

The perspective of emergency room workers on flexible deployment: A qualitative research

Master thesis

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Abstract

Introduction The pressure on the healthcare sector is increasing. This can also be seen in the emergency room, where shortage of nurses is a problem. This has not just a negative impact on nurses because of the increasing work pressure, it has an impact on quality of care. Flexible deployment, working in different hospitals, could be a solution to the problem of shortage of nurses. Despite the growth of freelancers, there is not much known on flexible deployment of nurses in their own region and their reasons for flexible deployment or working as freelancers. It is important to find out why nurses still see barriers avoiding them to be flexible deployed and why some nurses are willing to work as freelancer. Therefore, the aim of this study is to identify the impeding and facilitating factors expected by emergency room workers related to flexible deployment in the hospitals Medisch Spectrum Twente (MST), Ziekenhuisgroep Twente (ZGT), and Streektziekenhuis Koningin Beatrix (SKB).

Methods

Semi-structured individual interviews were conducted, to give some direction to the interviews, but still give respondents the chance to give as much information as they wanted. Interviews were preferable held physically in the emergency room of the participating hospitals, or via Zoom if necessary. Managers and nurses who were working at the emergency room from SKB, ZGT and MST were included in this study. Convenience sampling was used to recruit managers. Nurses were invited via snowball sampling. There were two interview schemes, one for managers and one for nurses. Both were based on the Social Cognitive Theory and the Job Characteristics model. Interviews were recorded and held in Dutch. Before the interviews were held, the participants had to agree vocally with the informed consent. After the interviews were held, the interviews were transcribed with the use of Amberscript. Interview data was pseudonymised. Thereafter, transcripts were coded. A second researcher coded next the first researcher, also the first two transcripts. First open, summarizing pieces of text, then axial, clustering the codes under themes. Lastly selective coding was used. In this last phase all existing themes were compared, and overlap was removed. Based on the remaining themes, topics were created to show the different aspects mentioned by the respondents. Based on the themes which belong to the topics, the impeding and facilitating factors were conducted.

Results A total of 16 interviews were conducted. Three managers and thirteen nurses were included in this study. Ten topics on the attitude towards a flexpool were retrieved from the interviews. Each topic had themes, which showed the most important findings of the interviews. Remarkable was that all nurses saw the opportunity to learn something in other hospitals as facilitating factor to work in a flexpool. In contrast, the current working arrangements were seen as an impeding factor to work in a flexpool. Managers thought besides these factors the improvement of cooperation between different hospitals as opportunity when a flexpool was created. Both managers and nurses saw the influence of freelancers, who work currently in the emergency room to fix the problem of shortage of nurses, as an impeding factors to create a flexpool.

Discussion Most of the respondents were positive and enthusiastic about a flexpool provided that there was clarity about terms of employment, such as schedule, travel expenses and wage. This study has shown that a lot of factors facilitate or impede working in a flexpool. This study is a first step towards creating a flexpool. However, to create a flexpool more research should be done to make it also appealing and cost effective for hospitals. This includes research to the possibilities of a flexpool within a hospital with collaboration between different units and research to the factors which are the most impeding and most facilitating, to know which factors should be prioritised when making a flexpool attractive for emergency room workers.

Introduction

The Dutch working population is aging. Consequently, there are more elderly, and the need of care is growing because of the aging populations (Van Hamersveld, 2021). Simultaneously, the Dutch working population is decreasing (De Beer, 2022). Expectations suggest that the care demand for health care will increase even more in the upcoming 30 years (De Beer, 2022). The aging of the population puts pressure on the Dutch health care system, especially on health care workers such as nurses. One of the parts of the health care system that is under pressure is the emergency care (Ten Houten, 2017). Emergency care demand is defined as ‘a patient/victim or a bystander of an accident asks for immediate assistance in association with an experienced or observed possibly treating or short-term life-threatening situations as consequence of a health problem or an injury that has suddenly arisen or is suddenly getting worse than it was’ (Landelijk Netwerk Acute Zorg, 2019). Emergency care in the Netherlands is provided by different stakeholders including general practitioners (GPs), general practice service which work after office hours of a GP, ambulance care and the emergency room (ER). ERs form the frontline of health care for immediately care (Berchet, 2015). The primary task of an ER is therefore to take care of patients who fell acutely ill and create safety for these patients (Eriksson et al., 2017). The Dutch ER took care of more than 2.3 million patients in 2018 (Nederlandse Zorg Autoriteit, 2020). Despite the importance of the ER, the amount of Dutch ERs is decreasing. Seven ERs were closed in the Netherlands between 2016 and 2019. Alongside this decline, the amount of ERs which were open 24 hours a day decreased from 90 to 83 (Nederlandse Zorg Autoriteit, 2020). In the existing ERs, the shortage of nurses is a serious issue. Emergency care nurses experience high levels of stress what may result in absenteeism, decreased job satisfaction and a high turnover rate (Brborović et al., 2017; Bruyneel et al., 2017; Roberts & Grubb, 2014). The shortage of nurses does not only influence the nurses themselves, but also negatively influence the care patients receive (Oulton, 2006; Aiken et al, 2002). Patients receive delayed, unfinished, or incomplete care (Blouin & Podjasek, 2019) which in turn could lead to damage of patient’s health and safety (Hall et al., 2016).

According to Van Beek (2021) adaptability is key to solve the problem of the mismatch between health care demand and supply. Flexibility is important in situations when pressure exists, and there is need of quick action, like in the ER. Different solutions were provided in the literature to solve the problem of shortage of nurses. One of them is shown in Germany where economic migrants could learn the German language and learn nursing, so they can work as nurse and the problem of shortage of staff could decline (Marc et al., 2019). According to Boswell et al. (2008) a flexpool could be another potential solution to the problem of the shortage in staff. This flexpool could be provided in a way that staff will be transported to work at different hospitals instead of transporting patients to different hospitals. To create a flexpool, it is important to know what working in a flexpool includes. Flexpool workers are ‘Internally hired (no use of a third party) under zero-hour and min-max contracts’, for flexpool workers ‘working in a flexpool enables the ability to meet demand and supply fluctuations’ (De Heer & Verweij, 2011). Besides the term flexpool, the term flexible deployment is often used in similar contexts (Kelly et al., 2011). According to Morris (2021), different forms of flexible deployment exist; ‘float pools’, ‘cross-trained nurses’, ‘resource teams or temporary nursing agencies’ and ‘agency nurses’. Float

pools are used in hospitals where nurses are trained in working as nurses in different departments of the hospital, for example in the ER and in the intensive care unit (ICU) (Dall'ora and Griffiths, 2017). Cross-trained nurses are quite identical to float pool nurses, but instead of trained for different units, they are primarily trained for one unit. When it is necessary, nurses could work temporarily on other units, but after a certain amount of time, they will go back to their own unit (Dziuba-Ellis, 2006). Resource team nurses have a certain expertise but work in different hospitals. Agency nurses have overlap with resource team nurses, but instead of focussing on one department, these nurses are broader oriented and could therefore work on different departments in different hospitals (Mazurenko, Liu & Perna, 2015). Besides flexpool workers, some nurses work on freelance base. Freelance workers are externally hired and need to take care of their own social insurance. Freelance workers are not secure of money and work, they must arrange it by themselves while flexpool workers have certainty of work, but the amount of work and therefore their income may vary (Tabak, 2022).

Flexibility of employees could be divided into workers perspective and organisational perspective (Hill et al., 2008). From the workers perspective, flexibility exists when employees can choose their own location, time, and duration. Flexibility is for them working combined with their private schedule (Gerdenistch et al, 2015). In the organisational perspective there are three different views (Wright & Snell, 1998), 1) flexibility of human resource management (HRM) practices, referring to the question if a flexpool is possible based on the human resource instruments of a company; 2) the flexibility of behaviour, referring to the flexibility of people in changing their routine, e.g. anticipating on the changes of order; 3) flexibility of employee skills (also called 'functional flexibility' or 'floating'), referring to the extent to which employees can use their skills in a variety of working context. The more employees can work in a different context, less people are needed (Wright & Snell, 1998; Salvador & Gnanlet, 2021).

According to Van Osch et al. (2017), the main reasons for emergency care nurses and ICU nurses to keep their job can be explained by four reasons which are related to behavioural factors. The first reason involves the traits of the unit leader. Nurses value their leader when they are accessible, actively involved in their unit and when communication is clear. The second reason concerns the interprofessional relations between different colleagues in a unit. Van Osch et al. (2017) observed that nurses are more likely to stay in their position when the relations with colleagues are good. This includes trust, feeling valued and feeling respected. Thirdly, the working environment is important for nurses. Nurses who work on the ICU or ER have the feeling that their job has value. This feeling of appreciation makes nurses more likely to keep their position. Lastly, personal reasons as job fit and lifestyle determine if people want to keep their job as ICU or emergency care nurse (Van Osch et al., 2017). Despite this extensive study from Van Osch et al. (2017) about reasons for working in ICU and ER, insight in the specific context of flexible deployment, was not studied.

Flexible deployment in health care is associated with both advantages and disadvantages. Flexible deployment has been correlated with less experienced workload, more freedom, and more variety in work, especially when working in different settings (Maurits, de Veer, Francke, 2013). Despite these advantages there is hesitancy to flexible deployment because of costs and safety concerns of flexible deployment, which is the reason that there is still an imbalance between supply and demand of nurses (May, Bazzoli and Gerland, 2006). Nevertheless, the

number of freelance workers in health care workers is growing (Central Bureau for Statistics, 2020). In 2007, there were about 73,000 employees in social and health care who worked on freelance base. In 2018 this amount was already increased to more than 128,000 (Central Bureau for Statistics, 2020), and in 2022 this number was further increased to almost 170,000 people (The Netherlands Chamber of Commerce, 2022). One of the reasons of this growth is the abundance of vacancies. Nurses could choose on average between five different vacancies when they are searching for a job. The growth of freelancers results in flexibilization of care (Tabak, 2021). Despite the growth of freelancers, there is not much known on flexible deployment of nurses in their own region and their reasons for flexible deployment or working as freelancers. It is important to find out why nurses still see barriers avoiding them to be flexible deployed and why some nurses are willing to work as freelancer.

Bowie et al. (2022) described how to use a flexpool. Bowie et al. (2022) pointed out different fields of interest like program design, nursing practice, workforce technology and flexible workforce pipelines which should be considered when building a working flexpool. What was missing in this article were the reasons for nurses explicitly, to be flexible deployed. Therefore, to get a broader view on the perspective of flexible deployment from emergency care workers, this study aims to identify the key impeding and facilitating factors expected by emergency care workers related to flexible deployment in the hospitals MST, ZGT and SKB (Mazurenko et al., 2015). The following research question has been formulated to investigate this:

What are impeding and facilitating factors of flexible deployment from the perspective of emergency room workers at the hospitals MST, ZGT and SKB?

Methods

In this chapter the methods of this study are presented. This chapter contains of the research design, study population, interview procedure, way of analysing the data and ethics.

Research design

The aim of this study was to investigate what the facilitating and impeding factors of flexible deployment are from the perspective of emergency room workers at 'Medisch Spectrum Twente' (MST), 'Ziekenhuisgroep Twente' (ZGT) and 'Streekziekenhuis Koningin Beatrix' (SKB). A qualitative study was conducted with the use of semi-structured interviews. In this study it was important to gather information about emergency room workers and their opinion about flexible deployment, so a broader sense of the problem and solutions could be pointed out. Besides this Crowe et al. (2011) described that qualitative research was often used to 'explore professional attitudes to and experience of a new policy initiative or service development'. Interviews were semi-structured to give some direction, but still enable the respondent to give as much information as possible (Baarda & Van der Hulst, 2017; Edwards & Holland, 2013). The semi-structured interview method was the most used method of data collection through interviewing, especially in the context of health care (Gill et al., 2008; Taylor 2005). Interview schemes

showed the topics of the study with questions which were connected to each topic. These topics and questions were defined before performing the interviews, so all interviews had the same topics (Annex 1; Annex 2) (Robert Wood Johnson Foundation, 2008; Taylor, 2005; Gill et al., 2008). To perform a semi-structured interview, it was important to have knowledge about the topic. To gain information about working in a flexpool, research from Bowie et al. (2022) and Van Osch et al. (2017) was consulted. This research focused on opinions about flexible deployment from nurses in other units than the ER. The results were used to create the topics of the interview scheme (Turner, 2014).

Population

The study population consisted of ER workers of three hospital which were part of Acute Zorg Euregio. These ER workers include nurses and managers. The Acute Zorg Euregio is a network of Emergency care organisations in the Euregio. The Euregio includes the region Twente, Oost-Achterhoek and parts of the border regions with Germany (Figure 1) (Annex 3). The following hospitals were part of the Acute Zorg Euregio: MST, ZGT and SKB. Nurses and managers were included when they had been working in the ER in MST Enschede, ZGT Almelo or SKB Winterswijk for at least three months and met the following inclusion criteria. First of all, nurses and managers should be capable to perform the interviews in Dutch. No ages or genders were excluded. Secondly, nurses should still be working in the ER, so retired nurses were excluded. Nurses were included that were working in a flexpool or as a freelancer (ZZP) next to their employment at one of the three hospitals. As freelancer nurses, they already work different shifts in different hospitals. Nurses working in a "float pool" were also included. This means that nurses work in a flexpool between different departments within their own hospital (Dall'ora and Griffiths, 2017). Lastly, there were nurses involved who do not work in a flexpool or as freelancers.

ZORGGEBIED IN DE EUREGIO

Acute zorg stopt niet bij de landsgrens. In Twente, de Oost-Achterhoek en een deel van Duitsland is Bureau Acute Zorg Euregio op vele terreinen actief.



Figure 1: Map of Euregio

Recruitment

Participants were recruited using convenience sampling. Convenience sampling is often used in qualitative research and specifically around a certain location, in this case hospitals (Stratton, 2021). A researcher (MP) of Acute Zorg Euregio contacted the three managers of the ERs at MST, ZGT and SKB. These three managers recruited the nurses using ‘Snowball sampling’. Snowball sampling is a sub-category of convenience sampling and is also known as ‘chain referral sampling’ (Bryman, 2012; Kennedy-Shaffer, Qiu & Hanage, 2021). Snowball sampling is identifying and inviting participants via already included participants (Kennedy-Shaffer, Qiu & Hanage, 2021). The managers recruited the ER nurses that could be included in the interviews. The managers of the ER were also participants in this study. After a researcher (MP) introduced the project to the managers, an email was sent to the three managers with a short introduction of the study and the question to plan an appointment and to recruit staff to be included. Information letters (Annex 4) were shared with the managers and sent to the participants. The informed consent (Annex 5) was also shared with the participants in an email, so they knew where they had to consent for to participate in this study.

Interview procedure

The interviews were scheduled in March and April of 2023. For performing the interviews, two interview schemes were made and used (Annex 1; Annex 2). The interview schemes were based on the determinants from the SCT (Bandura, 1986; 2004) and the Job Characteristic Model (JCM). The interviews took about 45 minutes and were conducted in Dutch. Audio recordings of the interviews were made, to allow the researcher to listen to the interviews again. Interviews were held individually, so social pressure would not influence participants’ answers. Interviews were held preferably in person (face-to-face), but if this was not possible the interview took place online via Zoom. The in-person interviews took place at the ER of MST, ZGT (Almelo) and SKB. The interview scheme for nurses (Annex 1) differs from the interview scheme for managers (Annex 2). The interview scheme for managers was used to interview the contact persons, which were the managers of the ERs of SKB, ZGT and MST.

Interview schemes

The interview scheme for managers contained some general questions about the structure of the unit. According to Van Osch et al. (2017) structure of a unit influences behaviour of nurses. Information which was gathered included the staff in the ER, the number of nurses that worked in the ER and if there is shortage of staff and the reasons for this. There were also some questions about the connections within the hospital to see if things could be changed easily. This information needed to be collected once per hospital, therefore it was decided to ask this question to the managers. Some questions were less relevant for managers, therefore some questions in the interview scheme for nurses were deleted or changed in the interview scheme for managers. The interview schemes can be found in Annex 1 and Annex 2. Both interview schemes were based on

several models to create a complete scheme that could answer the main question.

To develop the interview scheme, the researcher used factors from the SCT by Bandura (1986). The theory was used for behavioural learning and behavioural interventions and often used in the context of health care interventions. When working in a flexpool nurses and managers need to adapt their behaviour and learn from this. According to Siahaan (2022) environmental, physiological, and cognitive factors, make that someone is behaving in a certain way and choose their job on that base. It was expected that nurses did choose their job and the location of their job with a reason, and therefore are not easily willing to work in different hospitals. These three factors are in line with the SCT of Bandura (1986). Bandura (1986) claims that change in behaviour is based on environmental, behavioural, and personal factors, this also overlaps with the existing views of flexibility according to Wright and Snell (1998). Because of the influence of environmental factors, it is expected that colleagues will influence working behaviour of nurses (Van Osch et al. 2017). The ability to adapt of humans depends on the social system they are living in (Bandura, 2004). Cognitive (or personal) factors, individual factors, and environmental factors together explain human behaviour (Bandura, 1986). Every factor in the SCT has its own sub-terms that describe the factor. The cognitive factors include knowledge, expectations, and attitudes of a certain person. The more positive the attitude and expectations about a flexpool are the higher the chances that people are willing to join a flexpool. The behavioural factors include skills, practice, and self-efficacy of a person. With self-efficacy 'the belief that one has the personal capabilities and resources to meet the demands of specific task and situation' is meant (Bandura, 1986). Lastly, environmental factors include social norms, the access in community and influence on others. All these sub-terms can be found in the interview schemes (Annex 1 and Annex 2). For all these factors goes: the more positive, higher, or easier, the higher the willingness to work in a flexpool.

The SCT was revised in 2004. The core elements of both models were the same, but other terms were used, and it was visualised differently. According to Bandura (2004), the core elements of SCT include knowledge of how to overcome barriers (self-efficacy), outcome expectations about downsides and benefits, goals people set themselves and the plans people make to reach these goals, and perceived facilitators and impeding factors which could influence their behaviour, such as flexible deployment. 'goals' and 'outcome expectations' were used in the interview scheme. The topic 'goals' was used to see which goal nurses and managers want to reach within their job, and if this is still possible in other circumstances, like a flexpool. The topic 'outcome expectations' out of Bandura's SCT (2004), exists of different parts. First, physical outcomes. These include enjoyable and unpleasant effects of a person's behaviour and the additional benefits and drawbacks of this behaviour. For example, travel distance to different locations for nurses when they are flexible deployed. Second, social expectations, the responses of others on flexible deployment, is a part of these social expectations. Lastly, there are outcomes related to the self-evaluative reactions of persons to themselves. These could be both positive and negative such as a greater possibility to learn tasks with a higher difficulty level or work in a hospital with other expertise (Bandura, 2004).

Beside the SCT (Bandura 1986;2004), the JCM (Hackman & Oldham, 1974) was used to conduct the interview scheme. In the JCM there was assumed that the core job dimensions, skill variety, task identity, task significance, autonomy, and feedback should be positive to create the

best critical psychological states. The psychological states in this model are ‘experienced meaningfulness of the work’, ‘experienced responsibility for outcomes of the work’, and ‘knowledge of the actual results of the work activities’. Personal and work outcomes can only be researched when all three critical psychological states are positive (Hackman & Oldham, 1974). Not all factors in the JCM were relevant for the interview schemes. Some factors will remain the same with or without a flexpool and other factors showed overlap with the SCT. Therefore, only task significance, job satisfaction, autonomy, and environmental factors were used in the interview schemes. According to Gazi et al. (2022) job satisfaction is an important factor to keep or change the way of working, in this case in the ER. This is also an important factor in the JCM. In the left column of the interview schemes can be found on which theory or model the questions are based and on which factor(s) the questions are based. In table 1 this is summarized.

Table 1: Overview of interview topics and models/theories on which these topics are based on.

Topics	Model/theory
Knowledge and attitudes (cognitive factors)	SCT ¹
Goals (cognitive factors)	SCT
Task significance	JCM ²
Job satisfaction	JCM
Autonomy	JCM
Social norms, influence of others and access in community (environmental factors)	SCT
Expectations (cognitive factors)	SCT/JCM
Skills and practice (behavioural factors)	SCT/JCM
Self-efficacy (behavioural factors)	SCT

¹ SCT stands for Social Cognitive theory and was created by Bandura (1986;2004).

² JCM stands for the Job Characteristics Model and was created by Hackman and Oldham (1974).

*Other mentioned source like Gazi et al (2022) felt under one of the above standing theories/models and were therefore not separately mentioned in table 1.

Data analysis

After performing the interviews, the data was analysed. This was done by using the five steps of analysing interviews of Bakker and Van Buren (2014). First audio recordings were transcribed by using the software Amberscript. It was only necessary to check the by Amberscript conducted transcripts and improve them when needed. Secondly, transcripts were read through, and important sentences and words were marked, so they could be retraced (Bakker and Van Buren, 2014). After transcribing and analysing the interviews, member checking was provided for participants who indicated they would appreciate receiving it. Member checking is a process in which participants of the interviews were asked to review a version of the interview they

participated in (Doyle, 2007); in this case this was provided in the form of a one-page summary, with the main points of the interview. The aim of this member check was to create more accuracy of the interview data, and to minimize potential misinterpretation (Doyle, 2007). The participants received the member check via mail and needed to respond within a week if they did not agree with it. When there was discussion about a subject and no consent could be researched via mail, a short phone call with the participant was made to complete the information.

The third and fourth step of the analysing process were open and axial coding. Open coding is the process wherein pieces of text were summarized into a few words or a short sentence. This created overview in a transcript. Only the parts that were connected to the aim of the study received a code, therefore some parts of the transcripts did not receive any codes. Furthermore, there were parts of the transcript, that could receive multiple codes (Blair, 2015; Bakker and van Buuren, 2014). After open coding, axial coding started. By axial coding, codes were clustered under so called themes (Bakker and Van Buuren, 2014). Themes were a short sentence which summarizes a certain group of topics. Every code was linked to a theme (Blair, 2015). The fourth step ensures that the codes were organised (Bakker and Van Buren, 2014). As last step codes were interpreted and verified. This was done by comparing the different interviews and codes with each other (Bakker and Van Buren, 2014). Based on the codes, results of the transcripts were conducted. Codes that were often mentioned or mentioned by different participants were seen as more important than codes which were less often mentioned. This last step is also seen as selective coding, in which only relevant codes were kept, overlapping codes and codes which were irrelevant to the research question were deleted (Mortelmans, 2013). Important to notice was that in all steps codes could be changed when they were not specific enough (Bakker and Van Buren, 2014). For step three till step five ATLAS.ti was used. Two interviews were coded by a researcher of Acute Zorg Euregio (MP) and the researcher of this study (SW). Both researchers coded the first interview separately. After the first interview was coded, codes were compared, and a code list was made for the second interview. This second interview was again coded separately and compared afterwards. The code list was changed and used to code the other interviews by SW.

Ethics

All participants received an information letter (Annex 4) and an informed consent (Annex 5) before the interviews. Vocal informed consent was a requisite for participation in the study. Agreeing with the informed consent included interview data may be used for this study. The collected data was stored on the UT drive and used in order to reach the aim of this study. The collected data was pseudonymised so individuals could not be traced. The complete thesis was shared with the supervisors from the University of Twente and Acute Zorg Euregio. The transcripts and audio recordings were stored on the cloud of the University of Twente, which is a secured desk. The recordings were deleted when the interviews were transcribed. The transcripts will be stored for at least 10 years in line with the code of conduct of the University of Twente (Vereniging van Universiteiten, 2012). This study was evaluated and approved by the Ethical Commission of the University of Twente within the faculty of Behavioural, Management and Social Sciences (BMS) (Req nr 230160).

Results

In this chapter the results of the study will be presented. The aim of the results is to answer the research question. This chapter starts with the demographics of the respondents and the setting of the hospitals. After this, an overview of the impeding and facilitating factors is showed, followed by an in-depth explanation of all the described factors.

Demographic information respondents

A total of sixteen interviews were conducted, three managers and thirteen nurses were included in this study. The mean age of the respondents was 44 with a range from 31 till 63. The nurses experience in the ER varied. The mean was 11 years with a minimum of 2 years and a maximum of 23 years working experience in the ER. The deviation of respondents was as followed: one manager from each hospital (n=3), three nurses from SKB, and five nurses both from MST and ZGT. Saturation was reached after the sixteenth interview. Two of the three nurses who participated in the interviews and worked in SKB, were emergency care nurses. This means that they worked partly in the ER and partly in the ICU. Because of this, the manager of SKB was not only the manager of the ER, but also from the ICU. Nurses who worked in ZGT Almelo worked besides their job in Almelo in ZGT Hengelo for acute cases. All three managers have worked as nurses before they got the function as manager. The experience they had as manager differed among the managers. The time as manager in the current hospital ranges from 2.5 years till 10 years.

Setting

All interviews in SKB and MST were conducted face-to-face at the ER. Three of six interviews conducted at ZGT were conducted online via Zoom, because of too many patients in the ER during interviewing. Five out of sixteen respondents wanted to receive a member check after the interview. Two of them reacted on the member check with additional comments which were added to the transcript. The mean duration of the interviews was about 30 minutes without introduction to the topic. ZGT and MST experience shortage of nurses in the ER according to the managers, SKB does not have a shortage of nurses in the ER. Therefore, ZGT and MST made use of freelancers and had experience with flexworking. SKB did not use freelancers. Despite this the manager of SKB had experience with flexworkers in the past as nurse, but not as manager.

Facilitators and impeding factors for flexible deployment

In this paragraph themes are classified as 'facilitating', 'impeding' and 'impeding and facilitating'. A few themes are not mentioned in table 2. These themes are not directly impeding and/or facilitating, but these themes can be seen as an opportunity. This means that they are not completely impeding and/or facilitating, but when this theme will be improved, it will be a facilitator. These themes include: A more positive than negative attitude about a flexpool, a neutral opinion about a flexpool (both under topic attitude to flexpool), Cooperations between hospitals (topic: cooperations in region), and work pressure (topic: personal experiences).

Themes which are classified as facilitating factors make it easier to work in a flexpool. This could be themes that already exist in the current working situation like the importance of balance between the amount flexworkers and employed nurses. On the other hand, this could be themes that are expected to be facilitating, such as working together with the ambulance services.

Themes that are classified as impeding factors, make it harder to work in a flexpool. Themes that are classified as impeding and facilitating, could be both impeding and facilitating, depending on what a participant explicitly explained about this. One of them is influence of age, dependent on the age, participants expected that it was facilitating or impeding.

Table 2: Overview of impeding and facilitating factors for flexible deployment according to managers and nurses in the ER in the Euregio.

<i>Topic</i>	<i>Facilitating factors</i>	<i>Impeding factors</i>	<i>Impeding and facilitating factors</i>
<i>Attitude to flexpool</i>	Positive attitude	Negative attitude	
<i>Importance of own team</i>	Balance in flexworkers	Connection with own team	Opinion of colleagues
	Use of role model	Connection with own hospital	Level of hospital
<i>Cooperation in region</i>	Work with ambulance care	Temptation to go to other hospital	
<i>Freelancer</i>	Connection with freelancers	Influence of freelancers	Experiences with freelancers
<i>Influence of home</i>	Influence of home		
<i>Knowledge</i>	Learn from others	More effort to invest	Knowledge of hospital
<i>Skills</i>	Need time to settle down	Language	Experience as nurse
			Practicing skills
<i>Personal experiences</i>	Experience as flexer	Shortages of nurses	
<i>Personal factors</i>	Openminded and motivated	Distance	Choosing when/where to work
	Self-efficacy		Influence of age
<i>Schedule and peripheral matters</i>	Make working more attractive.	Time of receiving the timetable	Time of working on a locations
	Management of flexpool	Terms of employment	
	Listen to nurses		

The topics are based on the codes which were extracted from the interviews. First, some parts of the transcript received a code about the given information in the sentence. For example, 'I will not go to a hospital A because it is too far', this sentence received the code 'distance'. Many codes were retrieved, but some codes were overlapping. For these overlapping codes, themes were created. Themes can be found in Table 2. After creating a list with themes, topics were created. Topics can be seen in Table 2 on the left side. In the following paragraphs the themes are explained in more detail.

Attitude to flexpool

Attitude is one of the determinants out of the SCT (1986). In the results this includes the opinion of nurses and managers about a flexpool. This could be positive, negative, neutral or more positive than negative. When participants have a positive attitude towards a flexpool, this means that they are interested in a flexpool and see the benefits of working in a flexpool.

Six out of thirteen nurses were positive about working in a flexpool in the ER, this will facilitate working in a flexpool. They saw the potential of a flexpool to solve future problems like shortages of staff. Besides this, nurses saw the need of more nurses, because there are already problems with filling up gaps in the schedules, and therefore it was a good idea to implement this in the region. Four out of thirteen nurses were more positive than negative about the flexpool but were sceptical and mentioned that their opinion depends on the requirements of a flexpool, like better wage and good travel expenses. Furthermore, there was one nurse neutral about a flexpool, and two nurses were negative about a flexpool for nurses in the ER, this will impede working in a flexpool. The nurses who were negative about a flexpool did not see additional value of a flexpool. This had to do with the fact that the problem of shortage of staff will not be solved with exchange of staff. According to one nurse the problem of capacity had to be solved first:

I13: *'A flexpool is filling up shortages from somewhere where already shortages are'.*

The opinion of the managers was in general positive about having a flexpool in the ER. Two managers were positive, and one manager was neutral about the flexpool. The attitude of managers will facilitate flexible deployment. The manager with a neutral opinion saw the opportunities in lessening the pressure on nurses by creating a flexpool but did not directly see the positive effects for the hospital where this manager worked. According to this manager, the most important thing is to assure that nurses will still be involved with their own hospital. This manager questions if this is priority number one in a flexpool. The other managers were positive because of different reasons. One of the managers was positive about the flexpool because a flexpool will help against freelancing. According to this manager a flexpool could be a solution to make freelancing more difficult. The last manager wanted more competition in the healthcare sector. This manager saw a flexpool as competitor of freelancing, and by creating a flexpool with better terms of employment than working on freelance base, a flexpool is more attractive and less people will go freelancing. If there are enough people who want to join the flexpool, it is according to this manager, even possible to let the nurses work in even more hospitals and to make profit as hospital.

Importance of own team

This topic is about the importance of working in a permanent team for nurses. A permanent team means working with the same colleagues and work in the same hospital, their base hospital. Besides this, the influence of the hospital where nurses work will be showed as well as importance and impact of colleagues on nurses. The following themes will be presented: connection with own hospital and own team, balance in flexworkers, opinion of colleagues, level of hospital and use of role model.

Connection with own hospital and own team

Working in a team means being familiar and connected to their 'base hospital'. This is important according to nurses. Familiarity with a unit makes it easier to work in the unit and nurses can therefore guarantee more safety for patients. Nine nurses expect that this connection will be lower when they work in a flexpool, this impede working in a flexpool. Nurses are afraid that they will see their own team and base hospital less often when working in different hospitals. One of the nurses mentioned that is harder to keep the connection to your own hospital because it will be harder to be up to date of all changes. This nurse was anxious about her connection with her own hospital and thought implementing a flexpool would be 'tricky'.

I6: 'That [be up to date when you work in a flexpool] is a kind of tricky, because of course you have to stay on top of the departmental changes.'

Besides connection to a hospital, it is important to keep the connection with their own team. Colleagues are important for nurses, and they want to keep their bonding with their colleagues. There should be a clear threshold about the time nurses should work in their base hospital and the time nurses can work elsewhere. Nurses suggest to still work about 80% in their base hospital, compared to 20% in other hospitals.

According to managers both the connection with the new hospital, and the connection with the base hospital is important. The connection with the new hospital is important to bond with the other hospitals and involve the new nurses in a hospital. Bonding can be seen as feeling welcome and on longer term the new hospital can feel like a second home. It is important to keep nurses involved and up to date about their base hospital, even when nurses temporarily work on another location according to the managers. It is expected that this will be hard in a flexpool and therefore will impede flexible deployment.

Balance in flexworkers

Nurses think that it is important to have balance in the distribution of flexworkers. Therefore, nurses advice to put not more than one flexworker per shift in a hospital, so the flexworker can get familiar with the other nurses and vice versa. This will facilitate working in a flexpool. Nurse experience more pressure because of the many freelancers. Flexworkers and freelancers do not have the same responsibilities as the other nurses, like education of nurse students. If there are too many flexworkers/freelancers, nurses get more pressure and more nurse students. Because of this there must be good deviation in flexworkers versus other nurses.

One of the managers explicitly mentioned that it is important to keep the balance in the amount of flexworkers, this is line with what nurses said. According to this manager it is important to keep the balance between working in another hospital and working in your own hospital. Further it is important to keep the balance on the unit. With balance on the unit this manager meant that there still must be enough nurses who work often on the unit and know how it works in the ER, if this balance exists it will facilitate flexible deployment.

Opinion of colleagues

The opinion of colleagues has influence on the opinion of nurses about a working in a flexpool. This could both impede and facilitate working in a flexpool. Nurses react on opinions of other nurses, so if other nurses have positive experiences with working in a flexible situation and share this with other nurses, nurses are more likely to be flexible deployed. Nurses expect that other nurses will be positive and interested about working in a flexpool, and mention that this will make it easier to also be interested in working in a flexpool. Next to this, some nurses mention that colleagues will be afraid for gaps in their own team schedule. They expect that nurses will go to other hospitals and therefore there will be more spots left in their schedule which will not be filled.

I13: *‘Colleagues will be particularly concerned about the fact, how about the timetable? Aren’t we being duped by the fact that others work in a flexpool outside this hospital?’*

There is also a chance that nurses want to stay in the hospital they work temporary in. This could be a problem according to nurses, and they think they ensured that the chance that this will happen is small. The problem according to these nurses is that you cannot forbid nurses to switch from hospitals. So, there will always be a chance that nurses switch after working in a new hospital.

Level of hospital

The three hospitals all have a different level, this could be seen as an impeding factor, but also as a facilitator for flexible deployment. The level of the hospitals stands for the presence of required facilities for emergency care in hospitals. A level one hospital does the most complicated cases with specializations such as neurosurgery. Level two hospitals can handle the vital endangered patients but does not have all specializations as a level one hospital has. A level three hospital is handling the isolated injuries as fractures. In the Euregio SKB is a level three hospital, ZGT a level two hospital and MST a level one hospital. Level of hospital has influence on the opinion about a flexpool. Especially the nurses who work in level one hospital, thought it will be a drawback to work many shifts in lower-level hospitals. Again, the nurses from all hospitals showed that they have a reason for working at a certain place and the level of hospital is important to them. The nurses who work in lower-level hospitals, mentioned that they have more freedom to perform certain tasks and think that is important to them and therefore a reason to work in that specific hospital. The nurses which work in higher-level hospitals like the speed of handling cases and challenges which come by in these hospitals.

The difference in level of the hospitals could lead to opportunities to learn new skills but could also be a pitfall for nurses according to managers. Managers see the differences in level as educational and interesting. According to managers, nurses could learn from the differences in expertise in the hospitals. A downside according to two of the managers is that there is a reason why people choose for a certain hospital. It could be the degree of challenge in MST or the feeling of home in SKB. According to the managers this could be a threshold for making a flexpool.

I1: *‘When you work here, you do so for a certain reason. Nurses choose a certain amount of calmness and a certain amount of security.’*

Use of role model

In every team there are some people who are curious to do something, this facilitates flexible deployment. According to one of the managers it is important to choose a few nurses who can handle working in a flexpool and will probably be positive about it. This group can be seen as the role models. The role models should convince other nurses to try working in a flexpool and these nurses will convince other nurses. If the first nurses are not the right persons, the rest of the nurses will not follow according to this manager. The managers advice therefore to choose the first nurse in a flexpool wise, so this nurse will attract other nurses and the chance of a successful flexpool is bigger according to the managers.

Cooperation in region

This topic is about the cooperation between the hospital in the Euregio and includes the advantages and disadvantages of cooperation in the region according to nurses and managers. This topic looks broader than only cooperation between hospitals. The following themes will be showed: cooperations between hospitals, work with ambulance care and temptation to go to other hospitals.

Cooperation between hospitals

According to eight nurses, working in a flexpool will lead to more and better cooperation between the hospitals in the region. This can solve problems of capacity in the Euregio. Besides this, the expectation is that nurses are less likely to leave the region when there are more opportunities to work in their own region. Nurses will know the other hospitals after a certain amount of time; therefore, it is easier to help each other when there are shortages of nurses. Nurses know the protocols in different hospitals and can find stuff they need for helping patients. This will have a positive influence on the quality of care according to the nurses. This can therefore be seen as an opportunity of working in a flexpool.

I6: *‘Maybe I will take some of my knowledge with me and I can at least spread it there.’*

One thing that needs attention is the fact that this cooperation must be a flow between all hospitals and not a one-way flow. Some nurses are afraid for a one-way flow. Only when there is

a flow between all hospitals, a flexpool is useful according to the nurses.

All managers agree that there are opportunities in the Euregio to solve the problem of shortage of nurses. Managers already know each other what makes it easier to make this connection. Managers could use each other's network, and this will make a better connection between the hospitals, what could lead to better healthcare in the Euregio. All managers think it is important to invest in the cooperation in the region.

Work with ambulance services

Beside the cooperations with the hospitals in the region, three nurses and all three managers see added value in involving the ambulance services in a flexpool. Working with the ambulance services will therefore facilitate flexible deployment. A lot of nurses leave the ER because of the challenging and varied work by the ambulance services. By involving the ambulance services in a regional flexpool, the regional connection will be stronger, and it will be easier to cover a shift for each other. The only obstacle of involving the ambulance services is that the degree of ambulance personal differs from that from ER nurses, so nurses should get another degree for working on the ambulance.

Temptation to go to other hospital.

Two managers are afraid that the cooperation between the hospitals could lead to migration of nurses. This is seen as an impeding factor for working in a flexpool. They expected that other hospitals could be more appealing to work in and nurses will leave their base hospital. Managers see this as a negative fact and mention that if there will be a cooperations as a flexpool in the region, hospitals should be careful that we not become each other's rivals and steal each other's nurses.

Freelancer

This topic is about freelancers on the ER. Some hospitals already use freelancers and some nurses work besides their job in a hospital as freelancers. The opinion and experiences of nurses could have influence on their opinion about a flexpool. The following themes will be showed: experiences with freelancers, influence of freelancers and connection with freelancers.

Experiences with freelancers

Many ER nurses already have experience with working together with flexworkers like freelancers. The opinion of nurses about freelancers differs from nurse to nurse, therefore for some participants their experiences with freelancers will facilitate working in a flexpool and for other it will be an impeding factor. In general, nurses think that freelancers have the skills to work in an ER, but there was often a 'but' when nurses talked about freelancers. The doubts have to do with the broader tasks which go along with work as a nurse. Nurses think that freelancers work their shift and that is it, where nurses in their base hospital do more than that. Nurses in their base hospital must help in commissions and workgroups. Nurses think that a negative effect

of freelancing is that less people join the workgroups and commissions. The opinion about freelancers differs between nurses which also work as freelancers and nurses which do not work as freelancers. Nurses who work as freelancer had more appreciation and were more positive about the freelancers. They saw the added value of freelancers. One of the nurses mentioned other nurses should be happy if freelancers will help in their hospital, because otherwise they should work with less nurses.

Influence of freelancers

The fact that freelancers exist, has influence on the opinion of nurses about working in a flexpool. Working on a freelance base is, according to nurses, more tempting because of the higher wage and the freedom of choosing the best shifts. Freelancers do not have to take care of the students, and when they do, to a lesser extent than other nurses. Freelancers can for example let a student help with one shift, but the other nurses have supervision and conversations about the progress of the student. Nurses do understand why other nurses work as freelancer, but still think this is a huge obstacle to create a flexpool and a huge obstacle to solve the problem in general of the shortages of nurses. Therefore, freelancers negatively impact working in a flexpool. One of nurses mentioned:

I7: 'It is obviously very twisted now that we have freelancers here and we have shifts open here and our nurses are working in [another hospital]. So, it [freelancing] is all about the money.'

The fact that freelancers exist has also influence on the managers of the flexpool. Freelancers are less involved by the hospital, but the hospitals with shortages see the need of using them. Without the use of freelancers there is even a higher work pressure for nurses according to the managers. The managers do understand why people work as freelancer: there is a lot of variety in work and a freelancer earns more money than a nurse in employment. For managers is it frustrating that they must pay freelancers far more money than their own staff, despite the workload for freelancers is less. Therefore, managers are enthusiastic about a flexpool. They hope they can give their own nurses a better wage and still have enough nurses.

Connection with freelancers

The two hospitals which make use of freelancers explain that they are careful with them. The managers explain that they only use freelancers they know, and only those who work in a base hospital besides working as a freelancer. To the managers this is important because nurses should keep their expertise, and this can be done via their base hospital. The connection with freelancers is a facilitator to use flexworkers and be flexible deployed because managers are positive about the freelancers they work with.

Influence of home

All nurses mentioned that they expect family was either positive about flexworking or they had no opinion about flexworking. This will therefore facilitate working in a flexpool. The main

reason for no opinion was that nurses thought it does not matter where they work for their family. They already have flexible and irregular working times, and the location has no influence of the irregularity of working in an ER according to the nurses.

I10: *'It would not affect them very much, because you work the same hours and for your family it does not matter whether it is in Almelo or in Winterswijk or in Enschede.'*

Knowledge

The following topic is about different degrees of knowledge nurses have of a hospital and how to gather knowledge when working in a flexpool. Besides these subjects, the importance of knowledge of an hospital is mentioned. The next themes will be touched upon knowledge of hospital, learn from others, and more effort to invest.

Knowledge of hospital

Nurses mention that it is important that people know how protocols works in the hospital where they work. Nurses wonder how this will be organised when people work in a flexpool, because people know less about other hospitals. Nurses are afraid that this will not work. Especially because some protocols differ between the hospitals, like who is doing the blood tests and which tests need at least be done. Nurses agree that all nurses could do their work in a normal situation and doing the base task of nursing, but when there is an urgent situation, it is even more important that people be familiar with the unit, because you need to handle quick. When nurses are working in different hospitals it will help to get information about the hospital to make it easier to make it familiar. Nurses mention especially the vision of the hospital and a tour in the ER is important to arrange this. All three hospitals work with the same system, Hix, and this is according to nurses not the only positive point. If nurses know the hospital and know how they work in a certain hospital, nurses could work in a same way of efficiency as nurses which work normal in a certain hospital. So, when the knowledge is there, it is easier to work with these nurses. On the other it is important to keep your knowledge about your own unit. When working in a flexpool, this could be harder. The nurses who are afraid if this is still possible are more resilient to join the flexpool because they think their base hospital is still the most important one. Because of these advantages and disadvantages, knowledge of hospital is seen as both impeding and facilitating when working in a flexpool.

Learn from others

All thirteen nurses agreed that a flexpool and exchange of nurses means that you learn from each other. According to all respondents this is positive and therefore will facilitate flexible deployment. This includes seeing a different ER what could make your own working situation better, because it is worser at another hospital. Besides this, working at different ERs assures that knowledge will be expanded, knowledge will be more up to date, and nurses see other expertises which are not in their base hospital. One of the nurses mentioned that experience with freelancers causes a lot of curiosity about work arrangements. The freelancer, wanted to learn:

I9: *'How you work here [hospital a] and be curious to know more about how it [work methods] works in this hospital [hospital a]. That are things where you talk about with each other'*

Managers think that a flexpool could help nurses to develop to a better nurse by learning from each other and give nurses more insights during their work. One of the managers gave an example from exchange of knowledge, from a nurse who worked as a freelancer. The nurse gathered information about Hix in another hospital and could therefore help another hospital to update their system. This saved a lot of time, because otherwise they had to find it out themselves.

More effort to invest

A side-effect of working in other hospitals is that nurses need to invest more effort, both in their own hospital and in the other hospitals. This is an impeding factor for working in a flexpool. Nurses expect that besides extra effort it will cost them more energy, both for the nurses which come to a new hospital and for those who must explain everything to the new nurse. Some nurses even expect that they will have less spare time because they are going to work on different locations. One of the nurses expected a negative attitude from the nurses which work in the hospital the flexworker arrive:

I12: *'There will always be people who will think; Again, such a newbie and we have to explain everything again and it is all fuss again.'*

One of the managers also sees the side-effect of investing more effort in a flexpool. This could cost more energy and time because some nurses need some extra education to be up to date and can work in the other hospitals too, for example to be skilled to do all tasks which are done less in their base hospital.

Skills

There are some themes relating to skills which are important for working in a flexpool according to nurses and managers. This topic is about the skills a nurse needs to work in a flexpool in the ER and what a nurse needs to get these skills. The themes that will be presented are the following: experience as nurse, language, need time to settle down, and practicing skills.

Experience as nurse

To start with the experience nurses must have to join a flexpool. With experience as nurse is meant the time a nurse is certified as ER nurse. The time as basic nurse does not count. Almost all nurses agreed that nurses which are certified as ER nurses, must start with working on their own unit and wait with working in a flexpool. First, they must have a certain amount of experience and then they could join the flexpool. The time experience on the own unit varies, but most nurses say this must be about two years. Many nurses also added to these two years that this depends on the nurse, some need more time and others less.

According to managers a bit of experience in your own hospital is important to join a flexpool. In principle nurses know how to work in an ER and it does not matter which hospital nurses normal work, but for the nurses themselves it is better to start in one hospital to learn the routine and to learn one standard manner of working. Managers think this is important to get routine in your work. Experience as nurse could be an impeding factor and a facilitator dependent of the amount of experience nurses have.

Language

One nurse mentioned explicitly that there must be more information and schooling about the German language, because in some hospitals, they also must communicate with German colleagues. The nurse says that it is not normal Germany, but the medical way of talking German. If there is a flexpool, more people need to learn this, otherwise nurses could not fully function in the ER in the specific hospital. This will impede working in a flexpool, because not all nurses can speak medical German.

Need time to settle down

Some nurses and a manager mentioned that it is important to get the time in a new hospital to settle down. If they get this time, it will facilitate working in a flexpool. Despite nurses say they have the skills, they still need the time to get used to a new situation. This includes explanations about the hospital and the way of working in this hospital. According to nurses this could differ per hospital. Nurses must get the time and opportunity to ask questions to nurses which normally work at the hospital. It is important to give the nurses the time to settle down, because this will be advantageous on the long term. Besides this, nurses will feel more confident and there is a bigger chance that they like working in a flexpool. One of the nurses mentioned that it is already less scary, when nurses get the time:

I7: 'I think if you've been there a few times, you will learn that [working in another hospital] too.'

Practicing skills

Nurses already have skills after finishing their nurse-degree, but still should be trained in their skills.

I5: 'Of course, we get everything in theory, but not in practice.'

Nurses mentioned that a flexpool could play a role as an advantage and a disadvantage in practicing skills and is therefore seen as both impeding and facilitating for flexible deployment. A flexpool could be advantageous to keep skills about traumas up-to-date, especially for hospitals where less traumas are seen. A disadvantage according to nurses is that nurses who work in hospitals where there are less traumas, first need some extra training to practice their skills before they can work in an ER with more traumas. When these nurses work in another hospital, they need more time to practice and cannot do all the rooms when they are new in the hospital.

Managers think it is important that nurses keep their skills. Managers have different opinions about how to provide training. According to one manager every nurse should be schooled in the same hospital to assure everybody has the same skills when there will be a flexpool. Another manager has no worries about the expertise of nurses when working in a flexpool, because freelancers also have expertise, and it works for them. Lastly, one of the managers sees a flexpool as an advantage of practicing skills and to keep the nurses up-to-date. According to this manager, it is sometimes hard to keep the nurses up-to-date, and when other hospitals could help by this, it would be an advantage.

Personal experiences

This topic is about the factors in personal experiences from the current working situation which could be positive or negative when starting a flexpool. These factors should be taken into account when nurses work in a flexpool. The following themes will be addressed: shortages of nurses, experience as flexer, and work pressure.

Shortages of nurses

Two nurses wonder if a flexpool will be a solution for the shortage of staff. According to them, you could only start a flexpool if you have enough nurses and borrow them in periods of sickness in a certain hospital. In the current situation, in which shortages already exist, a flexpool has no added value according to these nurses.

This was in line with what one of the managers thought, shortage of nurses will therefore impede flexible deployment. This manager was afraid that creating a flexpool was impossible with the current shortages. Therefore, this manager advice to first create a surplus of nurses and after this you could look if a flexpool can still be useful to switch nurses.

I3: 'You can hardly establish it [a flexpool] with all the shortages in care.'

Another manager did not saw the usefulness of a flexpool and was afraid that a flexpool will only cost nurses instead of supplying more nurses. This nurse was not afraid about working in a flexpool, but afraid that a flexpool could make the situation worse.

Experience as flexer

Some nurses had experience with flexworking as freelancer. They were all positive about flexworking, this will therefore facilitate working in a flexpool. They felt welcome in the hospital they worked, experienced that basics were in every hospital the same and they liked the freedom of freelance. Due to the possibility to freelance, they saw different hospitals. One of the nurses was happy with seeing things which were familiar in other hospitals:

I6: 'It is also nice to recognise that it is indeed the same everywhere.'

This gave confidence to the nurses to be able to work also in a flexpool, because then hospitals would probably differ less than nurses expect.

Work pressure

Nurses in two of the hospitals mentioned that there is a lot of work pressure and there need to be done something about this. Work pressure can therefore be seen as an opportunity for making more nurses enthusiastic about flexible deployment. According to the nurses, work pressure already exists a couple of years. There are a lot of shifts that are not covered, and nurses must work more hours than they have in their contract. This have led to an increased turnover rate: some nurses even mentioned the high work pressure as reason for leaving the ER and working another job. Nurses see the advantage of having a flexpool because they think this can give them more rest and more nurses who could help if there is someone ill.

Personal factors

Personal factors could have influence in making the choice of working in a flexpool. Personal factors could be different per nurse, but there were factors which could help in being flexible deployed. The themes that will be presented are choosing when/where to work, distance, influence of age, openminded and motivated, and self-efficacy.

Choosing when/ where to work

Two themes, which are connected to each other, are the freedom to choose when and where to work. Both could be seen as impeding and facilitating for working in a flexpool. Some nurses see flexibility as positive of working in a flexpool. They expect more freedom when they are flexible deployed because they work at different locations and times. Other nurses think they get less freedom. Their reason is that they deliberately choose for working in a certain hospital and they think it is strange if they must work in other hospitals, because this was not their choice. This has impact on their feeling of freedom, and therefore to their attitude of working in a flexpool.

I8: 'I choose for [hospital], and I choose it for a reason. Then I am not looking forward to working outside of the [hospital].'

Distance

Distance is an often-mentioned factor that could be a problem for working at different locations, as in a flexpool and will therefore impede flexible deployment. Many nurses mentioned that they expected that other nurses will mention distance as problem, but on the same time many nurses say that they think it is not a big problem for themselves. Some nurses mentioned that they think it is important to live close to their hospital, because they like to walk or cycle to the hospital. In general, the nurses agreed that traveling for one hour is still okay if it is not too often. One of the hospitals is the biggest problem for the distance issue, because this hospital is often seen as either far away to travel to or close enough to cycling/walk. Therefore, nurses have the most difficulty with working in this hospital or leaving this hospital with regards to distance.

I15: 'Indeed, [location] it is quite far to travel for me.'

Two of the managers think the distance can be a problem for nurses to work in a flexpool. According to the managers the increase in travel distance could be a problem. Nurses are used to drive a certain distance and if this become more, managers think this could be a reason that nurses will not join the flexpool.

Influence of age

A lot of nurses think that age influences the choice of working in a flexpool. They expect that a younger age will support the positive attitude and curiosity to work in a flexpool. Nurses also expect that it will be easier for younger nurses to be flexible deployed, because a younger age means less commitments and more freedom.

I13: *'The younger ones, if I could say it in that way, they would have less trouble to work in a flexpool than the somewhat older employees.'*

This does not mean that older nurses should be excluded from working in a flexpool according to the nurses. In addition to this, some nurses do not agree with the fact that a flexpool is especially interesting for younger nurses, they think it should be for everybody. Despite this fact, the older nurses did not think they would join a flexpool, because of their age. As argument they said that they have already seen a lot and do not think the advantages will counterbalance the disadvantages.

According to the managers, younger nurses are more tempted to find challenges, and the managers expect therefore that more younger nurses will joining a flexpool. According to the managers is it important to involve the older nurses in this project. They could be interested, and it is important that there is a mix of nurses in a flexpool. In a normal ER there is always a mix of ages after all, so this should also be the case in a flexpool. Depending on the age, age could be a facilitator of impeding factor for working in a flexpool.

Openminded and motivated

Two characteristics facilitate a good working flexpool according to the nurses. Nurses should be motivated to work in a hospital which they are not familiar with. Motivations is a requirement, otherwise it will not work.

I6: *'You must be up for going there'*

This is even more important in the early stages ofc creating a flexpool. Besides motivation, nurses should be openminded. Nurses should be open to learn on a different place, open to change, be open to learn new people and be open to the whole idea of a flexpool. This supports the efficiency of a flexpool according to the nurses. Besides this, motivations and open mindedness will make other people enthusiastic about a flexpool.

Self-efficacy

All nurses think they can work in a flexpool, this will facilitate working in a flexpool. According to some of them, working in the ER of SKB is not that much different from working in the ER of

ZGT or MST. The ER is a good unit to make a flexpool, because nurses in an ER must already be very flexible. One moment it is busy in an ER and another moment it is not. Patients in the ER have a short laying period what makes it also appropriate to make a flexpool in this unit. The short laying period is the result of acute care patients receive. When patients need care for a longer period, they go to a nursing unit. ER nurses do not see patients more days after each other and contacts are usually short. On top of this, freelancers in the ER are the example that it is possible for nurses to work flexible in the ER. According to different nurses, not only the ER and the flexibility is the same everywhere, but also the patients:

I6: *'But the big advantage of an ER is that the patients, in any hospital, have the same complaints.'*

Schedule and peripheral matters

The last topic is schedule and peripheral matters. The themes which belong to this topic are about the management and way of arranging a flexpool. This topic includes the following themes: make working more attractive, management of flexpool, listen to nurses, time of receiving the timetable, time of working on a location, terms of employment.

Make working more attractive

A couple of issues according to many nurses includes the wage nurses receive, the appreciation nurses get, and the travel expenses nurses receive. According to the nurses, at least higher travel expenses are necessary to make it attractive to work in a flexpool. Nurses also believe that if there is more appreciation from the upper hand, more nurses would consider working in a flexpool and therefore attractiveness will facilitate working in a flexpool. The opinion about wage differs per nurse. Some say that they are happy with it, others think they earn too less compared to the amount of flexibility they give. One of the nurses was not negative about a flexpool, but one thing was missing for this nurse to say yes to a flexpool:

I9: *'But of course, if it is financial attractive, then yes.'*

Managers agree with nurses about this topic. According to the managers the most important thing is to use more money to make it more attractive for nurses.

I3: *'People do much for money'*

Some nurses who doubt about working in a flexpool, will do it when there is more money involved and appreciation which stimulate to be flexible deployed according to managers. The advice of managers is offer the nurses something what they will not reject such as better wage, then a flexpool will be successful.

Management of flexpool

According to nurses, the management of the flexpool should be clear and well organized. When this is the case, it will facilitate flexible deployment. Take one manager who plans everything and

to whom nurses can ask their questions. It is important that the manager of the flexpool will be supported and advised by the managers of the ERs, and it is also important for nurses to be involved in the process of creating a flexpool.

According to the managers, communication between the three of them is important. There must be clear agreements between the hospitals. According to the managers there is some friction between the hospitals, and this should be spoken out. All managers think that there must be one manager for the flexpool, which receives some help of a team. This team should be a regional team, so every hospital has their input in this team. One important point for the manager of this flexpool, was that the manager of a flexpool will not be one of the three managers out of the interviewed hospitals:

I3: *'You must ensure that the management is neutral, if you have a flexpool with three.'*

Listen to nurses

Nurses want to be heard when a flexpool is created. They think they must have an opinion in the subject because they must work in a flexpool. Nurses also mention that it must be free for nurses to choose to join a flexpool. In line with this, nurses mention that the change to have successful flexpool is higher when inviting nurses to join the management team of a flexpool.

According to the managers the opinions of nurses are necessary to create a flexpool. The nurses are the ones which must work in a flexpool, so make sure they agree with the ideas of the flexpool and let them think along in this process. In line with this, nurses should be given freedom to choose if they want to join the flexpool.

I2: *'I can think of something what is good for the team and this hospital, but if the team does not want it, it will not happen.'*

Time of receiving the timetable

The time of receiving the timetable is important for nurses. This means, how many days the nurses receive their timetable in advance. A lot of nurses expect that in a flexpool there is a bigger chance to receive the timetable adhoc and this is seen as a disadvantage. Nurses mention that they have a private life and if they hear their schedule adhoc, they cannot have less time to spent with their family and friends. Some nurses see more advantages for the hospital in filling up the gaps in the schedule on the short-term, but prefer to not hear it adhoc. Nurses prefer to receive notice around the same time as their normal schedule, then it is still possible for them combine in with their private life.

Time of working on a location

The period of working on a certain location differs from person to person and is therefore seen as both impeding and facilitating for flexible deployment. Most nurses like to work a maximum of one day a week at another location. For the familiarization period, the time in which nurses get used to a new hospital, some nurses like to work a longer period. This makes it easier for them to get used to a new hospital. A few nurses want to work for a longer period on a certain location.

The downside of this is that they see their own team less often, but an advantage will be that they will be more familiar with the other hospital. Two managers agreed that it will not be a problem to send nurses for a longer period to another hospital on condition that they have enough nurses. Managers think a longer period would be better for nurses, than for a shorter period.

I2: *'They can work there [in another hospital] fulltime for three months if anyone wants it.'*

Terms of employment

A lot of nurses are dissatisfied about the current working situation regarding terms of employment. This is a big issue and an impeding factor for working in a flexpool. Nurses advise to improve the terms of employment in a flexpool, to make it more attractive for nurses to work in a flexpool. The biggest irritations have to do with working groups, collective agreements, and differences in work agreements between the hospitals.

To create a flexpool these matters must be set into clear arrangements. Managers think that the collective labour agreement should be improved. This includes improvements of travel expenses, wage, and level of education. Some of these things are written in the collective agreements, and therefore this needs to be changed.

Deviation of used codes

In the Figure 2 and 3 the deviation of codes from the interviews are shown in barcharts. The managers and nurses are pictured separately because they differ. Every topic received an own colour. Ten topics were created for the nurses and nine for managers. In the barchart for the nurses (Figure 2), the topics 'Importance of own team', 'Personal factors', and 'Schedule and peripheral matters' are mentioned most often in the interviews. In the barchart for the managers (Figure 3) the topic 'Schedule and peripheral matters' is most often mentioned by the managers. By nurses there are some themes which are frequently mentioned compared to others. These include 'Influence of freelancers', 'Connection with own team', 'Knowledge of hospital', 'Learn from others', 'Terms of employments' and 'Need time to settle down'. The frequently mentioned themes for managers include 'Cooperations between hospitals', 'Influence of freelancers', 'Listen to nurses', 'Make working more attractive', and 'Terms of employment'.

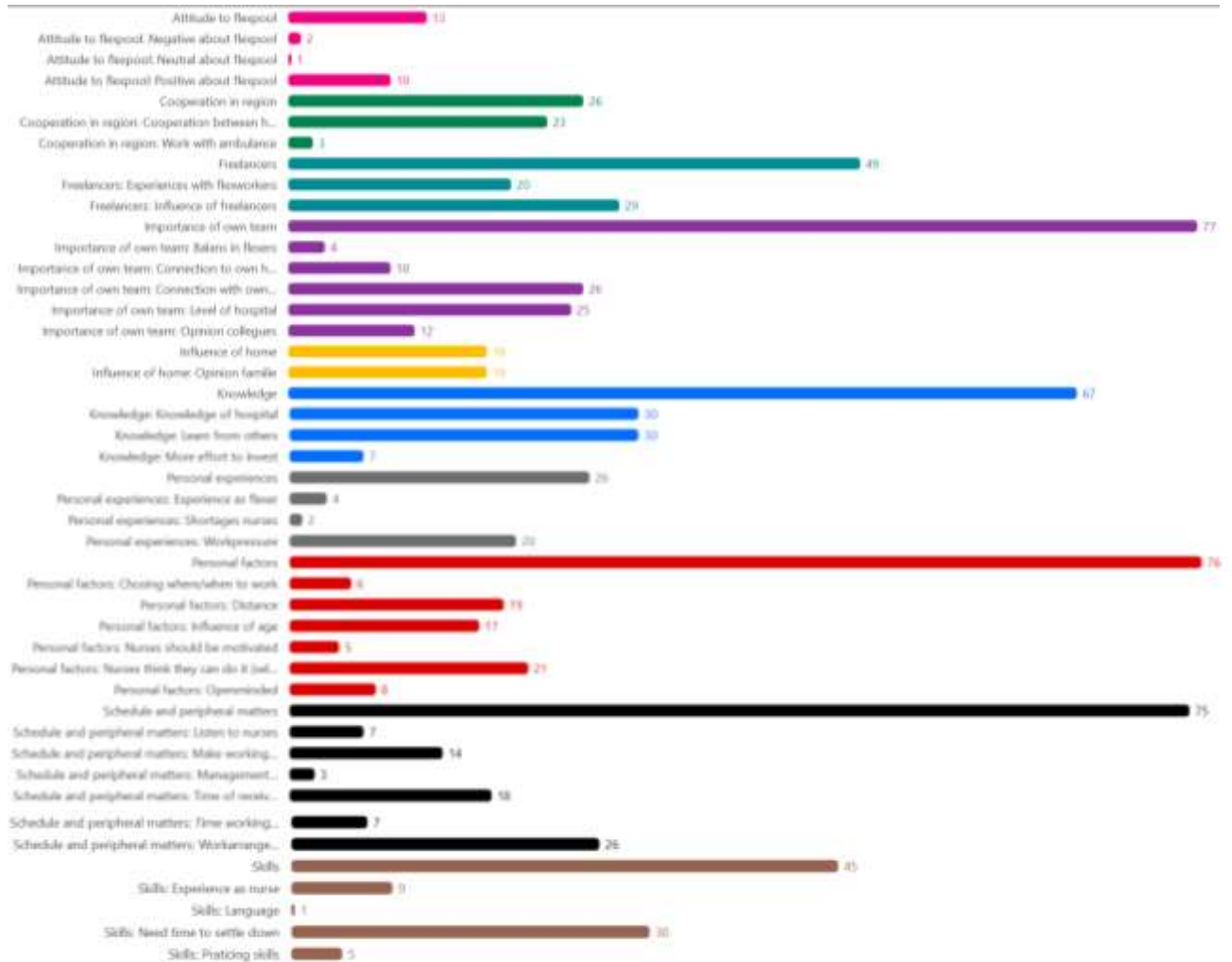


Figure 2: Barchart with deviation of used codes in the interviews of nurses (n=13).

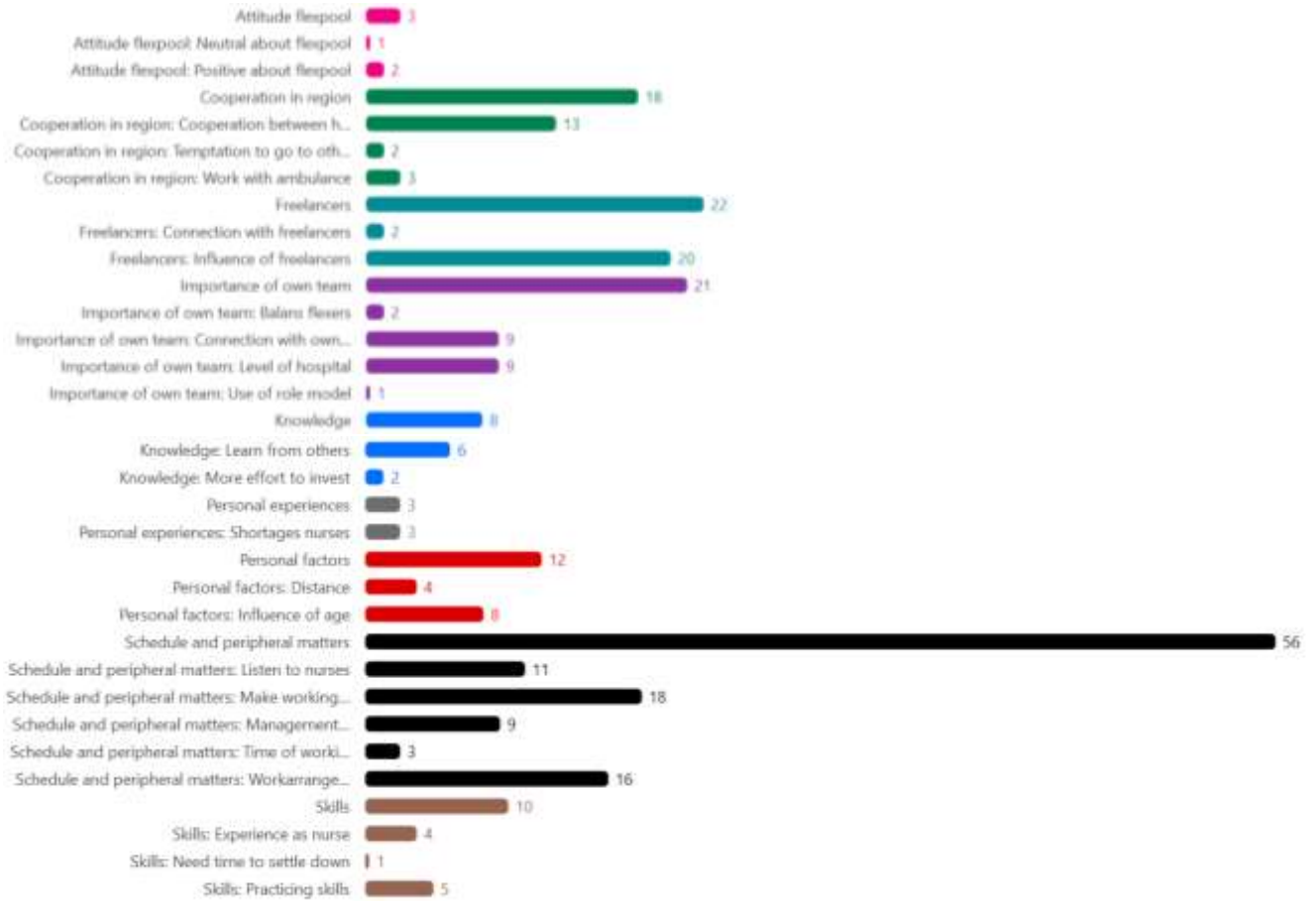


Figure 3: Barchart with deviation of used codes in interviews of managers (n=3).

Best solution according to nurses and managers

As alternative solution to decrease the problem of shortages of nurses, different solutions were mentioned by the respondents. In Table 3 an overview of the solutions was presented.

Table 3: Overview of solutions which could help by decrease the problem of shortage of ER-nurses according to managers and nurses.

<i>Solution</i>	<i>Explanation</i>
<i>Higher reward for nurses</i>	This could be financial, but also the feeling of appreciation, and more attention for healthy working
<i>Better employment agreements for ER nurses</i>	This includes travel expenses, and this must be written out in the collective bargaining agreement for nurses.
<i>Increase the investment of training of ER-nurses</i>	This means that more nurses can do the ER specialization and it is easier for nurses to start the ER specialization, for example for lower educated nurses.
<i>Invest in double degrees</i>	Give ER nurses the change to not only do the ER specializations, but also another acute care specialization, like ICU or ambulance services.
<i>Make your hospital attractive for nurses</i>	Nurses did not exactly know how to do this, but it is important to show why your hospital is special and is interesting.
<i>Involve nurses in the decision-making process</i>	The opinion of nurses is important. Give them a voice in the decision-making process. They know what they want and often they have good ideas to solve problems on the ER.

In Table 3 the solutions are summarized. Remarkable is that all managers mention the importance of the opinion of nurses, as good working flexpool. Further, a lot of advice which was given by the respondents was already mentioned in the earlier parts of the interviews like higher rewards, better agreements and making hospitals more attractive. The investment in training of ER nurses and double education, were both not mentioned yet. The double education was especially seen in combination with ICU-nurses and other acute care units of the hospital because they are closely related. The investment of training also includes more attention for lower educated nurses and use them on the ER.

Discussion and conclusion

In this chapter results will be discussed. First, the main findings of this study are presented together with recommendations of the current study. These main finding and recommendations

are compared with existing research. After this the strengths and limitations of the study are discussed. Next, implications for further research and practice are described and lastly the conclusion of this study is shown. Besides the recommendations which are written out in this chapter, there is also an advice written for the Acute Zorg Euregio. This can be found in Annex 6.

Main findings and recommendations

The aim of this study was to find out what the impeding and facilitating factors of flexible deployment are from the perspective of emergency care workers in the hospitals MST, ZGT and SKB. This study is important because a flexpool could solve the problem of shortage of staff in the ER. This study has shown that a lot of factors facilitate or impede working in a flexpool. Ten topics were retrieved from the interviews, which give an overview of the subjects which are impeding or facilitating. These topics include attitude to flexpool, importance of own team, cooperations in region, freelancers, influence of home, knowledge, skills, personal experiences, personal factors, and schedule and peripheral matters. The interviews showed that 75% of the interviewed nurses and managers were positive and enthusiastic about a flexpool under good working circumstances. The most notable factors were the terms of employment, influence of freelancers, and the chance to learn something. The current terms of employment impede flexible deployment and the influence of freelancers has also been found to obstruct flexible deployment. In contrast, the chance of extension of knowledge and experience in a flexpool, facilitates flexible deployment.

Nurses' opinions

The influence of freelancers was often mentioned by nurses as an impeding factor for flexible deployment. The reason for this is that working on a freelance base is more attractive than working in a flexpool according to nurses. One of the reasons is the wage freelancers receive compared to the tasks freelancers must do. According to Maurits, de Veer and Francke (2013a) freelancers are more expensive while they have lesser tasks, because they are not familiar with the place where they work. Besides this, freelancers often have less responsibilities. This makes creating a flexpool less attractive. This unfair distribution of tasks compared to the wages nurses receive, hinder flexible deployment.

Another impeding factor of working in a flexpool is the connection of nurses with their own team and own hospital. Nurses are afraid to lose these connections when working in a flexpool and are therefore less motivated to join a flexpool. This is in line with research of Janssen et al. (2015) about the work situation for freelancers. Freelancers mention the lack of colleagues to discuss work matters with as a problem. In this study having colleagues is also seen as a crucial factor for a good working environment. Despite the lack of colleagues, the advantages of freelancing are still tempting, and people still want to do freelance jobs according to Janssen et al. (2015). This means that other factors also play a role in decision making about flexible deployment, which means there should not only be looked at improving the connection with colleagues, but also at more factors. Improvements need to be made for those aspects which are now more attractive for freelancers than for flexible deployed nurses, such as wage and a

voice in creating the timetable.

Positive nurses' perspectives about a flexpool are the new experiences in a hospital and learning by seeing other cases than in their base hospital. Verbiest et al. (2020) mentions that there are two kinds of learning. The first one, formal learning, is the way of learning in educational institutions. Informal learning, on the other hand, is learning out of daily tasks and happens during work or in spare time. According to Verbiest et al. (2020) flexworkers like freelancers, put less effort in formal learning than other workers. For example, they spend less time on additional training and courses compared to other workers. According to Verbiest et al. (2020) freelancers also learn less than the other workers on informal base. This is especially the case when freelancers work at a certain place for only a short period. The reason for this is that they have less autonomy to do what they want and therefore more often only do the easier tasks, like the basic nursing tasks (Verbiest et al., 2020). For more complex tasks, like triage, repetition is necessary and therefore flexworkers would have to work at the same place for a longer period to be able to do this. This is exactly the purpose of a flexpool, to assure that nurses work at the same place for a longer period, so they are familiar with the hospital, and they can learn new skills. This is in line with the fact that nurses think it is important to be familiar with the new hospital they have to work in. Therefore, it is facilitating when nurses get the time to settle down before they start in a new hospital. Some nurses mentioned that freelancers do not always get this time, which is also mentioned in the article of Verbiest et al. (2020). When they get the time to get used to a new hospital, they feel more confident and they tend to function better within the team. This will lead to a more positive atmosphere at the ER, which will facilitate a good working flexpool.

Due to the shortages of staff in hospitals nurses are forced to deal with higher work pressure. Nurses are eager to find a solution for this maintaining problem. A flexpool could offer this solution. In research of Noens (2019) the use of interdisciplinary cooperation in hospitals is analysed as solution for the high work pressure. Noens (2019) concludes that interdisciplinary collaborations can possibly reduce the high work pressure of nurses, but only if the impeding factors of interdisciplinary collaboration are decreased. In line with what was mentioned in the interviews, there are more factors which determine the success of a flexpool, therefore focus should not only be on one factor.

Terms of employment could be seen as an impeding factor for working in a flexpool. The current terms of employment are not good enough according to nurses, especially when compared to the terms of employment for freelancers. Terms of employment is one of the biggest barrier for the dissatisfaction of nurses to work in a flexpool. Many nurses mentioned that when the terms of employment, like wage and more appreciation from the management, increase, they feel more valued, and this will facilitate working in a flexpool. Besides this, higher reward was also mentioned by nurses and managers as one of the best solutions (Table 3). In the study of De Veer and Francke (2009) different reasons for working as freelancers were mentioned. They have to do with the terms of employment, like higher reward from the management of hospitals. Despite these bad arrangements nurses are not dissatisfied with their current job, but when working as freelancers, they have the possibility to earn more money and get more flexibility in working hours and decisions on patient care. The improvement of terms of employment is therefore necessary to let nurses work in a flexpool, instead of working as freelancer. This

includes higher reward in terms of higher wage.

In a systematic literature review of Chan et al. (2013) about shortages of nurses and the intention to leave the profession, different factors showed to have a connection with leaving the profession. These factors include organizational factors like work environment, culture, commitment, work demands and social support, and individual factors as job satisfaction, burn-out and demographic factors. There are overlapping themes with the current study. In the current study, work environment is part of the themes, 'terms of employment' and 'management of the flexpool'. Culture has no influence in the current study, because the flexpool will be regional and therefore, there will be less cultural differences compared to a worldwide study, as in the review of Chan et al. (2013). Commitment has to do with the attitude of a nurses, this is also used in the current study. When nurses are positive, there is a bigger chance that they will join a flexpool. Social support has overlap with the theme connection with own team in the current study. In this study the theme 'job satisfaction' is interesting, but only why and not if nurses are satisfied. This means that it does not matter if people are satisfied or not with their job, but the reasoning behind this opinion is relevant in the current study. Their reasoning gives insights in impeding and facilitating factors for working in a flexpool. For example, some nurses were satisfied with their current working situations because they lived close by the hospital. An impeding factor could therefore be the distance to other hospitals. Even though the current study was not about leaving the profession, it could still be interesting to use the findings of the study of Chan et al. (2013) to create a better understanding of reasons why people leave the ER and to make it easier for nurses to work in a flexpool.

Managers' opinions

The opinion of managers differs on some points from what nurses mentioned as impeding and facilitating factors for flexible deployment. Managers see the cooperation between hospitals in the Euregio as an opportunity when working in a flexpool. Managers think creating a regional flexpool, will not only help the ER as unit, but also makes it easier to cooperate between other units and discuss regional problems. The opinion about the influence of freelancers is similar to the opinion of nurses, and therefore seen as an impeding factor for working in a flexpool, because freelancing is simply more attractive in means of wage and hours, than a flexpool (De Veer & Francke, 2009). Managers mentioned besides the connection with own team as impeding factor, also level of hospital as important factor to look at when nurses work in a flexpool. Level of hospital could be both impeding and facilitating according to the managers. For some nurses, especially from lower-level hospitals, it is positive to have a look in hospitals with more complex care. This could be educational for them, because they see cases they do not see in their own hospital. Some managers expect that the level of hospital will impede working in a flexpool because people choose their own hospital, with a reason. Nurses will not be happy to work in another level of hospital for this reason, according to the managers. On top of this, managers expected that some nurses who work in a higher-level hospital, could be bored because they miss the challenge when working in a lower-level hospital.

In line with what nurses mentioned, managers see the probability of learning from others as facilitating for a flexpool. According to Starremans (2021) it is important that learning and

education is provided in a way nurses want it. Therefore, nurses should get input in how they want to learn things. Some nurses want an e-learning, while others want to see patients physically immediately. Starremans (2021) shows that learning can be provided in different ways, and this should be used when making a flexpool and explaining nurses how to work in lower- and higher-level hospitals. This does not only go for knowledge but also for skills which differ in the hospitals. According to managers, nurses could practice their skills in a flexpool. The opportunity to practice skills is therefore seen as a facilitating factor for flexible deployment by managers. When nurses can practice their skills, they can be up-to date with nursing tasks they do not have to provide often in their base hospital, which also promotes working in a flexpool according to the managers.

Managers mentioned that the collaboration with the ambulance services will facilitate working in a flexpool. This was also seen as one of the best solutions to decrease the problem of shortages of nurses (Table 3). Already a lot of nurses want to work for the ambulance services, and when the combination is made with the ER, it is easier to keep more nurses in the flexpool. According to an article in the TvZ (2020), not only the ambulance services should be included in flexpool. In their research mention also collaboration with education, quality work, research, and management to keep nurses at least parttime on the ICU. The same can be done with the ER to keep the nurses in the ER. In the current study there were several nurses who were leaving the ER because they missed something in their job, but still liked the job as nurse. For them it would be a good solution to combine both jobs, so they could still be parttime nurse in the ER. This connection with more different jobs, will facilitate making a flexpool and should be considered. This is also in line with the fact that investment in double degrees was seen as one of the best solutions for the problem of shortages of nurses in the ER (Table 3). If there is more money and time, it is easier for nurses to work in different work fields and the ER, and the ambulance services can share people. In the same paper the collaboration with medical care workers is seen as a solution for the problem of shortage of staff on the ICU (TVZ, 2020). As mentioned in the interviews by some managers, the solution should be found broader than only the college educated nurses. It could be interesting to also use the medical care workers in the ER. This is a quite new training programme and can be used in different settings. According to the TvZ (2020), medical care workers can be used in acute care settings, like and ICU, but also in the ER. When using medical care workers, more schooled people can be used in the ER and the shortages can be decreased. This is also in line with the fact that investment in double degrees was seen as one of the best solutions for shortages of staff in the ER (Table 3). With a higher number of staff, it is easier to exchanges nurses and it will be easier to fill gaps in the timetable.

Strengths and Limitations

Many strengths and limitations had to do with the methods of the study. By using convenience sampling, researchers are dependent on the motivation and willingness of participants to join the study. Despite this limitation, a lot of respondents were enthusiastic to join the study and it was not difficult to recruit respondents. This enthusiasm could be seen in the interviews because they were happy to talk about their experiences in the ER. Results of research, which used convenience sampling, can only be used in the participating group and thus cannot be generalized

to a broader group (Stratton, 2021). This limits the current study. Luckily, the investigated group is quite broad. It contains different level hospitals and hospitals of different sizes. Compared to other studies in the ER, the mean age of 44 is comparable to research of Hunsaker et al. (2015) which is also 44 and research of Sawatzky and Enns (2012) with a mean age of 41 in the ER. This made the age group a representative for the general population of ER nurses. This study only included hospitals in the eastern part of the Netherlands, and in these hospitals were not many freelancers active compared to other parts of the Netherlands according to expert opinions. The representative of the populations is therefore limited to the eastern parts of the Netherlands, where the number of freelancers is relatively low. The results of this study can therefore be generalized to other similar hospitals in the eastern part of the Netherlands, but not to all Dutch hospitals. Opinions in hospitals of nurses were comparable to colleagues in the same hospital, which shows that especially within each hospital, nurses think in a similar way. For example, nurses from MST were less positive about working in other hospitals because they want to work in a level 1 hospital and expected that their work will be less exciting in other hospitals. These overlapping opinions of the nurses and the fact that there was saturation in the interview data, makes the methods for this study applicable.

By using semi-structured interviews with open-ended questionnaires, respondents get freedom to formulate their answers. Questions in semi-structured interviews are free for interpretation (Baarda & Van der Hulst, 2017; Edwards & Holland, 2013). The interview schemes assure that the same topics were discussed while at the same time the respondents were free to give their own answer and were not forced in a certain way. This assures that in every interview, despite the differences in questions, roughly the same data was collected. A limitation of doing a qualitative study is always the chance of response bias. This means that the respondents give a false answer to the question, to please the interviewer. By using interviews instead of questionnaires, the chance of response bias is lower (Wetzel, Böhnke & Brown, 2016). Also, the word choice of the questions has influence on how nurses and managers interpreted a question. Hence, some words in the interview scheme were written out in simple language, so there was no confusion about the meaning of words during the interviews. On top of this, in the interview scheme some extra information was added alongside a few questions. This was to explain the question if it was still not clear for the respondents and to decrease the change of response bias.

A strength of the current study is that the interview scheme was based on existing models and theories, namely the SCT and the JCM. Despite that the main subject of the SCT is not job satisfaction, but learning, the theory still fits this study. The JCM is about working environment and job satisfaction and there are different elements out of the JCM which are overlapping with the SCT. The SCT is originally a learning theory that assumes that learning is influenced by personal experiences, actions of others, and environmental factors. When starting to work in another environment all these factors have influence on the opinion of a person. Besides this, working in another environment also demands learning somewhat about the new place and therefore the SCT fits this study. Also, in a study of Nilsen (2015) the SCT is explained as classic theory. According to Nilsen (2015) a classic theory *'originates from fields external to implementation science eg [examples] which can be applied to provide understanding and/or explanations of aspects of implementation'*. Even though this theory does not explicitly belong to the implementation sciences, it still can be used to understand aspects of implementation. In

further research a flexpool must also be implemented, so the SCT fits to base the interview scheme on.

Implications for further research and practice

Based on the results retrieved from the interviews, implications for further research and practice are made. With information about the wishes of nurses and managers regarding a flexpool, creating a flexpool can be realised. Based on the results, there should not only be looked at a regional flexpool, but there must also go attention to a flexpool within a certain hospital, called a float pool as described earlier (Dall'ora and Griffiths, 2017). Float pools are used in hospitals where nurses are trained in working as nurses in different departments of the hospital, for example in the ER and in the intensive care unit (Dall'ora and Griffiths, 2017). In a float pool, it is important that exchange of nurses between different units can easily be achieved. More research about the activities of certain units is necessary to see which units can collaborate with each other, and what kind of expertise or extra skills are needed to work on other units, think for example of an ICU nurse who can work in the ER. Nurses who work in the ICU could do some tasks from the ER perfectly according to managers, because they must do this in the ICU too according to expert opinions. But to take the pressure away from the ER, it is also important to take the responsibility away from the ER nurses. How this can be done should be investigated.

Furthermore, is it important to investigate how many nurses are needed to create a flexpool in the ER. This should be done from a business perspective. The current research only has the qualitative side of working in a flexpool, but to assure that a flexpool works in practice it is also important to find out how many nurses are minimally needed. This can be investigated in follow-up research, by creating models based on facts and assumptions about the current work capacity of the three hospitals. In this follow-up study, the financial aspects should also be investigated. Research on this subject is already done in a flexpool about neonatal ICU (Morris, 2021). The more nurses work in a flexpool, the higher efficiency. This does not mean that with a low number of nurses a flexpool is not efficient. The exact number of nurses who are needed to be efficient and keep nurses content, has to be found out by doing similar research as Morris (2021).

This study is a head start for creating a flexpool. Knowledge about the facilitating and impeding factors is now known, and this information should therefore be used to create a flexpool. For example, let nurses help in the creation of an a flexpool, give better travel expenses and assure that nurses can keep the connection with their base team. Further research should show how the impeding factors can be solved or be made less impeding than they are right now. The facilitating factors should be used to make a flexpool more attractive. How this should be done exactly, should be investigated in further research. The facilitating factors should get attention to overcome the barriers. If nurses for example get more time to settle down, they will get the chance to get used to the new situation. When balance in flexworkers and regular staff exists, they will not lose the connection with their base hospital and their colleagues. It is important to have a look in the (unexpected) barriers and facilitators when nurses start working in a flexpool by doing follow-up research with nurses while they work in a flexpool. The opinions could vary per hospital, therefore it is important to have a look if this varies per hospital and

when it does vary, to search for a customized solution for each hospital. According to van Aalten (2022) evaluation of an innovation should be an iterative process. This means that in this case the feedback of nurses is important of different phases of the implementations of a flexpool. Nurses should not only be involved in the creating of a flexpool but should also still be involved when the flexpool exists to assure that it can be improved.

Influence of age was often mentioned as influential factor by managers, which could be both impeding and facilitating. According to managers, age should not be a barrier to join a flexpool and it is important that everybody regardless of age can join a flexpool. Despite this, managers expect that especially younger nurses are curious to see other hospitals and work there. Older nurses will probably not join a flexpool. In the literature there is not much known about influence of age on freelancing, therefore it is hard to compare if this is the case in practice. Further research should be done to see if older nurses will not join a flexpool in practice.

Lastly, it is hard to mention one factor as most impeding or most facilitating for working in a flexpool. This was also not the aim of this research. It could be interesting to know which factor the most impeding is, and which factor the most facilitating is when a flexpool will be implemented. When this is known, it will be easier to start with working in a flexpool, because most important factors are charted. To find out what these most impeding and facilitating factors are, follow-up research with a questionnaire is necessary. In this questionnaire nurses and managers could rank factors as a bit impeding, or really impeding and this can be used to create a better working flexpool.

Conclusion

To conclude, there is not one single factor which can be assigned as impeding or facilitating factor to work in a flexpool, based on the expectation of nurses and managers. Different factors together make a flexpool appealing, and even if a nurse is positive about a flexpool there are still impeding factors. Learning is always seen as a factor which facilitates working in a flexpool. Because hospitals differ in terms of level and patient groups, it is interesting to work and learn in another hospital. Whereas learning is often seen as positive, the current terms of employment impede working in a flexpool. According to the respondents, the current terms of employment should change, for example making the travel expenses higher. Without changes in terms of employment nurses will not work in a flexpool. Further research must show how a flexpool can be used in practice. Use the opinion of nurses to create a flexpool and evaluate this during the process of making a flexpool, so it is not only based on expectations, but also on experiences of nurses. This will make the chance of a successful flexpool bigger. In the end, working in a flexpool is also a process of trial and error because nurses could say they are positive about working in a flexpool, but in practice they will not work in it. Therefore, the practice should show how exactly to implement a flexpool, to start with using the facilitating and impeding factors found in this study.

References

- Acute Zorg Euregio. (n.d.). Over ons. Over ons | Acute Zorg Euregio. Retrieved February 9, 2023, from <https://www.acutezorgeuregio.nl/over-ons/>.
- Acute Zorg Euregio. (n.d.a). Ketenpartners Netwerk Acute Zorg Euregio: Acute Zorg Euregio. Ketenpartners Netwerk Acute Zorg Euregio | Acute Zorg Euregio. Retrieved February 9, 2023, from <https://www.acutezorgeuregio.nl/ketenpartners-netwerk-acute-zorg-euregio/>.
- Acute Zorg Euregio (n.d.b) Keten Acute Zorg, Keten acute zorg | Acute Zorg Euregio. Available at: <https://www.acutezorgeuregio.nl/portefeuille/keten-acute-zorg/> (Accessed: February 14, 2023).
- Aiken, L. H., Clarke, S. P., Sloane, D. M., Sochalski, J., & Silber, J. H. (2002). Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction. *JAMA*, 288(16), 1987–1993. <https://doi.org/10.1001/jama.288.16.1987>
- Baarda, D.B. & Van der Hulst, M. (2017). *Basisboek interviewen* (4de editie). Noordhoff.
- Bakker, E., & Van Buuren, H. (2014). *Onderzoek in de gezondheidszorg*. Groningen/Houten: Noordhoff uitgevers.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (2004). Health promotion by social cognitive means. *Health education & behavior* 32(2), 143-164. DOI: 10.1177/1090198104263660
- Berchet, C. (2015). *Emergency Care Services: Trends, drivers and interventions to manage the demand*. OECD Health Working papers 83, OECD Publishing, Paris. <https://doi.org/10.1787/5jrts344crns-en>.
- Blouin, A.S. and Podjasek, K. (2019). The continuing saga of nurse staffing. Historical and emerging challenges. *The journal of nursing administration* 49(4), 221-227. DOI: [10.1097/NNA.0000000000000741](https://doi.org/10.1097/NNA.0000000000000741)
- Boswell, C., Gatson, Z., Baker, D., Vaughn, G., Lyons, B., Chapman, P., & Cannon, S. (2008). Application of evidence-based practice through a float project. *Nursing Forum*, 43(3), 126–132. <https://doi.org/10.1111/j.1744-6198.2008.00104.x>
- Bowie, D., Shelley, K., Weigel, K. & Scherzinger T. (2022). How to build flexible nursing workforce program: Making the dream a reality. *Nurse leader* 20(4), 410-414. <https://doi.org/10.1016/j.mnl.2022.03.006>
- Brborović, H., Daka, Q., Dakaj, K., & Brborović, O. (2017). Antecedents and associations of sickness presenteeism and sickness absenteeism in nurses: A systematic review. *International Journal of Nursing Practice*, 23(6). <https://doi.org/10.1111/ijn.12598>

- Bruyneel, L., Thoelen, T., Adriaenssens, J., & Sermeus, W. (2016). Emergency room nurses' pathway to turnover intention: A moderated serial mediation analysis. *Journal of Advanced Nursing*, 73(4), 930–942. <https://doi.org/10.1111/jan.13188>
- Bryman, A. (2012). *Social research methods*. Oxford: Oxford University Press CA: Sage Publications, Inc. doi: 10.4135/9781412963947
- Central Bureau for Statistics (2020) Meer zelfstandigen in zakelijke dienstverlening en zorg. [More self-employed workers in business services and health and social care]. Central Bureau for Statistics. Retrieved 28 January 2022, from <https://www.cbs.nl/nl-nl/nieuws/2020/05/meer-zelfstandigen-in-zakelijke-dienstverlening-en-zorg>
- Chan, Z.C.Y, Tam, W.S, Lung, M.K.Y, Wong, W.Y., and Chau, C,W. (2013). A systematic literature review of nurse shortage and the intention to leave. *Journal of Nursing Management* 21, 605-613. DOI: [10.1111/j.1365-2834.2012.01437.x](https://doi.org/10.1111/j.1365-2834.2012.01437.x)
- Crowe, S, Cresswell, K., Robertson, A., Huby, G., Avery, A. and Sheikh, A. (2011). *BMC Medical Research Methodology* 11(100), 1-9. <https://doi.org/10.1186/1471-2288-11-100>
- Dall'ora, C. and Griffiths, P. (2017). Flexible nurse staffing in hospital wards: the effects on costs and patient outcomes. *Health work evidence briefs* 3, University of Southampton.
- De Beer, J. (2022). Demografische toekomst van Nederland geschetst. *Demos* 36(7), 5-7. Retrieved from <https://publ.nidi.nl/demos/2020/demos-36-07-debeer.pdf>
- De Heer, T. & Verweij M. (2011). De inzet van de flexpool. Wanneer wel en wanneer niet? *Zorgmarkt* 9,37-41. www.zorgmarkt.net
- De Veer, A.J.E., and Francke, A.L. (2009). Lonkt het perspectief van het werken als zelfstandige in de zorg? Resultaten van de peiling onder leden van het Panel Verpleging & Verzorging. www.nivel.nl: NIVEL. Retrieved from: <https://www.nivel.nl/sites/default/files/bestanden/Rapport-zelfstandige-in-de-zorg.pdf>
- Doyle, S. Member checking with older women: a framework for negotiating meaning. (2007) *Health care women international* 28(10), 888-908. doi: 10.1080/07399330701615325.
- Drimpy. (n.d.). Ziekenhuisgroep Twente (Almelo). Drimpy. Retrieved February 9, 2023, from <https://www.drimpy.com/ziekenhuis/ziekenhuisgroep-twente-almelo/>
- Dziuba-Ellis, J. (2006). Float pools and resource teams: a review of literature. *Journal of Nursing Care Quality*, 21(4):352–359. doi: 10.1097/00001786-200610000-00013.
- Edwards, R. & Holland, J. (2013). *What is qualitative interviewing?* London: Bloomsbury Publishing.

- Eriksson, J., Gellerstedt, L., Hilleras, P. and Craffman A.G. (2017). Registered nurses' perceptions of safe care in overcrowded emergency departments. *Journal of clinical nursing* 27(5-6), 1061-1067. <https://doi.org/10.1111/jocn.14143>
- Gazi, A.I., Islam A., Shaturaev, J. and Dhar, B.K. (2022). Effects on job satisfaction on job performance of sugar industrial workers: empirical evidence from Bangladesh. *Sustainability* 14(21), 14156. <https://doi.org/10.3390/su142114156>
- Gerdenistch, C., Kubicek, B., & Korkuna, C. (2015). Control in flexible working arrangements: when freedom becomes duty. *Journal of Personnel Psychology* 14(2), 61-69. <https://doi.org/10.1027/1866-5888/a000121>
- Gill, P., Stewart, K., Treasure, E. & Chadwick, B. (2008). Methods of data collection in qualitative research: interviews and focus groups. *British Dental Journal* 204(6), 291-295. doi:10.1038/ bdj.2008.192
- Hackman, J.R. and Oldham G.R. (1974). The Job Diagnostic Survey: An Instrument for the Diagnosis of Jobs and the Evaluation of Job Redesign Projects.
- Hall, L. H., Johnson, J., Watt, I., Tsipa, A., & O'Connor, D. B. (2016). Healthcare staff wellbeing, Burnout, and Patient Safety: A Systematic Review. *PLOS ONE*, 11(7). <https://doi.org/10.1371/journal.pone.0159015>
- Hill, E.J., Grzywacz, J.G, Allen, S., Blanchard, V.L., Matz-Costa, C., Shulkin, S. and Pitt-Catsouphes, M. (2008). Defining and conceptualizing work place flexibility. *Community, work and familie* 11(2), 149-163. <https://doi.org/10.1080/13668800802024678>
- Hunsaker, S., Chen, H., Maughan, D. & Heaston, S. (2015). Factors that influence the development of compassion fatigue, burnout, and compassion satisfaction in emergency department nurses. *Journal of nursing scholarship* 47(2), 186-194. <https://doi.org/10.1111/jnu.12122>
- Janssen, B., Van der Torre, W., De Vroome, E., Mol, M., Janssen, B. and Van den Bossche S. (2015). *Zelfstandige enquête arbeid 2015*, TNO/CBS, Leiden/Heerlen.
- Kelly, E. L., Moen, P., & Tranby, E. (2011). Changing workplaces to reduce work–family conflict schedule control in a white-collar organization. *American Sociological Review*, 76(2), 265–290. Kim, J. (2018). Workplace flexibility and parent–child interactions among working parents in the U.S. *Social Indicators Research*. <https://doi.org/10.1007/s11205-018-2032-y>.
- Kennedy-Shaffer, L., Qiu, X. and Hanage, W.P. (2021). Snowball Sampling study design for Serosurveys early in disease outbreaks. *American Journal of Epidemiology* 190(9), 1918-1927. <https://doi.org/10.1093/aje/kwab098>
- Landelijke Netwerk Acute Zorg (LNAZ). (2019). Kwaliteitskader Spoedzorgketen. LNAZ. Accessed on February 14th 2023. Available at: <https://www.lnaz.nl/acute-zorg/kwaliteitskader-spoedzorgketen>

Marc, M., Bartosiewicz, A., Burzynska, J., Chmiel Z., And Januszewicz, P. (2019). A nursing shortage – a prospect of global and local policies. *International Council of Nurses* 66(1), 9-16. DOI: [10.1111/inr.12473](https://doi.org/10.1111/inr.12473)

Maurits, E.E.M., de Veer, A.J.E. & Francke, A.L. (2013). Ruim de helft van de interne oproepkrachten in de verpleging en verzorging vindt voordelen van flexibel dienstverband groter dan nadelen. Utrecht: NIVEL. Retrieved from: <https://www.nivel.nl/sites/default/files/bestanden/Factsheet-werken-als-interne-oproepkracht-voordelen-nadelen.pdf>

Maurits, E.E.M., de Veer, A.J.E. & Francke, A.L. (2013a). Zorgverleners werken liever met interne oproepkrachten dan met personeel van buitenaf. Utrecht: NIVEL. Retrieved from: <https://www.nivel.nl/sites/default/files/bestanden/Factsheet-werken-met-oproepkracht.pdf>

May, J.H., Bazzoli, G.J. and Gerland, A.M. (2006). Hospitals' responses to nurse staffing shortages. *Health affairs* 25(4), 316-323. DOI: [10.1377/hlthaff.25.w316](https://doi.org/10.1377/hlthaff.25.w316)

Mazurenko, O., Liu, D., And Perna, C. (2015). Patient care outcomes; and temporary nurses. *Nursing Management* 46(8), 32-38. DOI: [10.1097/01.NUMA.0000469351.33893.61](https://doi.org/10.1097/01.NUMA.0000469351.33893.61)

Medisch Spectrum Twente. (n.d. a). Medisch Spectrum Twente: Kwaliteit en Behandelresultaten. Ziekenhuischeck. Retrieved February 9, 2023, from <https://www.ziekenhuischeck.nl/ziekenhuizen/medisch-spectrum-twente/#:~:text=MST%20heeft%20547%20bedden%20met,polikliniekbezoeken%20komt%20op%20ruim%20400.000.&text=Medisch%20Spectrum%20Twente%20behoort%20tot,academische%20ziekenhuizen%20van%20ons%20land>.

Medisch Spectrum Twente. (n.d. b). Spoedeisende Hulp. Medisch Spectrum Twente. Retrieved February 9, 2023, from <https://www.mst.nl/p/specialismen/seh/>

Medisch Spectrum Twente. (n.d.). Over MST. Medisch Spectrum Twente. Retrieved February 9, 2023, from <https://www.mst.nl/over-mst/>

Morris, K.J.C. (2021). Reducing neonatal intensive care transports by introducing a regional nurse flex pool. [Master Thesis]. University of Twente.

Mortelmans, D. (2013). Handboek kwalitatieve onderzoeksmethoden. Leuven etc.: Acco. Retrieved from: https://www.accoutgeverij.nl/sites/default/files/book_pdfs/9789033493607_fragm.pdf

Nederlandse Zorg Autoriteit (NZA). (2020). Update cijfers acute zorg 2019. Retrieved February 14, 2023, from: https://puc.overheid.nl/doc/PUC_301126_22/1/#39fcac40-7616-4bea-9423-67ef1f5f45af

Nilsen, P. (2015). Making sense of implementation theories, models and frameworks. *Implementation Science* 10(53). <https://doi.org/10.1186/s13012-015-0242-0>

- Noens, W. (2019). De impact van Interdisciplinair samenwerken op verpleegkundige werkdruk binnen ziekenhuizen. Een focus op paramedici in de geriatrie. [Master Thesis]. University of Ghent.
- Oulton, J. A. (2006). The global nursing shortage: An overview of issues and actions. *Policy, Politics, & Nursing Practice*, 7(3_suppl), 34–39. <https://doi.org/10.1177/1527154406293968>
- Roberts, R. K., & Grubb, P. L. (2014). The consequences of nursing stress and need for Integrated Solutions. *Rehabilitation Nursing*, 39(2), 62–69. <https://doi.org/10.1002/rnj.97>
- Robert Wood Johnson Foundation (RWJF). (2008). Semi-structured Interviews. Retrieved from <http://www.qualres.org/HomeSemi-3629.html> [Accessed on February 10th 2023].
- Salvador, R.O., and Gnanlet, A. (2021). The impact of the use of employee functional flexibility on patient safety. *Personnel Review* 50(3), 971-984. DOI 10.1108/PR-10-2019-0562
- Sawatzky, J.V., & Enns, C.L. (2012). Exploring the key predictors of retention in emergency nurses. *Journal of Nursing Management* 20, 696-707. DOI: 10.1111/j.1365-2834.2012.01355.x
- Siahaan, R. Effect of work environment on employee satisfaction with work communication as intervening variables. *Journal of educational and language research* 1(7), 987 -1002. Retrieved from <https://bajangjournal.com/index.php/JOEL/article/view/1532>
- Speet, S. (2022). Forse toename van aantal patiënten bij SKB Winterswijk. Retrieved February 9, 2023, from <https://www.regio8.nl/forse-toename-van-aantal-patienten-bij-skb-winterswijk>.
- Starremans, S. (2021). Meer eigen regie. *TvZ Verpleegkundige praktijk en wetenschap* 131(5), 28. doi: [10.1007/s41184-021-1037-1](https://doi.org/10.1007/s41184-021-1037-1)
- Stratton, S.J. (2021). Population Research: Convenience Sampling strategies. *Prehospital and disaster Medicine* 36(4), 373-374. doi:10.1017/S1049023X21000649
- Streekziekenhuis Koningin Beatrix. (n.d. a). Bestuur. SKB Winterswijk. Retrieved February 9, 2023, from [https://www.skbwinterswijk.nl/bestuur-1#:~:text=Het%20Streekziekenhuis%20Koningin%20Beatrix%20\(SKB,ziekenhuis%20wo nen%20ongeveer%20150.000%20mensen](https://www.skbwinterswijk.nl/bestuur-1#:~:text=Het%20Streekziekenhuis%20Koningin%20Beatrix%20(SKB,ziekenhuis%20wo nen%20ongeveer%20150.000%20mensen).
- Streekziekenhuis Koningin Beatrix. (n.d.). Samen voor Goede Zorg in De Achterhoek. Werken bij SKB Winterswijk. Retrieved February 9, 2023, from <https://www.werkenbijskb.nl/>
- Tabak, L. (2021). Groei van het aantal zzpers in de zorg zet door. 700% stijging in 15 jaar. ZZZP-ER in de zorg.nl. Available at: <https://www.zzp-erindezorg.nl/blog/groei-van-aantal-zzpers-zorg-700-stijging-15-jaar> (Accessed February 23, 2023).
- Tabak, L. (2022). Een zelfstandig ondernemer is geen flexwerker. ZZZP-ER in de zorg.nl. Available at: <https://www.zzp-erindezorg.nl/blog/een-zelfstandig-ondernemer-is-geen-flexwerker> (Accessed March 3, 2023).

- Taylor M.C. (2005) Interviewing. In *Qualitative Research in Health Care* (Holloway I., ed.), McGraw-Hill Education, Maidenhead, England, pp. 39–55.
- Ten Houten, S. (2017). Hoe houden we ouderen weg van de SEH? *Zorg + Welzijn* 23, 40-41. <https://doi.org/10.1007/s41185-017-0179-z>
- The Netherlands Chamber of Commerce. (2022). ZZZP'er in de Zorg. <https://www.kvk.nl/advies-en-informatie/bedrijf-start-en-startsituaties/zzper-in-de-zorg/>
- Turner, D. (2014). Qualitative interview design: A practical guide for novice investigators. *The Qualitative Report*. <https://doi.org/10.46743/2160-3715/2010.1178>
- TvZ – Verpleegkunde in praktijk en wetenschap. (2020). *Nieuws. Berichten uit de verpleegkundige praktijk* 130(4), 4-7. doi: [10.1007/s41184-020-0842-2](https://doi.org/10.1007/s41184-020-0842-2)
- Van Aalten, L. (2022). *Telebegeleiding opschalen in het BovenIJ ziekenhuis: een ontwerp voor succesvolle inzet en opschaling van telebegeleiding*. Technische Universiteit Eindhoven.
- Van Hamersveld, S. (2021). Wil je een paar uurtjes meer werken? Een onderzoek naar contractuitbreiding onder oudere vrouwelijke zorgmedewerkers (Thesis). Philadelphia, Utrecht.
- Van Osch, M., Scarborough, K., Crowe, S., Wolff, A. C., & Reimer-Kirkham, S. (2018). Understanding the factors which promote registered nurses' intent to stay in emergency and Critical Care Areas. *Journal of Clinical Nursing*, 27(5-6), 1209–1215. <https://doi.org/10.1111/jocn.14167>
- Verbiest, S., Van der Torre, W., Van den Ven, H., and Goudswaard, A. (2020). Zit er ontwikkeling in flex? *Duurzame inzetbaarheid in Nederland*, 157 – 168. Retrieved from: https://wp.monitorarbeid.tno.nl/wp-content/uploads/2020/12/DI-NL_H6-Zit-er-ontwikkeling-in-flex.pdf
- Vereniging van Universiteiten (VSNU). (2012). De Nederlandse Gedragscode Wetenschapsbeoefening. Principes van goed wetenschappelijk onderwijs en onderzoek. Retrieved March 2, 2023, from https://www.universiteitenvannederland.nl/files/documenten/Domeinen/Onderzoek/Code_wetenschapsbeoefening_2004_%282012%29.pdf
- Wetzel, E. Böhnke, J.R. and Brown, A. (2016). Response biases. *The ITC International Handbook of Testing and Assessment*, 1-36. Retrieved from https://kar.kent.ac.uk/49093/1/Response_biases_Final_accepted_version.pdf
- Wright, P.M. and Snell, S.A. (1998). Towards a unifying framework for exploring fit and flexibility in strategic human resource management. *Academy of management review* 23(4), 756-772. <https://doi.org/10.2307/259061>
- Yin, R.K. (2014). *Case study research: Design and methods* (5th ed.) Thousand Oaks, CA: Sage.

Ziekenhuisgroep Twente. (2020). Jaarverslag 2020. Retrieved from <https://www.zgt.nl/media/36361/zgt-jaarverslag-2020.pdf>

Ziekenhuisgroep Twente. (n.d. a). ZGT locaties en Contactgegevens. ZGT locaties/contactgegevens. Retrieved February 9, 2023, from <https://www.zgt.nl/contact/zgt-locaties-contactgegevens/>

Ziekenhuisgroep Twente. (n.d.). Onze Organisatie. Retrieved February 9, 2023, from <https://www.zgt.nl/over-zgt/onze-organisatie/>

Appendix

Annex 1 Interview scheme nurses (In Dutch)

Deel van interview/ onderwerp	Wat ga ik vertellen/ vragen	Aanvullende vragen/ uitleg
Introductie	<ul style="list-style-type: none"> - Student University of Twente - Master Health Sciences - Afstudeerscriptie - Acute zorg Euregio 	
Doel	<p>Stel er zou een flexibele werkomgeving zijn tussen MST, ZGT en SKB wat betekent dat je op verschillende locaties zou kunnen werken.</p> <p>Doel: Inzicht krijgen in de verwachte belemmerende en bevorderende factoren van werken in een flexpool volgens SEH-verpleegkundigen en managers.</p>	Uitleg geven eventuele flexpool tussen SKB, ZGT en MST op de SEH.
Toestemming	<p>Zijn er vragen rondom de informatiebrief of het toestemmingsformulier?</p> <p>Of andere vragen aan mij?</p>	
Algemene gegevens die niet opgenomen hoeven te worden	<ul style="list-style-type: none"> - Leeftijd - Functie 	In welk ziekenhuis doet u deze functie?
Opname	<ul style="list-style-type: none"> - Start audio - Toestemming op audio + tekenen formulieren 	
Algemene gegevens	<ul style="list-style-type: none"> - Welke taken voert u uit in uw functie? - Hoe uitdagend is uw functie volgens u? - Hoelang bent u werkzaam in deze functie? - Heeft u wel eens in een flexpool gewerkt? - Werkt u fulltime of parttime 	
Knowledge/ attitudes – cognitive factors (SCT)	Waar denkt u het eerst aan bij een flexpool?	Kort vertellen wat een flexpool is volgens mijn onderzoek: Bij drukte verpleegkundigen verplaatsen van

<p>Satisfaction</p>	<p>Wat zijn uw ervaringen met werken in een flexpool? (Kan ook geen ervaring zijn)</p> <p>Wat zijn uw ervaringen met samenwerken met mensen die als flexkracht/zzp'er werken?</p> <ul style="list-style-type: none"> - Wat vindt u van mensen die als flexkracht/ zzp'er werken? <p>Hoe tevreden bent u over uw huidige werksituatie? (U kunt denken aan structuur, loon, voordelen van (niet) flexibel werken, werkzekerheid)</p> <ul style="list-style-type: none"> - Wat zijn de voor- en nadelen van uw huidige werksituatie? <p>Hoe veranderen voor-, nadelen en tevredenheid over werk wanneer u in een flexpool werkt, denkt u?</p>	<p>locaties (SKB, MST, ZGT), zodat patiënten niet verplaatst hoeven te worden en ze nog dezelfde zorg krijgen.</p> <p>Geen ervaring is geen probleem. Wel belangrijk om te weten.</p> <p>Is het überhaupt nodig om extra mensen in te zetten in de vorm van een flexpool? Heeft dit meerwaarde volgens u?</p>
<p>Expectations – Cognitive factors (SCT)</p> <p>Goal</p>	<p>Hoe zou een flexpool ingericht moeten zijn?</p> <ul style="list-style-type: none"> - Tijd - Personen <p>Wat is het doel dat u wilt bereiken met uw werk?</p>	<p>Vaste momenten? Oproep basis? Eén keer in de zoveel tijd?</p> <p>Moet iedereen het of een deel van het team, bijv. alleen de mensen die het willen?</p> <p>Waarom doet u uw werk?</p>

<p>Task significance (JCM)</p>	<p>In hoeverre is het mogelijk dit doel te bereiken als u in een flexpool zou werken, denkt u?</p> <p>Hoe belangrijk voelt u zich in uw organisatie?</p> <p>Hoe zou dit veranderen wanneer u op verschillende locaties moet werken?</p>	<p>Waarom?</p>
<p>Autonomy (JCM)</p>	<p>In hoeverre heeft u het gevoel dat u vrijheid en controle heeft tijdens uw huidige werksituatie?</p> <p>In hoeverre zou dit veranderen wanneer u in een flexpool zou werken, denkt u?</p>	<p>Om uw werk te doen op de manier zoals u graag wil.</p> <p>Of zou het niks veranderen?</p>
<p>Social norms + influence of others – environmental factors (SCT)</p>	<p>Wat denkt u dat anderen van een flexpool vinden?</p> <p>Wat denkt u dat anderen ervan vinden als u in een flexpool zou gaan werken?</p> <p>In hoeverre heeft de mening van anderen invloed op u?</p>	<p>Denk bij anderen aan: collega's, partner, kinderen, ouders, vrienden</p>
<p>Expectations - Cognitive factors (SCT)</p>	<p>Wat verwacht u dat voordelen zijn van werken in een flexpool?</p> <p>Wat verwacht u dat nadelen zijn van werken in een flexpool?</p> <p>Hoe wegen deze positieve en negatieve kanten tegen elkaar op?</p>	<p>Denk aan reistijd, geld, tijd, werkdruk, pensioen, collega's, kinderen, ziekenhuiscapaciteit.</p> <p>Wat zou er moeten gebeuren om u positiever te krijgen over werken in een flexpool?</p>
<p>Job satisfaction</p>	<p>Welke aspecten zou een flexpool moeten hebben om u tevreden te maken over werken in een flexpool?</p>	<p>Denk aan het team, organisatie, regio.</p>

<p>Skills + Practice – Behavioural factors (SCT)</p> <p>Social norms+ Influence of others</p> <p>Skills + Practice – Behavioural factors (SCT)</p>	<p>Wat zou er moeten veranderen om u tevreden (of tevredener) te maken met werken in een flexpool? En welke skills en vaardigheden heeft u hiervoor nodig?</p> <p>In hoeverre beïnvloedt uw thuissituatie u in het maken van de keuze om in een flexpool te werken?</p> <p>Hoe beïnvloedt uw mate van ervaring als verpleegkundige uw mening over flexibele inzet van verpleegkundigen?</p>	<p>Gaat zowel om het werken (het doen/skills), als om de structuur van en flexpool.</p> <p>Relatie, kinderen, woonsituatie</p> <p>Beginnende verpleegkundigen bijvoorbeeld verplicht flexibel laten werken?</p>
<p>Self-efficacy – Behavioural factors (SCT)</p>	<p>In hoeverre past uw functie als SEH-verpleegkundige in een flexpool situatie volgens u?</p> <p>In hoeverre bent u in staat om de barrières die u tegen een flexpool heeft te overwinnen?</p> <p>Waarom denkt u dat u het wel of niet kan?</p> <p>In hoeverre denkt u dat u uw functie in een ander ziekenhuis op eenzelfde niveau kunt uitvoeren als u nu doet?</p>	<p>Denk bij barrières zowel aan barrières vanuit de omgeving als vanuit persoonlijk factoren.</p>
<p>Afsluitende vraag</p>	<p>Als u nadenkt, waarom bent u dan voorstander/tegenstander van een flexpool tussen SKB, ZGT en MST?</p> <ul style="list-style-type: none"> - Voor uzelf? - Voor anderen? 	

	Wat is volgens u een goede aanpak om het tekort aan personeel binnen de SEH op te lossen?	
	Heeft u nog aanvullingen/ dingen die ik niet besproken heb die u wilt delen?	
Afsluiten	Vragen of er interesse is in Membercheck - Bedanken + stop opname	Member check is een samenvatting van hoofdpunten van het interview, zodat de geïnterviewde het interview kan nalezen en bekijken of er wat mist of dat sommige dingen meer belicht moeten worden. De geïnterviewde kan op de membercheck reageren via mail en zo kan een mening worden toegevoegd.

Annex 2 Interview scheme managers (In Dutch)

Deel van interview/ onderwerp	Wat ga ik vertellen/ vragen	Aanvullende vragen/ uitleg
Introductie	<ul style="list-style-type: none"> - Student University of Twente - Master Health Sciences - Afstudeerscriptie - Acute Zorg Euregio 	
Doel	<p>Stel er zou een flexibele werkomgeving zijn tussen MST, ZGT en SKB wat betekent dat je op verschillende locaties zou kunnen werken.</p> <p>Doel: Inzicht krijgen in de verwachte belemmerende en bevorderende factoren van werken in een flexpool volgens SEH-verpleegkundigen en managers.</p>	Uitleg geven eventuele flexpool tussen SKB, ZGT en MST op de SEH.
Toestemming	<p>Zijn er vragen rondom de informatiebrief of het toestemmingsformulier?</p> <p>Of andere vragen aan mij?</p>	
Algemene gegevens die niet opgenomen hoeven te worden.	<ul style="list-style-type: none"> - Leeftijd - Functie 	In welk ziekenhuis doet u deze functie?
Opname	<ul style="list-style-type: none"> - Start audio - Toestemming op audio + tekenen formulieren 	
Algemene gegevens	<ul style="list-style-type: none"> - Welke taken voert u uit in uw functie? - Hoe uitdagend is uw functie volgens u? - Hoelang bent u werkzaam in deze functie? - Heeft u wel eens in een flexpool gewerkt? - Fulltime/ parttime 	
Structuur ziekenhuis	<p>Wie werken er allemaal op de SEH/ met wie krijgt u te maken tijdens uw werk?</p> <p>Hoeveel verpleegkundigen, artsen en ander personeel zijn er op de SEH in uw ziekenhuis?</p>	Hoe zit de SEH in elkaar?

	<p>Hoe makkelijk is het voor u om contact te leggen met een leidinggevende, zoals bestuur/ leidinggevende van andere afdelingen, bij vragen uit andere onderdelen van het ziekenhuis?</p> <p>Hoe dicht staat u bij verpleegkundigen?</p> <p>Is er sprake van personeelstekort in uw ziekenhuis?</p>	<p>Zo ja: Hoe tevreden bent u over de (eventuele) huidige oplossing voor omgang personeelstekort?</p> <p>Zo nee: Hoe kan het dat er geen personeelstekort is volgens u?</p>
<p>Algemeen flexpool</p> <p>Knowledge/ attitudes – cognitive factors (SCT)</p>	<p>Waar denkt u het eerst aan bij een flexpool?</p> <p>Wat zijn uw ervaringen met werken in een flexpool? (Kan ook geen ervaring zijn)</p>	<p>Kort vertellen wat een flexpool is volgens mijn onderzoek: Bij drukte verpleegkundigen verplaatsen van locaties (SKB, MST, ZGT), zodat patiënten niet verplaatst hoeven te worden en ze nog dezelfde zorg krijgen.</p> <p>Geen ervaring is geen probleem. Wel</p>

	<p>Wat zijn uw ervaringen met samenwerken met mensen die als flexkracht/zzp'er werken?</p> <ul style="list-style-type: none"> - Wat vindt u van mensen die als flexkracht/ zzp'er werken? <p>Hoe zou deze flexpool ingericht moeten zijn?</p> <ul style="list-style-type: none"> - Tijd - Personen 	<p>belangrijk om te weten.</p> <p>Vaste momenten? Oproep basis? Eén keer in de zoveel tijd?</p> <p>Moet iedereen het doen of een deel van het team, bijv. alleen de mensen die het willen?</p>
<p>Goals</p> <p>JCM (task significance)</p>	<p>Wat is het doel dat u wilt bereiken met werk?</p> <p>In hoeverre is dit doel mogelijk tijdens werken met flexibel inzetbare verpleegkundigen, denkt u?</p> <p>Hoe verandert dit doel als er meer flexibele werkers zijn op uw afdeling?</p> <p>Hoe belangrijk voelt u zich in uw organisatie? Hoe zou deze mate van gevoel van belangrijkheid veranderen wanneer u</p>	<p>Waarom doet u uw werk?</p> <p>Of hoe veranderen uw taken?</p> <p>Waarom?</p>

	meer flexibel inzetbare verpleegkundigen moet managen?	
Autonomy JCM	In hoeverre heeft u het gevoel dat u vrijheid in en controle over uw huidige werk heeft? In hoeverre zou dit veranderen wanneer uw personeel in een flexpool zou gaan werken, denkt u?	Of zou het niks veranderen?
Social norms + influence of others – environmental factors SCT	Wat denkt u dat de mening van verpleegkundigen is over flexibel werken? In hoeverre beïnvloedt deze mening van verpleegkundigen voor u de sfeer op de SEH?	
Outcome expectations physical / Expectations - Cognitive factors (SCT)	Wat verwacht u dat voordelen zijn van werken in een flexpool? Wat verwacht u dat nadelen zijn van werken in een flexpool? Hoe wegen deze positieve en negatieve kanten tegen elkaar op?	Denk aan reistijd, geld, tijd, werkdruk, pensioen, andere collega's, kinderen, ziekenhuiscapaciteit. Wat zou er moeten gebeuren om u positiever te krijgen over werken in een flexpool?
Outcome Expectations social (SCT) + Social norms	In hoeverre heeft de mening van anderen invloed op u? Hoe merkt u aan verpleegkundigen dat ze positief/negatief zijn over werken in een flexpool?	Denk hierbij aan collega's, partner, kinderen, ouders, vrienden. Of zijn dit aannames?
Outcome expectations self-evaluative	In hoeverre verandert uw werk als er meer gebruik wordt gemaakt van flexibele verpleegkundigen in plaats van 'vaste' verpleegkundigen?	

<p>Job satisfaction</p> <p>Skills + Practice – Behavioural factors (SCT)</p>	<p>Welke aspecten zou een flexpool moeten hebben om u tevreden te maken om een flexpool te managen?</p> <p>In hoeverre speelt ervaring van een verpleegkundige mee of ze geschikt zijn om te werken in een flexpool?</p>	<p>Beginnende verpleegkundigen bijvoorbeeld verplicht flexibel laten werken?</p>
<p>Self-efficacy – Behavioural factors (SCT)</p> <p>Skills (JCM)</p>	<p>In hoeverre bent u in staat om de barrières die u tegen een flexpool heeft te overwinnen?</p> <p>Waarom denkt u dat u deze barrières wel of niet kan overwinnen?</p> <p>Wat zou er moeten veranderen zodat er meer verpleegkundigen in een flexpool kunnen werken?</p> <p>In hoeverre denkt u dat verpleegkundigen hun functie in een ander ziekenhuis op eenzelfde niveau kunnen uitvoeren als hier?</p> <ul style="list-style-type: none"> - Welke vaardigheden zijn ervoor nodig om dit niveau hetzelfde te houden? 	<p>Denk bij barrières zowel aan barrières vanuit de omgeving als vanuit persoonlijk factoren.</p>
<p>Afsluitende vraag</p>	<p>Als u nadenkt, waarom bent u dan voorstander/tegenstander van een flexpool tussen SKB, ZGT en MST?</p> <p>Hoe zou een flexpool er volgens u uit moeten zien?</p>	

	Wat is volgens u een goede aanpak om het tekort aan personeel binnen de SEH op te lossen?	
	Heeft u nog aanvullingen/ dingen die ik niet besproken heb die u wilt delen?	
Afsluiten	Vragen of er interesse is in een Membercheck Bedanken + stop opname	Member check is samenvatting van hoofdpunten van het interview, zodat geïnterviewde interview kan nalezen en bekijken of er wat mist of dat sommige dingen meer belicht moeten worden. Geïnterviewde kan op de membercheck reageren via mail en zo kan een mening worden toegevoegd.

Annex 3 Background

Background

This thesis was written on behalf of Acute Zorg Euregio. In the next paragraph it will be explained what the Acute Zorg Euregio is, and the included hospitals are pointed out.

Acute Zorg Euregio (AZE)

The Network ‘Acute Zorg Euregio’ (AZE) is a cooperation of acute (health) care settings in the Euregio. The Euregio includes the regions Twente (the Netherlands), Oost-Achterhoek (the Netherlands) and the border region with Germany (Figure 1) (Acute Zorg Euregio, n.d.).



Figure 1 Acute Zorg Euregio location (Acute Zorg Euregio, n.d.)

The aim of the AZE is to optimise the emergency care in their region. The AZE does this by coordination, stimulation, and facilitation activities in the chain of emergency care. This is provided in collaboration with the partner organisations of AZE (Acute Zorg Euregio, n.d.)

AZE aims to achieve the best possible care for patients within the right time, on the right place and provided by the people with the right skills. Health care givers are facilitated by possibilities to participate in different courses, thematic meetings, and training sessions. Besides these duties, results of scientific research are spread by the AZE to inform health care givers (Acute Zorg Euregio, n.d.).

Included hospitals

Three hospitals located in the Euregio work together with AZE. This are the Medisch Spectrum Twente (MST), Ziekenhuisgroep Twente (ZGT) and Streekziekenhuis Koningin Beatrix (SKB) (Acute Zorg Euregio, z.d. a; Acute Zorg Euregio, z.d. b).

MST

MST is one of the biggest top clinical education hospitals of the Netherlands. It has about 3500 employees who take care of the health of people who live in Twente. The main location of MST is Enschede. Besides this location, there are two outpatient clinics located in Oldenzaal and Haaksbergen (Medisch Spectrum Twente, n.d.). MST has 547 available hospital beds (Medisch Spectrum Twente, n.d. a). About 85 patients per day visit the ER at MST. This is more than 30,000 patients annually (Medisch Spectrum Twente, n.d. b).

ZGT

ZGT is another hospital located in region Twente. It has about 3200 employees and 300 people who work on voluntary base. (Ziekenhuisgroep Twente, n.d.). ZGT has two locations, one in Almelo and one in Hengelo. The hospital in Almelo has an ER, the location in Hengelo not. Besides these two hospitals, there is also an outpatient clinic in Rijssen (Ziekenhuisgroep Twente, n.d. a). ZGT has 687 available hospitals beds, spread across locations in Hengelo and Almelo (Drimpy. n.d) In 2020 there were 23,792 visits to the ER (Ziekenhuisgroep Twente, 2020).

SKB

The SKB is a hospital based in the region Oost-Achterhoek, located in Winterswijk. It has about 1100 employees and besides this, there are 80 medical specialists which work in SKB (Streekziekenhuis Koningin Beatrix, n.d.). Besides its location in Winterswijk there is an outpatient clinic in Eibergen. SKB has 214 available hospital beds (Streekziekenhuis Koningin Beatrix, n.d. a). In 2022 the ER of SKB has seen more than 13,000 patients (Speet 2022).

Annex 4 Information letter (In Dutch)

Interview over faciliterende en belemmerende factoren die gezien worden door SEH-verpleegkundigen en managers over mogelijke flexibele inzet over locaties van het MST Enschede, ZGT Almelo en SKB Winterswijk

Beste heer/mevrouw,

Dank voor uw interesse in deelname aan het onderzoek. Dit onderzoek is onderdeel van mijn Master thesis van de Master Health Sciences aan de Universiteit van Twente. Het onderzoek bestaat uit een interview over de verwachte faciliterende factoren en barrières die er volgens u zijn wanneer u (hypothetisch) flexibel zou werken over de locaties van het MST Enschede, ZGT Almelo en SKB Winterswijk. Aan de hand van deze bevindingen, schrijf ik een advies aan Acute Zorg Euregio. Voordat ik u ga interviewen, is het van belang dat u weet wat mijn Master thesis precies inhoudt. Daarom vraag ik u om deze brief door te lezen. Mocht u na het lezen van de brief nog vragen hebben, kunt u deze stellen door contact op te nemen met mij.

Doel van het onderzoek

Dit interview heeft als doel naar boven te halen wat de faciliterende en belemmerende factoren zijn om flexibele te werken binnen de locaties van het MST Enschede, ZGT Almelo en SKB Winterswijk op de SEH. Het gaat om een hypothetische situatie om inzicht te krijgen in meningen van SEH-verpleegkundigen en managers. Het betekent niet dat de flexpool er per definitie komen zal. Een flexpool zou een oplossing kunnen zijn voor het personeelstekort, daarom is het van belang inzicht te krijgen in welke onderdelen er eventueel veranderd kunnen en moeten worden.

Deelname

Voor mijn interview zijn de volgende punten van belang.

- U werkt op de spoedeisende hulp als verpleegkundige en/of een managing functie heeft binnen de SEH.
- U bent ouder dan 18 jaar
- U bent werkzaam in (minimaal) een van de volgende ziekenhuizen op de SEH: MST Enschede, ZGT Almelo of SKB Winterswijk

Tijdens het interview

Het interview bestaat uit open vragen en zou inclusief introductie in mijn onderwerp ongeveer 45 minuten duren. In overleg met u zou een datum en tijd afgesproken worden wanneer en waar deze zal plaatsvinden. Het interview vindt hoogstwaarschijnlijk plaats op uw werkplek (MST Enschede, ZGT Almelo, SKB Winterswijk), maar als het u online beter uitkomt, hoor ik het graag. Uw gegevens worden anoniem verwerkt en opgeslagen op een beveiligde schijf van de Universiteit van Twente.

Als u verder nog vragen en/of opmerkingen heeft kunt u terecht bij:

Sofie Weelink - Student Master Health Sciences

s.w.weelink@student.utwente.nl

Annex 5 Informed consent (In Dutch)

Toestemmingsformulier

Hierbij geef ik toestemming voor deelname aan het interview. Ik verklaar hiermee dat ik ervan op de hoogte ben dat:

- Ik door de student ben geïnformeerd over het doel en inhoud van het interview.
- Ik aanvullende vragen kon stellen over het interview. Die vragen die ik had zijn voldoende beantwoord.
- Ik genoeg tijd had om te beslissen of ik wilde deelnemen aan dit onderzoek
- Deelname aan dit onderzoek is vrijwillig en ik kan op elk moment zonder opgave van een reden mij terugtrekken uit het onderzoek zonder consequenties voor mij.
- Er vertrouwelijk met mijn informatie wordt omgegaan en dit alleen wordt gebruikt voor de Master Thesis voor de studie Health Sciences aan de Universiteit van Twente.
- Mijn gegevens worden onder een pseudoniem opgeslagen en op een veilige schijf van de Universiteit van Twente opgeslagen, de UT Cloud
- Ik geef toestemming voor het verzamelen, bewaren en gebruiken van mijn gegevens voor de beantwoording van de onderzoeksvraag van dit onderzoek. Het verzamelen gebeurt door middel van een audio opname.

Het formulier wordt aan het begin van het interview mondeling ondertekend onder vermelding van de datum.

Bedankt voor uw deelname,

Met vriendelijk groet,

Sofie Weelink

Student Master Health Sciences

s.w.weelink@student.utwente.nl