MASTER THESIS

The perspective of Intensive Care nurses on flexible deployment at three hospitals: A qualitative approach.

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ACUTEZORG EUREGIO

UNIVERSITY OF TWENTE.

PREFACE

This thesis is written about the perspective of Intensive Care nurses on flexible deployment at three hospitals. For this study, several Intensive Care nurses of Medisch Spectum Twente, Ziekenhuisgroep Twente and Streekziekenhuis Koningin Beatrix have been interviewed and/or surveyed. The thesis served as a master assignment for the study program Health Sciences of the University of Twente.

I applied for the master Health Sciences because I would like to contribute to future-proof healthcare in the Netherlands. The research topic was suggested by Acute Zorg Euregio during the master assignment week at the University of Twente. I immediately became enthusiastic about this subject since I am a nurse myself. With this research, I could help Medisch Spectrum Twente, Ziekenhuisgroep Twente and Steekziekenhuis Koningin Beatrix by providing new insights about efficient deployment of available Intensive Care nurses, which is a very important topic because of the increasing shortage of nurses.

I would like to thank Acute Zorg Euregio for giving me the opportunity to write this thesis. I thank my supervisors, Max, Anke, Derya and Caroline, for their guidance and support during this period. I am grateful Max helped me with contacting the ICU heads and managers of all hospitals and that he was always ready to help me with this research project, but also trusted me to work independently at home. Halfway during my research project, my first supervisor went on maternity leave. Luckily, Caroline was willing to become my new first supervisor and provided me a lot of helpful feedback. I also want to thank Manon, manager of Acute Zorg Euregio, for her feedback during the research project.

I wish to thank all of the Intensive Care Unit heads, managers, and nurses I interviewed or who filled in my survey. The Intensive Care Unit heads and managers provided a lot of helpful and interesting information and helped me with recruiting all participants for my research. I am thankful for all the Intensive Care Unit nurses who wanted to participate in my research. I did not expect such a great response.
I hope you will enjoy reading my thesis.

Elise Elferink
Zwolle, 19 September 2022

ABSTRACT

BACKGROUND

There is an increasing shortage of nurses in the Netherlands. Healthcare institutions and organizations should therefore find solutions for using current capacity and resources more effectively and efficiently. A shared float pool for the ICU of three hospitals; Medisch Spectrum Twente (MST), Ziekenhuisgroep Twente (ZGT) and Streekziekenhuis Koningin Beatrix (SKB), could be a solution to adapt to a fluctuating demand for healthcare in the Euregio. It is important to know whether the Intensive Care Unit (ICU) nurses are open to flexible deployment before starting the implementation process. Otherwise, the float pool will not have a chance of success. Only limited literature is available about deploying nurses from different organizations in one shared float pool and the perspective of the nurses about working in such a float pool. This research will identify the expected influential facilitating and impeding factors on the perspective of ICU nurses regarding flexible deployment in the Euregio.

METHODS

A mixed method approach was used for this study. First, relevant information about flexible deployment (of nurses) was sought in literature. Interviews were held with seventeen ICU nurses from the three hospitals in the Euregio. The influential factors that were found, were used to create a survey. The results from the survey show the importance of these factors to the ICU nurses. The data from the survey was statistically analyzed to be able to calculate the correlations between several variables.

RESULTS

This study found nine main factors which are expected to have an influential effect on the perspective of ICU nurses regarding flexible deployment at MST, ZGT and SKB. These are the expected influential facilitating or impeding factors ranked to importance: (1) private life of the ICU nurses, (2) incentives, (3) work environment, (4) team dynamics, (5) nature and duration of flexible deployment, (6) the complexity of healthcare, (7) personal development, (8) pandemic and (9) being self-employed or not. In general, the ICU nurses that were either interviewed or participated in the survey held negative attitudes towards flexible deployment at MST, ZGT and SKB.

DISCUSSION

This study gives insight in the perspective of ICU nurses regarding flexible deployment at MST, ZGT and SKB. The exchange of nurses between three hospitals is a new way of looking at flexible deployment. The results that were found might not be the only influential facilitating or impeding factors that play a role in the perspective of ICU nurses regarding flexible deployment at the three hospitals. This research provides useful recommendations to the hospital management and Acute Zorg Euregio, which can be considered when an actual float pool will be set up. Future research could focus on finding out whether these results would also apply for other hospital units.

KEYWORDS

Float pool – flexible deployment – hospital – Euregio – influential factors– perspective – ICU – nurses

TABLE OF CONTENTS

1 INTRODUCTION

The shortage of nurses in the healthcare sector has been a point of concern for a long time in the Netherlands. As the demand for healthcare and shortage of nurses increases, healthcare institutions have no other option than to find solutions for using current capacity and resources more effectively and efficiently [1]. A solution to adapt to a fluctuating demand for healthcare is to create a nursing float pool. Nurses who work in a float pool are trained to work on several units within a hospital, or other healthcare institutions. A float pool allows the hospital to make more efficient and effective use of the available nurses [2]. This is also called the 'pooling effect'. Research shows that nursing float pools can be very useful when it comes to dealing with the fluctuations in staffing and patients in the healthcare setting [3]. Additional benefits to float pools are the prevention of expensive overtime and exhaustion of regular nursing staff [4]. Using in-house staff for a float pool, instead of nurses from for example a secondment agency, could lead to a reduction of two to five percent of the total labor costs of nurses within a hospital [2]. This is a huge saving, considering that staff costs cover the largest expenses for a hospital [2].

This research is commissioned by the Acute Zorg Euregio (AZE). By the end of 2022, Medisch Spectrum Twente (MST), Ziekenhuisgroep Twente (ZGT) and Streekziekenhuis Koningin Beatrix (SKB) are possibly creating a float pool with Intensive Care Unit (ICU) nurses in the Euregio. This research is about ICU nurses within the Euregio because the AZE only focusses on the acute care departments within the Euregio which are the ICU, emergency department, ambulance care and the general practitioner centers [5]. From all these departments, the shortage of ICU nurses is most problematic because too few graduated nurses choose to specialize and working on the ICU is complex and emotionally exhausting [6], [7]. During the COVID-19 pandemic this shortage of ICU nurses became even more apparent [7], [8]. ICU nurses who want to work in this float pool, will first receive a traineeship based on their work experience and skills. Once the nurses are trained well enough on all three locations, they will be deployed wherever they are needed in one of the three hospitals. Before starting the implementation process, it is important to know whether ICU nurses support this proposal. Otherwise, flexible deployment of ICU nurses in the Euregio will not have a chance of success.

Currently, many healthcare institutions and organizations in the Netherlands are making use of secondment agencies, which provide healthcare professionals who can be deployed within several settings. Some organizations create their own float pool, whereby nurses can be deployed at multiple units or locations within that organization. The exchange of nurses between multiple hospitals which do not belong to the same organization is a novel way of looking at flexible deployment, because float pools are normally created within one organization. There is limited literature available about deploying nurses from different organizations in one float pool and the perspective of nurses about working in a float pool like this. During the COVID-19 pandemic, some healthcare institutions have already been exchanging or flexibly deploying their healthcare professionals as a temporary solution for the crisis situation [9], [10]. This solution contributed to optimal spreading and utilization of the available healthcare professionals. The COVID-19 pandemic showed us that a collaboration between multiple healthcare institutions, whereby staff is being exchanged, is a feasible solution.

Existing literature mostly describes the experiences of nurses regarding flexible deployment. Research about what motivates or withholds nurses from starting to work in a float pool is very limited. There is a knowledge gap when it comes to the intention and perspective of nurses who are not (yet) working in float pools. This study will give new insights in the expectations of ICU nurses about working in a float pool and which factors will either have a facilitating or impeding influence on the intention to actually start working in a float pool. This study will provide relevant insights for AZE and the management of MST, ZGT and SKB about the willingness of ICU nurses to work in a float pool and which factors have a facilitating or impeding influence. The insights will hopefully provide useful information for actual implementation of a float pool in the future.

The main aim of this research is to identify the perspective of ICU nurses, who work in the Euregio, regarding flexible deployment at the MST, ZGT or SKB. A secondary aim is to identify which factors are expected to influence the ICU nurses' perspective. A third aim is to identify what factors are most important to the ICU nurses. The following research question has been formulated:

What are expected influencing factors on the perspective of Intensive Care Unit nurses regarding flexible deployment at Medisch Spectrum Twente, Ziekenhuisgroep Twente and Streekziekenhuis Koningin Beatrix?

There are a few sub questions that belong to this research question:

1. *What are expected facilitating factors for ICU nurses regarding flexible deployment at MST, ZGT or SKB?*

2. *What are expected impeding factors for ICU nurses regarding flexible deployment at MST, ZGT or SKB?*

3. *How do the identified expected facilitating and impeding factors rank to importance according to the ICU nurse from MST, ZGT and SKB?*

2 BACKGROUND

In this chapter, some background information is given about Acute Zorg Euregio and the hospitals in which the ICU nurses are working. Causes of the ICU nurse shortage are also addressed in this chapter. Lastly, some existing theory on influential factors for flexible deployment are addressed.

2.1 ACUTE ZORG EUREGIO

Acute Zorg Euregio is a partnership between The Netherlands and Germany. The area includes Twente, the eastern part of the Achterhoek and the German border region. In this study, the focus lays on Twente and the eastern part of the Achterhoek. This area is marked orange in figure 1 [11]. The AZE is one out of eleven Regionaal Overleg Acute Zorgketen (ROAZ) network organizations within the Netherlands. The ROAZ organizations are continuously working on better cooperation regarding acute care in the region. These ROAZ organizations are part of the overarching Landelijk Netwerk Acute Zorg (LNAZ) [5].

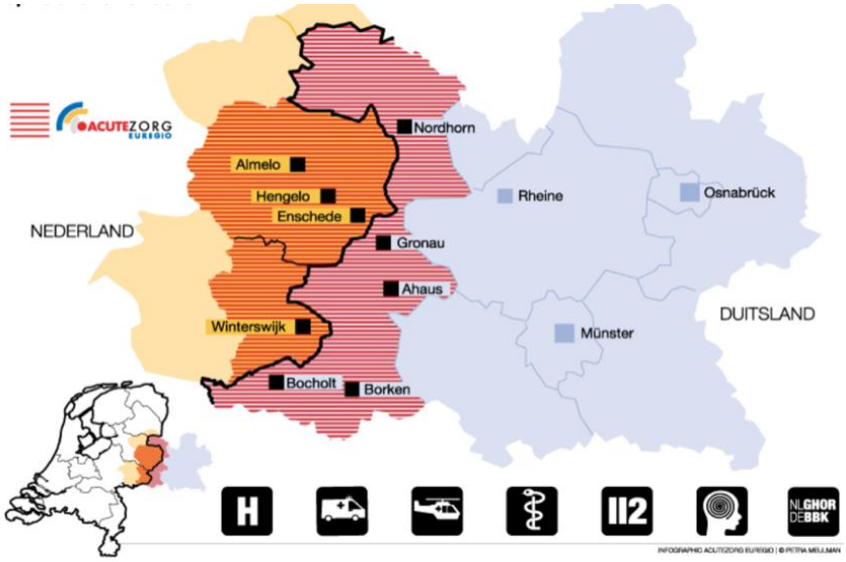

Figure 1: Euregio area [11].

2.2 THE HOSPITALS

Medisch Spectrum Twente:
MST is a top clinical teaching hospital in Enschede. A top clinical hospital delivers both basic healthcare as well as high complex healthcare for which specialized services are needed. The hospital has a trauma center with a regional trauma function. MST is one of the largest non-academic hospitals within the Netherlands. MST has 547 hospital beds and approximately 3,500 employees. Around 30,000 patients are admitted to MST yearly. The number of annual outpatient visits lays around 400,000 [12].

Ziekenhuisgroep Twente:
ZGT is also a top clinical hospital and delivers healthcare on two distinctive hospital locations, Almelo and Hengelo. In total, ZGT has 638 hospital beds and around 3,200 employees. Approximately 24,500 patients are admitted to ZGT yearly. The annual number of outpatients lays around 500,000 for ZGT [13].

Streekziekenhuis Koningin Beatrix:
SKB is a general hospital in Winterswijk with 214 beds and one outpatient clinic in Eibergen. SKB has around 1,100 employees. Approximately 18,500 patients are admitted to SKB yearly. The annual number of outpatients for SKB lays around 50,000 [14].

These hospitals provide different levels of complexity in healthcare. SKB is the smallest hospital and has eight ICU beds, of which two beds serve as Coronary Care Unit (CCU) beds. Only two beds can be used for ventilation. SKB mostly delivers postoperative ICU care, which is in general less complex. ZGT has twelve ICU beds. Next to postoperative ICU care, ZGT also delivers care to patients after more complex surgeries like major abdominal surgeries and oesophageal surgeries, in which ZGT is specialized. MST delivers the highest complexity of healthcare. It is one of the eleven trauma centers in the Netherlands and provides care for patients after thorax and neurological surgeries, which are specializations that generally do not occur in ZGT and SKB.

2.3 SHORTAGE OF NURSES

During the past decades, the demand for healthcare has been increasing due to multiple causes [15]. One cause is the aging population [16], which is the consequence of an improved healthcare system over the past decades [17]. In 2018, the last year before the COVID-19 pandemic started, 77,189 patients were admitted to the ICU in the Netherlands [18]. Due to the rising demand for healthcare, an increasing inflow of ICU nurses was predicted [19]. The ICU bed capacity increased from 1,065 in 2006 [19] to 1,208 in 2018 [18]. However, the number of admissions on the ICU decreased with 12% since 2014 [20]. This could be caused by more patient stops due to the shortage of healthcare providers or because patients are more often moved to medium care or nursing wards [19]. Patients who are admitted to the ICU are in general patients that have at least one acute endangered or disrupted vital function that requires continuous monitoring, whereby there is a possibility on recovery of this vital function [21]. According to the Nationale Intensive Care Evaluatie (NICE), the median age of the patients on the ICUs was 65 years in 2016 [22]. Because of the aging population, this median age will increase over the years [23]. The older the patient, the more likely it is that the patient is becoming frail. This causes an increased risk of morbidity and mortality, and therefore also a higher risk of being admitted to an ICU [24], [25], [26]. To compensate for this increasing demand for healthcare, more nurses are needed. According to Verpleegkundigen & Verzorgenden Nederland (V&VN), which is the professional association for nurses, there will probably be a shortage of 125,000 healthcare professionals in 2025 [27]. The highest shortages of nurses occur among the Intensive Care Unit (ICU), paediatrics, oncology, and emergency care [28], [6]. The Dutch Capacity Organ is an organization that performs research on the required capacity of healthcare professionals in the future. The capacity organ stated that there will probably be a shortage of 419 to 608 ICU nurses per year between 2018 and 2022 [24].

Another cause of the shortage of nurses in general is the inflow of nurses, which is too low compared to the outflow [29]. Increasing the number of nursing students sounds like a feasible solution in the long run, but that is not always possible. Some Universities of Applied Science in the Netherlands still use a numerus fixus. This means that only a predetermined number of students can be admitted for a certain study. In the case of the nursing study program, a numerus fixus is sometimes applied because there are simply not enough internships available [30]. There are too few internships available because these internships are very difficult to arrange for employers. The nurses are already very busy with their own tasks and are therefore not always able to supervise students [31]. Among the students that have been admitted to the study program, approximately one fifth of the students drop out before graduation. According to Bakker et al. the core reasons to drop out are experiencing increased physical, psychological, and social problems and discovering a mismatch between expectations of the work field or study program and reality [32]. The low inflow might also be influenced by the unappealing image of the healthcare sector. For example, a high workload and a mediocre wage for nurses compared to employees in other sectors might be a reason for people to choose to work in a different sector [33]. The Dutch healthcare professionals have received 6 to 9 percent less income compared to employees within the market and public sector since 1999. This backlog has never been corrected since that time [34].

Next to the low inflow, the outflow also contributes to the shortage of nurses. Figure 2 provides an overview of the balance of healthcare employees of the past years. The balance is calculated by subtracting the outflow numbers with the inflow numbers of a quartile. Figure 2 shows that within the past years, the balance is decreasing [35]. This might be caused by a decreased inflow or increased outflow of health care employees [29]. The outflow of employees between 25 and 34 years of age, who are working within the care and welfare sector, was 10% during the first quartile of 2020 [36], [37]. V&VN stated that within the first two years of work after graduation, four out of ten health care professionals are leaving the health care sector [38]. The outflow numbers for other age categories can be found the appendices (Appendix I). The COVID-19 pandemic also had a negative influence on the outflow numbers. On average, 15% of the ICU nurses resigned during the COVID-19 period. According to Kox et al. there are six core motives for nurses in general to leave the profession. Nurses might feel a lack of challenge, competence, passion, job satisfaction, work capacity, or feeling of belonging within their profession [39], [40]. About 24% of the nurses in the healthcare sector were older than 55 years of age in the first quartile of 2020 [41]. In 10 till 15 years from now, these nurses will retire. This will have a negative influence on the already high shortage of nurses [42].

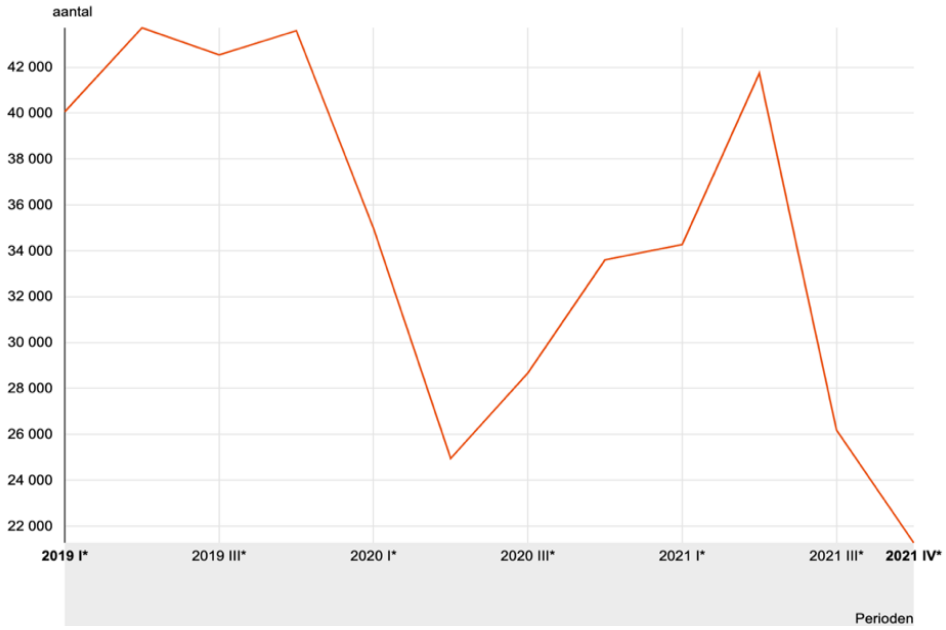

Figure 2: Balance (inflow – outflow) of health care employees [35].

2.4 THEORY ON FLEXIBLE DEPLOYMENT

Some research has been done about factors that influence the intention to work according to Flexible Work Arrangements (FWAs) in one organization. FWA stands for flexible working hours, patterns of work and location of work [43]. Ko & Kim (2018) described that the personal life of the employee and behavior of other employees might be influential factors. Personal life is the umbrella concept for savoring leisure, experiencing a balance between work and family, savings in travel time, childcare, and other private matters. The nurses might not be interested in participating in the float pool if it would affect the balance between their work and family. For example, when they must work additional hours outside their contract with the hospital. Research points out that age and gender might have an influence on the perspective regarding flexible deployment [44], [45]. Loretto & Vickerstaff (2015) describe that the difference in experiences of flexible deployment per gender might be strengthened by the factor age. A Swedish study stated that relative work flexibility and gender could lead to psychological fatigue under working parents [46]. In the Netherlands, men more often have full time jobs compared to women [47]. Women are probably working parttime more often to take care of the children. Approximately 86% of the nurses in the Netherlands are women [48]. Having younger children will therefore probably affect the flexibility of the ICU nurses. Nurses with younger children might be less open for working in a float pool. The outcomes might be different for male ICU nurses. Moreover, the age or phase in life of the ICU nurses could have an influence. The expectation is that the younger nurses, who do not have children yet, will be more open to flexible deployment at the three hospitals [49]. The older nurses, who do not have to arrange day-care or a babysitter for their children might be more open to work in the float pool as well. Being an informal caregiver will probably have the same influence as having young children, because it will also affect the flexibility of the nurses [50].

The social exchange theory describes that the behavior of a person is influenced by personal interests but also by the interests of the organization and colleagues. Individuals most often fear criticism from others and therefore, the social norms may have a high influence on the behavior and actions of individuals [51]. There will probably be some peer pressure among the nurses. When many nurses would have a negative attitude towards working in the float pool, others who initially had a positive attitude might become reluctant to be flexibly deployed. A reason could be that some units might be dealing with staff shortages. The fact that some nurses are going to work at other locations might give those who stay behind the feeling of an increased workload. On the other hand, this could also work in a positive way. The ICU nurses might also be able to support each other and exchange experiences when becoming flexibly deployed.

Travel time and financial compensation are also described as influencing factors for flexible deployment in other studies [52], [53]. Working on other locations might come with additional travel time for some of the ICU nurses. Having more travel time might also cause higher expenditures, for which some organizations will compensate these expenditures to a certain extent. Considerable additional travel time might negatively influence the intention of ICU nurses to become flexibly deployed. If the nurses would have to travel further to other hospitals, they will probably want to be compensated with additional travel allowance. Not receiving any compensation for extra travel expenditures, might make working in the float pool less attractive for the nurses. The same is true for another type of compensation. Nurses who will be working at the three hospitals, need to be more flexible. Compensating their effort with for example a bonus, or structurally offering a higher income will probably positively stimulate the nurses to become flexibly deployed.

Experiencing stress and work pressure at your own ICU might also have a negative influence on the perspective of ICU nurses, because someone might not be able to handle a flexible working attitude due to all the stress and pressure [54]. Working in the float pool might causes more stress for some nurses, because they must adapt to new work environments. Some researchers have described attitudes of nurses about working in float pools. It turns out that working in a float pool may cause feelings of wariness because the nurses must step outside their comfort zone. It is the wariness for the unknown [55]. Nurses may experience a lack of communication with the staff of the unit they are deployed to. This could be because the staff is too busy and does not have the time and energy to train the nurses from the float pool. Some nurses might experience or expect an unfair patient care assignment, whereby the nurse from the float pool receives the ‘worst’ patients [56], which of course would not motivate the float pool nurses to continue their work at the other hospitals.

The variety in work tasks, colleagues, or environments were also mentioned as possibly having an influence on the perspective of nurses regarding flexible deployment [54]. Some nurses might have difficulties with an unfamiliar work environment, which refers to for example the protocols and procedures at the unit as well as the feeling of belonging and being appreciated within the team [57]. Working in a float pool might cause a reduced group feeling because in some cases the nurses will see their own team less than before. Or maybe some nurses will not be able to blend in with the other teams or feel left out. However, working in a float pool also comes with some advantages. The nurses will be able to work with more diverse patient populations and specialties, make new connections and gain knowledge and skills [55]. Most nurses who decide to work in a float pool have certain personality traits that differ from nurses who are working at only one unit. Float pool nurses tend to be more independent, tough-minded, open to change and courageous [58]. Research from the Netherlands shows that there are some key principles to successful deployment of a flexible workforce. These principles are that the professionals need to be able to perform their general medical skills and that specific medical education can be recommended [59].

The following factors were suggested by experts. In the first few weeks of the master assignment, several appointments took place with the managers and team heads of the ICUs of MST, ZGT and SKB. A summary of these conversations can be found in the appendices (see Appendix II). During the COVID-19 pandemic, hospitals had to set up a COVID unit. Healthcare professionals from different specializations had to work on this new ward. The hospitals had an extremely difficult workforce challenge during the pandemic. Internal flexible deployment was a solution to this challenge. One of the experts mentioned it might be interesting to find out whether the perspective of healthcare professionals regarding flexible deployment changes during an epidemic/pandemic or other crisis related situation compared to a ‘normal’ situation [60]. Nurses might have a stronger motivation to become flexibly deployed at other hospitals in a crisis situation because they feel committed to helping each other out in the region.

Another expert mentioned that the duration of the flexible deployment period could also make a difference for some nurses. Some might prefer to work only single shifts at other hospitals. Others might prefer working somewhere else for a longer period [61], [62]. This also connects to the culture within the three hospitals. Every hospital has its own culture. The nurses probably want to have the feeling they belong somewhere. The welcome might be warmer within one hospital compared to the others, which makes it more pleasant to work there for a longer period. Working at a hospital with less bonding and connections between colleagues might be doable for a single shift now and then, but this might not be preferable for the long run [63]. Furthermore, there is a difference in complexity of healthcare between the three hospitals. When a nurse is used to working in a hospital with a higher complexity of healthcare, they might think it is less interesting to work in hospitals where the complexity of healthcare is lower [60]. Although a lower complexity of healthcare does not necessarily have to be less interesting. On the other hand, working in a smaller hospital with less complex healthcare could also be refreshing for nurses who are used to a higher and more difficult workload. Lastly, the work experience of the nurses might also have a positive or negative influence. Working in a float pool for three hospitals might be more interesting and challenging to younger ICU nurses with less work experience. However, for the older nurses with more experience it might be easier to work at other locations because of all their experience [60]. All the possible influential factors that were found in the literature or that were mentioned by experts, were combined in figure 3.

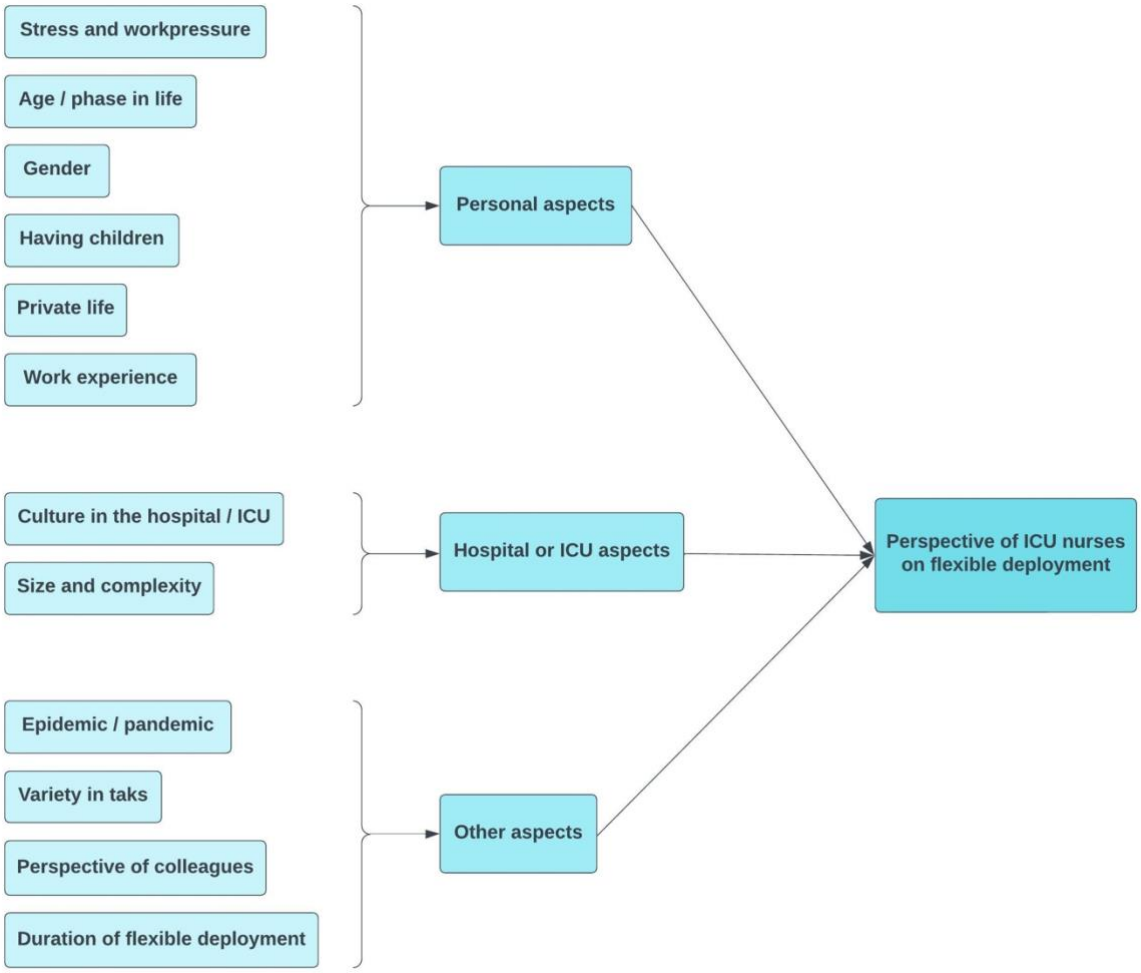

Figure 3: Influencing factors for ICU nurses regarding flexible deployment.

3 METHODOLOGY

In this chapter, the research design is shortly described. The interview and survey procedure are addressed. The way in which the data has been analyzed is described and finally, some ethical considerations are mentioned.

3.1 RESEARCH DESIGN

This study aims to gain insight in subjective opinions and experiences of ICU nurses. Several interviews and a survey were held to answer the research question and sub-questions. A mixed method approach was chosen for this study. The nature of this study is exploratory because there is limited literature available on what motivates or withholds nurses from starting to work in a float pool. This study will provide new insights on the perspective and expectations of ICU nurses regarding working in a float pool for three hospitals. The interviews provide qualitative data about the factors that influence the perspective and intention of ICU nurses to become flexibly deployed. The survey provides mainly quantitative data about the importance and influence of the factors.

3.1.1 STUDY POPULATION

The study population consists of ICU nurses who are working in the Euregio. 125 ICU nurses are working at MST, 64 at ZGT and 30 ICU nurses at SKB, which gives us a total of 219 ICU nurses. A float pool will possibly be set up for the following hospitals: MST Enschede, ZGT Almelo, and SKB Winterswijk. The first inclusion criterion was therefore that the participants should work in one of these hospitals. Next to that, the participants should work as a nurse on the ICU of one of these hospitals. Other healthcare professionals are excluded from this research because they do not fall within the scope of this research. Participating ICU nurses were allowed to work for other units, (healthcare) institutions or organizations because ICU nurses who work on other locations as well might be more open to flexible deployment at three hospitals.

3.1.2 SAMPLE SIZE

A sample was taken from this study population of ICU nurses. This was done based on a stratified proportional method, which is a random sample. The number of ICU nurses that were interviewed was chosen based on the size of the hospital they work in. The factor age was considered during the selection because age might have an influence on the perspective and intention of the ICU nurses. The participants were divided in three age categories for anonymity reasons: under 35 years old, 35-50 years old, and above 50 years old. Interviewing approximately equal number of nurses per age category might also prevent biases. The figure below shows an overview of this stratified proportional sample. The factor gender was left out during the selection because the ICU heads and managers of all three hospitals stated that only a very small percentage of the ICU nurses is male.

Location	**Population**		**Proportionate Stratified Sample**	
	Frequency	**Percentage**	**Frequency**	**Percentage**
MST Enschede	125	57,1%	11	57,1%
ZGT Almelo	64	29,2%	6	29,2%
SKB Winterswijk	30*	13,7%	3	13,7%
Total	219	100%	20	100%

* 30 = 21 ICU nurses and 9 Acute Care nurses (ICU + Emergency Room (ER))

Table 1: Planned Proportionate Stratified Sample Interviews

3.1.3 RECRUITMENT

The participants were recruited by the ICU heads and managers. The ICU heads and managers knew what the inclusion criteria were for this research and tried to find ICU nurses from all age categories (<35 year, 35-50 year, >50 year). The contact details of the ICU nurses, who were willing to participate, were provided by the ICU heads and managers. Appointments were then made with the ICU nurses. The participating nurses received additional information about the research and the informed consent form. The informed consent form needed to be filled in before the interview, to make sure that the participants were aware of their rights and so that they can give consent for recording the interview.

3.2 INTERVIEW AND SURVEY PROCEDURE

Figure 3 is used to create the interview scheme. The interview scheme can be found in the appendices, see appendix III. All interviews were recorded. The interviews were conducted in Dutch, since it is the native language of the participants. The interviews were held individually so that the ICU nurses were stimulated to think about their own expectations and feelings, instead of repeating answers of colleagues. The interviews took place at the family rooms of the ICU's. This way, the nurses were close to their unit in case of emergency situations. A semi-structured design with open-end questions was used for the interviews. Open-ended questions help receiving unbiased responses with more sentiment and details [64]. The interviews lasted around 20 – 50 minutes, depending on the number of additional questions that were asked based on the input of the participants. Additional questions or probes were asked when the interviewees might have given socially desirable answers to the questions. Suggestive questions were avoided. The interview scheme only served as a guide. This way, some deviation was possible during the interviews when for example interesting topics popped up that were not included in the interview scheme. Only one interview took place online, via a Teams meeting. All other interviews were conducted face-to-face at the hospitals. The decision to interview the participants face-to-face was made to create a better connection with the participants, which led to less stiff conversations. Twenty appointments with ICU nurses were scheduled, but eventually the moment of saturation already occurred at the seventeenth interview. The moment of saturation is the moment when additional interviews will not provide new information [65]. This moment of saturation was calculated by first counting the number of new influential aspects found in the first four interviews (the base set or denominator). Next, the number of new influential aspects per interview was divided by the base set. This process was continued until a threshold of zero percent was reached. An overview of this process can be found in the appendices, see appendix IV.

After the interviews were conducted, a survey was created. The survey was sent to all 219 ICU nurses who work in the Euregio for MST, ZGT or SKB. This survey was created based on all the main factors that were found during the interviews. The survey was made with QUALTRICS. A few general questions were asked about for example the age category and for which hospital the participant works, but most questions were based on a 5-point Likert scale. The ICU nurses had to choose between for example: Not important at all – Slightly unimportant – Neutral – Important – Very important or Very negative – Negative – Neutral – Positive – Very positive. The last question was a ranking question so that it would become clear how the ICU nurses rank the main influential factors to importance regarding their perspective and intention for flexible deployment. Some questions were randomized. This was not possible for all questions since there was a logical order for some questions. When possible, answer options were randomized as well to prevent the occurrence of the order effect. For a survey whereby there is no relationship between the researcher and the study population, the average response rate is about 20% to 30%. Therefore, it was assumed that 44 to 66 ICU nurses would fill in the survey.

3.3 DATA-ANALYSIS

The interviews have been recorded and transcribed literally. After the transcription of the interviews, the data was coded with the program ATLAS.ti. This process started with open coding, whereby the transcriptions were labelled. These labels were compared and combined under one or more overarching labels. The last step in coding the data was selective coding, whereby the theories were built up based on the connections and relations that could be made from the coded data. One of the supervisors coded a few interview transcriptions as well, which contributed to intercoder reliability. A coding table was created to give an overview of the frequencies of occurrence per factor. This coding table can be found in the appendices, see appendix V.

Excel was used to discover differences between the respondents of the three hospitals and whether the age of the respondents had an influence on their perspective. SPSS was used to do the statistical analysis. The null hypothesis is that there is no significant correlation between X and Y in this study population. The dependent variable (Y) in this study is the attitude of ICU nurses regarding flexible deployment at MST, ZGT and SKB. The independent variables (X) are all the aspects within the nine main influential factors that were found in the interview transcriptions.

3.4 ETHICS

All ICU nurses who participated in the research as an interviewee received an informed consent form before the interview took place. The informed consent form can be found in the appendices (see appendix VI). To ensure that literal transcription could be applied, the interviewees had to fill in the informed consent form before the interview took place. In this form they had to give consent for the recording of the interview. This question in the consent form needed to prevent appointments with interviewees who do not want to give consent for recording the interviews. Before the start of the interview the interviewer asked the interviewees for their consent again as a double check. The interviewees were notified about the confidentiality of the research.

The data that was collected was anonymized. All the interviewees were linked to a number combination that cannot be traced back to the participant. For the surveys, an option for anonymization was used in QUALTRICS. All recorded answers of participants are saved without names, IP-addresses and other information that can be traced back to the participants. The data was handled carefully and according to the Dutch Algemene Verordening Gegevensbescherming (AVG) which is part of the privacy regulations in Europe [66]. The thesis will be uploaded to the website of the University of Twente. Before uploading the thesis, some privacy sensitive parts are covered. The complete document, without covered parts will only be shared with the supervisors from the University of Twente and Acute Zorg Euregio.

Participation in the research was voluntary. Participants might have experienced some discomfort by participating in this research. For example, because they had to make time before, during or after their shift to be interviewed or to fill in the survey. Other discomfort that the participants might experience is that they might be wary that the information they provide will end up with their team manager. Which might make the participants feel like their answers could have negative consequences. This type of discomfort can be scaled under social risks. To prevent this discomfort, the participants received information about how their answers are processed in advance. There was no physical, economic, or legal risk or a loss of confidentiality linked to participating in this research [67].

The data that is collected during this research period will be saved and stored at a secured data storage of the University of Twente for a maximum of 15 years after completing the research. The data may not be used for other purposes without permission of the ethical committee.

4 RESULTS

The results from the interviews and survey are described in this chapter. The questions from the survey can be found in the appendices (appendix VII) The results from the seventeen interviews shows there are nine main factors that are expected to influence the perspective of the ICU nurses regarding flexible deployment at MST, ZGT and SKB. These nine factors and underlying themes will be addressed and will provide an answer on the main research question and the first two sub-questions. More quotes of interviewees about these factors can be found in the appendices, see appendix VIII. In this chapter, only mean values of the survey answers are given. An overview of all descriptive statistics can be found in appendix IX.

4.1 GENERAL INFORMATION ABOUT THE RESPONDENTS

77 ICU nurses filled in the survey, of which 66 respondents completed the whole survey. This means that there is a response rate of 30% for the survey. Figure 4 provides an overview of the number of respondents per hospital. 17% of the respondents were ICU nurses from SKB, 35% of the respondents were ICU nurses from ZGT, and 48% were ICU nurses from MST. More than half of the ICU nurses of the MST who filled in the survey, belonged to the age category 35 to 50 years old. About one third of the respondents from MST was under 35 years old. The respondents of the ZGT were quite evenly spread over the three age categories. Most respondents of SKB belonged to the age categories under 35 years old and above 50 years old.

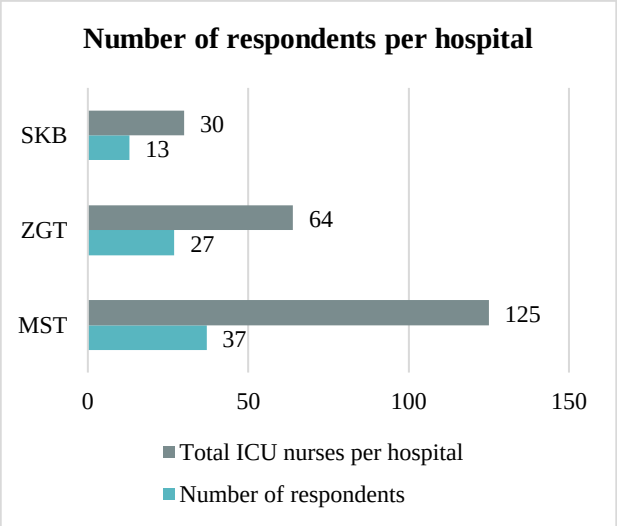

Figure 4: Number of respondents per hospital

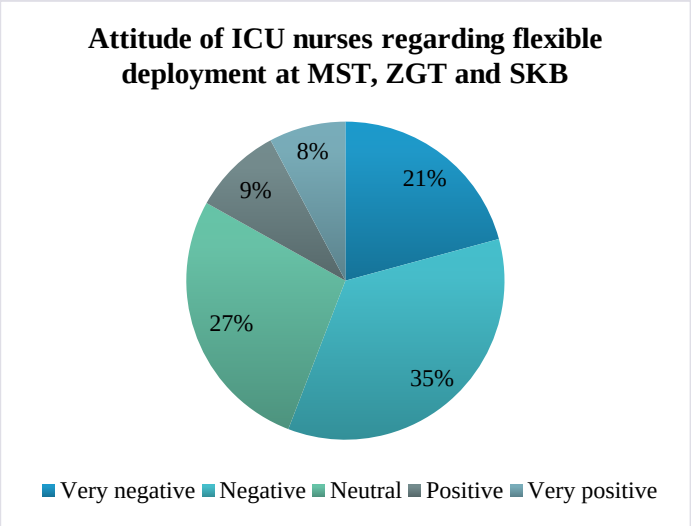

Figure 5: Attitude of ICU nurses towards the float pool

The nurses were asked about their attitude towards flexible deployment at three hospitals. Figure 6 shows that the majority of the respondents had a negative or very negative attitude towards flexible deployment. The mean value of all answers was 2.48. Most negative attitudes come from ICU nurses who work at MST and ZGT. The mean value for responses of ICU nurses from ZGT was 2.22. For MST, the mean value was 2.38. This means that ICU nurses from MST and ZGT have a very negative to neutral opinion regarding flexible deployment. Answers from respondents from SKB had a mean value of 3.31. The ICU nurses from SKB seem to have a more neutral to positive opinion about flexible deployment. The results show that many ICU nurses from the age categories 35 to 50 years old and over 50 years old were negative or very negative about flexible deployment. The youngest ICU nurses seem to be the most positive about flexible deployment. Despite the high number of negative attitudes from the oldest age category, 17% of the oldest ICU nurses said to have a positive attitude towards flexible deployment at three hospitals.

4.2 COMPLEXITY OF HEALTHCARE

The survey results show that 78 percent of the ICU nurses find the complexity of healthcare important or even very important. The results show that mean values for the ICU nurses from MST and SKB lay between 4.00 and 4.50. ICU nurses from MST and SKB seem to find delivering high complex healthcare important or even very important. For ZGT, the answers of the respondents had a mean value of 3.74. Apparently, ICU nurses from ZGT find the complexity of healthcare less important than the ICU nurses form the other hospitals. These results from ZGT contrasts with what was mentioned during the interviews. During the interviews, most nurses from ZGT did say they would like to work in a hospital with a higher complexity of healthcare, because this could be interesting and educational for them. When looking at the difference in answers between the three age categories, the results show that the younger ICU nurses give a higher importance to the complexity of healthcare. The mean value for the ICU nurses under 35 years old and 35 to 50 years old lays between 4.00 and 4.50. For the age category above 50 years old, the mean value was 3.76, which means that the older ICU nurses find the complexity of healthcare less important than the younger ICU nurses.

Interviewee #009 mentioned some reasons why a higher complexity is more interesting, see the following quote:*””*. Working a single shift in a hospital with a lower complexity of healthcare would not be a problem if the nurses would not have to work there for a longer period. Table 2 shows an overview of all aspects of this factor that were mentioned during the interviews.

Factor 1 Complexity of healthcare		
Facilitating	**Impeding**	**Facilitating or impeding**
-	Less attractive to work at a location with lower complexity healthcare for a longer period	Preferring a certain level of complexity in healthcare The need for challenge in work

Table 2: Factor complexity of healthcare

4.3 PRIVATE LIFE

The private life is also expected to have an influence on the perspective of the ICU nurses regarding flexible deployment. Most ICU nurses with children said they are less flexible in their schedule because of their children. The travel time could have a positive influence when nurses could work closer to their hometown, but a negative influence when they must travel further. The following quote from interviewee #004 shows what kind of influence children or travel time could have: *“”*. More than half of the respondents per hospital had children. ICU nurses with children were asked to fill in how their private life (having children or being an informal caregiver) influences their intention to become flexibly deployed. Most of these ICU nurses said this aspect of their private life has a (very) negative or neutral influence on their intention to become flexibly deployed. The mean value of the answers of ICU nurses from was 2.28. The ICU nurses were also asked how the availability of a (flexible) babysitter would influence their intention. The availability of a (flexible) babysitter caused a small increase of the mean value. The mean value of the answers for this question was 3.00 (neutral), which means the ICU nurses said that their intention to become flexibly deployed would be less negatively influenced by having children when they have a (flexible) babysitter available.

Of course, the preferred maximum travel time differs per ICU nurse. But in general, the ICU nurses said additional travel time would negatively influence their intention to become flexibly deployed. The mean value of the answers regarding additional travel time was 2.25, which means additional travel time would probably have a negative to neutral influence on the intention to become flexibly deployed. There were no substantial differences in the answers between the three hospitals. The mean value for the age category under 35 years old was 2.46. For the age category between 35 and 50 years old, the mean value was 2.33 and for the age category above 50 years old, the mean value was 1.90. These results show that the eldest nurses are the least enthusiastic about additional travel time when becoming flexibly deployed.

During the search in literature, it already became clear that the attitude towards flexible deployment might also be influenced by the personality of the ICU nurses. This was also mentioned during the interviews, see the following quote from interviewee #012: *“”*. Other nurses did say that the work experience would have an influence on their intention to become flexibly deployed. Some nurses said that they would feel more confident and relaxed to work at other hospitals now that they have more work experience. Others said that they might be more enthusiastic about flexible deployment if they were younger, since it would be a great opportunity to boost your knowledge and experience. Now that they are older they would rather stay at their own hospital. These topics were not addressed in the survey.

During the interviews, mental health was also mentioned to have an influence on the perspective of ICU nurses. When someone is already dealing with a burn-out or depression for example, they might be less enthusiastic about working in a different hospital. This might be too much for them at that moment. Therefore, the ICU nurses also had to fill in a question about the influence of their mental health on their intention to become flexibly deployed. The mean value for the answers to this question was 3.11. There were no substantial differences between the answers of the age categories. This means that according to the survey results, the mental health of the ICU nurses would probably not influence their intention to become flexibly deployed. One of the ICU nurses said to have some physical limitations. Therefore, the direct patient care is sometimes too burdensome for their body. Flexible deployment is no option because of these physical limitations. Stress was expected to have an influence on the perspective of ICU nurses. However, almost all nurses said they do not experience any stress or a heavy workload at the ICU.

Some interviewees said age would be an influential factor. Older nurses said to have trouble with getting used to new equipment and systems and are therefore less enthusiastic about working in other hospitals. Younger ICU nurses mentioned they see older colleagues struggle with new innovations at their unit. In the survey, the ICU nurses were asked what kind of influence their age has on their intention to become flexibly deployed. The mean value for the answers to this question was 3.14. The mean value from answers of the age category of ICU nurses under 35 years old was 3.57. The mean value of the answers from the ICU nurses who are 35 to 50 years old is 3.07 and for the eldest ICU nurses the mean value is 2.63. These results show that the eldest ICU nurses expected their age to have the most negative influence on their intention to become flexibly deployed, which corresponds to the general outcomes about the influence of age on the perspective on flexible

deployment. The ICU nurses were also asked about the possible influence of having hobbies next to their work. The results show that the mean value of the answers is 2.88. There were no substantial differences between the age categories. This mean value shows that hobbies probably have a negative to neutral influence on the intention of ICU nurses to become flexibly deployed. An overview of all aspects that were mentioned for this factor can be found in table 3.

Factor 2 Private life		
Facilitating	**Impeding**	**Facilitating or impeding**
Having a (flexible) babysitter or day care for the child(ren)	Having children / Informal caregiving	Mental health
Years of work experience	Age	Physical limitations
	Circumstances in private life	Working attitude
	Hobbies	Personality
	Stress and workload	Travel time

Table 3: Factor private life

4.4 INCENTIVES

Incentives were mentioned as an influential factor in all interviews that took place. During the interviews, most interviewees spoke about wanting to receive more appreciation for their hard work. Incentives were most often linked to some sort of financial compensation. As stated before, working in other hospitals might also cause some additional travel time for the ICU nurses. Additional travel time also means higher travel expenses. The current travel allowance for the hospitals is very low according to the ICU nurses. The mean value of the answers on the question about additional travel allowance was 4.56. Additional travel allowance therefore seems to be important or very important to the ICU nurses. There were no substantial differences in the answers between the three hospitals nor the age categories.

The following quotes show the importance of these financial compensation according to the ICU nurses: “ ”. The mean value of the answers on the question about additional income was 4.50, which means additional income would be (very) important to the ICU nurses when they would become flexibly deployed. There were no substantial differences in the answers between the three hospitals nor between the age categories.

Another incentive is a time-for-time arrangement, whereby the additional time the ICU nurses spend on their working day, for example due to more travel time, can be seen as working time. This time-for-time arrangement prevents additional time the ICU nurses must spend on work outside their contract. The mean value for the answers on the time-for-time arrangement was 4.35. This means that a time-for-time arrangement would be important or even very important to ICU nurses who become flexibly deployed. An overview of all aspects that belong to this factor can be seen in table 4.

Factor 3 Incentives		
Facilitating	**Impeding**	**Facilitating or impeding**
Financial compensation (additional travel allowance)	-	-
Financial compensation (additional income)		
Time for time arrangement		
Receiving appreciation/rewards for flexible deployment		

Table 4: Factor incentives

The respondents also had the option to write down other forms of incentives that are important to them. Below, an overview of the answers to this question is given.

Other incentives
Verbal appreciation
Additional growth possibilities in pay rate
Annual allowance for good footwear
Improved secondary working conditions
Possibility to use a car from the organization for commute- and work traffic
Additional days off

Table 5: Other important incentives.

4.5 SELF-EMPLOYMENT

Only five respondents are self-employed next to their salaried employment at MST or ZGT. These nurses fill in additional shifts at other hospitals in the country. There were two self-employed ICU nurses from MST and three self-employed ICU nurses from ZGT. 60% of the self-employed respondents belonged to the age category below 35 years old. 40% belonged to the eldest age category of above 50 years old. The ICU nurses were asked what kind of influence their freelance work would have on their intention to become flexibly deployed at MST, ZGT and SKB. The mean value for the answers to this question was 3.6, which means the ICU nurses said that their self-employed work has a neutral to positive effect on their intention to become flexibly deployed at MST, ZGT and SKB. There was no substantial difference between the answers of ICU nurses from MST and ZGT. There was a difference in answers between the age categories. The mean value for the age category under 35 years old was 3.00. For the ICU nurses above 50 years old it was 4.50. This means that the youngest age category thinks the self-employment has a more neutral influence on their intention and for the eldest age category it would probably have a (very) positive influence.

Self-employed ICU nurses can apply for shifts at other healthcare institutions. They can decide for themselves how many of these shifts they will work. They can adjust their own schedules. The ICU nurses were asked how the frequency of self-employed shifts influences their intention to become flexibly deployed. The mean value of the answers to this question was 3.20. This means that the frequency would probably have a neutral influence on the intention of ICU nurses to become flexibly deployed. There was no substantial difference between the answers per age category.

The main reason for self-employment was the salary according to the ICU nurses. As a self-employed nurse, you will earn a higher salary, which makes it very attractive. The ICU nurses were asked what kind of influence this aspect would have on their intention to become flexibly deployed. The mean value of the answers to this question was 2.40. The mean value for the youngest age category was 1.67, which means that due to the higher income these nurses already earn by self-employment, working in a float pool becomes less attractive. The mean value for the eldest age category was 3.50, which means the higher income due to self-employment would not negatively influence the intention of the older nurses.

Next to the higher income, it is also seen as a good opportunity for the nurses to broaden their horizon and knowledge. The self-employed ICU nurses mentioned the threshold for working at several hospitals is lower to them because they are already used to working at multiple locations. Most of the self-employed nurses said they would be interested in working at these three hospitals because it could be educational. However, since they are already working at multiple locations, some nurses did not see the benefit of working at three hospitals because they would not earn as much income as for their self-employed shifts. Other nurses said they would be interested if working in the float pool if they would be compensated for it, see the quote of interviewee #010: “”. All the aspects belonging to this factor can be seen in table 6.

Factor 4 Self-employment		
Facilitating	**Impeding**	**Facilitating or impeding**
Broaden horizon and knowledge	Self-employment next to salaried employment Higher income due to self-employment	-

Table 6: Factor self-employment

4.6 COVID-19 PANDEMIC

During the COVID-19 pandemic, many ICU nurses had to work additional hours. Sometimes they had to work 12 hours a day, and some even worked around 72 hours a week. During the interviews, the ICU nurses said that they are still recovering from this extremely busy period. The nurses who are still recovering from this busy period said they would not be very enthusiastic to work in other hospitals if a new wave or pandemic would occur. The ICU nurses were asked how important working in their own hospital during a (new) pandemic would be to them. The mean value of the answers to this question was 4.30. This value shows that the ICU nurses said working in their standard hospital during a pandemic would be (very) important to them. There was no substantial difference between the answers of the three hospitals or age categories.

Because of the lockdown, some ICU nurses did not mind working additional hours since there was not really anything else you could do except for working, see the quote of interviewee #009: “”. In the survey, the nurses were asked about the importance of working in their standard hospital during a pandemic when the Netherlands is in lockdown. The mean value for the answers to this question was 4.31. This means that working in the standard hospital during a pandemic with lockdown would be (very) important to the ICU nurses. There was no substantial difference between the answers of the three hospitals or age categories.

Moreover, some ICU nurses said they would rather work in their own hospital during a period of crisis, because they are familiar with the location, equipment, materials, protocols, and procedures. The quote of interviewee #010 shows the importance of working in a familiar hospital during a pandemic: “”. Only a few nurses said they would feel responsible for helping each other out during a period of crisis. An overview of all aspects that were mentioned for this factor can be found in table 7.

Factor 5 Pandemic		
Facilitating	**Impeding**	**Facilitating or impeding**
Lockdown	Still tired of previous pandemic	-
Willingness to help each other out in the region	Preferring working in own hospital during pandemic	

Table 7: Factor pandemic

4.7 WORK ENVIRONMENT

All three hospitals make use of the same system brand, which is called Health Information eXchange (HIX). This system is used for the Electronic Health Records (EHR) of the patients. There seem to be quite some differences between protocols and procedures and equipment that are being used in the hospitals. These differences might complicate it for ICU nurses within a float pool to do the exact same tasks as the permanent nurses. Almost all ICU nurses would prefer equal protocols and procedures, materials equipment, and systems (EHR) in the three hospitals. This would lower the threshold to start working in a float pool, see the quote from interviewee #009: “”. The ICU nurses were asked how important equal protocols and procedures would be to them if they would become flexibly deployed. The mean value for all answers was 4.14. Equal protocols and procedures therefore seem to be important or even very important to the ICU nurses. There were no substantial differences between the different age categories. Materials like intravenous drips, injection needles etcetera might be slightly different at MST, ZGT and SKB, because all hospitals have their own suppliers. Materials are not purchased together. The ICU nurses were asked how important equal materials would be to them if they would become flexibly deployed. The mean value for all answers was 4.14. Equal protocols and procedures therefore seem to be important or even very important to the ICU nurses. There were no substantial differences between the different age categories. All three hospitals are using different brands of equipment. Equipment is for example dialysis equipment, intravenous poles, or a ventilation machine. The ICU nurses were asked how important equal equipment would be to them if they would become flexibly deployed. The mean value for the answers to this question was 4.05. This means that ICU nurses find it important to have equal equipment at the hospitals when they would become flexibly deployed. There were no substantial differences in answers between the different age categories.

During the interviews it became clear that not all ICU nurses are aware that these three hospitals are all using the same system. In the survey, the ICU nurses had been asked how important it is to them that all three hospitals are using the same system when they would become flexibly deployed. The mean value for all answers to this question was 4.29. The ICU nurses seem to find it important to have the same systems in the hospitals when becoming flexibly deployed. There were no substantial differences between the different age categories.

During the interviews, some ICU nurses mentioned that they would prefer working at their own hospital because you must deal with frequent acute situations at the ICU. During an acute situation, they said they would feel more confident at a familiar unit, a place where you know your colleagues, protocols and procedures and all materials and equipment. When you are not familiar with the materials and equipment, you cannot respond as quickly which might have negative consequences for the health condition of the patient. Therefore, a question was added to the survey whereby the respondents had to fill in whether their opinion about equal protocols and procedures, materials, equipment, and systems would change in acute situations. 27% of the ICU nurses answered their opinion on the previous aspects would change in acute situations.

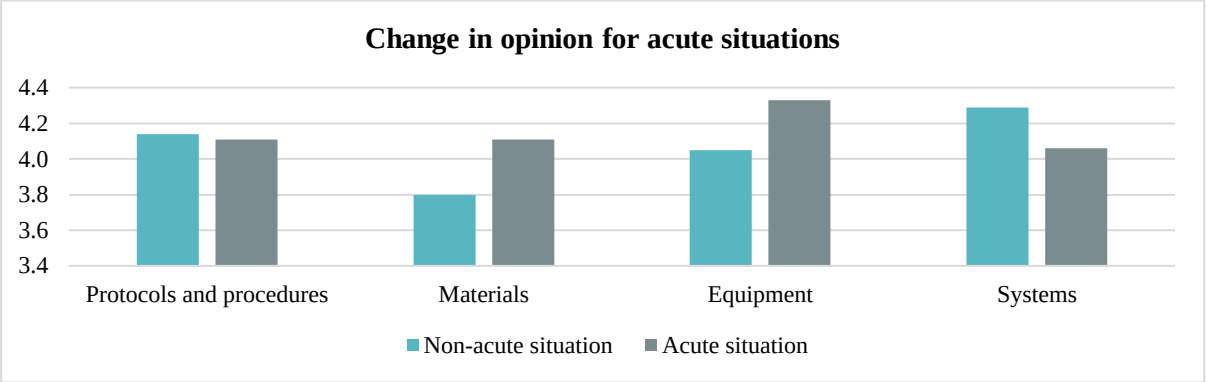

Figure 6: Change in opinion for acute situations.

Figure 6 shows that ICU nurses think equal protocols and procedures are equally important in normal and acute situations. Equal materials and equipment become more important in acute situations and equal systems become less important in an acute situation.

Many of the interviewed nurses had preconceptions about the other hospitals, about for example the culture within the different hospitals or the challenge of work. An example of one of the preconceptions is given by interviewee #006: *“”.* Nurses from SKB and ZGT, were less interested in working in a larger team. They prefer working in a smaller team because they think it is more personal. Everybody knows each other and their personal situations. Some ICU nurses said that they think fully participating at the other hospitals and being able to work there as one of the permanent ICU nurses might be a utopia. Mostly nurses from MST mentioned they were not sure if the nurses from SKB would even be able to work at MST because of the complexity of the healthcare. This would require additional training they said. The nurses from MST were also the least interested in working at SKB, because they think working at that hospital would not be challenging enough for them.

Depending on how often the ICU nurses would have to switch between the hospitals, working in the float pool might also affect the continuity of healthcare according to the nurses. Patients would be cared for by more different nurses, but the nurses themselves might also experience less stability in their work. They would need to adapt to the different units over and over again. This requires additional thinking but might also keep the nurses alert so that they would not fall into a routine. Some nurses mentioned that there are frequent changes at the ICU. It might be difficult to keep up with all changes of the three hospitals. A last thing ICU nurses mentioned regarding the work environment was that their intention would depend on the business at their own unit. If they would have a very busy period, they would not want to burden their colleagues by working at other locations. In that case they would prefer staying at their own unit.

During the interviews it became clear that most ICU nurses prefer certain locations. Some hospitals might be further away from their place of residence, which was often mentioned as a negative aspect during the interviews. Only one ICU nurse mentioned that one of the other hospitals, which is not her standard hospital, was closer to her place of residence. In a case like that it is seen as a positive aspect. Therefore, the ICU nurses were asked how important it would be to them to be able to choose in which hospitals they would become flexibly deployed. The mean value for the answers to this question was 4.24. This means that the ICU nurses would probably find it (very) important to be able to choose in which hospital(s) they would become flexibly deployed. There were no substantial differences between the different age categories.
There are many ICU nurses who have (several) tasks next to the direct patient care. Some ICU nurses even work for multiple employers. During the interviews, ICU nurses said these tasks and other work might have a negative influence on their intention to become flexibly deployed at MST, ZGT and SKB. The ICU nurses were asked what influence additional tasks or work would have on their intention to become flexibly deployed at MST, ZGT and SKB. The mean value of the answers given to this question was 2.79. This mean value shows that the additional tasks or work would probably have a negative to neutral influence on the intention of ICU nurses to become flexibly deployed at the three hospitals. An overview of all aspects for this factor can be found in table 8.

Factor 6 Work environment		
Facilitating	**Impeding**	**Facilitating or impeding**
Variation in patient population	Variation in systems, materials, equipment, protocols, and procedures	(Decreased) continuity of healthcare
Preferred team size	Frequent changes in protocols and procedures	Culture within the hospitals
Being able to choose where you want to work	Insecurities in acute situations	Business at own ICU
Corresponding protocols, procedures (and equipment and materials) in all hospitals (for acute situations)	Other activities or responsibilities next to the ICU work	Stability
	Wariness about the unknown in other hospitals	Image of the hospitals
	Working at an unfamiliar hospital requires additional thinking	
	Possible reduced quality of healthcare	

Table 8: Factor work environment

4.8 PERSONAL DEVELOPMENT

The following topic was brought up during the interviews: “”. ICU nurses are specialized nurses. They must follow a study program of approximately 1,5 years. During the past years, the study program for ICU nurses has changed. The study program consists of several Entrusted Professional Activities (EPA’s). These EPA’s can be seen as modules within the study program. Hospitals can decide which EPA’s they will offer based on the healthcare they provide within the hospital. SKB is performing mainly postoperative ICU care, and therefore they will not offer EPA’s about for example trauma care, because they simply do not deliver this type of healthcare at SKB. Because of this, the study programs might differ in EPA’s and length per hospital. Some ICU nurses from for example SKB might not have passed all EPA’s that are required to work at a hospital like MST. They might need to pass these EPA’s before being able and allowed to work at MST. It takes approximately three to four months to pass one EPA. Therefore, it might take some time before some nurses can become flexibly deployed at the other hospitals. The ICU nurses were asked whether they would be open for passing additional EPA’s if necessary. The mean values for the answers to this question from MST and ZGT lay between the 2.50 and 3.00. This means that the ICU nurses from MST and ZGT would probably not want to pass additional EPA’s if this might be necessary to work at one of the other hospitals. The mean value for SKB was 3.67. This means that ICU nurses from SKB would be more open to pass additional EPA’s if necessary. A difference in mean values between the different age categories was found as well. The mean values for the age categories between 35 and 50 years old and above 50 years old lay between 2.50 and 3.00. The mean value for the age category under 35 years old was 3.29. This means that the younger ICU nurses are more open for passing additional EPA’s if necessary to work at other hospitals.

All ICU nurses must follow training, whereby their skills and expertise are tested yearly. These trainings serve to maintain high quality healthcare. Agreements about these trainings may differ per hospital. At MST, all trainings are scheduled on one day to cause the least possible burden for all the ICU nurses. Some nurses said they think working in a float pool could be very educational and interesting, see the quote of interviewee #005: “”. They are curious about the way of working in other hospitals. However, they would not be very enthusiastic about obligated training and tests at all three hospitals if they would start working in the float pool. In the survey, the ICU nurses were asked how important it would be to them that training and skills testing would only be obligated in their standard hospital. The mean value for the answers of ICU nurses from MST was 4.21. For ZGT the mean value was 3.93 and for SKB 3.25. These results show that there is a substantial difference between the opinion of ICU nurses who work at MST, ZGT or SKB. Following training and being tested in the standard hospital is important or very important to the ICU nurses who work at MST or ZGT. This aspect was less important to the ICU nurses who work at SKB. There was no substantial difference between the answers of the three age categories. According to most of the ICU nurses who were interviewed, a good training period in advance is necessary to be able to get familiar with the other units. The respondents of the survey had to answer a question about whether a training period in advance to flexible deployment would be (un)important to them. The mean value for the answers to this question was 4.31, which means that the ICU nurses find it (very) important to have a training period in advance to becoming flexibly deployed. There was no substantial different between the answers of the three hospitals or age categories.

The nurses might be able to exchange valuable knowledge when working at these three hospitals. The ICU nurses had to answer how important it is to them to exchange knowledge with ICU nurses from other hospitals. The mean value for answers to this question was 3.67. The mean value for ICU nurses from MST was 3.43. For ZGT, the mean value was 3.70 and for SKB it was 4.17. These values show that it is more important to being able to exchange knowledge with ICU nurses from other hospitals for ICU nurses from SKB than it is for ICU nurses from MST and ZGT. There was no substantial difference between the answers of the three age categories.

Some ICU nurses from MST and ZGT mentioned that working in a hospital with less high complex healthcare would be less challenging for them. The ICU nurses were asked whether they think becoming flexibly deployed could be educational for them. The mean value for the answers to this question was 3.22. The mean value for MST was 2.86, for ZGT 3.33 and for SKB it was 3.83. These results show the same information as what was mentioned during the interviews. ICU nurses from MST think working in the float pool would be less educational for them compared to nurses from ZGT and SKB. Some differences were found in the mean values of the answers between the different age categories. The mean value for the youngest age category was 3.63. The mean value for the age category 35 to 50 years old was 3.11 and the mean value for the eldest age category was 2.81. Therefore, the older the nurse, the less educational they personally think working in the float pool could be for them. Certain expertise and skills are needed when working on an ICU. The ICU of MST, ZGT and SKB require different expertise and skills, because there are different levels of complexity of healthcare and different specializations per hospital. During the interviews, several ICU nurses mentioned that they want to keep their expertise and skills up to date. When becoming flexibly deployed for a long period, the ICU nurses from ZGT and MST might not be able to use certain expertise and skills. These ICU nurses from ZGT and MST said this aspect of the flexible deployment was less attractive to them. Moreover, most nurses have a certain attention field. When working at other hospitals for a longer period, this knowledge and the skills will be missed at their standard hospital. In the survey, the ICU nurses were asked to what extend they agreed with keeping expertise and skills up to date being important to them. The mean value for the answers to this question was 4.37. This value shows that most ICU nurses find it important to keep their expertise and skills up to date. This was about equally important to the ICU nurses of all three hospitals and age categories. An overview of all aspects that were mentioned can be found in table 9.

Factor 7 Personal development		
Facilitating	**Impeding**	**Facilitating or impeding**
Ambition	Following a study program	Offered Entrusted Professional Activities (EPA's) per hospital
Broaden horizon / educational	Loss of skills	Challenging
Training period in advance	Loss of expertise	
Agreements on required yearly training and testing of the skills		
Learning to work with different systems and equipment		
Exchange knowledge with other ICU nurses		
Gaining insight in procedures and working methods of other hospitals		
Experiencing benefits from experiences gained in other hospitals		
Having previous work experience from working in different hospitals		
Making new connections		

Table 9: Factor personal development

4.9 NATURE AND DURATION OF FLEXIBLE DEPLOYMENT

According to the nurses who were interviewed, working in a float pool should be voluntary. To obligate working in the float pool would create a lot of resistance from the nurses. Some of the nurses said that being able to choose what kind of shifts you work at other locations, how often, and at which location, would have a positive influence on their perspective on working in a float pool, see the following quote of interviewee #011: "". Preferring a certain type of shift was mostly linked to having children or a partner that works irregularly as well. The preference for a certain location was mostly linked to the distance and travel time. Most ICU nurses preferred to not travel farther than they currently did. Others said the distance would not be a hurdle for them as long as they would not have to work far away frequently. There were many different answers regarding the frequency of flexible deployment. Some ICU nurses said that they would rather work single shifts at other locations because they want to keep their home base at the hospital they originally work for, see the following quote of interviewee #002: "". Others mentioned that it might be better to work somewhere else for a longer period because you will get more familiar with the place and the team. The ICU nurses were asked how important it would be to them to be able to decide how often they would work at (one of) the other hospitals. The mean value of the answers to this question was 4.37. No substantial difference was found between the mean values between the different hospitals or age categories. The ICU nurses were also asked to rank these aforementioned options. Working on stand-in basis was most often mentioned as the preferred option. The second-best option according to the ICU nurses was working a fixed number of hours at (one of) the other hospitals. The least preferred option was to work at (one of) the other hospitals for a longer period.

When becoming flexibly deployed at MST, ZGT and SKB, the ICU nurses need to get familiar with new units, colleagues, and patient categories. The results of the interviews showed that most ICU nurses are wary of the unknown. A trial period could reduce this wariness. 72% of the ICU nurses said a trial period would be (very) important to them. The mean value for the answers to this question was 4.00. Both the ICU nurses from MST and ZGT answered a trial period would be neutral to important to them. The ICU nurses from SKB mostly said a trial period would be (very) important to them. There was no difference between the mean values of the answers per age category. During the interviews, many ICU nurses said they want to keep a steady basis in their standard hospital. Reasons for keeping a steady basis were for example that ICU nurses wanted to keep a good connection with their colleagues, because of certain additional tasks next to the direct patient care or keeping up to date in what is going on at their own unit. The results showed that 91% of the respondents find it (very) important to keep a steady basis in their standard hospital. This was about equally important for ICU nurses of MST, ZGT and SKB. The mean value of the answers to this question was 4.54. There was no substantial difference in answers between the age categories.

During the interviews, many different opinions on advanced notice were mentioned by ICU nurses. Some ICU nurses would rather work on stand-in basis whereby they can apply for shifts on short term. Other ICU nurses rather wanted the shifts to be communicated in advance so that they can schedule other activities around it or be able to arrange a babysitter for their child(ren). The results show that the advanced notice in which shifts are communicated is seen as an important or even very important aspect. The mean value for the answers to this question was 4.29. There was no substantial difference between the answers of the three hospitals or age categories.

The ICU nurses work different type of shifts. There are morning shifts, evening shifts, and night shifts. It is obligatory for all ICU nurses to work all type of shifts. With a fulltime contract, ICU nurses at MST must work around seven or eight night shifts per month. Except for the older ICU nurses, they can choose to not work any nightshifts. The ICU nurses were asked how important it would be to them to be able to decide what type of shifts they work at the other hospitals when they would become flexibly deployed. The mean value for the answers to this question was 4.23. This value shows that being able to decide what type of shifts to work at the other hospitals would be (very) important to the ICU nurses. The nurses were also asked to tell what type of shifts they would prefer when becoming flexibly deployed at MST, ZGT and SKB. Most ICU nurses would prefer working day shifts or evening shifts at the other hospitals. 21% of the ICU nurses said to have no preference in what type of shifts they work at other hospitals. An overview of all aspects that were mentioned about this factor during the interviews can be found in table 10.

Factor 8 Nature and duration of flexible deployment		
Facilitating	**Impeding**	**Facilitating or impeding**
Voluntariness Test period Good arrangement on single shifts before being deployed elsewhere for a longer period Having a choice in the frequency of float pool shifts Clear agreements about what you may (not) at other locations No obligation to work night shifts at other locations	Longer working day with more travel time Less bonding with other teams when working single shifts	Distribution of (contract)hours over the different locations Duration of flexible deployment Frequency of flexible deployment Advanced notice Preference in type of shift (morning, evening, or night shift) Hours inside or outside year hour system Single shifts on stand-in basis

Table 10: Factor nature and duration of flexible deployment.

4.10 TEAM DYNAMICS

MST, ZGT and SKB are three different hospitals, with different cultures and team dynamics. Most people feel the urge to belong somewhere. This also became clear during the interviews. Many nurses were a bit hesitant about the way they would be welcomed at other hospitals. An example is shown with the following quote from interviewee #002: “”. There is this image of MST that because of the size of the team, people would not be welcomed in a good way. Furthermore, the team at MST would have less personal connections with each other according to ICU nurses from ZGT and SKB. The ICU nurses were asked how important it would be to them to feel welcome at the other hospitals when becoming flexibly deployed. The mean value for the answers of ICU nurses from MST was 4.16. For ZGT, this mean value was 4.37 and for SKB it was 4.69. Most ICU nurses seem to find it (very) important to feel welcome at the other hospitals. For the ICU nurses from SKB this seems to be even more important than for the ICU nurses from MST. The results also showed that the older the ICU nurse, the less important it becomes to feel welcome at the other hospitals when becoming flexibly deployed.

A connection with their permanent team, but also with the other teams seems to be very important. To be able to keep a good connection with the permanent team, most of the ICU nurses want to keep a home base. At the home base, most ICU nurses from SKB and ZGT blindly trust their colleagues, they were not sure if they could have the same bond with colleagues at MST because the size of the team at MST. The nurses also mentioned to have strong bonds with the intensivists at their hospital. They said it might be more difficult to build a similar bond with intensivists at other hospitals because they will not work there as frequently as within their own hospital. No connection with other colleagues would have a negative influence on their intention to work more shifts at these other hospitals. The ICU nurses had also been asked about this subject in the survey. The survey results show that most ICU nurses indeed find this connection (very) important. The overall mean value for the answers to this question was 3.56, which means having a connection with ICU nurses at other hospitals would be neutral to important to the ICU nurses. This was about equally important to the ICU nurses from all hospitals and age categories.

Feeling safe can be seen as a safe work environment and learn environment, but also feeling confident to provide safe healthcare to the patients at the ICU. During the interviews, some ICU nurses who are working at MST, mentioned having doubts whether ICU nurses from SKB could safely deliver healthcare to certain patients at MST. The mean value for this aspect was 4.66. ICU nurses from all hospitals and age categories seem to find it (very) important to feel safe at the other hospitals when becoming flexibly deployed at MST, ZGT and SKB.

It was also mentioned that working in a float pool might also cause a reduced responsibility for certain tasks or attention fields because the nurses within the float pool might not experience the group feeling or team spirit as much as others, see the following quote from interviewee #008: “”.

Possible unfair patient assignment was also mentioned by some of the nurses. It could be that ICU nurses who work at an unfamiliar unit, will receive the least interesting patients to care for or maybe the most difficult patients. Some ICU nurses said they heard stories from other nurses who had experienced situations like this. This would have a negative effect on their motivation to work at other locations. Another theme was the hearing and rebuttal. This was especially an important aspect for the ICU nurses from ZGT and SKB. The ICU nurses said that they are hesitant about the float pool becoming a one-way traffic, whereby mostly nurses from these two hospitals would have to fill in shifts at MST and nurses from MST would not work at ZGT and SKB.

There are differences in size between the ICU teams at MST, ZGT and SKB. MST has the largest team with 125 ICU nurses. ZGT has 64 ICU nurses and SKB only 30 ICU nurses. Some ICU nurses might consciously choose to work in an either large hospital and team, or a smaller hospital and team. The ICU nurses were asked how important working in a large hospital and team would be to them. The mean value for the answers to this question is 2.79. The mean value for MST was 3.74. For ZGT it was 2.22 and for SKB only 1.69. These results show that it is most important to ICU nurses from MST to work in a large hospital and team. ICU nurses at SKB find it (very) unimportant to work in a large hospital and team. There were also some differences between the answers of the different age categories. The answers of the ICU nurses within the youngest age category had a mean value of 2.64. The answers of the ICU nurses within the age category 35 to 50 years old had a mean value of 3.41 and the mean value for the answers of the eldest age category was 1.94. This shows that the size of the hospital and team is least important to the eldest ICU nurses and most important to the ICU nurses within the age category 35 to 50 years old. An overview of all aspect that were mentioned can be found in table 11.

Factor 9 Team dynamics		
Facilitating	**Impeding**	**Facilitating or impeding**
Trust in colleagues / being able to blindly rely on colleagues	Being part of multiple teams	Interest in each other
Feeling safe / safe working atmosphere / feeling welcome	(Losing responsibility for) field of attention	Opinion of colleagues
Freedom to think along in the care process	Becoming less flexible for own team / not willing to burden own team	Team spirit
Having a connection with the unfamiliar teams	Being less aware of the personal situations of colleagues / Less personal attention for colleagues when not seeing each other as much / Losing the connection with own team	Willingness to properly train the float pool employees
Short lines between employees	Being less inclined to deal with annoyances because you frequently switch locations	Hearing and rebuttal
Feeling of belonging	Less bonding with colleagues in larger teams	(Possible unfair) patient assignment at other locations
Keeping a home base		
Willingness to help each other in the region		
Receiving appreciation from other teams		

Table 11: Factor team dynamics

4.11 RANK TO IMPORTANCE

For this question, the ICU nurses had to rank all factors that were addressed during the survey to importance, whereby the factor addressed to number one was the most important factor and number nine would be the least important factor to them. The answers were analyzed per hospital. Table 12 provides an overview of the rank in importance according to ICU nurses of MST, ZGT and SKB is given.

Rank	MST	ZGT	SKB
1.	Private life	Incentives	Nature and duration
2.	Incentives	Work environment	Complexity of healthcare
3.	Work environment	Private life	Team dynamics
4.	Complexity of healthcare	Team dynamics	Incentives
5.	Team dynamics	Nature and duration	Personal development
6.	Nature and duration	Complexity of healthcare	Private life
7.	Personal development	Personal development	Work environment
8.	Pandemic	Pandemic	Pandemic
9.	Self-employment	Self-employment	Self-employment

Table 12: Factor rank in importance MST, ZGT and SKB.

When looking at the results of all hospitals together the rank to importance is: (1) private life, (2) incentives, (3) work environment, (4) team dynamics, (5) nature and duration, (6) complexity of healthcare, (7) personal development, (8) pandemic and (9) self-employment.

The results of the ranking question show that especially the private life, incentives and work environment seem to be very important to the ICU nurses. The ranking order of MST and ZGT are quite similar. What all ranking orders have in common is that a pandemic and self-employment seem to be the least important to the ICU nurses. These results give us an answer on the third sub-question; "*How do the identified expected facilitating and impeding factors rank according to importance by the ICU nurse at MST, ZGT and SKB?*".

4.12 STATISTICAL ANALYSIS

Some significant correlations were found, see table 13 below. These positive correlations show that when ICU nurses gave either more positive or higher importance to these aspects, their attitude towards flexible deployment would also be more positive. The same is true the other way around. A more negative or a lower importance to the independent aspects leads to more negative answers on the attitude towards flexible deployment. The negative relations mean that an increasing value for one of these aspects causes a decreasing value for the attitude of the ICU nurses towards flexible deployment. A decreasing value for one of these aspects causes an increasing value for the attitude of the ICU nurses towards flexible deployment. An overview of all correlations can be found in the appendices, see appendix X.

Aspect	Correlation coefficient	P-value	Type of correlation
Importance exchanging knowledge with ICU nurses from other hospitals	0.515**	<0.001	Moderate positive significant correlation
Agreeing that flexible deployment could be educational	0.605**	<0.001	Strong positive significant correlation
No objection against passing additional EPA's	0.491**	<0.001	Moderate positive significant correlation
Agreeing that ICU nurses from MST, ZGT and SKB could learn from each other	0.570**	<0.001	Moderate positive significant correlation
Influence of having children or being an informal caregiver	0.436**	<0.001	Moderate positive significant correlation
Influence of having a (flexible) babysitter	0.487**	<0.001	Moderate positive significant correlation
Influence mental health	0.340**	<0.001	Weak positive significant correlation
Importance of a time for time arrangement	-0.292*	0.018	Weak negative significant correlation
Importance of keeping a steady basis at standard hospital	-0.312**	0.009	Weak negative significant correlation
Importance of being able to decide the frequency of shifts at other hospitals	-0.246*	0.040	Weak negative significant correlation
Importance of equal materials	-0.268*	0.030	Weak negative significant correlation
Importance of equal equipment	-0.249*	0.044	Weak negative significant correlation
Importance of working at own hospital during a pandemic	-0.320**	0.007	Weak negative significant correlation
Importance of working at own hospital during a pandemic with lockdown	-0.244*	0.042	Weak negative significant correlation

*. Correlation is significant at the 0.05 level, **. Correlation is significant at the 0.01 level.

Table 13: Overview of the significant correlations between attitude of ICU nurses towards flexible deployment at MST, ZGT and SKB and several aspects of the nine main influencing factors.

4.13 SUMMARY OF THE RESULTS

The main research question was: ”*What are expected influencing factors on the perspective of Intensive Care Unit nurses regarding flexible deployment at Medisch Spectrum Twente, Ziekenhuisgroep Twente and Streekziekenhuis Koningin Beatrix?* The interviews showed us that the following factors are expected to have an influence on the perspective of ICU nurses regarding flexible deployment at MST, ZGT and SKB: the complexity of healthcare, private life of the ICU nurses, incentives, being self-employed or not, the presence of a pandemic, the work environment, personal development, nature and duration of flexible deployment and team dynamics.

For the first two sub-questions it was determined whether these expected influencing factors were facilitating or impeding factors. The complexity of healthcare was important to almost all ICU nurses. A higher complexity is most often a facilitating factor to the perspective of the ICU nurses on flexible deployment at MST, ZGT and SKB. The private life of the ICU nurses could both positively and negatively influence their intention to become flexibly deployed. Having children would for example have an impeding influence on the intention but being a young ICU nurses could have a facilitating influence. Almost all ICU nurses said incentives would positively influence their perspective on flexible deployment. Some ICU nurses are self-employed next to their salaried employment. The self-employed ICU nurses who filled in the survey were mostly positive about flexible deployment. However, working a lot of shifts as self-employed ICU nurse and earning a higher salary for these shifts, has an impeding influence on their intention to become flexibly deployed at MST, ZGT and SKB. The presence of a pandemic is an impeding influential factor for flexible deployment at the three hospitals. The Netherlands being in lockdown or not did not make a difference in these results. The work environment could be a facilitating or impeding factor, depending on the extent to which there are different protocols, guidelines, equipment, materials, and systems in the hospitals. Also, most ICU preferred working in certain hospitals. Being able to choose in which hospitals to work would be a facilitating factor. Personal development was seen as a facilitating factor. However, the obligation of following training and tests at all hospitals would be an impeding factor. Working at ZGT or MST as an ICU nurse from SKB might require passing additional EPA’s. For some ICU nurses this might be an impeding factor. Nature and duration could be both a facilitating as impeding factor. Offering a training and trial period to the ICU nurses who become flexibly deployed is a facilitating factor. Not having a standard basis in one of the hospitals, however, would be seen as an impeding factor. Also, many ICU nurses have a prefer certain type of shifts. Working only day- and evening shifts at the other hospitals is seen as a facilitating factor. Working nightshifts is however seen as an impeding factor. The team dynamics is also a factor that could be facilitating or impeding. When ICU nurses do not feel welcome at other hospitals when becoming flexibly deployed, this would be an impeding factor. Feeling safe however, feeling that one can deliver safe healthcare, or the feeling of a safe work- and learning environment, is a facilitating factor according to the ICU nurses.

The last sub-question demanded an answer on how the identified expected facilitating and impeding factors would be ranked to importance by all ICU nurses from MST, ZGT and SKB. The results show that the expected influential factors were ranked to importance as follows: (1) private life, (2) incentives, (3) work environment, (4) team dynamics, (5) nature and duration, (6) complexity of healthcare, (7) personal development, (8) pandemic and (9) self-employment. An overview of all factors that were found in this study can be seen in figure 7.

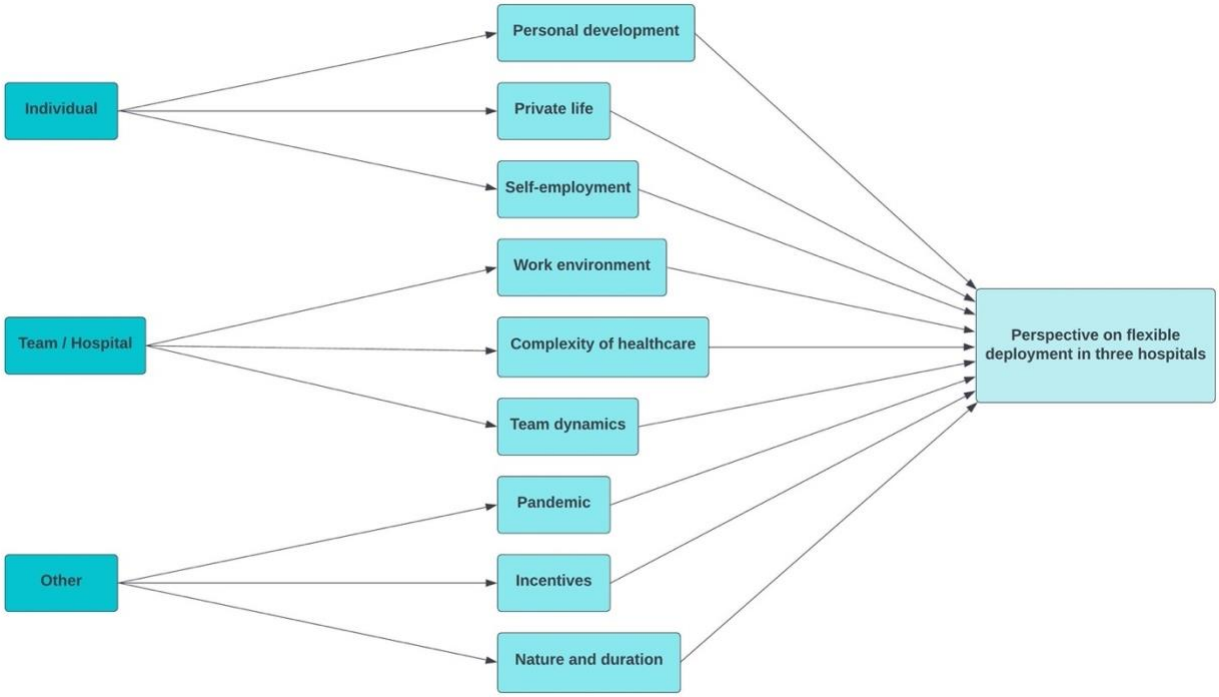

Figure 7: Overview of all influential factors found in this study.

5 DISCUSSION

This research aimed to give insight in the perspective of ICU nurses, who work at MST, ZGT and SKB, on flexible deployment at these three hospitals. The results showed there are nine main factors of which the nurses think they might have a facilitating or impeding influence on their perspectives regarding working in a float pool for the three hospitals. This study revealed that more than half of the respondents have a negative attitude towards working in a float pool for these three hospitals. There are several aspects that contribute to this negative attitude. In this chapter the main findings and recommendations will be discussed. Theoretical and practical implications are described, and the limitations of this study are also addressed. Lastly, a suggestion for further research is done.

5.1 MAIN FINDINGS & RECOMMENDATIONS

The results showed some difference between the answers of the three hospitals. For example, the nurses from MST and ZGT were most negative about flexible deployment at three hospitals. Most ICU nurses that were interviewed said they chose for this work because they like to be challenged. Working with patients who require a higher complexity of healthcare are seen as more challenging and therefore more interesting to the nurses. Delivering a higher complexity of healthcare is therefore preferred by the ICU nurses [60]. A large hospital, team and high complexity of healthcare were most important to the nurses from MST. Many ICU nurses do think working at other hospitals could be interesting and educational for them. However, the influential factors found in this study would withhold some of these nurses from participating in a float pool. The ICU nurses from MST where less convinced working in the float pool could be educational for them. A reason could be that they are already delivering the most complex healthcare in the region [60]. The nurses from SKB had a stronger preference for a high complexity of healthcare than the nurses from ZGT, which is also a large hospital with a higher complexity of healthcare. According to the nurses from SKB, the most challenging healthcare is centralized in the region throughout the past years. The nurses from SKB might therefore have a stronger preference for a higher complexity of healthcare because they want to be challenged again. A key principle for successful deployment of a flexible workforce is that the professionals need to be able to perform their general medical skills [59]. Nurses from MST and ZGT will not be able to perform and use certain skills and knowledge when working at SKB for a longer period because some patient populations are simply not treated at SKB. The hospital management could look for other possibilities to motivate the nurses from MST to work at a unit with less complex healthcare. Maybe there is less challenge when it comes to the direct patient care, but the nurses from the larger hospital could also be deployed at the other hospitals for knowledge promotion. Or maybe they could learn from the processes in the other hospitals. They might gain some knowledge about practical benefits at other hospitals that they could bring back to their own hospital, which could therefore also make working in the float pool interesting for them.

Ko & Kim (2018) described private life as an influential factor on the intention to use flexible work arrangements. This study however revealed that in general the private life of the nurses would have a neutral to slightly negative influence on their perspectives. The nurses said their age would not necessarily influence their perspectives. However, the results show that age actually did influence their perspectives regarding some factors. Older nurses did not only have a less positive attitude towards flexible deployment, but they also do not care about the complexity of healthcare and size of the hospital and team as much as the nurses within the other age categories. The eldest ICU nurses also seem to be the least positive about passing additional EPA's if necessary for working at other hospitals. According to Zinsmeister, elder nurses are less open for changes [68], and that might also be the case for flexible deployment at three hospitals. The youngest ICU nurses find the complexity of healthcare most important. They were the least negative about additional travel time and passing additional EPA's if necessary to work in the float pool. They also gave the most positive answers about whether working in the float pool could be educational for them. Because there were differences in answers between the different age categories, it can be concluded that the age of the nurses does influence their perspective on flexible deployment.

Having younger children was also expected to affect the flexibility of the ICU nurses [51] for which they would probably be less willing to participate in a float pool for three hospitals. However, this depends on whether these working hours in other hospitals would count within or outside the contracts of the nurses and whether they would have more travel time or not. Most people choose to work somewhere close to their hometown. The CBS stated that in Twente and the Achterhoek, most people would like to have a maximum travel distance to work of approximately 21 to 27 kilometers [69]. Working at one of the other hospitals comes. The results of this study showed that additional travel time would have a negative influence on the intention of ICU nurses to work in the float pool. The difference for travelling to ZGT or MST will probably not be that impactful, but for most nurses who work in these two hospitals, the travel time to SKB will increase substantially. Because of that reason, some nurses might have a preference in location when becoming flexibly deployed. Therefore, it could be suggested to let all nurses decide for themselves at which locations they would want to work. Working in a float pool and obligation of working at all three hospitals could be something that withholds nurses from participating in the float pool. The results in this study also showed that a good travel allowance would also be appreciated. Many nurses would also be positive about a time-for-time arrangement whereby the additional travel time may count as working hours. The nurses also mentioned that more travel time would not be a problem when it is only for a single occasional shift. Frequent shifts with substantial additional travel time would not be appreciated. The type of shift also plays a role. In general, the nurses would prefer to work day shifts. Much travel time and working evening shifts or night shifts was seen as a bad combination because many nurses did not like to travel far during the evening or night. Allowing the nurses to choose the type of shifts to work at other hospitals, might make working in the float pool more attractive. However, there are other ways to attract nurses to participate in the float pool.

One of the factors that was expected to have a major influence was the incentives. The Nederlandse Vereniging van Ziekenhuizen (NVZ) stated that the employers should be careful with their employees, especially in these times of a tight labor market. The descriptive statistics of the results (see appendix IX) show mean values between 4.30 and 4.60 for the incentives. The incentives received the highest scores of all factors, which means this is one of the most important influential factors. One of the reasons why incentives are seen as a very important aspect are the presence of self-employed nurses. The nurses who only work on salaried employment basis, know how much more income the self-employed nurses earn and therefore feel passed or deprived sometimes. It feels unfair that others receive a higher income for the exact same work. Most nurses would therefore want to receive more income when becoming flexibly deployed. The results of this study also showed that being a self-employed nurse, would not necessarily mean that the person has a negative attitude towards the float pool. However, since the salary for self-employment is a lot higher compared to the salaried deployment, some self-employed nurses might not see the benefit of working in the float pool next to their self-employment. It can be recommended to give the nurses who want to participate in the float pool some incentives. One could think of a bonus, additional income or growth possibilities in pay rate, annual allowance for good footwear, a car for commute- and work traffic, or additional days of. When having more travel time, the nurses could receive additional travel allowance. The nurses also mentioned they want to receive verbal appreciation for their effort more often. Overall, flexible deployment demands more flexibility of employees, which could have an impact on the private life of the employees. Therefore, becoming flexibly deployed should be rewarded [70].

This study shows that most nurses would prefer to work at their own hospital during a pandemic. During the last wave, the ICU nurses had to care of four patients instead of two. Their workload doubled, and that could be dangerous for patients in life-threatening conditions. Because of this reason the nurses rather work at their standard hospital where they know how to work with all the materials and equipment. With the presence of a lockdown, working more shifts might not be so bad, because there is nothing else to do. However, even with the presence of a lockdown, the nurses would still rather stay working at their own hospital. This study revealed that actually most nurses are still recovering from the last wave of the pandemic. The nurses sometimes worked up to 72 hours per week, twelve hours a day. It was an extremely busy period for them, and they hope a new wave will not occur within the near future. Most of them do not want to work that much during a new wave unless they are compensated for all their effort. They do not want to receive a one-time bonus, but a more permanent incentive. The same is true for the verbal appreciation. Many nurses wish they would also receive more appreciation during normal periods, not only in an exceptional situation like a pandemic.

The ICU nurses would rather follow yearly training at their own hospital. Following training at all three hospitals might be burdensome. Receiving specific medical education for unfamiliar patient categories is a key principle for successful flexible deployment [59]. This study shows that the nurses do find it very important to have a training period in the other hospitals. It can be recommended to allow the nurses who will participate in the float pool to only follow training at their own hospital. Another important aspect for the factor personal development is the EPA's. Some ICU nurses might have to pass additional EPA's before being able to work at the other hospitals. This will mostly affect the ICU nurses from SKB. Luckily, the ICU nurses from SKB did have a neutral to positive opinion on passing these additional EPA's. Also, the younger nurses were more positive about working in a float pool in general and were also the most positive about passing additional EPAs if necessary. In general, the nurses who want to work in a float pool might be more motivated to passing additional EPAs. The management of the three hospitals should take the possible differences in offered EPAs per hospital into account. The question is, which hospital will pay for educating and training these nurses? The standard hospital of the nurse or the hospital where the nurse will be deployed to? The hospital management should first think about this financial matter before implementing the float pool.

A person is influenced by personal interests and the interests of the organization and colleagues according to the social exchange theory [51]. However, according to this study the nurses do not seem to be influenced by the opinion or perspective of colleagues. Most of them said they make a choice for themselves that is beneficial for their work-life balance. Participating in the float pool with multiple colleagues could be beneficial because of the possibility to hold intervision sessions. The nurses could exchange experiences and helpful tips that could help them in their work. The results showed that ICU nurses want to feel welcome in the other hospitals they are not familiar with. The nurses from SKB and ZGT think MST is too large to be able to build up strong and personal connections with colleagues. Due to this image, some ICU nurses feel like they might not receive proper training, would not feel welcome, and would not be able to build meaningful connections with colleagues at MST. The hospital management of MST could motivate their own nurses to make sure nurses from other hospitals feel welcome at MST. This might also give MST the opportunity to change the image of the hospital. On the other hand, Linzer, Tilley & Williamson (2011) described that float pool nurses tent to be more independent, tough-minded, open to change and courageous [58]. The nurses who have these personality traits will probably apply for participation in a float pool and will care less about the behavior of colleagues at other locations.

In general, healthcare providers often experience a high workload, which sometimes comes with stress [71]. Stress and work pressure were expected to have an influence on the perspective of ICU nurses regarding flexible deployment at three hospitals, because a person might not be able to handle a flexible working attitude due to experiencing stress and work pressure [54]. However, all ICU nurses said they did not experience stress and work pressure at the ICU. Working at the ICU was described as running and standing still. There are very busy periods, but most of the time the ICU nurses can carry out their work without stress. The results of this study show that the variety in work is an influential factor. The ICU nurses seem to be wary of the unknown. The difference in protocols, procedure, materials, equipment, and systems negatively influences the perspective of the ICU nurses regarding flexible deployment. They would rather see that MST, ZGT and SKB would apply group buying so that all the materials, equipment and systems would be equal. Equal protocols, procedures and systems are most important to ICU nurses. However, in acute situations, equal materials and equipment become more important because in life threatening situations, only the materials and equipment will help the nurses to stabilize the patients. The hospitals should try to equalize the protocols and procedures, materials, and equipment when possible. This will lower the threshold for some nurses to participate in the float pool.

Several different opinions on the duration of flexible deployment were mentioned by ICU nurses. Most of the ICU nurses would rather work at other hospitals on stand-in basis. They only want to work single shifts at other hospitals now and then because they do not want to lose their steady basis and connection with colleagues. Some ICU nurses also would like to work a fixed number of hours next to their work at their standard hospital, because this brings more stability. Only a few ICU nurses prefer working at one of the other hospitals for a longer period because of the continuity of healthcare, but also because you do not have to adapt to each hospital frequently. The duration of flexible deployment might therefore need to be adjusted to each nurses' personal wishes. The one thing all ICU nurses agreed on was that working in the float pool should be voluntary. An overview of all recommendations can be found in the table below.

Overview of the recommendations	
Complexity of healthcare	1. Instead of creating a float pool for MST, ZGT and SKB, the management could think about a shared float pool for hospitals with a similar level of complexity 2. Motivating nurses from MST to participate in the float pool by making it attractive and challenging in a different way
Private life	3. Let all nurses decide at which locations they want to work. 4. Let all nurses decide what shifts they want to work (morning, evening, or night).
Incentives	5. Rewarding participation in the float pool with additional travel allowance 6. Rewarding participation in the float pool with additional income or a time-for-time arrangement
Pandemic	7. Reward the nurses for their flexibility and effort when they will work at other hospitals during a pandemic 8. Do not give verbal appreciation in that period only, the nurses should receive verbal appreciation more often, also during normal periods
Work environment	9. Make sure the float pool nurses will not decrease their contract with the standard hospital, to prevent a decrease in available FTE at the unit 10. Try to create more similarities between the hospitals, think of protocols and procedures, materials, and equipment
Personal development	11. Keep in mind that some nurses might have to pass additional EPA's before being able to work at other hospitals 12. There should be a training period / trial period in advance to working in the float pool 13. Allowing the nurses to follow training and let their skills be tested in their standard hospital
Nature and duration	14. Make participating in the float pool voluntary 15. Adjust the frequency of float pool shifts to the personal wishes of the nurses
Team dynamics	16. Make sure all float pool nurses will be included the same way as the permanent staff, make them feel welcome

Table 14: Overview of the recommendations.

5.2 IMPLICATIONS

The theoretical implications of this study are that it describes multiple factors that motivate or withhold nurses from participating in a float pool before they are actually participating in a float pool. Literature about this topic is very limited because most studies evaluate and describe the experiences of nurses who are already participating in a float pool. This research creates more insight the perspectives of ICU nurses regarding flexible deployment and therefore contributes to decreasing the knowledge gap on this topic.

This research could be very useful for practice. The hospitals might decide to set up a float pool in the future. This study gives the hospital management insights about the perspective of the nurses and what they could do to make working in a float pool more attractive for the nurses.

5.3 LIMITATIONS

For this research, seventeen interviews took place and were transcribed and coded. The coding was performed by one researcher. One of the supervisors coded two of the interview transcriptions to check for intercoder reliability. Most codes overlapped, therefore the overall codes could probably be seen as reliable. However, since only two transcriptions were coded by the supervisor, not all transcriptions, there is still a chance that some codes or factors were missed since qualitative research methods come with subjectivity and biases [72].

In this research, there might have been an information bias. The nurses had to answer questions about what is important to them or what factors would have a facilitating or impeding influence when becoming flexibly deployed. However, they did not receive any additional information about whether they for example would be compensated when becoming flexibly deployed. This might have caused more negative answers to the question. There is also the possibility of a non-response bias. It could be true that more (de)motivated and skeptical ICU nurses wanted to participate in the interviews and survey. They might only have heard about the float pool and thought they could prevent the implementation of a float pool by participating in the study. Therefore, the general attitude of ICU nurses from these three hospitals regarding flexible deployment might be less negative than the results indicate. A last type of bias that might be present is the interpretative bias. Although it was explicitly mentioned within the informed consent before the interviews and survey and at the start of participation that a float pool might be a good way to make optimal use of the current capacity of nurses in times of shortages, … There might have been more nurses who interpreted the research in a different way. A correction for answers like this was not applied.

Gender was not included as an influential aspect in this study. The reason behind this is because there are very few male ICU nurses. Therefore, the results would probably not be representative for all male ICU nurses. The same problem occurred for the self-employed ICU nurses. Only five self-employed ICU nurses responded to the survey. According to the interviewees, there are many more self-employed who are working within these three hospitals. The results from the self-employment factor might therefore not be representative for all self-employed ICU nurses who work at MST, ZGT and SKB. The actual age distribution among ICU nurses at the three hospitals is unknown. There might have been ICU nurses from certain age categories who did not respond to the survey. All ICU nurses who wanted to participate, could participate. There was no limit for the age categories. Therefore, the overall balance between the age category of the respondents might not be representative for all ICU nurses at MST, ZGT and SKB. The question about additional travel time was included after a few days because it was forgotten. Therefore, fewer answers were collected from that question. This might have affected the results for that question. The question about mental health might not give any relevant outcomes. The ICU nurses were not asked about their current state of mind. Therefore, the answers to that question do not show the influence of a good or bad state of mind.

Another limitation is that the results are based on the perspectives of ICU nurses who are working in the Euregio only. To what extend these results are also applicable to other regions within the Netherlands is unknown. Some regions might have multiple hospitals with similar patient categories. There might be less differences in the complexity of healthcare, which might make it more attractive to work in a float pool for multiple hospitals. The same might be true for regions whereby there is less distance between the hospitals, and therefore also less travel time. This might also make it more attractive to work in a float pool for multiple hospitals. Because of these reasons, the perspectives of ICU nurses regarding flexible deployment might be different in other regions.

5.4 SUGGESTIONS FOR FURTHER RESEARCH

There is a shortage of all kinds of nurses, not only a shortage of ICU nurses. Additional research could be done to find out whether the perspective of ICU nurses and general nurses on flexible deployment at three hospitals overlap. If the perspectives on flexible deployment overlap, hospitals could also apply a shared float pool for other units within MST, ZGT and SKB. When creating float pools for all units, the hospitals might benefit making optimal use of all available nurses, not only the ICU nurses.

The shortage of nurses is a national problem. When shared float pools in the Euregio will provide good results, other regions might want to introduce similar ideas. However, every region has its own characteristics. Nurses might be more open or less open for flexible deployment due to for example the mentality in other regions, more or less travel time between hospitals, more or less differences between complexity of the hospitals. Research could be done on finding out whether a shared float pool for multiple hospitals would be feasible in other regions.

The ICU and emergency department of SKB are integrated and some nurses work on both units. This internal solution also contributes to an optimal use of the current capacity of acute care nurses. Flexible deploying the nurses from the ICU and emergency department within their own hospital, might lower the threshold for working at multiple units. It might even be more attractive to nurses than working in a float pool for multiple hospitals because they do not have to get used to other colleagues, protocols, procedures, materials, and equipment. There will be no additional travel time and expenses. Therefore, it might be interesting to find out whether an integrated ICU and emergency department might be feasible for other (larger) hospitals as well. That way, the hospitals can still make optimal use of their capacity of nurses, and it might be less burdensome for the nurses.

APPENDIX I: OUTFLOW NUMBERS PER AGE CATEGORY

	jonger dan 25 jaar	25 t/m 34 jaar	35 t/m 44 jaar.	45 t/m 54 jaar	55 jaar en ouder
Zorg en welzijn totaal (exclusief kinderopvang)	21%	10%	7%	6%	10%
Universitair Medische Centra	25%	9%	5%	4%	9%
Ziekenhuiszorg en overige med. spec. zorg	18%	7%	4%	3%	9%
Geestelijke gezondheidszorg	21%	8%	7%	5%	10%
Huisartsenzorg en gezondheidscentra	17%	7%	6%	4%	9%
Verpleging, verzorgen en thuiszorg	21%	10%	7%	5%	10%
Gehandicaptenzorg	18%	8%	6%	5%	10%
Jeugdzorg	27%	12%	8%	8%	12%
Sociaal Werk	41%	18%	14%	12%	17%
Overige zorg en welzijn	25%	16%	12%	9%	13%

BRON - CBS, dossier AZW

Outflow numbers per age category [36], [37].

APPENDIX II: SUMMARY APPOINTMENTS WITH THE ICU HEADS AND MANAGERS OF MST, ZGT AND SKB

Vragen:

1. **Hoeveel IC verpleegkundigen zijn er werkzaam in dit ziekenhuis?**

MST: 125

SKB: 30 (21 IC verpleegkundigen en 9 Acute zorg verpleegkundigen die op zowel de IC als de Spoed Eisende Hulp (SEH) worden ingezet)

ZGT: ZGT Almelo heeft 51 FTE aan IC verpleegkundigen. 64 verpleegkundigen en ongeveer 5 FTE Physician Assisstant.

2. **Hoeveel IC bedden zijn er in dit ziekenhuis?**

MST: 32 bedden, waarvan 28 bedden waar ook personeel voor beschikbaar is.

SKB: 6 IC bedden en 2 bedden die daar ook bij horen, maar eigenlijk bedoeld zijn voor de cardiologie. Al wordt hier wel flexibel mee om gegaan. Dus eigenlijk 8 in totaal.

ZGT: 12 bedden. (16 fysieke bedden)

3. **Wat voor patiënten liggen er voornamelijk op de IC in dit ziekenhuis?**

MST: Op de IC van het MST komen hart patiënten, patiënten met interne problematiek, chirurgische problematiek, niet na OK want deze patiënten verblijven op de Post Anesthesie Care Unit (PACU), buik vaat problematiek etc.

Patiënten zijn verdeeld in 4 categorieën. Dit is vastgesteld voor alle ziekenhuizen in Nederland. In het MST worden ook complexe patiënten behandeld, die niet reageren op therapie.

SKB: In het SKB worden met name patiënten uit eigen ziekenhuis specialismen op de IC geplaatst of spoed patiënten van buitenaf. Er zijn dus geen grote OK's, trauma of neurochirurgie. Het is echt bedoeld als veiligheid voor de kliniek.

ZGT: In principe wordt in ZGT Almelo alles gedaan behalve neurochirurgie en grote traumachirurgie. Er is ook geen kinder-IC, al worden kinderen vanaf de kinderafdeling wel gestabiliseerd indien nodig. ZGT heeft een expert centrum slokdarm. Dus daar komen wel veel patiënten van op de IC terecht, omdat het vrij grote ingrijpende operaties zijn. Er zijn voor alle 12 bedden beademingsmogelijkheden. Tijdens de COVID-19 pandemie was het aantal bedden opgeschaald naar 16.

4. **Is er in dit ziekenhuis sprake van een tekort aan IC verpleegkundigen? Of wordt dit zo ervaren? Hoe wordt dit nu opgelost?**

5. **Zijn er tijdens de COVID-19 pandemie verpleegkundigen uit het ziekenhuis uitgewisseld met andere ziekenhuizen? Hoeveel verpleegkundigen deden hier aan mee?**

6. **Wat zijn volgens u factoren die bijdragen aan het wel of niet flexibel ingezet willen worden?**

7. **Denkt u dat er een verschil is in complexiteit van zorg tussen MST, ZGT en SKB?**

MST: Ja, maar dat komt met name doordat er andere patiënten categorieën zijn per ziekenhuis. Elke patiënten categorie vraagt weer om andere ondersteuning. Dus het is niet per se complexer, maar eerder gewoon anders. Waardoor het voor iemand die er niet dagelijks mee te maken krijgt wellicht wat lastiger is of even wennen.

SKB: Ja zeker. Bepaalde interventies worden niet uitgevoerd binnen het SKB. Denk daarbij aan ventrikel drains, de hart-long machine, dialyse wordt heel beperkt gedaan, EKMO long pomp komt hier ook niet voor.

ZGT: Er is wel een groot verschil met de zorg die verleend wordt in het SKB. Maar tussen het MST en het ZGT zal het verschil niet zo groot zijn. Het zit hem meer in bepaalde operaties/interventies die niet plaatsvinden in het ZGT vergeleken met het MST. Denk aan de neurochirurgie en grote trauma's.

8. **Denkt u dat flexibele inzetbaarheid in de regio een goed plan is? Waarom wel of niet?**

9. **Wat denkt u dat de beste oplossingen zullen zijn voor het oplossen van de tekorten in de zorg?**

10. **Heeft u zelf nog vragen ten aanzien van mijn onderzoek waar u graag een antwoord op zou krijgen?**

APPENDIX III: INTERVIEW SCHEME

Name interviewer:	Elise Elferink
Name interviewee:	……..
Age of the interviewee:	……..
Working location:	……..
Residence location:	……..
Date:	……..
Place:	……..

Recording the interview
Double checking whether the interviewee is indeed agreeing with recording the sound of the interview.

Anonymity and voluntariness
Emphasize again that all results will be processed anonymously and that the participant may stop the interview at any time without giving an explanation.

Introduction
I am Elise Elferink, I am a master student in Health Sciences at the University of Twente. I am working on a research project for the Acute Zorg Euregio. The shortages of nurses are a big problem. One way to reduce the impact of these shortages is flexibly deploying personnel. The idea of flexible deployment in this research is that nurses from one organization can also be deployed on locations of another organization. The goal of the research is to find out what the perspective of ICU nurses is regarding flexible deployment at MST Enschede, ZGT Almelo and SKB Winterswijk. The outcomes of this research will be used to formulate an advice for the Acute Zorg Euregio regarding flexible deployment of ICU nurses within the region. I do not work for the MST, ZGT or SKB. The results of this research do not have any effect on the policy of the hospitals. The results only serve to gain knowledge about the perspective of nurses regarding flexible deployment.

This interview will last around 30-60 minutes, depending on the extensiveness of the answers. I will first ask you some general questions and then we will continue with questions about flexible deployment.

Background information
1. What is your age?

2. In which city do you live?

3. In which hospital do you work?

4. Do you have a fulltime or parttime contract with the hospital?

5. How many years have you been working in this specific hospital?

6. How many years have you been working as a nurse? And how many years on the ICU?

7. Is this the only organization or institution you currently work for?

Pre-defined questions
1. Imagine a situation in which the MST, ZGT and SKB would decide to create a float pool of ICU nurses, whereby you have the possibility to work on all three locations. You will receive additional training based on your work experience, so that you get familiar with all three locations and will be able to fully participate in the three team.
    - What do you think about this plan?

2. What are factors that influence your perspective with regard to the situation I just described?

Based on question 1 and 2, I will continue with the questions below.

3. To what extend does the perspective of your colleagues regarding flexible deployment at MST, ZGT and SKB influence your own perspective?
    - What is your perspective regarding flexible deployment if many of your direct colleagues would be open for flexible deployment?
    - What is your perspective regarding flexible deployment if few of your direct colleagues would be open for flexible deployment?

4. Imagine the following two situations. The first situation is that you will be deployed at one of the three hospitals for half a year. After this period, you will return to your own hospital. The second situation is that you will for example work in your own hospital for around 20 hours and in one of the other two hospitals for 16 hours. Do you prefer one of these two situations? And why do you prefer this situation?

5. What would be your point of view regarding flexible deployment when a new epidemic or pandemic would arise?

6. To what extend does the size of the hospital or ICU ward you work for influences your point of view regarding flexible deployment at MST, ZGT and SKB?

7. How is the complexity of healthcare in the hospitals you do not have a contract with influencing your perspective on flexible deployment at MST, ZGT and SKB?

8. To what extend does the culture within the hospital or ICU ward you work at influences your point of view regarding flexible deployment on a different location?
   The culture can be described as for example the 'we-feeling', shared norms and values, the way employees are treated etc.

9. To what extend does the phase in life you are in, influence your perspective on flexible deployment?
   For phase in life, you can think about for example how much work experience you have, if you have children or if you are a caregiver to someone etc.
    - Much work experience → How would your perspective change if you had less work experience?
    - Little work experience → How would your perspective change if you had more work experience?
    - Children → How would your perspective change if you did not have children?
    - No children → How would your perspective change if you had children?
    - Caregiver → How would your perspective change if you weren't a caregiver?
    - No caregiver → How would your perspective change if you were a caregiver?

10. To what extend is having more variety in work an influential factor for your perspective on flexible deployment at MST, ZGT or SKB?
    More variety in work could be for example more variety in tasks, working with different colleagues or working in a different environment etc.

11. To what extend do stress and work pressure influence your perspective on flexible deployment at MST, ZGT and SKB?

12. How does the amount of travelling time to the MST, ZGT or SKB influence your perspective on flexible deployment at these three locations?

13. If you would receive compensation for becoming flexibly deployed, would that change your perspective on flexible deployment at MST, ZGT or SKB?
    You could think about compensation for additional travel expenditures or extra income for example.

14. Are there other factors that influence your perspective that have not been mentioned? If yes, what are these factors?

Closing note

Thanking the participants for their participation.

If the team manager agrees, notifying the participants that they can declare the time they spend on this interview as working time.

APPENDIX IV: MOMENT OF SATURATION

Interview number	New influential aspects per interview	Total new influential factors per set	% change over base set
1	12		
2	19		
3	5		
4	2	38	-
5	2	2	5%
6	9	9	24%
7	9	9	24%
8	15	15	39%
9	4	4	11%
10	5	5	13%
11	4	4	11%
12	5	5	13%
13	5	5	13%
14	4	4	11%
15	3	3	8%
16	1	1	3%
17	0	0	0%
Total	104	-	-

APPENDIX V: CODING TABLE

Frequencies per factor and interviewee	#001	#002	#003	#004
Complexity of health care	2	3	3	3
Incentives	2	2	0	2
Nature and duration of flexible deployment	0	1	0	3
Pandemic	1	1	0	1
Personal development	1	2	1	1
Private life	9	3	4	4
Self employment	0	0	1	0
Team dynamics	5	9	6	2
Work environment	4	1	1	3
Totals	24	22	16	19

#005	#006	#007	#008	#009	#010	#011	#012	#013	#014
0	1	0	3	2	3	3	3	2	3
3	5	6	6	2	3	2	1	3	5
1	1	9	6	2	3	3	2	5	2
1	1	0	1	3	2	0	5	3	1
1	1	9	10	1	7	0	0	6	3
4	4	4	6	7	4	3	9	7	8
2	2	0	0	0	5	0	1	0	1
0	6	2	13	2	2	0	6	13	1
1	6	1	10	7	7	2	4	2	10
13	27	31	55	26	36	13	31	41	34

#015	#016	#017	Totals
1	1	1	34
5	8	5	60
9	2	4	53
2	2	2	26
6	3	7	59
9	4	6	95
0	3	3	18
7	0	2	76
3	3	6	71
42	26	36	492

APPENDIX VI: INFORMED CONSENT FORM INTERVIEWS

Titel van het onderzoek
De zienswijze van Intensive Care verpleegkundigen, werkzaam in de Euregio, over flexibele inzetbaarheid binnen het Medisch Spectrum Twente, Ziekenhuisgroep Twente en Streekziekenhuis Koningin Beatrix.

Het onderzoek
Het onderzoek wordt uitgevoerd door Elise Elferink, student Gezondheidswetenschappen aan de Universiteit Twente. Zij voert dit onderzoek uit in opdracht van de Acute Zorg Euregio. Er is een toenemend tekort aan verpleegkundigen. Het tekort onder gespecialiseerde verpleegkundigen is nog schrijnender, omdat relatief weinig verpleegkundigen er voor kiezen om zich te specialiseren na het afronden van hun studie. Dit onderzoek focust op Intensive Care (IC) verpleegkundigen. Het flexibel inzetten van personeel op verschillende locaties zorgt er voor dat de beschikbare zorg professionals in de regio efficiënt ingezet kunnen worden. Daarbij zou u kunnen denken aan het flexibel uitwisselen van IC verpleegkundigen tussen Medisch Spectrum Twente (MST), Ziekenhuisgroep Twente (ZGT) en Streekziekenhuis Koningin Beatrix (SKB).Voordat er überhaupt nagedacht kan worden over implementatie is het van belang om te inventariseren of de IC verpleegkundigen van MST, ZGT en SKB voor flexibele inzet open staan. Dat is dan ook het doel van dit onderzoek. De Acute Zorg Euregio wil onderzoeken wat de mening is van IC verpleegkundigen over flexibele inzetbaarheid in de drie hierboven genoemde ziekenhuizen. Daarnaast wordt onderzocht welke factoren een positieve of negatieve invloed hebben op de mening van de IC verpleegkundigen over flexibele inzetbaarheid. De door het onderzoek verkregen informatie zal gebruikt worden om een advies te formuleren aan de Acute Zorg Euregio ten aanzien van flexibele inzetbaarheid van IC verpleegkundigen.

Het interview
De onderzoeker wil het interview graag opnemen zodat het interview automatisch getranscribeerd kan worden. Mocht u hier niet akkoord mee gaan, laat dit dan alstublieft tijdig weten. De onderzoeker zal u eerst een paar algemene vragen stellen over bijvoorbeeld uw leeftijd en hoe lang u werkzaam bent als (IC) verpleegkundige. Daarna zal de onderzoeker u open vragen stellen over flexibele inzetbaarheid. Een voorbeeld van een vraag die u kunt verwachten tijdens het interview is: In hoeverre heeft meer variatie in uw werk door flexibele inzetbaarheid een invloed op uw mening ten aanzien van flexibele inzetbaarheid binnen het MST, ZGT en SKB? De transcriptie van het interview zal aan u teruggekoppeld worden ter verificatie. De transcriptie van de interviews wordt gebruikt om de factoren in kaart te brengen die invloed hebben op de maning van IC verpleegkundigen ten aanzien van flexibele inzetbaarheid.

Potentiële risico’s en ongemakken
Er zijn geen fysieke, juridische of economische risico’s verbonden aan de deelname aan dit onderzoek. U hoeft de vragen niet te beantwoorden als u dit niet wilt. Uw deelname is volledig vrijwillig en u kunt zich terug trekken van deelname op elk willekeurig moment. Ongemak dat u zou kunnen ervaren is dat het interview natuurlijk tijd in beslag neemt. Het interview zal mogelijk voor of na uw dienst plaatsvinden, waardoor uw werkdag wat langer zal duren.

Vergoeding
Aan deelname aan dit onderzoek is geen vergoeding verbonden.

Vertrouwelijkheid
Uw privacy is gewaarborgd. Persoonlijke informatie zal niet openbaar worden gemaakt en zal niet te herleiden zijn naar u. Het onderzoek wordt geanonimiseerd. Uw naam zal bijvoorbeeld vervangen worden door een willekeurige cijfercombinatie. Uw leeftijd wordt gecategoriseerd in: <35 jaar, 35-50 jaar of >50 jaar. De geanonimiseerde primaire data zijn vertrouwelijk en wordt alleen gedeeld met de Acute Zorg Euregio en de Universiteit Twente.

Het onderzoek is goedgekeurd door de Ethische commissie van de Universiteit Twente op 14 april 2022.

Vrijwilligheid
Deelname aan dit onderzoek is geheel vrijwillig. Als participant kunt u op elk moment uw deelname intrekken. U kunt ook op elk moment de toestemming tot het verwerken van uw gegevens intrekken, zonder opgave van reden. Het intrekken van toestemming tot verwerking van de informatie die u hebt vertrekt, kan tot maximaal 5 dagen na deelname. Als u de toestemming intrekt voordat de 5 dagen verstreken zijn, dan zullen uw gegevens verwijderd en vernietigd worden uit het data bestand. Als u de toestemming in wil trekken nadat de 5 dagen zijn verstreken, dan zal alle data die tot dat moment is verzameld gebruikt worden in het onderzoek. Er zal geen nieuwe data verzameld of gebruikt worden.

Indien u uw deelname aan het onderzoek wil stoppen, als u een vraag of klacht hebt, uw zorgen ten aanzien van het onderzoek wil uitspreken, of enige vorm van ongemak of schade ervaart naar aanleiding van het onderzoek. Neemt u dan alstublieft contact op met de onderzoeker. Zie onderstaande contact gegevens.

Contact details:
Elise Elferink
Elise.Elferink@mst.nl
0623017174

Toestemmingsverklaring
Door dit formulier te ondertekenen, geeft u aan dat u goed geïnformeerd bent over het onderzoek, het gebruik en verwerken van de data en welke risico's of ongemakken mogelijk verbonden zijn aan dit onderzoek.

Door dit formulier te ondertekenen geeft u aan dat al uw vragen zijn beantwoordt en dat u vrijwillig deel wilt nemen aan dit onderzoek. U zult een ondertekende kopie van dit document ontvangen.

Ik stem in met deelname aan dit onderzoek, uitgevoerd door Elise Elferink. Het doel van dit formulier is het vastleggen van de voorwaarden van mijn deelname. De vragen hieronder zijn voor de participant bedoeld. Als u het eens bent met de stelling en u bent op de hoogte van de gegeven informatie, geef dit dan weer met 'JA'.

	JA / NEE
Ik heb voldoende inforamtie ontvangen over het onderzoek dat uitgevoerd wordt door Elise Elferink. Het doel van deelname van mij als participant is duidelijk.	
Mijn deelname aan het onderzoek is vrijwillig. Ik voel me op geen enkele manier verplicht of geforceerd om aan dit onderzoek deel te nemen.	
Mijn deelname aan het onderzoek betekend dat ik geïnterviewd zal worden door Elise Elferink. Het interview duurt 30 – 60 minuten. Ik geef Elise Elferink toestemming om het interview op te nemen (alleen audio).	
Ik heb het recht om vragen niet te beantwoorden. Het is mij duidelijk dat ik op elk willekeurig moment mijn deelname kan stoppen, zonder opgaaf van reden.	
Ik ben op de hoogte dat de gegevens uit het onderzoek, niet herleidbaar zullen zijn naar mij. Mijn privacy is gewaarborgd.	
Ik heb dit formulier gelezen en begrepen. Al mijn vragen zijn beantwoord.	

Wanneer u geïnteresseerd bent in de resultaten. Dan kunt u contact opnemen met Elise Elferink. Dat kunt u direct na het interview aangeven, of uiterlijk tot augustus 2022 (na deze periode kan dat via Acute Zorg Euregio, info@acutezorgeuregio.nl). De contact gegevens van Elise staan in dit formulier. Aan het einde van de onderzoeksperiode, in augustus/september, zal zij u een samenvatting van de resultaten toesturen.

Handtekening en datum

Naam participant:	……..	Naam onderzoeker:	Elise Elferink
Handtekening:	……..	Handtekening:	…….
Datum:	……..	Datum:	…….

Toestemmingsverklaring

Bij dezen nodig ik, Elise Elferink, u uit om deel te nemen aan de vragenlijst voor mijn afstudeeronderzoek. Ik studeer Gezondheidswetenschappen aan de Universiteit Twente en momenteel ben ik bezig met mijn afstudeeronderzoek voor Acute Zorg Euregio.

Er is een oplopend tekort aan verpleegkundigen. Een oplossing zou kunnen zijn om de beschikbare verpleegkundigen in de regio zo efficiënt mogelijk in te zetten. Het doel van mijn onderzoek is dan ook om te inventariseren wat de mening van Intensive Care (IC) verpleegkundigen is ten aanzien van flexibele inzetbaarheid in het Medisch Spectrum Twente (MST), Ziekenhuisgroep Twente (ZGT) en Streekziekenhuis Koningin Beatrix (SKB). Bij deze flexibele inzetbaarheid zou u bijvoorbeeld kunnen denken aan één float pool voor alle drie ziekenhuizen, waarbij u als IC verpleegkundige dus ook in de andere twee ziekenhuizen kan werken.

Ik heb de afgelopen weken interviews afgenomen bij IC verpleegkundigen die werkzaam zijn in deze drie ziekenhuizen. Uit de interviews zijn verschillende factoren naar voren gekomen die een positieve of negatieve invloed hebben op de mening van de IC verpleegkundigen ten aanzien van de flexibele inzetbaarheid. Het doel van deze vragenlijst is om een waarde te geven aan deze factoren.

De voorwaarden om deel te nemen aan deze vragenlijst zijn:

- U bent werkzaam als IC verpleegkundige.
- U bent werkzaam in Medisch Spectrum Twente, Ziekenhuisgroep Twente of Streekziekenhuis Koningin Beatrix.

De vragenlijst zal ongeveer 15 minuten van uw tijd in beslag nemen. U zult een paar algemene vragen krijgen en vragen waarbij u een waarde moet hangen aan de factoren.
Voorbeeld: Uit de interviews is naar voren gekomen dat de complexiteit van zorg in de drie ziekenhuizen een invloed heeft op de mening van IC verpleegkundigen ten aanzien van flexibele inzetbaarheid in MST, ZGT of SKB. Hoe belangrijk is het voor u om met patiënten te werken die hoog complexe zorg vragen?
Antwoord: helemaal niet belangrijk - niet belangrijk - neutraal - belangrijk - heel belangrijk.

Deelname aan deze vragenlijst is vrijwillig. U heeft het recht om op elk gewenst moment te stoppen met de vragenlijst. Er zullen geen persoonsgegevens van u verwerkt worden in het onderzoek. Uw privacy is gewaarborgd. De antwoorden op de vragenlijst worden opgeslagen op een beveiligde opslag van de Universiteit Twente. De antwoorden worden na het afronden van het onderzoek tot maximaal 15 jaar na het onderzoek bewaard en mogen niet zonder toestemming van de ethische commissie voor andere doeleinden gebruikt worden.

Het onderzoek wordt uitgevoerd in opdracht van Acute Zorg Euregio en dient puur ter inventarisatie voor eventuele oplossingen voor het enorme tekort aan verpleegkundigen.
Als u nog vragen heeft over dit onderzoek, dan kunt u contact opnemen met Elise Elferink.
Telefoonnummer: 0623017174
Email: Elise.Elferink@mst.nl

Gaat u akkoord met deelname aan dit onderzoek?

- Akkoord
- Niet akkoord

In welk ziekenhuis bent u werkzaam?

- Streekziekenhuis Koningin Beatrix
- Medisch Spectrum Twente
- Ziekenhuisgroep Twente

Onder welke leeftijdscategorie valt u?

- < 35 jaar
- 35 - 50 jaar
- 50 jaar

Werkt u als ZZP'er in de zorg?

- Ja
- Nee

Stel dat MST, ZGT en SKB er voor kiezen om samen één flexpool op te zetten, waarbij IC verpleegkundigen uit deze drie ziekenhuizen op alle drie locaties kunnen werken.

1. Wat zou uw houding zijn tegenover deze flexpool van MST, ZGT en SKB?
   Zeer negatief – Negatief – Neutraal – Positief – Zeer positief

Hoe belangrijk zijn de volgende onderwerpen voor u?

2. Hoe belangrijk is het voor u om regelmatig hoog complexe zorg aan patiënten te kunnen leveren? (Denk daarbij bijvoorbeeld aan de multi(trauma) IC patiënten, neuro IC patiënten en dergelijke).
   Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

3. Hoe belangrijk is het voor u om een vaste basis in uw eigen team te behouden als u zou werken in een flexpool voor alle drie ziekenhuizen?
   Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

4. Hoe belangrijk is het voor u dat u zelf de frequentie van het werken in de andere ziekenhuizen zou mogen bepalen?
   Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

5. Hoe belangrijk is het voor u dat u zelf het soort dienst dat u in andere ziekenhuizen werkt zou mogen bepalen? (dagdienst, avonddienst of nachtdienst)
   Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

6. Hoe belangrijk is het voor u dat er een proefperiode komt waarin u uit kunt proberen of het werken in een flexpool voor drie ziekenhuizen wat voor u is?
   Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

7. Hoe belangrijk is het voor u dat de diensten geruime tijd van tevoren worden doorgegeven?
   Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

8. Rangschik de volgende mogelijkheden. Nummer 1 is de mogelijkheid waar uw voorkeur het sterkst naar uit gaat.
   - Een vast aantal uren naast mijn huidige vaste baan in één of twee van de andere ziekenhuizen werken.
   - Voor een bepaalde tijd in één van de andere ziekenhuizen aan het werk gaan en daarna terug keren naar mijn vaste baan.
   - Op inval basis naast mijn huidige vaste baan diensten oplossen binnen één of twee van de andere ziekenhuizen.

9. Stel dat u als IC-verpleegkundige binnen de flexpool aan het werk gaat. Naar wat voor soort diensten gaat uw voorkeur dan uit? (U kunt meerdere opties aanvinken).

- Dagdiensten
- Avonddiensten
- Nachtdiensten
- Geen voorkeur

Hoe belangrijk zijn de volgende onderwerpen voor u?

10. Hoe belangrijk is het voor u dat u alleen bij uw eigen ziekenhuis scholing hoeft te volgen?
    Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

11. Hoe belangrijk is het voor u dat er een goede inwerkperiode aangeboden wordt op basis van uw kennis en kunde?
    Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

12. Hoe belangrijk is het voor u om kennis met IC verpleegkundigen uit andere ziekenhuizen uit te kunnen wisselen?
    Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

In hoeverre bent u het met de volgende stellingen eens?

13. Ik denk dat het werken in een flexpool voor MST, ZGT en SKB heel leerzaam voor mij zou kunnen zijn.
    Helemaal mee oneens – Oneens – Neutraal – Eens – Helemaal mee eens

14. (Entrustable Proffesional Activities (EPA's) zijn modules die een IC verpleegkundige binnen de opleiding moet behalen. Indien ik aanvullende EPA's zou moeten behalen om in de flex pool te werken, zou ik dit geen probleem vinden.
    Helemaal mee oneens – Oneens – Neutraal – Eens – Helemaal mee eens

15. Ik vind het heel belangrijk om mijn expertise en skills op peil te kunnen houden.
    Helemaal mee oneens – Oneens – Neutraal – Eens – Helemaal mee eens

16. Ik denk dat wij als IC verpleegkundigen uit MST, ZGT en SKB veel van elkaar zouden kunnen leren door het werken in een flexpool.
    Helemaal mee oneens – Oneens – Neutraal – Eens – Helemaal mee eens

Hoe zou u de invloed van de volgende onderwerpen omschrijven?

17. Het werken als ZZP'er in de zorg heeft een … invloed op mijn intentie om flexibel ingezet te worden in MST, ZGT en SKB.
    Zeer negatieve – Negatieve – Neutraal – Positieve – Zeer positieve

18. De frequentie van ZZP diensten die ik per maand werk heeft een … invloed op mijn intentie om flexibel ingezet te worden in MST, ZGT en SKB.
    Zeer negatieve – Negatieve – Neutraal – Positieve – Zeer positieve

19. Het hogere inkomen dat ik door ZZP diensten verdien heeft een … invloed op mijn intentie om flexibel ingezet te worden in MST, ZGT en SKB.
    Zeer negatieve – Negatieve – Neutraal – Positieve – Zeer positieve

Hoe belangrijk zijn de volgende onderwerpen voor u?

20. Hoe belangrijk is het voor u om een connectie of band te hebben met collega's in de andere ziekenhuizen?
    Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

21. Hoe belangrijk is het voor u om u welkom te voelen in de andere ziekenhuizen?
    Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

22. Hoe belangrijk is het voor u dat u zich veilig voelt in de andere ziekenhuizen? (Denk daarbij aan een veilig werksfeer maar ook zelf het gevoel hebben veilige zorg aan de patiënten te kunnen leveren)
    Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

In hoeverre bent u het met de volgende stelling eens?

23. Mijn voorkeur gaat uit naar het werken in een groot ziekenhuis / team.
    Helemaal mee oneens – Oneens – Neutraal – Eens – Helemaal mee eens

Hoe belangrijk zijn de volgende onderwerpen voor u?

24. Hoe belangrijk vindt u het om in uw eigen ziekenhuis te werken wanneer er een pandemie is?
    Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

25. Hoe belangrijk vindt u het om in uw eigen ziekenhuis te werken wanneer er een pandemie is en Nederland in lockdown zit. (Alles zit dicht, met uitzondering van supermarkten en andere winkels die levensmiddelen verkopen)
    Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

26. Hoe belangrijk is het voor u om extra inkomen te ontvangen voor flexibele inzetbaarheid in MST, ZGT en SKB?
    Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

27. Hoe belangrijk is het voor u om extra reiskostenvergoeding te ontvangen voor flexibele inzetbaarheid in MST, ZGT en SKB?
    Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

28. Hoe belangrijk is het voor u dat er een tijd-voor-tijd regeling geldt voor de extra reistijd die u hebt vanwege flexibele inzetbaarheid in MST, ZGT en SKB?
    Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

29. Zijn er naast reiskosten vergoeding, extra inkomen of de tijd-voor-tijd regeling nog andere vormen van waardering of beloning die u belangrijk vindt? (open vraag)

30. Heeft u kinderen?

Ja/Nee

Hoe zou u de invloed van de volgende onderwerpen omschrijven?

31. Mijn privéleven (denk daarbij bijvoorbeeld aan kinderen of mantelzorg) heeft een … invloed op mijn intentie om flexibel ingezet te worden in MST, ZGT en SKB.
    Zeer negatieve – Negatieve – Neutraal – Positieve – Zeer positieve

32. Het beschikbaar hebben van een (flexibele) oppas of opvang voor mijn kind heeft een … invloed op mijn intentie om flexibel ingezet te worden in MST, ZGT en SKB.
    Zeer negatieve – Negatieve – Neutraal – Positieve – Zeer positieve

33. Mijn leeftijd heeft een … invloed op mijn intentie om flexibel ingezet te worden in MST, ZGT en SKB.
    Zeer negatieve – Negatieve – Neutraal – Positieve – Zeer positieve

34. Mijn geestelijke gezondheid heeft een … invloed op mijn intentie om flexibel ingezet te worden in MST, ZGT en SKB.
    Zeer negatieve – Negatieve – Neutraal – Positieve – Zeer positieve

35. Mijn hobby's hebben een … invloed op mijn intentie om flexibel ingezet te worden in MST, ZGT en SKB.
    Zeer negatieve – Negatieve – Neutraal – Positieve – Zeer positieve

Hoe belangrijk zijn de volgende onderwerpen voor u?

36. Hoe belangrijk is het voor u dat de apparatuur waar u mee werkt op de IC's, in MST, ZGT en SKB veelal overeenkomt? Denk daarbij aan de dialyse apparatuur, infuuspalen, beademingsmachine etc.
    Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

37. Hoe belangrijk is het voor u dat de protocollen en procedures waar u mee werkt op de IC's, in MST, ZGT en SKB veelal overeenkomen?
    Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

38. Hoe belangrijk is het voor u dat de systemen waar u mee werkt op de IC's, in MST, ZGT en SKB veelal overeenkomen? Denk daarbij bijvoorbeeld aan HIX.
    Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

39. Hoe belangrijk is het voor u het materiaal waar u mee werkt op de IC's, in MST, ZGT en SKB veelal overeenkomt?
    Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

40. Hoe belangrijk is het voor u dat u zelf zou mogen kiezen in welke ziekenhuizen u gaat werken voor de flexpool?
    Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

41. Veranderd uw mening over het overeenkomen van materiaal, apparatuur en systemen in alle 3 ziekenhuizen als het gaat om een acute situatie?
    Ja/Nee

Hoe belangrijk vindt u het dat de volgende onderwerpen (protocollen en procedures, materiaal, apparatuur en systemen) in acute situaties vrijwel identiek zijn in het MST, ZGT en SKB?

42. Materiaal
    Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

43. Systemen
    Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

44. Apparatuur
    Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

45. Protocollen en procedures
    Zeer onbelangrijk – Onbelangrijk – Neutraal – Belangrijk – Zeer belangrijk

Hoe zou u de invloed van het volgende onderwerp omschrijven?

46. Eventuele andere werkzaamheden naast het IC werk (planning, nazorg, ventilation practitioner etc.) hebben een … invloed op mijn intentie om flexibel ingezet te worden in MST, ZGT en SKB.
    Zeer negatieve – Negatieve – Neutraal – Positieve – Zeer positieve

47. Onderstaande onderwerpen zijn de hoofdthema's die uit de interviews naar voren zijn gekomen. Zet deze alstublieft op volgorde van het meest belangrijk (1) naar het minst belangrijk (9). De meest belangrijke onderwerpen zijn de onderwerpen die de meeste invloed hebben op uw intentie om flexibel ingezet te worden in MST, ZGT en SKB. Daarbij maakt het niet uit of het onderwerp een positieve of negatieve invloed heeft.

- Aard en duur van flexibele inzetbaarheid
- Complexiteit van zorg
- Pandemie
- Privéleven
- Beloning en waardering
- Werkomgeving
- Persoonlijke ontwikkeling
- ZZP
- Team dynamiek

APPENDIX VIII: INTERESTING INTERVIEWEE QUOTES

Complexity of healthcare

Private life

Incentives

Self-employment

Work environment

Personal development

Nature and duration of flexible deployment

Team dynamics

APPENDIX IX: DESCRIPTIVE STATISTICS OF THE RESULTS

Descriptive statistics of the results						
Factor	**Underlying themes**	**Mean**	**Std. Dev.**	**Min.**	**Max.**	**N**
Complexity of healthcare	Importance of delivering high complexity healthcare	4.13	0.84	1	5	72
Private life	Influence of having children	2.28	1.01	1	5	43
	Influence of having a flexible babysitter	3.00	1.17	1	5	43
	Influence of the age	3.14	0.91	1	5	66
	Influence of the mental health	3.11	0.70	1	5	66
	Influence of additional travel time	2.25	0.88	1	5	32
Incentives	Importance of additional travel allowance	4.56	0.64	3	5	65
	Importance of additional income	4.50	0.86	1	5	65
	Importance of a time for time arrangement	4.35	0.77	2	5	65
Self-employment	Influence of being self-employed	3.60	1.14	2	5	5
	Influence of the frequency of self-employed shifts	3.20	0.84	2	4	5
	Influence of higher income due to self-employed shifts	2.40	1.52	1	5	5
COVID-19 pandemic	Importance of working at own hospital during a pandemic	4.30	0.87	1	5	70
	Importance of working at own hospital during a pandemic with lockdown	4.31	0.80	2	5	70
Work environment	Importance of equal protocols and procedures	4.14	0.63	3	5	65
	Importance of equal materials	4.14	0.85	2	5	65
	Importance of equal equipment	4.05	0.85	2	5	65
	Importance of equal systems	4.29	0.70	3	5	65
	Importance of being allowed to choose locations	4.24	0.80	2	5	65
	Influence of having other tasks or responsibilities next to the direct patient care	2.79	0.73	1	4	65

Personal development	Importance of yearly training at one hospital	3.93	0.89	2	5	66
	Importance of a training period in advance	4.31	0.63	3	5	66
	Importance of exchanging knowledge with other ICU nurses	3.43	0.86	1	5	66
	Could working in the flex pool be educational or not	2.86	1.14	1	5	66
	No objection to passing additional EPA's	4.54	1.20	1	5	66
	Importance of keeping expertise and knowledge up to date	4.37	0.53	3	5	66
Nature and duration	Importance of a trial period	4.00	1.10	1	5	69
	Importance of keeping a steady basis	4.54	0.70	2	5	69
	Importance of advanced notice in which shifts are communicated	4.29	0.87	2	5	69
	Importance of being able to decide the frequency of float pool shifts	4.37	0.78	2	5	69
	Importance of being able to decide what type of shifts to work	4.23	0.92	1	5	69
Team dynamics	Importance of feeling welcome at other hospitals	3.56	0.77	2	5	70
	Importance of having a connection with colleagues at other hospitals	3.56	0.97	1	5	70
	Importance of feeling safe at the other hospitals	4.66	0.56	3	5	70
	Importance of working in a large hospital and team	2.79	1.29	1	5	70

APPENDIX X: OVERVIEW OF ALL CORRELATION OUTCOMES

Factor	Aspect	Correlation coefficient	P-value	Type of correlation
Complexity of healthcare	Importance of giving high complex care to patients on a regular basis	-0.010	0.934	Very weak negative to no correlation
Incentives	Importance of additional travel allowance	-0.106	0.397	Very weak negative correlation
	Importance of additional income	-0.110	0.381	Very weak negative correlation
	Importance of a time for time arrangement	**-0.292***	**0.018**	**Weak significant correlation**
Nature and duration	Importance of a trial period	0.049	0.688	Very weak positive correlation
	Importance of keeping a steady basis at standard hospital	**-0.312****	**0.009**	**Weak negative significant correlation**
	Importance of timeliness in which shifts are communicated	-0.206	0.087	Weak negative correlation
	Importance of being able to decide the frequency of shifts at other hospitals	**-0.246***	**0.040**	**Weak negative significant correlation**
	Importance of being able to decide what type of shifts to work at other hospitals	-0.231	0.054	Weak negative correlation
Personal development	Importance of having to follow training at the standard hospital only	-0.232	0.059	Weak negative correlation
	Importance of a training period in advance to flexible deployment	0.201	0.102	Weak positive correlation
	Importance of being able to exchange knowledge with ICU nurses from other hospitals	**0.515****	**<0.001**	**Moderate positive significant correlation**
	Agreeing that flexible deployment could be educational	**0.605****	**<0.001**	**Strong positive significant correlation**
	No objection against passing additional EPA's	**0.491****	**<0.001**	**Moderate positive significant correlation**
	Agreeing that ICU nurses from MST, ZGT and SKB could learn from each other	**0.570****	**<0.001**	**Moderate positive significant correlation**
	Agreeing that it is important to keep personal skills and expertise up to date	0.100	0.423	Very weak correlation

Private life	**Influence of having children or being an informal caregiver**	**0.436****	**0.003**	**Moderate positive significant correlation**
	Influence of having a (flexible) babysitter	**0.487****	**<0.001**	**Moderate positive significant correlation**
	Influence age	0.159	0.203	Very weak positive correlation
	Influence hobbies	0.196	0.115	Very weak positive correlation
	Influence mental health	**0.340****	**0.005**	**Weak positive significant correlation**
	Influence additional travel time	0.293	0.103	Weak positive correlation
Self-employment	Influence self-employment work	0.816	0.092	Very strong positive correlation
	Influence of frequency of self-employed work	0.135	0.828	Very weak positive correlation
	Influence of having a higher income due to self-employment	0.574	0.312	Moderate positive correlation
Team dynamics	Importance of feeling welcome	0.112	0.354	Very weak positive correlation
	Importance of having a connection with colleagues from other locations	-0.109	0.367	Very weak negative correlation
	Importance of feeling safe	-0.001	0.991	Very weak negative to no correlation
	Preferring a large hospital	-0.049	0.687	Very weak negative correlation
Work environment	Importance of equal protocols and procedures	-0.196	0.115	Very weak negative correlation
	Importance of equal materials	**-0.268***	**0.030**	**Weak negative significant correlation**
	Importance of equal equipment	**-0.249***	**0.044**	**Weak negative significant correlation**
	Importance of equal systems	-0.235	0.057	Weak negative correlation
	Importance of being able to decide at which other locations to work	-0.176	0.158	Very weak negative correlation

	Influence of having other tasks or work next to the direct patient care on the ICU	0.238	0.054	Weak positive correlation
Pandemic	**Importance of working at own hospital during a pandemic**	**-0.320****	**0.007**	**Weak negative significant correlation**
	Importance of working at own hospital during a pandemic when the Netherlands is in lockdown	**-0.244***	**0.042**	**Weak negative significant correlation**

*. Correlation is significant at the 0.05 level, **. Correlation is significant at the 0.01 level

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