

**DEVICE SPECIALISTS' EXPERIENCES OF THEIR ROLE AND
COOPERATION WITH MEDICAL DEVICE SALES REPRESENTATIVES**



Bachelor's thesis

Degree programme in International Business

Autumn 2021

Nuutti Haikala

International Business
Valkeakoski

Author	Nuutti Haikala	Year 2021
Subject	Laitevastaavien kokemuksia heidän omasta tehtävästään sekä yhteistyöstä lääkinnällisten laitteiden myyntiedustajien kanssa.	
Supervisor(s)	Tarja Pääkkönen	

TIIVISTELMÄ

Tämän tutkimuksen tarkoituksena on selvittää, millaisia kokemuksia laitevastaavilla on lääkinnällisten laitteiden myyntiedustajista.

Käyttäjät arvioivat parhaiten tuotteiden ja palveluiden suorituskykyä, koska he hyötyvät niiden käytöstä. Tämä tutkimus keskittyy niiden sairaanhoitajien kokemusten tutkimiseen, jotka työskentelevät myös laitevastaavina omilla osastoillaan. He käyttävät laitteita päivittäin ja toimivat laitekouluttajina. Lisäksi laitevastaavilla ja myyntiedustajilla on keskeinen rooli lääkinnällisten laitteiden käyttäjien ja valmistajien välillä.

Teoreettinen osa käsittelee kirjallisuutta ja tutkimuksia liittyen tutkimusalueeseen, kuten lääkinnällisiin laitteisiin, koulutukseen sekä yritysten välisiin suhteisiin ja asiakaskokemukseen.

Tämä tapaustutkimus tehtiin käyttäen kvalitatiivista tutkimusmenetelmää, teemahaastattelemalla laitevastaavia yhdellä toimialueella Tampereen yliopistollisessa sairaalassa. Tämän tutkimuksen yleinen johtopäätös on, että laitevastaavat ovat enimmäkseen tyytyväisiä myyntiedustajiin. Jokaisen myyntiedustajan tulisi kuitenkin olla aktiivinen ennen myyntiä, myynnin aikana ja myynnin jälkeen. Paremman asiakaskokemuksen varmistamiseksi laitevastaavien ja myyntiedustajien välistä yhteistyötä on kehitettävä. Tutkimuksessa todettiin myös, että laitevastaaville ja lääkinnällisten laitteiden koulutukselle annettu johdon tuki sekä laitevastaavan roolin selventäminen ovat olennaisessa roolissa lääkinnällisten laitteiden käyttäjien osaamisen yhdenmukaistamisessa sekä potilasturvallisuuden kehittämisessä.

Avainsanat Asiakaskokemus, Palvelukokemus, B2B-suhde, Laitevastaava, Lääkinnällinen laite, Lääkinnällisen laitteen käyttäjä

Sivut 49 sivua sisältäen liitteitä 9 sivua

International Business
Valkeakoski

Author	Nuutti Haikala	Year 2021
Subject	Device specialists' experiences of their own role and cooperation with medical device sales representatives	
Supervisor(s)	Tarja Pääkkönen	

ABSTRACT

The aim of this study is to find out what kind of experiences device specialists have concerning the medical device sales representatives.

The users are the best judges of the performance of the products and services, because they are the ones who benefit from their use. This research concentrates on studying the experiences of nurses who also work as device specialists in their own wards, as they are using the devices daily but are also training others in the use of devices. In addition, the device specialists and medical device sales representatives play a key role between the users and manufacturers of the medical devices.

The theoretical part consists of literature and research on different study related topics, such as medical devices, training, and business-to-business relationships and customer experience.

This case study was conducted by using a qualitative research method, through half structured interviews of device specialists in one operating area in the Tampere University Hospital. The overall conclusion of this study was that the device specialists are mostly satisfied with the sales representatives, but they all should be active at all phases, before, during and after sales. To ensure better customer experience the cooperation between device specialists and sales representatives require development. The study also found that managerial support for device specialists and for medical device training, and clarification of the role of a device specialist play essential role when harmonizing medical device user competency and developing patient safety.

Keywords Customer experience, Service experience, B2B relationship, Device specialist, Medical device technology, Medical device user

Pages 49 pages including appendices 9 pages

CONTENTS

1	INTRODUCTION.....	1
1.1	Structure of the research.....	1
1.2	The methods.....	2
1.3	The research question.....	2
1.4	Key concepts.....	2
2	THE KNOWLEDGE BASE OF MEDICAL DEVICE SALES AND CUSTOMER EXPERIENCE...3	
2.1	Legislation.....	3
2.1.1	Medical Devices Act.....	4
2.1.2	Regulations in European Union.....	4
2.1.3	Act on Public Procurement ad Concession Contracts.....	4
2.2	Medical Device Technology.....	4
2.2.1	The definition of a medical device.....	5
2.2.2	Medical device users.....	5
2.2.3	Training of medical devices.....	6
2.3	Medical device sales.....	7
2.3.1	Customers.....	7
2.3.2	Sales representatives.....	7
2.4	Business to business relationship.....	8
2.4.1	Customer Relationship Management.....	8
2.5	Customer experience.....	10
2.5.1	Physical customer experience.....	10
2.5.2	Digital customer experience.....	10
2.5.3	Subconscious emotional experience.....	11
2.5.4	Measuring of the customer experience.....	11
2.6	Service experience.....	12
2.6.1	Characterisations of the service experience.....	12
3	RESEARCH METHODOLOGY.....	13
3.1	The research methods.....	13
3.2	Theme interview.....	13
3.3	Analysis and transcription of the data.....	15
3.4	Limitations.....	17
4	PRESENTATION OF RESULTS.....	18
4.1	Interview information.....	18
4.2	The background of the participants.....	18
4.3	Competence of the device specialist.....	19
4.3.1	The role of the device specialist.....	20
4.3.2	Cooperation between colleagues.....	20
4.4	Medical device training in one operating area.....	21
4.4.1	Medical device groups.....	21
4.4.2	Medical device knowledge.....	21
4.4.3	Competence development.....	22

4.4.4	Emotions in learning.....	23
4.4.5	Role of management in the competence development and time management of medical devices training	24
4.5	Cooperation between device specialist and sales representative	25
4.5.1	Communication with the sales representatives.....	25
4.5.2	Competency of the sales representatives	26
4.5.3	Cooperation before, during and after sales	26
4.5.4	Individuality and customer needs	27
4.5.5	Emotions and values	27
4.5.6	Customer satisfaction and loyalty	28
4.5.7	Competitive tendering	29
5	THE ANALYSIS OF THE THEME INTERVIEW RESULTS.....	31
5.1	Competence of the device specialist	31
5.2	Medical device training in one operating area	31
5.3	Cooperation between device specialist and sales representative	32
5.4	Ethics.....	33
5.5	Reliability	34
6	CONCLUSIONS.....	35
7	RECOMMENDATIONS.....	37
	REFERENCES	38

Appendices

Appendix 1 Theme interview frame

Appendix 2 Consent of the participant

Appendix 3 Original expressions in Finnish

1 INTRODUCTION

The purpose of this thesis is to explore what kind of experiences does the device specialists in Tampere University Hospital (Tays) have about their own role and services of medical device sales representatives.

Medical devices sales play an important role in the economy of Europe, providing 110 billion euros turnover and over 500 thousand jobs. The devices are essential for healthcare, as they are used everywhere. Pacemakers, x-ray scanners, monitors, respiratory devices, and many in-vitro diagnostic devices such as diabetes monitors are significant when preventing, diagnosing, monitoring, and treating illnesses and chronic conditions. (European Commission, n.d.)

Technical solutions help people to live self-contained lives and the professionals of social and healthcare sector to save lives. Most of the medical devices are bought through public procurement. The value, responsibility and quality for the patients and professionals play a key role when purchasing medical devices. (Sailab – MedTech Finland ry, 2019)

1.1 Structure of the research

The medical device users need to be trained to use the devices properly and safely. (Medical Devices Act 2010/629) In hospitals, the professionals, such as nurses and doctors are using the devices intended for professional use. The users are the best judges of the performance of the products and services, because they are the ones who benefit from their use. (Shah & Robinson, 2008) This research concentrates to study the experiences of nurses who also work as device specialists in their own wards, as they are using the devices daily but are also customers of the device selling companies.

The medical device sales representatives can represent a manufacturer, supplier, or distributor of the medical device. It requires internal and external communication skills by the seller to improve the customer experience. (Brogie, n.d.)

The quality of the service is measured by the customer experience (Tuulaniemi, 2011, p. 37). According to Klaus et al. the customer experience can be framed as a sustained interaction between the seller and the buyer. This makes it possible to study the views of the customer before, during and after the purchase. If all these three phases are taken into consideration, it might have a positive effect on word-of-mouth, customer satisfaction and loyalty. (Klaus et al., 2013, p. 517-519)

1.2 The methods

This is a case study, which was conducted by using a qualitative research method, through half structured interviews of device specialists in Tays.

Theme interviews were chosen as a data collecting method because the topic is less known. According to Puustinen (2013, p. 5) theme interviews are a commonly used method in rarely studied topics, because they allow to acquire deeper information about the themes that are defined beforehand (Puustinen, 2013, p. 5). As the interview progress with beforehand defined themes, interviewees should be people, who presumably have information about the research topic (Saaranen-Kauppinen & Puusniekka, 2009, p. 52-56). This study concentrates on the experiences of the nurses who also work as device specialists in their own wards.

The gathered data will be analysed with inductive content analysis. With this method the data can be analysed systematically. The aim is to gain a concise and general interpretation of the interviewees' service experiences.

1.3 The research question

The aim of this study is to find out what kind of experiences device specialists have concerning their own role in the hospital and the services of medical device sales representatives.

The research question:

- What are the device specialists' experiences of their role and the medical device sales representatives?

1.4 Key concepts

Customer experience, service experience, Business to business relationship, device specialist, medical device technology, device training, sales representative, and medical device user.

2 THE KNOWLEDGE BASE OF MEDICAL DEVICE SALES AND CUSTOMER EXPERIENCE

The theoretical framework provides important support for answering the research question. The main areas of theory include legislation and sales of medical devices, Business to business relationships and different kind of experiences at a customer level.

Regulatory and quality matters are very important as different acts and regulations require them, but also the medical device buying customers have high expectations that the products are reliable and meet the users' specific needs.

Customer relationships between the user and the representative of medical devices is important. Strong communication and listening of the customer's needs at before, during and after the sales are essential when maintaining customer satisfaction and loyalty.

2.1 Legislation

Medical devices industry and sales are highly regulated inside European Union (EU). In addition to EU directives and regulations, manufacturers also have to comply with national regulations when selling their products in Finnish market. (Heinonen 2017.) 2017 European Union enacted two new regulations concerning Medical Devices. New regulations are Medical Device Regulation (MDR) and In-Vitro Diagnostic Medical Devices Regulation (IVDR). (European Commission, 2017)

In Finland only the medical devices that comply with requirements of existing regulations can be placed on the market. Medical device manufacturer must demonstrate the performance, reliability and safety of the device. Also, CE marking is needed as it indicates that the device complies with the requirements. (Medical Devices Act 2010/629, Fimea 2020.) When a device is used properly, it should not endanger the health nor the safety of the patient, device user or any other person. In addition to functionality and traceability of the devices, also availability of instructions and training for operators are in responsibility of professional users. (Fimea, 2020)

As has been written before, there are many different acts and regulations that affect to sales of medical devices in Finland. Now two main guidelines for medical devices are the Finnish Medical Devices Act and medical devices regulations of the European Parliament. (Sailab – Medtech Finland ry, 2019.) According to Sailab – Medtech Finland ry (2010), also Act on Public Procurement and Concession Contracts 1397/2016 has to be taken into consideration, when making procurements in public healthcare.

2.1.1 Medical Devices Act

The purpose of the Medical Devices Act is to maintain and promote the safety of the devices and equipment used in healthcare. Medical Devices Act regulates several matters, including the requirements of the medical devices, the responsibilities of the manufacturer and operator, and supervision and administrative coercive measures. The act demands that the manufacturer has to give all the essential information about usage, storing and transportation, when considering a safety of the device. The instructions of the device should be in Finnish, Swedish and English. (Medical Devices Act 2010/629)

2.1.2 Regulations in European Union

According to European Union (2017) two new regulations concerning Medical Devices were enacted in European Union. MDR and IVDR were added to previous directives and regulations of European Union. Regulations updates the older regulation to the level set by the current requirements of healthcare sector and medical technology industry in Europe. (Regulation EU 2017/745) These two new regulations create a regulatory framework that is solid, sustainable and transparent. This internationally recognised framework improves clinical safety and creates fair market access for all medical device manufacturers. (European Commission 2017)

2.1.3 Act on Public Procurement and Concession Contracts

The purpose of the Act on Public Procurement and Concession Contracts is to order state and municipal authorities and other contracting entities, such as public hospital purchasing offices to arrange competitive tendering of their procurements and concession contracts. The act also implements several different directives of European Parliament. The aim of the act is to make the use of the public funds more effective by encouraging to sustainable, innovative and high-quality procurements. According to the act the small and medium-sized enterprises and other organisations should have the same possibilities to participate in competitive tendering. All the participants in a procurement procedure should be treated equally. (Act on Public Procurement and Concession Contracts 2016/1397)

2.2 Medical Device Technology

Health care should support patients to get the best possible evidence-based treatment by using only safe and functional devices. Medical devices (MD) or Medical Device Technologies (MDT) are used to prevent, diagnose, treat and rehabilitate diseases. MD can be for example an equipment, a tool, a software, an instrument or an implant. These technologies decrease cost pressure in public sector health care and support people to live

healthier and spontaneous lives, if illnesses are prevented, identified and treated effectively. (Sailab – MedTech Finland ry, 2019)

2.2.1 The definition of a medical device

There are many very similar definitions for the medical devices. These definitions are based on the regulations inside European Union and national laws. According to Regulation EU 2017/745, Medical Devices Act 2010/629, National Health Service (2019) and Linnavuori (2015) an instrument, appliance, software, apparatus, implant, material or other article that is intended by manufacturer to be used for medical purposes for human beings is a medical device. These medical purposes can be:

- Prevention, diagnosing, monitoring, treatment or alleviation of a disease.
- Diagnosing, monitoring, treatment alleviation or compensation of an injury or disability.
- Investigation, replacement or modification of the anatomy or physiological function.
- Control or support of a fertilisation.

(Medical Devices Act 2010/629)

2.2.2 Medical device users

Medical device users have high expectations that the products and services they buy and use will meet their specific needs. The users are the best judges of the performance of the products and services, because they are the ones who benefit from their use. (Shah & Robinson, 2008)

While the portfolio of different medical devices has widened, it has increased also the range of the users. These include for example health care professionals, such as doctors and nurses, but also patients, family members and many other professionals who work in health care. (Shah & Robinson, 2008)

Shah and Robinson (2008) define a medical device user:

“A person who uses a medical device for the treatment and/or care of him-/her-self or someone else” (Shah & Robinson, 2008).

Shah and Robinson (2008) made a classification of medical device users through their study. They divided the users into two different classes, seven groups and multiple types and sub-types. Primary users are the ones who use the medical devices for the intended therapeutic treatment specified by the manufacturer. These primary users can be health care professionals and also patients and carers. The classification of MDT users is presented in Figure 1. (Shah & Robinson, 2008)

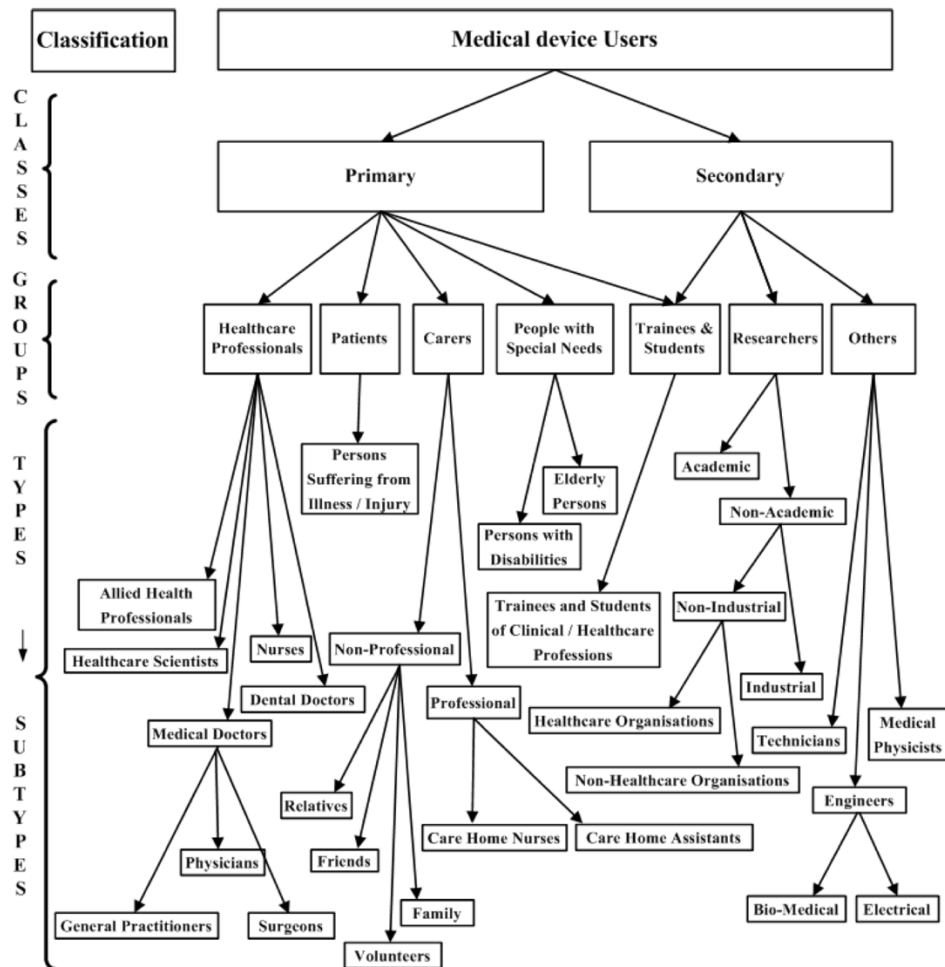


Figure 1. The classification of MDT users (Shah & Robinson, 2008).

This study concentrates on nurses, who are classified to Primary class and are part of Health care professionals' group.

2.2.3 Training of medical devices

According to Medical Devices Act (2010/629), the users of medical devices need to be trained for the use of device. Inside the hospitals the medical device users are healthcare professionals, who have sufficient theoretical and practical skills for using the device. Without proper training the use of the device may compromise good care of the patients.

Mehraban, Hasanpour, Yazdannik & Ajami (2013) studied the fulfilment of the training of devices for nurses. They claim that training of the medical devices is unorganised and shattered. Training might have given by supervisor, colleague or representative, or just by reading manuals and instructions. The respondents were altogether unsatisfied by the quality of the training and they were not motivated for implementation of new devices. (Mehraban et al., 2013)

Shranger (2010) figured the best methods for device training and discovered that the device training is prerequisite for safe and effective device use in nursing. According to this study training should be performed in small groups of ten to twelve participants. In 45 to 60 minutes the device is introduced and use of it is trained. Among quick guides, also manuals need to be introduced, when needed deeper information about the functions of the device. (Shranger, 2010)

During past years Finnish healthcare sector have been implementing new regulations of European Union and in guidance of National Supervisory Authority for Welfare and Health (Valvira), while also improving their training systems of medical devices. In 2020 the supervision of medical devices in Finland was transferred from Valvira to Finnish Medical Agency Fimea (Fimea, 2019). Also, the Finnish Medical Society Duodecim has a large role in training of healthcare professionals, as they are improving their Oppiportti -training centre and continuously publishing new “driving licenses” for various medical devices. (Karjalainen, 2016) Oppiportti -training centre is web-based platform where professionals can complete online courses of many kinds of device groups.

2.3 Medical device sales

Medical devices have high safety and quality requirements and additionally customers demand strong reliability for the products they buy. Devices are bought through public procurement by purchasing offices and directly by wards from the contractual partners. (Nordic Healthcare Group, 2018) Various different sales representatives are important links between the seller and buyer, especially when selling directly to the device users. (Brogie, n.d.)

2.3.1 Customers

The biggest buyers of medical devices in Finland are five special health care giving university hospitals. In addition to these district and central hospitals, other public healthcare and private sector service provider are fairly big buyers. Improving of highly regulated medical device competitive tendering and procurement could strengthen medical device technology market in Finland. (Nordic Healthcare Group, 2018)

2.3.2 Sales representatives

Different medical devices are represented by the medical device sales representatives, which can be referred for example as an account manager, a territory manager, a sales representative, or a regional sales representative. They represent manufacturer, supplier, or distributor of the medical device by selling medical equipment, products and services to hospitals, health centres and other clinics. (Brogie, n.d.) Nowadays

salespeople are many times titled as managers. It might sound convincing, but among the device users the titles are not so important.

The sales representatives are responsible of managing the leads and customers within a defined territory. Usually, the sales representatives build relationships with hospital staff by meeting the potential or existing accounts by setting appointments with them directly in hospital or meet them in different health care related fairs and training courses. To maintain customer relationships, the sales representatives educate medical device users on the benefits of the device and provide product education, demonstration, and support. Improving customer experience requires strategy planning and communication within the sales company, but also strong communication with the customer. (Brogie, n.d.) Manna and Smith (2004) studied the role of emotional intelligence training in the sales training programs of sales representatives. In the study sales practitioners found that negotiating skills, communication skills, presentation skills, emotional intelligence and the need of personality type differentiation are very important to them. Technical skills are less related to experience and success than listening and verbal skills. (Manna & Smith, 2004, p. 76-83)

2.4 Business to business relationship

Nowadays business-to-business customers are more value-conscious than before and less loyal and less tolerant of bad service levels. Differentiation is difficult and competition more intense because markets are so fragmented. Therefore, companies are becoming more customer centric. (Kumar, Kumar & Petersen, 2012)

2.4.1 Customer Relationship Management

Customer relationship management (CRM) consists customer-oriented way of thinking including information systems, which are used to manage customer relationships. According to Bhat & Darzi (2016) multidimensional construct of CRM includes four comprehensive components, which are complaint resolution, customer orientation, customer empowerment and customer knowledge. Their conceptual model of CRM dimensions is presented in Figure 2. (Bhat & Darzi, 2016, p. 390)

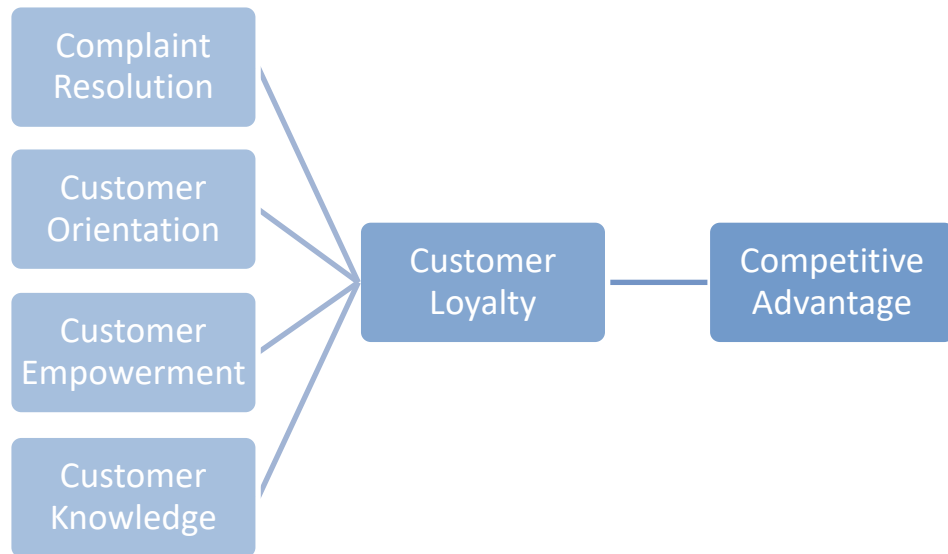


Figure 2. Conceptual model of CRM dimensions (Bhat & Darzi, 2016, p. 390)

Complaint resolution has a deep effect on customer relationship. Dealing with complaints and correcting grievances increases customer loyalty and retention, which generates the feeling of belonging between the customer and the company. Customer knowledge management is essential for companies who gathers, manages, and shares client data. To enhance customer relationship, CRM systems need client data as a platform for communication and providing additional customer service, creating loyalty and maintain trust and relationships. Customer empowerment includes helping customers to choose in their own terms that what they want and when they want it. Especially in healthcare sector loyalty, trust and commitment are linked to strengthening the relationship between organizations and customers. Customer orientation includes putting the customer interests first to develop profitable business in the long run. CRM generates considerable benefits for customers through customer orientation, which includes for example customer-oriented salespeople and service. There are authors who claims that salespeople are the ones who first advances of customer loyalty originating from customer orientation and customer perceived value, and after to the company. (Bhat & Darzi, 2016, p. 390-392)

Customer loyalty is in key role if a business wants to have long-term competitive advantage over its competitors, as acquiring new customer costs much more than retaining an existing customer. That is the reason why companies need to make its customers loyal. Loyal customers can also give a competitive advantage to the business. It has been found that relationship management effect competitiveness of the company, so proper implementation of CRM system could improve customer service,

which can yield both revenue and competitive advantage. (Bhat & Darzi, 2016, p. 392-393)

2.5 Customer experience

According to Tuulaniemi (2011) the focal factor for the services is how customers experience them. Customer experience can be divided into three different levels: actions, emotions, and values. Actions include abilities of service to answer to the customer needs, fluency of processes, the accessibility, usability, effectiveness, and versatility of the service. Level of emotions means direct feelings and personal experiences, such as interestingness, easiness, ability to inspire and style of the experience, and ability to touch the senses. Values include different dimensions of image and meaning, dreams, stories, promises, cultural codes and relationship to customer lifestyle and identity. (Tuulaniemi, 2011, p. 37)

Ahvenainen, Gylling & Leino (2017) also describes three different levels which form the comprehensive customer experience.

2.5.1 Physical customer experience

The most recognisable of these three levels is the physical encounter between the customer and representative of the company. Customers want expertise whether they are buying products or services and for exchange they are giving their valuable time by listening to the representative. Only after investing their time, the customer is willing to invest their money. Positive attitude, emotional intelligence and listening to the customer's needs are essential for enjoyable physical customer experience. (Ahvenainen et al., 2017, p. 33) Expertise is always desired, but with enjoyable encounter the lack of knowledge can be compensated.

2.5.2 Digital customer experience

Customer encounter in digital or social media is an important level especially nowadays when people are finding solutions to their problems from the web pages and social media (Ahvenainen et al., 2017, p. 33). Snyder & Hilal (2015) wrote about B2B decision makers' research and purchase habits and found that over seventy per cent of them start their buying decision process by finding information from the internet. In this phase internet search engines are the most important information channel and videos and mobile devices have an increasing role in B2B information search. (Snyder & Hilal, 2015) According to Ahvenainen et al. (2017) people make approximately twelve searches in search engines before ending to the web pages of the service provider. As we cannot know that where and which part of the buying process customers encounter the product selling company, it is important to provide expertise and value the sooner the better. Relevant information at different phases of the buying process is

needed, so that customer can make right decisions. (Ahvenainen et. al, 2017, p. 39)

2.5.3 Subconscious emotional experience

In addition to above mentioned levels the so called subconscious emotional experience is level where all the previous assumptions, interpretations and images affect to the comprehensive brand experience. For example, marketing, preconception, customer feedback, the feeling of value for money and previous face to face meetings influence on subconscious brand image. (Ahvenainen et al., 2017, p. 33) As companies can never fully influence how customers perceive a brand, they must work on how the experience would be as positive as possible.

All these three levels are connected seamlessly together and when succeeding in one level, it can rise also the customer experience in other levels too. In other hand, even though the brand and the marketing would be in adequate level, poorly prepared face to face meeting can spoil the customer experience and the purchase decision will not be made. (Ahvenainen et al., 2017, p. 33)

2.5.4 Measuring of the customer experience

According to Klaus et al. (2013) measuring of the customer experience is complicated, because the concept of customer experience is much wider than service or product quality. Customer experience can be framed as a sustained interaction between the seller and the buyer. This makes possible to study the views of the customer before, during and after the purchase. Klaus et al. (2013) claims that when a company is concentrating for all these three phases, it has a positive effect on word-of-mouth, customer satisfaction and loyalty. Therefore, customers' interpretation of their customer experience quality also defines marketing outcomes and thus also company's performance. (Klaus et al., 2013, p. 517-519)

Shaw & Ivens (2002) wanted to understand the multidimensionality of customer experience. In their study they asked the same question from hundreds of people and the following things were repeated in the responses:

- I was understood and I was cared for.
- I was treated as an individual.
- They did everything to help me in the best possible way.
- They made me feel important.

(Shaw & Ivens, 2002, p. 3-5)

2.6 Service experience

There are many similarities in customer experience and service experience. Both are multidimensional and have different levels, but service experience might be experienced in more individually.

Human being is in centre stage of the service experience. Customer is always part of the service event and the experience is felt individually in each event. Service experience is difficult to plan, because the experience is very subjective and happens inside of the head of each customer. Instead, it is important to make the service experience as positive as possible. This can be made by optimizing the critical points of the service experience, such as service process, working habits, space, interaction and by removing service disruptive matters. (Tuulaniemi, 2011, p. 15)

2.6.1 Characterisations of the service experience

Helkkula (2011) identified three characterisations of the concept of service experience in her literature review. These three characterisations are phenomenological, process-based and outcome-based service experience. (Helkkula, 2011, p. 382)

Phenomenological service experience includes discussion about values in the explanatory consumer research and service-dominant logic research. The main focus is on subjective, internal, event-specific and context-specific individual experiences. Moreover, recent studies have also recognised social experiences for example in multi-stakeholder network. The phenomenological service experience can be an imaginary encounter or a practical one, the subject of the experience can be any related player in the service phenomenon, such as the customer or representative that is providing the service. Direct or indirect connection with the service might occur and the context of phenomenological service experience can contain many kinds of service settings and events. (Helkkula, 2011, p. 371-376)

Process-based service experience interpret service as a consecutive process. The main focus is on the phases of the service process, which are architectural elements of the service-experience process. This characterisation includes phases in chronological order and changes, such as learning are emphasised. (Helkkula, 2011, p. 376)

Outcome-based service experience understands service experience as one element in the model of service, which are linked to different attributes and variables to several outcomes. The focus is on the service experience of multiple respondents, rather than in individual person. Contrary to the Process-based service experience, which concentrates to the longitudinal process, the outcome-based service experience focuses to the instant results, such as value, quality, satisfaction and quality of service or relationship. (Helkkula, 2011, p. 379)

3 RESEARCH METHODOLOGY

This is a case study, which is conducted by using qualitative research method, through half structured interviews. According to Eriksson & Koistinen (2014) a case study examines one or more cases whose definition, analysis, and results is the essential goal of the case study.

3.1 The research methods

According to Krishnaswami & Satyaprasad (2010) the sciences are generally divided into social sciences and physical sciences. Social sciences include for example Behaviour science, Economics, Management and Education. Unlike physical sciences, social sciences study human beings. A human behaviour is much more difficult to understand and predict compared to some physical phenomena, because of the complexity of human nature and man's environment. (Krishnaswami & Satyaprasad, 2010, p. 7)

Research can be classified according to the methods or to its major intent. The descriptive research is designed to collect descriptive information, which is used to formulate more sophisticated research. (Krishnaswami & Satyaprasad, 2010, p. 10-15)

To get an answer for the research question a descriptive information is needed. As qualitative studies are ideal for asking about opinions and attitudes, this case study is made by using qualitative research methods, by interviewing device specialists of Tays. Half structured theme interviews will be recorded, and the gathered data will be transcribed.

3.2 Theme interview

Theme interview is semiformal data collection method, as it progresses with beforehand defined themes. Therefore, it is slightly more formal compared to unstructured interview, where the interview proceeds freely and on the terms of the interviewee. Themes are same for all the interviewees, but the conversation flows as naturally as possible, and issues can be discussed to varying extent. From the interviewer theme interview requires thorough familiarisation with the topic and the situations of the interviewees. (Saaranen-Kauppinen & Puusniekka, 2009, p. 54-56) In this study the selected themes come from the theory. Themes are:

- Competency of device specialist
- Medical device user training
- General relationship between device specialist and sales representative
- Customer experience

– After sales service

When the topic is rarely studied or less known, theme interviews are commonly used method, as they allow to acquire deeper information about the themes that are defined beforehand. In half structured theme interviews a researcher can ask focused questions, which can be an advantage, because during the interview possible misunderstandings might occur. (Puustinen, 2013, p. 5) Interviewees should be people, who presumably have information about the research topic. In elite sampling method the interviewees are chosen because of their specific knowledge of studied phenomenon. (Saaranen-Kauppinen & Puusniekka, 2009, p. 52)

This data collection method was chosen because of the need of deeper data from the experiences of employees who are in charge of the devices on daily basis, and who are participating to the buying decision. These people are also most frequently in connection with the medical device representatives. Therefore, the nurses who also work as device specialists in their own wards are the interviewees.

A target was to interview five to ten nurses from different wards from one operating area and they were elected with elite sampling method. The election was made according to the different specialty areas and experience levels of the nurses. They should presumably have as much experience about the group two and three devices as possible. Selected interviewee candidates from the wards were connected directly by the author. The interviews were conducted face to face between the author and the participant. The interview themes were translated to Finnish and the interviews were conducted entirely in Finnish to assure better conversation flow between the author and the participant. After four interviews the collected data from the interviewees started to look similar, so it seemed to be saturated. After this one more interview was held, to make sure that new information for the research question would not arise.

3.3 Analysis and transcription of the data

All the interviews were be transcribed into a written text. The gathered data was analyzed with inductive content analysis. With this method the data can be analyzed systematically. The aim is to get a concise and general interpretation of the interviewees' experiences. Data-driven content analysis has three phases. The first phase is the reduction of data, the second is clustering of data and the third is abstraction of the data or the creation of theoretical concepts. The process of data analyzation is presented in Figure 2. (Tuomi & Sarajärvi, 2011, p. 95-109)

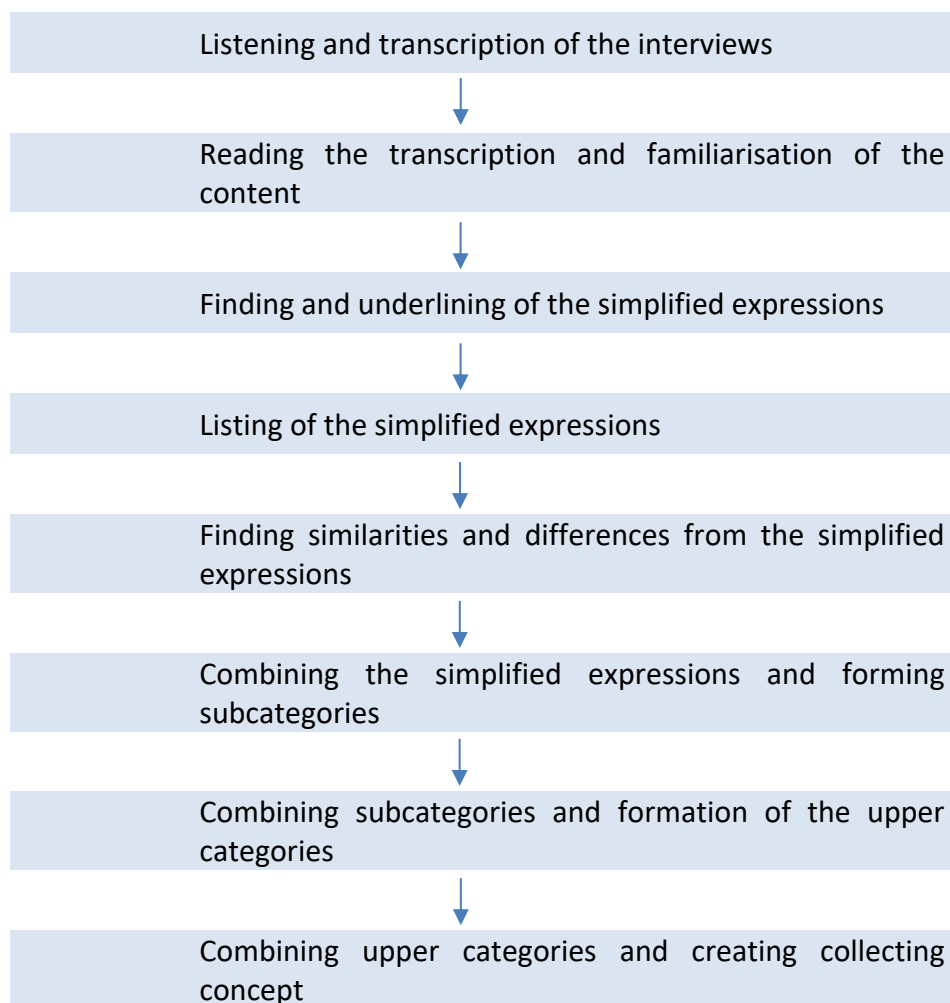


Figure 3. The Progress of data-driven content analysis (Tuomi & Sarajärvi, 2011, p. 109).

Before getting acquainted with the material, a unit of analysis must be defined. A unit of analysis can be a single word, a sentence or a whole concept guided by the research scheme and the quality of the data. The content will be carefully familiarized by reading it several times, after the decision of unit of analysis is made. To define the relevant information from the data, original expressions that fit to the research scheme are gathered and listed without losing any information from the original data.

The original expressions are simplified as much as possible, in way that the original data will not be lost. This is called reduction of the original data. (Tuomi & Sarajärvi, 2011, p. 109-113) In this Thesis after transcription, gathered data was read through several times and same time relevant original expressions were marked and simplified (Table 1).

Table 1. Example of making simplified expressions

Original expression	Simplified expression
Joka vuotinen koulutus kaikille, jotka tulee siihen työhön	Regularity of the training
Lähiopetus pienryhmällä on mun mielestä paras tapa kouluttaa	Training in small groups

After this the reduced original expressions are clustered to similar groups by finding similarities and differences within the expressions. Subcategories are formed by combining the simplified expressions that are similar by their content. These subcategories are named descriptively. (Tuomi & Sarajärvi, 2011, p. 109-113) Sample of this can be seen in table 2.

Table 2. Example of clustering of simplified expressions

Simplified expression	Subcategory
Training in small groups Online training Training alongside working	Training methods
Training skills Technical skills Selling skills Chemistry	Competence of the sales representative

Upper categories are formed by combining the subcategories that describe the same theme. These upper categories are combined into a section on the whole theme. (Tuomi & Sarajärvi, 2011, p. 109-113) Formed upper categories and themes of this thesis are presented in table 3.

Table 3. From upper categories to whole themes

Upper category	Theme
Skills for training Patient safety Expertise Managerial support	Competence of the device specialist
Knowledge of nurses Safety in nursing Driving license of the devices High-quality nursing Competence development	Medical device training in one operating area
Competence Communication Experiences Values Tendering	Cooperation between device specialist and sales representative

3.4 Limitations

As the author work also as a device specialist in the same operating area as the interviewees, therefore previous experiences and being a colleague could have influenced the responses of the participants as well as the questions of the interviewer. The opinions of the interviewees might have been biased even though the author's aim has been to be as objective as possible during the whole study.

4 PRESENTATION OF RESULTS

In this chapter the results of the theme interviews are presented according to the interview frame (Appendix 1) and the themes (Table 3). All the findings are divided into smaller sections. First the interviewees educational and working background are introduced, followed by their experiences of their role as device specialists and medical device training in one operating area including their own role as a trainer. Last section of the results is about the cooperation between the device specialists and medical device sales representatives. Direct quotes have been translated to English. Original versions of citations are presented in Appendix 3.

4.1 Interview information

The potential participants were contacted by email, where the author introduced the upcoming study and requested them to participate to interviews. All five participants agreed to take part in the study, but one interviewee was reminded about the sent request. The interviews were slightly affected by current Covid-19 pandemic situation and it took relatively long time to make all the interviews. Other reasons were data analysis between the interviews and saturation of the data.

The length of the interviews was from 46 to 53 minutes and the average length was approximately 50 minutes, and overall length approximately 251 minutes. The information of the interviews is presented in table 4.

Table 4. Interview information

Participant	Date	Length
Participant 1	11.2.2021	53min56s
Participant 2	17.2.2021	53min36s
Participant 3	3.3.2021	46min16s
Participant 4	19.3.2021	46min24s
Participant 5	8.4.2021	51min59s

All the interviews were conducted face-to-face in a conference room keeping the safe distance minimum of two metres.

4.2 The background of the participants

All five interviewees have university-level education from some university of applied sciences. Some of them also have additional education linked to their careers as nurses and device specialists.

All the interviewees have lots of experience working in health care, as they had been working ten to fifteen years as nurses. Most of them have

experience working in many different specialties and wards. They were also experienced working with the medical devices and sales representatives because they have been device specialists from five to ten years.

4.3 Competence of the device specialist

All interviewees were drifted to work as device specialists, but some of them had a genuine interest towards the devices or even had some technical background.

"At the very beginning head nurse of that time said that she has to name somebody to the role of device specialist and she named me. Actually without asking, but I wasn't against. I was the one who put the digital channels in place if they had been messed up." Participant 1

"I drifted to the position of device specialist. I guess I'll be in our department the one, to whom these kinds of things are given." Participant 2

None of the interviewees had any direct education or official training for their position as a device specialist. It is not very formal position and according to the interviewees the role is quite unclear. But during recent years in supervision of the management the cooperation has increased among device specialists inside the one operating area.

"I have not received any formal training for the position of device specialist. That was a bit like this incoherent job description, which was handled a bit each in its own style. And that job description wasn't very shaped. Now the work of the device specialist has begun to take shape and what should include in it." Participant 2

"...that way I became the device specialist of our ward. From there, it has gradually evolved and sometimes feels like a pretty big task together with my own daily role." Participant 5

"I remember then years ago that there was one meeting for device specialists when it was said that it would be taken forward. But it must have been four years before anything happened. After that, the first official meeting was actually a medical device driver license planning meeting. In the meantime, when I had that title, I then tried to find out a little more about those devices myself." Participant 1

4.3.1 The role of the device specialist

Even though during recent years the role of device specialist has been coming slightly clearer, more additional education and cooperation with other device specialists are wanted and the role should be even clearer.

"For a long time it was only a title, but nothing else. So, I wondered what my role was and what I should do. But it has now become slightly clearer over the years. I have been trying to create some own model for the job, instead of receiving training or guidance from outside." Participant 1

"What is this device special role and what could I bring to the ward through being in such role" Participant 4

Interviewees did not have enough time to perform their job as device specialists and they persist more support from the management so they could do their job as good as possible.

"I plan trainings while doing other work. I have to say that I have not received a lot of support from my employer. I feel that it would be good to get some support so that the skills would remain at a sufficient level." Participant 3

"Basically, I don't get time outside of basic work to do tasks of this role. If necessary, you can ask for this driving license planning, but not for the training itself." Participant 1

" I have a few other responsibilities that would require development time, but it is not allowed. But I think it might be nice to have such meetings of all the device specialists where you could discuss that I have done this and noticed this to be good, etc. Now it is a bit lonely and not as clear as many other areas of responsibilities." Participant 4

"I think it would take half a day to service the equipment, change the filters, etc. and if looking after on the equipment is required, then one day would be pretty optimal. We have quite a lot of equipment and I don't think it's enough for device specialist to only change the filters, but to make sure that there is always undamaged equipment and even make sure that the devices would work in any situation. In my opinion, the device specialist should also be such a support service for co-workers, make sure that there is always a spare blood pressure cuff and saturation meter in the closet, then it would support practical work." Participant 5

4.3.2 Cooperation between colleagues

Cooperation could be more organised, but already now there are both positive and negative word-of-mouth between the device specialists.

“It is important to be able to share experiences. Talk to other device specialists about what grievances have come up or what the needs are. Or the device representative has been in touch, what he/she has promised to you, what kind of user experiences we have had, if they are buying a new device and we have had it for five years.” Participant 1

“Sharing information with others and can help them to adapt to new device.” Participant 3

4.4 Medical device training in one operating area

After the project of harmonization of the device training in one operating area all the devices were divided to three different groups. The division is same in different wards inside the operating area.

4.4.1 Medical device groups

The first group includes basic devices that are easy to use and even if misused, safe for the user and for the patient. All nurses should have the knowledge to use these devices when they graduate.

“Many of the group 1 devices are quite simple to use. For example, a blood pressure monitor, which comes with basic training. These are so-called one-button devices.” Participant 2

In groups two and three the devices require more knowledge and training, and in group three also a test to ensure right and safe use.

“Competency verification goes so that we have a device list, groups 1, 2 and 3. In group 2 there is a part the training given and who has been the trainer. Group 3 still has its own point on the demonstration, but it has not been made a test, but has been part of that training situation.” Participant 5

4.4.2 Medical device knowledge

All the medical device users are responsible of their own knowledge. The knowledge of the new employee is confirmed together with the device specialist. Many times, the guiding of the use of the device is given by a colleague.

“When a new nurse comes to our ward, colleagues give the introduction to many of the devices. But then as a device specialist, I have given training to those devices that have not been trained during three orientation days“ Participant 5

"Officially, we do not have any structured model for training. Now when these different device groups came, it may have steered a little bit more in the direction that when new employee comes, she/he will first look that what devices are familiar. When employee meets an unfamiliar device, then she/he asks help from more experienced colleague and that device is looked through." Participant 1

"Everyone must take responsibility for their own competence. But the employer must give the employee the opportunity to develop his or her own skills." Participant 5

4.4.3 Competence development

Various training methods are used but the most used method is training in small groups. This is also considered as the best method for training device users. Sometimes the training situation has not been optimal for the learning experience.

"I like these workshop types of training, where everyone can do things practically. For me it is the most pleasing type of learning and I would assume that quite many others would like that kind of learning style too." Participant 4

"We have arranged non-stop training and then even short trainings, if someone asks them and there is a need." Participant 3

"In my opinion face to face teaching in small group is the best teaching method. There should be concrete situation where the device is used." Participant 2

"We have arranged training alongside the other work. Some have been working in that small room and then others looking that monitor. The training situation has been so confusing that you are not able to concentrate properly." Participant 4

During recent years the use of online training of Duodecim Oppiportti has increased, but the interviewees assess that there is not enough time to conduct these online courses in a way that the performing person would benefit sufficiently.

"There is good material in Oppiportti training centre, background theory about devices and their functions." Participant 5

"For example, different infusers are a good example that their basic principle is good to go through online training and then that device can be used in practical training. Device type-specific online training and related model-specific practical training." Participant 2

"The online courses related to the equipment are quite long, so many then skip the theory part and go straight to the exam and try to get through it and get the certificate. Work time has been allocated to online courses that management assigns, such as online courses on infection control and data protection." Participant 1

"Online courses are taken alongside other work. We can think pedagogically about what is a good learning situation. Employee will go through the material when it is forced to go through. Somewhere in between the work, through many breaks. Is content really being learned, or would it be a good idea to give time to employee to focus on it? And even take some device for and try it in practice and think about those stuff." Participant 5

There is also need for other supportive training methods, such as quick guides and training videos. These could help shift working employees to access device information any time a day.

"Quick guides serve new employees and substitutes. With quick guide an employee could safely use the device." Participant 5

"Nowadays, there are all kinds of electronic media, so why not use them. There could be a free training video of device for staff to download and watch. When a person hasn't used the device for at least half a year and it comes up, a worker can quickly watch a video clip of it and be able to remind the use of it. When the alternative is that he takes that 2cm thick manual and goes looking for same information." Participant 5

4.4.4 Emotions in learning

Emotions play a considerable role in the learning process. Many nurses are not very technically orientated, and the use of the devices can cause both positive and negative emotions. There is also a pressure of knowing everything.

"Usually the situation is so acute, when the use of the device is supposed to start, and you won't necessarily remember that how does it goes exactly, it will produce uncertainty and even fear. Employees could delay the start of using the device, when there is a tension about her/his own skills. It can be quite hard to say I don't realize or could we go slower. There may be pressure to say yeah yeah, even if you really feel like you don't know well enough." Participant 4

"Yes, for many, it produces the joy of success, as the use of the device has a positive effect on the patient's well-being" Participant 3

"Everyone should have an opportunity to test the devices, no matter how much work experience they have. Some employees have a pretty fearful

attitude towards those group 3 devices. Employee is going through the training now and get the name that the training is done. Then it will be many years, and those devices are not used and there is a name on the tag that you supposedly know how to use the device. It does not make it reliable." Participant 1

4.4.5 Role of management in the competence development and time management of medical devices training

More support from the management is wanted so the training would be more organised, and all the employees would have equal possibilities to develop their knowledge to the same level.

"Those employees who happen to work that day, can attend to the workshops. The workshops have usually been once in the fall and once in the spring. In many cases, the same people have been on duty and the training has not been used." Participant 1

"Resources are the biggest target for development for the employer. Time for the training would have been set aside. Training situations are usually pretty quick opportunities where to go alongside the own work and colleagues then try to look at the your patients." Participant 2

"For one nurse, the training day really rarely hits. Then there are a lot of those devices, that you get training rarely. So it is quite understandable that after two years you are no longer an expert on that device. And when you think about it, we're in a university hospital. We are given the highest possible care in this country, so we should be those experts...all of us. In my opinion, it would be optimal for training to be planned already when planning shifts." Participant 5

"I would like to have time outside of basic work for the device training because the devices are related to patient safety. You can see that the training is not seen as important enough on behalf of the employer. There are many levels of us, but different learners are not given enough attention. For others, it requires, even in small simple things, to be allowed to do it many times in peace to feel good that I know this. We proceed according to the fastest learning student." Participant 4

"I just asked, because during these Covid-19 restrictions many trainings are remote, that could online courses be made during working time. The answer was that those courses are supposed to do alongside working. But employees doesn't have time for that so the courses remain untapped." Participant 1

4.5 Cooperation between device specialist and sales representative

Medical device sales representatives are in direct contact with the wards. They promote new devices to potential and existing customers and make training and service visits to ensure good user experiences. Communication is fluent and there is a mutual respect between sales representatives and device specialist.

4.5.1 Communication with the sales representatives

Communication habits varies between the sales representatives and there are as much positive as negative experiences. All different contacting methods are used in both, customer, and seller sides.

"Medical device sales representatives visits to the ward have been helpful and you can notice that they really are excited about the devices they are representing. And always, no matter what you ask, the answer have been really clear." Participant 1

"Sometimes there are those situations, when they have advised to contact through email, and you write a message and it can take a month and there is no answer. Then you write a new email and still no answer. Then you start to think that is it just shiny outer shell, because of the first impression." Participant 1

"I think that communication has been really natural." Participant 5

"The contact has been kept by email, but then also by phone and agreed the training visits." Participant 3

"The communication is practically done by email and by phone, and in our unit device representatives make also visits. Some of the representatives contact me and some directly the head nurse." Participant 2

A comprehensive contact information of the representatives is needed, since many times it is unclear that who is representing which device.

"There is not always up-to-date contact information of the device representative. That's when I'm looking for it on the internet or maybe even the head nurse knows how to help." Participant 3

"The device representative is known in such devices, which have a close relationship in terms of daily use, but sometimes you do not even know who represents some devices. In cases of doubt, it would be good to have a comprehensive list for the contact details of the representatives." Participant 2

Interviewees also assess that communication can affect to the buying decision.

"If the representative would have been more active, I think that it would have had an influence to our buying decision." Participant 3

"If we would not make a contact in two to three months, they would most probably contact us. If communication does not work, it could effect to the buying of new devices." Participant 2

4.5.2 Competency of the sales representatives

Generally, the communication, technical and pedagogic skills of the sales representatives are very good, but interviewees feel that there are variability regarding to the background of the representatives.

"People are really approachable and easy to interact with. There is a really low threshold for asking for help." Participant 4

"In my opinion they have knowledge about their own products, and they can tell all the facts about the devices." Participant 3

"Working with the device representatives has been really easy and good. But clearly there are differences that some of the representatives are probably more business experts and some have previous experience in health care" Participant 5

"They master the devices they represent and if they don't know something, they figure it out. Things to improve relate more to the entire organization than to the representative. The action should be more agile in certain cases." Participant 2

Interviewees appreciate the training given by the sales representatives.

"Device representatives who have used the device themselves and are familiar with the patient group provide good targeted training." Participant 5

"In training, they are real professionals. They are active and proactive. They always generously organize all training events. They come here and organize online trainings." Participant 4

4.5.3 Cooperation before, during and after sales

The interviewees estimate that commonly the sales representatives take more contact before than after sales, but there are also positive

exceptions. First impression is always important, but as important is the after sales service.

"Once the device is purchased, communication almost stays there. It would be nice to have some regular interval on whether something new or something else has come, but there is no such contact. If you think that how much these devices cost and what kind of usage capacity they have, it would be really good, if you would be connected." Participant 3

"Some of the device representatives do not show up after the sale, but some keep in touch on a regular basis. Yes, it is that demonstration process before the acquisition decision and then that short training phase after the acquisition" Participant 5

"In many cases, the impression is that after the sale, when the device has been received by the ward, we are on our own. I would like after-sales communication, where they could ask that how it has gone with the device." Participant 1

4.5.4 Individuality and customer needs

Taking account of customer's individual needs and respecting customer's opinions are highly appreciated by the interviewees. In small scale these wishes are fulfilled, but there are some problems when big international corporations operate in relatively small market.

"I would like personalized service, not overly aggressive sales. The facts would be told, but same time giving room to customer to make the decision. Trusting that there is a good product that is sold and giving the customer a chance to make a decision." Participant 2

"The service has been individual and the needs of the ward have been taking into account. The device manufacturer notices us and started to develop their product." Participant 1

"Our needs are listened. It feels like our opinion really matters." Participant 4

"In this case, the customer's opinion was not listened." Participant 3

4.5.5 Emotions and values

Chemistry between customer and seller varies, but the experiences have been mostly positive. Emotions towards the representative may have an influence on the buying decision.

"I think that personal chemistry has worked well." Participant 3

"Some of the representatives convey closeness to people and they do home visits. For some, somehow more technical world of values come across. Perhaps home visits and doing work at the patient level affect to this." Participant 1

"Problems detected in a device are primarily considered resistance to change to the new device. There may be something behind it, too, but I think it is arrogant to set off the whole thing with resistance to change alone." Participant 2

"The most important thing is to be yourself. Yes, you can sense it if someone presents it. It would only have the opposite effect." Participant 4

Values are not often emphasized, but they are used as a sales argument.

"At the training events, their values become more prominent, compared to short presentations in the ward. Environmental or responsibility values have not really been raised, at least in the presentations in the ward." Participant 3

"There has been no talk of the carbon footprint and recyclability of the devices. Of course, there has been talk of the durability and life cycle of the devices, but that too has often been customer-oriented." Participant 5

"Surely they emphasize to us values that we consider important. I'm not saying it's a pretense, but when there's a company that aims to make as much profit as possible, then I guess we know what value is above everything else." Participant 4

"Energy and waste saving were the sales arguments for an otherwise very good device. Perhaps it reflects the modern age of wanting to act as a responsible actor, although perhaps the importance in the big picture will be less than what speeches are." Participant 2

4.5.6 Customer satisfaction and loyalty

Interviewees are more or less satisfied to the customer service, and customer satisfaction or dissatisfaction affect to the loyalty, trust and commitment for the sales company.

"Needless to say, good service is reflected in the reviews. We have thought that we always have the option to go then with the equipment of another company, if we feel that the other company gives too bad impression." Participant 2

"If you do not know the facts, it will affect to our opinions about the device." Participant 5

The marketing entry of a new player can be complicated, and this is especially affected by previous user experiences.

"Of course, there will always be competitive situations and especially if there is a new operator with a new device, then it is always a challenging situation if some other device has been used before." Participant 2

Interviewees appreciate when customers are listened, their needs are fulfilled, and a service has been good.

"I think customer satisfaction could be summed up in one thing, which is knowing the equipment. It is really nice to work with representatives who know their products. But then on the development side again, if the representative doesn't know the device so well and cannot help." Participant 5

"The kind of customer service where you feel heard. That the counterparty is interested in hearing for example, what problems there are in practice. And communicate that they are willing to take the problems forward, that they are important... Together for the benefit of the patient." Participant 4

4.5.7 Competitive tendering

Interviewees would appreciate, if also their opinions would be listened when making a buying decisions.

"I am wondering how the devices are bought for wards and also pricing policy. It would be good to be part of the orientation." Participant 1

"It would be nice if device specialists would be included in the procurements and regular check-ups could be included already at the tendering stage, as we cannot have a much influence on who wins the tender." Participant 3

Some devices come always to the user evaluation, but more test runs are needed.

"These devices always come to a separate user review. It is also always a negotiating decision as to how much user experience is agreed to be emphasized. There is always the opportunity to say an opinion, but it is unclear whether how it influences the procurement decision." Participant 2

"It would be nice if test runs would be arranged to all of the devices. Except those devices that are familiar." Participant 3

5 THE ANALYSIS OF THE THEME INTERVIEW RESULTS

The analysis is divided according to the main themes of this study. These themes are competence of the device specialist, medical device training in one operating area and cooperation between device specialist and sales representative.

5.1 Competence of the device specialist

The competence of the device specialists varies and altogether, is not in adequate level to the role they have. The knowledge of the device specialists should be increased, and work harmonized inside the operating area, to ensure that the training would be evenly matched in all wards. More education about the devices, public procurements and pedagogy is needed by the device specialists. Since there are no specific training for the role of device specialist, a new training could be established in alliance for example, with competence development unit and medical device service unit of hospital, and medical device manufacturers.

Managerial support and diversified cooperation are the keys to sufficient knowledge and resources for the device specialists. Especially now when the money is even tighter than before all the decisions about the resources are more difficult, but the results of this study show that allocating resources to better medical device training could pay for itself in a long run.

5.2 Medical device training in one operating area

Even though training of the medical devices in one operating area is more organised than it was few years ago, the results of this study show that it is not yet in optimal level. Different wards have different needs, but at the same time cohesion and information sharing between the wards are wanted.

Emotions may delay the start of using the device and the management should support employees' different level of competency and learning habits. Employees own wishes of their knowledge and learning speed according to their personal development review should be considered when planning training. Individual competence development road map could be an option for the equal competence.

According to interviewees the training is not always given by the same person and for this reason the content can vary. Same kind of results have been found before (Mehraban et al., 2013). The results show that the best training method is small group training, which Shranger (2010) found already ten years ago. Nowadays there are also other supporting methods,

such as online courses and video instructions, which can be used to provide more comprehensive knowledge.

It must be remembered that guiding and training are not the same thing. Anyone who have used the medical device can guide in the use of it, but only well-educated professional can give a proper training where all the crucial facts for the effective and safe use of the device are teach.

5.3 Cooperation between device specialist and sales representative

In big scale the competency of the medical device sales representatives is in good level, but there are also some problems on answering or contacting to customer. The representatives are more active before than after sales. According to Klaus et al. (2013) more active service at all three phases, before, during and after sales could influence customer satisfaction, positive word-of-mouth and through these to new sales.

In most times the communication, technical and pedagogic skills of the sales representatives are very good, but interviewees feel that there are variability regarding to the background of the representatives. Interviewees emphasize that competency is better if representative has a background in health care or previous experiences of using the device they are selling.

According to this study in half of the cases device specialists are satisfied to sales representatives work in listening customer needs and giving individual service. Participants bring out that the service highly depends on a representative but is not proportional to the price of the product.

This study found similar matters with Ahvenainen (2017), that positive attitude, emotional intelligence and listening of the customer's needs are essential for enjoyable physical customer experience. In addition, companies should succeed in digital and subconscious customer experience to ensure positive experiences and buying decision. (Ahvenainen et al., 2017, p. 33)

This study emphasizes that the device specialist's dissatisfaction with the service affect to the loyalty for the sales representative and sales company. In addition to loyalty, also trust and commitment are linked to strong relationship between device specialist and sales representative. This finding is consistent with previous research of Bhat & Darzi (2016), who also claim that customer loyalty is in key role if a business wants to have long-term competitive advantage over its competitors (Bhat & Darzi, 2016, p. 392-393). When relationship between the representative and the ward is strong, then also the service is better. Sometimes there is not enough competition or customer is too small, so sales representatives might think that there is no need to invest in customer service.

Values of the selling company are not emphasized, but environmental assets arise in the conversations, when comparing same type of devices. Interviewees of this study appreciate environmental sustainability, but it is not a significant issue when buying a new medical device or comparing it to another similar device.

There is an interest towards the competitive tendering among device specialists and they also have some ideas how to develop it. Involving device specialists more in competitive tendering could help device users to make their voices heard and help startups and small and medium size enterprises in market entry. This could have positive effect in improving medical device market in Finland, which is needed according to Nordic Healthcare Group (2018).

Device specialists need more time to do all the tasks that are required to ensure effective and safe use of the device in the wards. The author suggests that all operating areas should have their own expert nurses, who would manage the training of the medical devices. Local Medical Devices Links are used for example in Great Britain, where the medical device training is highly organised (National Health Service, 2019). These experts could also be the main contact person with the sales representatives and participate to the competitive tendering, because they would have the best knowledge about the needs of the field. Master studies of welfare technology could be one possible solution to ensure enough knowledge for these experts.

More studies are needed to develop this idea.

5.4 Ethics

The fundamental principles of research integrity are guiding the good research practices. They guide researchers with the intellectual, practical and ethical challenges that come across during the study. There are four different principles of research integrity, which should be taken into consideration when conducting a study. Reliability ensures the quality of the study, while honesty should be involved in all phases of the research. In addition to these researcher's respect for different stakeholders and accountability for the research help researcher to conduct a study in the most ethical way. (ALLEA – All European Academics, 2017, p. 4-9)

The study was conducted using good scientific practice. The participants were given a full disclosure of the purpose of the study, because of ethical consideration. The participants were also informed that they have right to withdraw their participation at any time and reminded that they have right to leave any question unanswered or topic commented, if they wished so. Full anonymity has been guaranteed and the names and working units are not mentioned in the study nor in the transcripts. The interview data was stored safely, and only researcher had access to recordings. After there

was no use for the data, it was deleted. All background data of the participants is confidential

5.5 Reliability

Reliability expresses how a research method used reliably and reproducibly measures a desired phenomenon (Saaranen-Kauppanen & Puusniekka, 2009). The data of the study will be considered reliable when the research results are repeatable. If the researcher explains the research results during the qualitative study, it increases the reliability. These results include for example the environment, duration, and circumstances of the interviews and in addition, interview situation evaluation of the researcher. (Hirsjärvi, Remes & Sajavaara, 2013, p. 232)

The theoretical part can be considered reliable, as it was built around texts written by professionals in these fields. The part could have been wider though.

To guarantee the interviewees understood the themes and to maximize the amount of data available the author gave the interview themes to the participants in advance. This could have positive influence on the interviews and in addition, help build trust to the author. When both the interview themes and the interviewer are familiar to the participants, they might have felt more comfortable during the interviews. But in the other hand because the interviewer and interviewees knew themselves beforehand, it could have produced biased opinions. Direct quotes from the participants' answers were included to the study, but they were translated from Finnish. Original expressions are included as appendix. All these matters increased the reliability of this study.

6 CONCLUSIONS

The original aim of this study was to find out that what kind of experiences device specialists in Tays in one operating area have concerning the medical device sales representatives.

Throughout the study more information came out about the situation of the medical device training in the hospital and deeper insight also to the device specialist's role. This important information could not be excluded from the study, therefore, the topic of this thesis was changed to more appropriate.

Medical devices sales are in important role to the economy of Europe, and the devices are essential for the healthcare, as they help the professionals of social and healthcare sector to save lives and people to live self-contained life. The device specialists and medical device sales representatives are in key role between the users and manufacturers of the medical devices. The research question was:

What are the device specialists' experiences of their role and the medical device sales representatives?

The theoretical part consisted of literature and research of different study related topics, such as medical devices, training, and customer experience. The theoretical part can be considered reliable, though it could have been slightly wider.

Based on a theory, theme interview was conducted to five device specialists in Tays in one operating area. Despite of the Covid-19 related restrictions the author was able to conduct interviews face to face with the participants. The interview themes were translated to Finnish and the interviews were conducted entirely in Finnish to assure better conversation flow between the author and the participant. Main themes of the study included competence of device specialist, medical device training in one operating area and cooperation between device specialist and sales representative.

According to this study the interviewed device specialists are mostly satisfied to the competency and service of the sales representatives, but they bring out that the service highly depends on a representative. In addition, customer's emotions towards the representative may have an influence on the buying decision. All representatives should be active at all phases, before, during and after the sales to ensure better customer experience. This study found that different wards have different needs, but at the same time cohesion and information sharing between the wards are wanted. The training of the medical devices is not fully organised and there are individual development needs among device users. In addition, the

study found that device specialists are motivated and have interest to develop their role in medical device training. There is also a need for more modern training methods, such as training videos and device specific online courses which could be helpful for shift working professionals. However, it is important to remember that as the sample was small and the gathered data only explores one operating area of one hospital, any generalization cannot be made through this study.

The study concludes that to ensure better customer service the cooperation between device specialists and sales representatives require development. The study also found that managerial support for device specialists and for medical device training, and clarification of the role of device specialist are in essential role when harmonizing medical device user competency and developing patient safety.

Overall, the research and learning process can be considered a success. The study was able to answer to the research question and the objectives were reached. In addition, other information about the role of device specialist and medical device training in this specific operating area were found. During the study, the researcher learned a lot about the customer experience and the collaboration between the hospital and equipment representatives. In addition, the author learned more about the experiences and found few development ideas of medical device training in this operating area.

7 RECOMMENDATIONS

More studies are needed to develop the idea of using expert nurses to manage the training of medical devices in operating areas and in cooperation with medical device sales representatives and procurement offices. New research could focus on procurement offices and sales representatives or it could be expanded to several operating areas or hospitals.

REFERENCES

Ahvenainen, P., Gylling, J. & Leino, S. (2017). Viiden tähden asiakaskokemus: Tee asiakkaistasi faneja. 2. painos. Helsinki: Kauppakamari.

ALLEA – All European Academics (2017). The European Code of Conduct for Research Integrity.

European Commission (2017). Getting ready for the new regulations. Retrieved 5 March 2019 from

https://ec.europa.eu/growth/sectors/medical-devices/regulatoryframework/getting-ready-new-regulations_en

Bhat, S. A. & Darzi, M. A. (2016). Customer relationship management. *International Journal of Bank Marketing*, 34(3), pp. 388-410.

<https://doi.org/10.1108/IJBM-11-2014-0160>

Brogie, F. (n.d.). Medical device sales: Definition, job description, salary, and more. Retrieved 30 October 2020 from

<https://www.repsly.com/blog/field-team-management/medical-device-sales-job-definition-description-salary#stan>

Eriksson, P. & Koistinen, K. (2014). Monenlainen tapaustutkimus. Kuluttajatutkimuskeskuksen tutkimuksia ja selvityksiä 11/2014.

European Commission (2017). Getting ready for the new regulations. Retrieved 5 March 2019 from

https://ec.europa.eu/growth/sectors/medical-devices/regulatory-framework/getting-ready-new-regulations_en

European Commission (n.d.). Medical devices. Retrieved 5 March 2019 from https://ec.europa.eu/growth/sectors/medical-devices_en

Fimea (2020). Medical devices. Retrieved 30 March 2021 from <https://www.fimea.fi/web/en/medical-devices>

Heinonen, T. (2017). Go to market strategy, Role of Medical Device Regulation in EU. Master's Thesis. *International Business Management*. Tampere University of Applied Sciences. Retrieved 5 April 2019 from https://www.theseus.fi/bitstream/handle/10024/135066/Heinonen_Tuomo.pdf?sequence=1&isAllowed=y

Helkkula, A. (2011). Characterising the concept of service experience. *Journal of Service Management*, Vol. 22 No. 3, pp. 367-389. <https://doi.org.ezproxy.hamk.fi/10.1108/09564231111136872>

- Hirsjärvi, S., Remes, P. & Sajavaara, P. (2013). Tutki ja kirjoita. 18. uudistettu painos. Porvoo: Bookwell.
- Karjalainen, M. (2016). Laiteajokorttiverkkokoulutus. Retrieved 2 March 2019 from http://spty.fi/wordpress/wp-content/uploads/2017/06/5_Kansallinen-laiteajokortti.pdf
- Klaus, P., Gorgoglione, M., Buonamassa, D., Panniello, U., & Nguyen, B. (2013). Are you providing the “right” customer experience? The case of Banca Popolare di Bari. *International Journal of Bank Marketing*.
- Krishnaswami, O. & Satyaprasad, B. (2010). *Business Research Methods*. Delhi: Himalaya Publishing house.
- Kumar, V., Kumar, V. & Petersen, J. A. (2012). *Statistical Methods in Customer Relationship Management*. Wiley.
- Linnavuori, K. (2015). Uusi lääkinnällisten laitteiden EU-asetus. Valvira. Retrieved 5 March 2019 from https://www.fimea.fi/documents/160140/765540/28338_Linnavuori_AT_MP_2015-02-04_2_.pdf
- Manna, D. R. & Smith, A. D. (2004). Exploring the need for emotional intelligence and awareness among sales representatives. *Marketing Intelligence & Planning*, Vol 22 No 1, pp 66-83. Retrieved 14 April 2021 from <https://doi.org/10.1108/02634500410516922>
- Medical Devices Act 2010/629. Retrieved 2 March 2019 from <https://www.finlex.fi/fi/laki/ajantasa/2010/20100629#a19.12.2017-936>
- Mehraban, M.A., Hasanpour, M., Yazdannik, A., & Ajami, S. (2013). Technology User's Training Is a Waif. *Iranian Red Crescent medical journal*.
- National Health Service (2019). Medical devices training policy. Retrieved 2 March 2019 from <https://doctrinary-rcht.cornwall.nhs.uk/GET/d10138831>
- Nordic Healthcare Group. (2018). Terveysteknologian toimialaselvitys. Haettu 14.7.2019 osoitteesta <https://www.sailab.fi/wp-content/uploads/2018/12/terveysteknologian-toimialaselvitys-2018.pdf>
- Puustinen, S. (2013). Qualitative research and theme interview as a method of collecting data. Aalto University. Centre for Urban and Regional Studies. Retrieved 22 June 2020 from https://mycourses.aalto.fi/pluginfile.php/195681/mod_resource/content/1/qualitative%20research%202013-10-28_handout.pdf

Regulation EU 2017/745. Retrieved 5 March 2019 from <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32017R0745>

Saaranen-Kauppanen, A. & Puusniekka, A. (2009). Menetelmäopetuksen tietovaranto KvaliMOTV. Yhteiskuntatieteellisen tietoarkiston julkaisuja. Retrieved 20 August 2020 from <https://www.fsd.tuni.fi/fi/tietoarkisto/julkaisut/kvalimotv.pdf>

Sailab – MedTech Finland ry (2010). Lääkintä- ja laboratoriolaitteet, Osto-opas. Retrieved 5 April 2019 from https://www.sailab.fi/wp-content/uploads/2017/09/laakinta_laboratorio_osto-opas_2004.pdf

Sailab – MedTech Finland ry (n.d.). Mitä on terveysteknologia. Retrieved 20 April 2020 from https://www.sailab.fi/wp-content/uploads/2019/09/mitaterveysteknologiaon_opas.pdf

Shah, S.G.S. & Robinson, I. (2008). Medical device technologies: who is the user? *Int. J. Healthcare Technology and Management*, Vol. 9(2), pp. 181–197. [https://doi: 10.1504/IJHTM.2008.017372](https://doi:10.1504/IJHTM.2008.017372)

Shranger, F. (2010). Revamping end-user training. *Computers, informatics, nursing. CIN*. Vol 28(1), pp. 5-7.

Snyder, K. & Hilal, P. (2015) The changing face of B2B Marketing. Retrieved 30 August 2020 from <https://www.thinkwithgoogle.com/consumer-insights/consumer-trends/the-changing-face-b2b-marketing/>

Tuomi, J. & Sarajärvi, A. (2011). *Laadullinen tutkimus ja sisällönanalyysi*. Helsinki: Kustannusosakeyhtiö Tammi.

Tuulaniemi, J. (2011). *Palvelumuotoilu*. Helsinki: Talentum Media Oy.

Valvira (2015). Health technology. Retrieved 5 April 2019 from <https://www.valvira.fi/web/en/healthcare/health-technology>

THEME INTERVIEW FRAME

TAUSTATIEDOT

- Peruskoulutus ja mahdolliset lisäkoulutukset
- Työkokemus sairaanhoitajana vuosina
- Työkokemus laitevastaavana

LÄÄKINNÄLLISTEN LAITTEIDEN KOULUTUS

- Laitekoulutus haastateltavan osastolla
 - o Koulutuksen toteutuminen laitekorien 2 & 3 kohdalla
 - o Koulutukseen varattu aika ja säännöllisyys
 - o Osaamisen todentaminen erityisesti laitekorien 2 & 3 kohdalla
- Laitevastaavan rooli osaston työntekijöiden laitekouluttajana
 - o Osaston työntekijöiden kouluttaminen
 - o U-aika
 - o Laitevastaavan oman osaamisen tukeminen työnantajan toimesta
- Koulutusmetodit ja eri välineiden hyödyntäminen
 - o Sähköiset oppimisympäristöt
 - o Kertaus
 - o Laite-edustaja
- Mitä hyvää ja mitä kehitettävää laitekoulutuksessa on kokonaisuudessaan?

ASIAKASKOKEMUS ja PALVELUKOKEMUS

- Yhteydenpito edustajien kanssa
 - o Laite-edustajien vuorovaikutustaidot
 - o Yhteydenpitokanavat
 - o Yhteydenpidon säännöllisyys
- Laite-edustajan osaaminen
 - o Tekninen
 - o Koulutus
 - o Asiakaskohtaaminen
- Yhteistyö myyntiprosessin eri vaiheissa
 - o Ennen myyntiä
 - o Myynnin aikana
 - o Myynnin jälkeen
- Toiminta
 - o Asiakkaan kuunteleminen ja tarpeiden täyttäminen
 - o Yhteistyön luonteisuus
 - o Yksilöllisyys
 - o Joustavuus
- Tunteet
 - o Ihmiskemia
 - o Luottamus
 - o Henkilökohtaiset kokemukset
- Arvot
 - o Myyjän edustaman yrityksen
 - Imago
 - Tarkoitus
 - Vastuullisuus
 - Ympäristö
 - Asiakaslupaus
 - o Kohtaavatko sairaalan, laitevalmistajan, laitevastaavan ja edustajan arvot?
- Asiakastytyväisyys ja -uskollisuus
 - o Yhteydenpito
 - o Palvelu
 - o Asiakkuus
 - o Myynnin jälkeinen tuki
- Minkälainen on odotukset täyttävä asiakaskokemus?
- Mikä kokemuksissa on hyvää entä missä on kehitettävää?

CONSENT OF THE PARTICIPANT

OSALLISTUJAN SUOSTUMUS

MEDICAL DEVICE USERS' EXPERIENCES OF THE MEDICAL DEVICE SALES REPRESENTATIVES

Minua on pyydetty osallistumaan yllä mainittuun Hämeen ammattikorkeakoulun opinnäytetyöhön ja olen saanut sekä kirjallista että suullista tietoa opinnäytetyöstä ja mahdollisuuden esittää siitä opinnäytetyön tekijöille kysymyksiä.

Ymmärrän, että opinnäytetyöhön osallistuminen on vapaaehtoista ja että minulla on oikeus kieltäytyä siitä sekä perua suostumukseni milloin tahansa syytä ilmoittamatta. Voin keskeyttää osallistumiseni missä tahansa opinnäytetyön vaiheessa ennen sen päättymistä ilman, että siitä koituu minulle mitään haittaa. Jos päätän peruuttaa suostumukseni tai osallistumiseni opinnäytetyöhön keskeytyy jotain muusta syystä, siihen mennessä kerättyjä tietoja käytetään osana opinnäytetyön aineistoa. Ymmärrän myös, että tiedot käsitellään luottamuksellisesti.

Tampereella _____.____.2020

Tampereella _____.____.2020

Suostun osallistumaan opinnäytetyöhön:

Suostumuksen vastaanottaja:

osallistujan allekirjoitus

opinnäytetyöntekijän allekirjoitus

nimenselvennys

nimenselvennys

ORIGINAL EXPRESSIONS IN FINNISH

”Silloin ihan alkuun edellinen osastonhoitaja sanoi, että hänen täytyy nimetä joku ja hän nimesi minut. Oikeastaan ilman kysymättä, mutta en sitten laittanut hannttiin. Olin se, joka laitteli digikanavia paikoilleen, jos ne oli saatu sekaisin.” Participant 1

”Laitevastaavan tehtävään ajauduin. Mä taidan olla meidän osastolla tämmöinen, jolle nämä tällaiset hommat annetaan.” Participant 2

”Mitään virallista koulutusta en ole saanut laitevastaavan tehtävään. Sehän oli vähän niinku tällainen muokkautumaton toimenkuva, jota hoidettiin vähän sillai kukin omalla tyylillään. Eikä se toimenkuva ollut kovin muotoutunut. Nythän laitevastaavan työ on alkanut hahmottua ja mitä siihen tulisi kuulua.” Participant 2

...sitä kautta musta tuli sitten osaston laitevastaava. Siitä se on sitten kehittynyt pikkuhiljaa ja tuntuu välillä aika isoltakin tehtävältä näin niin kuin oman toimen ohessa.” Participant 5

”Muistan silloin vuosia sitten, että siinä oli yksi kokous yhdyshenkilöiden osalta, jolloin puhuttiin, että sitä aletaan viemään eteenpäin. Mutta siinä oli varmaan neljä vuotta, ennen kuin mitään tapahtu. Sen jälkeen oikeastaan ensimmäinen virallinen oli laiteajokortin suunnittelukokous. Siinä välissä kun tiesin, että on se titteli olemassa, niin yritin sitten ottaa itte niistä laitteista vähän enemmän selvää.” Participant 1

”Pitkään olikin se, et oli se titteli, mut ei mitään muuta. Ni mietti, et mikäähä se mun rooli oli ja mitä mun pitäis tehdä. Mut vähän se on nyt ehkä tässä vuosien varrella selkiytyny. Sitä on yrittäny itte luoda jonkun oman mallin työhön, enemmänki, ku et olis saanu koulutusta tai ohjausta ulkopuolelta.” Participant 1

”Mitä tää laitevastaavuus on ja mitä voisin tuoda osastolle sitä kautta, että oon tällaisessa roolissa.” Participant 4

”Koulutuksia suunnittelen työn lomassa. Mun täytyy sanoo, et ihan hirveesti mä ite en oo saanu tukea työnantajalta. Kyllähä itekin kokee, et olis hyvä saada jotain tukea, et osaaminen pysyis riittävällä tasolla.” Participant 3

”Periaatteessa en saa perustyön ulkopuolista aikaa tehtävän hoitamiseen. Tarvittaessa voi sitte kysyä just vaikka näihin laiteajokorttisuunnitteluun, mutta itte kouluttamiseen ei oo annettu.” Participant 1

”Mulla on vähän muitakin vastuualueita, mitkä vaatis kehittämisaikaa, niin ei tahdo saada. Mut mun mielestä vois olla kiva, että olis semmosia kaikkien laitevastaavien tapaamisia, missä vois keskustella, että mä oon tehny näin ja huomannu tän hyväks jne. Nyt se on vähän yksinäistä eikä niin selkeää, mitä monet muut vastuualueet.” Participant 4

”Kyllä mun mielestä tarvis laitteiden huoltamiseen, suodattimien vaihtoon yms. puoli päivää listalla ja jos ajatellaan, että pitäis laitteita vähän tarkemminkin silmällä, niin yks päivä olis semmonen aika optimaalinen. Meillä on aika paljon laitteita ja mun mielestä siihen ei riitä, et se laitevastaava vaihtaa suodattimet, vaan laitevastaavana huolehtii, että aina on ehjät laitteet ja vähän varallakin, että se homma toimis tilanteessa kuin tilanteessa. Mun mielestä laitevastaava saisi olla myös sellainen tukipalvelutoimenpide siinä työkavereille, et jos se huolehtii, et siellä on aina kaapissa varalla verenpainemansettia ja saturaatiomittaria, niin se tukis sitä käytännön toimintaa.” Participant 5

”Kyllä se on tärkeätä, että saa jakaa niitä kokemuksia. Laiteyhdysheikköiden kanssa jutellaa, et mitä epäkohtia tullu tai mitä tarttis. Tai laite-edustaja ollu yhteydessä, et mitäs se on teille luvannu, onko ollu samoja asioita käyttökokemuksista, jos vaikka heille tulossa uus laite ja meillä ollu se viis vuotta.” Participant 1

”Et saa jakaa tietoa muitten kanssa ja saa auttaa heitä sopeutumaan uuteen laitteeseen.” Participant 3

”Monet korin 1 laitteista ovat tämmöisiä varsin yksinkertaisia käyttää. Esim. vaikka verenpainemittari, joka tulee sitte ihan peruskoulutuksen myötä. Eli ovat niin sanottuja yhden napin vehkeitä.” Participant 2

”Osaamisen todentaminen menee niin, että meillä on laitekortti, korit 1, 2 ja 3. Siellä on korissa 2 kohta koulutus annettu ja kuka on ollut kouluttajana. Korissa 3 on vielä oma kohta näytöstä, mutta ei siitä oo tehty ns. testiä, vaan se on ollu osa sitä koulustilannetta.” Participant 5

”Kun meille tulee osastolle sairaanhoitajana, niin moniin laitteisiin työkaverit on antaneet perehdytystä. Mutta sitten laitevastaavana olen antanut koulutusta niihin laitteisiin, joihin siinä kolmen päivän perehdytyksen aikana ei ole saatu.” Participant 5

”Virallisesti meillä ei ole mitään strukturoitua mallia kouluttamiseen. Nyt ku tuli nää laitekorit, ni se on ehkä vähän enemmän ohjannu sinne suuntaan, et ku tulee uus työntekijä, ni se kattoo eka niitä laitteita, mitä osaa. Sen jälkee ku tulee joku laite, minkä käyttöö ei oo taitoo, ni sitte kysyy kokeneemalta hoitajalta ja se laite katsotaan läpi.” Participant 1

”Jokaisen täytyy kantaa itse vastuu omasta osaamisestaan. Mut työnantajan pitää antaa mahdollisuus siihen, että työntekijä voi kehittää omaa osaamistaan.” Participant 5

”Mä tykkäisin näistä työpajatyypisistä koulutuksista, joissa ihan tehään niitä asioita. Se on kaikista mieluisin tapa itelle oppia asioita ja luulisin, että aika moni tykkää semmosesta oppimistyylistä.” Participant 4

”Me ollaan pidetty non-stop -koulutuksia ja sitten ihan lyhyitäkin koulutuksia, jos joku tulee kysymään ja on tarvetta.” Participant 3

“Lähiopetus pienryhmällä kasvokkain on mielestäni paras vaihtoehto. Et siinä olisi konkreettinen tilanne, missä laitetta käytetään.” Participant 2

”Työn ohessa järjestetty koulutusta. Osa tehny hommia siinä pienessä tilassa ja kateltu sitä näyttöä. Se on ehkä koulutustilanteena ollu semmonen vähän sekava, että ei oo pystynyt täysin keskittymään.” Participant 4

”Oppiportissa on hyvää materiaalia yleisesti ja taustateoriaa laitteista ja niiden toiminnoista.” Participant 5

”Esimerkiksi erilaiset infuusorit on hyvä esimerkki siitä, et niitten perusperiaate on hyvä käydä verkkokoulutuksena ja sit voidaan sitä kyseistä laitetta käyttää käytännön koulutuksessa. Laitetyyppikohtainen verkkokoulutus ja siihen liittyvä mallikohtainen käytännön koulutus.” -Participant 2

”Laitteisiin liittyvät verkkokurssit on aika pitkiä, ni monet sitte skippaakin sen teoriaosuuden ja menee suoraa tenttiin ja koittaa päästä sen läpi ja saa sen todistuksen. Työaika on saanut niihin verkkokursseihin, mitkä talo vähän niinku määrää tehtäväks, esim. infektioiden torjunta ja tietosuoja -verkkokurssit.” Participant 1

”Verkkokurssit tehdään muun työn ohessa. Mutta sitten voidaan miettiä pedagogisesti sitä, että mikä on hyvä oppimistilanne. Et käydäänkö se materiaali läpi, kun se on pakko käydä. Jossain töiden välissä, monen katkoksen kautta. Opitaanko sisältöä oikeasti, vai olisiko sille hyvä antaa oikeasti se aika, että siihen pystyy keskittymään? Ja vaikka ottaa siihen jokin laite ja käytännössä kokeilla sitä ja miettiä niitä juttuja.” Participant 5

”Pikaohjeet palvelee uusia työntekijöitä ja sijaisia. Pikaohjeen kanssa työntekijä pystyis turvallisesti toteuttamaan laitehoidon. Potilasturvallisuus pitää kuitenkin mennä etunenässä.” Participant 5

”Nykyään on kaikenlaista sähköistä media, niin miksi niitä ei käytetä. Olis vapaasti henkilökunnalle ladattavissa ja katsottavissa oleva koulutusvideo. Kun ihminen ei oo vaikka puoleen vuoteen käyttänyt laitetta ja se tulee eteen, ni työntekijä voi käydä nopeasti katsomassa sen videopätkän ja pystyy siitä muistuttamaan asiat mieleen. Kun vaihtoehtona on, että hän ottaa sen 2cm paksun manuaalin ja lähtee siitä etsimään.” Participant 5

”Tilanne on yleensä akuutti, kun laitteen käyttö pitäis aloittaa, eikä välttämättä muista, että miten se tarkalleen tehtiin, ni siitä tulee epävarmuutta sekä pelkoakin. Ne lykkää laitteen käyttöönottoa, kun ei itse aktiivisesti tuo esille, että voisi aloittaa tämän laitteen käytön, kun omaan osaamiseen liittyy jännitystä. Se voi olla aika hankala sanoa, että mä en tajua tai voisko mennä rauhallisemmin. Et voi olla painetta sanoa joo joo, vaikka oikeesti tuntuis siltä, että ei osaa riittävän hyvin.” Participant 4

”Kyllä se monella tuottaa onnistumisen iloa, ku laitteen käytöllä saa positiivisia vaikutuksia potilaan vointiin.” Participant 3

“Kaikilla pitäis olla mahdollisuus päästä testaamaa niitä laitteita, vaikka olis kuinka paljon työkokemusta. Joillakin on aika semmonen pelokaskin suhtautuminen niihin laitteisiin, ni jos ne käy väkisin sen kolmoskorin kaikki tämmöset valvontatasoiset laitteet. He käy koulutuksen nyt ja saa nimen alle, että ne on käyty. Sit menee monta vuotta, eikä niihin laitteisiin koske ja on lapussa nimi, et sä muka osaat ne ni ei se jotenkin tee siitä semmosta luotettavaa.” Participant 1

“Työpajoihin voi mennä ne työntekijät, jotka sattuu olemaa silloin töissä. Ne on yleensä ollu kerran syksyllä ja kerran keväällä. Niissä on kyl monesti ollu työvuorossa samat ihmiset ja koulutukset on jätetty hyödyntämättä.” Participant 1

”Resurssit ovat suurin kehityskohde työnantajan puolelta. Eli et olis varattu oikeesti aikaa. Ne on yleensä aika semmosia nopeita tilaisuuksia, johon mennää oman työn ohella ja muut yrittää sitte katsoa sun potilaita siinä välissä.” Participant 2

”Yhdelle hoitajalle koulutuspäivä osuu tosi harvoin. Ja sitte kun niitä laitteita on hirveen paljon, ni se on ihan ymmärrettävää, et jos saat koulutuksen laitteesta, jota käytetään tosi harvoin, ni et sä enää 2v päästä ole sen laitteen osaaja. Ja kun mietitään, et me ollaan yliopistosairaalassa. Me annetaan tässä maassa kuitenkin korkeinta mahdollista hoitoa, niin meidän pitäisi olla niitä osaajia....kaikkien. Mun mielestä olis optimaalista, että koulutukset suunniteltais jo työvuoroja suunniteltaessa.” Participant 5

”No kyllä toivoisin perustyön ulkopuolista aikaa laitekoulutuksiin, koska laitteet liittyy potilasturvallisuuteen. Kyllä sen huomaa, ettei työnantajan puolesta nähdä sitä tarpeeksi tärkeäksi. Meitä on monen tasoisia ja toisilla se voi mennäkin suit sait, mutta ei huomioida erilaisia oppijoita riittävästi. Toisilla se vaatii pienissäkin yksinkertaisissa asioissa, että saa tehdä rauhassa monta kertaa, että siitä tulee se semmoinen hyvä olo, et mä osaan tän. Et tavallaan mennää sen nopeiten oppivan mukaan.” Participant 4

”Kysyin just siitäkin, ku tänä korona-aikana koulutukset on aika paljon etänä, eikä koulutuspäiviä muuten juuri oo, et pystyiskö hyödyntämään näitä Duodecimin Oppiportin laitekoulutuksia, että niihin sais työaikaa. Vastaus oli, että ei, koska ne on suunniteltu tehtäväks työajalla ja ei sitä nyt oikeen työn ohella niitä ehdi käymään, et kyl ne jää hyödyntämättä hyvin pitkälti.” Participant 1

”Laite-edustajien käynnit on olleet hyödyllisiä ja huomaa, et ne on oikeesti innostuneita niistä laitteista. Ja aina ku on mitä tahansa kysyny, ni aina on tullu semmonen tosi selkee vastaus.” Participant 1

”Välillä sitte tulee niitä tilanteita, ku he on kehoittaneet olemaan sähköpostitse yhteydessä ja laittaa jonku viestin, ni sit voi mennä kuukaus, ettei mitää kuulu ja taas laittaa uuden viestin, eikä mitää kuulu vielääkään. Sitä sit mieltii, et onks se vaa sitä pintaa, ku ensisilmäyksellä se vuorovaikutus pitää luoda.” Participant 1

Mun mielestä yhteydenpito on ollu tosi luontevaa.” Participant 5

”Yhteyttä on pidetty ihan sähköpostilla, mut sitte on puhelimellakin oltu ja sovittu niitä koulutuskäyntejä.” Participant 3

”Yhteydenpito tapahtuu käytännössä sähköpostitse sekä puhelimitse ja meillä laitevalmistajat käy myös paikan päällä. Osa edustajista ottaa yhteyttä muhun ja osa suoraa osastonhoitajaan.” Participant 2

”Aina laitteen edustajasta ei ole ajankohtaista tietoa. Silloin mä etin sen netistä tai ehkä osastonhoitajakin voi osata auttaa.” Participant 3

”Edustaja on tiedossa tällaisissa laitteissa, joissa on tiivis suhde ihan sen päivittäisen käytön osalta, mut aina et edes tiedä, että kuka se laitteen edustaja on. Epäselvissä tapauksissa olis hyvä, että saisi laite-edustajien yhteystiedot kootusti” Participant 2

”Jos hän olis ollu aktiivisempi, ni kyllä mä luulen, et sillä olis ollu vaikutusta meidän ostopäätökseen.” Participant 3

”Jos ei nyt mitään meiltä kuuluisi kahteen kolmeen kuukauteen, ni varmasti meihin oltais yhteydessä. Jos yhteydenpito ei pelaa, ni kyllä sillä vois olla vaikutusta uusien laitteiden ostamiseen.” Participant 2

”Ihmiset on tosi lähestyttäviä ja semmosia, et heidän kanssa on helppo olla tekemisissä. Avun pyytämiselle on tosi matala kynnyks.” Participant 4

”Mun mielestä ne pystyy aika hyvin niistä laitteista kertomaan ja hyvin osaavat heidän omat tuotteensa.” Participant 3

”Yhteistyö laite-edustajien kanssa on ollut todella helppoa ja hyvää. Mutta selvästi siellä on painotuksia, et osa laite-edustajista on varmaankin enemmän kaupallisen puolen asiantuntijoita ja osalla on hoitoalan taustaa laitteiden käytöstä.” Participant 5

”He hallitsevat edustamansa Asian ja jos eivät jotain tiedä, niin he selvittävät. Parannettavat asiat liittyvät enemmänkin koko organisaatioon eikä edustajaan. Eli toiminnan pitäisi olla ketterämpää tietyissä tapauksissa.” Participant 2

”Laite-edustajat, jotka on itse käyttäneet kyseistä laitetta ja tuntee potilasryhmän, ni kyllä heiltä saa hyvää kohdennettua koulutusta. Participant 5

”Kouluttamisen pitämisessä he ovat ihan rautaisia ammattilaisia. He ovat tosi aktiivisia ja oma-aloitteisia. He aina auliisti järjestävät kaikkia koulutustilaisuuksia. Tulevat tänne tykö ja järjestävät verkkokoulutuksia.” Participant 4

”Kun laite on hankittu, niin se yhteydenpito melkein jää siihen. Olis kauheen kiva, että olis semmonen joku säännöllinen väli, että onko näihin tullu jotain uutta taikka jotain tällaisia, mut ei semmosta yhteydenpitoa ole. Kyllä mä toivoisin, et ku mieltii, et paljonko laitteet maksaa ja minkälainen käyttökapasiteetti niillä on, niin olis hirveen hyvä, et olis yhteydessä.” Participant 3

”Osaa laite-edustajista ei myynnin jälkeen näy, mutta osa pitää ihan säännöllisesti yhteyttä. Kyllä se on se esittelyprosessi ennen hankintapäätöstä ja sitten se lyhyt koulutusvaihe hankinnan jälkeen.” Participant 5

”Monesti se mielikuva siitä, et se myynnin jälkeen, sit ku se laite on saatu sinne osastolle, ni sitte on vähän, että saatte olla omillanne. Toivoisin myynnin jälkeiseltä ajaltayhteydenpitoa, et miten sen laitteen kanssa on sujunu.” Participant 1

”Toivoisin sellaista yksilöllistä palvelua, eikä liian aggressiivista myyntiä. Eli kerrotaan faktat, mutta annetaan tilaa tehdä päätös itse, eikä olla koko ajan päsmäroimässä päälle. Luotetaan siihen, että on hyvä tuote, jota myydään ja annetaan asiakkaalle mahdollisuus tehdä päätös.” Participant 2

”Kyllä palvelu on ollut yksilöllistä ja osaston tarpeita huomioivaa. Laittevalmistaja huomioi meidät ja lähti kehittämään tuotettaan. Se loi semmoisen yksilöllisen tunteen, että meidän tarpeet huomioidaan.” Participant 1

”Tosi hyvin meidän tarpeita kuunnellaan kyllä. Semmonen tunne tulee, että meidän mielipiteellä on oikeasti merkitystä.” Participant 4

”Tässä tapauksessa ei oo ihan hirveesti asiakasta kuunneltu.” Participant 3

”Kyllä pääsääntöisesti mun mielestä kemia on hyvin pelannu.” Participant 3

”Joistain edustajista välittyy ihmisläheisyys ja he tekevätkin paljon kotikäyntejä. Joistain taas jotenkin semmonen enemmän teknisempi arvomaailma. Ehkä kotikäynnit ja työn tekeminen potilastasolla vaikuttaa tähän.” Participant 1

”Laitteessa havaittuja ongelmia pidetään ensisijaisesti muutosvastarintana uutta laitetta kohtaan. Varmaan siinäkin voi olla jotain perää, mutta koko asian kuittaaminen pelkästään muutosvastarinnalla on mielestäni ylimielistä.” Participant 2

”Tärkeintä on, että on oma itsensä. Kyllähä sen aistii, jos joku esittää. Sillä olis vaan päinvastainen vaikutus.” Participant 4

”Koulutustilaisuuksissa tulee heidän arvot enemmän esille, verrattuna osastolla tapahtuvaan lyhyisiin esittelyihin. Ympäristö- tai vastuullisuusarvoja ei oikeestaan oo tullu esiin ainakaan niissä osastolla tapahtuvissa esittelyissä.” Participant 3

”Ei olla puhuttu laitteiden hiilijalanjäljestä ja kierrätettävyydestä. Toki on puhuttu laitteiden kestävydestä ja elinkaaresta, mutta sekin on monesti ollut asiakaslähtöistä.” Participant 5

”Varmaan he painottaa meille sellaisia arvoja, joita me pidetään tärkeinä. En mä sano, et se olis teeskentelyä, mut kun on yritys, jonka tarkoitus on tehdä mahdollisimman suuri tulos, niin kyllä kai me tiedetään, että mikä arvo on kaiken yläpuolella. Participant 4

”Erään muutenkin erittäin hyvän laitteen myyntiargumenteissa aika isossa osassa oli energian ja jätteen säästö. Ehkä se kuvastaa nykyaikaa, että halutaan esiintyä vastuullisena toimijana, vaikka ehkä merkitys isossa kuvassa jää pienemmäksi, mitä puheet ovat.” Participant 2

”On sanomattakin selvää, että hyvä palvelu näkyy arvioissa. Me on ajateltu, että meillä on aina myöskin optio, että mennään sitten vaan toisen firman laitteilla, jos koetaan, että toinen firma antaa liian huonon vaikutelman.” Participant 2

”Jos et osaa faktoja, ni kyllä se vaikuttaa siihen, et kuinka hyvänä laitetta ylipäättään pitää.” Participant 5

”Tietysti tulee aina kilpailutilanteet ja varsinkin jos tulee uusi toimija uudella laitteella, niin se on aina haastava tilanne, jos on käytetty jotain muuta laitetta.” Participant 2

”Mun mielestä asiakastyytyväisyyden vois oikeastaan tiivistää yhteen asiaan, eli se on se laitteiden tunteminen ja osaaminen. Niitten edustajien kanssa, jotka tietää ja tuntee tuotteensa, on tosi kiva tehdä yhteistyötä. Mut sitte kehittämispuolella taas, jos se edustaja ei tiedä ja tunne niin hyvin laitetta ja osaa auttaa.” Participant 5

”Semmoinen asiakaspalvelu, jossa kokee tulleet kuulluksi. Että vastapuoli on kiinnostunut kuulemaan, että mitä ongelmia on esim. käytännössä. Ja viestii, että on valmis viemään niitä eteenpäin, että ne on tärkeitä...Yhdessä potilaan parhaaksi.” Participant 4

”Sitä miettii, et mitenköhän ne laitteet sinne osastoille hankitaan ja just toi hintapolitiikkakin. Et se olis ehkä hyvä olla osa sitä perehdytystä.” Participant 1

”Kauheen kiva olis, jos laitevastaavia otettais mukaan näihin hankintoihin ja säännölliset tsekkauskäynnit voitais sisällyttää jo kilpailutusvaiheessa, koska eihän me voida hirveesti vaikuttaa siihen, että kuka voittaa kilpailutuksen.” Participant 3

”Nämä laitteet tulee aina erilliseen hoitaja-arvioon. Se on aina myöskin neuvottelupäätös, että minkä verran käyttökokemus sovitaan painotettavaksi. Aina on mahdollisuus sanoa mielipide, mutta sitä, että vaikuttaako se hankintapäätökseen, niin sitä ei aina tiedä, että mikä se osuus on.” Participant 2

”Olis kauheen kiva, jos kaikkien laitteiden kohalla järjestettäisiin koekäyttö. Paitsi tietysti, jos se laite on semmonen, joka on ollu ennenkin käytössä.” Participant 3