



Norwegian University of
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Insight about Norwegian Millennials and Blood Donation

A qualitative Study on Experiences,
Expectations and Perceptions that identify
potential Areas of Improvement and
Innovation

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Abstract

Norway needs more blood donors to increase the preparedness. With the decreasing number of blood donors, the preparedness situation is put in danger if catastrophes or epidemics should occur (Røde Kors Blodprogram, n.d-b). Research about how blood donation should be organized exists, but often lack user-centricity when approaching the problem.

This thesis offers an exploratory and problem identifying contribution to this problem. A qualitative and user-centred approach was taken, where 18 young adults who both are and are not blood donors took part in an in-depth interview. The interviews gave insight about experiences, expectations and perceptions about blood donation and how blood donation is organized.

The aim of this study is to provide insight about challenging areas that can be useful for further research and guidance for decision making for further development in the service offered by the blood banks, so that future services better could meet user needs and expectations.

The overall findings of this thesis suggest that:

- User-centred research was suitable to identify perceptions, experiences and expectations about challenging areas in a (potential) role as a blood donor.
- Information and knowledge about blood donation is low and not very present in the participants' life.
- Everyday factors like planning, combining blood donation with work or studies, and finding an appointment that fits the schedule can be challenging as a (potential) blood donor. An extended list of such challenges is presented in this thesis.
- Technology such as an app and mobile notifications could possibly make it easier to plan and keep track of appointments.
- The findings in this study expressed both positive and negative aspects about blood donation in Norway. The negative aspects are about low visibility and practical issues in general. Positive aspects are about helping others, feeling appreciated, that it is a good concept, professional and friendly staff, not time consuming, and receiving gifts.

Abstract (Norwegian)

Norge trenger flere blodgivere for å øke beredskapen. Det at antall blodgivere går nedover gjør at beredskapssituasjonen står i fare i tilfelle det skulle oppstå katastrofer eller epidemier (Røde Kors Blodprogram, n.d-b). Det finnes forskning på hvordan blodivertjenesten burde organiseres, men disse mangler ofte brukersentrert tilnærming på problemet.

Denne masteroppgaven tilbyr en undersøkende og problemidentifiserende vinkling på dette problemet. En kvalitativ og brukersentrert tilnærming er anvendt, der 18 unge voksne ikke-blodgivere og blodgivere deltok i et dybdeintervju. Intervjuene ga innsikt om opplevelser, forventninger og oppfatninger om blodgivning og hvordan blodgiving er organisert.

Målet med denne studien er å skaffe innsikt som kan være nyttig for videre forskning og som potensielt kan være nyttig til å guide beslutninger i videreutvikling av tjenestetilbudet hos blodbankene, slik at de kan levere tjenester som bedre møter brukerbehov og forventninger.

Overordnet så antyder denne studien at:

- Brukersentrert reserach var egnet til å identifisere generelle oppfatninger, opplevelser og forventninger om utfordringer i en (potensiell) rolle som bloddonor.
- Informasjon og kunnskap om blodgiving er lav og ikke veldig synlig i deltagerens liv.
- Hverdagslige faktorer som planlegging, kombinere blodgivning med jobb og studier, og å finne et passende tidspunkt var ofte nevnt som utfordringer i en (potensiell) rolle som blodgiver. En utvidet liste om andre utfordringer er presentert i masteroppgaven.
- Teknologi som en app eller notifikasjoner på mobilen kan potensielt gjøre det enklere å planlegge og holde styr på oppsatte timer.
- Deltagere nevnte både positive og negative meninger om blodgiving i Norge. De negative aspektene handler om lav synlighet og praktiske utfordringer. Noen positive aspekter handler om å hjelpe andre, at det føles verdsatt, at det er et bra konsept, at personelt er profesjonell og hyggelig, at det ikke er tidkrevende, og at man mottar en gave.

Preface

The work on the master thesis took place from mid-August to mid-December 2017, and is the final step on the road to my master degree in Interaction Design at NTNU.

This thesis builds on a topic I worked with in the course Research Project Planning from spring 2017, where I got the opportunity to learn more about the topic of this thesis. This thesis equals the work of 30 ECTS.

The master programme in Interaction Design has involved advanced and challenging tasks, which has made me capable of problem solving at a high level. The master programme has taught me to think critically and has made me capable of approaching and finding new and better solutions through user-centred methods.

This thesis aims to understand behavioural aspects, needs and opinions about the blood donation system in Norway. My thesis contributes with a user-centred aspect on a topic many researchers try to learn more about. The results of this thesis could be useful for further research and helpful for potential adjustments or changes on how blood donation could be organized differently to deliver better experiences to potential and existing blood donors.

Hilde Vestby Fredriksen

Gjøvik, 15 December 2017

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Gjøvik, 15 December 2017

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1 Introduction

1.1 Topics covered and purpose of the study

This thesis has a user-centred approach about blood donation in Norway. It investigates if there are any misconceptions or unmet needs that stands in the way for people to consider a role as a blood donor. It also looks at barriers for Norwegian millennials' choice and awareness of blood donation. Using theoretical background from service design and user-centred principles and research, this thesis has a holistic approach. The scope is narrowed down to a research stage, where comprehensive qualitative research and analysis were conducted to achieve a better understanding of young Norwegian adults' experiences, expectations and perception about the Norwegian blood bank's service offering.

1.2 Keywords

User-centred design, user experience, service design, blood transfusion services, blood donation.

1.3 Problem description

According to Røde Kors Blodprogram (n.d-b), Norway does not have the desired amount of blood donors, which affect the preparedness negatively, and raises concerns in case of epidemics, big accidents or terror. Røde Kors Blodprogram (n.d-b) says the number of blood donors are too low, and that each Norwegian blood donor in average has to donate blood more frequently than blood donors in similar countries.

Each year many blood donors stop donating blood because of age, illness, medicines or moving, and therefore new donors have to replace them (Røde Kors Blodprogram, n.d-b).

The need for more blood donors are also communicated by news channels, such as NRK who in 2015 clearly communicated the need for more blood donors with the title 'Blodkrise i hele landet' (Grimstveit and Brendhagen, 2015), which translates into 'National blood crisis'. This article builds on information from a bioengineer and Tor Ole Bergan, the manager of the Norwegian Red Cross blood program. According to Røde Kors Blodprogram (n.d-a), Norway

has registered just below 100 000 blood donors. In the January 2016, Norway had a population of 5 213 985 (Statistisk Sentralbyrå, 2017), which mean that there were 19,17 blood donors per 1000 inhabitants. WHO (n.d) recommends a minimum of 20-25 blood donors per 1000 inhabitants for a country to be self-supplied with blood. With that number, Norway is below the recommended limit. WHO (n.d) also say that internationally, 90 % of potential blood donors are not blood donors. Therefore, it would be reasonable to believe that there are potential blood donors out there.

This problem is not new or unknown for researchers, and it already exists much research on the topic internationally. However, much existing research either investigate this problem with a very small scope, some of the research starts to get old, and other research are not qualitative and do not have a user-centred approach for understanding this problem. As the background chapter mentions, existing research often points to general aspects for motivation and why people do not become blood donors, and do in general lack a holistic and user-centred approach for understanding potential donors and how the service can be designed to fit their needs.

To summarize, Norway has too few blood donors which raises concerns for the preparedness situation. Existing research tend to lack a qualitative, holistic and user-centred approach to describe the situation and how it could be improved.

1.4 Motivation, justification and benefits

Existing research that looks at the same problem as this thesis do not to the author's knowledge offer the same user-centred and holistic approach as this thesis do. This contribution will therefore add valuable insight with a perspective that could describe more specific areas that could be improved, and in general offer a better understanding of existing and potential blood donors.

A contribution on this topic can be useful for further research and improvements or changes in the blood donation system. Getting user-centred insight about the blood donation system could result to knowledge that are suitable for recommending improvements to the blood donation system, which could better meet user needs and expectations.

According to (Reason, Løvlie and Flu, 2016, p. 3), a better understanding of the customer expectations, experience and behaviour will have advantages that could increase customer satisfaction and adoption level, reduce customer irritations and improve services for better customer relations. This view is commonly shared with people who works in a field within user-centred design. It seems like this approach could bring new knowledge to the situation described in the problem description.

If more people become blood donors it will benefit the society in general with a bigger database of blood donors, which make blood products more available for those who need it. Having enough blood donors available is important to increase the preparedness in case of big accidents, terror or epidemics, as well as it is of interest for people who need blood products for specific illnesses or surgeries in general.

If this study is worked on further, it potentially could lead to a service offering that more effectively meets user needs, and it could potentially lead to more effective distribution of information. That could benefit existing blood donors by providing better services and user experience. It could also benefit potential blood donors positively as they can receive suitable information on relevant information channels, or perhaps the role as a blood donor would fit them better with some adjustments in how blood donation is organized. Working with insight on this topic can be beneficial for public instances or researchers who wants to get learn more about how people interact with the blood bank.

This thesis is an independent piece of research, that aims to contribute with knowledge that can be useful both nationally and internationally.

1.5 Purpose of the study

The purpose of the study is to contribute to a better understanding of young Norwegian adults' perceptions, experiences and expectations about blood donation in Norway, where the insight that can tell about how a potential role as a blood donor could be easier and improved, and how people can become more aware of the opportunities of becoming a blood donor.

The insight can be used as a foundation for further research and potential improvements in the service offering for both blood donors and non-donors. Insight about what they expect of the

service can help designing and developing tools for existing blood donors. Other insight can be more suitable for choosing distribution platforms and design of information and commercial material.

1.6 Research questions

Research questions

RQ1: How can user-centred research contribute to insight about millennials' perceptions, experiences and expectations about the role as a blood donor in Norway?

RQ2: How visible is blood donation related content in Norwegian millennials life?

RQ3: What factors could be challenging in a role (or potential role) as a blood donor, and how could these challenges be overcome?

RQ4: Can technology improve experiences or ease the role as a blood donor?

RQ5: What do Norwegian millennials think is positive and negative in the way blood donation is organized today?

Description of research questions

Research question 1 focuses on overall insight that answers the other research questions. The user-centred approach will be discussed.

Research question 2 focuses on how information channels reach out to Norwegian millennials.

Research question 3 focuses on everyday aspects that can make the role as a blood donor challenging, and how these challenges can be overcome.

Research question 4 focuses on how and if technology has a potential to improve the service offering as a blood donor, in terms of better solutions and experiences.

Research question 5 focuses on mapping millennials opinions about positive and negative aspects about blood donation in Norway, with the aim to better understand this 'user group'.

1.7 Contributions

This master thesis contributes with:

- Insight into how young Norwegian adults perceive the blood donation system.
- Insight into what young Norwegian adults think about how blood donation is organized today.
- Insight about how visible the Norwegian blood bank is to young Norwegian adults, and how present advertisements and publicity reach out to them.
- Insight into what would make it easier for young Norwegian adults to know about and consider a role as a blood donor.
- Insight into what Norwegian young adults see as practical obstacles for considering their role as a blood donor.
- Insight into how young Norwegians plan and organize appointments similar to blood donation, and how significant the role of technology plays in this planning and organization.
- Insight into what technology or other aspects can make it easier, more convenient, or more exciting to be a blood donor.
- A research contribution that can supplement other research with a different (user-centred) approach, that helps to describe why this group of people act as they do.
- Insights that can be used for developing the service offering further. It may give an idea of which user needs to focus on further to provide better experiences for existing and potential blood donors.

1.8 Thesis outline

Chapter 1 Introduction

Presents the background and motivations, purpose, problem description, and research questions.

Chapter 2 Background

Goes in to background theory and related work about service design, user-centred design and blood donation services.

Chapter 3 Methodology

Explains the methods used in this thesis.

Chapter 4 Results

Presents summarized results from the interviews. Some of the participants' quotes are included, where both commonly given answers and other more informative quotes are represented.

Chapter 5 Discussion

This chapter discusses the results described in chapter 4, and discusses if there are some clear patterns in different parts of the data, and if there are other qualitative data that should be considered further. A small summary will highlight important findings. This part also describes the limitations in this study.

Chapter 6 Conclusion

This chapter present the final takeaways and main findings from this thesis.

Chapter 7 Future work

This thesis cannot alone contribute to a complete picture of every aspect about the topic, but it adds a contribution that future research can build on. This chapter presents chosen suggestions for further work based on both the findings and limitations of this study.

2 Background

2.1 Norwegian research and insight about blood donation

2.1.1 Norwegian Directorate of Health, blood donation registration form

In Norway, the Norwegian Directorate of Health has a society mission as professional advisors within the health sector, and has an overall responsibility for the national health preparedness (Helsedirektoratet, 2017a). The Norwegian Directorate of Health publish their research on their webpages, and some of them are interesting for the topic of this thesis.

One of the Norwegian Directorate of Health's publications is about reviewing the form that needs to be filled out every time the blood donors come to the blood bank to donate blood. Kjøllesdal, *et al.* (2012) used both qualitative and quantitative methods for reviewing the form, where the qualitative methods were weighted in their finding. They found out that some of the formulations/language in the form was vague, and that participants admit that they could have misunderstood or given incorrect answers based on the design and formulation on the form. Many blood donors also said that some of the questions was meaningless to answer every time, as some personal details do not change from time to time. Headlines were also often not read, and a "don't know" option has been requested.

Kjøllesdal, *et al.* (2012)'s study emphasizes the end-user and how they interact with the blood donation form, which is an interesting background for this thesis. In 2016 the Norwegian National Transfusion Council had a meeting, where this form was one of the topics (Helsedirektoratet, 2016b). The report says that a new form is under development, but needs user evaluation before implementation. As this specific case is already worked on, it will not take much of the focus in this thesis.

2.1.2 Norwegian Directorate of Health, guidelines for the transfusion service

The Norwegian Directorate of Health has published some guidelines for the transfusion services in Norway (Helsedirektoratet, 2017b). The guidelines do not cover specific aspects within communication and user experience, but focus more on legal and medical aspects. The guidelines do however have a section about what kind of information blood donors should be

provided and educated in, and this information should be given both verbally and written to the blood donor (Helsedirektoratet, 2017b).

2.1.3 Norwegian Directorate of Health, suggestion actions

In 2013, the Norwegian directorate of Health mapped the blood donation situations in Norway, and suggested actions that could make a more sustainable solution for blood donation (Helsedirektoratet, 2013). The report says that insight is built on feedback from the transfusion services quality organ ‘Transfusjonstjenesten kvalitetsråd’, the blood banks and Norwegian red Cross blood program. They were asked three questions:

- How to recruit new blood donors?
- How to keep blood donors?
- Who should organize the recruiting?

Helsedirektoratet (2013)’s suggestions summarized:

Recruiting:

- National actions: online recruiting portal, focus on campaign and recruiting material, Norwegian Red Cross, and a national recruiting group after the Danish model.
- Local actions: Increased competence with recruiters, local marketing strategies in work places, schools, local media and social media.

Keep blood donors:

- National actions: Mobile blood bank units
- Local actions: Changing opening hours, nice physical environments, parking options, a feeling of belonging for the blood donor, reputation, drop-ins, mobile units, competence within staff, good web pages for each blood bank.

Other

- National blood donation register, standardized electronic health cards, changing laws and regulations.

The Norwegian Directorate of Health touches upon things that could improve the blood donation system, like making it easier to be a blood donor and to give them a better experience.

Helsedirektoratet (2013)'s report does not go into actual user needs, but their insight came from informants that works close together with existing blood donors, and they probably have deep knowledge in many of the problems that existing blood donors have, and therefore their contribution can be valuable to map out what could have been done differently to keep and recruit more blood donors. The suggestions do not go further into details about how such improvements should be designed.

2.1.4 Master theses working within similar topics

Two Norwegian master theses also discuss the Norwegian blood donation system.

Olaussen (2012) has done a comparative study on blood bank organization between the Oslo-region, Skåne and Copenhagen-region with an evaluation of organization models for the Oslo-region, with an aim to identify an appropriate organization model for the Oslo-Region. Olaussen's contribution is more at an organizational level, and suggests four different solutions of how the blood banks in Oslo should be organized.

Misje (2001) wrote a thesis about factors that make Norwegians become blood donors. Some of Misje's findings show that:

- Most blood donors are recruited within their circle of acquaintances.
- Blood donors are happy with follow-up and their local blood bank. Note: the study is limited to the blood banks in Oslo.
- Altruistic motivation is the most important motivation to become a blood donor, but also motivations like social expectations and benefit incentives were common motivations.

Misje's quantitative study presents relevant and local background information. This thesis is dated 2001, and it would be interesting to see if anything as changed since then. Misje's results about motivations have similarities to international research. Factors that make people become blood donors are relevant as background for this thesis.

2.2 International guidelines

2.2.1 Guidelines for sustainable, voluntary and non-remunerated blood donation

World Health Organization (WHO) has a blood transfusion safety-program, where one of the programmes focuses on non-remunerated blood donation. A framework has been published about how to achieve voluntary blood donation.

World Health Organization, Blood Programme of the International Federation of Red Cross and Red Crescent Societies (2010) developed the framework that consists of 20 strategies for creating effective blood donation programmes, eliminate paid donation and phasing out family/replacement blood donation.

Some of these strategies focus directly on understanding and emphasizing blood donors and potential blood donors, which could be relevant and useful for improving the blood donation system. The strategies have been considered in the interview guide in this thesis. The framework does not offer a specific way to implement the strategies, but it gives a good overview of strategies that are considered to be good for improving the organization of a blood bank.

Some strategies stand more out as relevant for this thesis (World Health Organization, Blood Programme of the International Federation of Red Cross and Red Crescent Societies, 2010):

- Strategy 4: “Understand your blood donors”
- Strategy 5: “Identify target blood donor populations”
- Strategy 6: “Develop communication strategies for donor education and community involvement”
- Strategy 10: “Educate, motivate and recruit new blood donors”
- Strategy 11: “Mobilize youth as a new generation of voluntary blood donors”
- Strategy 13: “Recall infrequent, inactive and temporarily deferred blood donors”
- Strategy 14: “Retain sustainable voluntary blood donors”
- Strategy 15: “Recognize blood donors’ contribution to society”
- Strategy 16: “Make it convenient for donors to give blood”
- Strategy 17: “Reach out to donors through mobile donor sessions”
- Strategy 20: “Make blood donation a safe and pleasant experience”

2.3 International research about blood donors

The journal ‘Transfusion’ offers research about blood donation, where some of the research are relevant background for this thesis. After manually browsing through issues from 2014-2017, some selected relevant articles are presented below. In general, the chosen articles tell about motivations, communication, blood donor characteristics, fear and negative experiences related to blood donation. Being aware of such research have been very useful for this thesis in terms of taking precautions and in general finding a suitable scope to work with.

2.3.1 Motivational factors

A study by Dongen, *et al.* (2014) tells that factors that influence a blood donor’s decision to sign up for donation early in a blood donation career are related to motivation, experience of vasovagal reactions, and planning failures, while more experienced donors are influenced with factors related to planning failure.

Amongst motivational factors, altruism is frequently mentioned in research as an important factor to start or to continue as a blood donor. One study showed that specific altruism mechanisms had significant more impact than other. Ferguson and Lawrence (2016) found that altruism mechanisms influencing people to donate blood are warm-glow and reluctant altruism. Warm-glow altruism is the emotional feeling the donor gets for the act of helping, and reluctant altruism is about doing something for a good cause and lack of trust in that others take this responsibility (Ferguson and Lawrence, 2016).

2.3.2 Fear and vasovagal reactions

Fear and vasovagal can influence whether someone sign up or continues as a blood donor. A study showed that high school donors are affected negatively by fear, which influence both donor retention and indirectly increase risk for vasovagal reactions (France, *et al.*, 2014). Donors with fear showed vasovagal symptoms three times as often as donors with no fear (France, *et al.*, 2016b). Deferral, vasovagal reactions and service failure can discourage donors, but these factors do not alone decide if someone continues as a donor (Masser, *et al.*, 2016a). If a donor had a negative experience, the donor deterrence effect on retention can be decreased if the donor is asked to convert to another form of donation, like plasmapheresis (Masser, *et al.*, 2016a).

When donors and non-donors guessed frequency of vasovagal symptoms amongst blood donors, both groups gave overestimated guesses (Rose, *et al.*, 2014).

These studies suggest that fear or fear for vasovagal reactions negatively affects retention, and that frequency of vasovagal symptoms are overestimated. That is interesting in terms of potential blood donors' assumptions.

2.3.3 Trigger factors

Previous research also look at how motivation can be triggered to sign up or continue as blood donors, also for those with fears.

A study showed that motivational interviews affected motivational autonomy and increased attitude, self-efficacy, and intention amongst blood donors (France, *et al.*, 2016a). This and the following example show positive effects regards to willingness and motivation to donate blood. Non-donors who had anxiety related to blood donation increased their self-efficacy for donating blood after being exposed to recruitment material, a brochure with information about the need for blood donors, concerns about negative donor experiences, description of donation procedure, and tips and strategies about before and after donating blood (Masser, *et al.*, 2016b). Similar results are seen in previous studies that showed that brochures decreased anxiety and increased self-efficacy, both with standard brochures and brochures that were specifically designed for impacting those factors (France, *et al.*, 2007, France, *et al.*, 2011).

2.3.4 Return rate factors

While fear could prevent some people from blood donation, those who donate blood regularly show some other characteristics. Wevers, *et al.* (2014) say that donors that have positive feelings about donating blood are more likely to come back to the blood bank than people who felt pressure from the blood bank. They also say that multigallon donors score higher on self-efficacy, satisfaction and self-identity.

2.3.5 Use of technology

According to Godin, *et al.* (2011) phone calls reminding about upcoming opportunities for blood donation significantly affected the return rate. A study also shows that mobile technology to communicate and manage their relationship to the blood bank can be relevant.

A questionnaire study about mobile apps and blood donation showed positive attitudes about managing their donations through a mobile app (Yuan, *et al.*, 2016). The same study showed that desired features were requesting appointments anytime and receiving appointment conformations quickly.

2.4 Design for problem solving

2.4.1 Service design and user-centred design

Baxter, Courage and Caine (2015, p. 7) describe user-centred design as a development approach focusing on the end user, with early focus on users and tasks, empirical measurement of product usage and iterative design. Baxter, Courage and Caine (2015, p. 4) describe user experience as broad, holistic and human centred and subjective.

Service design gives opportunities to understand and identify motivations of people involved in a service, and can define new opportunities for how their goals can be achieved (Polaine, Løvlie and Reason, 2013, p. 187).

Service design is user-centred, but have other additional qualities compared to user-centred design alone. Stickdorn and Schneider (2011) mention five important principles in service design thinking: User-centricity, co-creation, sequencing, evidencing and a holistic view.

A service design approach about blood donation and this thesis is relevant. Service design has the advantage that the perspective, methods and tools work in a way that deals with business ambition and challenges (Reason, Løvlie and Flu, 2016, p. 4). With a service design approach, one can see the business through the customers perspective and get insight that enable to improve customer satisfaction, reduce irritations and improve services for better customer relations (Reason, Løvlie and Flu, 2016, p. 5). Reason, Løvlie and Flu (2016) also say that a customer centric focus that can be used to achieve business objectives like cost-reduction, increased customer retention and sale, and impact how successfully a service launches in the market.

Satisfied customers spread positive words about the organization, stays as customers for a longer time and spend more time with that organization (Vavra, 2002). Vavra describes a

customer relationship to an organization. To learn about customer satisfaction in the blood bank can therefore give valuable insight and reveal potential improvement areas.

Rieple (2016) describes differences between the process of design students and MBA students; While MBAs would face a challenge with market research, reading reports and produce a set of recommendations, the design student instead would use user-scenarios and talk to the customers to understand them to map habits and present potential concepts. The design-way of facing a challenge is more user-centred, tells about needs and challenges and more specifically define how these needs and challenges could be met.

Service design also contributes with an understanding in changing needs and desires (Curedale, 2016). As some research about blood donation start to get old, there may be other needs and desires that are not met amongst blood donors and potential blood donors. With the user-centred and holistic approach this thesis offers, it can tell about the present preferred ways of for example manage their relationship and communicate with the blood bank.

If the research questions in this thesis are solved with a service design perspective, the results may give good indicators on potential areas that could be improved or adjusted for to benefit existing and potential blood donors, and it could also lead to more specific recommendations for change.

2.4.2 Different lifecycles

One of the principles in service design is sequencing, often done through customer journeys.

Movement is a critical factor in service design, describing movement through a service, and is essential to understand when we design and manage services and want to achieve customer-oriented goals as attracting, acquiring and retaining customers (Reason, Løvlie and Flu, 2016, pp. 15,16).

A movement phase is often structured into *before, begin, during and after* a service, and can help understanding the service experience from the customer perspective (Reason, Løvlie and Flu, 2016, pp. 17-19). Lifecycles can give a clear overview of how people behave and

different mindset people have in different roles, as humans, consumers, customers and users (Reason, Løvlie and Flu, 2016, p. 33).

Reason, Løvlie and Flu (2016, pp. 33-37) describe four different lifecycles:

- **Human lifecycle:** Different life stages and phases and changing needs
- **Consumer lifecycle:** Consumers choose an option over another based on their needs.
Where do your service stand in comparison to others in the market?
- **Customer lifecycle:** All steps from the point people are aware of a service to they consider leaving the service; awareness, consider to be a customer, buy, setup, use the service, change, incident and leave the service.
- **User lifecycle:** The interactions within a specific service in detail.

Implementing questions about different lifecycles in the interview guide could yield insight about people's different needs and experiences at a higher level.

2.4.3 Mental models

Preece, Rogers and Sharp (2015, p. 86) say that mental models are assumed to be used by people to reason about a system, like when something unexpected happens or when you use an unfamiliar system.

When people's understanding of how systems work is poor, the consequences are that they can find it hard to identify, describe or solve a problem, and lack vocabulary or concepts to tell what is going on (Preece, Rogers and Sharp, 2015, p. 87).

Some of the questions in the interview guide are formulated and inspired with the mental model in mind, aiming to identify if the existing service deliver and communicate in a way that the users understand, or if there are missing knowledge that can lead to misconceptions about how the system works.

2.5 Voluntary services

As blood donation is based on voluntary effort, it is relevant to present some background about how this relates to blood donation in Norway and how design is used in voluntary services.

The Norwegian government states in a declaration for voluntary contribution in the society (Regjeringen Kulturdepartementet, 2015):

- “Voluntariness is not a supplement for activities in the public sector. It is a fundamental part of people’s lives, and an action and premise for a good society”
- “The government acknowledge voluntariness as important in solving society problems in health- and social services and in preparedness work”

According to Young and Warwick (2017, p. 133), designers are involved for design of services for social good, and are of interests in research and practice. Young and Warwick (2017) say that reliance to the voluntary community sector is increased due to reduced funding in the public sector. Young and Warwick (2017, pp. 133-136) discuss examples and evidence that service design is used in, and demonstrate that it could have positive impact in the voluntary community sector.

3 Methodology

3.1 Choosing research questions

Research questions were chosen based on what is missing in existing research in combination with the researcher's educational background.

After finding out that it was missing a user-centred and holistic perspective on the given problem, research questions started to formulate. To answer these questions properly and ensuring quality in the research process, some choices were taken. As the author/researcher does not have an educational background from fields like psychology, medicine or organizational management, there are some research questions that would have been more appropriate for them to solve.

With a background from interaction design, there are some limitations in terms of which research questions that could appropriate to contribute on the topic. This thesis has a holistic approach, and looks at more specific parts of the service offering, and how these are perceived by potential blood donors. The service design community use the term 'touchpoint' for describing where a user interacts or meets something connected to a business. This thesis looks at some of these touchpoints. This thesis also looks at general everyday aspects that can influence people's relationship or view about blood donation. This thesis does not offer insight about pure motivational factors, as existing research already offers many such contributions. This thesis has chosen a focus about end-users' experience, perceptions and expectations about the Norwegian blood bank.

3.2 Choice of methods

3.2.1 A user-centred perspective and service design

To answer the research questions, a holistic and user-centred approach was taken. According to Reason, Løvlie and Flu (2016, p. 4), service design can help to deal with internal and external challenges in organizations and give an understanding of the customers' perspective that can show clarity and directions needed for change in the organization.

Reason, Løvlie and Flu (2016, p. 5) also says that understanding the customers' expectations, experience and behaviour can expose customers' pain points and identify new ways that could create increased value for the customers.

With the service design perspective, a general mind-set influence how methods are chosen and how these methods are carried out.

3.2.2 Interviews

Qualitative research methods are common and suitable to understand user attitudes (Baxter, Courage and Caine, 2015, p. 103). Interviews are one of those methods, and is one of the most frequently used user research techniques (Baxter, Courage and Caine, 2015, p. 100).

When Interviewing multiple user types of a system it is possible to obtain a holistic view (Baxter, Courage and Caine, 2015, p. 100). In this study, the interviewees are both existing blood donors and potential 'blood donors', meaning that the interview data will represent users and potential users' viewpoints, which could give insight about specific areas that could be improved to better meet unmet user needs. Since many people are not blood donors, one can assume that they could contribute with insight about challenging areas that affect their choice (if there has been taken an active choice at all) to not become blood donors.

User interviews are also suitable for guiding additional user research (Baxter, Courage and Caine, 2015, p. 100), which is one of the goals in this thesis. This thesis cannot alone verify findings or assumptions, but it can open eyes for new hypotheses and highlight relevant areas for improvement based on qualitative data.

3.3 Background literature

3.3.1 Data collection

From the pre-project for the master thesis in the course IMT4601 Research Project Planning, it was spent time to learn about blood donation, and looking for relevant research on the topic.

The initial research on the topic looked at existing literature about:

- User experience, user involvement or similar research aiming to understand existing or potential end-users as blood donors and their general thoughts of blood bank organization.
- Research about information and recruiting material
- Motivational behaviours, and factors why some people are not blood donors
- How user-centred research methods and a service design perspective are used to answer similar problems
- Service design in voluntary services
- Both international and national relevant research

The literature was found searching in online databases like Springerlink, Oria, and Wiley. A manual search was done going into the journal Transfusion, where recent publications were prioritized. When starting to search through these databases, these query words (and combinations of them) were used; ‘service design’, ‘blood donation’, ‘motivation’, ‘blood donor’, ‘experience’ etc. When relevant literature was found, new searches in the databases inspired by relevant titles and content.

While doing this research, some basic background about blood donation were found through google searches, looking for public and reliable resources could ease the process for finding relevant literature in more reliable databases. Google searches about the topic often draw attention to news articles about blood donation with an angle that emphasises need for new blood donors both at a national and international level.

Overall, this background research gave relevant background knowledge about the topic, that was valuable for defining what this thesis should focus on and potential precautions that should be considered while designing data collecting material and collecting the data. In addition to online resources, textbooks from user-centred design and service design was used for different parts of this thesis.

3.3.2 How existing literature is used in this thesis

Existing research has been used as indicators and inspiration rather than an established truth. It has also been used to identify missing perspectives about understanding blood donation and blood donors, and it was helpful to identify and formulate research questions for this thesis.

3.4 Ethical considerations

3.4.1 Privacy and confidentiality

The interview guide is designed to not collect personal data that can be directly or indirectly identifiable for the participant. As described in the data collection section, the only data recording tools were pen and paper, and therefore researcher have full control over recorded data. Also, as described, if the participants mentioned such identifiable information, it would not be recorded, or the data was recorded with a rephrasing after approval from the participant.

The participants were ensured privacy and confidentiality for their participation. As little as possible of the participants' background were recorded.

The combination of all these data makes it impossible for anyone to recognize specific individuals in the data.

3.4.2 Anonymous data, no health information

As the previous section mentions, the data are already anonymized in the raw data. It was not asked for any health information from the participants, and the participants were informed before and during the interview that this study did not focus or ask for such aspects.

3.4.3 Storage and access of data material

Raw data was stored in a loose-leaf binder that only the researcher had access to. It was stored in a locked and private space. The participants signed a consent form that let Hilde Vestby Fredriksen (author) and her supervisors access raw data, and that quotes from the interview will be used in the master thesis report, which will be open to the public after the thesis is submitted.

3.4.4 Informed consent

All participants were informed and explained about the content in the informed consent form, and it was signed by all participants before the interview started.

3.4.5 Compensation for participation in the study

Participants received a small goodie-bag with chocolates as a compensation for their time. Value of the goodie bag was not significantly high, and given as a sign of gratitude. Along with the goodie-bag followed a thank-you-note with contact information in case of any additional questions.

The goodie bags were not used for recruiting purposes. This appreciation was a symbolic gesture that could not have impact ethical aspects for this study.

3.4.6 Contact with participants: recruiting, interview, post-interview

The recruiting process focused on completely voluntary participation, meaning that putting much time into convincing potential targets was not a priority. This focus increases chances that only people who wanted to and felt comfortable talking about the topic ended up as participants.

The participants' interests were always treated as more important than the interests for this thesis, meaning that the participants were treated well and it was always ensured that they were well informed about what their participation involved, that the principle of voluntary participation is strongly emphasised, and that the participant felt comfortable about taking part in the study.

3.4.7 NSD

The study is not reported to Norwegian Centre for Research Data. This thesis does not collect data that are a subject for registration at NSD. Both the author of this thesis and the supervisor came to this conclusion after evaluating this project. NSD's own test for checking if the project needed to be reported also confirmed this, as no data that are directly or indirectly identifiable for the participants would be recorded.

Even if the project wasn't reported to NSD, privacy and research ethics were highly prioritized in this project.

3.4.1 Quotes from participants and how the results are structured

The informed consent informs that quotes from the interview will be used in the final report. The participants were also informed about this verbally. In the report, all combinations of answers for each participant is erased, and it is not possible to identify individuals in this thesis.

3.5 Designing the interview guide

3.5.1 Type of interview

Even if the interview guide seemingly looks structured and long, follow up-questions were asked frequently to add additional insight about their initial answer. The interview guide has a semi-structural design.

According to Baxter, Courage and Caine (2015) a semi-structured interview combines the advantages from structured and unstructured interviews, and generates both quantitative and qualitative data with opportunities for follow up-questions. A semi-structured interview involves both open-ended and close ended-questions (Baxter, Courage and Caine, 2015), which this interview consists of.

The interview was done face-to-face. In face-to-face interviews the body language can be observed, and the situation could be more natural for the participants. It also allows the researcher to understand each answer when it is combined with the participants' body language. It will then also be easier to identify relevant follow-up questions and it will be easier to understand what the participant intended to answer, or if the participant has given an honest answer.

3.5.2 Interview phases

Baxter, Courage and Caine (2015, p. 238) describes five phases of an interview; Introduction, warm-up, body of the session, cooling-off and wrap up

Both in the recruiting phase and before the actual interview started, there was a focus on establishing a safe environment, introducing myself, the tasks, and asking if the participant had any experience in participating in similar study, and explain briefly and relaxed about

what a participation would involve. The participants completed the informed consent forms and were told that they could ask any questions at any point of the interview.

The warm-up session for this thesis was short, and asked some background questions as well as explaining more in-depth the different parts of the interview. The interviewees were told that there were no correct or incorrect answers for any questions, and that some of the questions may sound a bit different from an online questionnaire. They were told that the interview is not a test of the participant's knowledge, but the aim is to capture their opinions and experiences.

The main part of the interview contains more detailed questions. The blood donors were asked general questions about their experience about the blood donation system, and non-donors were asked questions about how they perceive the blood donation system. The last part was used for all participants, and had topics more related to information channels and touchpoints, everyday aspects in a (potential) role as a blood donor, and what they perceive as good and bad with the blood donation system.

The questions about what the participants think of as good and bad about the blood donation system helps to cool down the interview. The participants were also asked if they had any additional information they would like to tell about.

For wrapping up the session, the participants were asked if they had any questions. Before they left the participants were given a goodie bag and contact information.

3.5.3 How questions are identified

The questions are based on literature from the background chapter, much inspired by service design principles. Previous research and available literature has guided the process of choosing and narrowing down interview questions. Topic-wise the questions are formulated to better understand blood donors and potential blood donors.

In service design, customer insight focuses on experiences and interactions people have with service touch-points, and can give an understanding of why a service does not work that well Reason, Løvlie and Flu (2016, p. 164). The interview guide therefore has questions looking

more specifically at how service touch-points are perceived and experienced by the participants.

How a service fit into the customers' life can often give key insights (Reason, Løvlie and Flu, 2016, p. 164). Therefore, some questions are formulated in such way. More specifically, question 4.7 in the interview touches upon this at a very general and reflective manner for the participants, and opens for many potential reasons that could make it harder to be in the role as a blood donor. Question 4.7 asks about how well the role as a blood donor would suit them in different ages, and why it does or doesn't.

Identifying unmet needs also highlight areas that needs attention, and form the basis for opportunities (Reason, Løvlie and Flu, 2016, p. 83).

One of the approaches that Reason, Løvlie and Flu (2016, p. 121) describe to understand opportunities for adoption, is that you can map the adoption journey for 80 % of the customers to identify what to focus on. Another approach to get insight in adoption is to identify customer barriers and opportunities before, during and after a decision in a service, and comparing the contrasts between your service and similar services for each phase (Reason, Løvlie and Flu, 2016, p. 122).

As described in the background chapter, different lifecycles can give valuable insight. Many of the questions are therefore focusing on different aspects within the different lifecycles.

Pilot-test of interview

The interview guide had a pilot-test before the data collection started. It resulted in smaller changes in the interview guide. Some questions were also removed or replaced. The pilot-test was used to understand if each question was understandable or worked as intended. Questions that possibly could feel intruding or uncomfortable was removed or rephrased.

The pilot-test was done with one person, who had just a little pre-knowledge about blood donation and this thesis. The test person was an acquaintance, who fits well within the group of interests of this thesis. The pilot-test notes are not a part of the data material.

3.6 Data collection: Interviews

3.6.1 Practicalities about the interviews

All interviews were conducted discretely in a private meeting room at the university campus. Chairs and tables were arranged to encourage calm and comfortable conversation setting.

Ensuring ethical research and comfortable setting for the participant was always prioritised over all other factors, meaning that if it for any reasons makes sense to interrupt the session, that should be considered and discussed with the participant. The interview guide was carefully formulated to not ask intimidating questions. For the people who participated in this study there was no such complications.

3.6.2 Recording data

Data were recorded by pen and paper. A template for notes was used and provided an easier and more structured way of recording of the data. Using pen and paper makes it very flexible to not record sensitive data which could have happened with audio recordings. Audio recordings were not used in this interview.

Recording data by pen and paper has some drawbacks, one of them being that it could make the interview more time consuming, and that sometimes notes are written fast and could be hard to read. Using pen and paper does not practically allow a full transcription of the conversation, and the researcher therefore quickly needs to extract the most important information and quotes from the participants. That could lead to researcher bias, in terms that the researcher has to record what he or she believes is most important. That said, this bias was thought of when doing the interviews, and such biases were at least attempted to be avoided. This problem might be more distinctive when the participants give long answers, and therefore it was taken a choice to always write down keywords from the answers and always look back to the notes to see if there are any potential missing pieces or if there are any potentially follow up-questions that can be asked. A positive aspect of taking notes by hand, is that it gives the participants more time to reflect upon the question and their answer. Baxter, Courage and Caine (2015) say that silence is golden and that it gives the participant time to complete his or her thoughts. In this case, it is in the author's opinion that this extra time yielded richer and more accurate data that represented the participants' overall thoughts.

No personal data was asked for or collected. All participants were also reminded a couple times during the interview that this thesis did not ask for or aim for personal details or health information about the participants. These reminders appeared naturally in the interview as the interview guide was made with a short manuscript describing each section. There was at no time recorded any health information. If the participants mentioned such information, it wasn't recorded. In some cases where directly cited answers potentially could lead to indirect recognition of the participants through the data material, the participants were asked if it is ok that certain words are rephrased to eliminate the possibilities for indirect recognition in the data material. Information like specific locations, specific family relations that did specific things or at a specific time etc. are words/sentences that were not written down.

3.6.3 Recruiting participants

A convenience sampling method was used to recruit participants for the study. No personal details were collected for recruitment purposes. In total 18 participants took part in the study, where 3 of them are in the group of blood donors or previous blood donors.

The only recruitment criteria was that the participants are over 18 years old. This thesis has focused on young adults, or more specifically millennials, but no one would be rejected as long as they were over 18. As the recruitment mainly happened at a university campus, chances are that many millennials could be found in this area. It was also a goal to represent both genders equally.

Recruitment happened discretely, even if university campuses sometimes can be crowded. To respect discretion of participation in the study, it was taken a choice to not approach large groups of people for recruitment purposes.

The 'success rate' for recruiting participants were high, about one out of three that were asked wanted to take part in the study. It was not a priority to spend time and effort to convincing people to participate. That was done strategically in case some people could find it uncomfortable to talk about the topic. It could also be challenging for people to spontaneously give 30-45 minutes of their time. With this recruitment strategy it is in my opinion that people who did not have time, who did not want to, or that did not feel comfortable to talk about the topic, could find it easier to say no to participation.

3.6.4 Informed consent and introducing what an interview involves

Taking part in an interview can often be a new experience for people. Therefore, all participants were asked if they have taken part in a similar situation or interview before, and they were explained in general about interviews, what it is like, what it involves, and given some examples from what differs interviews from online surveys. In that way, the participants were more prepared and informed about the setting before giving their consent to participate.

An informed consent was made to cover aspects like privacy, information about the project, information about participation and voluntary participation, withdrawal at any time, the participant's right to answer only questions they want to, estimated time, what kind of data that are collected, how the data is collected, who has access to raw material, and how the data will be used in the final report. The informed consent was presented verbally as well as the participants read it by themselves. The participants were asked if they had any questions about the consent form or the study before the informed consent form was signed.

3.6.5 During the interview

The interview guide has different sections with manuscripts for each section that reminded the participant about voluntariness to answer the answers, that there would not be asked for or recorded personal data or about their health. As they were informed about that, the participants would not have to worry about talking about things that are very personal and perhaps uncomfortable. Questions in the interview guide are in general not formulated to look for such information. Using the manuscript in the description box during the interview helped to achieve a structured, natural and calm setting for the interviewee, so that he or she could be more comfortable in this setting.

3.6.6 After the interview

All participants were showed appreciation for their participation. In addition to thanking for their participation, the participants were offered to ask any questions related to the project and their participation before leaving. Participants were given a small goodie bag with treats like chocolate, energy bar, and chewing gum, valued less than 40 NOK. Should any questions arise after the participation, a thank-you note with contact information was attached to the goodie bag.

3.7 Analysing results

As the interview was semi-structured, there are both quantitative data and qualitative data that needed to be analysed.

Most of the questions are open-ended, and therefore it will be appropriate to pick a method for unstructured data to analyse the results. One of Baxter, Courage and Caine (2015)'s recommended strategies for analysing unstructured data is called 'Categorizing and counting'. When categorizing and counting, potential categories are identified in the text as a whole, then they are counted, and then some representative quotes are picked to represent each category of responses (Baxter, Courage and Caine, 2015).

Data from all the participants were combined in a separate document while structuring and analysing the data.

As this interview cover different topics, the results are presented question by questions, summarizing an average response with some representative quotes, and has applied an adapted version of the categorizing and counting method. It also presents quotes with more variety, as they can be suitable to identify specific problems.

Each question has a different set of categories. With the set of questions in this study, it was taken a choice that looking at the questions one by one was the most efficient way of analysing and presenting the data. There are of course advantages with Baxter, Courage and Caine (2015)'s suggestion to find similar answers across the text as a whole, but in this semi-structured interview it suited best with a one-by-one question approach. This can partly be justified by the high sample in this study, where many similar opinions were found behind each question. Even if similar insight was highlighted in the results, also some informative qualitative data are represented, as the variety of answers can contribute to rich and useful knowledge.

With this approach for analysing data, direct links between answers from each participant do not exist. It is likely that combinations of different data with different participants could have given extra and useful insight. Such analysis would be very time consuming. The only characteristic that follows the quotes, is whether it came from a blood donor or not.

4 Results

4.1 Results: Interview part 1, Sample and background



4.1.1 Sample

Sample size	Age
18	18-32: 16
	Over 32: 2
Gender	Main occupation:
Male: 8	Job: 3
Female: 10	Student: 15
	Other: 0
Blood donor:	Do know approximately how long time it takes for you to travel to your nearest blood bank?
No: 15	0-15 minutes: 3
Yes: 2	15-30 minutes: 3
Used to be: 1	Over 45 minutes: 0
County of residence:	Don't know: 12(*)
Oppland: 14	<i>*Many mentioned that they did not know where the blood bank was. Some of them added information that they thought it was inside or near the local hospital, but they were not sure.</i>
Other (in Norway): 4	


4.1.2 General about the results, structure


- Questions and participants' quotes are translated from Norwegian to English. Some quotes are re-formulated slightly so that they communicate the same message in English as in Norwegian. Translating word-by-word could disturb or change the overall message in each quote, and therefore re-formulations were necessary.
- Clear tendencies and specific and descriptive answers are represented in the results.
- The discussion chapter summarizes the most important findings

Result format:

Question number	Question from interview guide
Results	  "Quote"


To separate differentiate quotes from participants that are blood donors and those who are not, a small icon is put in front of each quote.

 = Not a blood donor. A grey blood drop with a cross inside.


 = Blood donor and previous blood donor. A red blood drop. Results: Interview part 2, Blood donors and previous donors


4.2 Results: Interview part 2, Blood donors and previous blood donors

Q 2.1 Would you describe yourself as an experienced or new blood donor? n=3



The participants describe themselves as experienced as blood donors.  *"Experienced"*

Q 2.2 Are there any practical challenges that makes it harder to donate blood as often as you want? Is there anything in your everyday life that makes this more difficult? n=3

The participants have varied experiences about challenges that makes it difficult for them to give blood as often as they want, but they express that the challenges are not that big.  *"No, not really. But it is a bit challenging combining it with studies and responsibilities, because I can get a little unwell after donating blood"*

Challenges that are mentioned are related to combining blood donation with studies, as it takes time to get there, and one of the participants also mentioned that it can affect the rest of the day as he/she can be a bit unwell after the donation.  *"I am busy with my studies, and it often takes some time to get there. But I try to get there a couple times a year, and think that fits me well."*

Q2.3 What kind of practical changes could make it easier for you to donate blood? n=2

The participants express that it could be easier if they get a reminder and if the blood bank service was more available for them, like for example expanding opening hours or that the blood bus comes where they are at so that regular activities are not impacted.  *"To get a reminder"*
 *"Sometimes it is open on the evening, but then I have fixed activities that stand in the way. If it was open in the evening or the blood bus came at my place."*

- Q2.4
- a) How do you plan your next visit to the blood bank? n=3
 - b) To what degree do you find it hard or easy to plan your next visit? n=2
 - c) Who do you think should be responsible to remind about future appointments and blood donations at the blood bank?
 - d) If you took a pause from being a blood donor, how easy do you think it would be to come back as a blood donor? Would you take initiative yourself, or would you want some extra motivation or reminders from the blood bank?

(a) When they plan their next appointment at the blood bank, all of them mention that they use phone calls if they need to change their appointment.

♦ *"It is quite simple. I get a new appointment there, and I can call them back if it doesn't fit. It seems very flexible."* (a)

(b) Both participants express that it could be hard to know if the next appointments fit, and it is negative that they have to use phone calls to cancel the appointment.

♦ *"It is hard because I have to make a call if it doesn't fit."* (b)

(c) Both participants say that they think the blood bank should be responsible to remind about future appointments and donations.

♦ *"Fine, but since it takes so long time before each appointment, I just have to guess that it fits my schedule."* (b)

(d) The participant who answered the question about taking a break from blood donation say that it would be nice with reminders and that it would be good if they didn't have think about everything themselves.

Q2.5 About regulations, organization and changes in your situations

a) Have you been unsure about the regulations about blood donation? How did that impact you?

For example, if you have gotten the flu, you have travelled abroad or any other reason that could cause a quarantine. n=3

b) Have you tried to look up information about regulations yourself? Did you find the information you needed? n=1

(a) The participants express that they understand the quarantine regulations, but that they could have been formulated and communicated clearer and easier.

♦ *"It's fine. There probably exists an overview about the quarantine regulations, but I wish it was easier to read so that I don't have to read much text on different web pages."* (a)

(b) The information about quarantines exists, but the participant expresses that it was poorly structured and that he/she needed to navigate through different web pages to retrieve sufficient information.

♦ *"Yes, I found it but it was stressful to navigate through an ocean of text on different web pages."* (b)

Q2.6 If you have been to a quarantine for any reason, for example the flu or traveling abroad, was it easy to come back as a blood donor after the quarantine? n=3

The participants say that it is easy to come back after situations that could put you in a quarantine, as you anyway need to wait some months before next donation. They say that the staff has called them and assisted in finding a new appointment. One of the participants mentioned that he/she recently moved, and that this might have a bigger impact in coming back as a blood donor, as you need to register as a new blood donor on in a new blood bank.

♦ *"I have been ill, they told me to call them back. And then they called me some months later"*

♦ *"In my experience, it is easy to come back. It is worse when it comes to moving, then you have to register all over again."*

Q2.7 Have you ever considered to quit as a blood donor? n=3

The participants say that they don't plan to quit as donors. One of them brings up that he/she felt unwell the first time donating blood, and that it affected him/her that day, but that changing residence probably has bigger impact. One of them would even want to donate blood more often.

♦ *"No, not on a permanent basis."*

Q2.8 At the blood bank:

a) How do you experience your arrival at the blood bank and in general how you are treated at your visit? n=3

b) If you receive written or verbal information, is this easy to understand and remember? For example, filling out forms, receiving practical information or planning next appointment. n=3

c) When you just finished your donation, what kind of feeling do you get? n=3

d) How do you perceive the thankfulness by staff and the blood donation system in general? n=3

(a) The participants are very clear that they are taken good care of and at they have a good experience with the staff.

♦ *"Very good, they are skilled people. They take good care of you" (a)*

(b) When it comes to understanding written or verbal communication at the blood bank, there are some terminology that could have been explained simpler.

♦ *"Not easy or difficult. They have some terminology that could have been less technical. " (b)*

(c) Two participants mention that they feel that they have contributed to a good cause and feel good about helping others.

♦ *"That I have done an effort/contribution, it is nice to help others who are ill." (c)*

(d) All of the participants felt appreciated and that the staff and blood donation system is thankful. Receiving appreciations through gifts and text messages was also mentioned as positive by one of them.

♦ *"I have always felt appreciated. I feel that there is symbolic value in the gifts they give away. And then I get a thank—you message text message."*

Q2.9 What do you like about the way the blood donation system is organized? n=3

The participants highlight that the system works well and seems serious, and that the blood bus increases visibility. One of them mentions reminders on text messages and that he/she likes the opportunity to eat snacks at the blood bank.

♦ *"It is serious and very professional"*

♦ *"The blood bus increases visibility. I like that I get the appointment right away and hat I get reminders on SMS. I also like the opportunities for snacks at the blood bank."*

4.3 Results: Interview part 3, Not blood donors

Q3.1 a) Do you feel that you have knowledge about and an overview about blood donation and the blood banks in Norway? n=15

b) If you should rate your knowledge about blood donation and the blood banks in Norway, would you describe it as

No – Little – Average – Much – very much n=15

(a) When the question about participants' knowledge and overview about blood donation was asked open-ended, 13 out of 15 said "no" or "not that much". Only 1 out of 15 said that he/she had knowledge and an overview about the blood banks and blood donation. 1 out of 15 describe his/her knowledge as average. The clear tendency from this question is that the participant rate their knowledge about blood donation and the blood banks in Norway as low.

(b) When the participants were asked to rate their knowledge about blood donation and the blood banks in Norway, more people describe their knowledge as average, but still the participants say that their knowledge is low or that they don't have any knowledge at all about it. Only one participant said that he/she had much knowledge about the topic.

Question 3.1 show that the participants range their knowledge in the lower part of the scale when it comes to their knowledge about blood donation.

- ✦ "No." (a)
- ✦ "Not really." (a)

Participants knowledge (b):

None: 4
Little: 4
Average: 6
Much: 1
Very much: 0

Q3.2 Do you have any general thoughts about blood donation in Norway/What are your general thoughts about blood donation in Norway? n=15

Many participants say that they did not have enough knowledge to be able to answer this question. Otherwise many express that they think it is a good concept, and that they like that there is a system for blood donation.

One of the participants mentioned that it was difficult to start giving blood, as he/she was about to change his/her residence, was therefore not accepted to start at the local blood bank.

Some of the participants also say that they feel that donating blood is appreciated by the society.

- ✦ "No"
- ✦ "It is a good thing. But it was difficult to sign up. I was about to move, and was therefore not accepted by my local blood bank"
- ✦ "I have many acquaintances that are blood donors. But it doesn't affect me any direction. I feel that blood donation is positive and appreciated by the society."

Q3.3 Do you feel that the topic blood donation is something that concern (In Norwegian the word ‘opptar’ is used, and gives a description if the participants have a general interest about the topic) you? n=13

Some of the participants interpret the formulation of the question as if blood donation is something was something they should be responsible for.

“I haven’t thought so much about it.”

More than half of the participants say that blood donation is a topic they think about occasionally, and some of them even say that they have felt a responsibility and that they wanted to become a blood donor. Some of the participants say that they feel a certain responsibility, but that they are afraid of blood or needles. Other have not thought so much about the topic or that it concerns them specifically.

“I feel some responsibility, but I think that I would have become dizzy if I were to donate blood.”

“I want to, and have thought about it before. I don’t know how I become a donor. I consider it but I need to find time for it.”

The answers are very varied and are not suitable for a statistical conclusion. There are tendencies in both directions if the blood donors find the topic as something that concerns them.

Q3.4 Have you ever thought about or taken a choice to not becoming a blood donor? n=13

4 out of 13 have not thought about it. That only indicates that they haven’t thought of it, and not that they did not want to. One participant mentioned that they have thought that blood donation is a nice thing to do.

“I have not thought about it.”

“I have thought about it. I have a best friend who donates blood, and that makes me want to donate blood. But the thought of actually donating the blood stops me.”

For those who have thought about it, some of them mention fright about needles as a cause to not think further about it. One of the participants even filled in the registration form, but never sent it in. Some of them also said that friends or family are blood donors, and that make them want to do it as well.

Q3.5 a) How do you think a role as a blood donor would fit your everyday life? n=14

b) ...when it comes to work/school n=13

c) ...Planning n=13

d)...Traveling n=13

(a) Most of the participants (8 out of 14) say that a role as a blood donor would fit their everyday life, and seem positive to a role as a blood donor. Two participants said that it would not have fit as they thought it could affect their performance or schedule at work or school. Four participants said that they didn’t know it would fit their everyday life

“Yes, it would fit.” (a)

“Very good, I have few commitments, so I could donate blood when it fits me” (a)

(b) Some of them say that it could be difficult to get time off at work and that it can be hard to combine blood donation with work or studies, and that it could affect their body and performance. Still over half of the participants say that the role as a blood donor would fit their everyday life when it comes to school and work. Some of them also mention that it would fit their life easier if it was possible to donate blood in the afternoon or in the evening.

♣ *"It is unfortunate if it affects my work." (a)*

♣ *"Don't know." (a)*

♣ *"Good." (b)*

♣ *"If it is open in the evening it would have worked." (b)*

(c) In terms of planning, the participants mainly express that it wouldn't require much planning, and that planning such appointments would not be very problematic. Some participants express that it could be problematic in terms of transport, that it depends on the flexibility of the appointments.

♣ *"It would fit fine." (c)*

(d) Over half of the participants said that the role as a blood donor would be fine when it comes to travelling. Of presumptions that would make traveling to the blood bank easy, the participants mention factors such as short distance, that they have a car or that public transport is good in their area. Some of them mention that it could be hard to get there as they did not have a driver's licence.

♣ *"It could be challenging, I don't have a driver's license." (d)*

♣ *"It would be fine unless the blood bank is far away" (d)*

♣ *"Personally, it wouldn't be an issue, I have the drivers licence. And the public transport is good too." (d)*

Q3.6 If you at this point should consider to be a blood donor

a) ...What kind of information would you look up before you made up your mind? n=14

b) ...Where would you look up such information? n=14

c) If you signed up as a blood donor, do you think that somehow anyone around you would be affected? n=14

d) How do you think that you register as a blood donor today? n=14

The participants were asked to imagine that they at this point was considering to become a blood donor when answering following questions.

♣ *"Criteria about if I qualify as a blood donor. How often you should or have to donate blood. Where to donate blood." (a)*

(a) When asked for what kind of information they would like to look up if they were to make up their mind, blood donor criteria and opening hours were frequently mentioned. Many wanted to know practical information like how frequently a donor usually donates blood, how long it takes and if it would affect their body afterwards. Some of them want to know if there are anything special you need to eat before or

♣ *"How often and how much blood. How it could affect me. How long it takes, and what happens to me. I don't want to feel low on energy" (a)*

after blood donation. A participant also mention that they would be interested to know what happens to the blood. Otherwise one of them mentioned that it is important how they distribute information and that their web pages should be good. A participant also mentioned that information about organ donors are more visible than blood donation, and that they have to look up information about blood donation their own to learn about it.

(b) All of them would look for such information online, Google was frequently mentioned. Three of them also said that they would look for a designated page for blood donation. Two of mention that they would ask friends and family.

(c) When asking the participants if they think that they would affect someone if they were donors, the question can be interpreted both in a negative and positive direction. Seven out of fourteen participants say that it probably would not affect anyone around them. For those who believed he opposite, two answers were common for many of them:

- You might feel unwell the same day after you donate blood, and that could affect someone around them negatively.
- If he/she started to donate blood, it might affect the people around positively in terms of increased interest about blood donation, and that maybe they want to join as well.

(d) The participants were asked how they believe one can sign up as a blood donor today. The descriptions are very accurate to how the registrations take place today; filling out a form online or at the blood bank. Some of them also express an expectation about a digital system, a bit more advanced than what is currently offered by the blood banks.

♣ "Google" (b)

♣ "Internet" (b)

♣ "It would maybe affect my performance at work. Or my cohabitant if I donate blood in the evening." (c)

♣ "Positively. Maybe more people would join. If I did something good then maybe others would want to do the same." (c)

♣ "Probably online. You can also go to the blood bank and fill out online." (d)

♣ "I would think in form of a digital system. I assume that there probably exist other opportunities, like a phone call." (d)

Q3.7 General questions about the participant's perception of blood donation in Norway

a) How often do you think that blood donors usually donate blood? n=14

b) How much time do you think that you would have spent at the blood bank when you donate blood (from you enter the door to you leave)? n=14

c) How much time do you think that you would have spent on a day you are donating blood (for example leaving university or work) n=14

d) What are your thoughts about the visit at a blood bank? n=14

e) Would you prefer to go the blood bank alone or together with somebody else? n=14

(a) When the participants were asked how often they believe blood donors usually donate blood, most of the participants answer about 3-4 times a year. Many of the participants mention lower and a higher limit of what they believe is normal. Some participants also believe that every second month or once a year is normal.

- ✦ "2-4 times a year" (a)
- ✦ "Every second month" (a)

(b) 7 of the participants think that the visit at the blood bank takes less than an hour. Of those participants, some of them think anything from ½ an hour to an hour is normal. The 7 other participants think that it takes up to two hours.

- ✦ "1/2 to 1 hour" (b)
- ✦ "1-2 hours. You have to sit and wait a while after." (b)

(c) The participants were asked how long time they think they would have spent a day if they were donating blood. Most of them answer 2-3 hours. Other mention 1 ½ hours or half a day.

- ✦ "2-3 hours" (c)

(d) The participants express that they have positive associations and thoughts about the visit at a blood bank. Many of them believe that the atmosphere will be like visiting a hospital or doctor's office, and that they take good care of you.

- ✦ "Like a doctor's office. They are friendly and helpful."

One participants say that he/she did not like waiting rooms, and would hope that he/she would not have to wait a long time.

(e) There are different preferences in whether the participant wants to go alone or together with someone at the blood bank. Seven of the participants had no preference or preferred to go alone.

- ✦ "With someone else. I don't know how I would react after donating blood. So, with someone else, at least the first time" (e)

Seven of the participants answer that they would prefer to go together with someone else. That was explained by different reasons, like:

- Being social, talking to someone they know when they are there,
- It is nice that you are in the same situation
- Having someone to support you and drive you there, and in case feel unwell or have a bad reaction.

- ✦ "Both are fine. Maybe you can donate blood together with somebody you know. Then you aren't completely alone about it" (e)
- ✦ "It doesn't matter" (e)

Q3.8 What do you think could have been done differently if you should reconsider to be a blood donor? n=14

Most of the participants mention that there should be more information directed to them, on channels they use. Many of them say that they have not heard or read too much about blood donation before, and that they usually do not look up or read such information.

Many of them comes with suggestions for what could have been done differently:

- More public information about it.
- Information through school
- Increased visibility at universities.
- Posters, presentations.
- Stronger recruitment once you turn 18.
- Social attention to it through a competition or similar at work.
- Commercials.
- Reach out in different channels.

💡 *"Stronger recruitment when turning 18."*

💡 *"I haven't heard anything about it in the media. They could have been more visible."*

💡 *"The problem is that it isn't common to look up such information. (...) It is important that people can be reminded that they can donate blood."*

Q3.9 What do you like about the way blood donation is organized today? n=14

Eight of the participants say that they don't know what they like about the blood donation system. Some of them say that they know too little about it.

The other six mentioned what they like about it:

- It is nice to help and being a blood donors has positive association
- It is nice that there is a system for it
- It is probably easy to sign up
- Receiving a gift and that you are appreciated

💡 *"It seems serious. There are positive associations by being a blood donor. It is a nice thing to do."*

💡 *"You get a gift when you are done. It represents appreciation."*

💡 *"Don't know."*

Q3.10 Do you have any opinion on how it could be easier for you to start being a blood donor? n=14

10 out of 14 had suggestions that could make it easier for them to start being a blood donor:

- Someone else should motivate and take initiative
- More knowledge about the topic
- Information about blood donation and practical information needs to be easily accessible.
- People should talk about it to increase interests.

💡 *"Someone else need to convince and take initiative to start processes. I find it hard to motivate myself to do it"*

💡 *"More knowledge. Maybe some are afraid or think it is scaring. If people have been aware of their contribution they would probably do it"*

4.4 Results: Interview part 4, All participants

Q4.1 When is the last time you can remember... or have you...

a) heard anyone talk about blood donation? n=18

b) Heard or seen any commercial about blood donation? n=18

c) Seen representatives from the blood bank on a stand (recruiting) or other places? n=17

d) seen or heard any kind of information related to blood donation? n=18

e) thought of blood donation? n=17

(a) The participants do in general answer that it is a long time since they have heard anyone talked about blood donation:

♣ *"About a year ago. It was someone who started to donate blood" (a)*

- 4 out of 18 participants say that they have heard someone talked about blood donation recently (the last year). Some of them say that they have seen commercial or that a friend has talked about it. One of them was also attempted recruited.

♣ *"A long time ago. I have a friend who donates blood. I almost never hear anything about the topic." (a)*

- 5 of 18 participants say that it is a long time since they heard about it, about 2-4 years.

♣ *"About four years ago." (a)*

- Some of the answers did not mention how long time it was since they heard about it. Two of them say that they never have heard anyone talk about it. Other non-donors mention that they have seen a video on Youtube about it, or that they have about it with a friend or family member.

♣ *"Don't know. The last time I donated blood. And I have talked about it at work" (a)*

- The participants in the blood-donor group also have different responses. One of them mention that it was a conversation topic at work, while another mentioned that a friend has asked if it hurt to donate blood.

- Overall it seems like many have heard or talked about the topic, but it is a while ago, and it might not be a very frequent conversation topic.

♣ *"No, not as I can remember" (b)*

♣ *"I don't remember where and when, but I think so." (b)*

(b) 12 out of 18 participants mention that they have not seen or heard any commercial about blood donation. 5 of the participants, where 2 of them are blood donors mention that they think they have heard or seen commercial about blood donation. The channels that were mentioned are Instagram, internet and brochures. One participant also mentioned to have heard about blood donation in relation to a tragedy in America.

♣ *"A long time ago. I particularly remember the argument that blood cannot be produced artificially." (b)*

(c) Only 1 out of 17 participants can remember to have seen representatives from the blood bank on a stand or similar.

♣ *"No" (c)*

(d) 6 out of 18 participants say that they haven't seen or heard any information about blood donation. 4 participant say that they think they

♣ *"No." (d)*

have heard about it, but that their recalled memories are vague. 8 out of 18 mention that they remember to have heard or seen more specific information related to blood donation. They mention channels like television, blood bus, friends, material at the doctor's office, Facebook posts, online commercials, brochures and donors get a reward after donating blood.

- ✦ *"I think so, don't remember. I have a vague memory about it."* (d)
- ✦ *"Maybe last year. Someone posted an article on Facebook about important it is."* (d)

(e) 8 out of 17 participants mention that they have not thought about it lately or at all. Two of them mention to have thought about it after being in contact with friends who are blood donors, where one of them mention to have thought about it after their friend sent a snapchat-message related to blood donation.

- ✦ *"Not lately"* (e)
- ✦ *"A couple of months ago, it was mentioned in a conversation"* (e)

9 out of 17 say that they have thought about blood donation lately. The time span varies between years, months, weeks and days. One blood donor say that he/she has thought about it at the blood bank, another blood donor mentioned to have seen posters at the hospital. Non-donors mention that it has been a part of a conversations, that it was thought of after watching a YouTube video, and one of them thought about it after hearing about a mass-shooting episode in USA. One of them also say that they want to be a blood donor.

Q4.2 Have you talked to anyone about blood donation lately (last week, month, year, last 5 years, never?) n=18

8 out of 18 say that they have not talked about blood donation to anyone at all.

- ✦ *"No."* (never)
- ✦ *"No. many years ago. Talked to a family member."*

Of those who mentioned to have talked about it, a timespan from a couple of months to a couple of years are mentioned. A couple of them mentioned that they have talked to friends or family about it. One of the blood donors also mentioned that he/she talked about it as he/she could not join a regular activity that evening because as he/she had donated blood earlier that day.

- ✦ *"No, not since the last time I gave blood, a couple of months ago"*
- ✦ *"Yes, but not as a big topic. I could not join an activity in the evening as I was donating blood that day."*

Q4.3 Can you remember if anyone have encouraged you directly through personal communication to become a blood donor? n=17

2 out of 17 participants say that someone have encouraged them through personal communication to become a blood donor. One of them mention that he/she at that point considered it, but was little motivated to do it back then.

- ✦ *"No"*
- ✦ *"I have seen flyers or posters"*

One of them mentioned to have seen posters or flyers, and another one mentioned that a conversation about the topic with a friend reminded him/her about it. The blood donors also say that they cannot remember to have been encouraged directly through personal communication.

💧 *"Yes, a long time ago. I considered it then, but at that time I wasn't very motivated to do it."*

Q4.4 Can you remember to have read or heard anything that encourage you to become a blood donor? n=18

10 participants do not recall having seen anything that encourage them to sign up as blood donors. Of the 8 who recall something that encouraged to them become blood donors, these channels were mentioned:

- Flyers
- Brochures at the doctor's office,
- Television,
- Newspapers,
- Poster at public bathrooms
- Articles on Facebook or internet

💧 *"No"*

💧 *"A commercial on Facebook or internet"*

🔴 *"Yes. I have seen in a newspaper or magazine about accidents where blood products saved their lives."*

🔴 *"A brochure at the airport. But it is seldom that I see information about it."*

Q4.5 Can you remember to have read, seen or heard anything that made you aware of the opportunities to be a blood donor? n=18

10 out of 18 say that they cannot remember to have read, seen or heard anything that made them aware of the opportunities to be a blood donor. Of the 8 participants who tell that they have read, seen or heard such information, this was mentioned amongst them:

- Contact with friends
- Brochures
- Articles online
- When tragedies or accidents are brought up in the news

Of those participants, only one or very few things were mentioned from each. Tendencies from this question show that the participants cannot recall having read, heard or seen too many things that made them aware of the opportunity to be a blood donor.

💧 *"Only through a friend"*

💧 *"No."*

💧 *"I am aware of it, my sub-consciousness probably picked it up somewhere."*

🔴 *"I became a blood donor because a family member is a blood donor."*

Q4.6 a) When do you think that it is natural to be informed about blood donation? n=18

b) Whose responsibility do you think it should be to communicate information about blood donation? n=18

(a) Many answer that it would be natural to be informed about blood donation around the age of 18. Some also mention that they should be informed when they are younger, so that it is stuck in the memory when they become old enough to donate blood. Hereby, suggestion that schools should have responsibility about communicate this information, at that it perhaps could be done as an excursion.

Other opinions are more related to situations or contexts; In the autumn, stands or and speeches at the university, increased visibility on social media and where they can be reached, at the doctor's office or hospitals, student environments, at work or at the compulsory military service.

(b) When asked who they think should be responsible to inform about blood donation, many answer the blood bank or the government. Other also mention health care personnel.

One of the participants mention that such information also should be available where healthy people go, as not everyone goes to the hospital or the doctor that often.

Some also mention that they should focus on spreading information to relevant channels where they can reach a younger audience.

✦ *"Early so that you get aware of it. It would be nice to get more information at high school. Not everyone would do it when they are 18, but they would at least be aware of it." (a)*

♥ *"At the doctor is a good place. And at student environments" (a)*

♥ *"Before you move out and before you are 18. Then you can look forward till you turn 18 and are allowed to donate blood." (a)*

✦ *"The blood bank" (b)*

✦ *"The government" (b)*

✦ *"The Norwegian Directorate of Health. To formulate correct information. Schools and nurses can put up posters. Organizations. Marketing on all channels, both digital and in brochures. When you get a driver's licence. Other places where health people go when they don't go to the hospital or doctors." (b)*

♥ *"It is a corporate social responsibility. It should be more focus on it during the childhood or at the school" (b)*

Q4.7 About age and blood donation:

a) Imagine that you are 18, 20, 25, 30, 40, and 50 years old (ask one age at the time):

Do you think that a role as a blood donor would fit you then? Why or why not? n=17

b) At what age do you think it will fit you better in a role as a blood donor? n=14

(a) The participants were asked to hypothetically describe how their role as a blood donor would fit various ages. Summarized, the participants say that it would fit them better between the age of 20-30. 18 is the age that is described as less fitting as a blood donor.

18: Over half of the participants say that it would not have fit them that well when they were 18. Some of them say that it would fit well when he/she was 18, and another participant mentions that he/she was planning to become a blood donor after turning 18, but has still not signed up. Amongst reasons that it would not fit, this is mentioned:

- Wouldn't have thought about it
- Have many other things to think of
- Moving a lot
- Challenging to get there without a car and a driver's licence.
- Young and dumb without any routines
- Other interests
- Uncertain everyday life

20: About 75 % of the participants say that a role as a blood donor would fit them. Compared to 18, many mention that 20 fits better. Many also mentioned that they have more flexibility and that they are more mature at 20. Some reasons why it does not fit are:

- Have many other things to think about
- Some of the same as the age of 18, but have better routines
- Can be hard to get someone to drive you there

25: Everyone thinks that it to some degree would fit them to be a blood donor, and most of them say that it fits better than the age 18 and 20. They say that they have a more stable and calm life, as well as the flexibility is high as a student. Some of them also mention what could hinder them to become blood donors, like work or a potential pregnancy.

30: The answers are much like 25, but many mention that work and starting to establish a family could prevent them in a role as blood donor. Someone also mention that it would fit even better to donate blood when you are 30 compared to younger ages.

40: The answers are similar to answers given about age 30. Establishing family and work are frequently mentioned as hindrances.

18

🍷 "It wouldn't come naturally to think about it"

🍷 "I would probably not know about it. But it would fit my everyday life."

🍷 "Yes, for me personally. But It might have been difficult to get there."

20

🍷 "Yes, I would be more mature and reflected. I have the time and opportunity."

25

🍷 "Yes. I have few commitments as a student. It is possible to plan around blood donation."

30

🍷 "It fits even better. One would established and have better routines"

🍷 "Yes. I would be depended on flexibility from work and the blood bank. If I had a wish to donate blood I would find time for it. I might have children, and there are things that would take up my spare time."

40

🍷 "It fits well. I would be established and the children would be older and take care of themselves."

50

🍷 "Good, but you might have gotten a disease"

🍷 "Good. And the children would be grown up."

50: The answers show much of the same tendencies as about age 40. Someone also say that the health issues potentially could be a problem.

(b) 🌟 “In the 20’s or 30’s”

(b) When asked which age or age group they think would fit them best as a blood donor, the answers mainly were centred around 20 and 30. Many also mention that it fit well between 20 and 40. No one said that would fit better at the age 18 or 50. Many express that they would have more flexibility and freedom in their everyday life between they are 20 and 30 years old.

Q4.8 About planning for choosing a time for blood donation (participants assumptions)

a) How do you think a blood donor decide upon a time for blood donation from time to time?

n=14

b) If you were to plan for an appointment at the blood bank, what factors would you need to consider before choosing a time? n=17

c) How long time in advance would you prefer to plan or know about your next time for blood donation? n=17

d) Do you think that there is a better way of planning appointments at the blood bank than today? n=15

(a) Most of the participants assume that choosing an appointment can be done at the blood bank over a phone call. Four participants imagine that there is an online service. A text message service for appointments was also mentioned. Only non-donors where asked this question.

🌟 “When you are there (at the blood bank) it would be nice to get a new appointment right ahead” (a)

🌟 “Something online. That you are registered online.” (a)

(b) When asked what the participants needed to consider before choosing a time, most of them say that is need to work out with work or studies. Many of them mention that it needs to fit their schedule with other activities that day. One of them also mention that it need to be a day without physical activities. Another participant express that he/she have better time in the summer, because there is nothing school-related that takes up time. One of the non-donors say that they would check if they had a free schedule that day, as he/she didn’t know how he/she would react after donating blood.

🌟 “If it fits with work and studies. And if I am doing anything that day” (b)

🌟 “I consider it closer to the appointment. If it doesn’t fit I call back and they will pick me another day.” (b)

(c) The participants have different preferences on how much time prior the blood donation appointment they would like to plan the next appointment. Many of them answered a couple of weeks, and many answered a couple of months.

🔴 “I would like to know about it when I donate blood, then I can change it later If it doesn’t fit, because its long time until the next appointment” (c)

(d) When asked if there are anything that could make it easier to book the appointments than today, six of the participants suggest specifically

🌟 “It would have been best if everything was online.” (d)

an online service or an app. Some of them describe that you should be able to pick a time yourself, and that this makes it more flexible for them. One of the blood donors also said that it would be nice to not have to manage everything through a phone call and that it would be great with an easier way to do it. It was also suggested an text message service for booking appointments by one of them.

💧 *“That everything didn't have to be done over a phone call. It would have been nice with an easier way.” (d)*

💧 *“Yes, I think there could have been an online booking and appointment solution.” (d)*

Some of the participants also describe how it could be easier. Flexibility, overview of appointments, finding available appointment themselves was mentioned. One of the participants also said that they would want the blood bank to pick a date, that they take initiative for setting up appointments.

Q4.9 In general, what do you think about keeping track of your appointments in general? For example, a dentist, hairdresser or personal trainer? What is good or bad about the way you keep track of these appointments? n=18

Most of the participants say that they use a digital calendar to keep track of their appointment, and it makes planning easier. Some of them mention that like that the calendars give notifications on the phone. Text message reminders were also mentioned as an appreciated function. One of them say that they wouldn't be able to manage without the calendar, that is always synchronised with their schedule at the university.

💧 *“Thank Good, for my calendar. It is nice that it can download the schedule from school is always synchronized and show my appointment. I wouldn't be able to manage without it.”*

Many say that it is not a big problem to keep track of such appointments, but that a digital calendar plays a big role on keeping track of them.

Q4.10 How do technology affect the way you plan appointments such as mentioned in last question? n=18

Most of the participants say that technology affect positively when it comes to keeping track of appointments.

💧 *“Positive. They you always have it with you and it is much easier accessible.”*

Many mentioned functions that they think makes it easier: notifications, text message-reminders, calendars, booking a new appointment, get an overview of different alternatives (hairdressers), digital notes, and that content and calendars are synchronized between phone and computer.

💧 *“Much. If I haven't had the calendar on the phone I wouldn't know if I had time or not. And I like SMS-reminders. I think I get that from the blood bank.”*

Someone also mention that they prefer to use sticky notes or write it down in a book-format planner.

Q4.11 If a technology should have helped you keeping track of your relation to the blood bank, what kind of platform do you think would suit you best? Why? n=16

Many of the participants mention that an app or website accessible from a mobile phone could help them keep track of their relationship to the blood bank.

Some of them explained that you have the phone with you all the time, and that it is convenient to have such platform easily available. Other suggestions were text messaging-booking system, reminders on text messages or e-mail, or electronic calendar-files that can be integrated with the calendar on the phone. Two participants suggest that such functions are integrated in a health-app, because they did not want too many apps. Other describe the app as a separate blood bank app.

💧 *“An app or a webpage where I get full overview over what I need to know”*

💧 *“Mobile phone, an app.”*

Q4.12 If you imagine such technology, what kind of tasks do you think it should have solved for you if you were a blood donor? n=14

The participants mention functionalities and content that could be implemented in such a technology:

- Reminders, push notifications
- More self-service. Booking, changing or cancel appointments, find available time for blood donation
- Choose appointment without interaction with people
- Information about next time you donate blood
- Where, location, map
- How long time it takes
- Synchronize with calendar or a calendar function.
- An overview of how much blood you have donated and what impact you have made.
- Information about quarantines, and if you are permitted to donate blood
- General information about blood donation
- Opening hours

💧 *“Opening hours, location, when it is available time to donate blood, when you are going to donate blood. News”*

💧 *“Next appointment. Change booking. It would be cool to see how much I have contributed with after donating blood. Students don’t have a lot of money to charity. But we have blood. That could be combine with social media.”*

One of the blood donors also say that it would be interesting to combine the contribution as a blood donor with social media, as students do not have a lot of money to charity, all people have blood. The participant said that other charity events often get much attention on social media.

Q4.13 If you have changed residence recently or are going to change residence in near future, do you think that you would have thought of the topic ‘blood donation’ or the possibilities for blood donation in the new place? n=16

The non-donors would not have thought too much about blood donation if they are going to change residence. The blood donors would have thought about it, but it would not be prioritized on the list. One of the blood donors say that it could have been easier to continue as a blood donor at other blood banks, as you need to register as a new donor instead of coming back as usual.

🔴 *“Yes. It could be easier to change from one blood bank to another. You have to register as a new donor instead of coming back as usual.”*

🟡 *“No”*

Q4.14 4.14 Post-it activity: Note down three things you perceive or consider as negative about how blood donation and the blood bank are organized in Norway today. n=17

Most of them point to lack of information or no presence. All non-donors do to some degree mention something about low information level, low visibility, weak recruitment or low exposure in the media.

🔴 *“Not much information for new people. A little negative that not everyone can donate blood because of regulations that should have been reevaluated.”*

One blood donor say that the communication tools that are used are outdated, and another blood donor say that him/herself was the biggest driving force to donate blood, and that it could be hard for others to know that they are needed.

🔴 *“Outdated communication, based on phone calls. It is on the hospitals and it can be hard to get there. And strict quarantine regulations.”*

Participants have also mentioned other aspects they consider as negative:

- Strict regulations and quarantine regulations. Strict for homosexuals.
- It takes a long time to get accepted at the blood bank
- It can be challenging to set up appointments
- Afraid of needles
- Time consuming, and don’t know about the procedures.

🟡 *“Little information. Time consuming.”*

Q4.15 Post-it activity: Note down three things you perceive or consider as positive about how blood donation and the blood banks are organized in Norway today. n=18

The participants do not mention many things each, but they give a broad variety of what can be considered as positive with blood donation in Norway today.

🌿 *"Blood donation has positive associations. And you get a reward. The feeling of being a part of a community."*

The non-donors think that this is positive:

- To help who needs it. To feel that you help and contribute to the society. Everyone can contribute. To take part in a society.
- That there is a system for blood donation
- Rewards after donation
- Not time consuming, easy, accessible, flexible.
- Important for the society in case of critical situations.

🌿 *"To help others."*

🔴 *"They take good care of you. The staff are professional and have high knowledge. It is flexible if the arranged appointment doesn't fit."*

The blood donor group mention positive things like

- Appointments are flexible and you are taken good care of.
- Not as scary as assumed the first time.
- The blood go to those who need it. You get asked if the blood can be used for research and you can be asked if you want to be a bone marrow donor.

4.16 What do you think about that blood donors get a reward after their donation? n=18

Most of the participants have positive associations about that reward. Their opinions are still varied. While some of them say that it should not be necessary, other mention that it is positive and could be motivating. It is also mentioned that that the reward is a good way that the blood bank express their gratitude and that the blood donor feels appreciated.

🌿 *"It shouldn't be necessary."*

🌿 *"Positive. Motivating"*

🌿 *"It's nice to get something back. You know that you have done something for a good cause. It's a confirmation that you have done something good."*

Some of the participants also share their experiences and view about the specific rewards. Two participants mentioned Moomin Mugs, commonly used as rewards. They said that the Moomin mugs have been recognized and associated with blood donation when having friends over or when visiting friends. Two other express that the reward should be more valuable if the reward should motivate them. It was also mentioned by one of the blood donors that it would be nice and even better if the reward was to donate something to charity.

🔴 *"It is a nice way to say thank you. I feel appreciated. People who visits my house have seen some of the Moomin Mugs and asked if I was a blood donor."*

🔴 *"Probably nice. But that's not why I donate blood."*

4.17 Is there anything else you would like to mention, something that you would like to go more in-depth with, or is there something that we did not talk about that you would like to mention when it comes to blood donation in Norway? n=3

Three of the participants had additional experiences they would like to share:

- One of the blood donors mention that the staff at the blood bank is professional with people and that he/she in general has good experiences with the staff.
- Another blood donor mention that they felt a responsibility to sign up as a blood donor as other people might not.
- A non-donor participant say that it would be easy for him/her to have some fixed dates in the year so that it would be more manageable.

💧 *"I have good experiences with the staff. They are professional people who are good with other people."*

💧 *"It would be a lot easier to have one fixed date or more. Then I wouldn't have to think so much about. And I wouldn't have to actively plan and stress about it. I would always know what to deal with."*

💧 *"Before I became a blood donor I felt that I had a responsibility when I first thought about it, because maybe many other would have thought about the same and didn't become a blood donor."*

5 Discussion

5.1 Approaching the problem description

As there exists user-centred research that looks at the specific problem in this thesis, it is challenging to identify one specific user-centred problem to look further at about blood donation. As there in general is a lack of this perspective, it was considered as necessary to use an exploratory approach to identify potential problem areas in terms of user needs, experience and expectations. As the background chapter mentions, a use-centred approach and service design principles are suitable for getting insight about such factors.

As user-centred design processes and design can lead to more usable products and services, better user experience and potentially improved customer relationship, it was reasonable to believe that this approach that could contribute with valuable insight about the topic.

With little spot-on existing research to build on, it was decided to do a qualitative and exploratory approach in different areas related to everyday life problems, technology, and what people think about and perceive the Norwegian blood donation system.

As only about 2 % of the Norwegian population are blood donors (see chapter 1), it could be challenging to recruit many from this group. With such a large group of non-donors who potentially could be donors (see chapter 1), it was considered as interesting to get their view on the case as well. The non-donors were brought into the interview with the purpose of getting their view and understanding about the blood donation system. It was especially interesting to look at how they perceive different parts of the blood donation system and practicalities about blood donation, and if there are any everyday problems or needs that interfere a potential role as a blood donor.

When including non-donors' view on the study, it would be much easier to recruit participants. It was decided to look at young adults, as this group is easily available through for example university campuses, and they often tend to have a flexible schedule. Young adults, or the millennial generation, is typically born between 1980 and 2000 and are typically associated with high usage of media and technology (Millennials, 2017). The millennial group may have other needs and preferences than other generations.

As the population of non-donors is big, it was considered necessary to bring in a larger number of participants for the study to represent this group. If the study solely was including blood donors, the number of participants would probably be lower, and it would probably be suitable to apply other methods and combination of methods for looking at a more specific part of the service.

With available background literature, there has been made some choices regards to the scope. A scope that would be able to capture a full understanding about the blood donors and non-donors would be too comprehensive for any researcher. As little user-centred research has been done on this specific topic before, a pure research approach was taken. That has affected choices in terms of the question this thesis has chosen to focus on. That gives consequences that some of the findings are at a general level, but on the other hand, these findings are supported by qualitative data that tells more specifically about the user's preferences, needs and experiences.

5.2 Interview guide

As described about the scope, this thesis cannot go into every possible aspect that are relevant to fully describe the blood donor situation. The interview guide focuses on retrieving the participants' thoughts, experiences and beliefs about how the blood donation system is organized today. The interview guide is constructed to explore these further within selected relevant topics about blood donation. As many potential participants are not blood donors, it was interesting to understand their perspective in terms of awareness of blood donation, information channels, their experience with previous recruitment attempts, or what they think of or believe about specific parts of the blood donation system. The blood donors were included in this study as they are likely to provide accurate and descriptive insight about their experiences with the actual blood bank. It therefore made sense to divide the interview guide into suitable sections for each participant group.

The interview guide has four sections, where part 2 were dedicated to blood donors, and part 3 dedicated to non-donors. Part 1 and 4 was made for all participants. Part 2 and 3 are have many questions that are independent of each other. This was done to get as much un-biased data as possible, as previous question could bias upcoming questions. Some questions in part 2 and 3 are of similar character and topic as in part 4, but part 4 go more in-depth in specific

parts like information channels or everyday life issues and needs. For instance, when asking the participants about what could have been differently about the blood donation system in part 2 or 3, it would not be affected on more in-depth questions in part 4. However, it is difficult to avoid that participants with bias refer to what they already have been asked about earlier in the interview. The same weaknesses apply for the wrap-up questions in part 4, where the participants are asked what they find positive or negative about how the blood donation system works today. The data and the results do however indicate that the participants have given answers are not exclusively connected to previous answers, and many of the participants also brought up new information that was not previously mentioned or asked about.

Most of the questions in the interview guide are open-ended, which ended up in a big variety in the data. The open-ended questions allowed the participants to express themselves without feeling that there is a right or wrong answer.

5.3 Conducting the interview

As the interview was held in a private environment, with no disturbing elements and in general a comfortable set-up, and the participants were properly introduced to what a participation involved, it is reasonable to believe that the atmosphere and setting felt comfortable for the participants. It was also a focus about being open-minded and non-judging as a researcher during the interview. That could have encouraged the participants to express honest answers. However, it is hard to avoid all response biases. In interviews, people's responses are often constructed on the spot as they have not had much time to think about it, and it can be coloured by recent events (Leedy and Ormrod, 2016, p. 170). People may also tend to answer in what they believe is socially desirable, and they need to rely on inaccurate memories for giving an answer (Leedy and Ormrod, 2016, p. 170).

The participants were given proper time to answer each question. As notes were written by hand, it was naturally added extra time for the participant to think of the answer, and many of the participants came with additional information as the notes were written. Follow-up questions were also asked. That yielded many in-depth answers. Audio recordings were not used in the interviews. Audio recordings could have made some participants feel nervous and affect the answers. Given the fact that there was only taken notes by hand, the participants

might have felt more comfortable about expressing their answers accurately and correctly, which could possibly have decreased the level of response biases.

5.4 Discussion: Interview results part 1

5.4.1 Sample characteristics and limitations

15 out of 18 participants were non-donors. Different opinions, experiences and needs may vary much with such a large group. In matter of practicalities of conducting the qualitative research, it will not be possible to find a sample large enough sample that to represent the entire Norwegian millennial population. A choice was made to focus on students, which in this case made it convenient with easy to access potential interview candidates. 15 out of 18 the interviewees identified themselves as primarily students.

The sample cannot entirely represent the entire population. Students may act or have different experiences than people who are not students, and students may have completely different needs than those who are not. In terms of ‘millennials’ or young adults, a sample of 18 participants is low. However, a significantly increased sample number could have given a very complex data set and would have been significantly more time consuming to implement. Some results from this thesis show clear tendencies. If the sample number was increased, this could possibly add some fine adjustments to a more accurate conclusion, and it would probably give even more variety in qualitative data. That could have increased the level of generalizability.

The interview data in this thesis do however show big variability as well as some tendencies was found in many interview questions.

Both genders are almost equally represented in this study, with 8 male participants and 10 female participants. That increases heterogeneity in the sample group, and ensures that there is no over-representation of this characteristic.

The participants are also over-represented from Oppland county. The results could be different in other parts of Norway, especially in terms of practical issues this thesis investigate, such as travel time etc.

The participants were also asked if they knew approximately how long it takes for them to travel to their nearest blood bank. 12 participants did not know how much time it would take them. Many of them said that they did not know where blood bank was located.

The findings of this thesis might to some degree be generalizable to populations where the sample consists of students between 18-32 years old, and that live in smaller cities. With a sample size of 18, there was much variety in the answers, and some of them answers show some clear tendencies between the participants. It is not unlikely that similar results may be seen in similar sample groups. The qualitative approach with 18 participants yielded insight about experiences, expectations, and needs that could be applicable for people who share characteristics to the sample group, but the because this is a low sample compared the population there are some limitations about generalizability.

5.5 Discussion: Interview results part 2

5.5.1 Question structure

The questions are structured by different topics that on different levels aim to get insight about practical challenges and experiences as a blood donor in Norway.

It starts by establishing whether if the participant is experienced or new as a blood donor, where all three said that they were experienced as blood donors. The fact that those participants were experienced blood donors, it makes their responses more representative for people who donate blood on a regular basis.

It then follows up with two open questions that are more or less unbiased by the rest of the interview. After these questions, they are asked about their view about how the blood bank is organized. Then some questions are asked about their experiences at the blood bank. Before finishing this part, they are asked a general question, now in terms of what they like about the blood bank. This question could be a bit biased by what else have been mentioned, and could have been based on topics that are crossed the participants mind after answering the other questions. The answers on this question may still be valid, but it is hard to claim or evaluate to which degree this should be weighted compared to other data.

5.5.2 Results summarized in categories

In a not prioritized order, **challenges** that were mentioned in interview part 2 are:

- Combine blood donation with school and work, in terms of time, traveling, and the possibility to feel unwell after donation (Q2.2).
- Handling appointments over phone calls is negative and cumbersome (Q2.4).
- It is hard to know if the next appointment fits (Q2.4)
- Information about quarantines seems ok to understand in general, but could have been presented in a format that are easier to read and understand for the blood donors (Q2.4).
- Written or verbal communication uses terminology that is hard to understand (Q2.8).

In a non-specific prioritized order, some **needs and preferences** that are communicated:

- That the role as a blood donor not interferes with other activities or responsibilities (Q2.2).
- Easier to access a blood donation facility, more flexible with time and location (Q2.3)

In a not prioritized order or weight, the participants' suggestions that **could make it easier** for them to donate blood are:

- To get a reminder (Q2.3, Q2.4)
- Extended opening hours (Q2.3)
- Available blood bus (Q2.3)

Other things that were mentioned by the participants:

- The participants plan their next appointment at the blood bank and use phone calls if needs to be changed (Q2.4).
- Quarantines do not impact that much as there is long time between each donation anyway, and the staff call them back later (Q2.4).
- The participants feel that they are taken good care of and feel appreciated by the blood donation system (Q2.8).
- 'Thank you' text messages and gifts show appreciation (Q2.8).
- Text message reminders were mentioned as positive (Q2.9).

5.5.3 Discussion and interpretation

One thing that should be considered when looking at these results, is that the sample is low. Each question was answered by only 1 to 3 participants, and many thing that are listed above was mentioned only by one of them.

Considering that this is qualitative data, that it is based on thoughts and opinions by real blood donors, and that there is are few circumstances that could cause bias to this data, it is reasonable to believe that this data is valid. It is however impossible to generalize such opinions, but it is not unlikely that other blood donors feel the same way as the participants about the Norwegian blood donation system. It is reasonable to believe that a bigger sample of blood donors would yield more variety in the answers.

The participants mention challenges in terms of combining the role as a blood donor with work, studies or other activities and responsibilities, as it is time consuming, blood donation facilities are not necessary easily available, and or that it possibly decreases their performance after their donation. With the small sample, it is likely that some of these factors would vary much more with a bigger sample. Even if there probably are other variations to these answers, these insights should not be ignored.

Handling and planning appointments also had some issues, as it was hard to know if the next appointment fits the schedule and it felt cumbersome to change appointments over phone calls. Considering the that digital technology typical millennials are committed to (Millennials, 2017), managing your appointments over a phone call might not feel optimal. As it also takes long time between each blood donation, it can be difficult to know exactly if the donor has a free schedule.

It was expressed that terminology communicated at the blood bank could be difficult to understand, and that available information about quarantines were hard to navigate through. If it is difficult to understand and navigate through important information, that could affect the blood donor negatively in the process of obtaining this information.

As participants also mention what could be done differently to make their role as a blood donation easier, they can also tell about preferences, needs or experiences. Extended opening

hours, available blood buses and reminders were mentioned about this topic. Today opening hours vary between different blood banks, and the blood bus exists but, but is not available to most cities. Reminders are also given by text messages, or sometimes the blood bank can call you back. It can be hard for the participants to identify what specifically could have been done differently to make their role as a blood donor easier when they are asked for it. It therefore does not come as a surprise that they point to some already existing initiatives. Their suggestions may indicate that it can be challenging to dedicate time for blood donation within the offered opening hours and locations.

The blood bank's use of text messages for reminders and thank-you notes are mentioned as positive. A gift after the blood donation was also mentioned as positive. They also mentioned to be very pleased with the staff who works at the blood bank and how they are taken care of.

5.5.4 Summary

- Fitting the role as a blood donor into an everyday life can be challenging as it can interfere with work, studies or other responsibilities.
- Handling appointments is not experienced as optimal with today's phone call system.
- Communicated content and terminology was mentioned as not always easy to understand and navigate through.
- Suggested actions about extended opening hours and making blood buses more available may indicate that the existing opening hours at the blood banks do not fit people's everyday life.
- Gifts and use of text messages for reminders and thank-you notes are positive.
- The participants feel safe and pleased about the staff and blood bank in general.

5.6 Discussion: Interview results part 3

5.6.1 Question structure

Part 3 of the interview guide was used for non-donors in this interview.

The interview starts with questions about their general thoughts and relationship to blood donation (Q3.1-Q3.4).

It then continues to a section where the participants can express if a role as a blood donor fit their everyday life (Q3.5) and what their perspective if they were to consider to be a blood donor (Q3.6).

The interview guide follows with a question that ask about the participants' beliefs and perception about the blood donation system, in terms of frequency of donations and practicalities, an in addition a few thoughts about their thoughts or preferences about the visit at the blood bank (Q3.7).

At the end of this section three different formulated questions ask about what can have made it easier for them to consider or be in a role as a blood donor (Q3.8-3.10).

5.6.2 Results summarized in categories

Participants' **perception and knowledge** about blood donation:

- They describe their knowledge about blood donation in the lower range of the scale (Q3.1).
- About registering as a blood donor, the participants imagine a form that is filled out either online or at the blood bank, and some express expectations of a digital system (Q 3.6).
- Most frequent thoughts about donation frequency is 3-4 donations a year (Q3.7).
- Half of the participants believe that a visit at the blood bank would last between 1 to 2 hours, and of all participants 2-3 hours is frequently mentioned on how long time it would require of their day if they were to donate blood (Q 3.7).
- Positive associations about atmosphere at the blood bank facility (Q3.7).

Participants' general **thoughts, awareness and opinions** about blood donation

- Participants' thoughts are that the concept of a blood donation system is good, but that they do not know too much about it (Q3.2, Q3.10).
- The topic is thought about occasionally (Q3.3), but the data varies when they are asked if they have thought of or taken a choice of not becoming a blood donor (Q3.4).
- About half of the participants would like to be accompanied with a friend at the blood bank, as it would be social, feels supportive and gives a feeling of being in the same situation (Q3.7).

Participants' **interaction and contact with information or content** about blood donation

- Some participants mention that contact with friends and family who are blood donors could lead to thoughts about wanting to become blood donors (Q3.4) and some mention that if they were blood donors people around them could have been encouraged too (Q3.6).
- Participants want to read about practical information like (Q3.6):
 - Opening hours and blood donor criteria
 - How much time it takes and how frequent the blood donations are
 - If they need to eat or drink anything special before or after donation.
 - What happens to the blood
- All participants would use internet and google to look up information about blood donation (Q3.6).

Participants' thoughts of possible **obstacles and challenges** in as a potential role as a blood donor (not necessarily statistically representative, these points are based on qualitative data only):

- Most participants mention that the role as a blood donor would fit their everyday life and in terms of planning and traveling to the blood bank (Q3.5 a, c-d), but that it could be hard in terms of fitting it into work or studies (Q3.5 b).
- Getting to the blood bank, travel distance can be big, not having driver's licence or access to a car. The public transport also would have to be good.
- The participants are very clear that they would need information targeted to them, and that many of them have not heard or read too much about blood donation, and that

they need this information and knowledge to consider a role as a blood donor (Q3.8, Q3.10).

- Information should be easier accessible, people should talk about it, and someone else need to engage them to make it easier for them to sign up as a blood donor (Q3.10).
- It requires individuals' own effort to read about blood donation (Q3.6)

5.6.3 Discussion and interpretation

That the participants describe their knowledge about blood donation as low might not be ideal for the current situation in Norway where more blood donors are wanted. But even if the participants describe their knowledge as low, it does not mean that it is low. This question builds entirely on the participants' perception of what is high or low knowledge about blood donation. A factor that could have affected this answer, is that the participants might have given an answer that they thought was ideal for this study. Before the interview started, the participants were told that there is no requirement about foreknowledge on the topic, and that this study aims to investigate people's thoughts as it is. That might have encouraged the participants to give honest answers to this question. Since the data show clear tendencies to low knowledge instead of high knowledge it could support that their knowledge in general is at a lower level. Blood donation is a topic that is of interest for the common good, and therefore it can be problematic if the knowledge about the topic is low.

The participants also say information should be easier accessible and targeted to them if they should be more aware of or considering the options for being a blood donor. It is logical to assume that if people do not know about the need for blood donors or how blood donation works in general, it is likely that people would not look up such information themselves.

The participants were asked about how they think specific things work as a blood donor, such as donation frequency, duration of the visit at the blood bank, and how they think one can sign up as a blood donor. Norwegian blood donors do in average donate blood 2,1 times a year (Røde Kors Blodprogram, 2013), while you can donate blood up to 4 times a year (Helsedirektoratet, 2016a). The participants in this study say that they think blood donors usually donates blood 3-4 times a year. This number is close to what is allowed annually, but the number is higher than how often an average donor donates blood. If the participants think that it is required or expected to donate as often 3-4 times a year, it can perhaps feel

overwhelming. This study does not investigate this question further, but in general one can assume that if someone believe it takes more effort than expected, that could be negative for potentially adapting to a service or product. Another way of discussing this is that a person's mental model of how a system works can affect how he or she relates to that system. Similar assumptions can be said about how long time it takes at a blood donation facility when donating blood. As many of the participants believe it takes 1-2 hours, but in reality it often can be done within 30 minutes (Helsedirektoratet, 2016a), there can also be some challenges due to the participants' mental models.

As the results show, blood donation is not one of the most frequent topics that comes to the participants' mind, and they often mention that they know little about it. It was also mentioned that it requires individual's own effort to obtain knowledge about blood donation. It can be natural to assume that this combination is not very ideal in a situation when more blood donors are needed.

The fact that all participants would use internet as a tool to look up information about blood donation, the online information should be easy to reach and understand for someone with no or little knowledge about the topic. Information that is requested by the participants is related to practical information and criteria, what happens before, during and after blood donation, and should be considered when developing content for blood donation web pages.

The participants have positive associations about the organization of the blood banks and the blood bank facilities in general. The participants also mention that close relations that are blood donors can affect them in a positive direction about blood donation.

The participants also express that blood donation could fit their everyday life, except from work or studies, but that it could fit if it was flexible with the time of the appointments. That fact that many people say that blood donation would fit their everyday life, can be a indicate that there are more potential blood donors could be out there. However, when the participants were asked about the questions about how it would fit their everyday life, one cannot ignore the fact that their answer could have been biased by what they think is socially correct. This question is followed up in part 4 of the interview, and goes more into detail about how well it would fit their life do be a blood donor in terms of everyday challenges in different life phases.

5.6.4 Summary

- Non-donors claim to have low knowledge about the blood donation and the blood banks.
- Non-donors express that information should be easier available, and targeted to them if they were to consider a role as a blood donor, as blood donation is not a topic that naturally comes to mind.
- Non-donors slightly overestimate the time and effort it takes to be a blood donor, which could cause inaccurate image and expectations from them as potential blood donors.
- Non-donors would primarily look up practical information online if they wanted to look up information about blood donation.
- Non-donors claim that blood donation can fit their life if it does not interfere that much with work or studies.

5.7 Discussion: Interview results part 4

5.7.1 Question structure

Part 4 was used for all participants. It is important to notice that non-donors' experiences are over represented in this part.

This part begins with questions about the participants' memory about having seen or heard about conversations, information or anything related to blood donation (Q4.1-4.5). This part was intended to map experiences about different channels where the participants may have been exposed to anything related to blood donation, and how that affected them. As many of the questions were answered with 'no' or that they couldn't recall, or that their memories were vague and that it must have been a long time ago, these questions turned out to give less insight than anticipated.

The interview guide follows with the participants' opinion about when they think it is natural to be informed about blood donation and who should be responsible to communicate this information.

Then questions about different ages and blood donation are asked. This was intended for the participant to imagine themselves in different life situations, and then describe what could make it easy or difficult for them as a blood donor at this stage. As this study focus on young adults, it was reasonable to let them express themselves about situations that are closer to their age. The interval between different ages in this question was smaller on the youngest part of the scale. The answers were thought to be more accurate and informative if the participants talked about previous, present, and soon to come situations. The participants were also asked about ages older than themselves, as it could give a reference point to answers that are closer their age.

Then some questions about planning different appointments was asked. This was meant to extract different preferences and needs in terms of planning appointment for a blood donation. Then some questions about technology was asked in terms of the same topic. A question about changing residence was asked to get insight about how the participants would have thought about blood donation or if they would have thought about it at all.

Then some post-it activities was introduced to the participant. The participant was asked to write down positive and negative thoughts they have about the topic. This question could have been biased by things that they already have thought of earlier in the interview. Since these was asked at the almost end of the interview, the participants would have had time to think about the topic in general, and that may also have lead them to more accurately express their meaning. The concept of letting them write the answer themselves meant that they got time to reflect more about their answers, which could have yielded more accurate and informative answers. If the same question was presented and answered verbally, the circumstances about thinking about the question would perhaps have been more stressful and could have yielded less accurate, reflected and informative answers.

The interview ends with an open question where the participants get an opportunity to add additional thoughts or go more in-depth in some of their answers, which also is a good way of wrapping up the interview.

5.7.2 Results summarized

Participants about **presence and visibility** of information and communication about blood donation:

- Blood donation does not seem be a frequent topic that they hear about. (4.1)
- Most participants cannot remember to have seen or heard any commercial about blood donation and only one participant can remember to have seen representatives from the blood bank at stand or similar (Q4.1).
- 1/3 of the participants say they have not seen or heard about information about blood donation, some say to have vague memories and, eight participants mention to have noticed such information through various channels (Q4.1).
- About half of the participants have not thought or talked about the topic, and for those who have thought about it, the time since they lastly thought about it vary (Q4.1, Q4.2).
- Only two participants have been encouraged to blood donation through personal communication (Q4.3), and over than half of the participants could remember to have seen or read anything that encouraged or made them aware of the possibility to become a blood donor (Q4.4, Q4.5).

Channels that are mentioned where participants have heard, seen or thought about blood donation (Based on data from Q4.1, Q4.4, Q4.5. This list summarizes examples mentioned and is not equally representable for each participant):

- Printed flyers, brochures and posters. Both in general and at the doctor's office.
- Television and newspapers, when tragedies or accidents are brought up in the news
- Articles on Facebook or internet
- Friends and family
- Blood bus

Thoughts and opinions about blood donation:

- Participants say it would be natural to be informed about blood donation in the age of 18 or earlier, and in places where they usually spend their time in their everyday life (Q4.6)
- Most participants mention that the blood banks or the government should be responsible for communicating information about blood donation, but also health care personnel and schools and other instances were mentioned (Q4.6).
- The participants describe that a role as a blood donor would fit them best between the age of 20-30 compared to younger or older ages, as they have more flexibility in their everyday life at this point (Q4.7).
- Most non-donors say that they believe that one can choose time for the next appointment at the blood bank or over a phone call (Q4.8).
- The participants say that if they were to make up an appointment, it would have to fit with work or studies, and they would like to know about the appointment good time in advance (Q4.8).
- When participants are asked about how planning of such appointments could have been easier of them, some of them mention an online service or app, and that flexibility is important (Q4.9).
- The non-donors would not have thought about blood donation if they were to change residence, but the blood donors said they probably would, but it was not highly prioritized on their list (Q4.12).
- There are positive associations about the reward given after a blood donation (Q4.17).

About **planning and technology** in general and about blood donation:

- Technology was expressed to affect their life positively when it comes to planning and keeping track of appointments, where digital calendars had a big role, but also notifications and reminders were mentioned (Q4.9, Q4.10).
- Many participants said that an app or a website could help them keep track of their relationship to the blood bank (Q4.11).
- In a technology that could keep track of their relationship to the blood bank functions that were asked for is: practical knowledge about blood donation and the blood bank facility, information about appointments and self-service options (Q4.12).

Participants **negative perception** of how blood donation and the blood banks are organized (Q4.15):

- Outdated communication tools for blood donors
- Low visibility and little information about blood donation.
- Strict regulations, time consuming, challenging to set up appointments

Participants **positive perception** of how blood donation and the blood banks are organized (Q4.16):

- Non-donors: Feel that you can contribute and help, it is nice that there is a system for it, rewards, flexible, not time consuming, important society contribution.
- Blood donors: Flexible appointments, you are taken good care of, not scary, you can help people.

Other things that were mentioned at the end of the interview (Q4.17):

- A suggestion about fixed appointment dates for blood donation could make it easier to handle and deal with.
- Feeling that other might not take responsibility and that makes he/she feel extra responsibility as a blood donor.
- Good experiences with the staff.

5.7.3 Discussion and interpretation

Question 4.1 to 4.5 do in general indicate that many participants have not seen, heard, thought about blood donation at all, and that many of those who have seen, heard or thought about it say that it is a long time ago. The overall picture these the data generated in these question, indicate that blood donation is not a frequent topic that comes to mind and that it is not very visible in the participants' life. When the interview guide was made, the thought was that these questions would yield insight about specific times the participants have been exposed to blood donation related content and how they reacted to it. Since the answers tended to be answered with a "no", these questions failed to gain specific insight about how they reacted to such content. Instead, the answers on these questions indicate that the topic is not very visible and present in the participants' life.

As question 4.1 to 4.5 failed to give detailed insight about how the participants reacted to being exposed to different blood donation related material, a different data collection approach should maybe have been considered. One method that could result in such insight could be to expose specific recruiting material or similar, to see how the participants feel and respond about them. In the making of the interview guide, this method was considered, but skipped as it would have increased the length of the interview and data processing significantly.

The participants have mentioned different channels where they have been exposed to blood donation related content or content that reminded them of blood donation. The summarized results about the channels do not represent all participants, as each participant who had been exposed to such content mentioned one or very few of the listed channels. As their answers rely on their memories, this list could have been longer, and if they were exposed to previous recruiting material they could have been able to tell if they have seen it before. This list can potentially tell something about where people from this sample could have encountered information about blood donation, but it does not say anything about the preferred information channel. One of the participants mentioned that potential donors should be introduced to the topic where they hang out at an everyday basis, and not only at health institutions where sick or injured people go, and that being visible at universities would perhaps have helped. This might be something to consider when deciding where to expose blood donation related material in the future.

The participants mention that an age group of 20-30 would fit them best in a role as a blood donor, as they have much flexibility in their life at this point. The fact that they mention this, could support the participants' opinions about being introduced to the topic around the age of 18 or earlier, so that people could be aware of the opportunity to become a blood donor when they have a flexible schedule in near future. As many of the respondents are students, and it was mentioned that they have very a flexible schedule, it would make sense to reach out to this group at university campuses.

The participants say that an app or an online solution could have made it easier to keep track of blood donation appointments and manage a relationship to the blood bank in comparison to phone calls that are used today. This was also expressed by one of the blood donors, who expressed that he/she did not like to use phone calls to cancel or change an appointment. In

general, the participants claim that technology plays a big role in keeping track of other appointments and their schedule, and that digital calendars make this process very easy. Based on the data one can also assume that an app could have functionalities that would make it easier for a blood donor to manage their relationship with the blood bank, and that it could be easier to keep track of, change and make new appointments, and provide relevant practical information in one place. It seems like the participants are ready and would welcome such a solution if they were a blood donor, and that an app or digital solution could solve and answer practical issues and problems.

At the end of the interview, many mention that the blood bank is little visible in their everyday life, and that they are in general have not been introduced to much information about blood donation. Different participants may have different perceptions and opinions about how challenging or time consuming a role as a blood donor is, and this was mentioned both in the question about positive and negative aspects about blood donation. That could point back to that many claim to have low knowledge about blood donation and the blood banks, which can impact how they understand how a system works. Blood donors have repeatedly also mentioned that they are very pleased with the staff at the blood bank, and participants say that it is nice that there is a system for it, and that the role as a blood donor is appreciated and important for the society, and they overall express a good impression of how it is organized.

5.7.4 Summary

- Information and focus about blood donation is perceived as low, and many people have not heard, seen or thought about blood donation lately or at all.
- The participants mean that people should be exposed to information about blood donation by the age of 18, and that recruiting material should be more targeted to where they typically hang out.
- The participants say that a role as a blood donor would fit them best between the age 20 and 30, as they describe their life situation as much more flexible then. It seems like students aged between 20 and 30 typically could fit the role as a blood donor well.
- It seems like participants would have welcomed a digital solution like a smart phone app to keep track of their appointments and relationship with the blood bank, and that such solution could be preferred over the existing phone call solution that was

described as outdated. An app solution could be the preferred way of managing a blood donor relationship, and it could correspond to other digital habits that the participants prefer and would expect in general as a customer or member of a service.

5.8 Methods used to answer the research questions and contribute to knowledge about the topic

5.8.1 Research within service design and user-centred design

User research is a core principle in service design and user-centred design. One of the goals of this thesis was to contribute with knowledge that could be helpful for guiding potential improvement areas within blood donation in Norway. We need insight about people's needs, motivations and behaviours to design for them (Polaine, Løvlie and Reason, 2013, p. 46). Qualitative insights can help to understand people's behaviour and motivations, and is suitable as a basis for design (Polaine, Løvlie and Reason, 2013, pp. 38-41).

This thesis only contributes with the insight part, and do not offer specific design suggestions, even if some insight more specifically mention areas with potential and how this potentially could be improved. As there exists little user-centred research about the topic this thesis works on, it made sense to focus on the insight, as it the scope would be too big for potential design and prototyping activities for the service.

The user-centred approach has allowed to get insight that to better understand blood donors and potential blood donors and how they interact with or understand how blood donation works. Some of the questions in the interview guide yielded more useful insight than others, but in total all of them contributed to an increased understanding of existing and potential blood donors.

This thesis does not implement every possible aspect under user-centred design and service design, but has formulated questions in the interview guide that were suitable for getting insight about potential improvement areas.

Otherwise, service design and different the idea of sequencing has been inspirational for selection questions in the interview guide, which has led to insight about thoughts, needs,

experiences and expectations opposed to the role as a blood donor for different parts of the service. The concept about sequencing made it possible to identify relevant questions about:

- Becoming aware of the service
- Thoughts about starting to interact with or initiate use of a service
- Thoughts about practical aspects, expectations and experience about using the service
- Thoughts about what happens after using the service
- Thoughts what happens between different times of using the service

One thing that should be mentioned, is that the action of becoming a blood donor is not necessary an answer of a simple user need, and the reasons for why people become blood donors are probably compound. This thesis does not answer or investigate why people become blood donors, and do therefore not investigate the “need” or other motivational factors that lies behind that choice of becoming a blood donor. On a general basis, it should be mentioned that design research does emphasize user goals and needs to understand why people use a product or service. Cooper, *et al.* (2014, pp. 76, 77) write about user goals and mention Don Normans three types of user goals that are based on cognitive processing theory: Experience goals, end goals and life goals. Experience goals is about how people feel while using a product and the quality of interaction of a product (Cooper, *et al.*, 2014, p. 76), end goals is about the people’s motivations for using a specific product (Cooper, *et al.*, 2014, p. 77) and life goals is about people’s aspirations beyond the designed product that explain why people try to accomplish end goals (Cooper, *et al.*, 2014, pp. 77, 78). It would be interesting to apply these levels in further research to learn more specifically about why people choose to become blood donors.

5.8.2 Interviews

Interviews was the only method that was used for gathering new data. Interviews are suitable and acknowledged as a method to learn about a specific issue and gather qualitative data about a phenomenon.

The sample consists of present and previous blood donors, and people who are not blood donors. It is important to gather information from both existing and potential users, where potential users also can contribute to knowledge about needs about a product (Cooper, *et al.*, 2014, p. 42). Cooper *et al.* speak about products, but one can assume that this might be

applicable to services such as blood donation. The data of this thesis has shown both variety and more specific tendencies in behaviour and opinions by all participants. The fact that about only 2 % of Norwegians are blood donors, makes this a small group that could be hard to access for data collection purposes. The idea that potential users can offer insight about a system has therefore been very valuable for the results of this thesis.

In terms of user research and service design, multiple methods and iterations are common in the design process. The research questions and scope of this thesis did however consider interviews as the most effective data collection alternative. Other methods could have been applied to gain user insight, but that do of course depend on the research question and how narrow the scope is. In the future, one could go more in detail within a specific sequence. With a narrower scope, it would be easier to focus on a specific sequence, where multiple methods and iterations could give insight about the service and potential design proposals.

5.9 Discussion of research questions

5.9.1 Research question 1

How can user-centred research contribute to insight about millennials' perceptions, experiences and expectations about the role as a blood donor in Norway?

As you might have noticed, this thesis offers an exploratory and problem identifying approach, which has led many findings to be at a general level.

The user-centred research approach in this thesis has provided insight about how blood donation is seen through the eyes of blood donors and potential blood donors. This has contributed to a better understanding of experiences, challenges and opinions that about blood donation in Norway. The service design principles about holistic thinking and sequencing have been very helpful to identify a broad and relevant range of questions that would be able to describe different thoughts, experiences and expectations. Without this perspective, the interview guide would probably have lacked many aspects that could describe the participants view, and it would have lacked specific arguments or motives behind the findings.

As this thesis has taken a broad and explorative approach, it therefore lacks very descriptive details about different sequences or interactions about the blood bank. It has however identified challenging areas that can be suitable for further investigation.

In the part of the interview that was intended to let the participants express their opinions about blood donation related content and material, the answers did not turn out as anticipated. As many participants could not remember to have been exposed to such material, or that it was a long time since the last time they were exposed to such material, or that their memories were vague about it, this part did not lead to insight into how they reacted or felt about being exposed to it. This is already discussed further in the discussion chapter.

In this particular thesis, the user-centred approach overall contributed with a mind-set that allowed to investigate perceptions, experiences and expectations at a general level. For future research, I recommend applying principles from user-centred design and service design to a more specific part of the service, which could give very specific insight about improvement areas and potential solutions.

5.9.2 Research question 2

How visible is blood donation related content in Norwegian millennials life?

Overall, it seems like the topic blood donation do take a big part in non-donors' life. They describe their knowledge as none or not that much when they were asked openly, and when rating their knowledge with given alternatives, the answers mainly varied between none to average knowledge. As discussed previously, it is reasonable to believe that non-donors have little knowledge about the blood banks in Norway and how blood donation is organized.

Amongst all participants, the results show tendencies that blood donation related content is not very present and visible in their life. When asked about if they have heard anyone spoken about blood donation, heard or seen commercials or any information about blood donation, thought or seen something that reminded them of blood donation at all, it was very commonly answered that they could not remember or that they have not been exposed to such content. Several participants mentioned that blood donation is not something that comes naturally to mind and that one has to take own initiative to learn anything at all about it. Tendencies

throughout the interview indicate that blood donation is a topic that is almost absent in the participants' life, and that it requires own effort or influence from other people to become aware of and learn about blood donation.

To increase visibility and knowledge about the topic, some participants mention that information about blood donation should be visible where they hang out in their everyday life, such as at university campuses or increase visibility on relevant digital channels. When they are asked about when it would be natural to be informed about blood donation, many mention in the age of 18 or earlier, and some point to responsibility from institutions such as schools, the government, the blood bank etc. to communicate the opportunities and information about blood donation. These effort is in the authors opinion something that should be considered further, as it potentially could increase awareness when approaching people where they are, and if it is collectively distributed at schools, it could reach many potential blood donors for the future. A participant also mentioned that blood donation could have been something to look forward to when you turn 18. The author's advice is to inform potential blood donors early, even if the results of this thesis indicate that participants believe that a role as a blood donor fits best in an age between 20-30.

5.9.3 Research question 3:

What factors could be challenging in a role (or potential role) as a blood donor, and how could these challenges be overcome?

As described in the answer of research question 2, visibility and knowledge about blood donation is low. This can be challenging for potential donors to know be aware of the need and opportunity for blood donors.

The blood donors expressed that there are some challenges, but that they are not that big. Blood donors mentioned challenges like combining it with studies, that it takes time to get to the blood bank, and reduced performance after blood donation.

A blood donor mentioned that moving makes extra effort as a blood donor, as you must register as a new blood donor at blood banks you have not visited before.

Non-donors have some opinions and suggestions on how a role as a blood donor could fit them. Challenging areas that were mentioned amongst them are: could affect performance at school or work, transportation to the blood bank. Fright of needles was also mentioned by some as a reason why they have not considered to become a blood donor. The non-donors also contributed with suggestions that could make it easier for them to begin as a blood donor; Flexibility of appointments, increased knowledge and more accessible information about the topic, that someone else should motivate and take initiative, and that people should talk about it to increase interest about the topic.

The participants also communicated potential challenges in different life situations. At the age of 18, many would mention reasons that it would not fit them to be a blood donor: moving a lot, no drivers licence, immature and uncertainties in their life, and that they would not have thought about it. When getting a bit older, reasons like establishing a family, combining blood donation with work as challenging. The participants mentioned that later in their life they could be dealing with challenges about their health in addition to challenges to combine it with work. Overall the age of 20-30 was described to fit the participant's everyday life best.

Blood donors say that the way of interacting with the blood bank is outdated, and one of them mention that they would prefer a different way of managing their appointments another way than phone calls. It is also described as challenging to set up appointments. This is described further in research question 4 below.

Another thing that that is not necessary challenging for potential blood donors themselves, but that could be challenging for getting enough blood donors, is that the participants in this study slightly overestimate how much time a blood donation session takes, and they slightly overestimate what is considered as normal frequency to return to the blood bank. If the participants have an inaccurate perception about how blood donation works and the effort it takes, that could be negative for potential new donors. The concept of mental models, where people's understanding of a system determines how they interact with and understand the system, could support that misconception about how a system works are not very fortunate.

Notice: The part of the research question "...how could these challenges be overcome" is answered by the participants' opinion about how these challenges could be overcome, and this

thesis and specific questing do not offer guidelines or recommendations that are tested out, validated or verified.

5.9.4 Research question 4

Can technology improve experiences or ease the role as a blood donor?

Insight from both blood donors and non-donors indicate that a technology such as an app could improve and provide a better experience when it comes to managing their customer relationship and appointments as a blood donor. A blood donor who took part in this study was clear about that the phone-call solution for managing the appointments was not ideal and that it was not a good experience. Also, blood donation appointments amongst the blood donor participants was arranged at the blood bank after they have donated blood, and the new appointment is often some months in the future. The participants (both donors and non-donors) said that it could be hard to know if an appointment fitted their schedule that far in the future. An app could have contributed to self-service about appointments that made it easier to find schedule appointments that fits, and it could be more efficient for changing and cancelling appointments. The participants say that technology affect their way of planning and managing their appointments positively, and that their digital calendar plays a significant role of arranging and keeping track of their appointments and activities.

Text messages and push notifications were mention by many participants as a way of helping them to remember upcoming appointments.

Independent of which platform the participants mentioned as suitable for managing their relationship with the blood bank, features and content that could be useful, informative or solve their needs that were mentioned are:

- Push notifications and notifications over text messages
- Calendars or implementation of calendar files for synchronizing blood donation appointment with the calendar on the phone
- Booking, changing and cancelling appointments
- Choose appointments without interaction with people
- Information about upcoming donation
- Location, map
- Overview of how much blood you have donated and which impact that have made.

- Information about quarantines, and if you are allowed to donate blood.
- General information about blood donation
- Opening hours
- Possibility to share on social media

Most participants referred to an app when providing these suggestions. If an app is going to be developed, more research and user-involvement is recommended to verify user needs and test the app design and its functionalities.

The listed suggestions could be practical to consider for platforms who deliver information about blood donation. As all participants would have used Google or internet in general to look up information about blood donation, the content should be easily accessible, presented in a format that is easy to understand, and meet blood donors and potential donors need for different information.

As described about the millennial generation, technology often play a big role in their lives. The question about technology and planning in this thesis indicate that digital calendars and technology is established and much appreciated in the participants' everyday life.

Overall, it seems like Norwegian millennials might welcome a digital solution for managing their relationship as a blood donor.

5.9.5 Research question 5

What do Norwegian millennials think is positive and negative in the way blood donation is organized today?

This research question offers insight into opinions the participants have about blood donation in Norway today. The presented lists should be considered as the participants' opinions, and not as facts about how blood donation is organized.

Positive aspects/thoughts mentioned about blood donation in Norway:

- The concept of a blood bank is good, and blood donation is appreciated by the society.
- The opportunity to help others.

- Probably easy to sign up as a blood donor.
- That you receive a gift.
- Not time consuming (*Notice: some participants express that they think it is time consuming*).
- Staff is perceived as professional and blood donors have good experience with them.

Negative aspects/thoughts mentioned about blood donation in Norway:

- Information about the topic is not very present in their lives
- One can feel unwell after donation and that could affect performance at work and studies.
- Time consuming, possibly challenging to get to the blood bank. Can be hard to get time off at work or school.
- Terminology can be a bit advanced and relevant information can be hard to obtain without having to navigate through different resources.
- One has to register as a new blood donor when you want to donate blood at another blood bank.
- Strict regulations
- It takes time to get accepted as a blood donor
- Fright about needles

Some of the negative aspects and thoughts are discussed under the research question about challenges. Some of the negative thoughts should be considered and investigated further. Fright about needles, fear or anxiety about a blood donation situation is described in existing research to have negative impact on donor retention (France, *et al.*, 2014), but that that being exposed to specially designed information material decreased anxiety and increased self-efficacy (France, *et al.*, 2007, France, *et al.*, 2011). This argues that the way blood donation related content is presented could affect potential blood donors in a positive direction, and therefore it would be interesting for further research to look at how this information is presented and could be improved.

5.10 Limitations

5.10.1 Scope

As previously described, this or other research cannot alone give a full description of the situation with too few blood donors. This thesis does not have a scope that is big enough to capture all potential areas for improvement or general needs different people have in terms of a potential role as a blood donor.

5.10.2 Sample

The sample size is acceptable for a qualitative study. However, it is mostly limited to students. The sample is also over-represented by participants who lives in Oppland county. It can be hard to generalize the findings for all Norwegian young adults, as the participants representing the sample typically lives inn Oppland county and is a student. The number of blood donors represented is also low, and are not representative for the millennial group or the Norwegian population in general. The blood donors did however contribute with descriptive and informal information about their experiences, needs and expectations, which weights up for the low sample number.

Even if the sample is low, it is not unlikely that similar results would be found in other locations in Norway. However, 18 participants cannot identify all possible varieties in answers that a bigger sample and a bigger scope would result in.

5.10.3 No cause-and-effect relationship

As some existing research look for cause-and-effect relationship within this topic, it is important to notice that this thesis does not offer such contribution. To claim a cause-and-effect relationship, a quantitative approach with a stricter data collection structure should preferably be applied. This is not a limitation for the results or methods used in the thesis, it is only a friendly reminder for those who were looking for research with cause-and-effect relationship.

5.10.4 This thesis does not offer an answer to why people become blood donors

There is a lot of existing research aim to understand why people become blood donors. This thesis does not offer such explanation. The data collection, structure, and content are not

designed to find out why people become or do not become blood donors. Although this thesis identifies some obstacles that potentially could hinder people in a role as a blood donor, and that it identifies examples of experiences, expectations and needs, it cannot alone explain why people decide to become or not become a blood donors. This thesis only looks for aspects that potentially could make this path easier, and in general identify challenges that could make their role as blood donors more pleasurable. The challenges that are identified in this thesis cannot be used to draw conclusions on why people choose or choose to not become blood donors.

5.10.5 Much of the insight is based on what people think about the Norwegian blood donation system, and not how it is.

15 out of 18 participants are not blood donors, and many of them describe their knowledge and insight about blood donation as low. On some interview questions, the answers are given based on their assumptions at the time interview took place. That means that many of the given answers are not based on how things work in reality, but it is based on their opinions and what they at the point at the interview. There is nothing wrong with this approach, as this can reveal misconceptions or issues that should be worked with further in the future.

5.10.6 Biases, reliability

Interview biases can influence the participant to not accurately express their feelings (Baxter, Courage and Caine, 2015, p. 237). All participants were told about the background for this thesis, and the topic itself can be problematic for reliability. The description of the study and interview may have communicated a signal about what is socially desirable. Where specific questions ask about their opinion or preferences, some participants might have answered what he or she believes is a desirable answer either for the purpose of this thesis or in general of what could have been socially desirable.

Baxter, Courage and Caine (2015, p. 237) mention common biases such as social desirability and prestige response biases. With the topic this thesis looks at, it is difficult to completely avoid these types of biases. What has been done to trying to avoid such biases is to follow Baxter, Courage and Caine (2015, p. 237)'s advice that the interviewer should put aside ideas, feelings, thoughts and responses in a way that might cause the participant to come with such

statements, and in general use formulations and respond to questions in a way that encourages the participants to express themselves truthfully without worries of being judged.

The interview questions were formulated to ask for opinions, experiences or feelings, and were not formulated in a way that suggest a correct or desirable answer. The interviews were attempted to avoid biases mentioned above. It is the author's impression that most answers are not biased.

6 Conclusion

A user-centred approach has in this thesis contributed to insight about Norwegian millennials' experiences, expectations and thoughts about blood donation. The insight has contributed to knowledge about both tendencies and more specific issues. As there are little user-centred research of this kind on the specific topic, the many findings were more general. A user-centred approach could in the future go more in-depth into findings from this thesis, to further investigate how the service offering can be improved to meet user needs and expectations. If future research looks at more defined areas of the service, the methods and insight would differ from the results in this thesis, in terms of additional methods and more detailed information about how blood donors and potential blood donors would feel about a service.

This thesis suggests that blood donation is a topic that is not very visible or present in non-donors' life. The participants express that their knowledge on the topic is low, and there is a slightly indication that many non-donors overestimate the effort it would take in the role as a blood donor. All participants do to some degree mention that blood donation related content is not very visible, and for those who could remember to have seen or heard about blood donation related content, it was given only one or very few examples. Participants have mentioned that blood donation is not a topic that easily comes to their mind, and that it requires individual's own effort to learn about it.

All participants contributed to insight about what could be challenging in a role as a blood donor. The listed challenges are based upon the participants' experiences and thoughts that are mentioned throughout the interview. In general, the challenges that was identified in this study was related to:

- Awareness and knowledge about blood donation seems low, and it requires own effort to read and learn about blood donation.
- Time consuming and challenging to combine with work or studies, and that one can become unwell which could affect their performance at work or studies.
- Finding a suiting time can be challenging, as the next appointment is a few months in the future. The blood banks have limited opening hours, and many say that appointments and opening hours would have to be flexible to fit with their everyday life.

- Fright of needles.
- In the age of 18 there was a lot of uncertainty in the participant's life that wouldn't have suited the role or responsibility as a blood donor.
- Transport to the blood bank, as students often do not have access to a car, and if the blood bank is located far away from their job/university, they would have to rely on public transport.
- Outdated communication tools, requires much effort and gives a bad experience by using phone calls to change or make new appointments.
- Little knowledge about the topic and some examples of misconceptions of how much effort it takes as a blood donor.

An app could possibly be helpful to manage the blood donors' relationship to the blood bank. It could make it easier to find suitable appointments, it could offer personalized functionalities like how much blood they have donated, and it could offer relevant information about practicalities as a blood donor and information about the nearest blood bank. Implementation and design of such app should follow a process with user involvement and testing. Otherwise, technology seemed to play a big role in the participants' life when it comes to planning appointments or similar, where digital calendars were mentioned by very many to be much appreciated. Reminders by text messages and push notifications were also mentioned as helpful.

The participants mention these aspects and thoughts as **positive** about blood donation in Norway: A good concept, it is appreciated and an opportunity to help others, not time consuming, professional and friendly staff, and that you receive a gift after the donation.

The participants mention these aspects and factors as **negative** about blood donation in Norway: information about the topic is low, time consuming, feeling reduced or unwell after donations, challenging to combine with work or studies, transport can be an issue, strict regulations, it takes time to be accepted as a blood donor, difficult terminology and hard to obtain relevant information when searching for information about blood donation, and that you must register as a new donor if you want to donate blood in a new location.

7 Future work

7.1.1 Quantitative and qualitative research with a smaller scope

In general, some findings of this thesis should be verified or investigated at a deeper level to get a better understanding of the problem. Quantitative methods can be suitable for verifying tendencies found in this thesis. Where the insight tends to describe something at a general level, more qualitative research could add give more detailed descriptions of people's needs and experiences.

7.1.2 Recruiting material and information distribution about blood donation

A study about how Norwegian millennials consume and think about existing recruiting material, and how they can be improved, can potentially lead to improved recruiting material who have a bigger impact to this group.

Future research could measure impact of new recruiting material and new ways of distributing information, for example through a longitudinal study.

7.1.3 App or online platform for blood donors

This thesis suggests that technology could improve the way blood donors interact and manage their relationship with the blood bank. An app or online solution was frequently mentioned in by the participants in this study.

Future research should go more in-depth in potential functionalities, identify and prioritize user needs, and work in user-centred iterative processes with user involvement and user testing. Qualitative methods would be suitable to gain insight. A service design approach would add a holistic view that opens for different opportunities this technology can offer.

7.1.4 Insight into motivational and behavioural patterns as a blood donors

Motivational factors are commonly seen as a goal in existing research, but one can always be interested to learn more specific about motivational and behavioural factors that make people choose to become blood donors. Different populations may also behave differently and have different needs, and might be an idea to consider for further research.

8 References

Baxter, K., Courage, C. and Caine, K. (2015) *Understanding Your Users. A Practical Guide to User Research Methods*. 2 edn. Waltham, MA, USA: Morgan Kaufmann.

Cooper, A., *et al.* (2014) *About Face: The Essentials of Interaction Design*. 4 edn. Indianapolis, Ind: ohn Wiley & Sons

Curedale, R. (2016) *Service Design: Process & Methods*. 2 edn. Los Angeles: Design Community College Inc.

Dongen, A. v., *et al.* (2014) Predicting blood donation maintenance: the importance of planning future donations, *Transfusion*, 54(3pt2), pp. 821-827. doi: 10.1111/trf.12397.

Ferguson, E. and Lawrence, C. (2016) Blood donation and altruism: the mechanisms of altruism approach, *ISBT Science Series*, 11(S1), pp. 148-157. doi: 10.1111/voxs.12209.

France, C. R., *et al.* (2007) Enhancing attitudes and intentions in prospective blood donors: evaluation of a new donor recruitment brochure, *Transfusion*, 48(3), pp. 526-530. doi: 10.1111/j.1537-2995.2007.01565.x.

France, C. R., *et al.* (2011) Enhancing blood donation intentions using multimedia donor education materials, *Transfusion*, 51(8), pp. 1796–1801. doi: 10.1111/j.1537-2995.2010.03033.x.

France, C. R., *et al.* (2014) Fear of blood draws, vasovagal reactions, and retention among high school donors, *Transfusion*, 54(3pt2), pp. 918-924. doi: 10.1111/trf.12368.

France, C. R., *et al.* (2016a) A brief motivational interview with action and coping planning components enhances motivational autonomy among volunteer blood donors, *Transfusion*, 56(6pt2), pp. 1636–1644. doi: 10.1111/trf.13485.

France, C. R., *et al.* (2016b) Fear of blood draw and total draw time combine to predict vasovagal reactions among whole blood donors, *Transfusion*, 56(1), pp. 179–185. doi: 10.1111/trf.13264.

Godin, G., *et al.* (2011) The effects of a phone call prompt on subsequent blood donation among first-time donors, *Transfusion*, 51(12), pp. 2720–2726. doi: 10.1111/j.1537-2995.2011.03204.x.

Grimstveit, G. and Brendhagen, K. (2015) Blodkrise i hele landet, *NRK*. Available at: <https://www.nrk.no/buskerud/blodkrise-1.12593034> (Accessed: 15 October 2017).

Helsedirektoratet (2013) *Blodgiversituasjonen i Norge: Forslag til tiltak som kan bidra til et bærekraftig tilbud for blodgivning*. Helsedirektoratet. Available at:

<https://helsedirektoratet.no/Lists/Publikasjoner/Attachments/191/Blodgiversituasjonen-i-norge-forslag-til-tiltak-som-kan-bidra-til-et-berekraftig-tilbud-for-blodgivning-IS-2129.pdf> (Accessed: 15 October 2017).

Helsedirektoratet (2016a) *Vil du bli blodgiver?* Available at: <https://helsenorge.no/bli-blodgiver> (Accessed: 28 November 2017).

Helsedirektoratet (2016b) *Møte i transfusjonstjenestens kvalitetsråd 20.9.2016*. Available at: [https://helsedirektoratet.no/Documents/Transfusjonsmedisin/20.09.16 Referat m%C3%B8te Transfusjonstjenestens kvalitetsr%C3%A5d.pdf](https://helsedirektoratet.no/Documents/Transfusjonsmedisin/20.09.16%20Referat%20m%C3%B8te%20i%20transfusjonstjenestens%20kvalitetsr%C3%A5d.pdf) (Accessed: 15 October 2017).

Helsedirektoratet (2017a) *Dette gjør Helsedirektoratet*. Available at: <https://helsedirektoratet.no/om-oss/dette-gjor-helsedirektoratet> (Accessed: 14 October 2017).

Helsedirektoratet (2017b) *Veileder for transfusjonstjenesten i Norge* Utgave 7.3 2017. Available at: [https://helsedirektoratet.no/Lists/Publikasjoner/Attachments/1/Veileder for transfusjonstjenesten i Norge versjon 07.03.2017.pdf](https://helsedirektoratet.no/Lists/Publikasjoner/Attachments/1/Veileder%20for%20transfusjonstjenesten%20i%20Norge%20versjon%2007.03.2017.pdf) (Accessed: 14 October 2017).

Kjøllesdal, J. G., et al. (2012) *User evaluation of the Norwegian blood donor form* Available at: [https://helsedirektoratet.no/Lists/Publikasjoner/Attachments/1138/Brukerevaluering av det norske blodgiverskjemaet.pdf](https://helsedirektoratet.no/Lists/Publikasjoner/Attachments/1138/Brukerevaluering%20av%20det%20norske%20blodgiverskjemaet.pdf) (Accessed: 15 October 2017).

Leedy, P. D. and Ormrod, J. E. (2016) *Practical Research: Planning and Design*. 11 edn. Boston: Pearson.

Masser, B. M., et al. (2016a) Negative experiences and donor return: an examination of the role of asking for something different, *Transfusion*, 56(3), pp. 605–613. doi: 10.1111/trf.13390.

Masser, B. M., et al. (2016b) The impact of the context and recruitment materials on nondonors' willingness to donate blood, *Transfusion*, 56(12), pp. 2995–3003. doi: 10.1111/trf.13805.

Millennials (2017). Available at: <https://en.wikipedia.org/wiki/Millennials> (Accessed: 1 December 2017).

Misje, A. H. (2001) *Alturisme bak hver dråpe? En spørreundersøkelse blant blodgivere ved Blodbanken i Oslo*. Master thesis, Universitetet i Bergen. Available at: <http://bora.uib.no/bitstream/handle/1956/1737/Masteroppgave-misje.pdf?sequence=1> (Accessed: 14 October 2017).

Olaussen, R. W. (2012) *Blodbankorganisering i Oslo-området: En komparativ studie av blodbankorganisering i Skåne, København-regionen og Oslo-området med vurdering av organisasjonsmodeller for Oslo-området*. Master thesis, Universitetet i Oslo. Available at: <https://www.duo.uio.no/bitstream/handle/10852/30297/Master-Richard-W-Olaussen.pdf?sequence=2> (Accessed: 14 October 2017).

Polaine, A., Løvlie, L. and Reason, B. (2013) *Service design: from insight to implementation*. Brooklyn, N.Y: Rosenfield Media.

Preece, J., Rogers, Y. and Sharp, H. (2015) *Interaction Design. Beyond human-computer interaction*. 4 edn. West Sussex: John Wiley & Sons Ltd.

Reason, B., Løvlie, L. and Flu, M. B. (2016) *Service Design for Business: A Practical Guide to Optimizing the Customer Experience*. John Wiley & Sons, Inc.

Regjeringen Kulturdepartementet (2015) *Frivillighetserklæringen. - Erklæringen for samspillet mellom regjeringen og frivillig sektor*. Available at: <https://www.regjeringen.no/contentassets/99f8110d39674f3494ec9668be846c09/frivillighetserklaeringen-hefte.pdf> (Accessed: 15 October 2017).

Rieple, A. (2016) Theoretical Context for Strategic Design: An introduction to Design Thinking, in Nixon, N. W. (ed.) *Strategic Design Thinking: Innovation in Products, Services, Experiences and Beyond*. London: Bloomsbury Publishing Inc.

Røde Kors Blodprogram (2013) *Visste du at....* Available at: <https://www.giblod.no/Home/Vissteduat/TabId/3901/ArtMID/10623/ArticleID/336/L-gjennomsnitt-tapper-hver-blodgiver-i-Norge-21-ganger-i-229ret.aspx> (Accessed: 28 November 2017).

Røde Kors Blodprogram (n.d-a) *Giblod*. Available at: <https://www.giblod.no/> (Accessed: 12 September 2017).

Røde Kors Blodprogram (n.d-b) *Å gi blod*. Available at: <https://www.giblod.no/%C3%85GiBlod.aspx> (Accessed: 12 September 2017).

Rose, J. P., *et al.* (2014) Norm perception and communication for vasovagal symptoms in blood donation, *Transfusion*, 54(9), pp. 2258–2266. doi: 10.1111/trf.12625.

Statistisk Sentralbyrå (2017) Folkemengde per 1. januar, fødte, døde, flyttinger, og folketilvekst (SÅ 48). Available at: <http://www.ssb.no/300132/folkemengde-per-1.januar-fodte-dode-flyttinger-og-folketilvekst-sa-48> (Accessed: 12 September 2017).

Stickdorn, M. and Schneider, J. (2011) *This is service design thinking*. Hoboken, New Jersey: Wiley & Sons, Inc.

Vavra, T. G. (2002) *Customer Satisfaction Measurement Simplified*. Milwaukee, Wis: ASQ Quality Press.

Wevers, A., *et al.* (2014) Return behavior of occasional and multigallon blood donors: the role of theory of planned behavior, self-identity, and organizational variables, *Transfusion*, 54(3pt2), pp. 805-813. doi: 10.1111/trf.12309.

WHO (n.d) *Statistics*. Available at: <http://www.euro.who.int/en/health-topics/Health-systems/blood-safety/data-and-statistics> (Accessed: 12 September 2017).

World Health Organization, Blood Programme of the International Federation of Red Cross and Red Crescent Societies (2010) *Towards 100% Voluntary Blood Donation A Global Framework for Action*. Available at: http://www.who.int/bloodsafety/publications/9789241599696_eng.pdf?ua=1 (Accessed: 12 September 2017).

Young, R. and Warwick, L. (2017) Service design and the edge effect, in Sangiorgi, D. and Prendiville, A. (ed.) *Designing for Service: Key issues and New Directions*. London: Bloomsbury Academic.

Yuan, S., *et al.* (2016) Blood donation mobile applications: are donors ready?, *Transfusion*, 56(3), pp. 614-621. doi: 10.1111/trf.13387.

9 Appendix

Appendix A: Informed Consent (Norwegian)

Appendix B: Thank-you letter (Norwegian)

Appendix C: Interview guide (English, translated)

Appendix D: Interview guide (Norwegian)

Appendix A: Informed consent (Norwegian)

Forespørsel om deltakelse i forskningsprosjektet

Unge voksnes tanker om blodgivning i Norge

Bakgrunn og formål

Formålet med prosjektet er å se om brukersentrert design kan bidra til innsikt som kan hjelpe blodgiver-tjenesten i Norge i utformingen av materiell og tjenester for å øke antall blodgivere. Studien ser særlig på unge voksne sine tanker rundt blodgivning. Deltagere til studiet blir spurt personlig og rekrutteres fra steder der mange unge voksne ofte oppholder seg, som f.eks. universitetscampuser. Utvalget av deltagere er tilfeldig. Deltagere i studien vil være både blodgivere og ikke-blodgivere. Studien gjennomføres i forbindelse med Hilde Vestby Fredriksen sin Masteroppgave i Interaction Design ved NTNU i Gjøvik (Fakultet for Arkitektur og Design, Institutt for design)

Hva innebærer deltakelse i studien?

Du blir spurt om å delta i et intervju i denne studien.

Intervju: ca. 30-45 minutter, ingen forkunnskaper kreves. Det blir tatt notater på papir. Spørsmålene vil omhandle dine tanker rundt blodgivning i Norge, og om hvorfor noen velger å være eller å ikke være en blodgiver. Spørsmål er hovedsakelig av praktisk art (planlegging, hverdag etc.) og men vil også omhandle ulike reklame/kommunikasjonsmateriell.

Hva skjer med informasjonen om deg?

Det vil ikke samles inn personopplysninger om deg. Kun generell bakgrunnsinformasjon om deg samles inn. Bakgrunnsinformasjonen sammen med øvrige opplysninger fra intervju vil ikke føre til at du er gjenkjennelig i verken datamateriell eller avsluttende rapport. Din deltakelse er 100 % anonym og konfidensiell. Kun masterstudent Hilde Vestby Fredriksen og hennes veiledere har tilgang til rådata. Bearbejdede sitater og innsikt fra intervjuer og workshop vil presenteres i masteroppgaven som vil være offentlig tilgjengelig. Personopplysninger etterspørres ikke i prosjektet, men om du i løpet av intervjuet eller fokusgruppen nevner personidentifiserende opplysninger vil dette ikke noteres. Prosjektet skal etter planen ferdigstilles før 31.01.2018.

Frivillig deltakelse

Det er frivillig å delta i studien, og du kan når som helst trekke ditt samtykke uten å oppgi noen grunn. Dersom du trekker deg, vil dine opplysninger bli slettet.

Dersom du ønsker å delta eller har spørsmål til studien, ta kontakt med Hilde Vestby Fredriksen på telefon (922 422 64) eller e-post (hildevf@stud.ntnu.no). Spørsmål kan også rettes til veiledere Frode Volden (frodv@ntnu.no) og Sashidharan Komandur (sashidharan.komandur@ntnu.no).

Samtykke til deltakelse i studien

Jeg har mottatt informasjon om studien, og er villig til å delta

(Signert av prosjektdeltaker, dato)

Appendix B: Thank you letter for participants

Takk for ditt bidrag!

Jeg setter stor pris på at du satt av tid til å bli med i intervjuet. Som takk for deltagelsen i forskningsprosjektet mottar du denne goodiebagen. Dersom du skulle ha noen spørsmål angående din deltagelse eller om prosjektet generelt, kan du kontakte meg på e-post.

Med vennlig hilsen

Hilde Vestby Fredriksen

hildevf@stud.ntnu.no

Master in Interaction Design - Fakultet for Arkitektur og Design, institutt for Design, NTNU

Appendix C: Interview guide (English, translated)

Introduction

Information and procedures

No audio recordings. Data are collected by pen and paper. If the participants mention details that could be directly or indirectly identifiable, it will not be recorded. If the participant mentions such information, and it seems relevant for answering the question, the answer can be rephrased to an anonymously format with the participant's approval.

Go through the informed consent form, and let the participant read and sign it. Explain it verbally in addition to let the participant read it themselves.

- *What the study is about and what a participation mean for them*
- *What the participant can be asked about and other practical information*
- *Information about voluntary participation and confidentiality*
- *Inform participants that quotes from the interview are presented completely anonymously in the published report.*

Part 1 – Background questions

Information about procedure

- No directly identifying personal data are asked for or registered
- There are no indirect data that can be traced back to the participant
- The background questions are used to choose relevant parts and questions for the participant (if they are blood donors or not)
- The background information will not cause any risk for directly or indirectly tracing back information to individuals, neither in raw data or final report.
- Background questions can be used together with other data from the interview.

The background questions are used to get an overview over the participants. What is answered in this part (if they are blood donors or not) are used to pick out relevant question categories.

1.1 Gender <input type="checkbox"/> Female <input type="checkbox"/> Male	1.2 Age <input type="checkbox"/> 18-32 <input type="checkbox"/> 33+	1.3 County of residence _____	1.4 Blood donor <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Used to be
1.5 Travel time to nearest blood bank <input type="checkbox"/> 0-15 min <input type="checkbox"/> 15- 30 min <input type="checkbox"/> 30-45 min <input type="checkbox"/> Over 45 min <input type="checkbox"/> Don't know <input type="checkbox"/> The blood bus comes to a place near me		1.6 Main occupation <input type="checkbox"/> Job (full time or part time) <input type="checkbox"/> Student (full time or part time) <input type="checkbox"/> Other	

Part 2 Blood donors and previous blood donors' perception, experience and opinions about the Norwegian blood donation system

Information about procedure

- This section is used for participants who identify themselves as blood donors or previous blood donors from the background questions.
- Follow-up questions can be asked to gain more insight about the initial answer on a question.
- Questions in this section is about how it is to be a blood donor in the Norwegian blood donation system.

This section is used if the participant is or previously was a blood donor. Participants are reminded that it is voluntarily to answer all or even just parts of the questions. The participants are informed that this interview does not aim for health information about the participants, and if such information is mentioned, it would not be recorded.

Aspects within user-centred design and service design

- *Mostly related to the user lifecycle, the participants meeting and interaction between the actual service*
- *Questions related to customer lifecycle, the participants experience about being aware of the opportunity to become a blood donor, being a blood donor itself, or eventually quitting as a blood donors.*

2.1 Would you describe yourself as an experienced or new blood donor?

2.2 Are there any practical challenges that makes it harder to donate blood as often as you want? Are there anything in your everyday life that makes this more difficult?

2.3 What kind of practical changes could make it easier for you to donate blood?

2.4 a) How do you plan your next visit to the blood bank?

b) To what degree do you find it hard or easy to plan your next visit?

c) Who do you think should be responsible to remind about future appointments and blood donations at the blood bank?

d) If you took a pause from being a blood donor, how easy do you think it would be to come back as a blood donor? Would you take initiative yourself, or would you want some extra motivation or reminders from the blood bank?

2.5 About regulations, organization and changes in your situations

a) Have you been unsure about the regulations about blood donation? How did that affect you? For example, if you have gotten the flu, you have travelled abroad or any other reason that could cause a quarantine.

b) Have you tried to look up information about regulations yourself? Did you find the information you needed?

2.6 If you have been in a quarantine for any reason, for example the flu or traveling abroad, was it easy to come back as a blood donor after the quarantine?

2.7 Have you ever considered to quit being a blood donor?

2.8 At the blood bank:

a) How do you experience your visit at the blood bank, and how do you feel treated during your visit?

b) If you receive written or verbal information, is this easy to understand and remember? For example, filling out forms, receiving practical information or planning next appointment.

c) When you just finished your donation, what kind of feeling do you get?

d) How do you perceive the thankfulness by staff and the blood donation system in general?

2.9 What do you like about the way the blood donation system is organized?

Part 3, Not blood donor

Information about procedure

- This section is used for participants who do not identify themselves as blood donors.
- Follow-up questions can be asked to gain more insight about the initial answer on a question.
- Questions in this section is more about the participant's opinions and how they perceive the Norwegian blood donation system. Information about information, communication, marketing and expectations are central.

This section is used if the participant identifies him or herself as 'not a blood donor.' Participants are reminded that it is voluntarily to answer all or even just parts of the questions. The participants are informed that this interview does not aim for health information about the participants, and if such information is mentioned, it would not be recorded.

Aspects within user-centred design and service design

- Customer lifecycle. Central questions are about how the participants perceive, understand and experience in relation to blood donation in Norway, and if the participant has taken a choice or even considered the opportunity to sign up as a blood donor.
- To some degree user lifecycle, if the participant has any experience with interacting with relevant information about blood donation

3.1 a) Do you feel that you have knowledge about and an overview about blood donation and the blood banks in Norway?

b) If you should range your knowledge about blood donation and the blood banks in Norway, would you describe it as

None – Little – Average – Much – very much

3.2 Do you have any general thoughts about blood donation in Norway? What are your general thoughts about blood donation in Norway?

3.3 Do you feel that the topic blood donation is something that concern (In Norwegian the word 'opptar' is used, and gives a description if the participants have a general interest about the topic) you?

3.4 Have you ever thought about or taken a choice to not becoming a blood donor?

3.5 a) How do you think a role as a blood donor would fit your everyday life?

b) ...when it comes to work/school

c) ...Planning

d) ...Traveling

3.6 If you at this point should consider to be a blood donor

a) ...What kind of information would you look up before you made up your mind?

b) ...Where would you look up such information?

c) If you signed up as a blood donor, do you think that somehow anyone around you would be affected?

d) How do you think that you register as a blood donor today?

3.7 General questions about the participants perception of blood donation in Norway

a) How often do you think that blood donors usually donate blood?

b) How much time do you think that you would have spent at the blood bank when you donate blood (from you enter the door to you leave)?

c) How much time do you think that you would have spent on a day you are donating blood (for example leaving university or work)

d) What are your thoughts about the visit at a blood bank?

e) Would you prefer to go the blood bank alone or together with somebody else?

3.8 What do you think could have been done differently if you should reconsider to be a blood donor?

3.9 What do you like about the way blood donation is organized today?

3.10 Do you have any opinion on how it could be easier for you to start being a blood donor?

Part 4, All participants

Information about procedure

- This section is used for all participants. This section aims to get insight about experiences, opinions, attitudes and behaviour related to the Norwegian blood donation system.
- Follow-up questions can be asked to gain more insight about the initial answer on a question.
- The questions are formulated around different life phases, situations and information channels.

This section is used for all participants. The participants are reminded that it is voluntary to answer any or just parts of the questions. They are reminded that they do not have to talk about their personal health and that such information will not be recorded in the data.

Aspects within user-centred design and service design

- Everyday issues, needs and expectations. How they are met today, and specific areas where things could have been done differently
- How do existing material or touchpoints communicate and relate to potential and existing blood donors? Do they affect the user in any way or do they leave a footprint that the participants remember?
- How do the participants feel that their needs are met with today if they were in a role as a blood donor?
- How do a role as a blood donor fit the participant's life in general?
- Human lifecycle, about blood donation and different life phases.

4.1 When is the last time you can remember... or have you...

- a) Heard anyone talk about blood donation?
- b) Heard or seen any commercial about blood donation?
- c) Seen representatives from the blood bank on a stand (recruiting) or other places?
- d) Seen or heard any kind of information related to blood donation?
- e) Thought of blood donation?

4.2 Have you talked to anyone about blood donation lately (last week, month, year, last 5 years, never?)

4.3 Can you remember if anyone has encouraged you directly through personal communication to become a blood donor?

4.4 Can you remember to have read or heard anything that encouraged you to become a blood donor?

4.5 Can you remember to have read, seen or heard anything that made you aware of the opportunities to be a blood donor?

4.6 a) When do you think that it is natural to be informed about blood donation?

b) Whose responsibility do you think it should be to communicate information about blood donation?

4.7 About age and blood donation:

a) Imagine that you are 18, 20, 25, 30, 40, and 50 years old (ask one age at the time):

Do you think that a role as a blood donor would fit you then? Why or why not?

b) At what age do you think it will fit you better in a role as a blood donor?

4.8 About planning for choosing a time for blood donation (participants assumptions)

a) How do you think a blood donor decide upon a time for blood donation from time to time?

b) If you were to plan for an appointment at the blood bank, what factors would you need to consider before choosing a time?

c) How long time in advance would you prefer to plan or know about your next time for blood donation?

d) Do you think that there is a better way of planning appointments at the blood bank than today?

4.9 In general, what do you think about keeping track of your appointments? For example, a dentist, hairdresser or personal trainer? What is good or bad about the way you keep track of these appointments?

4.10 How do technology affect the way you plan appointments such as mentioned in last question.

4.11 If a technology should have helped you keeping track of your relation to the blood bank, what kind of platform do you think would suit you best? Why?

4.12 If you imagine such technology, what kind of tasks do you think it should have solved for you if you were a blood donor?

4.13 If you have changed residence recently or are going to change residence in near future, do you think that you would have thought of the topic 'blood donation' or the possibilities for blood donation in the new place?

4.14 Post-it activity: Note down three things you perceive or consider as negative about how blood donation and the blood bank are organized in Norway today. (Post-it notes, for extra time to reflect. Discuss the answers after)

4.15 Post-it activity: Note down three things you perceive or consider as positive about how blood donation and the blood banks are organized in Norway today. (Post-it notes, for extra time to reflect. Discuss the answers after)

4.16 What do you think about that blood donors get a reward after their donation?

4.17 Is there anything else you would like to mention, something that you would like to go more in-depth with, or is there something that we did not talk about that you would like to mention when it comes to blood donation in Norway?

Appendix D: Interview guide (Norwegian)

Intro

Informasjon om gjennomføring

Ingen lydopptak. Data samles med penn og papir. Dersom deltager nevner opplysninger som kan virke direkte eller indirekte identifiserbart vill ikke dette føres ned. Eventuelt så vil en slik opplysning omformuleres på en anonym måte fortløpende under datasamlingen der dette sees som relevant.

Gå gjennom samtykkeskjema muntlig og la deltageren lese og signere skjemaet. Forklar muntlig i tillegg til at deltageren leser skjemaet:

- *Hva studien handler om og hva deltagelse innebærer*
- *Hva deltager kan bli spurt om og annen praktisk info*
- *Informasjon om frivillighet og konfidensialitet*
- *Sitater gjengis anonymt i sluttrapport*

Del 1 – Innledning

Informasjon om gjennomføring

- Ingen direkte personopplysninger etterspørres eller registreres.
- Ingen indirekte opplysninger vil kunne spores til enkeltpersoner.
- Svar på innledningsspørsmål vil bli brukt for å velge ut videre spørsmål intervju spørsmål med størst relevans for deltageren.
- Opplysningene i innledningsspørsmålene vil ikke utgjøre risiko for å være indirekte eller direkte identifiserbart sammen med øvrig datamateriell, verken ved innsamling eller i sluttrapport.
- Bakgrunnsopplysninger sammen med øvrig datamateriell kan brukes i publisert sluttrapport.

Brukes til å skaffe et oversiktsbilde over deltageren. Bakgrunnsinformasjonen kan i stor grad forklare deltagerens utsagn senere, og vil brukes til å velge ut spørsmålskategorier med størst relevans for deltageren.

1.1 Kjønn <input type="checkbox"/> Kvinne <input type="checkbox"/> Mann	1.2 Alder <input type="checkbox"/> 18-32 <input type="checkbox"/> 33+ år	1.3 Bostedsfylke _____	1.4 Blodgiver? <input type="checkbox"/> Ja <input type="checkbox"/> Nei <input type="checkbox"/> <input type="checkbox"/> Har vært
1.5 Reisetid til nærmeste blodbank <input type="checkbox"/> 0-15 min <input type="checkbox"/> 15- 30 min <input type="checkbox"/> 30-45 min <input type="checkbox"/> Over 45 min <input type="checkbox"/> Vet ikke <input type="checkbox"/> Blodbussen kommer dit jeg er		1.6 Yrkessituasjon <input type="checkbox"/> I jobb (fulltid/deltid) <input type="checkbox"/> Studier (fulltid deltid)	

Del 2 – Blodgivere og tidligere blodgiveres oppfatning, opplevelser og meninger om det norske blodgiversystemet

Informasjon om gjennomføring

- Seksjonen benyttes om deltageren identifiserer seg som blodgiver eller tidligere blodgiver (i følge innledningsspørsmål)
- Oppfølgingsspørsmål som hva/hvorfor/hvordan kan stilles for å utforske deltagerens svar.
- Spørsmål i denne seksjonen dreier seg i større grad om hvordan det er å være blodgiver i dagens norske blodgiversystem.

Seksjonen benyttes om deltageren er blodgiver eller tidligere har vært blodgiver. Deltager påminnes om at det er frivillig å svare på alle eller deler av spørsmålene. Deltager informeres om at vi ikke er ute etter helseopplysninger om personen, og at dersom deltager mot formodning nevner slike opplysninger uoppfordret, så vil ikke dette noteres.

Aspekter innen brukersentrert/tjenstedesign som utforskes i seksjonen

- I størst grad user lifecycle; deltagerens møte og bruk av den faktiske tjenesten.
- Men også i stor grad customer lifecycle; deltagerens erfaringer med det å bli klar over, vurdere, bli blodgiver, å være blodgiver, og eventuelt å slutte som blodgiver.

2.1 Vil du beskrive deg selv som en erfaren eller fersk blodgiver?

2.2 Er det noen praktiske utfordringer som gjør det vanskelig å gi blod så ofte som du ønsker? Er det noe i hverdagen som gjør det vanskeligere for deg å gi blod så ofte som du ønsker?

2.3 Hva slags praktiske forandringer kunne gjort det enklere for deg å gi blod?

2.4 a) Hvordan planlegger/planla du ditt neste besøk hos blodbanken?

b) I hvilken grad syntes du at det var vanskelig eller enkelt å planlegge neste besøk?

c) Hvem synes du bør være ansvarlig for å minne på om fremtidige timer og donasjoner hos blodbanken?

d) Dersom du tar en pause fra blodgivning, hvor enkelt tror du det er for deg å komme tilbake som blodgiver?

Ville tatt initiativ selv, eller ville du ønsket ekstra motivasjon eller påminnelser fra blodbanken?

2.5 Om regelverk, organisering og forandringer i situasjon:

a) Har du vært usikker på regelverket og har det påvirket deg noen gang? Som for eksempel ved influensa, utenlandsreiser eller andre årsaker som omfattes av regelverket for karantener.

b) Har du oppsøkt informasjon om regelverket, og fikk du informasjonen du trengte?

2.6 Dersom du har vært i karantene uansett årsak (for eksempel influensa eller utenlandsreiser), var det lett å komme tilbake som blodgiver etter karantenen?

2.7 Har du noen gang vurdert å slutte som blodgiver?

2.8 Ved blodbanken og blodgivning:

- a) Hvordan opplever/opplevde du å bli du mottatt og ivaretatt i løpet av ditt besøk?
- b) Om du får skriftlig eller muntlig informasjon, er dette enkelt å forstå og eventuelt huske (For eksempel ved utfylling av skjema, praktiske beskjeder, ny time etc.)?
- c) Når du er ferdig med din donasjon, hva slags følelse sitter du igjen med?
- d) Hvordan oppfatter du takknemligheten av personellet og blodgiversystemet i Norge?

2.9 Hva liker du med måten blodgiversystemet er organisert på i dag?

Del 3 Ikke blodgivere

Informasjon om gjennomføring

- Seksjonen anvendes for deltakere som identifiserer seg som ikke-blodgivere i følge Del 1.
- Oppfølgingsspørsmål som hva/hvorfor/hvordan kan stilles for å skaffe mer kunnskap om deltakeren sitt opprinnelige svar på spørsmålet.
- Spørsmål i denne kategorien dreier seg om ikke-blodgiverens oppfatninger og meninger av det norske blodgiversystemet. Her vil kanaler for informasjon, kommunikasjon og markedsføring være sentrale spørsmålsområder. Hvordan disse kanalene oppfattes av blodgiver vil være viktige områder å belyse.

Seksjonen benyttes om deltageren er ikke-blodgiver. Deltager påminnes om at det er frivillig å svare på alle eller deler av spørsmålene. Deltager informeres om at vi ikke er ute etter helseopplysninger om personen, og at dersom deltager mot formodning nevner slike opplysninger uoppfordret, så vil ikke dette noteres.

Aspekter innen brukersentrert/tjenestedesign som utforskes i seksjonen

- I stor grad customer lifecycle; Her vil sentrale spørsmål dreie seg om deltagerens oppfatninger og erfaringer knyttet til det å bli klar over blodgivning i Norge, og om deltageren har tatt standpunkt til å bli eller ikke bli blodgiver.
- Men også deltagerens oppfatninger om user lifecycle; deltagerens møte og bruk av den faktiske tjenesten.

3.1 a) Føler du at du har kunnskap og oversikt om blodgivning og blodbankene i Norge?

B) Om du skulle rangere hvor du føler din kunnskap om blodgivning og blodbankene i Norge ligger, ville du beskrevet det som:

Ingen- Lite- Gjennomsnittlig – En del – Veldig mye

3.2 Har du noen generelle tanker/Hva er dine generelle tanker om blodgivning i Norge?

3.3 Føler du at blodgivning er noe som opptar deg? (Før spørsmålet stilles gjentas at intervjuet ikke er ute etter deltagerens helseopplysninger, og at dersom slike svar nevnes så vil ikke dette noteres ned).

3.4 Har du noen gang tenkt over eller tatt et standpunkt om å bli eller ikke bli blodgiver?

3.5 Hvordan tror du at en rolle som blodgiver ville passet din hverdag?

A) (Åpent svar først, så spørsmål 3.7 b-e)

I forhold til b) jobb/skole c) Planlegging d) Reise

3.6 Om du skulle vurdert å bli blodgiver nå

a) Hva slags type informasjon ville du oppsøke før du gjorde deg opp en mening?

b) Hvor ville du oppsøkt slik informasjon?

c) Om du hadde vært blodgiver, tror du at det på noen vis ville påvirket noen rundt deg?

d) Hvordan ser du for deg, eller hvordan tror du at man registrerer seg som blodgiver i dag?

3.7 Generelle spørsmål om deltagers oppfatninger av blodgivning

a) Hvor ofte tror du blodgivere vanligvis gir blod?

b) Hvor lang tid tror du det tar det hos blodbanken når man gir blod?

c) Hvor lang tror du at du hadde brukt totalt en dag du drar til blodbanken for å gi blod?

d) Hva tenker du om selve besøket hos en blodbank (eventuelt sykehus)?

e) Ville du foretrukket å dra til blodgivning alene eller sammen med noen andre?

3.8 Hva tror du kunne vært gjort annerledes for at du skulle vurdert å bli blodgiver?

3.9 Hva liker du med måten blodgiversystemet er organisert på i dag?

3.10 Har du noen formening om hvordan det kan bli enklere for deg å begynne som blodgiver?

Del 4 Alle

Informasjon om gjennomføring

- Uavhengig av deltakeren identifiserer seg som blodgiver, tidligere blodgiver eller ikke-blodgiver, vil denne seksjonen gi innsikt om opplevelser, meninger og holdninger knyttet til det norske blodgiversystemet.
- Oppfølgingsspørsmål som hva/hvorfor/hvordan kan stilles for å skaffe mer kunnskap om deltakeren sitt opprinnelige svar på spørsmålet.
- Spørsmålene om blodgivning er strukturert rundt: Ulike livsfase og livssituasjoner, ulike informasjonskanaler.

Seksjonen benyttes for alle deltagere. Deltager påminnes om at det er frivillig å svare på alle eller deler av spørsmålene. Deltager informeres om at vi ikke er ute etter helseopplysninger om personen, og at dersom deltager mot formodning nevner slike opplysninger uoppfordret, så vil ikke dette noteres.

Aspekter innen brukersentrert/tjenestedesign som utforskes i seksjonen

- Hverdag, blodgivning og hvordan ulike behov møtes
- Hvordan kommuniseres dagens materiell/touchpoints med dagens potensielle og nåværende blodgivere. Kommuniserer dette et uttrykk som appellerer eller etterlater uttrykk som kan ha påvirkningskraft på aldersgruppen denne oppgaven ser på?
- Hvordan oppfattes det at brukerbehov møtes ved å være blodgiver i Norge?
- Hvordan passer en rolle som blodgiver inn i deres situasjon?
- Ser på human lifecycle; om blodgivertjenesten og ulike livsfaser.

4.1 Når er sist gang du kan huske å... eller har du...

- a) ... hørt noen snakke om blodgivning?
- b) ... hørt eller sett reklame om blodgivning?
- c) ... sett representanter fra blodbanken på stands eller annet?
- d) ... sett eller hørt hva som helst informasjon knyttet til blodgivning.
- e) ... tenkt på blodgivning

4.2 Har du snakket med noen om blodgivning i det siste (uke, måned, år, siste 5 år, aldri)?

4.3 Kan du huske å noen gang blitt oppfordret direkte gjennom personlig kommunikasjon til å bli blodgiver?

4.4 Kan du huske å ha lest eller sett noe som oppfordrer deg til å bli blodgiver?

4.5 Kan du huske å ha lest, sett eller hørt noe som gjorde at du gjorde at du ble klar over muligheten til å være blodgiver?

4.6 a) Når tenker du at det er naturlig å bli informert om blodgivning?

b) Hvem sitt ansvar burde det være å formidle informasjon om blodgivning?

4.7 Om alder og blodgivning:

a) Se for deg at du er 18, 20, 25, 30, 40 og 50, år gammel (Spør om en alder av gangen).

Tror du at en rolle som blodgiver passer/passet deg da? Hvorfor/Hvorfor ikke?

b) Ved hvilken alder tror du det passer deg best å være blodgiver?

4.8 Om planlegging av tidspunkt for å gi blod (deltagerens antagelser):

a) Hvordan ser du for deg at man avtaler tidspunkt for blodgivning fra gang til gang?

b) Om du skulle avtalt et tidspunkt for blodgivning, hva måtte du tenkt over før du bestemte tidspunktet

c) Hvor lang tid i forkant foretrekker du å vite om/planlegge neste blodgivning?

d) Tror du at det finnes en bedre måte å avtale tidspunktene på enn i dag?

4.9 Hvordan synes du det er å holde styr på og å rekke avtaler generelt? Som for eksempel tannlege, frisør eller personlig trener. Hva er bra eller dårlig med måten du holder styr på slike timer?

4.10 Hvordan påvirker teknologi måten du planlegger slike timer som nevnt i forrige spørsmål?

4.11 Om en teknologi skulle hjulpet deg å holde styr på ditt forhold til blodbanken (timer etc.), hva slags plattform tror du hadde passet deg best? Hvorfor?

4.12 Hvis du ser for deg en slik teknologi, hva skulle denne teknologien hjulpet deg med? Hva slags oppgaver tror du at den burde ha løst i forhold til deg om du hadde vært en blodgiver?

4.13 Om du har flyttet i det siste eller om du skulle flytte i nærmeste fremtid, ville du tenkt over temaet blodgivning og mulighetene for blodgivning ved det nye stedet?

4.14 Noter ca. 3 ting du oppfatter som negativt med hvordan blodgivning og blodbanken fungerer i Norge i dag. (Post-it lapper, for egenrefleksjon. Diskuter lappene kortfattet i etterkant)

4.15 Noter ca. 3 ting du oppfatter som positivt med hvordan blodgivning og blodbanken fungerer i Norge i dag. (Post-it lapper, for egenrefleksjon. Diskuter lappene kortfattet i etterkant)

4.16 Hva er dine tanker om at man får en premie etter endt blodgivning?

4.17 Er det noe mer du har lyst å si noe om, som du har lyst å utdype eller som vi ikke har snakket om tidligere når det kommer til blodgivning i Norge?