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Innovation in health care

Case Medical Helpline 116117

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ABSTRACT:
Innovations are becoming more and more important in the public sector than they have been before. There is a lot of expectation to reform public sector services and operations. The challenges facing society seem to be even more complex and multidimensional. Innovation can be used to seek different kinds of solutions to societal problems. The objective of the public sector is of higher quality and more cost-effectively delivered public services. It is possible to find out innovative approaches to enhance operations, improve services´ productivity, and quality of offered services for citizens.

The point of interest in this research is nationwide phone counseling and guidance service Medical Helpline 116117. Participants of this study are the primary health care and the special health care in the hospital district of South Ostrobothnia. Medical Helpline 116117 is put into operation in December 2019 in the hospital district of South Ostrobothnia. This research aimed to find out how the nursing staff experience the Medical Helpline 116117. There is also the possibility to find out if there are differences between special health care and primary health care. This research has also interest in the challenges and benefits of Medical Helpline 116117.

This research is quantitative research, and the empirical material gathered through a questionnaire. The questionnaire was executed by Webropol 3.0 online survey program in the common emergency service clinic at the hospital of Seinäjoki and in emergency duties at the health centers. The data was collected at the turn of March-April 2020. Based on the analysis of the empirical material, the Medical Helpline 116117 is seen positively, and the nursing staff´s opinion is that the Medical Helpline 116117 is a necessary service in health care.

The Medical Helpline 116117 is a service/product innovation. The goal of such innovation is to change the way service is produced for a better outcome for customers, develop quality of service, and make operations more efficient. The results showed that right kind of changes have been made to the chain of services, as directing customers to the right places is found to be easier after the introduction of Medical Helpline 116117. According to nursing staff, Medical Helpline 116117 is customer-oriented, and it brings added value to customers. The results showed that it is important that the Medical Helpline 116117 is a round-a-clock service. In this way, customers get help, information, and instructions for their own situations regardless of the time of the day. This brings safety to customers. In particular, there was a decrease in unnecessary doctor visits, which supports the fact that the operational model of the hospital district has been able to be enhanced to better direction because of the Medical Helpline 116117.

KEYWORDS: innovation, primary health care, special health care, public sector, health care sector

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1 Introduction

This master´s thesis deals with innovation in the public sector with a focus on the health care sector. Klijn et. al (2018, p. 289) sees that innovation in the public sector has surfaced and is topical now. Public sector innovation has certain features. In the public sector, innovation often implies change between the provider and the user of the service (Hartley, 2005, p. 27). In this case, processes, effects, outcomes, and products are the subject of innovation. Public innovations are aimed at increasing public value (Hartley, 2005, p. 27). Likewise, the intention is to get improvements in government and service delivery according to Hartley (p. 27). Hartley continues that public sector innovation is the spread of good practice and the introduction of existing innovations.

Nowadays the public sector has pressures because it should improve its products, act faster, cut costs, and reinvigorate services. Innovations can be used to seek a solution to these challenges. According to Laine (2015, p. 3) customer-driven renewal, organizational structures changes, and changes in management styles create pressure for more innovative action in the public sector. The public sector has a need for innovation to succeed (Laine, 2015, p. 3). Anttiroiko (2009, p. 281) continues that in the public sector innovation´s purpose is to control or prevent problems and innovation aims at cost savings or making better services.

The need for innovation in the public sector is most obvious. It is directed a lot of expectations toward public sector services and the ways how operations in the public sector can regenerate. Society faces increasingly complex and multidimensional challenges that affect public sector activities (Martikainen). Usually, citizens give feedback on the activities of the public sector and they may be dissatisfied with services or have a presentation of wishes on how the services should be organized (Martikainen). The public sector should change the way services are produced to answer these needs (Martikainen). Kivisaari et al. (2008, p. 9) continue that increasing customer orientation is met to be the most important thing in the reform of social care and health care. They mention that it

is also important to promote high-quality services and guarantee services´ impressiveness. According to Mäkelä (2015, p. 232), public services are wanted to be improved from both the financier and the client's perspective. Mäkelä continues saying that public sector services aim to meet the needs and objectives of both parties and at the same time, it is wanted to influence the citizens´ image of the public sector. The public sector is wanted to be a producer of value-generating services (Mäkelä, 2015, p. 232).

Bassi et al. (2015, p. 2) and Aslani & Naaranoja (2015, p. 105) sees the healthcare sector as a service industry which aim is to produce significant societal services to secure and promote citizens´ health and well-being widely. They mention that maintaining this kind of service at high-quality level is coming to a high item of expenditure for society nowadays. The ration of population dependency and fast technological development rises the costs of health services. Innovation activity becomes necessary to contain constantly rising costs, to produce new information, develop more efficient and powerful services and processes without forgetting good quality of services (Bassi et al., 2015, p. 2; Aslani, & Naaranoja, 2015, p. 105).

According to Aho (2018, p. 35), health and social care need board systemic innovations. Such innovations concern services as well as processes. Aho continues that social and health care structures and ways of an organization should also be developed through innovation. Aho also mentions that innovations in the public sector are also essential for staff and professionals. While there is a significant pressure to cut costs, it cannot be done by increasing workload for personals and staff because they are probably already heavily pressed because of their work environment and duties (Aho, 2018, p. 35). As Albury (2005, p. 51) notes, the idea of innovation is to work smarter and more efficiently.

1.1 The aim of the Research and Research questions

This research focus is on innovation, the Medical Helpline 116117, which is a counseling and guidance phone service in health and social problems. When the customer calls the number, personnel answering the phone call direct callers among right service by the

criterion of the regional need of care and gives self-care advises to the caller. The target of this study is the hospital district of South Ostrobothnia, especially the common emergency service clinic in the central hospital of Seinäjoki and the emergency duties at the local health centers in the hospital district. There are seven emergency duties at the health centers which are arranged by either municipality or joint municipality authorities.

The Medical Helpline 116117 was taken use in December 2019 in the hospital district of South Ostrobothnia. This research examines how nursing staff who is working in emergency duty at the health center or in common emergency service clinics perceive the start of the Medical Helpline 116117. This research collects information on health care personnel's view on the implementation of the Medical Helpline 116117. Also, this research points out if there are any differences between special health care and primary health care in the adoption of the Medical Helpline 116117.

The research questions are:

1. **What kind of effects Medical Helpline 116117 has brought on nursing staff´s working in special health care and the primary health care service?**

2. **What kind of differences there is between special health care and primary health care in the use of the Medical Helpline 116117?**

3. **What kind of challenges there is in the use of Medical Helpline 116117?**

4. **What kind of positive effects the Medical Helpline 116117 has?**

The hospital district of South Ostrobothnia can use the results of the study when evaluating the start and the use of the Medical Helpline 116117. This research can be used to highlight the issues to be developed and things where the Medical Helpline 116117 has been successful.

1.2 The structure of the thesis

This thesis consists of five main chapters. The introduction presents the purpose of the thesis and outlines the research questions.

The second chapter is a theoretical part of the thesis. In chapter two the definition of innovation is presented. This chapter also deals with innovation in the public sector as well as innovation in the health care context. It also discusses the various innovation types in health care. Finally, the chapter presents service/product, process, and systemic innovation in health care context. The theoretical material of this thesis base on international and national literature and thesis together with international journals and research articles of the subject.

The third chapter presents the method used in this study. Chapter three discuss how the data is acquired and what is the structure of the questionnaire. The processing and analysis of the data also discusses. Also, the reliability and validity of the research are assessed. This chapter creates a small overview of effectiveness in the health care services. The case in this research is the Medical Helpline 116117 in the hospital of South Ostrobothnia, and it is presented at the end of this chapter.

The empirical results are presented in chapter four. At the beginning, the respondents' background information is analyzed. Next, this chapter looks at the claims in the questionnaire. For claims, this paragraph is divided into four different themes according to the questionnaire. These themes are the implementation of the Medical Helpline 116117, the Medical Helpline 116117 as a new mode of operation, the assimilation of the Medical Helpline 116117 and the final theme is the effects of the Medical Helpline 116117. Also, open questions are subject to analysis. Also, the results show the three main things designated by respondents when starting to use the Medical Helpline 116117.

The fifth chapter concludes the central findings of the study. In this chapter, theory and the findings are gathered. The fifth chapter of the thesis presents the key findings and conclusions. Finally, a few possible topics of further research are presented.

2 Perspectives on Innovation

This chapter defines the concept of innovation. Then it introduces what innovation is like in the public sector and in the health care. Finally, it presents the types of innovation in the health care context.

2.1 Definition of Innovation

Seeck (2008, p. 234-244) describes that innovation theories create an understanding of the use of multiple approaches and theoretical orientations, such as management theories or organizational theories, to meet the challenges and needs of always dynamic and interactive operating environmental. Changes occur in the organization's environment, creating challenges for the organization's functioning and still, organizations must remain competitive, dynamic and productive despite changes (Seeck, 2008, p. 234-244). The point of innovation theories is to highlight the need for constant change as well as focus on creativity, continuous improvement, and uniqueness of innovation (Seeck, 2008, p. 234-244). New ways of thinking and cooperation between different actors, like stakeholders and customers, are also at the center of innovation theories (Seeck 2008, p. 234-244). Kivisaari and Lovio (2010, p. 13) remind that when surging innovations in different sectors, the diversity of sectors and innovations should be considered because the emergence of innovations is different in different periods, as well as between different sectors.

Schumpeter has done his research in the field of innovation and talked about innovation concepts already at the beginning of the 1900s. At that time, he defined innovation vary widely (Böckerman, 2000, p. 4-5). Böckerman writes that according to Schumpeter innovations are not just technological reforms in production rather Schumpeter sees that the scope of innovation includes different organizational reforms. Innovation can be thought to be about when entrepreneurs open new markets, therefore Schumpeter raises the development of the financial system as an innovation (Böckerman, 2000, p. 4-5). Hospers

(2005, p. 23) writes that also new methods of production and new services are one type of innovation. Schumpeter sees that innovation is something board, it is not just small changes it is something bigger and has many new combinations (Hospers, 2005, p. 23). Horpers continues that many things affect innovation for example personal expectations and imagination as well as environmental uncertainty and pre-existing circumstances. Schumpeter cannot see innovation as an outcome of rational decision-making (Hospers, 2005, p. 23).

Bessant & Tidd (2015, p. 11) present also Schumpeter´s concept of creative destruction, which is a consequence of innovation and in economics guarantees to develop the new action. Creative destruction means that competition and entrepreneurship create a basis to maintain long-term economic growth (Bessant & Tidd, 2015, p. 11). Firms want to make a profit, so they must create something new to survive in the competition. Competition eliminates some firms and on the other hand, new firms are created to answer the competition (Bessant & Tidd, 2015, p. 11).

Sørensen & Torfing (2011, p. 849) define innovation as:

> *"Here, innovation is defined as an intentional and proactive process that involves the generation and practical adoption and spread of new and creative ideas, which aim to produce a qualitative change in a specific context."*

Sørensen & Torfing (2011, p. 849-850) explain more about their definition of innovation. At first, their opinion is that innovation includes proactive and intentional action. Through this action, several players try to improve already existing factors or respond to challenges. Another attention to the above definition relates to its idea of innovation to be just an idea. This is not the case, but also the idea is needed for innovation export to practice, allowing it to evolve into innovation. Sørensen & Torfings´ third attention focus on the changes brought by innovation. Changes brought by innovation are not just simple changes in terms of goods or services. Changes will be more diverse. With innovation, future changes will relate to all aspects of the organization, for example, organizational

routines and the content and format of the services. Innovation also plays a role in understanding problems and policy goals.

Sørensen & Torfing (2011, p. 850) continue to unlock their definition of innovation. Their definition essentially includes the context as well. Innovation brings something new. However, this new one does not look the same in every context and does not work in the same way. In some environments, innovation has been found to be good while in some environments the same innovation is not suitable nor successful. The definition of Sørensen & Torfing does not highlight what the effects of innovation are even if the definition is positive. The best effects innovation has when it facilitates the work of public employees, users and policymakers are satisfied.

Innovativeness is needed to create innovation. In this case, an individual, group, or organization is looking for new perspectives and alternative ways to do familiar things in a different way (Miettinen, 1996, p. 32). An individual, group, or organization has a desire to do new things and fix the old one (Miettinen, 1996, p. 32). Innovativeness is both the development of innovations and the introduction of innovations already developed (Miettinen, 1996, p. 32). Innovativeness can be a feature, encompassing the whole innovation activity (Miettinen, 1996, p. 32). Sydänmaanlakka (2009, p. 115) explains that innovativeness is practical creativity aimed at concrete new product, service, process, or business innovation. In an innovative organization, different business entities communicate effortlessly and actively with each other to create something new (Sydänmaanlakka, 2009, p.115).

Pöyhönen et al. (2004, p. 11) highlight that at its simplest, innovation can be called an idea or inspiration. This definition is suitable to use in everyday situations. But, when it comes to innovations affecting an organization or wider environments, the concept of innovation should have a more pervasive meaning (Pöyhönen et al., 2004, p. 11). Innovation is seen as related to the renewal of a product, service, or other activities (Pöyhönen et al., 2004, p. 11). Pöyhönen et al. continue that innovation is also seen to

have value in a competitive situation. Innovation always includes the implementation of innovation, so innovation does not remain at the level of thought alone (Pöyhönen et al., 2004, p. 11). New services, products, operating models, or strategic approaches are innovations in the environment of an organization (Pöyhönen et al., 2004, p. 11).

There are problems with if every idea is thought to be an innovation (Koivisto & Pohjola, 2013, p. 90). Koivisto & Pohjola continue that innovation, however, has a deeper purpose. According to them, innovation is supposed to solve the problems for which they were developed. Koivisto & Pohjola explain that simple ideas alone are not innovations, but ideas should be put into practice. When ideas become innovative, they can respond successfully to the stated needs and objectives (Koivisto & Pohjola, 2013, p. 90). Koivisto & Pohjola defines innovation also as a practice. They mean that innovation from a practical point of view is that exports to the practice of innovation are successful and innovation brings something new to the previous situation. Innovation is created for some specific purpose, it is permanent, and repeated custom (Koivisto & Pohjola, 2013, p. 90). Innovation from a practice point of view is successful when it´s implementation is well done (Koivisto & Pohjola, 2013, p. 90).

As a concept, innovation is multi-dimensional describe Virranniemi (2015, p. 42) & Miettinen (1996, p. 32). They say that innovation involves many different alternative terms. One of these alternative terms is for example creativity. According to the innovation literature creativity is thought to be ground for innovation. Innovativity and creativity both represent the invention of new and the discovery of novelty, but creativity is not seen as necessarily leading to innovation. Innovation has a systematic course of action, which is not found in creativity (Virranniemi, 2015, p. 42; Miettinen, 1996, p. 32). Pöyhönen et al. (2004, p. 12) raise another difference between the concept of innovation and creativity. Creativity is the thinking of the individual, while innovation is the activity that occurs between individuals.

Miettinen (1996, p. 30) & Virranniemi (2015, p. 42) found that also invention is thought to be one alternative term for innovation. But there are differences between the terms of innovation and invention (Miettinen, 1996, p. 30; Virranniemi, 2015, p. 42). The invention does not mean the same thing as innovation because the invention is a thing that comes before innovation when it references finding a new idea. Sometimes the invention is described as the bases for innovative action (Miettinen, 1996, p. 30; Virranniemi, 2015, p. 42). If an invention is to be an innovation, it should be consolidated or implemented and at the end it is approved as a method or product (Miettinen, 1996, p. 30; Virranniemi, 2015, p. 42). Miettinen & Virranniemi continue that the definition of the invention is near to definition of the idea, but there is a difference between them. The idea is seen as a sketch or view of something whereas invention is already existing and real (Miettinen, 1996, p. 30; Virranniemi, 2015, p. 42)

As it is shown above, innovation is approached from many different perspectives. Brown & Osborne (2005, p. 119-121) suggest that the core of defining innovation includes four features. The first feature is about newness. This means that there is something new happening to an organization, person, situation, or society. The second concern about the relationship between innovation and how to implement it in practice. While innovating, should always think about how to implement it. The third aspect of defining innovation is about seeing innovation as a process and an outcome at the same time. The fourth and last one at this point of view is that idea comes realistic, it really happens, and it impacts somehow organization. With these four features, it is presented that innovation is a process that affects the organization. Innovation can create a totally new system or make better-existing products, services, or processes.

Complexity to define innovation and how it is valued is not the same way always; innovation varies from context to another (Bate et al., 2007, p. 27). Hence different actors and time slots make their own characters, innovation can never see apart from its context (Bate et al., 2007, p. 27). Because the organizations world is always changing rapidly,

innovation is an ongoing activity influencing by daily work processes (Bate et al., 2007, p. 27). Innovation is part of a process, not a thing itself (Bate et al., 2007, p. 27).

2.2 Innovation in the public sector

Bloch & Bugge (2013, p. 137) define innovation in the public sector:

> *"The simpliest definition is that public sector innovation is about new ideas that work at creating public value. The ideas have to be at least in part new (rather than improvements), they have to be taken up (rather than just being good ideas) and they have to be useful"*

Audretschb & Demircioluglua (2017, p. 1682) say that when defining innovation, the context always matters. In the public sector, innovation can be thought to be a reform (Kivisaari & Lovio, 2010, p. 10). In this case, the aim of the reform is to develop services and ways of producing services (Kivisaari & Lovio, 2010, p. 10). Audretschb & Demircioluglua (2017, p. 1682) continue that in the public sector it is thought that the organization is the one that invents the innovations and brings them out. The context of the public sector influences the invention of innovation (Audretschb & Demircioluglua, 2017, p. 1682). Audretschb & Demircioluglua continue that although public sector innovations must be new, they do not necessarily have to be self-invented since the context of the public sector does not aim at the competition between different organizations. Rather, the public sector wants to improve services through innovation. Operational processes are to be made smoother, as well as organizational methods are to be developed through innovation (Audretschb & Demircioluglua, 2017, p. 1682). In addition, public sector organizations are in partnership with users. The innovation aims to develop communication between them (Audretschb & Demircioluglua, 2017, p. 1682).

Like Jäppinen & Pekola-Sjöblom (2019, p. 3) bring up that innovation can describe many ways in the public sector. According to them typical feature of public innovations is that

they apply to services, processes, products, or ways of communication. In the public sector, innovation is defined as new if there are no existing and same kinds of innovations in the organization. Innovation is defined as new even when it is an application or a copy of some other innovation. Innovation is seen to produce a lot of benefit. The benefits of innovation in an organization can be better quality and improved efficiency of services. One innovation benefit is that personal are more satisfied with their work. Innovation can help improve the inclusion of citizens.

Public sector innovations involve specific features. According to Kivisaari & Lovio (2010, p. 38), these specific features of the public sector emerge from the objectives of the public administration and the organization of the public sector. In the public sector relationships between policymakers, government officials and citizens are in a major role (Kivisaari & Lovio, 2010, p. 38). Public sector innovations are mostly social innovations because of their efforts to solve societal problems (Kivisaari & Lovio, 2010, p. 38).

According to his studies, Borins (2001, p. 14) gives five situations that are reasons for innovation. The first concerns the political system around the organization. The need for innovation may arise from the demands of politicians or the law. The second concern of chances in leadership which can happen within or from outside of the organization. The third reason concerns the reputation of the organization. The organization might have some crisis, which is seen in public so there is a need to do something to it and fast. The fourth reason concerns internal problems in the organization. The environment around the organization changes, so the organization may have challenges to respond to those changes. An organization could have too few resources or resources that are not allocated in a right way which forces the organization to do something. The organization may have difficulty implementing the stated goals of the organization cannot reach the customers that would be intended to reach. Finally, the new technology or corresponding things makes new opportunities for the organization. Anttiroiko (2009, p. 283) will go on from this and raises other external stakeholders who have an impact on the emergence

of innovation. One such group is customers. Customers create pressure to renew operations with the feedback they give.

In the public sector, there is almost a pressing need for innovation but there are some things that prevent innovations. (Sorensen & Torfing, 2011, p. 848). Sorensen & Torfing (2011, p. 848) find out different kinds of barriers. The fact is that the public sector is very bureaucratic which brings several barriers and challenges for innovative action in the public sector. As such, the public sector has a lot of bureaucratic rules and its operation is based on laws. The public sector lacks competition and there is no patent system. Also, public services are multifunctional and relatively complex. This and the establishment of services on statutory rights can cause different kinds of problems. There are a lot of performance metrics in the public sector. If the meter focus on measuring inputs and outputs, it can prevent innovations.

Developing innovations in the public sector is not so easy to carry out (Sandford, 2011, p. 311; Sørensen & Torfing, 2011, p. 848; Albury, 2005, p. 55). Sandford (2011, p. 311), Albury (2005, p. 55) as well as Sørensen & Torfing (2011, p. 848) explain this more. Compared to the private sector, the rewards for doing successful innovations in the public sector are more reduced. There is no venture capitalist for funding public innovations. The budget has an impact on how to innovate. Usually, the budgets are short-term budgets that set boundaries for innovations. Employees´ salaries are fixed and there is no chance to get a similar bonus like, in the private sector, the bonus payments system is missing. In the private sector is shared ownership while in the public sector has none. Elected politicians and public managers are governing innovation in the public sector. They want to avoid risks because of failures. If the innovation is not successful, the opposite partner and the media are eager to make the whole community know who has made mistakes. Politicians and managers are afraid of that their careers can ruin if they take too big risks. This reduces the courage to create new innovations. Also, the culture of the organization influences innovation. The environment in the public sector can either discourage or courage people to be innovative. There could be a culture where is

no room for mistakes and therefore there is no innovative action, everyone is afraid of mistakes.

Differences between public and private sector appear in the diffusion of innovation (Bloch & Bugge, 2013, p. 136). In the private sector, the copying from others is usually protected and firms are trying to increase the rents because of monopoly (Bloch & Bugge, 2013, p. 136). In the public sector, this is the opposite. When innovation spreads through the public sector, it can lead to better use of public resources (Bloch & Bugge, 2013, p. 136). Anttiroiko (2009, p. 277) continues that the change brought by innovation also creates differences between the private and public sectors. In the private sector, innovation may be very radical and bring big changes but the way the public sector works is different, and the changes are not so revolutionary (Anttiroiko, 2009, p. 277). Public sector activity is more controlled through a democratic system and public sector activities are more focused on regulatory and service tasks (Anttiroiko, 2009, p. 277).

2.3 Innovation in the health care

Innovation is seen as technology-oriented but has expanded to service innovation. Many of the activities in the healthcare sector are equated to innovation, although they are not defined as innovation because innovation terminology is new, and the meanings are not entirely clear (Hämäläinen et al., 2011, p. 219). Hämäläinen et al. continue that health care has many different functions that can be defined as innovations. However, these do not use the concept of innovation, but instead, they are called new service, restructuring or reform (Hämäläinen et al., 2011, p. 219). Mäkelä (2015, p. 232) continues that because of the size and the complex nature of the health care sector, change requires the use of a variety of approaches which requires the development and deployment of innovative operations model. This kind of development measure has not called

for innovation, rather the usual development activity of public administration (Mäkelä, 2015, p. 232).

Kivisaari & Lovio (2010, p. 3) write that adopting the concept of innovation in health care has useful implications. As a concept, innovation can be seen reforming the public sector in a positive way (Kivisaari & Lovio, 2010, p. 3). It is seen as bringing different kinds perspectives or it can strengthen the means of analysis and planning (Kivisaari & Lovio, 2010, p. 3). The introduction of the innovation concept may have positive effects on staff working (Kivisaari and Lovio, 2010, p. 3).

Gherman et al. (2017, p. 337) define innovation in health care

> *"those changes that help healthcare practitioners focus on the patient by helping healthcare professionals work smarter, faster, better and more cost effectively".*

Hämäläinen et al. (2011, p. 2019) continue defining innovation in health care

> *"social- and health innovation is a new idea created as a result of creative activity by an individual, a group, a community, and/or network that leads to an added value in the well-being, health, or service system of the individual or community."*

Gherman et al. (2017, p. 337) as well as Kivisaari et al. (2009, p. 12) share the same opinion of health care sector nature and find out that health care sector has its unique nature what comes to innovation. First, it is a public organization and has a certain type of status. When doing innovation int he health care sector, they must be tested first before putting them into practice. Health care services are also regulated by law and there is a lot of state public regulation. The public sector also has a financier interest in health care service output. Innovation makes pressure both on the health services and on the government because balancing between lower costs and better quality for services. One unique feature is also that knowledge, power, and ethics are divided by profession. Exceptionally strong professions create their own interesting innovation environment.

Einspruch & Omachonu (2010, p. 14) point out that there are many dimensions in health care innovation. There is a need to be efficient as well as cost-effectiveness in the health care system. Healthcare services also aim at enhancing life expectancy and quality of citizens´ life. Healthcare services want to offer better diagnostic and treatment options. Fontenot et al. (2012, p. 564) point out that with innovation it is possible to ensure those targets. Innovation can secure patients´ safety and best outcomes for patients because of the adoption of the best-demonstrated practices which are tested to be successful (Fontenot et al., 2012, p. 564). Einspruch & Omachonu (2010, p. 14) continue that innovation in healthcare should improve productivity and because of innovation services should have good improved clinical outcomes which lead to the patient being satisfied with the service he/she receives. The service customers get should be of improved quality (Einspruch & Omachonu, 2010, p. 14). Good innovation also decreases the nursing staff shortage (Einspruch & Omachonu, 2010, p. 14).

According to Aalto et al. (2006, p. 68) earlier research strong leadership and shared and clear objectives are positively related to innovation success in healthcare organizations. Strong leadership can influence that staff participating in innovation is safe, enough resources are available, and innovation happens at the correct time (Aalto et al., 2006, p. 68). Also, participants´ motivation, lack of stress, and orienteering towards innovation can make innovation happen successfully as well as well-functioning teamwork (Aalto et al., 2006, p. 68). Miettinen´s (1996, p. 61) research findings are like Aalto et al. findings. Miettinen points out that there is a lot of democracy and less bureaucracy in an innovative organization. Also, management values innovations and encourage personals towards it (Miettinen, 1996, p. 61). Managing happens by going towards the future not staying in the past (Miettinen, 1996, p. 61).

Aalto et al. (2006, p. 67) say that innovation action has many objectives. Roughly broken down, the objectives can be shared between the organization and the clients. Innovation should support the patient's health and reduce the number of diseases. Organizational objectives concern better quality and efficiency of service. Like Aslani & Naaranoja (2015,

p. 115) found in their study, innovation in health care is necessary for achieving goals and generating alternative ways how to produce services to patients. They also mention that there is much innovation in the health care sector, but innovations are adopting slowly because the innovation process in the health care sector is a complex system.

Based on their research, Aslani et al. (2015, p. 183) are convinced of the complexity of innovation in health care. Healthcare innovation has not achieved the desired results, as the adoption of innovations is complicated. Aalto et al. (2006, p. 67) found many reasons for the complexity of innovation. Challenges relate to the organization as a whole and its operation. Professionals can resist change, as they are forced to change their own work as medical methods. Changes in health care can have serious consequences for patients' health, without forgetting the ethical, social, and economic perspective. Its moment the law becomes also take note in innovation. When creating innovations, professionals want to defend their own autonomy and reputation, which can lead to the fact that the organization does not want to implement innovation.

Amalberti et al. (2011, p. 47) say that sometimes innovations that are potential and deliver good do not diffuse rapidly while innovations which have unproven value or pose risks rapid fast. If the organization leans only to approaches that are participatory and cooperative, which is often seen as the best way to achieve positive and sustainable innovation, it can disturb the positive innovation (Amalberti et al., 2011, p. 47). Also, innovation means changes usually, and changes can generate new challenges (Amalberti et al., 2011, p. 47).

In the beginning, research of innovation concentrates mainly on technological innovation. Since then, the perception of innovation has changed and expanded to include other features than just technological. One example of this expansion is social innovation (Hennala, 2011, p. 36-37). In the public sector, innovations are often defined as social innovations, although they may involve features of technological innovation (Hennala, 2011, p. 36-37). Social innovations are one way to reform society (Hennala, 2011, p. 36-

37). Hämäläinen (2005, p. 198) defines that in social- and healthcare the concept of social innovation concentrates on individuals´ and society´s well-being, services, and health.

Hämäläinen (2005, p. 198) continues that social innovation has great opportunities because, at its best, social innovation can improve individual and society well-being and health. In the future, welfare society perspectives are well-being and health, what comes to social innovations (Hämäläinen, 2005, p. 198). This concludes that evaluation does not concentrate only on the effects of services, products, and societal structure but the aim is also to increase the ability of function of an individual (Hämäläinen, 2005, p. 198).

According to Hämäläinen (2008, p. 100) social innovation is based on the activities of an individual, group, community, or network. Based on this activity, an idea arises that outcome affects the well-being, health, or service system of an individual or community. Such activities want to produce impressive social innovations. The thing what makes social innovation become innovation is that its impressiveness can be measurable either macro or microlevel (Hämäläinen, 2008, p. 100).

Hämäläinen (2008, p. 102) says that social innovations are very pervasive and cover many different areas in social and health care. Social innovations affect social and health services, the organization of services, and the benefits and support system (Hämäläinen, 2008, p. 102). Social innovations dissemination, development, evaluation, and stabilization is problematic since the social and health environment has many players and is multi-professional (Hämäläinen, 2008, p. 102). Hennala (2011, p. 38) continues that because of social innovation, it is possible to identify more innovations alongside technological and product innovations. Such innovations include service, process, and organizational innovations (Hennala, 2011, p. 38).

Hämäläinen et al. (2011, p. 220) point out that there are strong links between the different types of innovation in the public sector. Also, innovation mechanisms are interrelated

to each other (Hämäläinen et al., 2011, p. 220). Therefore, it is not appropriate to compare the different types of innovation with each other, as they may contain similar features (Hämäläinen et al., 2011, p. 220).

Next is introduced Hämäläinen et al. (2011, p. 220) model for classifying social innovations. According to Hämäläinen et al., social innovations in healthcare can be divided into a systemic, process, and service/product innovation which is illustrated in table 1.

Table 1. Types of innovation in health care (Hämäläinen et al., 2011, p. 220).

Type of innovation	**What is about**	**Example**	**Factors affecting implementation**	**User of innovation**
Systemic innovation	Organization of services	Public health law, day care system	Ministry, parliament, municipal decision-makers, professionals	Inhabitant of a municipality
Process innovation	Service chain, treatment program	Regional treatment program	Service organizations management, professionals	Multi-professional team and customer /patient
Service/product innovation	Social and health services, welfare services and products	Service package, service guidance, culture production	Municipal decisionmakers, companies, professionals, organizations	Consumers and citizens

Systemic, process, and service/product innovation are described in the following paragraphs.

2.3.1 Systemic innovation

Systemic change refers to a wide-ranging simultaneous change in operating patterns, structures, and their interactions, creating conditions for future prosperity and sustainable development (Nieminen et al., 2011, p. 16). The underlying systemic innovation is influenced by the complexity of technology and products that give rise to systemic features (Nieminen et al., 2011, p. 16). The concepts of systemic innovation have provided a useful perspective to address extensive reforms at the level of the network of operators and the socio-technical system. With these perspectives, it has begun to better understand and structure the systemic features of change (Nieminen et al., 2011, p. 16).

Pelkonen (2011, p. 47) continues writing that systemic innovation, innovation, and its environment of users interact with each other. According to Pelkonen systemic innovation is developed to meet needs and objectives and the environment is modified for effective use of innovation. Systemic innovation requires changes to other components, subsystems, or products (Pelkonen, 2011, p. 47). Innovations are increasingly systematic, with rapid growth in ICT. This leads to more and more links between products, technology, and services (Pelkonen, 2011, p. 47). As such, no company can single-handedly control the entire chain of events. Nieminen et al. (2011, p. 17) state that in innovation systems research, systemic innovation largely refers to an interaction between actors, interdependence, interactive learning, and the importance of the institutional environment.

In social and health care systemic innovation changes the whole operating environment (Hyppönen et al., p. 1). Changes may concern processes, the organization of social and health care activities, or the tools by which the activities are carried out (Hyppönen et al., p. 1). When systemic innovation changes the whole operating system, it applies to all hierarchical levels. Local actors as well as operational systems from different levels are involved (Hyppönen et al., p. 1).

Systemic innovation is described as a socio-technical system that finds a new way of doing things (Kivisaari et al., 2008, p. 13). According to Kivisaari et al. the socio-technical system involves many organizations and in systemic innovation renews many sections at the same time. These sections can be for example processes, services, or structure. Also, way of organizing things, personals know-how, and used technology can be the target of renewing in systemic innovation (Kivisaari et al., 2008, p. 13). Systemic innovation has a simultaneous impact on operations and on its environment. Systemic innovation is an innovation that combines elements of service, leadership, and policy innovation (Kivisaari & Lovio, 2010, p.39).

Kivisaari et al. (2008, p. 13) find out four different features that typically define systemic innovation. The first feature is about the need for systemic innovation. The need for systemic innovation emerges as the needs of users and the provider change. On the supply-side, changes in services, technology, and in industry structure highlight the need for systematic innovation. On the other hand, user preferences, cultural meanings, and infrastructure change, and these must be met by systemic innovation. The second feature of systemic innovation is its impact on the organization. Systemic innovations change the socio-technical system of an organization. The third feature of social innovation is associated with the co-operative activity. The production of social innovation consists of many different actors from different social groups. The fact that systemic innovation takes time to develop is the fourth typical feature when defining systemic innovation.

2.3.2 Process innovation

Process innovation influences the production of services and products (Walker, 2006, p. 331). Process innovation´s aim is not producing products or delivering services (Walker, 2006, p. 331) but for example, chancing service chain is a typical characteristic of the process innovations (Karlsson & Tavassoli 2015, p. 1890). According to Alpkan et al. (2011, p. 662) the aim is to implement a new or mainly improved delivery method or production.

Such action requires changes in techniques, equipment, or software. It is assumed that process innovation decreases the cost of delivering service and improves the products that organization is delivering (Alpkan et al., 2011, p. 662). Process innovation deals with quality by increasing the quality of the product (Alpkan et al., 2011, p. 662).

Process innovation focuses on care practices and processes or service chains (Hämäläinen et al., 2011, p. 220). Hämäläinen et al. continue that process innovation is designed to increase the customer focus of the service. Efforts are made to increase customer inclusion and the customer's resources and operational capacity are made to be considered when developing service processes (Hämäläinen et al., 2011, p. 220). Bennet et al. (2008, p. 383) see process innovation as an innovation that changes the act of delivering or producing the product and the aim is to bring more significant value for stakeholders. One of the main goals of process innovations is to increase the quality of produced services or products (Karlsson & Tavassoli, 2015, p. 1890).

Walker (2006, p. 314) tells that process innovation affects organizations´ management as well. Also, process innovation affects relationships between members of an organization, and process innovations extend to rules, roles, and structures of an organization (Walker, 2006, p. 314). Communication between members of the organization changes as well as communication between the organizational members and the environment (Walker, 2006, p. 314).

Avellaneda et al. (2009, p. 654) continue that process innovation has an internal focus. The purpose of process innovation is to increase organizational processes´ effectiveness and efficiency. This way organization can make easier the delivery and production of services or goods to the clients. In process innovation, the organization has new elements on how to deliver its services for clients. The implementation of process innovation often involves the technological side or administrative side. Technological process innovation modifies the organization´s systems and operational processes. Technological process

innovation offers new elements of how an organization can reduce service delivery time, lower production costs, and increase operational flexibility in the organization.

An administrative perspective on process innovation can include changes in organizational structure and strategy reforming them (Walker, 2006, p. 314). Avellaneda et al. (2009, p. 655) continue that these changes have the purpose of motivating and rewarding organizational members. They mention that the administrative perspective renders the strategies and structure of the units and functions of the organization to develop. In the administrative process innovation, the organizations´ management processes revise (Avellaneda et al., 2009, p. 655). The change in management practices has the purpose of making the organization work better by using resources effectively (Avellaneda et al., 2009, p. 655).

2.3.3 Service- and product innovation

Service innovation is about producing a new service (Koch & Windrum, 2008, p.9; Lim & Maglio, 2016, p. 2). Service innovation has multiple forms depending on the environment. Besides this, service innovation is possible to improve the quality of an existing service product (Koch & Windrum, 2008, p.9; Lim & Maglio, 2016, p. 2). Service innovation changes the way service is produced for a better outcome to users (Koch & Windrum, 2008, p.9; Lim & Maglio, 2016, p. 2). Old core service that has been improved can be thought to be product innovation, as well as the new service, which has been implemented within the traditional borders (Kivisaari & Lovio 2010, p. 10). Product innovation can also be a new service entity that operate over sectors (Kivisaari & Lovio 2010, p. 10).

Kivisaari & Lovio (2010, p. 38) continue that when citizens demand personalized and flexible services, product innovation enables them to improve service to meet citizens' demands. Product innovations are important when the public sector´s services are com-

paring to potential private sector´s services (Kivisaari & Lovio, 2010, p. 38). When delivering services to users, innovation means here new or altered ways of delivering services or being interacting with users in some way else (Koch & Windrum, 2008, p. 9; Lim & Maglio, 2016, p. 2). The purpose is to supply specific services. Developing service innovation can demand chances in organizational and cultural behavior (Koch & Windrum, 2008, p. 9; Lim & Maglio, 2016, p. 2).

Hennala (2011, p. 39) continues from this and highlights the importance of customers in the development of service innovations. The development of service innovation is seen as being too organizational (Hennala, 2011, p. 39). Instead, in the development of services, the wishes and needs of the customer should be considered (Hennala, 2011, p. 39). Customers should also be included in the design of the services and the participation of customers in planning services should be an important issue, says Hennala.

Anttiroiko (2009, p. 288) claims that service innovations are important for many reasons now. Service innovations aim to address societal challenges such as demographic changes. As the population grows older, the need for services changes. Public services should also be developed with the decline of the workforce. These reasons together lead to a situation where services should be enhanced. In this case, customer orientation is emphasized in service innovations. Changes are desired to be made in the organization of the service and the competence of the staff. Changes are procedural or intangible.

3 Research Methods

This chapter is the base for the empirical part of the study, and it describes how the research has been conducted. This chapter describes the methods for analysis and the data gathering that was done using the questionnaire. The structure of the questionnaire is presented. In this chapter reliability and validity of the research are assessed. The chapter continues with the explanation of the effectiveness in health care. At finally, the case of this study is presented.

3.1 A quantitative survey

This study is a quantitative survey. In this case, the phenomenon is described on the basis of numerical data. In order to answer the research questions, the material of this study is collected through an electronic questionnaire. An electronic survey was best suited for data collection since respondents of the study have anmurgent and unpredictable working environment.

Vilkka (2007, p. 13-14) presents many features of quantitative research. In a quantitative survey, the empirical material of the study is collected in a standardized way, for example by means of a questionnaire, from a group of people. The aim is to describe, compare and estimate a phenomenon or an event that is the target of the research by collected information. By means of the survey, it is possible to get answers which give knowledge of the amount, universality, and incidence of the phenomenon. With help of survey, the aim is to get answers to the amount, extend, and incidence of the phenomenon. Matters to be investigated are handled with numbers and the phenomenon is described by figures and tables. Researcher also analyzes the differences and connections of collected material orally. This makes it possible to explain and interpreted things that a more specific way. Research units can be individuals or a wider group of people. Quantitative research is divided into many themes, which supports the research questions.

In a survey, collection of data is carried out usually by questionnaire (Hirsjärvi et al., 2009, p. 134.) According to Vilkka (2007, p. 28) the form of questions in a survey is standardized. This means that the same questions are asked to all respondents in the same order and in the same way. The questions in the questionnaire can be formed as open questions, closed and structured questions, or multiple-choice questions, or hybrid questions (Vilkka, 2007, p. 28). Vilkka also continues that the result of the study is independent of the researcher because the respondent answers the questionnaire by himself. The questionnaire is used to observation to get information about human´s attitudes, behavior, and opinions (Vilkka, 2007, p. 28). Hirsjärvi et al. (2009, p. 134) mention that in a survey, phenomenon can be described, explained, and compared by collected data.

3.1.1 Description of data collecting and structure of the questionnaire

The data collection was carried out electrically with Webropol 3.0 online survey program to nursing staff in the emergency department in special health care at the hospital of Seinäjoki and in primary health care at emergency duty at the health centers in the area of hospital district of South Ostrobothnia. Webropol 3.0 online survey program made it possible to leap questions, so the respondents were asked only questions concerning the respondent. Survey program also made it possible to sort out the respondents, so it was easy to know if respondents were from special health care or from primary health care. Webropol 3.0 online survey program also gave chance to compare a single municipality to the federation of municipalities. The respondents of survey are not recognized when using Webropol 3.0 online survey program.

Data was collected with an electrical link between 23.3.-5.4.2020. This research is a cross-section research because the data is collected in a specific timetable. It sent one reminder message for respondents for answering the questionnaire. Managers in every unit shared the questionnaire link to their staff. The survey was conducted in Finnish.

The response rate of the questionnaire was low. It was 22,8 %. The questionnaire opened 81 times and responding started 71 times. The final amount of answers was 47 answers. The most considerable reason for the low respondence rate might be the worldwide covid19 pandemic. It stressed health care during the survey.

The questionnaire was designed based on research questions. The questionnaire included background questions, Likert´s scaled statements, and open questions. The background information issues were about respondents´ age, gender, education, professional name, person´s work experience in the health care and in current organization. The questionnaire had 42 statements. The main themes concerning the statements were formulated into four themes. These themes were the implementation of the Medical Helpline 116117, the Medical Helpline 116117 as a new mode of operation, assimilation of the Medical Helpline 116117, and effects of the Medical Helpline 116117. Each set of statement had statements between nine and thirteen. In the questionnaire for open questions there were three questions, and those questions were placed at the end of the questionnaire. The open questions concerned the benefits of using the Medical Helpline and how to develop the operation of the Medical Helpline in the future. In the last open question, respondents were asked to name three important factors in the use of the Medical Helpline. Finally, the respondents had the opportunity for “free word” so the respondents had an opportunity to add their own thoughts and opinions.

The open questions were asked to get the information that cannot be get with the statements or otherwise. Testing open questions can give important information for the research which can otherwise stay discovered (Vehkalahti, 2014, p. 25). In this questionnaire the open questions related to the consequences of Medical Helpline 116117 both its success and development. The questionnaire was tested at forehand. The questionnaire was tested both in special health care and in primary health care. Few changes were made on the grounds of opinions from persons who tested it. According to Vehka-

lahti (2014, p. 48), it is good to test the questionnaire in advance. The suitable participants for testing are humans who belong to the target group because taking them with gives a truthful view about are questions and instructions understood right (Vehkalahti, 2014, p. 48). Additionally, testers can tell if there are unnecessary questions or if there is something important and relevant which is not been asked (Vehkalahti, 2014, p. 48). With the help of testers, it can find out at least the worst problems of the survey (Vehkalahti, 2014, p. 48). It is important for the success of the survey to get the problems fixed before the questionnaire is allocated (Vehkalahti, 2014, p. 48).

3.1.2 Processing and analysis of the research material

Checking the research material is at first carried out visually with help of Webropol 3.0 survey online program. SPSS IBM Statistic 24 statistical program is used when analyzing the research material. The data is viewed using the statistics, like average, variation, and extreme values of variables, that describes the file. Results of the study material are observed with figures, tables, and verbally. Open questions examined after an analysis of the subject matter. Analysis of the subject matter is a basic analysis method, which is used when analyzing written text. According to Lindblom-Ylänne et al. (2013, p. 123-126) the aim is to sort the similarities and differences of collected data. The meanings, consequences, and connections of phenomena are studied with the analysis of the subject matter (Lindblom-Ylänne et al., 2013, p. 123–126).

As a method for describing the material and for examining distributions the frequencies, the mean values, the standard deviation, the median, and the percentage were used. Cross-tabulation was used in the distribution of classification and order scale variables and the dependence between them was studied by cross-tabulation. To test the normal distribution was used for the Shakiro Wilk-test because of the size of collected data which was under 50 (47). Shapiro Wilk-test´s normal distribution´s level of significance,

so-called a p-value, was 0,000-0,002 in every statement. The result obtained was statistically very significant.

Measuring the reliability of the meter was measured using Cronbach´s α-statistics. The commensurability and repeatability of the measure were also examined by Cronbach´s α-statistics. The value of Cronbach´s alpha should be between 0-1. A high statistic indicator, or reliability, indicates that the partitions of the meter measure the same type of thing (Metsämuuronen, 2005, p. 455-456).

3.1.3 Reliability and validity of the research

When research is done, information is wanted to be truthful and reliable (Kananen, 2008, p. 79). The reliability of this research results may have been limited in some respects by the relatively low response rate. The final sample size deviated from the target. Therefore, it can be thought that a drop in answers influences the research results. On the other hand, the results of the study are at least generalizable when comparing the special health care and the primary health care, since the collection of the data was carried out in all emergency duties at the health centers and in common emergency service clinics, and both had a response rate a little bit over 20 %, primary health care 23,39 % and special health care 21,7 %.

When dealing with the trustworthiness of the measurement, two concepts arise according to Vehkalahti (2014, p. 40–41). According to Vehkalahti these are validity and reliability. Vehkalahti defines those that the validity of the measurement will examine whether the questionnaire measured what was supposed to. The reliability, in turn, tells how exactly it was measured. Vehkalahti considers the validity of the measurement primary. If the meter does not measure the right thing, the reliability of the measurement does not make any difference.

Research validity refers to the ability of a survey to measure what it is intended to measure (Kananen, 2008, p. 79). This thesis had set four research questions and the answers for research questions were obtained. There are, however, factors that may distort the study results. Dishonest and palliative answers can affect the results of the research. Also, the rush at work can affect. Staff has answered this questionnaire on their work time. This can mean that there was probably no chance to concentrate well. Hurry can cause the respondent to choose the easiest answer option which can distort the results of the study.

According to Karjalainen (2010, p. 23) external factors do not affect if the meter is reliable. Thus, it also does not give incidental results. If a meter consists of several variables, such as a set of positions in a survey, reliability also means internal consistency (Karjalainen, 2010, p. 23). It means the ability of different sectors to measure the same thing (Karjalainen, 2010, p. 23). Reliability specifically examines matters of measurement and accuracy (Vilkka, 2007, p. 149-150). When examining accuracy, in questionnaire are random errors (Vilkka, 2007, p. 149-150). Reliability measures the following things: the success and representativeness of the sample, response rate, diligence in data entry, possible measurement errors, and the ability of the meter to measure the desired thing comprehensively (Vilkka, 2007, p. 149-150).

The reliability of the meter can be measured in the Cronbach α-emblem, which informs the collective medallity and repeatability of the meter. The unity of the meter in this study was tested in the Cronbach emblem. In metrics, the internal commonality of question groups proved good. The greater the α-value of Cronbach, the more gapless the gauge is considered (Heikkilä, 2014, p. 187). Heikkilä (2014, p. 187) continues that the α-value of more than 0.70 Cronbach is preferred. In this study, the Cronbach ID numbers were calculated by assertion sections, which are presented in the study as four groups: the implementation of the Medical Helpline 116117, the Medical Helpline 116117 as a new mode of operation, the assimilation of the Medical Helpline 116117, and effects of the Medical Helpline 116117. The table 2 shows the measured values of the survey.

Table 2. Meter unity and Cronbach´s alpha.

Sections of statements	Cronbach´s alpha
The implementation of the Medical Helpline 116117	0,833
The Medical Helpline 116117 as a new mode of operation	0,890
The assimilation of the Medical Helpline 116117	0,696
Effects of the Medical Helpline 116117	0,889

Based on α-ID numbers describing the common medallity of the above variables, the metrics are found to be reliable. The value should be between 0 and 1.

3.2 Evaluating effectiveness

Effectiveness is a multi-conceptual phenomenon. The definition of effectiveness is dependent on perspective. Also, different fields of scientific discipline and the paradigm the author presents are contributing factors (Ihantola et al., 2009, p. 65). Blom et al. (2011, p. 801) say that in health care effectiveness can describe as one result of health care operation. They continue presenting more definitions for effectiveness in health care. Effectiveness is attached for example to resource management and operational planning. Resource management has seen as one the requirement for effectiveness. Operational planning takes care that patients' needs are observed. Rationalization is one of the key features when defining effectiveness. The rationalization means in healthcare context thinking ways how to cut costs and allocate resources. Responsibility is one factor of effectiveness.

According to Aaltonen (2008, p. 565), effectiveness can be divided into two ways: allocative and technical. Aaltonen explains that allocative effectiveness answers the question are we doing the right things. Allocative effectiveness tells how resources are allocated

at different stages of the process. Aaltonen tells that technical effectiveness on the other hand gives the answer when thinking is things done the right way. Developing technical efficiency is never about doing the same things faster but replacing existing approaches with new, fewer resources intensive ones. In health care, allocative and technical effectiveness can be improved so everyone benefits – customer, personal, and society.

There are limited resources in healthcare. Therefore, these resources must be targeted right (Blom et al., 2009, p. 494). Attention should be paid to both in how services are relived and how they are planned, and these both should be done more effectively (Blom et al., 2009, p. 494). Ahonen et al. (2011, p. 7) pay attention to resources and think that the use of resources must be made more efficient. At the same time, there is a need to pay attention to the productivity of services. Still, the quality and effectiveness of service are things that should not forget when considering these issues. In healthcare, there is a need for innovations that are tools for growth, productivity, and impressiveness (Ahonen et al., 2011, p. 7).

Blom et al. (2009, p. 495) continue that the healthcare sector´s effectiveness effect on patient's state of health because some activity is produced as a healthcare service. They think that effectiveness happens when set goals are achieved. One goal is that patients' needs are met.

Ihantola et al. (2009, p. 65) point out that quality and effectiveness are related to each other because with efficiency, quality is also sought. Ihantola et al. continue that although the quality of service is good does not mean that effectiveness is succeeded. Beside consequences of effectiveness are not probably seen straight away the same way as the quality of service (Ihantola et al., 2009, p. 65). Consequences can show as a recovery, the ability to work again, and reduction of limitations (Ihantola et al., 2009, p. 65).

What comes to telephone triage effectiveness, Blank et al. (2012, p. 2611) make the conclusion that telephone triage should be effective in the opinion of the service provider

and policymakers. According to them, effective telephone advice is based on directing customers to the right place at the right time; the worker answering the phone call makes decisions about what the caller should do or is there a need to visit a professional. This makes the telephone counseling service effective and safe for customers (Blank et al., 2012, p. 2611).

3.3 The case of hospital district of South Ostrobothnia

State parliament set a new legislative degree that comes to cause of emergency care and emergency duty in the year 2018. This changed the way how emergency care must be arranged in every hospital district.

Health Care Act § 50:

> *"South Ostrobothnia Medical District must organise an extensive round-the-clock emergency unit in connection with its central hospital. An extensive round-the-clock emergency unit refers to a primary care and specialty care co-emergency service that is able to provide broadly services across multiple medical specialties 24/7 immediately and has the resources necessary for healthcare to maintain readiness and to deal with specific situations. An extensive round-the-clock emergency unit must support other emergency services."*

Because of this, it was established common emergency clinic and emergency units in health centers in every hospital district. Thus, the Medical Helpline 116117 was innovated for dividing the customer to the right service. The Medical Helpline 116117 is organized in cooperation with the Ministry of Social Affairs and Health and the hospital districts. The role of the Medical Helpline 116117 sees also in cooperation between the emergency duty at the health centers and the special health care.

In the Ministry of Social Affairs and Health presentation Hätönen (2019a, p. 10) mentions many objectives for the Medical Helpline 116117. It is a national guidance and information service for citizens for free. The districts of hospitals organize this service in their own area. The objective is that Medical Helpline 116117 is in use during the year 2019 in all parts of mainland Finland. The Medical Helpline 116117 makes easier the use of information. There are skilled professionals who write down patients' information to the information system. In this way, every patient's information is seen in one view and it can utilize. The Medical Helpline 116117 is meant to be a telephone service that serves citizens year-round every day 24 hours. Also, the Medical Helpline 116117 is connected to other range of services in the district´s area that means that professionals can guide the customer to different services. This requires only one call from the customer. One of the objectives is also to unify policies at a national level what comes to transmitting the phone calls and the information between emergency number and the Medical Helpline 116117. The Ministry of Social Affairs and Health report (2019b, p. 30) explain that there are many societal objectives of the Medical Helpline 116117. The Medical Helpline 116117 is meant to improve the health and social care services available to citizens. It also reduces health care load by reducing residents' visits to the emergency service clinic.

According to Soininen (2019, p. 227) until now, Finland has lacked a single emergency counseling function for non-emergency situations. Soininen writes that when citizens need urgent care, they call to emergency number 112 of which is meant to people, who are in a life-threatening situation and therefore it contributes the number 112. The Medical Helpline 116117 purpose is to help when citizens situation is urgent but not an emergency (Soininen, 2019, p. 227). In the Ministry of Social Affairs and Health report (2019b, p. 30) is said that non-emergency calls are wanted to be directed to the Medical Helpline 116117.

The point is to call the Medical Helpline 116117 before the customer is going to an emergency clinic or to ask for advice. Customers can now receive general health information

or medical advice. The staff, registered nurses, and public health nurses are trained for the task assess citizens` situation and make an assessment for the need of treatment with the patient. Nurses determine the urgency of the customer´s problem and advise what is the best way to act. Citizens get general guidance from their situation and sometimes that is all that they want, get a confirmation for their own self-assessed treatment. In these kinds of situations, citizens do not need any visit to emergency care services because of advice and information. On the other hand, is it possible that there is a need for emergency services or urgent care services, so the customer will receive advice on how to act at the moment. Nurses decide whether the customer can go to an emergency service clinic or nurse can make an appointment with a general practitioner. Answerers can also leave a message to the emergency duty at the health center to call the customer back.

The Medical Helpline 116117 started in the hospital district of South Ostrobothnia at the beginning of December in the year 2019. In the hospital district of South Ostrobothnia, there is a common emergency service clinic in the central hospital of Seinäjoki and seven joint municipal authorities or municipality cooperation region which arrange emergency duty and health care services for the citizens living in that area.

The participants in this research are the nursing staff from the common emergency service clinic in the hospital of Seinäjoki and nursing staff from the emergency duties at the health centers in the area of the hospital district.

4 Discussion of results

Next, the findings of this study are presented. This chapter is organized following the research questions. The first part analyses the background information. Four next parts concentrates on the statements. The last part examines the answers to open questions about the benefits of Medical Helpline 116117 and its challenges. At the same time, the three issues named by the respondents regarding the introduction of the Medical Helpline 116117 are analyzed, as well as the last question in the survey, where respondents had the opportunity to bring up what they wanted. From this point on the Medical Helpline 116117 will be used the name Medical Helpline.

4.1 Background information

72 respondents had started answering the survey and 47 of them had responded to the end of the survey. The size of the research data was in total of 47 answers. 61,7 % (n=29) of the respondents worked at primary health care and 38,3 % (n=18) of the respondents worked at special health care. This is shown in figure 1.

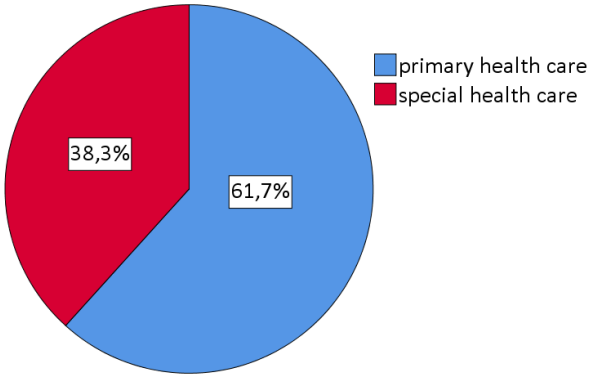

Figure 1. The division of the respondents between special health care and primary health care.

The questionnaire was shared for 83 nurses at special health care and for 123 nurses at the primary health care. Based on this, the answering percent was 21,7 % for special health care and 23,6 % for the primary health care. Thus, the answering percentage of the responses from both groups was almost equal, so the obtained sample was approximately the same size from both groups.

96 % (n=45) of the respondents were women. Men were only 4 % (n=2) of the respondents. Differences between the sexes are not compared in this study, as it is not meaningful due to the lack of male respondents.

The respondents who worked at the primary health care were also asked the question of whether they worked in a federation of municipalities or in an individual municipality. This is observed in figure 2.

Figure 2. The division of the respondents between an individual municipality and a municipal federation.

55,2 % (n=16) of the respondents worked in the federation of the municipality and 44,8 % (n=13) worked in a single municipality. Primary health care respondents were also asked about their job assignments, whether they worked in the emergency reception, the appointment, or both. 75,9 % (n=2) of them worked both in the emergency reception and in the appointment, the rest of the respondents worked solely in the second.

Survey respondents were also asked about their education. This information is marked in figure 3.

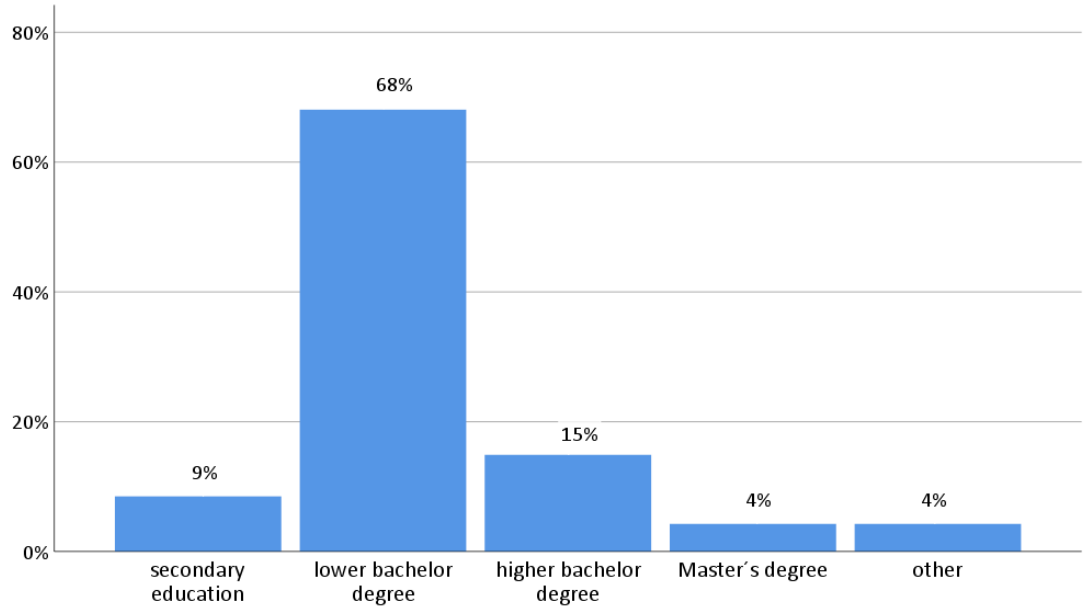

Figure 3. The education of the respondents.

Most of the respondent 68 % (n=32) had a lower bachelor's degree. The second-highest number of the respondents 14,9 % (n=7) had a higher bachelor's degree. 8,5 % (n=4) of the respondents had secondary education. University-level education had two respondents. Likewise, the two defendants had indicated their training in something other than the above.

Figure 4 describes the profession of the respondents.

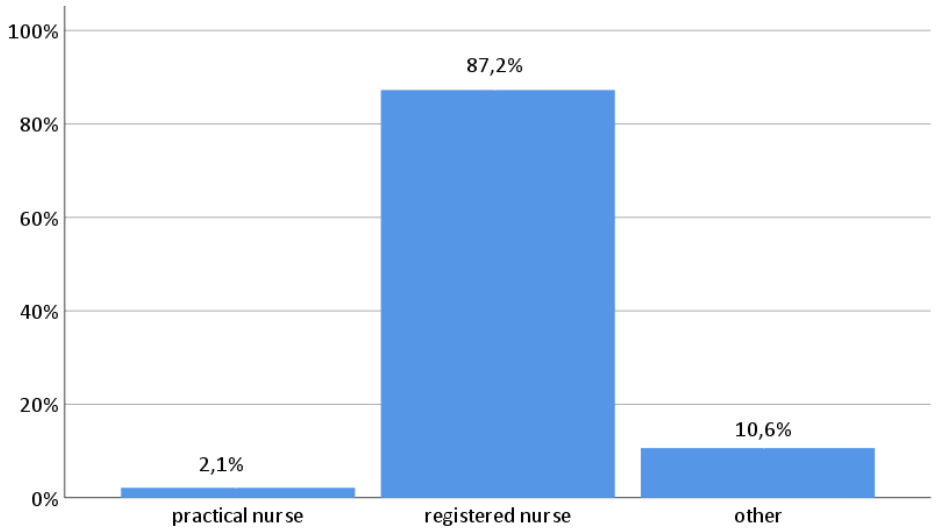

Figure 4. The profession of the respondents.

As seen in figure 4, most of the respondents worked as a registered nurse. 2,1 % (n=1) of the respondents worked as a practical nurse, and the rest chose the option other.

Respondents were asked about their age. It is illustrated in figure 5.

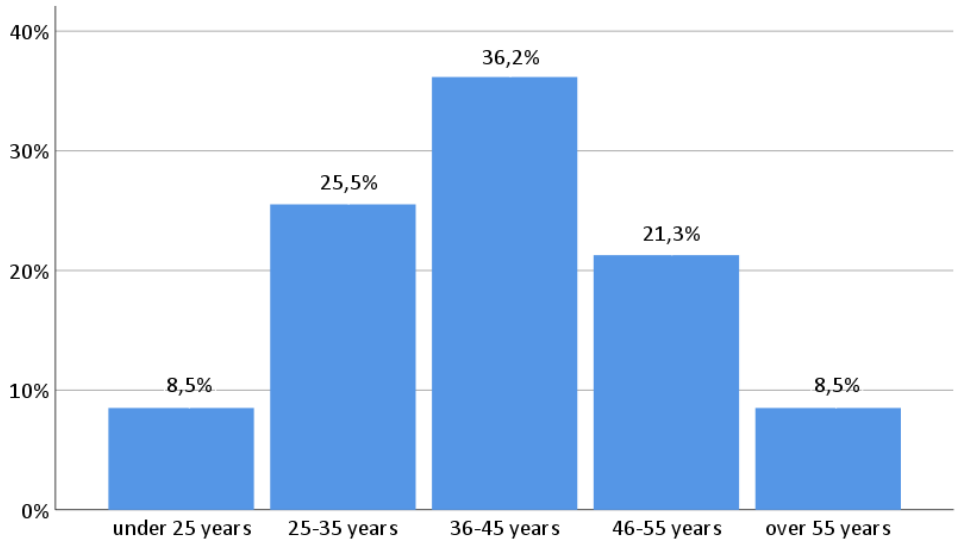

Figure 5. Age distribution of the respondents.

By age category, 36,2 % (n=17) of the respondents were 36-45 years old. 25,5 % (n=12) of the respondents were aged between 25 and 35 years. 21,3 % (n=10) of the respondents were 46-55 years old. Over 55 years old and under 25 years old were in both groups four persons.

Figure 6 looks at respondents' work experience in the health care sector.

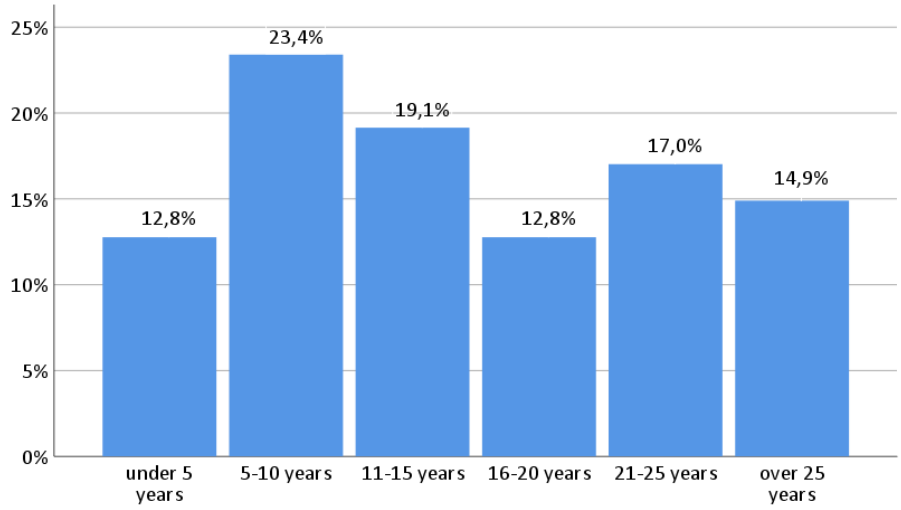

Figure 6. Respondents´ work experience in the health care sector.

As seen in figure 6 quarter (n=11) of the respondents had worked in health care from five to 10 years and one-fifth (n=9) of the respondents had worked in health care for 11 to 15 years. There is equal amount of people who had worked in health care for less than 5 years and 16 to 20 years, both 12,8 % (n=6) of the respondents. The answer option 21 to 25 years of work experience in health care had 17 % (n=8) of the respondents and 14,9 % (n=7) of all the respondents had worked for more than 25 years.

Next, based on Figure 7, is considered the work experience of the respondents in their current organization.

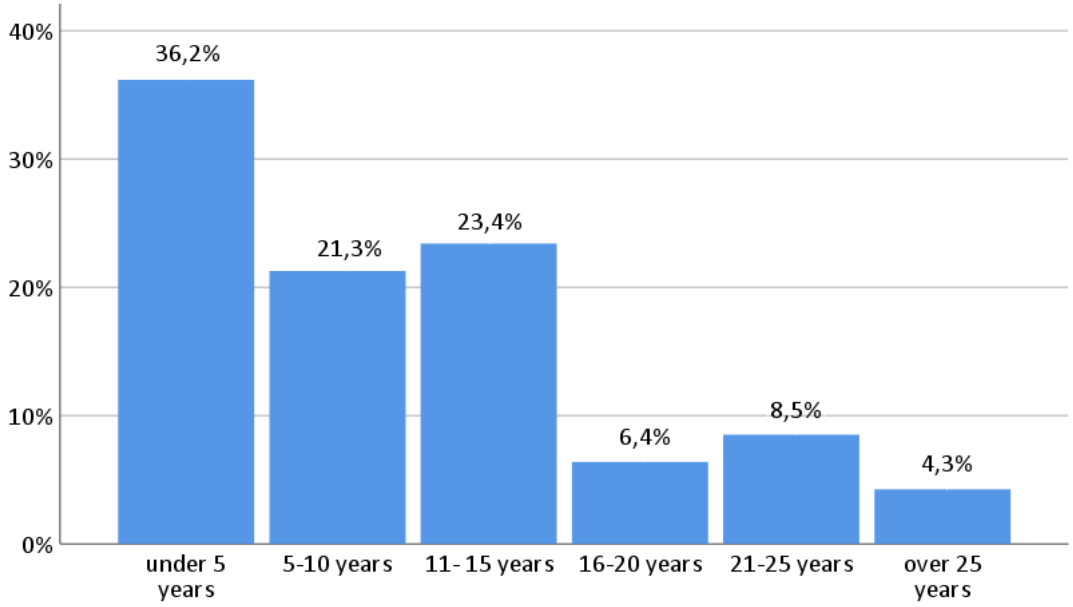

Figure 7. Respondents' work experience in the current organization.

As shown in figure 7, 36,2 % (n=17) of the respondents had worked in their current organization for less than 5 years. 23,4 % (n=11) of the respondents had worked in the current organization for 11-15 years. 23,4 % (n=11) of the respondents had worked 11-15 years and 21,3 % (n=10) 5-10 years in their current organization. The respondents who had worked 21-25 years in their current organization were 8,5 % (n=4) of the respondents. The percentage of the respondents who had worked 16-20 years was 6,4 % (n=3) and over 25 years worked was 4,3 % (n=2).

4.2 The implementation of the Medical Helpline 116117

Next, is analyzed the answers of questionnaires statements. The answer options were divided into five different options. Options were 5=totally agree, 4=agree, 3=not agree/ disagree, 2=disagree, 1=totally disagree. Figure 8 illustrates the distribution of the answers in statements concerning the implementation of the Medical Helpline.

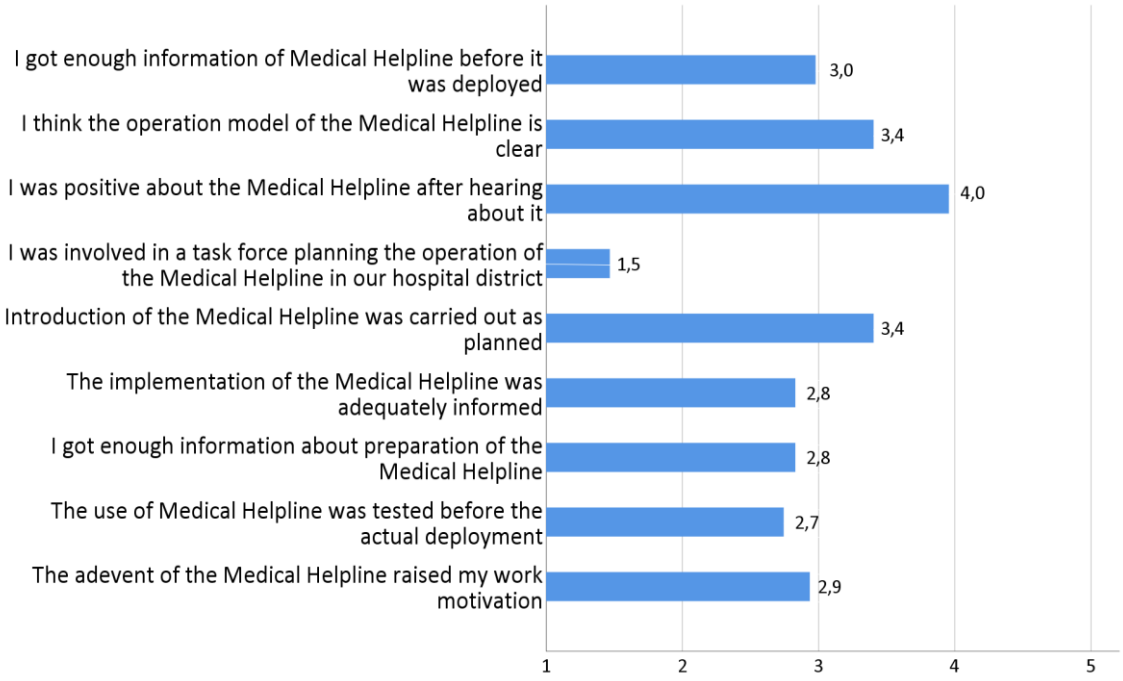

Figure 8. Respondents´view of the implementation of the Medical Helpline.

In this statement section the highest result concern about respondents´ attitudes towards the Medical Helpline. Both sides, special health care and primary health care, shared the same opinion. Over half of the respondents had a positive attitude towards the Medical Helpline when they heard from it. No one of the respondents in the primary health care did feel negative about the Medical Helpline, while a minority of the nurses in the special health care felt it somewhat negative. (mean=3,9, median=4, St. deviation =1,1)

Part of being involved in working group designing the Medical Helpline was the smallest among all the above-mentioned statements. A large majority of the respondents confirmed their opinion in being in a workgroup. To be exact, over 70 %, has not joined the workgroup that planned the Medical Helpline in the hospital district of South Ostrobothnia. Only one person from primary health care had been involved, in special health care few of the respondents more had been involved in this kind of work group. (mean=1,5, median=1, St. deviation=1,1)

56,6 % of the nurses who worked in special health care, did get enough information about the Medical Helpline before it was into operation. Correspondingly in primary health care, 37,9 % of the respondents did get enough information. On the other hand, in both groups, approximately 45 % of the respondents did not get enough information. (mean=2,9, median=3, St. deviation=1,3)

According to special health care, 38,9 % of the nurses answered that the Medical Helpline was tested before it was taken into practice. Only 10,5 % of the primary health care respondents shared the same opinion. In the primary health care, 44,8 % of the respondents seemed too challenging to answer this question. On the whole, 12,8 % of the nurses thought that testing has not been done. There was a dependency between the group and the statement. (mean=2,7, median=3, St. deviation=1,1)

A large majority, 45 %, of the respondents agreed that they did not get enough information about the preparation of the Medical Helpline. Those respondents who worked in special health care did get a little bit more information about the preparation of the Medical Helpline than those respondents who worked in primary health care. (mean=2,8, median=3, St.deviation=1,1). About 58 % of the primary health care respondents answered that there has not been enough information about the implementation of the Medical Helpline. On the special health care, one third of the respondents agreed that implementation was not adequately informed. In special health care, however, one third of the respondents agreed that the implementation was adequately informed. (mean=2,8, median=3, St.deviation=1,1)

The respondents expressed their opinion on Medical Helpline´s implementation. Most of the respondents in special health care believed that the implementation of the Medical Helpline was carried out as planned. The same rate in primary health care was 34,4 %. Also, a disturbingly big part, a little bit over 50 % of the respondents in primary

health care, demonstrated confusion in making their decision. (mean=3,4, median=3, St. deviation=0,9)

The third part of both groups agreed that the Medical Helpline´s operations model is a little bit unclear. On the other hand, half of the respondents thought that the operations model is clear. Nobody did not think that it is totally unclear. There was no dependency between the group and the statement. (mean=3,4, median=4, St. deviation=1,1)

In the last statement in this section, the respondents were asked to answer their opinion on their own work motivation after the input of the Medical Helpline. In special health care, the nurses` work motivation raised more than in primary health care when the Medical Helpline came. 44,4 % of the respondents in special health care was more motivated than before the Medical Helpline input. Altogether half of the nurses in this study were not sure about their attitude. 12,8 % of all the respondents agreed that the Medical Helpline did lower their work motivation. (mean=2,9, median=3, St. deviation=1,1)

4.3 The Medical Helpline 116117 as a new mode of operation

This section looks at the data concerning how nursing staff sees the Medical Helpline as a new mode of operation. Figure 9 illustrates the distribution of the answers. The answer options were divided into five different options. Options were 5= totally agree, 4=agree, 3=not agree/disagree, 2 =disagree, 1=totally disagree.

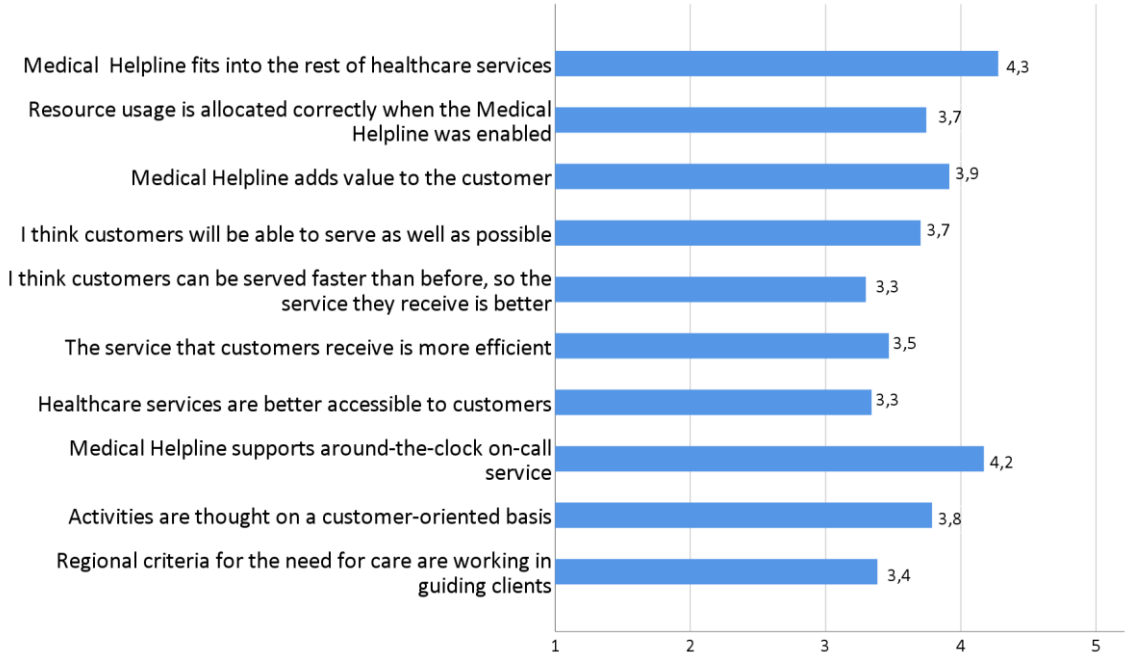

Figure 9. Respondent´s view of the Medical Helpline as a new mode of operation.

As shown in Figure 9, nurses felt that the Medical Helpline is suitable for the rest of the healthcare service range. There were no noticeable differences between special health care and primary health care responses because almost 90 % of the respondents agreed with this statement. (mean=4,3, median=4, St. deviation=0,7). Also, the statement about Medical Helpline supporting the arrangement of round-a-clock on-call services got a high mean because 89 % of the respondents chose the alternatives to agree or totally agree. Altogether, the conclusion is that the Medical Helpline is seen supporting round-a-clock on-call services regardless of the group, special health care or primary health care. (mean=4,2, median=4, St. deviation=0,7)

The respondents expressed their opinion on the availability of services to customers. This statement got the lowest estimation in this statement section. Half of the respondents think that health care services are better available to customers because of Medical Helpline. This opinion is reflected in the responses of both groups. On the other hand, one in a quarter of the respondents from both groups have an opposing view, leaving services less accessible to customers. (mean=3,3, median=4, St. deviation =1,1)

Both groups, special health care and primary health care, have clear dependency on what comes to serving customer faster than before as a result that the service they get is more effective. In primary health care, 34,4 % of the respondents did not agree with this statement and special health care only 5,6 % of the respondents did not agree. Even 66 % of the respondents in special health care had a strong belief that service is faster and effective than before. (mean=3,2, median=3, St. deviation=0,9)

The use of resources has an important role when it is a question about Medical Helpline. Almost half of the respondents shared the opinion that resources are targeted right when using Medical Helpline. A third of the respondents in special health care thought that resource use is allocated correctly, respectively, in primary health care 13,8 % of the respondents completely agree with this statement. No one of the respondents thought that resource use is completely misallocated. (mean=3,7, median=4, St. deviation=0,9)

Customer orientation is seen in the Medical Helpline and the respondents´ opinion was that the Medical Helpline brings added value to customers. Most of the nurses (68,1 % of the nurses) agreed on this statement. There were no differences between the groups. None of the nurses thought that the Medical Helpline does not add value to the customer. (mean=3,9, median=4, St. deviation=0,9)

In one statement came to evaluate whether customers can be served as well as possible. There was a dependency in this statement between the group and the statement. Primary health care respondents, 51,7 % agree or totally agree that customers are being able to serve as well as possible compared to responses from special health care, where 77,8 % of the respondents agree or totally agree that customers receive as good service as possible. In addition, 34,5 % of the primary health care respondents did not agree or did not disagree. (mean=3,7, median=4, St. deviation=0,9)

Half of the respondents answered that health care services are better available for customers because of the Medical Helpline. Only 4,3 % of the respondents disagreed with the statement. (mean=3,7, median=4, St. deviation=0,9). The service customers get should be effective. The vast majority, 57 % of the nurses, shared the thought that the service customers are receiving is more effective because of the Medical Helpline. Still, there was dependency between the groups and the statement. Special health care was more on the opinion that service is more effective. (mean=3,2, median=4, St. deviation=0,9)

As further answers showed, the opinion of the respondents of regional criteria for the need for treatment, had dependency between the group and the statement. It is stated as follows: a little bit over 70 % of the nurses in special health care thought that regional criteria instructions for treatment are working when directing the customers, while 44,8 % of the respondents in the primary health care agree. One-third of the primary health care respondents could not decide their opinion. (mean=3,4, median=4, St. deviation=0,9)

A large majority, 88,9 % of the nurses in special health care believed that the use of the Medical Helpline is thought to be customer oriented. In primary health care, 62 % of the nurses agreed on the opinion of customer-orienteering. At total, 19,3 % of the nurses thought that the Medical Helpline is not thought as a customer-oriented way. (mean=3,8, median=4, St. deviation =0,9)

4.4 The assimilation of the Medical Helpline 116117

The assimilation of the operation of the Medical Helpline is discussed in the previous part of the thesis. Figure 10 illustrates the distribution of the answers. The answer options were divided into five different options. Options were 5= totally agree, 4=agree, 3=not agree/disagree, 2 =disagree, 1=totally disagree.

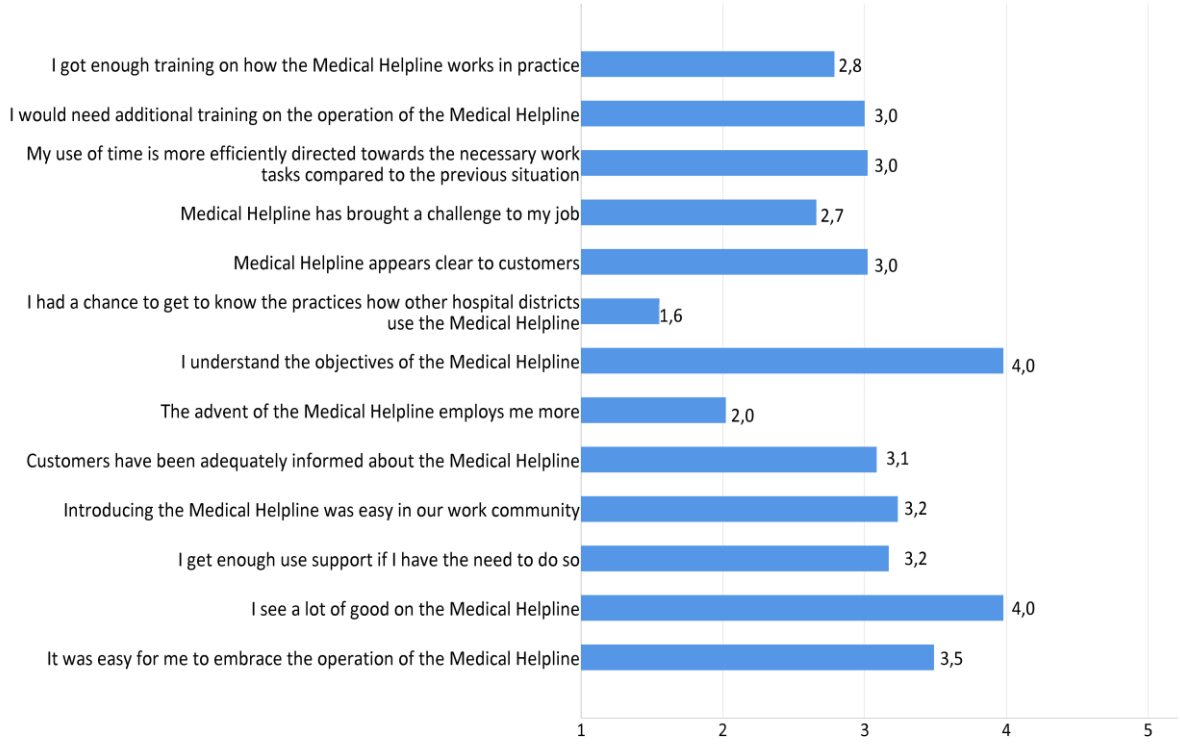

Figure 10. Respondents´view of the assimilation of the Medical Helpline.

Thing that supports the assimilation of the Medical Helpline is understanding the objectives of the Medical Helpline. As a matter of fact, all special health care respondents answered that they either agree or totally agree with the statement understanding the objectives of the Medical Helpline. Respondents from primary health care chose all alternatives but mostly they were on a positive side, meaning that they understood the objectives of Medical Helpline. As a whole, 83 % of the respondents understood the Medical Helpline´s objectives. (mean=3,9, median=4, St. deviation=0,8)

Both special health care and primary health care respondents saw a lot of good in the Medical Helpline action. Answers form both groups focused on this way. Differences appeared not to decide the answer. Primary health care respondents, who were not sure about their attitude, made up 37,9 % whereas only 5,6 % of special health care respondents could not decide their opinion. No one thought the Medical Helpline would be a bad thing. (mean=3,9, median=4, St. deviation=0,8)

The Medical Helpline has been introduced in some of our country's hospital districts earlier than in the district of South Ostrobothnia, so there would have been an opportunity for nurses to learn about their activities. The vast majority, 65 % of the nurses expressed that they had no chance to get to know the practices of another hospital district. (mean=1,5, median=1, St. deviation=0,8). When putting something new into operation, the introduction can vary. Primary health care respondents agreed more with the opinion that the introduction of the Medical Helpline was easy in their work community compared to responses in special health care. 40 % of all the respondents could not decide was the introduction of the Medical Helpline easy or not. (mean=3,2, median=3, St. deviation=0,9)

Special health care respondents felt that they did get enough help using the Medical Helpline if they needed it. To be exact, 61,2 % of the nurses got help. In this statement, there was dependency between the group and the statement because the primary health care respondents felt that they did not get enough help. (mean=3,2, median=3 St. deviation=0,9). The education of employees is important when it comes to a new issue for the working community. Respondents from primary health care answered that they did not get enough education on how the Medical Helpline is working. Answers in special health care varied, some had received enough education and some not. (mean=2,7, median=3, St. deviation=0,9)

As further answers showed, the opinion of the primary health care respondents on the need for education was that they did not get enough education. To this as a continuation, when asked about the need for education over half of them said that they need education. In special health care, 38,9 % need more education. (mean=3, median=3, St. deviation=1,2)

Very deep dependency between the group and the statement was about nursing staff time use. The vast majority, 66,7 % of the special health care respondents thought that

their use of time was more effectively directed towards the necessary work tasks compared to the previous situation. Primary health care this rate was only 10,3 %. The same thing showed also in the alternatives disagree and totally disagree. In primary health care 44,8 % of the respondents felt that time-consuming does not focus more effectively than before, the same value in special health care was 10,3 %. (mean=3, median=3, St. deviation=1,1). There was also deep dependency between the group and the statement when asking about the increase in job challenges. 38,9 % of special health care respondents thought that the Medical Helpline brought challenges to their work while the primary health care respondents 6,8 % answered that work is more challenging than before. (mean=2,7, median=3, St. deviation=1,1)

Almost 70 % of both groups did not think that the Medical Helpline is creating more work than previously. (mean=4, median=4, St. deviation=0,8). Approximately half of the respondents answered that the function of the Medical Helpline had been easy to adopt. There were few differences between groups but not statistically significant. (mean=3,2, median=3, St. deviation=1)

It is important at the beginning of a new service to let the customers know about it. In this survey, 73,2 % of the respondents in special health care thought that there had been offered enough information to customers. This statement divided answers between the special health care and the primary health care because only 20,7 % of the primary health care respondents thought that customers had been adequately informed. (mean= 3,1, median=3, St. deviation=1)

The appearance of the Medical Helpline to the customers is perceived in very different ways. Some respondents thought that the Medical Helpline is clear from the customers´ point of view. On the other hand, some respondents thought that the Medical Helpline seems unclear to customers. Answers divided through the scale, and there were no differences between the groups. (mean=3, median=3, St. deviation=1,0)

4.5 Effects of the Medical Helpline 116117

Next is investigated statements regarding the Medical Helpline effects. The more detailed distribution of answers is in figure 11.

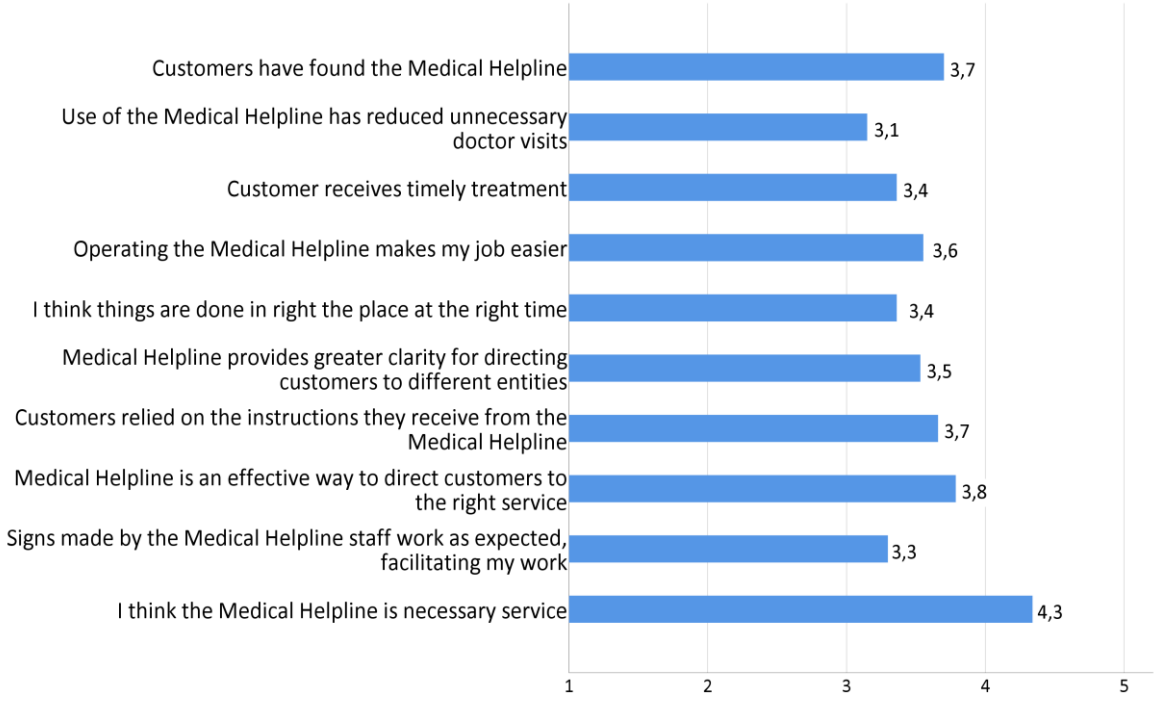

Figure 11. Respondents' view of the effects of the Medical Helpline.

The highest mean gets a statement about the necessary of the Medical Helpline. Seeing the need for service is a very important thing when starting a new service, it gives confidence to nurses to use the service. Based on the answers, the respondents thought that the function of the Medical Helpline is necessary. A large majority, 89 % of the respondents agreed with this. (mean=4,3, median=5, St. deviation=0,9)

Statement concerning about the Medical Helpline reducing the unnecessary doctor visits divided the answers. Special health care respondents, 72,2 % of them, saw that the Medical Helpline has reduced the unnecessary visit to the doctor`s appointment. Corresponding to primary health care, where only 17,2 % of the respondents thought that the unnecessary doctor`s appointment had reduced. Over 50 % of the primary health care respondents did not notice any differences compared to the previous situation. (mean= 3,1, median=3, St. deviation=1)

The same difference between the groups is noticed about customers finding the Medical Helpline. The nurses who work in special health care were more in agreement with the opinion that customers have found the service Medical Helpline. The vast majority, 88,8 % of the special health care respondents thought that customers have found the service and correspondingly 51,7 % of primary health care nurses thought the same way. This same set-up is concerned also with the statement answer option disagrees or totally disagree. (mean=3,7, median=4, St. deviation=1)

Special health care respondents also thought that the Medical Helpline has made their job easier. 77,8 % of the special health care nurses shared this opinion. Likewise, 44,5 % of the primary health care respondents agreed. On the other hand, 17,2 % of the primary health care respondents and 5,6 % of the special health care respondents thought that the Medical Helpline is not at all easing their job. (mean=3,6, median=4, St. deviation= 0,9).

Special health care respondents´ opinion was that things are done in the right place at the right time. A total of 66,6 % of special health care respondents agreed with this statement. Primary health care respondents score it lower, 37,9 % of nurses agreed with statement, and 41,4 % of primary health care respondents did not agree or agree. (mean =3,4, median=3, St. deviation=1). Interestingly enough, special health care respondents gave higher results to the Medical Helpline`s mission to help the patient`s directing to the right places than the primary health care respondents. Over 75 % of special health care

respondents agreed with this, while primary health care respondents almost half agreed. This statement found a connection with the group and the statement. (mean= 3,5, median=4, St. deviation=1)

Statement about customers trusting the Medical Helplines´ directions did not make any differences between the groups. In total, only 12,7 % of all the respondents thought that customers do not trust directions that they receive when they call to Medical Helpline. (mean=3,7, median=4, St. deviation=0,9). One of the Medical Helpline´s objectives are to direct customers effectively to the right services. 94,4 % of special health care respondents agreed that this is happening while the primary health care nurses were not sure about their opinion. (mean=3,8, median=4, St. deviation=1)

When the customer is calling to the Medical Helpline, an employee writes down the customer`s information into the system. Special health care respondents thought that these entries are more functional and make it easier to work comparing the answers from primary health care respondents. Noteworthily, a third of the primary health care respondents could not make up their viewpoint on the issue. (mean=3,3, median=3, St. deviation=1)

In the questionnaire were also three questions which concern only the primary health care respondents. In the hospital district, there is made regional criteria for estimating care. Those instructions are shared between special health care and primary health care and the purpose is that both parties use them. The first statement concerned the use of the primary health care regional criteria when they receive a phone call from a customer who should have been called to the Medical Helpline. Over half, 74 % of the respondents, used the instructions when they directed customers. In a single municipality, respondents utilized instructions a little bit more compared to those respondents who work in the federation of municipalities. (mean=3,8, median=4, St. deviation=0,9)

When customer is calling to Medical Helpline, it is possible that nurse leaves a call back request to primary health care nurses to call the customer when the health centre opens. A call back to the customer from primary health care was somewhat regarded by the individual municipality as a more functional service than those who worked in the federation of municipalities. Fair one-third of the respondents were on the callback service side. (mean=3,3, median=4, St. deviation=1,1).

A recall to the customer from primary health care can happen too late with the customer's health status in mind. This view was held by 44,8 % of the primary health care respondents. Whether the respondent worked in an individual municipality or a federation of municipalities was not relevant. (mean= 3,3, median=4, St. deviation=1,2). With these questions, there were also a chance to see if there were differences between a single municipality and the federation of municipalities. By analyzing the results, it can be concluded that there were no big differences between them.

4.6 Observation of open questions

The questionnaire included open question about the positive impacts of the Medical Helpline. Many of the respondents pointed out that the Medical Helpline has reduced unnecessary doctor`s visits. The respondents felt that after taking the Medical Helpline in use, the nursing staff can concentrate on their real job. Some of the respondents experienced that it was more peaceful to work in hospital emergency services than before. Earlier telephones in the emergency department have ringed, and it received many phone calls from customers. This has now stopped because all the phone calls directly to Medical Helpline. There is personal sized for answering, and other nurses have more time on nursing care. Their working time does not go in answering and guiding on the phone. And on the other hand, personal answering the phone calls can concentrate only the caller, and therefore customers get better service.

”Now, it is possible to guide customers to the right service, avoid unnecessary visits, and reduces the load of the emergency department.”

”Now, it is possible to concentrate better to phone counseling because there are answers in their shifts meant fo answering the calls.”

”Answerers can concentrate more on callers matters because there are not 100 other jobs around the neck, and therefore the service is better for customers.”

Also, practices have moved more similar, so the instructions to all kinds of aches are more equal than before. The Medical Helpline has also a service, that employees call back to the customer if they cannot answer the phone when the customer calls. Nursing staff considered this as a good service. Customers get service even though the person cannot receive the phone call for the first time.

Respondents thought that the Medical Helpline`s number, 116117, is clear. It is a positive thing that customers have only one number where to call to get advice and care instructions. In doing so, customers do not need to find and think about the right number. Through the counseling phone, customers can be directed to the right place and real aid. Because of the Medical Helpline instructions, in the emergency department is a patient who is supposed to be there, and nursing staff can concentrate more on their treatment because a patient carried in the emergency duty at the health center go there. On the other hand, people have been referred to help when they have not understood how to apply it for themselves.

It is good, that customers get in contact with health care regardless of the time of day. The importance of the Medical Helpline is highlighted especially during mid-week holidays and weekends. Medical Helpline increases the customer`s feeling of safety because it is always open.

”Customer gets fast connect to personal in health care regardless of the time. ”

Every citizen`s own health center is not always open. In cases like this, it is good that customers can call to Medical Helpline, and customer has no need to go to the emergency to ask for advice and get treatment because the visit can be useless. The Medical Helpline is important when the customer is thinking own symptoms and can she/he stay at home and wait. The Medical Helpline helps in these kinds of situations and brings confidence to the customer`s own thoughts.

> *”Assessment of the need for care can be done in the customer`s home, so there is no need to go somewhere. The patient gets confidence and can stay at home with the aid of the phone call.”*

> *”Customers have a place to ask if they can dare to stay home and wait. ”*

Nurses had the feeling that many customers have been satisfied with the professionals´ point of view in the situation that is unclear to him/herself.

The Medical Helpline has shared advice during Covid19, and it became familiar to citizens at that time. The Medical Helpline has shared advice to calm the citizens. Respondents thought that this has been good because it has been easy to direct the customers to call there. Another respondent stated that the Medical Helpline has cleared the situation and has offered good service to the customers when emergency duty at the health center has been closed.

The introduction of the Medical Helpline has also brought challenges. The most challenging thing is to estimate right what kind of care customer needs. It is hard to estimate the customer`s situation just on the call.

> *”Estimating the need for care in the phone is sometimes demanding and extremely difficult, there is always a chance to misjudge. When you don´t see the patient, you have to estimate by what the customer says. Sometimes customer´s information can differ from reality.”*

It also worries that are the customers getting the care and the service they need. It also worries that are the customers going to a directed place and do they get the service they need from there.

> *”What I find the challenge most is that even when I direct the patient to contact a particular health care operator, whether he/she will receive the service that I personally think he/she belongs to.”*

One respondents answer underlined the nurse`s working experience. In Medical Helpline should work employees, who have at least a couple of years’ experiences in the emergency department´s job. This guarantees that employee knows what kind of injuries are taken care of in the emergency department, and what kind of injuries can wait till the next morning. Employee`s experience is important and brings confidence to a phone counseling.

Concerns raised also in staffs´ adequacy and how work overstresses the nursing staff.

> *”There are a lot of work shifts in Medical Helpline, and that can be very stressful. Preferably take many employees to phone counseling so there would be too many shifts for one employee.”*

The nurse, who answers the phone, should know all the services where he/she is guiding the caller. This experienced as challenging thing because the supply of service is diverse in South Ostrobothnia. Writing information from the customer´s call also highlighted. Registration should be short and compact. Sometimes the registration can be challenging to do because customer gives a lot of information and there may be too little time for registration.

There have been situations when the customer has not believed the instruction he/she has gained from the Medical Helpline and came still to the emergency department. Respondents felt that there should be enough information for customers, so care and its timing does not delay because the function of the service is unclear to the customers.

Sometimes concerns arise has the customer understands the piece of advice received. Challenging is if customers do not know the deepest meaning of the Medical Helpline and why it exists. Some customers have felt that now it seems more confusing where to call. Customers´ unawareness of the Medical Helpline can show in many serious situations like when customers should have a call to 112 instead of calling the Medical Helpline. There have also been situations when calling back has had a long delay, or customer has not answered the phone when nurse is calling back. Because of Covic19, there have been many hours lines to the Medical Helpline.

> *”Customers don´t have enough information when to call the Medical Helpline and for what kind of things. ”*

> *”People don't really know the deepest purpose of 116117. They think you can give periods of this and referrals. A lot of people said that after this number got even more mixed up where they call. Some are waiting for access to lines 116117 during rush hour though they should have immediately called 112. ”*

Keeping the call-back time as short as possible was also felt challenging.

Employees in the Medical Helpline can give the customer an appointment to the health center. This causes challenges a little bit because practices in every health center are variegated, and sometimes the free times do not show in the system, so the caller must call several times to get the appointment.

The respondents in the primary health care highlighted common directives and felt important updating them. Part of the primary health care respondents felt that the special health care emergency department´s nursing staff does not know the differences between the emergency duty at the health centre and the common emergency service clinic.

> *”Person who is answering the Medical Helpline does not know the difference between the emergency duty at the health centre and the common emergency service clinic. This has been encountered too often in practice.”*

The same thing deals with knowing the emergency duty at the health center´s course of action. The primary health care respondents felt that the Medical Helpline´s answerer does not trust their course of action.

> *”Those who answer the phone is not necessary aware of what kind of possibilities there are to investigate or treat patient ”*

> *”Hospital district does not trust the care estimation made in primary health care but directs patient to the emergency duty at the health centre although customer is estimated to be emergency patient when the patient has called to primary health care”*

Through the Medical Helpline nurse answering the phone can send a message to primary health care. According the primary health care respondents, this it is not yet working well. Because of this, there was concern that does messages and registrations shown in the system for both.

When the primary health care units are not open, and if the customer survives with his illness to the next day, nurse who is working in the Medical Helpline can also leave a callback at the primary health care nurses to call for the customer next day. The respondent from the primary health care thought, that the call request should be made carefully. Some of the customers can call themselves when the health center opens. There was also one comment about LifeCare, the data transfer system, that there should be some sign, for example, exclamation mark, for those customers who have signed up for one week.

Some of the respondents in primary health care have noticed that there has done overlapping work that comes to the customer´s call and its reasons registration. The customer has called to the primary health care where his/her phone call information is recorded. Then customers have been advised to call the Medical Helpline where has been done the same recording. It would be faster if the answerer in the Medical Helpline read the information what has written in the primary health care. One of the respondents felt,

that it has announced in primary health care that the Medical Helpline is taking use but does not basically know how the Medical Helpline is serving the customer or the health care.

In the questionnaire, the respondents had an opportunity to add things that they wanted. One of the respondents wrote that he/she needed more orientation about telephone counseling and information about the rights and the responsibilities as a worker. Part of the respondents highlighted the meaning of staff training. There was a proposition that those who work at answering the Medical Helpline, should have more education about the primary health care duties, for example about throat- and earache, children diseases, and pregnant patients. One respondent answered that work experience in the emergency duty at the health center should be a requirement for working in the Medical Helpline.

Personal in the Medical Helpline can book an appointment with the primary health care for the caller. This did not see as a necessary service; it goes too far from the Medical Helpline´s purpose. The Medical Helpline should only be a guidance number according the respondents.

Respondents were asked to name three issues they considered important when deploying the Medical Helpline. From many answers, it can conclude things that respondents considered important objectives in the success of the Medical Helpline. The answers are compiled in figure 12. Answers are divided into three categories; customer, nursing staff, and cooperation between special health care and primary health care because the answers were so clear about a particular topic. The answers involved things concerning either customer, nurse, or cooperation between special health care and primary health care. Most of the responses were explained in one to five words, so it was meaningful to combine them into a figure. The figure can be used to easily and effortlessly see the answers given by respondents.

Figure 12. Summary of the important factors in the use of the Medical Helpline.

As can be deduced from figure 12, survey respondents highlighted three things that are able to present in a three-group. The first group concerns the customers. Respondents considered the customer important. Respondents highlighted the quality of the service and brought up the fact that the service should help the customer. Service should help the customers in their state of help, and it should be available for customers all the time. It is also important that customers are informed enough, and the phone number of the service is easy and the same all over the country. Because of this, customers get the same help no matter where they are. Also, the important thing in operating the Medical Helpline is to give enough information about the Medical Helpline to customers. The

respondents consider it important; the service is designed in such a way that it is smooth for customers.

The figure also shows that the respondents considered their role important. They should get enough education and resources so they can deliver good and quality service. Respondents considered it important that they know how to guide the customer correctly and in the right place when the customer calls the Medical Helpline. This concludes that their education is important, and training should be provided. Respondents believed that the nurses responding to the call should be skilled and have enough experience to help the customer in the right way. Respondents considered it important that the person is sufficiently motivated to work in the Medical Helpline. Also, the working spaces should be functional. When respondents mention that resources should be adequate, they mean that at least there is enough personal and working equipment.

Cooperation between primary health care and the special health care respondents considered important. There should be common rules, and every nurse should act according to the same principles. The information should be shared between primary health care and special health care. Messages forwarding should be functional, and the flow of information should be flexible. There should be common rules of play on how calls are answered, how calls are recorded, and how calls are statist. It is important to have a common line on how to act. Respondents also considered important that there are joint criteria for estimating care that are the uniform criteria for the assessment of the need for treatment.

5 Conclusion

This research aimed to find out how the service/product innovation Medical Helpline 116117 shows as a health care service in the hospital district of South Ostro-bothnia especially in the area of special health care and primary health care nursing staff. At the same time, there was an opportunity to examine if there appear different experiences between special health care and primary health care personnel in the use of the Medical Helpline 116117. Besides, this research had the interest to find out the challenges and benefits of the Medical Helpline 116117.

Innovation in health care aim to reform the health care sector in a positive way and to deliver alternative ways how to produce services. Innovation usually leads to new operation model and provides new elements how to deliver its services for clients. The healthcare system can be improved via well-functioning telephone counseling according to Carlsson et al. (2014, p. 7). Effective phone counseling has shown to improve the access to health services and it also increases the speed of health services and efficiency in customer service (Hyrynkangas-Järvenpää, 2007, p. 427).

Hyrynkangas-Järvenpää continues that via telephone counseling, customers are directed in the right place at the right time, and effective telephone counseling service save costs because visits to the accident and emergency department can replace with telephone counseling. With this function, it is also possible to create a follow-up system, and support customers to develop their self-care (Hyrynkangas-Järvenpää, 2007, p. 427).

One objective of using the Medical Helpline 116117 is to reduce visits to the emergency department. As it is said in Uniform criteria for emergency care (2010, p. 23, 71) emergency operation spends a significant percentage of health care resources. Also, if there were no phone call counseling, the citizen should decide his/her own state of health and go to the emergency to ask for advice. Uniform criteria for emergency care also state that to manage the number of patients in an emergency clinic, a counseling service is

essential. It leaves enough resources for the emergency ward to take care of the emergency patients.

It is shown that telephone nursing makes value or is valuable for customers. It meets customers´ needs and gives safe care and patient satisfaction and it also uses resources an appropriately way by satisfying the providers and nurses (Greenberg, 2009, p. 2622). Using the Medical Helpline 116117 as a guiding service, it is shown that it brings added value to customers because it serves them clock-a-round and the service is customer-oriented. Also, according to the results of this study, it can be interpreted that the nursing staff wants to work as well as possible. They want to take care that customer´s opinion is considered when using the Medical Helpline 116117. The nursing staff wants that the service customers are receiving is excellent, and the quality of service is high.

Telephone triage nursing is a complex form of clients' care (Rutenberg, 2000, p. 78). At its best, it offers effective care, and clients' needs will be satisfied, but this does not happen without skilled personal, says Rutenberg, and continue that if the receiver of calls is unskilled, there is a huge possibility that the caller gets wrong information and care. Because of telephone nursing´s unique nature, the education of staff should have an important role. One essential factor in successful telephone nursing is staff training (Rutenberg, 2000, p. 78). According to Kaakinen et al. (2016, p. 29) research, the education of the nursing staff makes the quality of telephone counseling better. Kaakinen and others continue that these kinds of results have found in earlier research, and they make the conclusions that the training should be all-time to maintain the nurse´s skills and to ensure the best quality of services. Respondents of this study highlight their education, and the importance of skilled personal.

Some innovations are easy to adopt while others are more complicated, and the time of adoption is longer. It is also shown that when an idea of innovation is understood, it will be adopted sooner (Rogers, 2003, p. 16, 257). According to the study, the operational model of the Medical Helpline 116117 was considered partly unclear. One in three of the

respondents considered the operating model unclear. The importance of training also arose from the responses, since primary health care respondents felt that they need additional training about the operation of the Medical Helpline 116117, due in part to the ambiguity of the operating model. Similarly, the objectives of the Medical Helpline 116117 should be clear to everyone. Now it seems that most of the respondents have understood the objectives of the Medical Helpline 116117. Importantly, the policy model of Medical Helpline 116117 was clear to all respondents.

When innovating different ways to produce services, the objective is to make a better outcome for users, for example, better service and a faster way to get help. Hätönen in the Ministry of Social Affairs and Health presentation (2019a) tells that Medical Helpline 116117 is aimed to improve social- and healthcare services. The purpose is that citizens does not need to use many different emergency service providers to get help, but they receive all services from the same place. Hätönen also continues that when citizens use the Medical Helpline 116117, they get treatment at the right time. Fong et al. (2010, p. 8-9) tell that telemedicine transfer medical information to patients through telephone, and the person answering to call gives consultancy for the caller. Telemedicine exchange health information and is one way to get access to health care (Fong et al., 2010, p. 8-9).

Aslani´s & Naaranoja´s research (2015, p. 115) highlights the necessity of innovation to achieve objectives and to create new policies to meet customer needs in the health care sector. Innovation in health care also seems increasing productivity and impressiveness (Aslani & Naaranoja, 2015, p. 115). Respondents in the study thought that most customers have acted following the instructions they received after calling the Medical Helpline 116117. Personal wants to serve the customers as well as possible, so personal and service planners must think about the activity in a customer-oriented way. The challenge arises that do customers find the purpose of the Medical Helpline 116117 and for what kind of things to call there. Customers should be guaranteed adequate information and presentation of the purpose of the operation. The good performance of operations needs to ensure that customers are well informed. According to the survey, only one-

fifth of primary health care respondents thought that customers has been adequately informed. This should be paid attention to.

Ministry of Health and Social Services video Hätönen (2018) highlights the rational and impressive use of tax resources in telephone counseling service. Soininen (2019, p. 228) continues that when hospital districts arrange phone counseling services impressively to the citizen and based on research information, it brings excellent service for citizens. This same is true for allocating health care resources. Resources can be better targeted if the phone counseling service is successful (Soininen, 2019, p. 228).

Like Ahonen et al. (2011, p. 7) state that the use of health care resources should be enhanced. However, the quality and effectiveness of services should not forget. Services should be of high quality and impressive from the customer's point of view. Both parties of the survey, special health care and primary health care respondents, believed that when resources use is allocated correctly, the Medical Helpline 116117 adds value to the customer that is also one objective of innovation. The Medical Helpline 116117 is perceived as an effective way to direct customers to the right place. Medical Helpline 116117 is thought to add value to the well-being of the individual. It gives customer health care advice, and customers can get help right away because they are directed to the right place at once.

Nurses are usually handling phone counseling. Nurses make decisions about care and how urgent the customer´ situation is and where to refer the customer independently (Kaakinen et al., 2016, p. 27). Kaakinen et al. continue and notice that this makes the human interaction between the nurse and the caller multifaced. Also, the role of the nurse is demanding because the nurse should have extensive knowledge from the diseases and health problems (Kaakinen et al., 2016, p. 27). When counseling the customer in the phone, the nurse does not see the customer and his/her non-verbal communication so nurse must make decisions only by listening, although the consequences of counselling can be serious to customer´s health (Kaakinen et al., 2016, p. 27). Kaakinen et al.

(2016, p. 27) continue that it is difficult to assess without face-to-face meeting and therefore nurse's interaction skills should be good, they should listen to customer actively, and be present. Doing so, the nurse can determine the customer´s need and observe the situation. The resources should be appropriate and patient-oriented to guarantee the quality of service. Giving nurse time to work is one of the resources (Kaakinen et al., 2016, p. 27).

Respondents felt it challenging to make a correct assessment of customer´s situation based on the call. Kyngäs et al. (2012, p. 217) say that by the nature, telephone counseling is individual. They continue, that in telephone counseling, the nurse establishes an interactive and goal-oriented relationship between him/herself and the caller, the action of which is guided by the nurses´ decision-making. Cedersund et al. (2003, p. 43) has researched nurses' experience of the problems, disadvantages, and difficulties they met on telephone counseling. They come conclusion in their study that the decision making on the phone is most challenging, and sometimes it is hard to make the final decision.

Hätönen (2018) supports this and tells that receiving and answering phone calls is very demanding because it is not easy to make judgments without seeing the customers, and there are also no examination instruments to supporting the decisions. Hätönen points out that the Medical Helpline 116117 is based on a human close meeting, and the good interaction skills of the nurse, and for good care of the customer, the professional should have extensive knowledge of the treatment of acute problems. The person, who is answering the phone should be motivated and competent (Hätönen, 2018). According to Hätönen, when the caller is calling the Medical Helpline 116117, it is assumed that the service customer gets is efficient and professional. At its best, the Medical Helpline 116117 is client-oriented and based on the interactive relationship between the nurse and the customer.

There were some shared features between special health care and primary health care about their opinion on Medical Helpline 116117. Innovation is successful if it supports

the service system. Both participants of the study thought that the Medical Helpline 116117 suits in the other selection of health care services and Medical Helpline 116117 complements health care services. According to results, the operation of the Medical Helpline 116117 is a necessary service. The Medical Helpline 116117 supports the arrangement of a round-a-clock services. Because of this, health care services are always available to customers.

There was also a chance to find out if there were differences between special health care and primary health care that comes to Medical Helpline 116117. According to the empirical data, there were differences. Respondents from special health care thought that customers are served as good as possible and faster than before, and health care service is efficient than before. Also, special health care is more agree that service has been thought of in customer orientation compared to primary health care responses. Respondents of special health care also thought their time using concentrates more efficiently on the necessary duties than before. Primary health care respondents did not see that the Medical Helpline 116117 has brought more demand for the job unlike the special health care respondents. Especially, the respondents from special health care thought that customers are aware of the Medical Helpline 116117, and they have got enough information from it whereas respondents from primary health care thought that the customers need more information.

Special health care respondents were more positive about customers getting right-timed care than the primary health care respondents. Besides this, special health care respondents thought that the Medical Helpline 116117 makes the directing of customers clearer than before. Respondents of special health care sees that the use of the Medical Helpline 116117 has decreased the unnecessary doctor´s appointments. Because of this, it has come more peace to work. Customer problems have been solved, so there is no need to go to the emergency department because of support from personal and their counseling. According to Taka (personal conversation, 23.9.2020), the unnecessary visits to the

doctor in the emergency ward decreased in the spring. But, now in the autumn, the worldwide corona pandemic has confused the situation.

The importance of cooperation between special health care and primary health care was considered important according to respondents, and the cooperation should be workable. Hätönen (2018) raises the issue of cooperation with other local entities when planning a common policy. A wish for special health care staff to become more familiar with the primary health care activities emerged from the responses of primary health care. Cooperation between primary health care and special health care is perceived in part as inadequate, especially on the part of primary health care respondents. Based on the responses, there should be more cooperation between the special health care and the primary health care. Also, there should be more information on job duties.

Blank et al. (2012, p. 2611) highlight that both parties must know the ways how another side is working and what are their inconsistent practice. Blank et al. says that this also deals with effective and safe service. Customers should be directed to the right service, and the timing must be right, so it is important to know what kind of matters is taking care of and where (Blank et al., 2012, p. 2611). Does the caller need care immediately, or is it time to make an appointment in a few days to the main public health? According to the results of the survey, the cooperation between special health care and the primary health care should be improved. Also, it is important to have common policies that are clear for nursing staff. The best functionality of the Medical Helpline 116117 is provided by common rules of play and being aware of duties and job descriptions from different sources.

The Medical Helpline 116117 has affected the work of nursing staff in such a way that it has added one new way how to work. To that end, the nursing staff has needed education to learn how to use this kind of health care service. However, the primary health care nurses had not received enough training, so for them, the introduction of this course of action may have been a challenge. More education was hoped for the primary

health care about the use of Medical Helpline 116117. Because of this, phone use may have brought them uncertainty in serving customers. The nurses' education is important. Because nurses are trained for the task, it brings quality to service and security to customers who calls to Medical Helpline (Hyrynkangas-Järvenpää, 2007, p. 427). A few of the primary health care respondents answered that they do not know the deepest meaning of Medical Helpline and they have only informed about it.

According to the results of the study, Medical Helpline 116117 has affected the working hours of the nursing staff. Employees said that their working hours are now more effectively arranged. But some workers are worried about the number of shifts they have on the Medical Helpline 116117, as well as the number of employees. Respondents felt that the Medical Helpline 116117 brought challenges to work but felt that the Medical Helpline does not employ them more. Staff motivation for the job remained the same as before. At whole, the staff was positive about the Medical Helpline 116117, and they felt it appeared clear. This certainly made it easier to adopt a new form of work. Likewise, that the operating model is clear.

In some parts, the effects of the Medical Helpline 116117 were positive according to primary health care respondents. Now, the primary health care nurses can direct the customer to call the Medical Helpline 116117 at the time the health center is closed. This allows them to provide customers with an option other than that during the catch periods they should leave to visit the hospital's emergency department. This will enable nursing staff in the primary health care to guarantee that the customer will always receive advice on the phone. On the other hand, their working hours may now be spent more advising customers about the Medical Helpline 116117 and its purpose.

One reason why innovation can be useful in the public sector is that personal are more satisfied with their work. In this study, this can be seen in two opposite ways. For special health care nursing staff, the advent of the Medical Helpline 116117 has affected both positively as well as brought challenges. Nursing staff is getting more loaded, as they

have the responsibility to ensure that the assessment of the need for care is correct when they answer the Medical Helpline 116117. It is challenging for respondents in the phone calls to assess the situation of the customer, and this can increase the concern that employees feel when they give instruction for the customer. The positive impact of the Medical Helpline 116117 applies to work conditions in the special health care. In their working hours, nurses will be able to better and more efficiently allocate the necessary work tasks. The use of the Medical Helpline 116117 calmed the atmosphere, as now customers' calls are directed to the Medical Helpline 116117 not to the emergency clinic.

The Medical Helpline 116117 has also contributed to the provision of service to customers by healthcare professionals. Respondents felt that the Medical Helpline 116117 supports serving customers well. Because the use of the phone supports the organization of 24/7 emergency services, it has made it easier for nurses to work. Nurses felt that they want to provide good service to customers, and now they can implement it, as the Medical Helpline 116117 complements the service provision in their opinion. The need for care regional criteria for guiding clients is a new method of operation in the hospital district. This will unify policies among providers and provide security for nursing staff to do the right thing. The Medical Helpline 116117 has also contributed to cooperation between primary health care and special health care. Cooperation takes on greater importance as 24-hour emergency services are now organized in cooperation.

The positive effect of the phone counseling is that customers receive quality service. Customers will be able to get timely care and easy access and contact with healthcare services. The Medical Helpline 116117 complements healthcare services and diverts resources in the right way to the right places according to results. Medical Helpline 116117 affects the organization workers' tasks. Since now, some of the staff can focus only on telephone work, and on the other hand, only on nursing and nurses do not need to do both simultaneously. This division of labors can also see as a one factor of innovation

because the phone answering, advice giving, and customer directing process is more effective now.

The main job of caregivers is to serve customers well. Respondents said that the Medical Helpline 116117 help with this. Respondents also felt they can serve customers as well as possible because with the phone customers have quick access to health care services. Customers receive timely care and advice quickly. Employees said directing customers to right place is easier now. There are also positive outcomes about customers reaching out to the on call more easily.

The challenge is the cooperation between special health care and primary health care. Some of the primary health care respondents felt that cooperation is not workable. Another challenge is that customers should be informed more. It is important that customers know the number of the Medical Helpline 116117 and what is the purpose of the Medical Helpline 116117. Now nursing staff thought that customers are not informed enough. Customers should recognize the difference between the emergency number and the number of Medical Helpline.

Especially, attention should be paid to staff members and their education. Education is meant to ensure that services are of high quality, and the nursing staff knows how to work properly. Telephone triage is a demanding job, and the challenge is to get all customers guided to the right service. According to results, nurses are concerned about whether the customer gets enough information and do they make a correct assessment of the caller's condition. Based on the call alone, there is a risk that the client's situation is different from what the customer tells on the phone. The challenge is also to make entries so that they are short but adequate and appropriate.

As an innovation Medical Helpline 116117 is a part of the whole health care service system. Its benefits may be more sensible services, increased well-being, the better quality of services, or more efficient functioning. Altogether, the role of the Medical Helpline

116117 is seen to support the arrangement of round-the-clock on-call duties based on the responses. Also, respondents thought that Medical Helpline 116117 complements other health care services. The results showed that the Medical Helpline 116117 is seen in a positive light from the perspective of the nursing staff. Nursing staff was happy to accept the Medical Helpline 116117. Action of the Medical Helpline 116117 was a necessary service and it has a lot of good characters. The Medical Helpline 116117 was also easy to accept. As Carlsson et al. (2014, p. 7) has shown in their studies that effective and well-functioning telephone counseling service can make the health care system to work better.

During the coronavirus epidemic the Medical Helpline 116117 shared information and care instructions to citizens. Partly the Medical Helpline 116117 jammed because the huge amount of calls. Because the Medical Helpline 116117 is a quite new service in the district of South Ostrobothnia, the coronavirus epidemic made it more familiar to citizens at once. This shows that citizens have found the Medical Helpline 116117. It is proved how necessary the Medical Helpline 116117 is.

This research focused on special health care and primary health care personal. One feature of innovation is that customers can affect the service they get. Further research could concentrate on customers and their opinions and experiences about the Medical Helpline 116117. It would be interesting to find out how customers had felt the use of the Medical Helpline 116117. The aim of the Medical Helpline 116117 is to direct customer to the right service, and give specific instructions depending on customers‘ situation. Really important knowledge would be that do the customers feel that they have received right help and have given instructions been right. Also, there is many stakeholders whose opinion would be useful when underestimating the effects of the Medical Helpline 116117 and how to improve it. Policy makers, service providers and service evaluators are interested in the outcomes and use of resources.

According to Ministry of Health and Social Services video Hätönen (2018) tells that the objectives of the Medical Helpline 116117 are to reduce unnecessary calls from the emergency centre and use tax resources sensibly and impressively. The customer is wanted to get help from the right place at the right time from the right place. The intention is for customers to get help from one call at a time. Examining the realization of these goals would also be interesting. For example, after one year of use it can research that are resources targeted right and how the Medical Helpline 116117 has affected on the use of health care resources. One objective of the public sector innovation is that the public resources are used effectively.

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