with delicacies after the field study was finished. In addition, at the end of the study field, she arranged a lottery of six sparkling wine bottles among all the participants. This was informed to the participants during the first days of the 2 weeks field study. This motivated the participants, although many said they would had participated in the study despite any rewards.

7.5 Limitations and suggestions for further research

When the research is done to the organization, where there are many different bodies and professional groups, limiting research is indispensable because of its abundance and time constraint. This study narrowed the scope of research closely. This is explained in detail in section 5. The purpose of this study was to find out about the nurses' use of time in the ward, specifically in field work. It would be good to repeat this study, for example, every two to five years, in order to get more accurate information about the nurses' use of time. This way, the nurses' use of time can be developed more efficiently and properly aligned. However, it would be good if the research proposals were put into practice before new research emerges. This is how we can see whether the implemented organizational changes have affected the Department.

An example of a future study would be for the Department Clerks to clarify their job descriptions. This study revealed that nurses spend a lot of time on departmental work. Why this is happening can be explained more precisely by doing a research for clerks in the ward. Certain research questions should be presented like, what the clerk's job description is in the ward, whether there are enough clerks in the ward and whether the clerk workload can be expanded. A combined-method research study may be most appropriate for this purpose.

In addition, it is good to clarify the job description of the pharmacists, physiotherapists, nurses' aides and patient transfer attendants. The study revealed that nurses spend a lot of time on preparing and sharing medicines during their shift. They also spend lots of time transporting patients to the operations rooms and from the recovery room back to the ward. They do a lot of cleaning and organizing things. Especially RNs are too overeducated for this kind of work. However, it is cheaper for the employer to hire a new department assistant than a Registered Nurse. When a nurse is doing a job like that, it's always away from the patient care. For this reason, it would be good to do this similar research just for these other professions to see how they spend their time while working

in the department. Then it would be easier to see how the work tasks could be shared between these professions.

According to Alasuutari (1999), the research process never ends when the research problem has been discovered. Answers are always partial responses and partial truths. The research does not end, but it has to stop by doing the report and putting the point to it. However, Alasuutari (1999) continues that the answers given to the study in some of the questions generally raise new questions and theoretical problem-thinking. The idea behind the end of one study or during it, can be the beginning of another research.

7.6 Learning outcome

The researcher compared the objectives that are set for the thesis process with the achievements and with the outcome. The activity of the study is also evaluated as a whole. The learning outcome presents the researcher's own views of the work's success. A successful study should achieve the set goals. Success should also be assessed from the point of view of the benefits of the end result. (Ruuska 2006, 248-252).

Completing the thesis was quite a disciplined process, but it was also a very inspiring and instructive experience. I started my thesis process at the beginning of 2017. I presented my different thoughts to the Ward Manager and together we decided to do a study about the nurses' use of time. We wanted to improve staff strategic planning, nurse scheduling and staffing structure. My goal would be to make nurses' work more functional and effective. As a Registered Nurse myself I see these issues that are out there, not only in the Plastic Surgery Ward, but all over the country. The job description of a Registered Nurse should be critically evaluated in order to bring appreciation to the profession.

At the very beginning I had some difficulties to create a thesis plan that would fit both my workplace's needs and my Master's degree requirements. I felt I didn't get enough guidance from my teacher in what direction I should to go. I realized I had to be more independent and active with my decisions that I had made according to my research plan. I was studying a lot about literature of research planning and after struggling through I finally was able to make a thesis plan in a tight schedule. The two-week field study was completed in May 2017. While I was doing my present-state analysis, I was

working on my own without being able to get proper support from my teacher. This made the process of this study very challenging and extremely laborious.

It took me almost a year to categorize my study results. After a little struggle, I was able to control my time management, and the summer of 2018 was a very fruitful time for me. I finally got my all research results done. I made several diagrams and picked the ones that described the results the best possible way. In the fall of 2018, I was really pushing this study forward. What motivated me was that I got a new teacher to work with me. My supervisor changed in the middle of the thesis process, which eventually turn out to be for the better. My study was incomplete and I felt like it wasn't going anywhere for a long time.

During the fall I was writing the conclusion part. I found it very demanding, but also quite an eye-catching experience while writing the validity and the reliability section in my study. Knowledge of validity and reliability helped me in designing and judging my own work. It also made me a better researcher because I learned to evaluate research literature and choose among alternative research designs. Adopting these standards ensured that my study results were credible.

The results of this study were very accurate. The data was collected from the nurses and it gave very valuable information to my work place. There has never been any other studies about nurses' use of time in the Plastic Surgery Ward in Töölö Hospital and whether that there are enough studies about nurses' use of time in general. Many studies focus on patients and patients' care, or nursing science. When it comes to improving the organization's strategy, it is extremely important to find out how the nurses work and what kind of contribution are given. By understanding the nurses' use of time, it gives significant information that can be utilized in many other development studies.

I have my Bachelor of Nursing science degree. I didn't have any business background before I started my studies of Health Business Management at the Metropolia University of Applied Science. I felt like I was studying a new field in a very short period of time. I was able to combine these two professions by learning how the health sector works in a business perspective. I was able to apply the research knowledge of the field. Because I learned how to use business methods, to develop and solve problems in my working life, my management skills improved dramatically.

At the end, I would like to say that I had my ups and downs during my thesis process, but I always found the inner strength to pull myself up. I believe that challenges made me more responsible and stronger at managing research projects. There is a saying: ’*a life without struggle is a life without success’*. Although I was struggling with my thesis in all aspects, it made me believe that obstacles can be turned into benefits. I didn’t give up and I learned not to quit. Most of all, I never wished it was easier, I wished I was better. And better I became.

References

Alasuutari, P. (1999). Laadullinen tutkimus. 3rd Renewed edition. Gummerus Kirjapaino Oy: Vaajakoski 2007.

Borgman, M. & Packalén, E. (2002). Parhaat käytännöt työyhteisön kehittämiseen. Tampere: Tammi.

Burke T., McKee J., Wilson, H., Donahue R., Batenhorst A. & Pathak, D. (2000). A comparison of time-and-motion and self-reporting methods of work measurement. Journal of Nursing Administration, 30(3), 118-125.

Coghlan, D. & Brannick, T. (2014) Doing action research in your own organization. 4th Edition. Sage: London.

Defloor, Tom & Gobert, Micheline & Limere, Veronique & Myny, Dries & Van Goubergen, Dirk & Verhaeghe, Sofie (2010). Determination of standard times of nursing activities based on a Nursing Minimum Dataset. Journal of Advanced Nursing Vol. 66, p. 92-102.

Duffield C, Gardner G & Gatling-Paul C. (2008). Nursing work and the use of nursing time. Journal of Clinical Nursing Vol. 17(24), p. 69–74.

Field, M. & Keller, L. (2006). Project management. The Open University. Thomson Learning: London.

Finnish Institute of Occupational Health / Työterveyslaitos (2018).
Available from:
http://www.ttl.fi/fi/toimialat/soter/vanhustyo/tyoajat/tyoaika_autonomia/sivut/default.aspx. [Accessed 14th of October, 2018].

Finnish Institute of Occupational Health / Työterveyslaitos (2018).
Available from:
http://www.ttl.fi/fi/tyoyhteiso_ja_esimiestyo/Sivut/default.aspx.
[Accessed 14th of October, 2018].

Finnish Nurses Association (2018). Nursing and Nurses education in Finland. Nurse education In Finland.
Available from:
https://www.nurses.fi/nursing_and_nurse_education_in_f/nurse-education-in-finland/
[Accessed 28th of February, 2017].

Furåker C. (2009). Nurse's everyday activities in hospital care. Journal of nursing management Vol. 17, p. 269–277.

Gran-Moravec, Marilyn & Hughes, Christina (2005). Nursing time allocation and other considerations for staffing. Nursing and Health Sciences Vol. 7, p. 126-133.

Grönroos, C. (2007). In Search of a New Logic for Marketing. Foundations of contemporary Theory. Hoboken: John Wiley & Sons Inc.

Grönroos, C. (2001). Palveluiden johtaminen ja markkinointi. Translated Maarit Tillman. Porvoo: WSOY.

Halonen, O. (2001). Yhdessä ykköseksi. Luo kilpailukykyä henkilöstön avulla. Helsinki: Kauppakaari.

Heikkilä, T. (2014). Tilastollinen tutkimus. 9th Renewed edition. Porvoo: Bookwell.

Heikkinen H.L.T., Rovio E. & Syrjälä L. (2008). Toiminnasta tietoon. Toimintatutkimuksen menetelmät ja lähestymistavat. Helsinki: Hansaprint Direct Oy.

Heikkinen, H.L.T, Rovio, E. & Kiilakoski, T. (2006). Toimintatutkimus prosessina. Helsinki: Hansaprint Direct Oy.

Heinonen, J. & Paasio, K. (2005). Sisäinen yrittäjyys kuntatyössä. Kunnallisalan kehittämissäätiön tutkimusjulkaisut; 48. Vammala: Vammalan kirjapaino Oy.

Houni, M & Nupponen, M. & Pakarinen, K. (2002). Kuntien strategiatyön avaimet. Helsinki: Finnish Association of Finnish Local and Regional Authorities / Suomen Kuntaliitto.

HUS, (2017). Medical care. Hospitals. Töölö Hospital. Wards. Ward 3. Available from: http://www.hus.fi/en/medical-care/hospitals/toolo-hospital/wards/ward3/Pages/default.aspx [Accessed 28th of March, 2017].

Hyrkäs, K & Nieminen, P. (2004). Terveydenhuollon sanasto. Englanti-Suomi-Englanti. Werner Söderström Osakeyhtiö. Helsinki.

Ikola-Norrbacka, R. (2010). Johtamisen eettisyys terveydenhuollossa. Esimiestyön ja hallinnon eettiset arvot julkisen terveydenhuollon kahdessa professiossa. University of Vaasa, Faculty of Philosophy. Dissertation.

Kakushi, L. & Evora, Y. (2014) Direct and indirect nursing care time in an Intensive Care Unit. Revista Latino-Americana de Enfermagem. 2014 Jan-Feb; 22(1): 150–157.

Kalisch B. (2006). Missed Nursing Care: A Qualitative Study. Journal of Nursing Care Quality 21(4), 306–313.

Kananen, J. (2013) Design Research as Thesis Research (Applied Action Research): A Practical Guide for Thesis Research. Jyväskylä, Finland: JAMK University of Sciences.

Kananen, J. (2009). Toimintatutkimus yritysten kehittämisessä. Jyväskylä: Jyväskylä University Applied Science.

Kandolin, I. & Hakola, T. (2000). Työaikojen kehittäminen. Production Härmä, M. Toimivat ja terveet työajat. Institute of Occupational Health. Social and health Ministry. Helsinki: MIKTOR.

Kangasmäki, E. (2007). Eettisen johtajuuden toteutuminen ja sen merkitys henkisen työhyvinvoinnin tukemisessa – sairaanhoitajien kokemuksia sairaalan osaston työyhteisössä. Jyväskylä University, Department of Health Sciences. Master's Thesis.

Kauhanen J. (2006). Henkilöstövoimavarojen johtaminen. WSOY, Helsinki.

Kauppinen, T. & Hanhela, R. & Kandolin, I. & Karjalainen, A. & Kasvio, A. & Perkiö-Mäkelä, M. & Priha, E. & Toikkanen, J. & Viluksela, M. (2010). Työ ja terveys Suomessa 2009. Helsinki: Institute of Occupational Health / Työterveyslaitos.

Kaustinen, Teija (2011). Oulu-hoitoisuusluokitus ja hoitohenkilökunnan ajankäyttö hoitotyön laatuvaatimusten näkökulmasta. Publications of the University of Oulu. Tampere: Juvenes print.

Koivumäki, M. (2006). Työaika-autonomia–projekti 10/2005 – 5/2006. The final report / Loppuraportti.

Koshy, E. & Koshy, V. & Waterman, H. (2011). Action research in Healthcare. London: Sage.

Laine M. (2005). Työn palkitsevuus vahvistaa hoitajien sitoutumista työpaikkaan ja ammattiin. Työterveiset 11 (4), p. 12–14.
Available from:
http://www.ttl.fi/Internet/Suomi/Tiedonvalitys/ Verkkolehdet/Tyoterveiset/2005-04/5.htm
[Accessed 28th of February, 2017].

Levin, D. (2006) Action Research: What Is It? Why Is It Important? Beginnings workshop.
Available from:
http://www.the-registry.org/Portals/0/Documents/Credentials/Leadership/Documents/Action%20Research%20-%20What%20is%20it,%20Why%20is%20it%20Important.pdf
[Accessed 23rd of October, 2018].

Lincoln, Y. S., & Guba, E. G. (1986). But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation. In D. D. Williams (Ed.), Naturalistic evaluation. San Francisco: Jossey-Bass, p. 73–84.

Lundgren S & Segesten K. (2001). Nurses´use of time in a medical-surgical ward with all RN-staffing. Journal of Nursing Management Vol. 9, p. 13-20.

Mattila, P. (2006). Toiminta, valta ja kokemus osrganisaation muutoksessa - Tutkimus kolmesta suuryrityksestä. Sosiologian laitoksen tutkimuksia 248. Helsinki: Helsinki University.

Mattila, P. (2006). Toiminta, valta ja kokemus organisaation muutoksessa - tutkimus kolmesta suuryrityksestä. Helsinki: University of Helsinki. Faculty of Social Sciences. Department of Sociology. Dissertation.

Mc Grory, P. & Pietilä, A-M. (2013). Healthy English. Edita. Porvoo.

Metropolia, 2018
Available from:
https://www.metropolia.fi/haku/koulutustarjonta-nuoret-sosiaali-ja-terveysala/hoitotyo-sairaanhoitaja/
[Accessed 27th of February, 2017].

Metropolia University of Applied Science (351/2003)
Available from:
https://www.metropolia.fi/en/apply/studies-adult-education-business-and-administration/health-business-management-mba/
[Accessed 28th of February, 2017].

Ministry of Education of Finland (2006). Ammattikorkeakoulusta terveydenhuoltoon. Koulutuksesta valmistuvien ammatillinen osaaminen, keskeiset opinnot ja vähimmäisopintopisteet Opetusministeriön työryhmämuistioita ja selvityksiä 2006:24
Available from:
http://www.minedu.fi/export/sites/default/OPM/Julkaisut/2006/liitteet/tr24.pdf?lang=fi
[Accessed 28th of February, 2017].

Morris R, Macneela P, Treacy P & Hyde A. (2007). Reconsidering the conceptualization of nursing workload: literature review. Journal of Advanced Nursing 57, p. 463-471.

Otala, L. (2008). Osaamispääoman johtamisesta kilpailuetu. Helsinki: WSOYpro.

Partanen, Pirjo (2002). Hoitotyön henkilöstön mitoittaminen erikoissairaanhoidossa. Kuopio: Kuopio University.

Pearcey P. (2010). 'Caring? It's the little things we are not supposed to do anymore' International Journal of Nursing Practice 16, p. 51–56.

Rissanen, T., Toivanen, T. & Miettinen, S. (2005). Mitä työajanseurantatutkimus kertoo psykiatrisesta hoitotyöstä? Tutkiva hoitotyö 3:19- 25.

Ruohotie, P. (2002). Oppiminen ja ammatillinen kasvu. Helsinki: WSOY.

Ruuska, K. (2006). Terveydenhuollon projektihallinta. Helsinki: Talentum.

Sawatzky-Dickson D & Bodnaryk K. (2009). Validation of a tool to measure neonatal nursing workload. Journal of Nursing Management Vol. 17, p. 84–91.

Soffarelli D & Brown D. (2001). The need of nursing leadership in uncertain times. Journal on Nursing Management 6, 201–207.

Silfverberg P. (2007). Ideasta projektiksi-projektityön käsikirja. 1st Edition. Edita, Helsinki.

Sochalski J. (2004). Is More Better? The relationship Between Nurse Staffing and The Quality of Nursing Care in Hospitals. Medical Care 42(2), p. 67–72.

Suomen sairaanhoitajaliitto ry (2018) Sairaanhoitajan työ.
Available from:
https://sairaanhoitajat.fi/tyo-ja-osaaminen/
[Accessed 11th of September, 2018].

Super, (2018). Suomen lähi- ja perushoitajaliitto.
Available from:
https://www.superliitto.fi/viestinta/super-lehti/ajankohtaista/lahihoitajakoulutus-muuttuu-entista-yksilollisemmaksi/
[Accessed 11th of September, 2018].

Sydänmaalakka, P. (2009). Jatkuva uudistuminen. Luovuuden ja innovatiivisuuden johtaminen. Helsinki: Talentum.

Sydänmaalakka, P. (2004). Älykäs johtajuus. Ihmisten johtaminen älykkäässä organisaatiossa. Helsinki: Talentum.

Sydänmaalakka, P. (2002). Älykäs organisaatio – tiedon, osaamisen ja suorituksen johtaminen. Helsinki: Talentum.

Syväjärvi, A. & Stenvall, J. (2003). Henkilöstövoimavarat työntekijöiden organisaatiotoimintaosaamisen arvioinnin ja johtamisen näkökulmasta. Administration Research / Hallinnon Tutkimus, 22 (4), p. 338-351.

Sädevirta, J. (2006). Henkilöstövoimavarojen johtamisen arviointi organisaation strategisena henkilöstötyönä. Teoksessa T. Suurnäkki (toim.) Strateginen henkilöstöjohtaminen ja työhyvinvointi – kirjoituksia arvioinnista ja kehittämisestä. Helsinki: Työturvallisuuskeskus Kuntaryhmä, p. 59-96.

Taskinen, H. (2011). Oikeudenmukaisuus ja kulttuurien kohtaaminen sosiaali- ja terveysalojen organisaatioiden yhdistämisessä. Kuopion ylioiston julkaisuja E. Yhteiskuntatieteet 126. Kuopio: Kuopio University.

Tehy (2018)
Available from:
https://www.tehy.fi/fi/apua/tyoaika
[Accessed 11th of September, 2018].

Thomsett, M. (2002). The little black book of project management. 2nd Edition. Amacom; New York.

Työterveyslaitos, (2010). Available from:
http://www.ttl.fi/fi/toimialat/soter/vanhustyo/tyoajat/tyoaika_autonomia/sivut/default.aspx.
[Accessed 11th of October, 2018].

Viitala, R. (2007). Henkilöstöjohtaminen. Helsinki: Edita.

Vilkka, H. (2015). Tutki ja kehitä. 4th Reviewed edition. Juva: Bookwell.

Vilkka, H. (2007). Tutki ja mittaa – Määrällisen tutkimuksen perusteet. Helsinki: Kustannusosakeyhtiö Tammi.

Virkki, P. & Somermeri, A. (2002). Projektityö kehittämisen moottori. Helsinki: Edita.

Virtanen, P. & Stenvall, J. (2010). Julkinen johtaminen. Helsinki: Tietosanoma.

Williamson, R. (2012) ‘What is action research?’ in R. Williamson, L. Bellman & J. Webster. Action Research in Nursing and Healthcare. London: Sage.

Westbrook J, DuffieldC, Li L. & Creswick N. (2011). How much time do nurses have for patients? A longitudinal study quantifying hospital nurses' patterns of task time distribution and interactions with health professionals. BMC Health services Research, 11:139.

Working Time Act / Työaikalaki. §1996/605.
Available from:
http://www.finlex.fi/fi/laki/ajantasa/1996/19960605?search%5Btype%5D=pika&search%5Bpika%5D=ty%C3%B6aikalaki.
[Accessed 11th of October, 2018].

Application for research permission to executive director of nursing

Metropolia University of Applied Sciences
Tukholmankatu 10
00300 Helsinki

Application for research permission
18th of April, 2017

Executive Director of Nursing, Terhi Mäkelä
Core & Plastic Surgery
HUCH / HUH Töölö Hospital
Tobeliuksenkatu 5 B, Helsinki
PO BOX 266, 00029 HUCH

Dear Executive Director of Nursing,

I am a final year student of the Master Programme in Health Business Management at Metropolia University of Applied Science. A part of my studies requires thesis writing, which is my current stage.

I kindly ask for permission to interview nurses in the Plastic Surgery Ward in Töölö Hospital. The anonymity of my participants will be strictly confidential. All the collected materials will be entirely confidential after the research is accepted. In order to obtain comprehensive and successful research, a questionnaire research method has a great significance for that.

The allocation of the self-assessment forms can be carried out only after authorization by the HUCH. Preliminary self-assessment forms are to be carried out in the end of May 2017. I hope that I can be in contact with the nursing manager of the ward and agree on the timing of the field work. The thesis is expected to be ready by the end of the year 2017. I will be happy to give more information about the thesis. My contact information can be found below.

Yours faithfully,

Sara Narbonne
Registered Nurse
Master's Degree student

A cover letter for nurses (in Finnish)

Arvoisa hoitaja,

Olen viimeisen vuoden opiskelija ylemmästä ammattikorkeakoulusta. Opiskelen englanninkielistä linjaa terveysalan hallintotieteen johtamista Metropolian ammattikorkeakoulussa. Osaksi opintoihini kuuluu opinnäytetyön teko, jonka tulen toteuttamaan osastollanne.

Opinnäytetyön tarkoituksena on arvioida hoitajien ajankäyttöä plastiikkakirurgisella vuodeosastolla. Tarkoituksena on, että hoitajat itsearviointilomakkeen avulla arvioivat omaa ajankäyttöä välillisessä ja välittömässä hoitotyössä. Tutkimus toteutetaan vuodeosastolla kahden viikon ajan, joka vuorossa. Tutkimukseen osallistuvat vuodeosaston potilastyötä (kenttätyötä) tekevät sairaanhoitajat sekä lähi- ja perushoitajat. Tavoitteena on saada tietoa käytettäväksi hoitohenkilökunnan mitoituksen ja rakenteen suunnitteluun plastiikkakirurgisella vuodeosastolla.

Pyydänkin ystävällisesti teidän osallistumistasi tutkimukseeni. Kaikki tutkimukseen kerätyt tiedot käsitellään luottamuksellisesti koko tutkimuksen ajan. Tutkimuksen hyväksyttyä, tutkimusaineisto hävitetään. Osallistujien anonymiteetti on ehdottoman luottamuksellista. Tutkimukseen osallistuminen on vapaaehtoista.

Otathan yhteyttä minuun tulevissa kysymyksissä.

Kiitoksia etukäteen, yhteystyöstänne.

Ystävällisin terveisi

Sara Narbonne
Puhelin: 045 175 5806
Sähköposti: sara.narbonne@metropolia.fi

A cover letter for nurses (in English)

Dear Nurse,

I am a final year student of the Master Programme in Health Business Management at Metropolia University of Applied Science. A part of my studies requires a thesis, that I'm about to do in your ward.

The purpose of the study is to evaluate nurses' use of time in the plastic surgery ward. The indentation is that the nurses evaluate their own use of time at the direct and indirect nursing care by using a self-assessment form. The aim is to obtain information of nursing staff dimensioning and design of the structure of the plastic surgery ward. The study will be carried out in the ward for two weeks, during every shift. The study will involve participating registered nurses and practical nurses who are working as nursing care (at the fieldwork) in the ward.

The results of the study will help to improve nurse scheduling and staffing structure. I would kindly request your participation in the study. All the information collected for the study will be handled confidentially during the whole process of the study. After the thesis is accepted, all the research data will be destroyed. The anonymity of my participants will be strictly confidential. Participation in the study is voluntary.

Please, contact me for any further information.

Thank you in advance for your co-operation.

Yours faithfully,

Sara Narbonne
Phone: 045 175 5806
E-mail: sara.narbonne@metropolia.fi

Self-assessment form of working time (in Finnish)

TYÖAJANSEURANTALOMAKE

Päivämäärä: ____ / 05 / 2017 Työvuoro (*ympyröi*): aamu / ilta / yö, klo. _____ - _____

Ammattinimike: ☐ sairaanhoitaja ☐ perus-/ lähihoitaja

Työkokemus osastolla: ☐ alle 1 vuotta ☐ 1-5 vuotta ☐ 5-10 vuotta ☐ yli 10 vuotta

Arvioi käyttämäsi työaika potilashoidossa 15 min. jaksoissa merkitsemällä rasti sen toiminnan kohdalle, jota olet ensisijaisesti tehnyt 15 min. ajan. Tarkista, ettei rasteja tule enempää, kuin työaikasi (4 rastia per tunti). Täytä kaavake vähintään kaksi kertaa työvuorosi aikana esim. klo 11 ja 15.

1 VÄLITÖN HOITOTYÖ	
1.1 Kommunikaatio / Ohjaus	
1.2 Yhteistyö omaisten kanssa	
1.3 Lääkitys	
1.4 Ravitsemus	
1.5 Eritys/ Hygienia	
1.6 Potilaan siirtäminen, kuljettaminen	
1.7 Liikkuminen, asentohoito	
1.8 Lääkärinkierrot /avustaminen	
1.9 Voinnin/tilan tarkkailu	
1.10 Vitaalielintoiminnot	
1.11 Näytteet	
1.12 Hoitotyön toimenpiteet	
1.12.1 Haavojen hoito	
1.13 Potilaan tulo- ja lähtötilanne	
2 VÄLILLINEN HOITOTYÖ	
2.1 Hoitotyön kirjaaminen	
2.2 Hoitotyön suullinen raportointi	
2.3 Muu potilaskommunikaatio	
2.4 Lääkitysten ja toimenpiteiden valmistelu / loppuunsaattaminen	
2.5 Hoitamisen valmistelu	
2.6 Tutkimukset, vastaukset	
2.7 Valmistelut uusia potilaita varten	
2.8 Odottelu, etsiminen	
3 OSASTOKOHTAINEN TYÖ	
3.1 Puhtaus, taloushuolto	
3.2 Toimistotyö	
3.3 Osastokommunikaatio	
3.4 Kokoukset, koulutus, ohjaukset	
3.5 Opiskelijaohjaus	
3.6 Välineiden, varastojen tark./täyd.	
4 HENKILÖKOHTAINEN AIKA	
4.1 Henkilökohtaiset asiat, tauot	
MUU	

Self-assessment form of working time (in English)

SELF-ASSESSMENT FORM OF WORKING TIME

Date: ____ / 05 / 2017 **Shift (*circle*):** morning / evening / night time: _____ - _____

Professional title: ☐ Registered Nurse ☐ Practical Nurse

Work experience in the ward: ☐ less than 1 years ☐ 1-5 years ☐ 5-10 years ☐ over 10 years

Evaluate your working time in patient care in 15-minute cycles by marking off the activity you have been doing for the 15 minutes. Check that there are no more marks than your working hours (4 marks per hour). Fill out the form at least two times during your shift, e.g. at 11am and 3pm.

1 DIRECT NURSING	
1.1 Communication / Guidance	
1.2 Cooperation with relatives	
1.3 Medication	
1.4 Nutrition	
1.5 Toileting / Hygiene	
1.6 Transferring, moving a patient	
1.7 Movement, positioning	
1.8 Medical attendance / assistance	
1.9 Monitoring, observation	
1.10 Vital signs	
1.11 Samples	
1.12 Nursing measures	
1.12.1 Wound care	
1.13 Admission, discharge activ.	
2 INDIRECT NURSING	
2.1 Nursing documentation	
2.2 Nursing reports	
2.3 Other patient communication	
2.4 Prep. / comp. of medication	
2.5 Prep. / comp. of treatment	
2.6 Examinations, results	
2.7 Preparations for new patients	
2.8 Waiting, searching	
3 DEPARTMENTAL WORK	
3.1 Cleaning, household management	
3.2 Office work	
3.3 Department communication	
3.4 Meetings, training, coaching	
3.5 Student supervision	
3.6 Equipment stocking, inventory	
4 PERSONAL TIME	
4.1 Personal matters, breaks	
OTHER	

The Nursing Activities Score classification (in Finnish)

T O I M I N T O L U O K A T

1 <u>VÄLITÖN HOITOTYÖ</u> = Hoitotyön toiminnot, jotka tehdään potilaan ja/tai omaisen läsnä ollessa.

1.1 Kommunikaatio / ohjaus: Potilasopetus ja – ohjaus. Hoitojen tai toimenpiteiden ohjausta ennalta ja toimenpiteen jälkeen. Potilaskutsuihin vastaaminen.

1.2 Yhteistyö omaisen kanssa: Potilaan ja omaisen haastattelu, keskustelu omaisen kanssa, omaisen ohjaaminen ja tukeminen, hoitoneuvottelut, joissa mukana potilas, omainen, eri yhteistyötahot.

1.3 Lääkitys: Lääkitykset suun kautta, injektioina, suppoina. Iv-lääkityksen aloittaminen/lopetus, lääkkeiden lisäys, infuusiopullon/pussin vaihto, tiputusnopeuden säätö, lopetus. Lääkitysten tarkistaminen. Potilaan/omaisen ohjaus lääkehoitoon liittyen.

1.4 Ravitsemus: Ravitsemus suun/ nenämahaletkun/ stooman kautta tai suonensisäisesti. Ruokatarjottimen vienti potilaalle ja pois kerääminen, avustaminen tarjottimien järjestelyssä, leivän voitelu, juottaminen, syöttäminen. Nestelistamerkinnät. Potilaan ohjaus ravitsemukseen liittyen.

1.5 Eritys, Hygienia: Kaikkien potilaaseen liittyvien eritteiden käsittely potilaan läsnä ollessa. Alusastian/ virtsapullon, kaarimaljan asettaminen, poistaminen. Dreenin kautta tulevan eritteen käsittely. Eritteen määrän kirjaaminen. Potilaan ohjaus eritykseen liittyen. Potilaan auttaminen hygienian hoidossa, osittain/ täysin, suihkussa/ lavuaarilla vuoteessa. Parran ajaminen, hiusten- kynsien hoito, suun/ ihon hoito, selän pyyhkiminen, vaippojen/ lakanoiden vaihtaminen. Käytössä olevan potilasvuoteen sijaus, purkaminen/ siistiminen kun potilas vuoteessa tai sen lähettyvillä (huoneessa). Kuolleen potilaan käsittely. Potilaan ohjaus hygienian hoitoon liittyen.

1.6 Potilaan siirtäminen, kuljettaminen: Potilaan saattaminen toiselle osastolle tai samalla osastolla toiseen paikkaan (esim. hartaustilaisuuteen vieminen). Hoitajan tekemät kuljetukset mm. laboratorio tms. Siirrot kävellen, pyörätuolilla tai sängyllä.

1.7 Liikkuminen, asentohoito (hoidollinen): Potilaan kääntäminen/ nostaminen/ auttaminen siirtymään sängystä ylös/ takaisin sänkyyn. Kävelyssä auttaminen/ ohjaus, p-tuolilla wc:aan vienti (koska kävely ei onnistu/ ole turvallista). Liikeharjoittelu, passiivinen tai aktiivinen, hengitysharjoitukset, yskittäminen. Liikkumisen/ asentohoidon apuvälineiden asettaminen ja poistaminen. Potilaan ohjaus liikkumiseen, asentohoitoon liittyen.

1.8 Lääkärinkiertoihin osallistuminen ja muu avustaminen: Lääkärinkierrot potilaan vierellä. Lääkärin tai muiden ei-hoitotyön ammattiryhmien avustaminen hoidoissa ja toimenpiteissä.

1.9 Potilaan voinnin/ tilan tarkkailu: Rutiini tarkkailut ja valvontakierrot (esim. yöllä), oireiden seuranta, esim. ahdistus, pelko, tajunta/ orientaatio, kipu, verenkierto, hikoilu, sidosten kunto. Potilaan ohjaus oman tilan tarkkailuun ja siitä raportointiin.

1.10 Vitaalielintoiminnot: Verenpaine, pulssi, hengitys, lämpö, neurologiset merkit, mittaaminen ja ylösmerkitseminen. Ekg:n ottaminen. Potilaalle kertominen mittaukseen/ mittaustuloksiin liittyvissä asioissa ja ohjaus.

1.11 Näytteet: Näytteiden ottaminen laboratoriota tai osastoa varten. Esim. veri-, virtsa-, uloste-, yskösnäytteiden ottaminen ja niiden merkitseminen. Potilaan ohjaus näytteisiin liittyen.

1.12 Hoitotyön toimenpiteet: Sidokset, kylmä/ lämminpakkaukset, katetroinnit, nenämahaletkun laitto/ poistaminen, peräruiskeet, antiemboliasukkien laitto/poisto, hapen antaminen, iv-kanyylin laittaminen/ poistaminen. Potilaan ohjaus hoitojen, toimenpiteiden aikana.

1.12.1 Haavojen hoito. Potilaan ohjaus hoitojen, toimenpiteiden aikana.

1.13 Potilaan tulo- ja lähtötilanteeseen liittyvät toiminnot ja tiedonkeruu: Tulohaastattelu, lupakaavakkeiden täyttäminen, raha- omaisuusluettelointi ja säilytyksestä sopiminen. Mmse-mittari, GDS-mittari, apuvälineiden käytön ja -tarpeen kartoitus, perhe- ja -ihmissuhteiden kartoitus, ortostattinen koe, osastoon orientoitumiset.

2 VÄLILLINEN HOITOTYÖ = Toiminnot, jotka tehdään osastopotilaiden välittömän hoitotyön valmistelua tai loppuunsaattamista varten.

2.1 Hoitotyön kirjaaminen: Hoitotyön suunnitelmat, myös hoitotyön suunnitelmiin liittyvät lääkärinmääräykset, erilaisten tietojen kirjaaminen. Hoitoisuusluokitusten tekeminen. Potilaan kotiutumiseen, osastolta siirtymiseen liittyvä kirjaaminen.

2.2 Hoitotyön suullinen raportointi: Työvuorojen vaihtumisiin liittyvä tai muulloin tapahtuva suullinen tai pelkästään potilaspapereiden kautta tapahtuva raportointi hoitajien kesken.

2.3 Muu potilaisiin liittyvä kommunikointi: Potilaisiin ja potilaiden hoitoihin/ tutkimuksiin liittyvä kommunikaatio lääkäreiden ja muiden jäsenten kesken. Esim. ”paperikierrot” kun potilas ei läsnä. Puhelimessa tapahtuva kommunikaatio eri tahojen kanssa (omaiset, muut hoitopaikat) osastolla sisällä oleviin potilaisiin liittyen. Potilaspuheluiden välittäminen, potilaan hakeminen puhelimeen.

2.4 Lääkityksen ja toimenpiteiden valmistelut/ loppuunsaattamiset: Lääkitykset ja lääket. Toimenpiteiden valmistelut ja loppuunsaattamiset. Lääkkeiden jako tarjottimelle, lääkekortin käsittely. Toimenpidevälineiden kokoaminen. Lääkitys- ja toimenpideohjeiden hakeminen, tutustuminen.

2.5 Hoitamisen valmistelut/ loppuunsaattamiset: Esim. pesu- ja muiden välineiden hakeminen, poisvieminen ja siihen liittyvä työ. Käsien pesu. Paluu tai menomatka potilassiirroissa (ilman potilasta). Hoito- ym. ohjeiden hakeminen, tutustuminen niihin. Osastolla olevien/ lähtevien potilaiden omaisuuden käsittely. Huom. Kotiutuneiden potilaiden omaisuuden käsittely kohtaan 3.2.

2.6 Tutkimusten tilaaminen, vastausten tarkistaminen: Lääkärinmääräysten edellyttämät jatkotoimenpiteet, tutkimusten tilaaminen, vastausten tarkistaminen atk:n/ puhelimen kautta.

2.7 Valmistelut uusia potilaita varten: Päivystys- tai elektiivisen potilaan osastolle tuloon liittyvä valmistelu ennalta (ennen kuin potilas on tullut os:lle). Potilaspapereihin tutustuminen, huonesijoituksen suunnittelu, näytteiden oton valmistelu jne. Huom. Potilaspapereiden ”kokoaminen” kohtaan 3.2 toimistotyö.

2.8 Odottelu, etsiminen: Toiminnan, puhelun, informaation odottaminen. Esim. lääkärinkierron alkamisen odottelu, toisen työntekijän, ohjauksen odottaminen ja työntekijän etsiminen.

3 <u>OSASTOKOHTAINEN TOIMINTA</u> = Osaston toiminnan ylläpitämiseen liittyvät toiminnot ja tehtävät.

3.1 Puhtaus, taloushuolto: Lähteneiden potilaiden vuoteiden, vaatteiden käsittely/ sijaus/ huolto. Kukkahuolto, osaston siistiminen, roskakorien tyhjennys. Välineistön järjestely. Huom. kotiutuneiden potilaiden omaisuuden käsittely kohtaan 3.2. Keittiön järjestely, ruuan jakelun valmistelu, ruokatilaukset, ruokakorttien käsittely.

3.2 Toimistotyö: Perinteiset ns. sihteerin työt. Potilaspapereihin liittyvä järjestelytyö, laboratorio- ym. vastausten käsittely. Huom. Myös osastolla olevien potilaiden papereihin liittyvä työ. Sanelujen purkaminen. Potilaskutsukirjeet. Lomakkeiden käsittely/ monistus, kanslian potilastaulun ylläpito. Postitus/ kukkatoimitusten jakelu. Lähteneiden potilaiden omaisuuden käsittely.

3.3 Osastoon liittyvä kommunikaatio: Työhön liittyvä kommunikaatio, joka ei liity osastopotilaisiin. Työhön liittyvät puhelinkeskustelut, sopimiset, tilaukset, lainaamiset. Eri tahojen (potilaat, omaiset, muut tahot) tiedusteluihin vastaaminen, jotka koskevat ei- sisällä olevia potilaita (sarjahoidoissa olevat, osastolta lähteneet/ jonossa olevat potilaat).

3.4 Kokoukset, koulutukset, ohjaukset: Yleinen osastoon liittyvä tiedonvälitys, neuvottelut, koulutus osastolla. Työvuorolistojen teko, tarkistaminen, muutoksista sopiminen. Henkilökunnan-/ potilas-ilmoitustaulujen ylläpito. Tiedotteisiin/ muuhun

työhön liittyvään materiaaliin tutustuminen. Toisen työntekijän ohjaus. Tutkimuslomakkeiden käsittely/ tutustuminen/ täyttäminen.

3.5 Opiskelijaohjaus: Opiskelijoiden ohjaus osaston toimintaan, potilashoitoon liittyen. Myös potilaan vierellä tehtävä ensisijaisesti opiskelijan ohjaukseen liittyvä työ. Opiskelija-arvioinnit, keskustelut opettajien kanssa, omien ohjaajien sopimiset jne.

3.6 Välineiden, varastojen tarkistus/ täydennys: Osastolla tarvittavien varastojen tarkistaminen, tilaaminen ja täyttö. Varasto-, lääke-, väline-, tekstiilitilaukset. Huom. ruokatilaukset kohtaan 3.1. Erilaisten hoitovälineiden toimintavalmiuden tarkistukset, kalibroinnit. Ensiapuvalmiuden/ toimenpiteissä tarvittavien välinetarjottimien tarkistus.

4 HENKILÖKOHTAINEN AIKA = Henkilökohtaiset toiminnot, jotka eivät liity potilaisiin tai osastokohtaiseen työhön.

4.1 Henkilökohtaiset asiat, tauot: Ruoka-, kahvitauot. Wc-käynnit, osaston ulkopuolella käynnit ilman työtehtäviä. Työhön liittymättömät keskustelut työtovereiden kanssa. Henkilökohtaisten asioiden hoitaminen, puhelut.

MUU: Toiminnot, joita ei osaa sijoittaa mihinkään edellä mainittuun. Kuvaa lyhyesti toiminta. Muista merkitä onko potilas läsnä, liittyykö osastolla hoidettaviin potilaisiin vai onko yleisluonteista/ osastokohtaista toimintaa.

The Nursing Activities Score classification (in English)

F U N C T I O N C L A S S I F I C A T I O N

1 <u>DIRECT NURSING</u> = Nursing activities, that are performed in the presence of a patient and / or relatives.

1.1 Communication / guidance: Patient education and counseling. Pre- and post-procedure guidance on therapies. Answering patient calls.

1.2 Cooperation with relatives: Interviews with, discussing with a relative, guiding and supporting a relative, care conference involving the patient, his/her relative and other stakeholders.

1.3 Medication: Medications by mouth, injections, suppositories. Starting / stopping IV medication, adding medication, infusion bottle / bag replacement, intravenous infusion rate adjustment, stop. Reviewing Medications. Patient teaching on medication self-administration.

1.4 Nutrition: Oral / nasogastric tube / stoma or intravenous nutrition. Taking a food tray to the patient and collecting them, assisting ward aides with food trays, assisting with buttering bread, feeding and drinking. Fluid intake chart entries. Patient guidance in related to nutrition.

1.5 Toileting, Hygiene: Treatment of all patient-related excretions in the presence of a patient. Setting / Removing a Bottle Bowl / Urine Bottle, Curved Bowl. Catheter and drainage bag care. Recording of excretions output. Patient guidance on toileting. Helping a patient with personal hygiene, partly / fully, in the shower / washbasin bed. Shaving, nail care, oral / skin care, wiping the back, changing diapers / pads. Making and tidying of patient beds. Caretaking of a deceased patient. Patient teaching on personal hygiene.

1.6 Transferring, moving a patient: Transferring a patient into another department or at the same department to another location (e.g. attending a worship). Transport by a nurse e.g. to/from the laboratory, etc. Ambulatory, wheelchair and bed transfers.

1.7 Movement, positioning (therapeutic): Push / raise / help the patient to move from bed to bed / back. Walking assistance / guidance, bed to washroom (when ambulating is not safe/successful). Assistance with passive and active exercise, breathing exercises, coughing. Setting / removing medical aids. Patient teaching on safe movement post-treatment / procedure.

1.8 Medical attendance and other assistance: Medical rounds by the patient. Assisting medical and non-nursing professionals with procedures and therapies.

1.9 Monitoring the patient's condition/status: Routine observation and monitoring nursing rounds (e.g. at night), monitoring of symptoms, e.g. anxiety, fear, consciousness / orientation, pain, circulation, sweating, condition of the dressings. Guidance for patient self-control for observing and reporting.

1.10 Vital signs: Blood Pressure, Pulse, Breathing, Heat, Neurological Signs, Measurement and Charting. Taking ECG. Patient teaching on vital signs findings.

1.11 Samples: Take samples for a laboratory or a department. For example, sample taking and labeling of blood, urine, faeces and labeling. Patient teaching related to the samples.

1.12 Nursing measures: Bandages, cold / heat packaging, catheterization, insertion / removal of nasogastric tube, enemas, put / removal of compression sock, administration of oxygen, insertion / removal of IV cannula. Patient teaching during treatment/procedure.

1.12.1 Wound care. Patient guidance during the treatment and measures.

1.13 Admission and discharge related activities and data collection: Admission Interview, filling out permission forms, money and personal item listing and agreeing on storage. MMSE Indicator, GDS Indicator, inquiry of the use and need of medical appliance and equipment, family and relationship inquiry, orthostatic examination orientation to the ward.

2 INDIRECT NURSING = Functions, that are made for the preparation or completion of departmental patients' indirect nursing.

2.1 Nursing documentation: Nursing plans, including medical prescriptions related to nursing plans, charting of varied types of data. Patient classification documentation. Charting related to discharge and departmental transfers.

2.2 Nursing reports: In-person reports to other nurses at shift change. Information sharing done in patient charts.

2.3 Other patient communication: Communication between doctors and other members about the patient care. Including case reviews when a patient is not present. Communication in the phone with various parties (relatives, other places of care) about the patients who are in the department. Forwarding patient calls, getting a patient to the phone.

2.4 Preparation / administration of medications: Medication preparation and measurement, distribution and administration, Medicine Administration Record entries. Collecting the relevant treatment and medicine protocols and familiarizing oneself thereof.

2.5 Preparation / completion of treatment: Collecting, washing and restocking care equipment. . Handwashing. Return or outward journey related to patient transfers (without patient). Patient handout and other documentation management. Handling personal items of patients (in the department) including outgoing patients. Note. Handling personal items of discharged patients in the section 3.2.

2.6 Ordering examinations, checking the results: Follow up on the doctor's orders, ordering examinations, checking the results via computer / phone.

2.7 Preparations for new patients: Advance preparation for emergency and elective patients prior to admission (Before the patient has came to the ward). Patient chart review, planning of room layout, preparation for diagnostic tests etc. Note. "Compilation" of patient files in section 3.2.

2.8 Waiting, searching: Waiting for activity, call, information. For example, waiting for the start of ward rounds, waiting for another employee, waiting for guidance, and searching for an employee.

3 <u>DEPARTMENTAL WORK</u> = Functions and tasks related to maintaining the Department's operations.

3.1 Cleaning, household management: Handling of bed linens, clothes for the outgoing patients. Flower delivery, cleaning the department, garbage disposal. Equipment organization. Note. Handing over the assets of the resettled patients to section 3.2. Kitchen organizing, preparation of food distribution, food orders, food processing.

3.2 Office work: The traditional so-called, clerk's work. Arrangements related to patient charts, processing of laboratory and other test results. Note. Also work that is related to the papers of the patients in the department. Deletion of dictation notes. The Patient Invitation Letters. Processing / duplication of forms, maintenance of a hospital's boardroom. Posting / delivery of flower deliveries. Managing property of discharged patients.

3.3 Department communication: Job-related communication that is not related to a patients in the department. Work-related telephone conversations, contracts, orders, quotations. Responding to (patients, relatives, others) inquiries from different parties concerning outpatients and those awaiting admission.

3.4 Meetings, training, coaching: General information about the ward, negotiations and trainings in a department. Making a request to staff schedule, checking, agree on the changes. Maintenance of staff / patient bulletin boards. Getting acquainted with information / other work-related material. Guidance of another employee. Processing / getting to know / filling up the study forms.

3.5 Student supervision: Student supervision related to the ward's activities and to patient care. Also, the work that is happening next to the patient but primarily related to student guidance. Student appraisals, discussions with teachers, agreement between the tutors, etc.

3.6 Equipment stocking / inventory: Checking, ordering, and restocking supplies, medications, instruments, textiles. Note. Food orders to section 3.1. Checks and calibrations of various treatment instruments. Checking the toolboxes required for first aid / measures.

4 <u>PERSONAL TIME</u> = Personal functions that are not related to patients or to departmental work.

4.1 Personal matters, breaks: Meal break, coffee break. Washroom visits, visits outside the department without a work task. Discussions with colleagues that are not work-related. Managing personal matters, phone calls.

<u>OTHER</u>: Functions that cannot place on any of the above. Briefly describe the operation. Be sure to indicate whether the patient is present, whether it is related to the patients being treated or whether it is generalized / department-specific.

All the original results from the Excel spreadsheet

Registered nurse

Experiences

REGISTERED NURSES				
All shifts	(Less than 1 year)	(1-5 years)	(5-10 years)	(Over 10 years)
1 DIRECT NURSING				
1.1 Communication / Guidance	50	59	50	55
1.2 Cooperation with relatives	8	8	10	5
1.3 Medication	43	38	20	45
1.4 Nutrition	11	6	5	9
1.5 Toileting / Hygiene	29	33	15	41
1.6 Transferring, moving a patient	18	15	40	15
1.7 Movement, positioning	24	19	20	19
1.8 Medical attendance / assistance	11	13	0	8
1.9 Monitoring, observation	34	32	20	42
1.10 Vital signs	20	11	10	12
1.11 Samples	3	3	0	3
1.12 Nursing measures	9	18	20	11
1.12.1 Wound care	14	25	10	15
1.13 Admission / discharge activ.	15	15	15	12
2 INDIRECT NURSING				
2.1 Nursing documentation	46	47	35	57
2.2 Nursing reports	27	25	35	22
2.3 Other patient communication	15	9	15	15
2.4 Prep. / comp. of medication	18	15	10	20
2.5 Prep. / comp. of treatment	12	13	15	18
2.6 Examinations, results	9	8	10	12
2.7 Preparations for new patients	18	9	20	19
2.8 Waiting, searching	9	8	15	3
3 DEPARTMENTL WORK				
3.1 Cleaning, household management	4	6	20	4
3.2 Office work	12	3	10	8
3.3 Department communication	6	8	15	8
3.4 Meetings, training, coaching	13	7	10	18
3.5 Student supervision	11	3	0	9
3.6 Equipment stocking, inventory	3	4	5	2
4 PERSONAL TIME				
4.1 Personal matters, breaks	37	30	15	34
OTHER	2	2	0	4
	(Less than 1 year)	(1-5 years)	(5-10 years)	(Over 10 years)
DIRECT NURSING	288	295	235	291
INDIRECT NURSING	153	133	155	166
DEPARTMENTAL WORK	49	32	60	49
PERSONAL TIME	37	30	15	34
OTHER	2	2	0	4

Morning shift

REGISTERED NURSES	8.5. - 14.5.2017	15.5. - 21.5.2017	**8.5. - 21.5.2017**
	Morning shift	Morning shift	**Morning shift**
1 DIRECT NURSING			
1.1 Communication / Guidance	50	69	**59**
1.2 Cooperation with relatives	4	7	**5**
1.3 Medication	29	24	**27**
1.4 Nutrition	4	6	**5**
1.5 Toileting / Hygiene	36	32	**34**
1.6 Transferring, moving a patient	17	21	**19**
1.7 Movement, positioning	21	15	**18**
1.8 Medical attendance / assistance	20	23	**21**
1.9 Monitoring, observation	25	22	**23**
1.10 Vital signs	10	4	**7**
1.11 Samples	2	5	**3**
1.12 Nursing measures	20	12	**16**
1.12.1 Wound care	23	33	**28**
1.13 Admission / discharge activ.	18	13	**15**
	Morning shift	Morning shift	**Morning shift**
2 INDIRECT NURSING			
2.1 Nursing documentation	45	55	**50**
2.2 Nursing reports	23	21	**21**
2.3 Other patient communication	13	13	**13**
2.4 Prep. / comp. of medication	8	3	**5**
2.5 Prep. / comp. of treatment	14	16	**15**
2.6 Examinations, results	8	10	**9**
2.7 Preparations for new patients	4	6	**5**
2.8 Waiting, searching	5	10	**8**
	Morning shift	Morning shift	**Morning shift**
3 DEPARTMENTL WORK			
3.1 Cleaning, household management	4	1	**2**
3.2 Office work	5	1	**3**
3.3 Department communication	4	8	**6**
3.4 Meetings, training, coaching	12	17	**15**
3.5 Student supervision	16	4	**10**
3.6 Equipment stocking, inventory	1	1	**1**
	Morning shift	Morning shift	**Morning shift**
4 PERSONAL TIME			
4.1 Personal matters, breaks	26	31	**29**
OTHER	2	6	4
REGISTERED NURSE	Morning shift	Morning shift	**Morning shift**
DIRECT NURSING	278	284	**281**
INDIRECT NURSING	118	133	**125**
DEPARTMENTAL WORK	41	32	**37**
PERSONAL TIME	26	29	**29**
OTHER	2	6	**4**

Double shift

REGISTERED NURSES	8.5. - 14.5.2017	15.5. - 21.5.2017	**8.5. - 21.5.2017**
	Double shift	Double shift	**Double shift**
1 DIRECT NURSING			
1.1 Communication / Guidance	29	24	**27**
1.2 Cooperation with relatives	2	13	**7**
1.3 Medication	26	21	**23**
1.4 Nutrition	8	11	**9**
1.5 Toileting / Hygiene	24	34	**28**
1.6 Transferring, moving a patient	14	11	**12**
1.7 Movement, positioning	11	15	**12**
1.8 Medical attendance / assistance	11	13	**12**
1.9 Monitoring, observation	33	26	**30**
1.10 Vital signs	11	8	**9**
1.11 Samples	6	0	**3**
1.12 Nursing measures	12	17	**14**
1.12.1 Wound care	20	26	**23**
1.13 Admission / discharge activ.	2	15	**8**
	Double shift	Double shift	**Double shift**
2 INDIRECT NURSING			
2.1 Nursing documentation	36	30	**33**
2.2 Nursing reports	20	15	**18**
2.3 Other patient communication	6	6	**6**
2.4 Prep. / comp. of medication	15	13	**14**
2.5 Prep. / comp. of treatment	21	15	**18**
2.6 Examinations, results	12	6	**9**
2.7 Preparations for new patients	18	8	**13**
2.8 Waiting, searching	6	9	**8**
	Double shift	Double shift	**Double shift**
3 DEPARTMENTL WORK			
3.1 Cleaning, household management	9	4	**7**
3.2 Office work	3	9	**6**
3.3 Department communication	3	9	**6**
3.4 Meetings, training, coaching	11	19	**14**
3.5 Student supervision	12	0	**7**
3.6 Equipment stocking, inventory	5	2	**3**
	Double shift	Double shift	**Double shift**
4 PERSONAL TIME			
4.1 Personal matters, breaks	20	32	**25**
OTHER	0	0	**0**
REGISTERED NURSE	Double shift	Double shift	**Double shift**
DIRECT NURSING	204	234	**218**
INDIRECT NURSING	134	101	**119**
DEPARTMENTAL WORK	42	43	**42**
PERSONAL TIME	20	32	**25**
OTHER	0	0	**0**

Evening shift

REGISTERED NURSES	8.5. - 14.5.2017	15.5. - 21.5.2017	**8.5. - 21.5.2017**
	Evening shift	Evening shift	**Evening shift**
1 DIRECT NURSING			
1.1 Communication / Guidance	55	51	**53**
1.2 Cooperation with relatives	8	9	**8**
1.3 Medication	42	37	**39**
1.4 Nutrition	10	10	**10**
1.5 Toileting / Hygiene	16	18	**17**
1.6 Transferring, moving a patient	26	23	**23**
1.7 Movement, positioning	14	16	**15**
1.8 Medical attendance / assistance	3	1	**2**
1.9 Monitoring, observation	26	24	**25**
1.10 Vital signs	11	14	**12**
1.11 Samples	2	2	**2**
1.12 Nursing measures	11	6	**8**
1.12.1 Wound care	9	6	**7**
1.13 Admission / discharge activ.	12	25	**18**
	Evening shift	Evening shift	**Evening shift**
2 INDIRECT NURSING			
2.1 Nursing documentation	40	55	**48**
2.2 Nursing reports	29	28	**29**
2.3 Other patient communication	17	13	**15**
2.4 Prep. / comp. of medication	20	14	**17**
2.5 Prep. / comp. of treatment	14	10	**12**
2.6 Examinations, results	10	8	**9**
2.7 Preparations for new patients	19	37	**29**
2.8 Waiting, searching	11	7	**9**
	Evening shift	Evening shift	**Evening shift**
3 DEPARTMENTL WORK			
3.1 Cleaning, household management	11	3	**7**
3.2 Office work	9	6	**7**
3.3 Department communication	9	10	**9**
3.4 Meetings, training, coaching	13	6	**9**
3.5 Student supervision	9	8	**8**
3.6 Equipment stocking, inventory	2	2	**2**
	Evening shift	Evening shift	**Evening shift**
4 PERSONAL TIME			
4.1 Personal matters, breaks	26	29	**27**
OTHER	1	2	**2**
REGISTERED NURSE	Evening shift	Evening shift	**Evening shift**
DIRECT NURSING	242	238	**240**
INDIRECT NURSING	160	172	**166**
DEPARTMENTAL WORK	51	35	**43**
PERSONAL TIME	26	29	**27**
OTHER	1	2	**2**

Night shift

REGISTERED NURSES	8.5. - 14.5.2017	15.5. - 21.5.2017	**8.5. - 21.5.2017**
	Night shift	Night shift	**Night shift**
1 DIRECT NURSING			
1.1 Communication / Guidance	68	58	**62**
1.2 Cooperation with relatives	4	10	**7**
1.3 Medication	76	74	**75**
1.4 Nutrition	10	13	**11**
1.5 Toileting / Hygiene	44	36	**40**
1.6 Transferring, moving a patient	6	8	**7**
1.7 Movement, positioning	42	22	**32**
1.8 Medical attendance / assistance	4	0	**2**
1.9 Monitoring, observation	81	61	**71**
1.10 Vital signs	27	30	**29**
1.11 Samples	3	3	**3**
1.12 Nursing measures	9	8	**8**
1.12.1 Wound care	9	14	**11**
1.13 Admission / discharge activ.	3	14	**8**
	Night shift	Night shift	**Night shift**
2 INDIRECT NURSING			
2.1 Nursing documentation	63	61	**62**
2.2 Nursing reports	29	30	**29**
2.3 Other patient communication	15	14	**14**
2.4 Prep. / comp. of medication	38	42	**40**
2.5 Prep. / comp. of treatment	9	22	**16**
2.6 Examinations, results	8	14	**11**
2.7 Preparations for new patients	19	16	**17**
2.8 Waiting, searching	4	3	**4**
	Night shift	Night shift	**Night shift**
3 DEPARTMENTL WORK			
3.1 Cleaning, household management	10	7	**8**
3.2 Office work	14	16	**15**
3.3 Department communication	14	7	**10**
3.4 Meetings, training, coaching	8	21	**14**
3.5 Student supervision	3	5	**4**
3.6 Equipment stocking, inventory	5	7	**6**
	Night shift	Night shift	**Night shift**
4 PERSONAL TIME			
4.1 Personal matters, breaks	46	51	**49**
OTHER	3	3	**3**
REGISTERED NURSE	Night shift	Night shift	**Night shift**
DIRECT NURSING	385	351	**367**
INDIRECT NURSING	183	202	**193**
DEPARTMENTAL WORK	53	62	**58**
PERSONAL TIME	46	51	**49**
OTHER	3	3	**3**

All shifts

REGISTERED NURSES	8.5. - 14.5.2017	15.5. - 21.5.2017	**8.5. - 21.5.2017**
	All shifts	All shifts	**All shifts**
1 DIRECT NURSING			
1.1 Communication / Guidance	51	55	53
1.2 Cooperation with relatives	4	9	7
1.3 Medication	42	39	40
1.4 Nutrition	7	9	8
1.5 Toileting / Hygiene	31	29	30
1.6 Transferring, moving a patient	16	16	16
1.7 Movement, positioning	22	17	20
1.8 Medical attendance / assistance	11	10	10
1.9 Monitoring, observation	39	32	36
1.10 Vital signs	14	13	14
1.11 Samples	3	3	3
1.12 Nursing measures	14	10	12
1.12.1 Wound care	16	20	18
1.13 Admission / discharge activ.	10	16	13
	All shifts	All shifts	**All shifts**
2 INDIRECT NURSING			
2.1 Nursing documentation	46	53	49
2.2 Nursing reports	25	24	24
2.3 Other patient communication	13	12	13
2.4 Prep. / comp. of medication	18	17	18
2.5 Prep. / comp. of treatment	14	16	15
2.6 Examinations, results	9	10	9
2.7 Preparations for new patients	13	17	15
2.8 Waiting, searching	6	8	7
	All shifts	All shifts	**All shifts**
3 DEPARTMENTL WORK			
3.1 Cleaning, household management	8	3	6
3.2 Office work	7	7	7
3.3 Department communication	7	8	8
3.4 Meetings, training, coaching	11	15	13
3.5 Student supervision	11	5	8
3.6 Equipment stocking, inventory	3	3	3
	All shifts	All shifts	**All shifts**
4 PERSONAL TIME			
4.1 Personal matters, breaks	31	35	33
OTHER	2	4	3
REGISTERED NURSE	All shifts	All shifts	**All shifts**
DIRECT NURSING	279	280	279
INDIRECT NURSING	145	155	150
DEPARTMENTAL WORK	46	41	44
PERSONAL TIME	31	35	33
OTHER	2	4	3

Practical nurse

Experiences

PRACTICAL NURSES				
All shifts	(Less than 1 year)	(1-5 years)	(5-10 years)	(Over 10 years)
1 DIRECT NURSING				
1.1 Communication / Guidance	45	42	45	44
1.2 Cooperation with relatives	9	5	5	5
1.3 Medication	14	12	0	6
1.4 Nutrition	15	20	18	18
1.5 Toileting / Hygiene	58	65	57	66
1.6 Transferring, moving a patient	17	12	23	19
1.7 Movement, positioning	25	29	27	33
1.8 Medical attendance / assistance	5	0	3	2
1.9 Monitoring, observation	24	68	55	68
1.10 Vital signs	21	51	23	31
1.11 Samples	3	0	0	2
1.12 Nursing measures	18	12	8	15
1.12.1 Wound care	32	10	27	11
1.13 Admission / discharge activ.	7	5	3	4
2 INDIRECT NURSING				
2.1 Nursing documentation	41	40	35	45
2.2 Nursing reports	17	20	20	18
2.3 Other patient communication	11	10	10	7
2.4 Prep. / comp. of medication	4	0	3	1
2.5 Prep. / comp. of treatment	20	20	20	11
2.6 Examinations, results	2	3	0	3
2.7 Preparations for new patients	4	12	30	14
2.8 Waiting, searching	6	5	10	1
3 DEPARTMENTL WORK				
3.1 Cleaning, household management	17	14	27	18
3.2 Office work	3	3	18	2
3.3 Department communication	4	1	23	1
3.4 Meetings, training, coaching	11	5	0	18
3.5 Student supervision	1	0	0	1
3.6 Equipment stocking, inventory	7	12	0	6
4 PERSONAL TIME				
4.1 Personal matters, breaks	31	39	30	35
OTHER	5	4	0	3
	(Less than 1 year)	(1-5 years)	(5-10 years)	(Over 10 years)
DIRECT NURSING	294	333	293	323
INDIRECT NURSING	104	110	128	101
DEPARTMENTAL WORK	43	35	68	47
PERSONAL TIME	31	39	30	35
OTHER	5	4	0	3

Morning shift

PRACTICAL NURSES	8.5. - 14.5.2017	15.5. - 21.5.2017	**8.5. - 21.5.2017**
	Morning shift	Morning shift	**Morning shift**
1 DIRECT NURSING			
1.1 Communication / Guidance	42	52	47
1.2 Cooperation with relatives	5	3	5
1.3 Medication	10	10	10
1.4 Nutrition	23	12	18
1.5 Toileting / Hygiene	90	73	83
1.6 Transferring, moving a patient	26	10	19
1.7 Movement, positioning	23	23	23
1.8 Medical attendance / assistance	5	3	5
1.9 Monitoring, observation	27	28	28
1.10 Vital signs	29	22	26
1.11 Samples	0	5	2
1.12 Nursing measures	18	22	20
1.12.1 Wound care	40	37	4
1.13 Admission / discharge activ.	4	0	2
	Morning shift	Morning shift	**Morning shift**
2 INDIRECT NURSING			
2.1 Nursing documentation	53	48	51
2.2 Nursing reports	15	17	16
2.3 Other patient communication	8	8	8
2.4 Prep. / comp. of medication	3	2	2
2.5 Prep. / comp. of treatment	22	25	23
2.6 Examinations, results	0	2	1
2.7 Preparations for new patients	0	3	2
2.8 Waiting, searching	3	3	3
	Morning shift	Morning shift	**Morning shift**
3 DEPARTMENTL WORK			
3.1 Cleaning, household management	15	12	14
3.2 Office work	3	0	2
3.3 Department communication	7	2	5
3.4 Meetings, training, coaching	5	5	5
3.5 Student supervision	1	0	1
3.6 Equipment stocking, inventory	4	2	3
	Morning shift	Morning shift	**Morning shift**
4 PERSONAL TIME			
4.1 Personal matters, breaks	39	32	36
OTHER	1	5	3
REGISTERED NURSE	Morning shift	Morning shift	**Morning shift**
DIRECT NURSING	342	300	323
INDIRECT NURSING	104	108	106
DEPARTMENTAL WORK	40	22	29
PERSONAL TIME	40	32	36
OTHER	1	5	3

Double shift

PRACTICAL NURSES	8.5. - 14.5.2017	15.5. - 21.5.2017	**8.5. - 21.5.2017**
	Double shift	Double shift	**Double shift**
1 DIRECT NURSING			
1.1 Communication / Guidance	26	35	**32**
1.2 Cooperation with relatives	0	5	**3**
1.3 Medication	0	3	**2**
1.4 Nutrition	8	10	**9**
1.5 Toileting / Hygiene	71	60	**65**
1.6 Transferring, moving a patient	26	12	**18**
1.7 Movement, positioning	23	25	**24**
1.8 Medical attendance / assistance	0	8	**5**
1.9 Monitoring, observation	26	27	**27**
1.10 Vital signs	23	18	**20**
1.11 Samples	0	8	**5**
1.12 Nursing measures	15	30	**24**
1.12.1 Wound care	15	18	**17**
1.13 Admission / discharge activ.	11	15	**14**
	Double shift	Double shift	**Double shift**
2 INDIRECT NURSING			
2.1 Nursing documentation	34	35	**35**
2.2 Nursing reports	8	15	**12**
2.3 Other patient communication	11	5	**8**
2.4 Prep. / comp. of medication	0	0	**0**
2.5 Prep. / comp. of treatment	8	12	**11**
2.6 Examinations, results	0	10	**6**
2.7 Preparations for new patients	8	8	**8**
2.8 Waiting, searching	4	5	**5**
	Double shift	Double shift	**Double shift**
3 DEPARTMENTL WORK			
3.1 Cleaning, household management	23	10	**15**
3.2 Office work	8	0	**3**
3.3 Department communication	4	5	**5**
3.4 Meetings, training, coaching	11	3	**6**
3.5 Student supervision	4	0	**2**
3.6 Equipment stocking, inventory	11	10	**11**
	Double shift	Double shift	**Double shift**
4 PERSONAL TIME			
4.1 Personal matters, breaks	34	23	**27**
OTHER	0	0	**0**
REGISTERED NURSE	Double shift	Double shift	**Double shift**
DIRECT NURSING	244	273	**261**
INDIRECT NURSING	71	90	**83**
DEPARTMENTAL WORK	60	27	**41**
PERSONAL TIME	34	23	**27**
OTHER	0	0	**0**

Evening shift

PRACTICAL NURSES	8.5. - 14.5.2017	15.5. - 21.5.2017	**8.5. - 21.5.2017**
	Evening shift	Evening shift	**Evening shift**
1 DIRECT NURSING			
1.1 Communication / Guidance	30	46	**40**
1.2 Cooperation with relatives	4	11	**8**
1.3 Medication	4	9	**7**
1.4 Nutrition	19	14	**16**
1.5 Toileting / Hygiene	41	45	**44**
1.6 Transferring, moving a patient	21	20	**20**
1.7 Movement, positioning	24	24	**24**
1.8 Medical attendance / assistance	0	3	**2**
1.9 Monitoring, observation	34	53	**45**
1.10 Vital signs	36	33	**34**
1.11 Samples	0	0	**0**
1.12 Nursing measures	9	10	**10**
1.12.1 Wound care	15	4	**8**
1.13 Admission / discharge activ.	6	4	**5**
	Evening shift	Evening shift	**Evening shift**
2 INDIRECT NURSING			
2.1 Nursing documentation	49	40	**44**
2.2 Nursing reports	30	23	**26**
2.3 Other patient communication	6	9	**8**
2.4 Prep. / comp. of medication	2	4	**3**
2.5 Prep. / comp. of treatment	15	11	**13**
2.6 Examinations, results	2	4	**3**
2.7 Preparations for new patients	13	19	**17**
2.8 Waiting, searching	4	8	**6**
	Evening shift	Evening shift	**Evening shift**
3 DEPARTMENTL WORK			
3.1 Cleaning, household management	15	14	**14**
3.2 Office work	4	5	**5**
3.3 Department communication	2	8	**5**
3.4 Meetings, training, coaching	21	3	**10**
3.5 Student supervision	0	0	**0**
3.6 Equipment stocking, inventory	8	5	**6**
	Evening shift	Evening shift	**Evening shift**
4 PERSONAL TIME			
4.1 Personal matters, breaks	34	29	**31**
OTHER	0	10	**6**
REGISTERED NURSE	Evening shift	Evening shift	**Evening shift**
DIRECT NURSING	242	274	**261**
INDIRECT NURSING	120	116	**118**
DEPARTMENTAL WORK	49	34	**44**
PERSONAL TIME	34	29	**31**
OTHER	0	10	**6**

Night shift

PRACTICAL NURSES	8.5. - 14.5.2017	15.5. - 21.5.2017	**8.5. - 21.5.2017**
	Night shift	Night shift	**Night shift**
1 DIRECT NURSING			
1.1 Communication / Guidance	50	56	**53**
1.2 Cooperation with relatives	0	13	**7**
1.3 Medication	20	19	**20**
1.4 Nutrition	20	24	**22**
1.5 Toileting / Hygiene	75	64	**70**
1.6 Transferring, moving a patient	8	17	**13**
1.7 Movement, positioning	55	28	**40**
1.8 Medical attendance / assistance	0	0	**450**
1.9 Monitoring, observation	115	118	**117**
1.10 Vital signs	63	32	**46**
1.11 Samples	0	2	**1**
1.12 Nursing measures	18	9	**13**
1.12.1 Wound care	8	13	**10**
1.13 Admission / discharge activ.	3	9	**6**
	Night shift	Night shift	**Night shift**
2 INDIRECT NURSING			
2.1 Nursing documentation	45	43	**44**
2.2 Nursing reports	15	24	**20**
2.3 Other patient communication	18	6	**12**
2.4 Prep. / comp. of medication	0	2	**1**
2.5 Prep. / comp. of treatment	25	19	**22**
2.6 Examinations, results	0	4	**2**
2.7 Preparations for new patients	23	17	**20**
2.8 Waiting, searching	5	4	**5**
	Night shift	Night shift	**Night shift**
3 DEPARTMENTL WORK			
3.1 Cleaning, household management	20	32	**27**
3.2 Office work	3	11	**7**
3.3 Department communication	0	4	**2**
3.4 Meetings, training, coaching	12	36	**25**
3.5 Student supervision	0	2	**1**
3.6 Equipment stocking, inventory	17	9	**13**
	Night shift	Night shift	**Night shift**
4 PERSONAL TIME			
4.1 Personal matters, breaks	50	47	**48**
OTHER	5	0	**2**
REGISTERED NURSE	Night shift	Night shift	**Night shift**
DIRECT NURSING	432	403	**416**
INDIRECT NURSING	130	120	**125**
DEPARTMENTAL WORK	53	94	**75**
PERSONAL TIME	50	47	**48**
OTHER	5	0	**2**

All shifts

PRACTICAL NURSES	8.5. - 14.5.2017	15.5. - 21.5.2017	**8.5. - 21.5.2017**
	All shifts	All shifts	**All shifts**
1 DIRECT NURSING			
1.1 Communication / Guidance	38	48	**43**
1.2 Cooperation with relatives	3	8	**6**
1.3 Medication	9	10	**9**
1.4 Nutrition	19	15	**17**
1.5 Toileting / Hygiene	63	59	**61**
1.6 Transferring, moving a patient	19	15	**17**
1.7 Movement, positioning	34	25	**29**
1.8 Medical attendance / assistance	2	3	**3**
1.9 Monitoring, observation	45	55	**51**
1.10 Vital signs	35	27	**31**
1.11 Samples	0	3	**2**
1.12 Nursing measures	14	16	**15**
1.12.1 Wound care	23	17	**20**
1.13 Admission / discharge activ.	5	6	**6**
	All shifts	All shifts	**All shifts**
2 INDIRECT NURSING			
2.1 Nursing documentation	45	42	**43**
2.2 Nursing reports	18	20	**19**
2.3 Other patient communication	10	8	**9**
2.4 Prep. / comp. of medication	2	2	**2**
2.5 Prep. / comp. of treatment	19	17	**18**
2.6 Examinations, results	0	4	**3**
2.7 Preparations for new patients	9	12	**11**
2.8 Waiting, searching	4	5	**5**
	All shifts	All shifts	**All shifts**
3 DEPARTMENTL WORK			
3.1 Cleaning, household management	17	16	**17**
3.2 Office work	4	4	**4**
3.3 Department communication	4	5	**4**
3.4 Meetings, training, coaching	12	10	**11**
3.5 Student supervision	1	0	**1**
3.6 Equipment stocking, inventory	9	6	**7**
	All shifts	All shifts	**All shifts**
4 PERSONAL TIME			
4.1 Personal matters, breaks	36	32	**34**
OTHER	2	5	**3**
REGISTERED NURSE	All shifts	All shifts	**All shifts**
DIRECT NURSING	308	308	**308**
INDIRECT NURSING	105	110	**108**
DEPARTMENTAL WORK	46	41	**44**
PERSONAL TIME	36	32	**34**
OTHER	2	5	**3**

Summary

REGISTERED NURSES AND PRACTICAL NURSES	RN		PN		TOTAL	
	All shifts		All shifts		**All shifts**	
1 DIRECT NURSING						
1.1 Communication / Guidance	53		43		**48**	
1.2 Cooperation with relatives	7		6		**6**	
1.3 Medication	40		9		**25**	
1.4 Nutrition	8		17		**12**	
1.5 Toileting / Hygiene	30		61		**45**	
1.6 Transferring, moving a patient	16		17		**17**	
1.7 Movement, positioning	20		29		**24**	
1.8 Medical attendance / assistance	10		3		**6**	
1.9 Monitoring, observation	36		51		**43**	
1.10 Vital signs	14		31		**22**	
1.11 Samples	3		2		**2**	
1.12 Nursing measures	12		15		**14**	
1.12.1 Wound care	18		20		**19**	
1.13 Admission / discharge activ.	13		6		**9**	
2 INDIRECT NURSING						
2.1 Nursing documentation	49		43		**46**	
2.2 Nursing reports	24		19		**22**	
2.3 Other patient communication	13		9		**11**	
2.4 Prep. / comp. of medication	18		2		**10**	
2.5 Prep. / comp. of treatment	15		18		**16**	
2.6 Examinations, results	9		3		**6**	
2.7 Preparations for new patients	15		11		**13**	
2.8 Waiting, searching	7		5		**6**	
3 DEPARTMENTAL WORK						
3.1 Cleaning, household management	6		17		**11**	
3.2 Office work	7		4		**5**	
3.3 Department communication	8		4		**6**	
3.4 Meetings, training, coaching	13		11		**12**	
3.5 Student supervision	8		1		**4**	
3.6 Equipment stocking, inventory	3		7		**5**	
4 PERSONAL TIME						
4.1 Personal matters, breaks	33		34		**34**	
OTHER	3		3		**3**	
DIRECT NURSING	279	**4h 39min**	308	**5h 8min**	**294**	**4h 54min**
INDIRECT NURSING	150	**2h 30min**	108	**1h 48min**	**129**	**2h 9min**
DEPARTMENTAL WORK	44	**44min**	44	**44min**	**44**	**44min**
PERSONAL TIME	33	**33min**	34	**34min**	**33**	**33min**
OTHER	3	**3min**	3	**3min**	**3**	**3min**
TOTAL	509	**8h 29min**	497	**8h 17min**	**503**	**8h 23min**