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Service experience and service design in the infertility sector: A case study

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Abstract of master's thesis

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Abstract

The interest in service experience in health care is increasing. This thesis has a focus on studying service experience and the applicability of service design approach to service development in the context of infertility services. The following research questions are studied: 1) How is a service experience constructed in infertility treatment services? 2) How can service design principles and methods be applied to service development in the context of infertility treatment services?

The research was conducted as a qualitative single case study in a Finnish private infertility clinic. The focus of the research was on studying the service experience of Swedish and Norwegian couples going through oocyte donation treatment in the case clinic. The empirical research was conducted during May-November 2012 using design probes, participatory design workshops and semi-structured expert interviews as primary data collection methods. Also service blueprinting, customer journey method, and user personas were utilized during the research process.

The findings of the thesis suggest that service experience in infertility services is constructed from five experience dimensions: operational dimension, informational dimension, participational dimension, emotional dimension, and physical dimension. The dimensions are overlapping and integrated meaning that the strengths and weaknesses in one dimension mutually reinforce or weaken the others. Furthermore, the empirical research implies that due to the high subjectivity and sensitivity of the infertility service experience, the service design principles and methods are well applicable for service development in this field.

Keywords service design, service experience, patient-centered care, infertility services, design probe, health care service development

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Kiinnostus asiakkaan palvelukokemusta kohtaan on kasvamassa terveyspalvelusektorilla. Tässä tutkimuksessa tarkastellaan palvelukokemusta ja palvelumuotoilun soveltuvuutta palveluiden kehittämiseen lapsettomuuspalveluiden kontekstissa. Tutkimuksessa vastataan seuraaviin tutkimuskysymyksiin: 1) Miten palvelukokemus rakentuu lapsettomuuspalveluissa? 2) Miten palvelumuotoilun periaatteita ja menetelmiä voidaan soveltaa lapsettomuuspalveluiden kehittämisessä?

Tutkimus toteutettiin kvalitatiivisena tapaustutkimuksena yhteistyössä suomalaisen yksityisen lapsettomuusklinikan kanssa. Tutkimus keskittyi tarkastelemaan lapsettomuusklinikan ruotsalaisten ja norjalaisten asiakkaiden palvelukokemusta liittyen luovutetuilla munasoluilla tehtäviin lapsettomuushoitoihin. Empiirinen tutkimus toteutettiin vuonna 2012 toukokuun ja marraskuun välisenä aikana, ja aineiston keruussa käytettiin muotoiluluotaimia, osallistuvia työpajoja ja puolistrukturoituja asiantuntijahaastatteluja. Tämän lisäksi tutkimusprosessin kuluessa hyödynnettiin myös muita palvelumuotoilun työkaluja kuten palvelublueprintia, palvelupolkua ja käyttäjäpersoonia.

Tutkimuksen tuloksena havaittiin, että asiakkaan palvelukokemus lapsettomuuspalveluissa rakentuu viidestä ulottuvuudesta: operationaalinen ulottuvuus, tiedollinen ulottuvuus, osallistuva ulottuvuus, emotionaalinen ulottuvuus ja fyysinen ulottuvuus. Nämä kokemusulottuvuudet ovat osittain päällekkäiset ja vaikutussuhteessa toisiinsa. Empiirisen tutkimuksen perusteella voidaan lisäksi todeta, että lapsettomuuspalvelukokemuksen henkilökohtaisuudesta ja arkaluontoisuudesta johtuen palvelumuotoilun periaatteet ja menetelmät soveltuvat hyvin lapsettomuuspalveluiden kehittämiseen.

Avainsanat palvelumuotoilu, palvelukokemus, potilaslähtöinen hoito, lapsettomuuspalvelut, muotoiluluotain, terveyspalveluiden kehittäminen

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1 Introduction

This thesis focuses on studying service experience and service design in the context of infertility services. This chapter discusses the background and the relevance of the research topic, and defines the research objectives and questions. Also short definitions for the key concepts are provided. The final part of this chapter summarizes the structure of the study.

1.1 Research background

The interest in service experience in health care is increasing (Dewar et al., 2009). The concept of service experience suggests that the objective of the service provider is not only to design consistent service encounters but also to enable and manage memorable service experiences (Pine & Gilmore 1998; Pullman & Gross 2004; Stuart & Tax 2004). Service design concentrates on “the design of the overall experience of a service as well as the design of the process and strategy to provide that service” (Moritz, 2005: 39). The potential of service design methodology in developing services has been widely discussed and acknowledged in the literature (e.g. Maffei et al., 2005; Moritz, 2005; Saco & Goncalves, 2008).

This thesis has a focus on studying service experience and the applicability of service design approach to service development in the context of infertility services. Using a Finnish private infertility provider as a case study company, this study aims at understanding how service experience is constructed in infertility treatment services, and how service design principles and methods could be applied to developing infertility treatment services. Through applying service design methods of design probing, participatory workshops, blueprinting, user personas and customer journey in data collection and analysis, the research aims to grasp a personal viewpoint on the infertility service experience and use that as a basis for service improvements in the case company context.

In the following section, the relevance of this topic and the research gap is discussed in more detail.

1.2 Relevance of the topic and the research gap

In Europe, the demand for infertility services is rising (Ferraretti et al., 2012). According to the literature, infertility can cause psychological distress, depression, marital tension, grief, and guilt (Lukse & Vacc, 1999; Merari et al., 2002; Anderson et al., 2003). Compared to other health care customers, women going through infertility treatments are more often dissatisfied with the treatment they receive (Malin et al., 2001). The infertility experience has been widely discussed in the literature, and two distinctive streams for research have been identified: a research stream using qualitative methods to study the socio-cultural context of infertility and a research stream utilizing quantitative methodology to study clinic patients from the viewpoint of service development (Greil et al., 2000). However, there remains a need for combining these two approaches in order to bring "an ethnographic sensibility to the modern clinic setting" (Greil et al., 2000: 154).

During recent years, the concept of patient-centeredness has been broadly discussed related to health care delivery (Gillespie et al., 2004). The importance of patient-centered care has been identified also in the infertility service sector (Schmidt et al., 2003). The concept has remained rather fuzzy (Epstein, 2000; Steiger & Balog, 2010), but commonly patient-centered care is seen as a measure of quality defining the criteria of patient-centered health care (Robinson et al., 2008). While focusing on the quality assessment of care delivery, patient-centeredness has not been studied extensively in the context of practical service development, although a need for redesigning the systems of care in order to achieve patient-centered outcomes has been identified (Bergeson &

Dean, 2006). Furthermore, a demand for more person-centered viewpoint on studying the concept of patient-centered care has been indicated (Epstein, 2000).

In the existing literature on health care services, the service success has long been discussed and studied from the viewpoints of service quality and customer satisfaction (Carman, 2000; Rashid & Jusoff, 2008). The applicability of these kinds of studies for the purposes of service development has been questioned (Dewar et al., 2009). At the same time, the interest in the patient experience in developing future health care services is growing (Ibid). There has been recognized a need for utilizing methods that grasp the holistic service experience (Steiger & Balog, 2010) and enable the patients to contribute to, and be involved in, the service design process (Bate & Robert, 2006; Sandström et al., 2008; Duncan & Bresling, 2009).

The academic as well as practical interest towards service design has been on the increase during the last decade. The potential of service design methodology in developing services has been discussed and acknowledged in the literature (e.g. Maffei et al., 2005; Moritz, 2005; Saco & Goncalves, 2008). When it comes to health care services, according to studies, the holistic design of the clinical care process influences the emotional care experience, which can have affect on the treatment outcomes (Altringer, 2010). Also the benefits of involving health care practitioners in the design process have been identified (e.g. Duncan & Bresling, 2009). While the interest in applying service design approaches to health care service development is increasing, actual case examples are still few and far between, especially when talking about special areas of health care such as infertility treatments.

As a conclusion, the observation is made that although the importance of patient-centeredness has been acknowledged, as well as the need for a holistic design of the service experience and the care process, there yet remains little research and practical knowledge on how service experience can be constructed and developed in the context of health care services. The following section presents the research objectives and the research questions, which describe how this research gap is addressed in this study.

1.3 Research objectives and questions

The objectives of this research are to describe the construction of service experience in the context of infertility treatments, and to study and test the applicability of service design principles and methods in developing infertility services. In contrast to the existing literature, the concept of patient-centered care is studied from the viewpoint of service development, and not just as an approach to quality care delivery. Infertility service experience is studied in the case context, applying qualitative research approach and the principles and methods of service design as described in the literature review. This is in contrast with the previous research with a quantitative emphasis on studying infertility treatment experiences in clinical settings (Greil et al., 2000). Furthermore, and also in contrast to the previous studies (e.g. Carman, 2000; Rashid & Jusoff, 2008), a more personal viewpoint on the service experience is pursued by using design probe method in the data collection.

On the basis of these research objectives, the following research questions have been constructed for the study:

Research question 1: How is a service experience constructed in infertility treatment services?

The focus of the first research question is two-fold. Firstly, based on the literature review, a framework for understanding the construction of a service experience in the infertility service context is suggested. Secondly, in the empirical part of the research, the suggested framework is tested by utilizing it for structuring and analyzing the customer research data.

Research question 2: How can service design principles and methods be applied to service development in the context of infertility treatment services?

The second research question will be answered in the empirical part of the study through providing a case example of applying the chosen service design principles and methods to service development in the case company context. In terms of managerial implications, practical recommendations on developing the case service are provided based on the empirical data and analysis.

1.4 Definitions of key concepts

1.4.1 Patient-centered care

In this thesis, the term ”patient-centered care” is used as an umbrella term to refer to the approach of care that emphasizes patient-centered attitudes, knowledge requirements, patient-centered consultation skills and behaviours, and the patient's role in the care delivery (De Valck et al., 2001). Patient-centered care is seen as a measure of the quality of health care (Robinson et al., 2008) supporting the design of more patient-centered service systems (Bergeson & Dean, 2006).

1.4.2 Service experience

Service experience is the service process and the outcome of that process influenced by the interaction between the organization, service system, and the customer (Bitner et al., 1997; Johnston & Clark, 2001). Fundamentally, it is an occurrence of an individual affected by the service context and the related social constructions (Helkkula, 2001). As such, it is a combination of what is offered and how it is offered (Patrício et al., 2008), and how the process and the outcome are perceived by an individual.

1.4.3 Service design

In this thesis, service design is defined as "applying design methods and principles to the design of services" (Holmlid & Evenson, 2008: 341). Furthermore, service design is seen as a philosophy or an approach, meaning "the overall mindset with which the research plan is to be conducted" (Sanders et al., 2010: 2). Here, a research plan refers to the overall design of the research process.

1.4.4 Service design method

A method is a "combination of tools and techniques that have been strategically put together to serve a specific purpose" (Sanders et al., 2010: 2). In this thesis, service design methods refer to the tools and techniques utilized during the research process. These include service blueprinting, design probing, user personas, customer journey mapping, and participatory workshops.

1.4.5 Service design principles

According to the Oxford English dictionary, "principle" is "a fundamental truth or proposition that serves as the foundation for a system of belief or behaviour or for a chain of reasoning". In this thesis, Wetter-Edman's (2011) categorization is adopted to describe the principles of service design. These principles are value creation, transformation, visualization, participation, and interdisciplinarity.

1.4.6 Design probe

Design probe is a user-centered research method based on user self-documentation (Mattelmäki, 2006). Design probe is an assignment through which users document their experiences, needs, ideas and attitudes related to the research topic. The probes seek to understand the users' subjective experiences and use that as a basis for design improvements. (Ibid)

1.4.7 Service encounter

Service encounter (or touchpoint) refers to the interaction between the customer and the service personnel (Solomon et al., 1985) as well as to the contact points between the customer and the physical facilities or other elements related to the service delivery (Shostack, 1985). Accordingly, the interaction can occur ”with the product or service itself or with representations of it by the company or some third party” (Meyer & Schwager, 2007: 3)

1.4.8 Oocyte donation

Oocyte donation is an infertility treatment originally introduced for women with ovarian failure. Today, the indications are more diverse including for example advanced maternal age, diminished ovarian reserve, and genetic abnormalities. (Van Der Hoorn et al., 2010) In the treatment, the oocyte needed for a pregnancy is received from a voluntary donor. As such, it can be considered as a counterpart of sperm donation.

1.5 Structure of the study

This study is divided into seven chapters. Following this introductory chapter, chapter 2 discusses the existing literature on patient-centered care, service experience, health care service development, and service design. Chapter 3 presents the case company and the case context of infertility services. Summing up the literature review and the case description, the framework of the study is presented in the chapter 4. After that, chapter 5 focuses on the research methodology and the process of data collection. Chapter 6 discusses the research findings. Finally, chapter 7 concludes the study by discussing the academic and managerial implications and by suggesting areas for further research.

2 Literature review

This chapter begins with discussing the literature on patient-centered care. After that, service experience and service development are discussed in the context of health care services. Finally, service design principles and methods are introduced. Together with the following chapter of Case description, this chapter sets the theoretical groundings for the empirical research.

2.1 Patient-centered care

2.1.1 Defining patient-centered care

The concept of patient-centeredness has received a lot of attention among the researchers and practitioners during the last ten years. In 2001, the Institute of Medicine defined patient-centered care as one of the six fundamental aims of the U.S. health care system (Institute of Medicine, 2001). Yet, the concept has remained fuzzy having different connotations for different people when discussed in more detail (Bensing, 2000). The vagueness of the term has led to both challenges in implementing patient centered care (Mead & Bower, 2000) and to questioning its scientific usefulness (Robinson et al., 2008).

In the literature, patient-centered approach has been discussed as opposed to doctor-centered model (Byrne & Long, 1976), evidence based model (Bensig, 2000), and disease centered model (Stewart et al., 1995). It has been described as a humanistic or biopsychomedical perspective to medicine as opposed to biomedical model (Mead & Bower, 2000) with ”molecular biology its basic scientific discipline” (Engel, 1977: 130). Depending on the discipline and the research area, the concept has been discussed, for instance, in terms of person-centered care (McCormack, 2004), client-centered care

(Law et al., 1995), family-centered care (Hutchfield, 1999), and relationship-centered care (Beach & Inui, 2006).

Building on the categorization of Robinson et al. (2008), the discussion on the patient-centered care can be summarized to four perspectives: a clinical perspective, a people perspective, an economic perspective, and a public policy/service systems perspective.

The clinical perspective concentrates on the patient-clinician relationship and communication (Robinson et al., 2008). The focus is on building a patient-centered clinical process (Stewart et al., 1995). According to Stewart et al. (1995), this is achieved by exploring the illness experience, understanding the whole person, finding a common ground, incorporating prevention and health promotion, enhancing the patient-doctor relationship, and being realistic. Clinical perspective is perhaps the most commonly discussed perspective in patient-centered care (Robinson et al., 2008).

A people perspective on patient-centered care adds to the clinical perspective by emphasizing the importance of patient needs and priorities related to the service interaction (Robinson et al., 2008). This means taking into account the cultural traditions, values and personal preferences of the patient. Furthermore, a people perspective pays attention to the role of the physical surroundings in promoting patient comfort as well as to the dedicated staff that seeks to meet the needs (physical, emotional, spiritual) of the patient (Charmel & Frampton, 2008).

An economic perspective to patient-centered care, on the other hand, stresses the importance of an individual's choice in selecting the service provider (Robinson, 2005). Instead of considering the patient as a passive receiver of medical services, it sees the patient as an active and conscious consumer with values, wants and needs (Robinson et al., 2008).

Finally, *the public policy perspective* (Robinson et al., 2008) or a *systems perspective*, as defined by Bergeson & Dean (2006), stresses the importance of redesigning the health care system in order to support the implementation of patient-centered care. From systems perspective, patient-centered care delivery requires focus on education, knowledge management, team management, accessibility of information (Jayadevappa & Chhatre, 2011) and on building systems to support patient participation, self-management and coordination (Bergeson & Dean, 2006).

Taking into account the discussion presented above, it seems fair to claim that the concept of patient-centeredness or ”patient-centered care” does not have one definition but instead it describes various paradigms (Cliff, 2012). Integrating the presented perspectives, in this thesis, the term ”patient-centered care” is used as an umbrella term to refer to an approach of care that emphasizes patient-centered attitudes, knowledge requirements, consultation skills and behaviours, and the patient's role in the care delivery (De Valck et al., 2001). Patient-centered care is seen as a criterion or a measure of the quality of health care (Robinson et al., 2008) supporting the design of more patient-centered service systems (Bergeson & Dean, 2006).

2.1.2 Dimensions of patient-centered care

Moving towards the practical implementation of patient-centered care in a clinical setting, various guidelines have been established and introduced in the literature. Traditionally, in delivering patient-centered care, the role of employees and teams has been emphasized (Dreachsling, 1999), as well as the role of communication skills (Levinson et al., 2010), information technology (Epstein et al., 2010), and the role of leadership and organizational culture (e.g. Epstein et al., 2010; Steiger & Balog, 2010). Many of the nowadays defined characterizations are based on the characteristics originally presented in the book *Through the Patient’s Eyes: Understanding and Promoting Patient-Centered Care* (Gerteis et al., 1993). A summary of the different characteristics can be found in the Table 1.

Table 1 Characteristics of patient-centered care

	Characteristics of patient-centered care
Gerteis et al., 1993	• Respect for patients' values, preferences, and expressed needs • Coordination and integration of care • Information, communication, and education • Physical comfort • Emotional support – relieving fear and anxiety • Involvement of family and friends • Transition and continuity
Davis et al., 2005	• Superb access to care • Care coordination • Patient engagement in care • Clinical information systems that support high-quality care, practice-based learning, and quality improvement • Integrated, comprehensive care and smooth information transfer across a fixed or virtual team of providers • Publicly available information on practices • Ongoing, routine patient feedback to a practice
Pruitt et al., 2005	• Listening and communicating • Coordinating continuous and timely care • Providing education and information • Sharing decision-making and management • Promoting wellness and healthy lifestyles • Preventing disease, disabilities, and impairments • Relieving pain and suffering • Identifying, caring about and respecting patients' preferences, values, differences and expressed needs
Conway et al., 2006	• Information sharing • Participation • Collaboration • Dignity and respect
Frampton & Gilpin, 2008	• Human interactions • Access to information and education • Participation of family and friends • Architecture and healing design • Caring touch • Nutrition and wellness • Arts and entertainment • Spirituality • Integrative therapies • Healthy communities • The retreat process

When synthesizing the patient-centered care characteristics based on the emphasis and interest they have gained in the literature, five different dimensions of patient-centered care delivery can be identified. In this thesis, the dimensions are called operational dimension, informational dimension, participational dimension, emotional dimension, and physical dimension.

The operational dimension describes the accessibility, coordination, integration and timeliness of the care. The waiting times (e.g. admission, appointment, room placements) should be short throughout the process (Shaller, 2007), and the patients should be able to access the care at a wished time and with the clinician they want (Bergeson & Dean, 2006). In addition, the care should be well coordinated across the clinical, ancillary, and supporting services (Shaller, 2007).

Moving on to *the informational dimension,* according to the principles of patient-centered care, the information provided by the health care organization should be sufficient, timely and accurate in order to facilitate patient autonomy (Shaller, 2007) and to help the patient and his/her family to participate in the care process and decision-making (Conway et al., 2006; Charmel & Frampton, 2008). Furthermore, the information provided should be unbiased and shared in a useful way (Conway et al., 2006). The objective is to promote wellness and healthy lifestyles (Pruitt et al., 2005) and to support patients to care for themselves also in the long run, after the clinical setting (Shaller, 2007).

The participational dimension describes the way and the degree of involving patient and his/her family into the care planning and delivery. According to the principles of patient-centeredness, the care should be based on a partnership between the patient and the care personnel (Frampton & Gilpin, 2008). Also the family members should be encouraged to be involved in the care process and decision-making (Conway et al., 2006; Shaller, 2007; Charmel & Frampton, 2008) and their role and importance as caregivers ought to be acknowledged (Shaller, 2007). In addition to the immediate care, the patient and families can collaborate with the personnel and health care leaders in the evaluation, development and implementation of the health care system (Conway et al., 2006). In order to support the engagement, organization should take care of collecting ongoing, routine patient feedback (Davis et al., 2005).

The emotional dimension describes the emotional support provided by the health care personnel. According to Pruitt et al. (2005), the personnel should identify and take into account the patient's expressed preferences and needs. The care should be delivered with a human touch (Frampton & Gilpin, 2008), keeping in mind the patient's values and background when planning the care (Pruitt et al., 2005). Furthermore, the personnel should listen to and be present with patients (Frampton & Gilpin, 2008) and relieve patient's fear and anxiety caused by the clinical status, prognosis, and finances (Shaller, 2007). The medical cure and traditional healing process can be complemented with supporting services such as art, massage, spirituality, and alternative practices (Frampton & Gilpin, 2008).

Finally, according to Gerteis et al. (1993), physical comfort during the care process is one of the most essential components of patient-centered care. *The physical dimension* refers to taking care of the physical aspects of the care delivery. Related to the medical treatment, this means for example relieving pain and suffering (Pruitt et al., 2005). Also the surroundings and the architectural and interior design can support the patient-centeredness of the care (Frampton & Gilpin, 2008). According to Charmel & Frampton (2008), the clinical surroundings should give space both for solitude and sociality. Furthermore, in hospital care, the nutrition should be recognized as an important part of the nurturing and as a source of pleasure, comfort, and familiarity (Charmel & Frampton, 2008; Frampton & Gilpin, 2008).

2.2 Service experience and health care service development

2.2.1 Characteristics of health care services

Health care services can be considered as pure services in the product-service continuum (Lian & Laing, 2004). Although these services usually include tangible aspects (e.g. operating room, medical equipment), the core benefits for the customer often come from performances (Berry, 2007). From customer's viewpoint, this can complicate the purchasing, consuming, and evaluation of the service (Grace & O'Cass, 2004; Lian & Laing, 2004). Firstly, as in other professional services, the buyer's dependence on the health care service provider can be significant, and assistance from the service provider is required already in defining the service need (Hill & Neeley, 1988). After the purchase decision, health care services have special emotional characteristics which affect the consumption process (Berry, 2007). The services are often highly customized and intimate requiring physical and emotional privacy. An illness can make customers more sensitive and demanding as consumers, which can affect on their perception of the service quality and their willingness to act as a co-producer. (Ibid) Finally, as with other professional services, health care services are often difficult to evaluate without certain expertise (Lian & Laing, 2004; Radish & Jusof, 2009) even after consumption (Grace & O'Cass, 2004; Berry, 2007). Intangibility and long service delivery cycles make the evaluation even harder (Lian & Laing, 2004).

However, it is important to pay attention to how customers deal with these difficulties since as stated by Martin (1999: 325): ”To a large extent, service is not so much what the business does, per se, but what the customer experiences.” Thus, more attention should be paid to the customer's *perception* of what occurred (Chase & Dasu, 2001).

2.2.2 Defining service experience

According to Vargo & Lusch (2004), value is co-created with customers during the service consumption. Thus, the objective of the service provider is not only to design consistent service encounters, meaning the interaction and contact points between the customer and the service provider (Shostack, 1985; Solomon et al., 1985), but to enable and manage memorable service experiences (Pine & Gilmore, 1998; Pullman & Gross, 2004; Stuart & Tax, 2004).

Service experience is the service process and the outcome of that process influenced by the interaction between the organization, service system, and the customer (Bitner et al., 1997; Johnston & Clark, 2001). Fundamentally, it is an occurrence of an individual affected by the service context and social constructions (Helkkula, 2001). As such, it is a combination of what is offered and how it is offered (Patrício et al., 2008), and how the process and the outcome are perceived by an individual.

2.2.3 Service experience in health care service development

Safety and quality issues have traditionally been considered as the basis for companies' success in the health-care sector (Meyers, 2009). Interestingly, in health care, the competition has not had as much effect on the quality and costs than in other sectors (Porter & Teisberg, 2004). Today, costs are rising, there are patients receiving care through inadequate procedures, errors are made, and costs and quality differ around the world (Ibid). Moreover, compared to the advances in medical treatment, the packaging and delivery of the treatment are not as well developed (Herzlinger, 2006). As stated by Berry et al. (2007: 112): ”Health care is a deeply troubled but critically important service sector. It costs too much, wastes too much, errs too much, [and] discriminates too much.”

According to Berry et al. (2004), the problem for the slow development of health care sector is that, compared to other companies, health care providers lack sufficient incentives for innovation. Also the existing resources, processes and business models restrict the innovation and start to determine how the company sees its future (Hwang & Christensen, 2008). What it comes to value creation, Lee & Lansky (2008) argue that, at the moment, health care systems emphasize provider value at the expense of the patients.

The pace of change in the health care sector can be expected to accelerate. The somewhat traditional idea of a passive patient seems to be overtaken by a new idea of an empowered and involved customer (e.g. Porter & Teisberg, 2004; Herzlinger, 2006). Already now health care customers are seeking value from health care services like from any other purchase (Charmel & Framptom, 2008). As stated by Duncan & Bresling (2009), user-friendliness, convenience, access, and experiential aspects of care

are increasingly important factors for customers when choosing a health care provider. In addition to the more active role as a consumer, according to Steiger & Balog (2010), there can already be seen a paradigm shift where patients move from the role of a passive receiver of the care into the role of involved partners in designing the care process.

Consequently, the interest in patient experience in developing the future health care services is growing (Dewar et al., 2009). Experimental knowledge has been recognized as important material also for service development (Bate & Robert, 2007; Fudge et al., 2008). While patient satisfaction describes how the patient has perceived the care, patient experience goes deeper into the patient's concerns (Scalise, 2003). According to Berry et al. (2006), it recognizes the things that are absent in the service process also as components of the experience. However, traditional research methods such as surveys and focus groups have difficulties in extracting this kind of information (Dewar et al., 2009).

Steiger & Balog (2010) point out the benefits of behaviorally-based survey data, which not only provides understanding of the things that matter to the patient but also offers insight on the patient's experience of the health care provider's actions and attitudes. In discovery interviews, for instance, patients share their care story through describing their experiences during the care process (Bridges & Nicholson, 2008). In the emotional touchpoint method patients and their families are asked to identify critical points during the care journey and choose words that best describe the experience at each point (Dewar et al., 2009). Furthermore, in the talking mats method picture symbols are used to support interviewing of people with difficulties in communication (Murphy et al., 2005).

In addition to the right mind-set in data gathering, the service development as a whole should be a person-centered process in order to plan a service-delivery system that is true to the vision of person-centeredness (Adams & Grieder, 2005). This requires a truly collaborative design process (Steiger & Balog, 2010) and an environment that supports the patient to take part in the co-creation of the services (Sandström et al., 2008). As argued by Duncan & Breslin (2009), service innovation is effectual only if it happens at the fuzzy interface between the health care customer and the organization. Referring to Bate & Robert (2007: 59): "It is in the coming together of two knowledge systems — what cognitive scientists call 'folk' (everyday, experience-based) knowledge and 'expert' knowledge (specialist, discipline-based) — that the innovation process really begins to ignite and take off."

2.3 Service design

2.3.1 Defining service design

Service design as a concept, field and approach is relatively young (Mager, 2009b; Stickdorn & Schneider, 2011). During the last decade, the development of service design has been driven by the growing attention to the role of design in product and service development, the growth of the service economy, the emergence of the 'experience economy', and the development of networked media technologies (Wetter-Edman, 2011). As a discipline, service design is often associated with service development, management, operations, and marketing (Holmlid & Evenson, 2008).

There is no common agreement on the definition of service design (Stickdorn, 2011). In the literature, service design has been discussed from the perspectives of designing interactions, designing experiences and touchpoints, and applying design principles and tools to the development of services (Wetter-Edman, 2011). According to Maffei et al. (2005), the focus of service design is in the interactivity dimensions of services. This orients the design emphasis on service experience, interface and identity and ”the visible part of the service through which the user can interact and orient his/her behaviour and choices" (Maffei et al. 2005: 416). Furthermore, as stated by Moritz (2005: 39), service design is "the design of the overall experience of a service as well as the design of the process and strategy to provide that service".

In this thesis, service design is approached from a methodological perspective and is thus defined as *"applying design methods and principles to the design of services"* (Holmlid & Evenson, 2008: 341). Service design is seen as a philosophy or an approach, meaning "the overall mindset with which the research plan is to be conducted" (Sanders et al., 2010: 2). Here, a research plan refers to the overall design of the research process.

2.3.2 Service design principles and methods

In the literature, there have been different attempts to describe and conceptualize the service design process. Moritz (2005) discusses six stages of service design: understanding, thinking, generating, filtering, explaining, and realising, whereas Mager (2009a) introduces four stage process model: discovery, creation, reality check, and implementation. Moreover, Stickdorn (2011) proposes four stage iterative process of exploration, creation, reflection, and implementation.

In addition to process tradition, there has been a growing interest towards describing the activities taking place inside the processes. Related to this, different principles and methods for service design have been suggested. According to Moritz (2005: 47), service design is "interactive" and "ongoing". Service design represents the client perspective and integrates expertise from different disciplines (Ibid). Stickdorn (2011) describes service design as user-centered, holistic and co-creative with emphasis on sequencing and evidencing, whereas according to Mager (2009b), the principles of service design are interdisciplinarity, holistic view, co-creative work, visual thinking, and radical approach. According to Miettinen (2009), service design methods emphasize social skills, empathy for the users, creativity, and visual thinking. This can for example mean applying visualizations in the analysis and modeling of the service (Holmlid, 2009; Segelström, 2009).

Wetter-Edman's (2011) synthesis on service design characteristics – that is to say, interdisciplinarity, participation, value creation, visualization, and transformation –

represents comprehensively the different service design viewpoints presented in the literature. Thus, in the next section, this characterization is used as a basis to discuss the principles and methods of service design in more detail.

Interdisciplinarity and participation

Wetter-Edman (2011) describes interdisciplinarity as one dominant characteristic of service design. Referring to Stickdorn (2011: 28), service design is “an interdisciplinary approach that combines different methods and tools from various disciplines”. This is in line with Moritz (2005: 47), who states that service design is not a new specialist design discipline but a “new multi-disciplinary platform of expertise.” In organizations, these fields usually include management, marketing, research, and design (Ibid).

The call for multidisciplinary participation has opened up possibilities also for non-designers to participate in the design process (Moritz, 2005). According to Sanders & Stappers (2008), co-design refers to collective creativity of designers and people not trained in design working together across the whole design process. The approach is based on the assumption that all people are creative (Ibid). In co-design, the service user is seen as the expert of his/her experience (Sanders & Stappers, 2008), which changes the role of the user from a passive object to an active collaborator in the design process (Moritz, 2005). A participatory workshop is an example of methods commonly utilized in service design. According to Luck (2003: 524): “When engaged in a participatory design workshop the people who attend are part of the social process of design and play an active part in the issue/problem raising, discussion and decision making processes that are part of the early design stage of a project.” In addition to the service user, also other stakeholders can be involved, such as different specialists from the service company (Mager, 2009b). This supports the multidisciplinary nature of service design and can be also seen as a possibility for collaborative learning (Kronqvist & Salmi, 2011). According to Sanders & Stappers (2008), the role of the designer is to support the participation by providing tools for expression and giving form to the ideas.

Also design research methods have a central role in the service design process (Miettinen, 2009). As an example of participational design research methods, Design Probing is a user-centered research method based on self-documentation (Mattelmäki, 2006). Design probes are assignments through which users document their experiences, needs, ideas and attitudes according to the research focus. The purpose of design probe research is to find out new opportunities as opposed to solving known problems. Probes seek to dig into the users' subjective experiences and use that understanding as a basis for design improvements. Furthermore, they invite the users to participate in the design process supporting the communication between the user and the designer. (Ibid)

Value creation and visualization

According to Miettinen (2009), value creation is an essential part of service design. Following the perspective of service-dominant logic, the value is co-created with customers when consuming the service (Pine & Gilmore, 1998). Intangibility, exchange processes and relationships are seen as means for value creation making the distinction between tangible and intangible aspects of service unrelevant (Vargo & Lusch, 2004). The goal is to "customize offerings, to recognize that the consumer is always a coproducer, and to strive to maximize consumer involvement in the customization to better fit his or her needs" (Vargo & Lusch, 2004: 12). Thus, the focus of service design is on the communication, interactions and actors, and the service design activities should be organized accordingly (Wetter-Edman, 2011). This means for example choosing and developing innovative design methods to support the value creation (Miettinen, 2009).

Visualizations and visual thinking have an integral part in service design discipline (Holmlid, 2007) and can be used in every stage of the design process (Mager, 2009b). According to Maffei et al. (2005), visualizations support designing and describing the user experience as well as structuring the surrounding organizational complexity. Furthermore, in design workshops, visualizations can be used to support imagination and expression of ideas, and recording the insights (Sibbet, 2008). The intangibility of services increases the importance of visualization both when developing a service and when delivering it (Wetter-Edman, 2011).

One example of visual service design methods is service blueprinting. Originally introduced by Lynn Shostack in 1984, it has been one of the mostly widely used tools in mapping, documenting and evaluating service processes (Johnston, 1999). In the method, the actions related to the company service process are documented using a specific template. The service actions are divided into components of customer actions, onstage actions, backstage actions, support processes, and physical evidence. According to Van Dijk et al. (2011), a participatory workshop is a good forum for producing a blueprint, because the formulation process can support internal communicating on the roles and responsibilities related to the service provision.

Service mapping methods add on to the blueprinting technique by paying more attention to the customer's perspective of the process (Johnston, 1999). One example of this is the customer journey method. Customer journey refers to the series of occurrences, service encounters or contact points that the customer experiences before, during and after the service consumption. According to Meyer & Schwager (2007: 3), these ”touch-points” can occur ”with the product or service itself or with representations of it by the company or some third party”. Thus, the journey is affected both by the service provider actions and the customer's choices (Koivisto, 2009). The framework can be used to mapping and concretising the customer service process from customer's viewpoint. As some contact points can be regarded as more valuable than others (Meyer & Schwager, 2007), the method helps to identify the critical moments during the process as well as the missing service elements (Koivisto, 2009).

User personas are fictional characters or profiles based on the user understanding. They often utilize stereotypes to make different user types or customer segments tangible (Stickdorn, 2009). Although being fictional representations, the personas are often created based on some form of user research (Van Dijk et al., 2011). When used in related to design research, user persona method is a good way to concretize the research material without revealing the identity of the study participants (Mattelmäki, 2006). The personas can be used to support the service design process by helping the design team to engage with different user types (Van Dijk et al., 2011). As a creative and visual tool user personas are also a good starting point for utilizing other service design methods (Stickdorn, 2009).

Transformation

Pacenti & Sangiorgi (2010) discuss transformation as one of the main research areas in service design research. Transformation can manifest itself on individual, societal, and organizational level (Sangiorgi, 2010). The importance and possibilities of design in organizational development have been discussed in the literature (Buchanan, 2008). In addition to providing solutions to specific problems, service design practitioners are introducing to organizations new tools, methods, practices and know-how for human-centered service innovation (Sangiorgi, 2010). According to Mager (2009b: 39), service design should aim at radical changes, as opposed to "minor decorative improvements in service system". By involving people from different levels of the organization in a collaborative design process, service design supports the implementation of the change (Moritz, 2005).

Before summarizing the literature and presenting the theoretical framework in the chapter 4, the chapter 3 presents the case company and the research context.

3 Case description

This thesis is conducted as a case study for a private Finnish infertility clinic. This chapter introduces the context of the study. First, the background of the case is presented. After that, a short introduction to the case company and the case service process of oocyte donation is provided.

3.1 Case background

3.1.1 Patient mobility in Europe

Patient mobility is increasing (Carrera & Bridges, 2006). People are increasingly seeking treatment from abroad especially due to the international differences in the care accessibility and the treatment costs (Ibid). According to the World Tourism Organization, in 2005, Europe was the primary destination for health related tourism with about 53% share of the market (Ibid). In the non-industrialized countries, wealth is concentrated on small populations, which together with limited local services increase the patient flows into the industrialized countries (Hartman & Kahri, 2011). In Europe, the flows are concentrated on culturally and linguistically similar border areas (Ibid). According to Rosenmöller et al. (2006), there remains scope for greater mobility due to the imbalance between supply and demand in Europe’s health systems.

In addition to the socio-cultural and geographical reasons, also the general integration of EU accelerates the mobility (Hartman & Kahri, 2011). One driver is the development of EU legislation. In 2006, EU member governments agreed on common principles of health care, including the aim of patient-centeredness (European council conclusions 2006/C 146/01). Along with this aim, the Directive on patient’s rights in cross-border health care was adopted in 2011 to clarify the rights of patients crossing borders between EU member states (Zanon, 2011). According to the Directive, the patients are eligible for the health insurance compensations of their own country health system when seeking health care services abroad (European parliament and council directive 2011/24/EC). The Directive is due to take effect during the year 2013 (Hartman & Kahri, 2011).

According to Hartman & Kahri (2011), very few of the Finnish health care service providers market their services actively also outside Finland. In the private sector, one possible reason for this is the small size of the service providers. However, there remains potential for Finnish know-how in certain special areas of health care. In addition to plastic surgery, eye surgery and imaging, one of these areas is infertility services. (Ibid)

3.1.2 Introduction to infertility services

Involuntary infertility is often a silent and hidden issue, touching surprisingly big numbers of people around the world in all social classes. Commonly, a couple is said to be experiencing infertility, if conception has not occurred during 12 months of trying. According to estimations, in industrialized countries, the lifetime prevalence of infertility with women who have tried to conceive is 16-26% (Schmidt et al., 2003). According to a research conducted in Finland, 14.4 % of Finnish women over 20 years have experienced unwanted childlessness in some part of their lives (Klemetti et al., 2004). With men the same number is 7.9% (Ibid).

Despite the relatively large prevalence of infertility in the world, the proportion of infertile couples seeking for medical care is much smaller (Boivin et al., 2007). According to Boivin et al. (2007), only about 56% of the couples experiencing infertility seek for medical care. According to Johnson & Johnson (2009), women often play determinant role when the couple makes the decision to search for external help. However, male partner's role in the decision making increases during the treatment process (Ibid). The high socio-economic class and high education increase the likelihood of seeking medical evaluation (Malin & Hemminki, 1996; Klemetti et al., 2004). According to Olafsdottir (2012), customers choose private clinics for example due to age, parity, and time pressures.

3.1.3 Infertility services in the Nordic countries

The Nordic countries (Denmark, Finland, Iceland, Norway, Sweden) have been among the pioneering countries in both developing and using assisted reproductive technology (Olafsdottir, 2012). Finland is the biggest provider of infertility treatments in the Nordic countries after Denmark (Andersen et al., 2008). There were about 14 300 assisted fertility treatments performed in Finland during the year 2010. The treatments resulted in a total of 3169 pregnancies and 2687 babies, which is 4.4% of the children born that year. (Heino & Gissler, 2012) The number of assisted infertility treatments rose from the year 2009 5.9%, and according to the estimations of The National Institute for Health and Welfare, the number continues to rise (Heino & Gissler, 2012).

Today, all the Nordic countries have legislation covering assisted reproductive technology treatments, Finland being last to adopt one in 2007 (Olafsdottir, 2012). However, legislation, especially regarding oocyte donation and sperm donation, differs among the countries. In Norway the legislation is more restrictive, the country being for example the only one having prohibited oocyte donation. Embryo donation is allowed today only in Finland and Iceland, whereas surrogacy (a practice of bearing a child for another woman) is not allowed in any of the Nordic countries. In Denmark, the donors are anonymous, while Sweden, Norway and Finland require the registration of the donors. In Iceland the anonymity is optional. (Ibid)

According to the study by Olafsdottir (2012), almost every private infertility clinic in the Nordic area offers assisted reproductive treatments also for couples from other Nordic countries. As members of the European Union, the Directive on cross-border Health care will affect Denmark, Finland, and Sweden. The citizens of Iceland and Norway will be involved in the agreement through the European Economic Area (EEA) collaboration. (Ibid) In addition to the differences in legislation (Olafsdottir, 2012), also costs, availability of care and waiting times increase the cross-border reproductive care demand (Horowitz et al., 2008).

3.1.4 Infertility experience

Infertility is a complex and highly personal experience. Infertility can cause psychological distress, depression, marital tension, grief, and guilt (Lukse & Vacc, 1999; Merari et al., 2002; Anderson et al., 2003). Furthermore, it can decrease life satisfaction, sexuality, and self-esteem and cause self-blame and avoidance of friends (Anderson et al., 2003). There remains dispute on the effect of stress and emotional concerns on the fertility treatment outcomes (e.g. Milad et al., 1998; Klonoff-Cohen et al., 2001), but according to Olivius et al. (2004), the psychological burden can make the couple discontinue the treatment process. According to studies, women often experience more emotional concerns than men (Merari et al., 2002; Anderson et al. 2003).

The possibilities to share issues and receive outside support are important for the conjugal well-being of the couple experiencing infertility (Abbey et al., 1995), but the support is sometimes perceived as unhelpful (McGrade & Tolor, 1981). According to studies, women discuss infertility related issues with their close ones more openly than men (Schmidt et al., 2005). However, often couples rely mainly on each other (Abbey et al., 1995).

Compared to other health care customers, women going through infertility treatments are more often dissatisfied with the treatment they receive (Malin et al., 2001). Generally, couples are more satisfied with the medical part than with the emotional aspects of the infertility care (Souter et al., 1998). However, both satisfaction and dissatisfaction with respect to emotional aspects have been reported by couples (Schmidt, 1998). The most common sources of dissatisfaction with infertility care are poor relationship with the personnel, the slow progress of the treatment, poor access to care, and having different doctor every time (Malin et al., 2001). According to the same study, the most important factors increasing satisfaction are having a child in the end of the process, receiving information that helps to clarify the situation, and being treated well by the nursing personnel. Also more couple-centered approach has been called for by the customers (Schmidt, 1996).

Provision of information, especially in written form, is one of the key aspects generating patient satisfaction in medical services (Souter et al., 1998; Hammerberg et al., 2001; Schmidt et al., 2003). In the beginning of the infertility treatments, customers wish to get information about the treatment possibilities and procedures, time spans, and schedules (Miettinen, 2011). During the treatment process, customers expect both medical advice and assurance that everything possible has been done (Malin et al., 2001). Interestingly, for women, high educational level increases the need for information, whereas for men the high educational level decreases it (Miettinen, 2011). The need for information is present although the couple would have gone through several treatments before (Olafsdottir, 2012).

3.2 Case company: AVA Clinic

The case company, AVA Clinic, is a private Finnish infertility clinic founded in Tampere in 1987. AVA Clinic consists of a group of clinics based in Finland (Tampere, Turku, Jyväskylä, and Helsinki) and in Latvia (Riga). In addition to infertility treatments, AVA Clinic provides services for later pregnancy following and psychology.

A substantial part of AVA Clinic's customers comes from abroad making the clinic an important player in the field of reproductive tourism in the Nordic countries. At the moment, a considerable portion of the foreign customers come from Scandinavia, especially from Sweden and Norway. Most of these customers seek for oocyte donation treatment due to the differences in legislation, accessibility and pricing compared to their home countries. Accordingly, oocyte donation treatment was also chosen as the focus of this research.

3.3 Case service process: oocyte donation

Oocyte donation is an infertility treatment originally introduced for women with ovarian failure. Today, the indications for the oocyte donation treatment are more diverse including for example advanced maternal age, diminished ovarian reserve, and genetic abnormalities. (Van Der Hoorn et al., 2010) Oocyte donation requires a suitable donor, who undergoes IVF stimulation (hormonal stimulation of the ovaries) to produce oocytes. After the stimulation the oocytes are harvested, fertilized and cultured in a laboratory setting. After a few days one or two of the developed embryos, meaning the fertilized and several-times-divided ovum, are placed in the recipient's uterus. Additional embryos can be frozen in case of future use.

From the viewpoint of service provision, oocyte donation treatment is a lengthy process taking several months, even years. The duration of one treatment cycle is mainly dependent on the availability of suitable oocytes. However, from the year 1984 when the oocyte donation was introduced, the amount of treatments performed has been in a constant increase (Kalfoglou & Gittelsohn, 2000).

In Finland, the first donor oocyte treatment was performed in 1991 (Seppänen, 2012). Today, about 95 percent of the treatments are performed in private clinics (Heino & Gissler, 2012). As previously mentioned, the cross-border demand for oocyte donation is driven for example by international differences in legislation, accessibility of care and pricing. For instance, at the time of the study, oocyte donation is prohibited in Norway, whereas in Sweden the treatment is allowed only in public clinics (Olafsdottir, 2012). Finland is the destination especially for customers coming from Sweden, Norway and Russia, but apart from a couple of clinics, the amount of treatments carried out on foreign customers has remained relatively low (Heino & Gissler, 2012).

Since September 2007, the clinics operating in Finland have been obliged to register the donors. This is due to the Act of Assisted Fertility Treatments, according to which a person born from donated germ cells can learn the identity of the donor after turning eighteen. The donation register is maintained by the Finnish National Supervisory Authority for Welfare and Health. (Heino & Gissler, 2012)

4 Theoretical framework

As pointed out in the literature review, the service success in health care has been long discussed from the viewpoints of service quality and customer satisfaction (Carman, 2000; Rashid & Jusoff, 2008). However, the fruitfulness of this kind of approach from the viewpoint of service development has been questioned (Dewar et al., 2009). Driven by the increasing activity of health care customers as knowledgeable consumers (Charmel & Framptom, 2008) and designers of their own care (Steiger & Balog, 2010), the interest in patient experience is growing (Dewar et al., 2009). Consequently, there has been acknowledged a need for finding methods that grasp the holistic service experience (Steiger & Balog, 2010) and enable the patients to be involved in the service design process (Bate & Robert, 2006; Sandström et al., 2008; Duncan & Bresling, 2009).

Based on the literature review and the case description, a theoretical framework for the research was created. The purpose of the framework is to present the theoretical conclusions of this research and to serve as a context for the empirical part of the study.

The theoretical framework is illustrated in the Figure 1. It seeks to address the two research questions: how is a service experience constructed in infertility treatment services and how can service design principles and methods be applied to service development in the context of infertility services. The framework is comprised of three constructions: *integrated perspective to patient-centered care, dimensions of service experience in infertility services, and service design principles and methods.*

Firstly, as pointed out in the literature review, the concept of patient-centered care has remained fuzzy (Epstein, 2000; Steiger & Balog, 2010). Commonly patient-centered care is seen as a measure of the quality of health care defining the characteristics of patient-centered health care (Robinson et al., 2008). Focusing on care delivery, however, the concept has not been studied very much in the context of practical service development, although a need for redesigning the systems of care in order to achieve patient-centered outcomes has been identified (Bergeson & Dean, 2006).

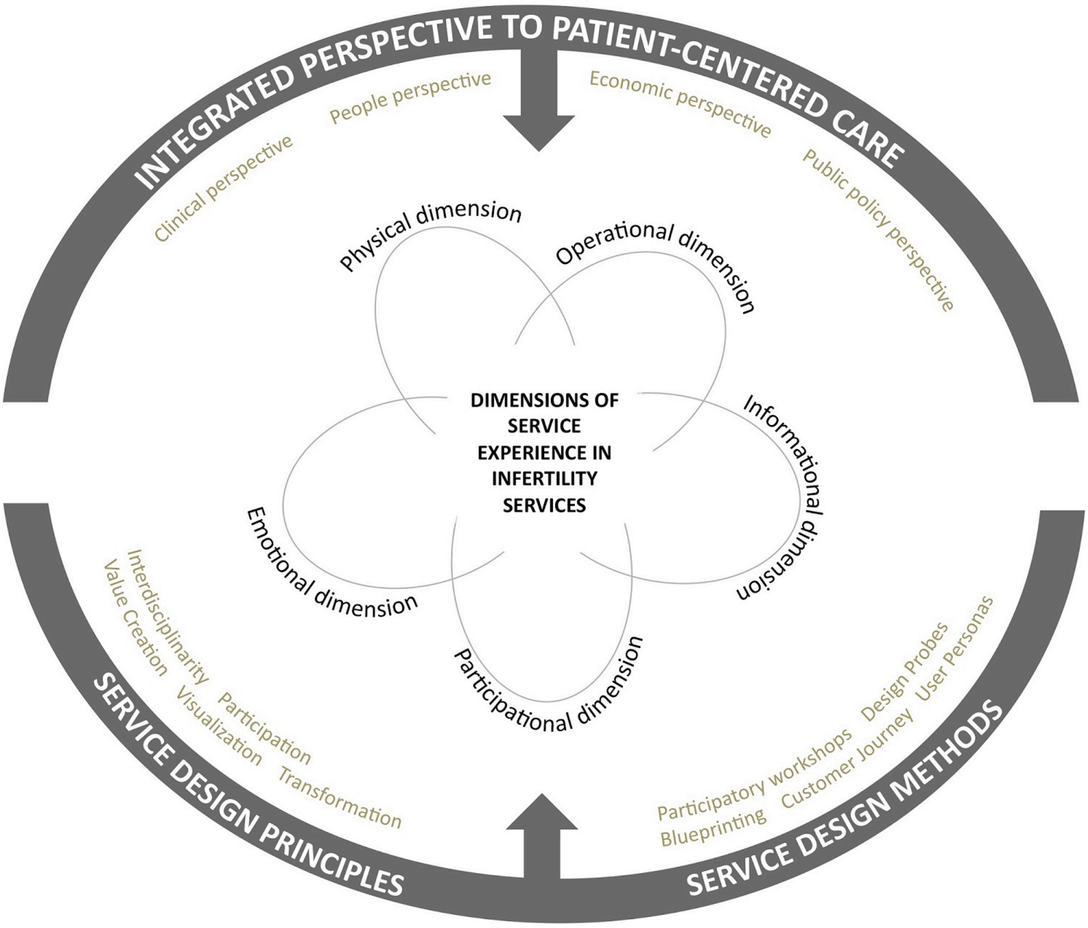
Synthesizing the reviewed perspectives on patient-centered care, *an integrated approach on patient-centered care* was chosen as a perspective for this study. Accordingly, patient-centered care refers to an approach of care that emphasizes patient-centered attitudes, knowledge requirements, consultation skills and behaviours, and the patient's role in the care delivery (De Valck et al., 2001). It examines patient-centered care from a holistic perspective stressing the importance of redesigning the health care system in order to support the implementation of patient-centered care (Bergeson & Dean, 2006).

Secondly, as a synthesis from the literature on service experience (Bitner et al., 1997; Helkkula, 2001; Johnston & Clark, 2001; Patrício et al., 2008), service experience was defined as a combination of what is offered, how it is offered and how the service process is perceived by an individual. Combining the literature on the quality characteristics of patient-centered care with the definition of service experience, and applying it to the context of infertility services, the infertility service experience can be seen to be constructed from five different service experience dimensions: operational dimension, informational dimension, participational dimension, emotional dimension, and physical dimension.

The operational dimension refers to customer's experiences related to access, timeliness and coordination of the care process (Bergeson & Dean, 2006; Shaller, 2007). In the context of infertility services this means for example reasonable waiting time for treatment. *The informational dimension* describes the experiences related to receiving information and knowledge concerning the treatment (Conway et al., 2006; Shaller, 2007). This refers to the sufficiency, accuracy, timeliness, and convenient delivery form of the information. *The participational dimension* illustrates the experiences of being actively listened and involved in the planning and delivering of the care (Convay et al., 2006; Shaller, 2007; Frampton & Gilpin, 2008). In the context of infertility services this means for example customer engagement in care, couple-centeredness of the personnel, and availability of peer support. *The emotional dimension* refers to the experiences of being taken care of as an individual and person during the care process (Frampton & Gilpin, 2008). This describes the attitude of the personnel (Shaller, 2007; Frampton & Gilpin; 2008), the way of communication and interaction, and the respect for customers' values, preferences, and needs (Gerteis et al., 1993). Finally, *the physical dimension* includes experiences related to physical aspects and physical comfort of the care (Gerteis et al. 1993), both related to body (medication, procedures) and the clinical surroundings.

Finally, in the literature review, service design was defined as "applying design methods and principles to the design of services" (Holmlid & Evenson, 2008: 341). Wetter-Edman's (2011) synthesis on service design characteristics (interdisciplinarity, participation, value creation, visualization, and transformation) was used to discuss the principles and methods of service design. Reflecting these principles, the service design methods of design probing, participatory workshop, customer journey, user personas, and blueprinting are applied to service development in the context of infertility treatment services in the empirical part of the study.

Figure 1 Framework of the study



5 Research methodology and data collection

This chapter concentrates on the research methodology and data collection. First, the research design, research methods and methodological choices are discussed and explained. After that, the processes of data collection and data analysis are discussed in detail. Finally, the chapter ends with a brief evaluation of the study.

5.1 Research design and methods

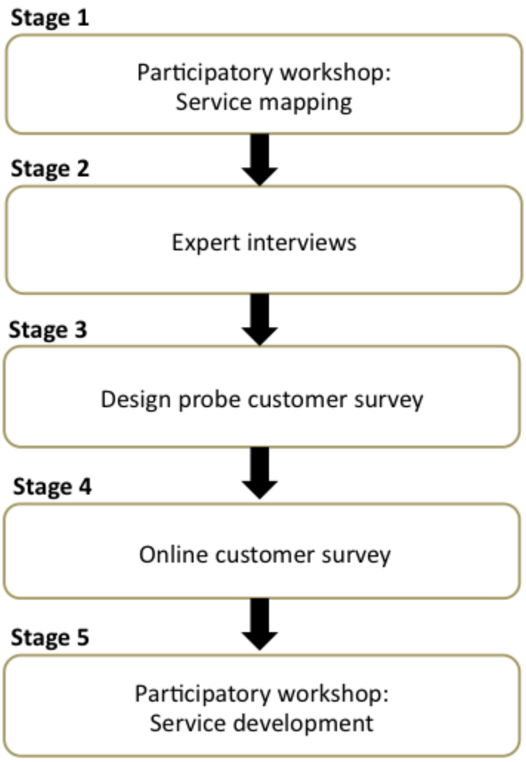
A paradigm is “a cluster of beliefs and dictates which for scientists in a particular discipline influence what should be studied, how research should be done, [and] how results should be interpreted” (Bryman, 1988: 4). Paradigms are based on different assumptions about the nature of reality, knowledge, and the research process (Collis & Hussey, 2003). Ontological assumptions, for instance, are related to the question of whether the world and the social entities are objective and external to the researcher, or whether they should be understood as social constructions (Collis & Hussey, 2003; Bryman & Bell, 2007). Epistemological assumptions answer the question of what kind of knowledge is considered valid in a discipline (Bryman & Bell, 2007). Finally, methodological assumptions are related to the practical research design (Collis & Hussey, 2003).

The objectives of this research are to study how service experience is constructed in infertility services and how service design principles and methods can be applied to service development in the context of infertility treatment services This thesis is founded on the phenomenological paradigm, which is concerned with ”understanding human behaviour from the participant’s own frame of reference” (Collis & Hussey, 2003: 53). Ontologically, a constructivist position is chosen for the study. In addition to seeing the world as a social construction, the constructivist ontology acknowledges that the researcher is part of the social world thus having an impact on the research results (Bryman & Bell, 2007). Furthermore, when it comes to epistemological assumptions, the thesis makes use of the interpretivist epistemology, which suggests that phenomena can be approached by analyzing the meanings that people subjectively bring to them (Blumberg et al., 2008).

The philosophical positioning of the research affects the research design and the methodological choices of the study. Often associated with the phenomenological paradigm (Collis & Hussey, 2003), the research is conducted as a case study for a Finnish private infertility service clinic. According to Gerring (2004: 342), case study is "an intensive study of a single unit for the purpose of understanding a larger class of (similar) units". Traditionally, the purpose of a case study has been to provide a description, test some theory or hypothesis, or generate new ones (e.g. Eisenhardt, 1989; Flyvbjerg, 2006). Case study research strategy typically combines different research methods and techniques (Eisenhardt, 1989). It is an appropriate research strategy especially when the objective is to achieve a holistic understanding of complex organizational, managerial, or business related issues (Eriksson & Kovalainen, 2008). Moreover, case studies usually have high validity with practitioners which, according to Voss et al. (2002: 195), are the "ultimate users of research".

The interest towards utilizing qualitative methods in health services research and health technology assessment is increasing (Mays & Pope, 2000). A qualitative research approach was chosen also to this study. In contrast to quantitative research focusing on measuring the causalities between different variables, qualitative research studies "things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them" (Denzin & Lincoln, 2000: 3). According to Gilmore & Carson (1996), the qualitative research approach is well applicable to studying dynamic and experiential processes such as services. Furthermore, qualitative research methods enable learning during the research process thus providing deeper understanding of the phenomena (Gilmore & Carson, 1996). Qualitative research utilizes a variety of methods, techniques and materials in data collection. The techniques range from traditional interviews and observational studies to utilizing stories, narratives, and visual presentations (Denzin & Lincoln, 2000). An overview of the empirical research design is presented below (Figure 2).

Figure 2 Overview of the empirical research design



In the first stage of the empirical research, two service mapping workshops were organized in the case company premises (Tampere and Turku) in order to collect understanding of the research context, document the current oocyte donation service process with the clinic practitioners, and to build a basis for the design collaboration. In the documentation, blueprinting method was used to discuss, document and categorize the service process actions (Johnston, 1999).

In the second stage of the empirical research, expert interviews were conducted in the clinic in order to discuss and evaluate the current oocyte donation process with practitioners working in different roles in the service process. Interviewing methods can be divided into three approaches: unstructured interactive interviews, semistructured interviews, and structured interviews (e.g. Fontana & Frey, 1994; Corbin & Morse, 2003). These approaches differ in relation to the control of the interviewee over the process and the content of the interview (Corbin & Morse, 2003). In structured interviews the researcher has a full control over the interview structure (Corbin & Morse, 2003). In order to minimize errors, the questions are preestablished and asked in the same order and form from every respondent (Fontana & Frey, 1994). In semistructured interview the researcher defines the agenda by asking pre-determined set of questions (Corbin & Morse, 2003) and complementing the set by questions emerging during the dialogue (Dicicco-Bloom & Crabtre, 2006). The interviewee is thus not in control of the structure but can control the agenda and information amount through ones responses (Corbin & Morse, 2003). Finally, in unstructured interview, such as the open-ended ethnographic interview (Fontana & Frey, 1994), the interviewee sets the agenda, and the researcher can focus the agenda by asking questions (Corbin & Morse, 2003). In contrast to the other approaches, unstructured interview provides greater "breadth" of information (Fontana & Frey, 1994: 365).

For the purpose of this study, a semistructured interview approach was chosen. The service blueprint developed in the first stage of the empirical research was used in the interviews to focus the discussion. The objective was to identify critical process phases and elements and to discuss the roles and responsibilities related to the service provision (Van Dijk et al., 2011). A checklist of questions was used to keep a certain consistency between the interviews. At the same time, semi-structured approach enabled the researcher to follow up interesting avenues that emerged in the interview situation (Smith, 2001).

The usefulness of narrative approach in collecting insight on patient experience has been acknowledged in the literature (Bridges & Nicholson, 2008; Dewar et al., 2009). *In the third stage* of the empirical research, design probe study method was used to collect understanding of the customer's service experience during the oocyte donation process. The design probe study was targeted to Swedish and Norwegian couples that were, at the time of the study, under oocyte donation treatment in the clinic. The method has been criticised for its broad focus (Mattelmäki, 2006). From the viewpoint of decision-making, the results can be too subjective and fragmented (Ibid). In this study, however, design probing was considered to give more profound understanding of the service experience than more traditional survey methods. Instead of answering predetermined set of questions, design probes make possible for the customers to point out critical issues concerning the service thus giving more inspirational material for service development. Furthermore, probes are well suitable for situations where the purpose is to find out new opportunities as opposed to solving known problems (Mattelmäki, 2006).

Online survey is a cost effective survey method (Andrews et al., 2003). In order to complement the design probe study, an online customer survey was conducted *in the fourth stage* of the empirical research. The survey was targeted to Swedish and Norwegian couples that had approached the clinic by e-mail regarding the oocyte donation treatment but who had not decided to start the treatment process. Compared to mail surveys, the response rate of online surveys is often lower (Manfreda et al., 2008). In this research, however, the purpose of the online survey was not to provide statistically significant data but to complement the design probe study by providing additional customer information for the purposes of service development.

Finally, *in the fifth stage* of the empirical research a participatory service design workshop was organized for the clinic practitioners. The objectives of the workshop were to discuss the research findings with the clinic employees and to combine the internal and external understanding of the service experience in order to use that as a basis for service improvements. Following the approach of clinical process redesign, the patient's care journey was mapped and evaluated in order to improve the health care process from customer point of view (Ben-Tovim et al., 2008). In the workshop, visual tools such as Customer Journey (e.g. Meyer & Schwager, 2007; Koivisto, 2009) and User Personas (Stickdorn, 2009; Van Dijk et al., 2011) were used to support imagination and expression of ideas (Sibbet, 2008).

In the following sections, the process of data collection and analysis is discussed in more detail.

5.2 Process of data collection and analysis

5.2.1 Participatory workshop: service mapping

The empirical research process began with two participatory workshops in which the current service process of oocyte donation was mapped together with the clinic personnel in Tampere and Turku (Table 2). In the workshops, post-it notes and a blueprint template were used for documentation (Figure 3).

Table 2 Overview of the service mapping workshops

	Participant position	Location	Date
Workshop A	Administrative Manager & Fertility Specialist	Tampere	12.6.2012
Workshop B	Office Secretary & Fertility Specialist	Turku	14.6.2012

Figure 3 Service mapping workshop material

5.2.2 *Semi-structured interviewing*

After the service mapping, semi-structured, thematic interviews were conducted in the company premises on six people working closely related to the oocyte donation process (Table 3). The purpose of the interviews was to discuss the process phases and the roles of different practitioners in the service process. The service blueprint mapped in the phase one was used as a basis for conversation during the interviews. Interviews were recorded by using notes, and with the permission of the interviewee, half of the interviews were also tape recorded for further processing. The interviews lasted from 60 to 90 minutes. After the interviews, the tape recordings were transcribed into a textual format.

Table 3 Overview of the clinic interviews

Interviewee	Location	Date
Administrative Manager	Tampere	5.6.2012
Fertility Specialist	Turku	14.6.2012
Fertility Specialist	Tampere	27.6.2012
Fertility Nurse	Tampere	27.6.2012
Chief Nurse	Turku	5.9.2012
Fertility Specialist	Tampere	12.9.2012

5.2.3 *Design probing*

In the third phase of the empirical research, the design probe method was used to collect understanding of the company's customers and their experiences during the oocyte donation process. The probe exercises were developed in collaboration with the clinic personnel. First, preliminary ideas of the exercises were generated based on the research focus and the insights gathered during the service mapping and the clinic interviews. Also practical case and method examples from the literature such as Talking Mats (Murphy et al., 2005) and the emotional touchpoint method (Dewar et al., 2009) were used as inspiration. The ideas were then discussed with two staff members (Fertility

Specialist and Administrative Manager). Based on the discussion, the first version of the design probe research kit was designed. After that, the exercises were once again discussed and validated in the clinic, and some modifications were made to the assignments.

As a result, the ”Polku” research kit consisting of four probe exercises (Diary, Journey Map, Picture Cards, Memo Pad) was designed for couples coming from abroad to Finland for oocyte donation treatment (Figure 4; Appendices 2-7).

Figure 4 Design probe kits

The research kits were delivered to the couples who expressed their willingness to participate in the research. This was asked through an e-mail and when the couples visited the clinic for the first time. Altogether, 21 design probe kits were delivered. Eight kits were sent by mail and 13 kits were handed out by the staff during the clinic visit. The couples were asked to document their experiences related to the oocyte donation process for two weeks. After that, the probe kits were sent to the researcher. Altogether, eight probe kits were received, making the response rate 38%. At the time of response, five of the respondent couples were waiting for the donor, whereas three of the couples had already been in embryo transfer (Table 4).

Table 4 Overview of the design probe respondents

Respondent couple	Country	Process phase
Couple 1	Norway	Embryo transfer
Couple 2	Norway	Waiting for donor
Couple 3	Sweden	Embryo transfer
Couple 4	Sweden	Embryo transfer
Couple 5	Norway	Waiting for donor
Couple 6	Norway	Waiting for donor
Couple 7	Norway	Waiting for donor
Couple 8	Sweden	Waiting for donor

The probe kits were carefully examined one at a time, and the material was also explored as a whole. In order to be able to manage the amount of data, all the material related to one couple was collected to a same file.

According to Mattelmäki (2006), the interpretation of the probe material can be approached in different ways depending on the purpose and the context of the research. In general, informational aspirations demand more careful organization of the data, whereas for purely inspirational purposes the material can be utilized as such. To serve both theoretical and practical purposes of this research, different interpretation models were applied in a processual manner to approach the material.

First, the insights and ideas emerging from the material were listed. The objective was to remain open to topics, phenomena and perspectives rising from the material (Mattelmäki, 2006). After that, each probe kit was organized and transcribed to a form of a chronological story describing the service experience. The stories of the couples were compared with each other in order to find patterns and common themes related to the experiences. Five different persona types emerged from the material ("Open and reflective", "Lonely and lost", "Satisfied and hopeful", "Active and thirsty for knowledge" and "Gloomy and frustrated"). The persona types were discussed with the clinic psychologist, and accordingly, following the interpretation approach of *condensing and combining* (Mattelmäki, 2006), the material was condensed and visualized into a form of five User Personas (Appendix 8).

When examining the design probe material as a whole it was noticed that in addition to the more descriptive elements, a big proportion of the material included straight compliments, ideas, and questions for the clinic. Based on this observation, the material was categorized into three groups: greetings, development ideas, and questions. These categories were further processes into a form of Experience Cards –tool (Appendix 11).

Finally, the approach of *applying interpretation models* was used to structuring the design probe material in order to focus the attention to a certain predefined goals of the research (Mattelmäki, 2006). In this stage, the design probe material was categorized according to the research framework. Based on the framework, five interpretation topics were used: operational experience, informational experience, participational experience, emotional experience, and physical experience.

Figure 5 Design probe material

5.2.4 Online customer survey

In the fourth phase of the empirical study, the design probe survey was complemented with an online customer survey. The survey was targeted to Swedish and Norwegian couples that had been in contact with the clinic by e-mail regarding oocyte donation but had not, for some reason or another, reserved a doctor appointment. The main objective of the survey was to increase understanding of the factors that affect the decision on which infertility clinic customer chooses.

The survey was conducted through an online survey software. The couples were randomly selected from the clinic e-mail archives by the clinic contact persons. Due to patient privacy and security issues, the covering letter and the link to the survey were sent by e-mail through the clinic personnel. A combination of a cover e-mail and a web-based survey was also suggested by Andrews et al. (2003). The survey could be filled either in English or Swedish. The survey was sent to total of 31 couples. As the target group was not customers and thus challenging to reach, it was not to expect high response rate. Total of eight responses to the survey were received, thus making the response rate 25.8%.

For disclosure reasons, the online survey is not further discussed in this thesis. However, a sixth user persona ("Unknown customer") was created on the basis of the insight gained through the survey (Appendix 9).

5.2.5 Participatory workshop: service development

In the last phase of the empirical research process a three-hour workshop was organized for eight staff members working in different roles in the oocyte donation process in Tampere and Turku clinics (Table 5). The workshop was held in the clinic premises in Tampere (29.11.2012). The main objectives of the workshop were to create common understanding of the service experience during oocyte donation service process, identify the most critical service phases and elements from customer's point of view, and collaboratively develop the service based on the gained understanding.

Table 5 Overview of the workshop participants

Participant	Participant position	Clinic
Participant 1	Office Secretary	Tampere
Participant 2	Fertility Nurse	Tampere
Participant 3	Fertility Specialist	Tampere
Participant 4	Administrative Manager	Tampere
Participant 5	Office Secretary	Turku
Participant 6	Chief Nurse	Turku
Participant 7	Medical Director	Turku
Participant 8	CEO	-

Based on the presented objectives, the workshop was structured into three phases: discussing the service experience based on the customer research material (design probes and online survey), generating ideas to meet identified customer needs, and evaluating and developing the ideas together.

The workshop begun with a short introduction on the background of the study and the customer research process. Also the objectives, phases and the schedule of the workshop were introduced. After that, the participants were divided into two (pre-selected) groups of four members, and both groups were asked to select a secretary and a ”time police” among themselves. The groups got detailed workshop instruction sheets in order to be able to proceed with the tasks independently. The instructions were also projected on the wall.

The first part of the workshop was reserved for exploring the customer research material and forming understanding of the service experience during the oocyte donation process. First, the groups got familiar with the service users through User Personas (Appendices 8-9) created based on the design probe and online survey material. The groups were asked to discuss the persona characters and their motives, needs and behaviour models based on their own experiences. Some questions were prepared to support and inspire the discussion. The insights were then shared between groups. After that, the groups were instructed to go through the customer quotes in Experience Cards (Appendix 11) and place the cards on Customer Journey board (Appendix 10). The established understanding of the service experience was used in discussing and identifying the critical process phases and elements from customer's point of view (Figure 6). Based on the discussion, groups documented the identified elements and needs on an A2 sheet of paper.

Figure 6 Utilizing User Personas, Customer Journey and Experience Cards for identifying critical steps in the service process

In the second phase of the workshop, the groups were asked to generate service solutions and ideas based on the identified customer needs. At this point, the participants were asked to ideate freely without boundaries in order to produce as many ideas as possible without stopping to evaluate. The ideas were documented on post-it notes which were then collected on an A2 sheet of paper. In the end of the phase two, the groups presented the ideas briefly to each other.

In the third phase of the workshop, the ideas generated were evaluated and developed (Figure 7). First, the groups were asked to discuss and evaluate the ideas from the viewpoints of customer value and internal feasibility. Based on the discussion, the ideas were divided into three categories: valuable and feasible ideas, valuable but not so feasible ideas, and unfeasible ideas. After that, both groups chose 2-3 ideas they considered as the most potential. The customer's perspective was emphasized in the evaluation. These ideas were then discussed briefly between the groups, and after the discussion, the ideas chosen were further developed and concretized on an A2 sheet of paper. The groups were asked to rotate the idea sheets between groups in order to find a fresh viewpoint.

Figure 7 Evaluating ideas and developing service concepts

In the end of the workshop, the groups presented the service concepts to each other, and there was a brief discussion on how to proceed with them. Table 6 summarizes the three concept ideas discussed in the end of the workshop. A summary of the empirical research is presented in the Table 7.

Table 6 Overview of the developed service concepts

Concept	**Form**	**Description**	**Objective** *(customer, organization)*
Concept 1: "My Diary"	Artefact	A visual and carefully designed diary for making notes, processing thoughts, and collecting memories (e.g. picture of the embryo) during the oocyte donation process. Distributed to the customer in the first visit.	• Supporting customer's psychological preparation before and during the treatment process • Supporting information provision
Concept 2: "We Care"	Process	A technology-supported process for being actively in contact with the customer during the treatment process.	• Decreasing customer's feeling of uncertainty related to the care process (e.g. waiting) • Supporting information provision and care coordination
Concept 3: "Travelling Aid"	Partnership	Collaboration with a regional travel agency in order to provide the foreign customers practical information and support concerning the travelling and accommodation.	• Decreasing customer's uncertainty related to practicalities concerning the travelling • Liberating resources for core business and daily work

Table 7 Overview of the data collection

Stage	Content	Service design methods utilized
Participatory workshop: Service mapping	• Documenting (blueprinting) the current oocyte donation service process with the clinic employees • Creating common language between the researcher and the practitioners • Involving the practitioners in service development	• Participatory workshop • Blueprint
Expert interviews	• Discussing the oocyte donation service process phases and employee roles with different practitioners • Identifying critical process phases and elements from organization's viewpoint • Involving the practitioners in service development	• Blueprint
Design probe customer survey	• Collecting understanding of the service experience • Identifying critical process phases and elements from customer's viewpoint • Involving the customers to service development	• Design Probes
Online customer survey	• Complementing the design probe survey with an online survey targeted to customers not under any treatment process at the clinic • Increasing the understanding of the customer choosing criteria	
Participatory workshop: Service development	• Based on the research material, creating common understanding of the service experience • Combining the internal and external understanding of the service experience in order to develop new service elements and concepts • Involving the practitioners in service development • Discussing the next steps	• Participatory workshop • Design Probes • User Personas • Customer Journey • Experience Cards

5.3 Evaluation of the study

5.3.1 Validation of the study

In the literature, the quality of the qualitative data has been questioned (Seale & Silverman, 1997). According to Mays & Pope (2000), the key to ensuring the quality is reached by the same means as in quantitative data: systematic and self-conscious design of the research, data collection, interpretation and communication. Bryman & Bell (2007) suggest four measures for evaluating the trustworthiness of a study: dependability, credibility, transferability, and confirmability.

Dependability refers to the reliability of a study, meaning the likelihood of getting same results if the study was repeated (Bryman & Bell, 2007). In this thesis, different overlapping methods were used iteratively in the data collection and validation. During the process, different people from the clinic were involved in interpreting the research material. Furthermore, the research design and its implementation were carefully described and justified in the thesis in order to enable the evaluation of the utilized research practices (Shenton, 2004).

Credibility refers to the internal validity of a study, meaning the extent to which the research findings are believable and congruent with the reality (Shenton, 2004). The literature review was conducted before the empirical research design in order to validate the research focus and methodological choices. Also called as triangulation (e.g. Mays & Pope, 2000; Bryman & Bell, 2007), different data collection methods were applied during the research process in order to get a comprehensive view of the research topic. The findings were validated with the practitioners in the workshops and when condensing the research material. Credibility of the research is supported by the notion that there are apparent correspondences between the empirical findings and the existing literature. Moreover, the findings that contradict the existing literature are discussed in the study (Mays & Pope, 2000).

Transferability refers to the external validity of a study (Bryman & Bell, 2007). It assesses the extent to which the findings can be generalized to other contexts. This research was conducted as a single case study in a private Finnish infertility clinic. The focus of the research was on the service experience of Swedish and Norwegian couples going through oocyte donation treatment. Although the experience of infertility can be seen quite universal, the specific context of the study limits the generalization of the results. Furthermore, in this research, the design probe method was used both to inspire the service development and to test a theory. With regard to the latter, the relatively small size of the sample increases the weight of a single response in the analysis, which should be taken into account when assessing the validity of the study. Following the suggestion of Shenton (2004), in order to enable further evaluation of the transferability, a detailed description of the research context and background was provided in the study.

Confirmability refers to the objectivity of the study, meaning the extent to which the findings are free from bias caused by the researcher's own characteristics and preferences (Shenton, 2004). In terms of confirmability and researcher's predispositions, apart from knowing the company's CEO from other associations, the researcher had no connection to the case company prior to the research process. However, since the research continued for several months and the clinic employees were closely involved in the process, some bias may have developed during that time.

5.3.2 Limitations of the study

The research was conducted as a single case study in a Finnish infertility service clinic. The single case setting limits the possibilities to generalize the observations to represent a broader group. Driven by the practical needs of the case company, the empirical research focused on a single infertility service process at the same time recognizing the comprehensiveness of the infertility service sector. Accordingly, the subjects of the customer research were restricted to heterosexual couples from Sweden and Norway.

The scope of the research did not allow following the same couple throughout the service process. This was due to the long duration of the oocyte donation process in relation to the time available for the empirical data collection. However, in order to gain a holistic understanding of the service experience, couples from different stages in the oocyte donation process were included in the study sample.

The honesty of the respondents and the way the material is recorded by the researcher affect the reliability of the design probe research (Aaltonen & Heikkilä, 2000). Due to the sensitivity of the issue, the respondents may not have been willing to fully disclose all experiences and opinions on the topics covered in the study. In addition, although given the possibility to answer in their own language, all the respondents used English in filling the probes. Not using mother tongue may have affected the depth and the extent of describing the experiences.

6 Research findings

In this chapter, the findings from the empirical research are introduced. The first part of the chapter discusses the dimensions of service experience in infertility treatment services. Straight quotations from the design probe research are used in presenting the research results. After that, service design principles and methods are discussed in relation to developing infertility services.

6.1 Dimensions of service experience in infertility treatments

6.1.1 Operational dimension

The operational dimension of the service experience describes the experiences related to accessibility, coordination, progress, and timeliness of care (e.g. Bergeson & Dean, 2006; Shaller, 2007). In the context of infertility services, the couples emphasized the importance of quick response time to customer contacts, regular contacting and follow-up during the service process, and holistic coordination of the care including an appointed contact person.

Supported by the empirical research, waiting times should be short throughout the care process (Shaller, 2007). In practice, this means for example the possibility to access the care at wished time (Bergeson & Dean, 2006). Couples reported satisfaction with reference to the response time to customer requests and inquiries.

> *The first contact with the clinic was quick and correct.* (Couple 4, Sweden, embryo transfer)

> *Quick, polite and informative reply.* (Couple 5, Norway, waiting for donor)

> *AVA is polite, rapid and they connected to us as a couple.* (Couple 3, Sweden, embryo transfer)

The experiences related to waiting for a suitable donor varied between the couples. The perception of the waiting time seemed to be related to the couple's infertility experience and treatment history as a whole.

> *Time! To wait in all stages. The feeling of not having control, and not to know if or when we will succeed.* (Couple 8, Sweden, waiting for donor)

> *We understand that the process of egg donation takes a "long" time. We know that it is for the best of the customer.* (Couple 1, Norway, embryo transfer)

> *We both live busy lives, socially and at work – but still we think about it / talk about it almost every day! Since we have been trying to get pregnant for 3 years, I think 6 months more is not bad, though…* (Couple 2, Norway, waiting for donor)

In general, the couples were well prepared for long waiting times. However, more information and follow-up during the queuing period was hoped for in order to feel more comfortable with the waiting.

> *The waiting period [is] a sort of a vacuum, we don't know how long we have to wait.* (Couple 5, Norway, waiting for donor)

> *When accepting egg-donation and starting the process, it is a long period from first appointment at the clinic to the donor has been decided. In this period, I would wish for regularly information from the clinic by e-mail.*

> *This is to make us feel sure that the process is moving forward.* (Couple 6, Norway, waiting for donor)

> *During the waiting period it would be nice to know where we are in the queue, or at least that we still are in the queue and when – approximately – the waiting is over.* (Couple 5, Norway, waiting for donor)

As pointed out by Shaller (2007), the care should be well coordinated across clinical and supporting services. The importance of care coordination and an appointed coordinator was supported also by the research data.

> *It has been important to have a contact person.* (Couple 7, Norway, waiting for donor)

> *The first contact with the clinic was informative. Service minded coordinator [was] helpful, understanding, experienced in the field, professional.* (Couple 8, Sweden, waiting for donor)

Related to care coordination, a closer contact between the clinic and the customer's own gynecologist was hoped for. Also the importance of coordinating the care between the oocyte donor and the receiver was pointed out.

> *I (female) would have liked a closer contact between AVA and my gynaecologist and preferred an appointed doctor.* (Couple 3, Sweden, embryo transfer)

> *The real challenge may be more of a funny issue in the sense that these persons (the couple and the donor) should be "coordinated" in order to plan for both the medical dimension of this but also practically in the sense of travelling and lodging. The clinic handled this well in spite of some problems. But this issue cannot be underlined too much!* (Couple 4, Sweden, embryo transfer)

6.1.2 Informational dimension

The informational dimension of a service experience describes the amount, timeliness, accuracy, and delivery form of the information received by the customer during the service process (e.g. Conway et al., 2006; Shaller, 2007). In the context of infertility services, the couples pointed out the importance of receiving sufficient and holistic understanding of the care process and receiving information in written and practical form. Also the importance of the clinic in the information provision was emphasized in the research data.

Receiving information was described as an important factor in coming to acceptance with and getting ready for the treatment process.

> *The most challenging phase is to accept the need of egg-donation. Not being able to get pregnant by ourselves, even with IVF, is not easy. To come to acceptance with egg donation as an option, it is important to receive information about the nationality and motivation of the donors. This information should be available on the website, and by e-mail.* (Couple 6, Norway, waiting for donor)
>
> *We have received good information and feel that we are well prepared.* (Couple 7, Norway, waiting for donor)
>
> *[We feel] very well prepared after contact with AVA.* (Couple 8, Sweden, waiting for donor)
>
> *By having answers to our questions, we feel much better about the treatment.* (Couple 6, Norway, waiting for donor)

In general, the couples were satisfied with the amount of information provided by the clinic. However, in respect of the information sufficiency, the data revealed differences between the couples.

> *All information necessary is already there [on the website]. The virtual photo tour at the clinic was a nice extra to have before the first visit.*
> (Couple 4, Sweden, embryo transfer)

> *If we could change one thing in the clinic's way of doing things, it would be providing even more information at the web-page, by e-mail, [and] when at the clinic. Information is critical!* (Couple 6, Norway, waiting for donor)

Provision of information, especially in written form, is one of the key aspects generating satisfaction in medical services (Souter et al., 1998; Hammerberg et al., 2001; Schmidt et al., 2003). This was also supported by the empirical findings. In addition to the form, also the style of the information was described as important.

> *All the info about the procedure could be repeated and in writing – and easy to access.* (Couple 3, Sweden, embryo transfer)

> *The clinic's website was easy to navigate, and it provided all the information we wanted. The website was also good in the sense that it didn't give unrealistic hopes/expectations as one can get from websites showing lots of pictures of babies and pregnant women, and 'success stories'. The website doesn't hide the fact that there is an element of uncertainty.* (Couple 5, Norway, Waiting for donor)

In the beginning of the oocyte donation treatment couples wished for information on the treatment procedures and schedules. This observation was in line with the previous studies (Miettinen, 2011). The couples also reported the importance of getting an overall view of the care process, which can be seen to reflect Shaller's (2007) notion of the role of information in promoting patient autonomy. This could also be seen in the wishes concerning the form of the information.

> *We would have preferred a checklist of all the steps in the process. Now we just got a little bit at a time and not the whole overview. It would have been nicer to have a better overview of the situation.* (Couple 3, Sweden, embryo transfer)

Related to the care process, sufficient information on prices, age-limits, ethical aspects of the care, succeeding probabilities, clinic experience, and rules and regulations related to the treatment were seen as important by the couples. Since the oocyte donation is illegal in Norway, some Norwegian couples reported having difficulties in finding information in their home country. This emphasizes the role of the clinic in information provision.

> *We don't get much information about this kind of treatment in our country, as it is illegal, so good information from the clinic is very important. We need to feel sure that the clinic takes good care of us and the donor, to make sure that the treatment is done in a good manner.* (Couple 6, Norway, waiting for donor)

> *The most challenging phase for us was probably to take the decision (egg donation versus adoption). Egg donation is not allowed in Norway, so we knew we had to go abroad. That's also the reason why family and friends don't know too much about egg donation (many questions).* (Couple 2, Norway, waiting for donor)

In addition to the information related to the clinical care process, some couples described the need for practical information on travelling.

> *It would be nice to have received a little more practical information about how to get to Tampere. For example, we didn't know that we could have*

> *taken a train from Helsinki to Tampere.* (Couple 5, Norway, waiting for donor)

6.1.3 Participational dimension

According to the literature (Convay et al., 2006; Shaller, 2007; Frampton & Giplin, 2008) and supported by the empirical research, the experiences concerning the participational dimension of the service experience are related to customer engagement in care, couple centeredness of the personnel, and availability of peer support. Furthermore, as mentioned in the literature review, a possibility to share issues related to infertility experience has been identified important for marital wellbeing (Abbey et al., 1995). The importance of a supporting network of friends and family was described also in the empirical research.

> *It is not easy to accept that we need help from a stranger to become parents. It is a lot of thoughts, and we have had good experience of sharing the thoughts with our closest friends and family.* (Couple 6, Norway, waiting for donor)

> *You need your friends and family in ups and downs.* (Couple 3, Sweden, embryo transfer)

There were different reasons for discussing the treatment with just a limited number of people. One couple wanted to ensure that the child does not hear about his/her background from a wrong source. Also encountering the questions and expectations of friends and family was found difficult. Furthermore, sharing the issue with colleagues was found problematic due to a managerial role.

> *Fundamentally one should be able to be open about this…but for the sake of the child getting information from the right source and at the right time the information must be kept in a very narrow circle at trusted people.*

> *Then we need someone to discuss with, of course!* (Couple 4, Sweden, embryo transfer)

> *Closest family should know to be able to give support. However, sometimes tough since they ask questions and especially when an IVF has been done, questions about success.* (Couple 8, Sweden, waiting for donor)

> *Depending on position at work, hard to involve colleagues especially when having a team management role. Do not want to show weakness.* (Couple 8, Sweden, waiting for donor)

As discussed in literature (Abbey et al., 1995), some couples seemed to rely most of all on each other.

> *Our doctors are the only ones who know about the process.* (Couple 5, Norway, waiting for donor)

> *We haven't told so many people about the egg donation. It's only parents who know about it.* (Couple 1, Norway, embryo transfer)

> *It feels like a long journey with a lot on our minds, with no one else than ourselves on the travel.* (Couple 3, Sweden, embryo transfer)

In addition to the support from friends and family, also a need for peer support was discussed in the empirical research.

> *Before we begun this process we thought that we would interact more with other couples in the same situation. We have not been in contact with anyone.* (Couple 3, Sweden, embryo transfer)

The importance of a couple-centered approach in infertility care (Schmidt, 1996) was supported by the empirical findings. Most the procedures focusing on woman, the emotional involvement of man in the treatment process was seen as important. With this respect, two couples reported negative experiences related to the communication with the clinic.

> *So unsatisfying! Feels like you only stand beside and watch, and unable to comfort the one you love. A feeling of insufficient!! Hard when you as a man can't feel the biological 'draft' that your woman has to deal with. It's hard to understand and therefore hard to help. Right now I can only be there as a physiological support. I want to share the pain and everything else, but can only watch, and it's hard to see your love suffer.* (Couple 8, man, Sweden, Waiting for donor)

> *In the doctor appointment we felt that the doctor spoke mainly to the woman, and not to us as a couple.* (Couple 5, Norway, waiting for donor)

> *My husband feels excluded in some parts of the process and contact with AVA Clinic.* (Couple 3, Sweden, embryo transfer)

6.1.4 Emotional dimension

Based on the literature, infertility can cause psychological distress, depression, marital tension, grief, and guilt (Lukse & Vacc, 1999; Merari et al., 2002; Anderson et al., 2003). As stated by Frampton & Gilpin (2008), health care customers should be supported emotionally by delivering the care with human touch. According to the research, the experiences concerning the emotional dimension of the service experience are related to the expectations, attitude and activity of the personnel, communication and interaction, and the personnel's respect for patients' values, preferences, and needs.

The expectations and feelings towards the oocyte donation treatment varied between the couples. The struggle of balancing between the uncertainty related to the treatments and the hope for becoming parents could be seen in the couple's descriptions.

> *Roller coaster. Some days I feel ok that we can't have a child (the 'normal way'). Some days I am very sad and frustrated not being a fertile woman. 'Everyone' else is successful and it feels very unfair.* (Couple 8, Sweden, waiting for donor)

> *Really looking forward to becoming parents. I think egg donation will give us good odds for becoming parents.* (Couple 6, Norway, waiting for donor)

> *Before we begun this process we thought that it would be easier, not affecting your everyday life and feelings. Not being so sad and anxious. Now we feel that there is 'light' in the tunnel and hope is there, eventhough there is a struggle and many thoughts and curiosity.* (Couple 8, Sweden, waiting for donor)

Furthermore, as it can be seen in the following extractions of one couple, the feelings towards the treatment process varied also between the woman and man.

> *I was informed that it was no longer possible for me to become a mother. At the same time egg donation was mentioned as a possibility. That gave me hope!* (Couple 4, woman, Sweden, embryo transfer)

> *Egg donation at first sounded like a remote possibility – a long way to walk with many hurdles and an unpredictable outcome after a lot of steps involving hard-to-grasp medical issues.* (Couple 4, man, Sweden, embryo transfer)

According to literature, being treated well by the nursing personnel is one of the most important factors increasing satisfaction with infertility treatment (Malin et al. 2001). The importance of helpful and understanding attitude of the personnel emerged also from the research data. In addition, the couples described the significance of kindness, warmth, politeness, personal chemistry, comfortableness, and trust.

> *As patients we are in a sensitive position and the correct attitude and understanding from the clinic staff is probably more vital than anything else.* (Couple 4, Sweden, embryo transfer)

> *Since the whole process is so personal it is also important that it is received with kindness and warmth.* (Couple 7, Norway, waiting for donor)

> *For us it is important to feel comfortable and safe meeting the staff and clinic. Personal chemistry and atmosphere [are] important.* (Couple 8, Sweden, waiting for donor)

> *We wish that the clinic staff would continue in the positive, polite and helpful way we experienced.* (Couple 5, Norway, waiting for donor)

> *The clinic staff is professionals who we trust (though it's business…).* (Couple 2, Norway, waiting for donor)

> *It is important that the clinic accepts that we are doing IVFs on our own while in the queue, and that we can say no to the first donor and keep our place in the queue if we are not mentally ready for the treatment yet.* (Couple 6, Norway, waiting for the donor)

Furthermore, also positivity and sense of humour was seen as important factors by some couples.

> *We think that they are very understanding and positive, it makes us feel good.* (Couple 1, Norway, embryo transfer)
>
> *In the doctor appointment we felt that he was a professional but used humor. Made us relax!* (Couple 2, Norway, waiting for donor)
>
> *In the doctor appointment we felt that we got relevant information with a smile.* (Couple 7, Norway, waiting for donor)

Shaller (2007) has pointed out the importance of the personnel in relieving fear and anxiety during the care process. This was also supported by the research data.

> *By providing us with the information we need, and [by] answer[ing] our questions, we feel that the clinic staff help[s] us feel less stressed or insecure.* (Couple 5, Norway, waiting for donor)
>
> *Before we begun this process we though that it was hard to accept the need for egg-donation. After the first appointment at the clinic we feel much more thankful about the possibility and are sure that this will be a good process.* (Couple 6, Norway, waiting for donor)
>
> *There are several things that can be relaxing and helpful in all the different stages in the process. If the staff shows that they are professionals and also show kindness that can be helpful and can also make the process better.* (Couple 7, Norway, waiting for donor)

Frampton & Gilpin (2008) stresses the importance of listening and being present with the customers. This was supported also by the empirical research.

> *They [the clinic staff] have not really asked us how we are doing and coping the whole situation and if we need anything. We feel alone.* (Couple 3, Sweden, embryo transfer)

> *We wish that the staff would use even some more time with us at the first appointment. It would be nice to meet the coordinator, which is our e-mail contact, and it would be nice to have a tour at the clinic.* (Couple 6, Norway, waiting for donor)

6.1.5 Physical dimension

The experiences concerning the physical dimension of the service experience are related to physical aspects of care such as clinical environment and surroundings, medication, procedures, and physical sensations related to the care process (e.g. Gerteis et al., 1993; Frampton & Gilpin, 2008). In the empirical data, couples documented experiences related to medication and side effects, atmosphere of the clinic, the physical surroundings, and the outcome of the treatment.

As stated by Frampton & Gilpin (2008), physical surroundings and the architectural and interior design can support the patient-centeredness of the care. In the research data related to oocyte donation service, the physical surroundings were discussed in relation to a preferred size, atmosphere, and impression of the clinic. The clinic surroundings were seen to reflect the expertise and values of the clinic.

> *We prefer small and family like clinics.* (Couple 8, Sweden, waiting for donor)

> *This [the physical surroundings and the atmosphere of the clinic] is very important for the clinic in order to gain confidence with the patients.* (Couple 4, Sweden, embryo transfer)

> *The surroundings can make a difference in both ways. The first impression is important!* (Couple 2, Norway, waiting for donor)

> *It is very important that the clinic gives a good impression, both regarding experience and physical surroundings. This kind of treatment is a big step for us, and we can't do it without a feeling of being in good hands at the clinic.* (Couple 6, Norway, waiting for donor)

> *The physical surroundings and the atmosphere say something about how serious the clinic is, and [it] also says something about the clinic's priorities: do they value nice surroundings?* (Couple 5, Norway, waiting for donor)

As stated by Gerteis et al. (1993), physical comfort is an essential factor of patient-centered care. Concern related to medications and side-effects were also expressed by the couples.

> *How will my body react to the medications?* (Couple 5, Norway, waiting for donor)

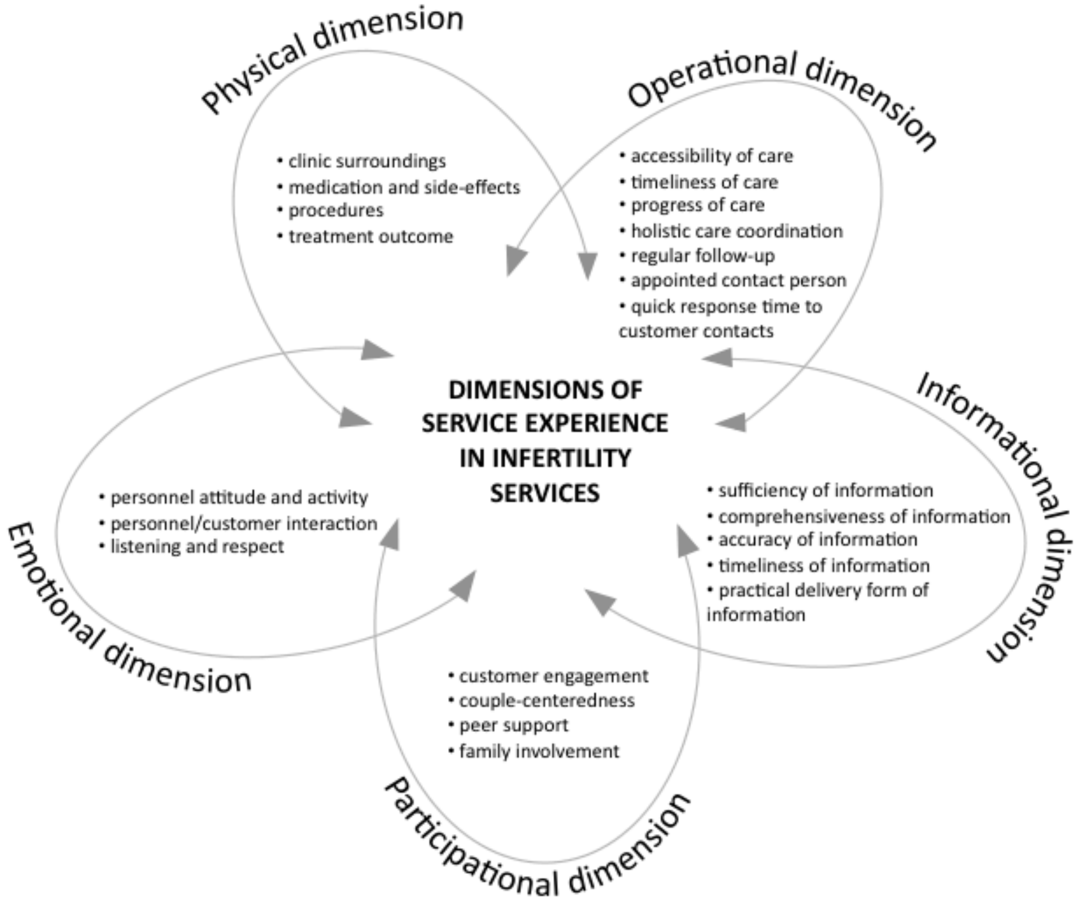
> *[There were] lots of medicines and it's ups and downs.* (Couple 3, Sweden, embryo transfer)

Not surprisingly, treatment results and the wish of having a baby in the end of the process were frequently mentioned by all of the couples. Also Malin et al. (2001) mentioned the positive treatment result as one of the most important factors in increasing satisfaction in infertility services.

> *This is the only way for me to get pregnant, and I wish and hope that this process will be successful.* (Couple 5, Norway, waiting for donor)
>
> *Hoping of having a family. Disappointed of not succeeding by our own, thankful that egg donation is an option. Having big hopes of succeeding with egg donation.* (Couple 6, Norway, waiting for donor)
>
> *It's Sunday.. On Wednesday it's time for pregnancy test. Exciting and a bit scary. - - Negative.. I can't even describe how sad I am. Tears seem endless.* (Couple 3, Sweden, embryo transfer)
>
> *It was a surprise for us that it seems so "easy" to proceed with the treatment from Sweden and also that it could result in a baby if successful and lucky. Amazing if it will succeed.* (Couple 8, Sweden, waiting for donor)

As a summary of the literature review and the empirical research, an overview of the dimensions of service experience in infertility services is presented in the Figure 8. Based on the customer research, the dimensions seem to be overlapping and integrated meaning that strengths and weaknesses in one dimension mutually reinforce or weaken the others.

Figure 8 Dimensions of service experience in infertility treatments



6.2 Service design principles and methods in developing infertility services

Although infertility treatments *per se* can be very technical procedures, the customer process of receiving infertility treatment is personal and intimate. When talking about cross-border oocyte donation, also the needed emotional, economic and time related investments are substantial. According to the literature (Malin et al., 2001) and supported by the empirical research, the care personnel has a big role in creating a positive service experience in infertility services. Thus, profound understanding of the service experience and its formation not only helps to develop the service process but also gives new tools for the personnel to perform in the daily service encounters.

In the case company, service design principles and methods were applied to modeling and evaluating the current service process, collecting customer understanding and insight, concretizing and analysing the collected customer data, and developing new service ideas and concepts. The approach of applying service design methodology throughout the service development process was also suggested by the literature (e.g. Maffei et al., 2005; Holmlid, 2009; Segelström, 2009).

For a customer, cross-border oocyte donation treatment is a several-month process including activities both in Finland and in one's home country. Therefore, a natural kick-off for the design process was to apply the service design principles and methods to *model and discuss the current service process* with the clinic practitioners. Applying the blueprint method to document the service process from internal and external viewpoints functioned as a fruitful starting point for the collaboration. It enabled detailed documentation of the current service process at the same time creating a common language between the researcher and the clinic practitioners. This was important because of the special terminology related to the oocyte donation. In the clinic interviews conducted after the blueprinting workshops, the visual service blueprint supported the discussion with the different specialists by serving as a common reference point.

After documenting and evaluating the current service process with the clinic practitioners, the service design principles and methods were applied to *collect understanding of the service experience during the oocyte donation process.* In order to find new opportunities for the service development (Mattelmäki, 2006), a design probe kit was used as a primary method for data collection. The probe kit design enabled the respondents to participate in the documentation either as individuals or as a couple. Moreover, although attached with brief instructions, the flexibility of the probe assignments made possible for the couples to discuss and highlight the issues that are most important for them.

A customer journey probe provided an overview of the couple's actions during the oocyte donation process. The couples were encouraged to report all the steps and incidents during the service process (Coulter & Cleary, 2001). Compared to the service blueprint focusing on the official service process, also the steps in the couple's home country were included. Due to the long duration of the process, the descriptions were mostly recollections of the past experiences. However, the Memo Pad assignment succeeded in grasping the authentic feelings of the moment by documenting the everyday questions and concerns related to the service process.

After the data collection, the service design principles and methods were used *to process and condense the customer understanding.* The probe material of each couple was organized in a chronological order in order to piece together the customer journey and the service experience. This helped to see causal relationships between customer needs, motivations, experiences and wishes thus enabling to distinguish between different customer persona types. The usefulness of narrative methodologies in collecting understanding of experiences has also been identified in the literature (Helkkula & Holopainen, 2011). For the purposes of the upcoming workshop, the understanding of the customer types was condensed into a communicable form of User Personas (Appendices 8-9). In order to validate the customer understanding, the clinic psychologist was involved in creating the personas. Furthermore, the customer process was visualized (Appendix 10), and the process was complemented with Experience Cards (Appendix 11) tool that was created during the data processing.

Considerable amount of time was allocated to designing the design probe survey kit, implementing the data collection, and analyzing and condensing the probe material. However, in contrast to documenting satisfaction after the service, the method enabled subjective description of the experiences during the oocyte donation process thus giving fruitful and authentic material for the service development. In addition, the method made possible for the customer to participate in developing the oocyte donation service (Moritz, 2005), which supported the viewpoint of the service user as the expert of his/her experience (Sanders & Stappers, 2008).

Finally, the service design principles and methods were used to *create new service concepts.* Since the delivery of oocyte donation treatment is based on close teamwork between different professionals, a participatory workshop was chosen as a suitable method for involving practitioners from different parts of the oocyte donation process in developing the service.

In addition to going through the practicalities, a brief introduction on the service design approach in the beginning of the workshop was found useful in order to familiarize the participants with the methodology. After the introduction, the workshop followed a predetermined structure with game-like instructions in order to decrease ambiguity and to give space for creativity. This allowed for flexibility and adjustments to the workshop flow and schedule when needed. The role of the researcher was to facilitate the process by providing tools for expression and ideation (Sanders & Stappers, 2008).

The workshop functioned as a forum for creating a common understanding of the service experience and developing the oocyte donation service based on the observations emerged from the research data. The workshop method utilized the practitioners' ability to imagine themselves in the role of the service user and to interpret the user experiences (Helkkula & Holopainen, 2011).

During the workshop, service design methods and visualizations supported the communication around the service experience. User Persona method made the customer types tangible and evoked a discussion on how the different persona types should be encountered. The visualized customer journey and the Experience Cards with customer quotes concretized the service experience and brought the customer's voice to the workshop. Together these methods helped to focus the discussion on the critical service steps from the customer's viewpoint.

Not surprisingly, the practitioners paid attention to different issues according to their role in the organization and in the service process. Thus, the interdisciplinary approach enabled learning from each other (Kronqvist & Salmi, 2011) and sharing understanding of the process aspects also between the clinic personnel.

The condensed research material was being validated when the practitioners compared the findings to their daily observations. The created understanding and identified customer needs were used as a basis for ideating possibilities for service improvements and new service elements. Information provision was one of the most discussed issues during the workshop. Interestingly, according to Crawford et al. (2002), production of new or improved sources of information for patients is the most frequently reported effect of involving patients to care development. After the discussion, the ideas were evaluated and developed together in the multidisciplinary teams.

Referring to Sangiorgi's categorization of transformation (2010), during the service design process transformation took place on both individual and organizational level. The intimate descriptions of service experiences given by the customers challenged the practitioners to evaluate their role and contribution during the service process. In addition to the common understanding of the customer service journey and experience, a group of service ideas and three more profound service concepts were created as an end result of the service design process. The clinic was introduced to new tools, methods, practices and know-how for human-centered service innovation (Sangiorgi, 2010). In the long run, involving people from different levels of organization in the design process can be seen to support the implementation of the change (Moritz, 2005).

7 Discussion and Conclusions

This final chapter summarizes the research findings. The chapter begins with discussing the main findings of the study by providing answers to the two research questions. Also the revised framework of the study is introduced. After that, managerial implications are presented in the form of recommendations for the case company. Finally, suggestions for further research are presented.

7.1 Main findings and theoretical contribution

The objectives of this research were to study and understand the construction of service experience in the context of infertility services, and to study and test the applicability of service design approach in developing infertility services. Based on the research objectives, the following research questions were formed: first of all, how is a service experience constructed in infertility treatment services; secondly, how can service design principles and methods be applied to service development in the context of infertility treatment services.

By taking an integrated approach to patient-centered care, the concept of patient-centered care was studied from the viewpoint of service development, and a theoretical framework for constructing service experience for the purpose of service development in infertility service sector was created. Infertility service experience was studied from the viewpoint of service development in the case company by utilizing qualitative research approach with emphasis on service design methodology. This was in contrast with the previous research with quantitative emphasis on studying infertility experience in clinical setting (Greil et al., 2000). In contrast to the previous studies (e.g. Epstein, 2000), a more personal viewpoint was taken to studying customer's service experience during the oocyte donation treatment by utilizing design probe method in data collection. Furthermore, the development of oocyte donation service was conducted in collaboration with the case company by utilizing the defined principles and methods of service design.

Based on the literature review and the empirical research, here are the key findings of this study according to the research questions.

How is a service experience constructed in infertility treatment services?

The infertility service experience is constructed from five dimensions: operational dimension, informational dimension, participational dimension, emotional dimension, and physical dimension.

Firstly, the operational dimension of the service experience describes the experiences related to accessibility, coordination, progress, and timeliness of care (e.g. Bergeson & Dean, 2006; Shaller, 2007). In the customer research, the couples pointed out the importance of quick response time to customer contacts, regular contacting and follow-up during the service process, and holistic coordination of the care including an appointed contact person. Secondly, the informational dimension refers to the amount, timeliness, accuracy, and delivery form of the information received by the customer during the service process (e.g. Conway et al., 2006; Shaller, 2007). Particularly, the couples described the significance of receiving sufficient and holistic understanding of the care process and receiving information in written and practical form. Also the importance of the clinic in the information provision was emphasized in the customer research. Thirdly, the experiences concerning the participational dimension of the infertility service experience are related to customer engagement in care, couple centeredness of the personnel, and availability of peer support (Convay et al., 2006; Shaller, 2007; Frampton & Giplin, 2008). Also the importance of a supporting network of friends and family was described by the couples. Fourthly, the emotional dimension of the service experience describes the experiences related to the expectations, attitude and activity of the personnel, communication and interaction, and the personnel's respect for patients' values, preferences, and needs (e.g. Gerteis et al., 1993; Pruitt et al., 2005; Frampton & Gilpin, 2008). The couples described the significance of kindness, warmth, politeness, personal chemistry, comfortableness, trust, positivity, and sense of humour. Also the importance of the personnel in relieving fear and anxiety during the care process was supported by the research data. Finally, the experiences concerning the physical dimension of the service experience are related to physical aspects of care such as clinical environment and surroundings, medication, procedures, and physical sensations related to the care process (e.g. Gerteis et al., 1993; Frampton & Gilpin, 2008). With this respect, the couples described observations related to medication and side effects, atmosphere of the clinic, the physical surroundings, and the outcome of the treatment.

As a conclusion, the research implies that the experience dimensions are overlapping and integrated meaning that strengths and weaknesses in one dimension mutually reinforce or weaken the others.

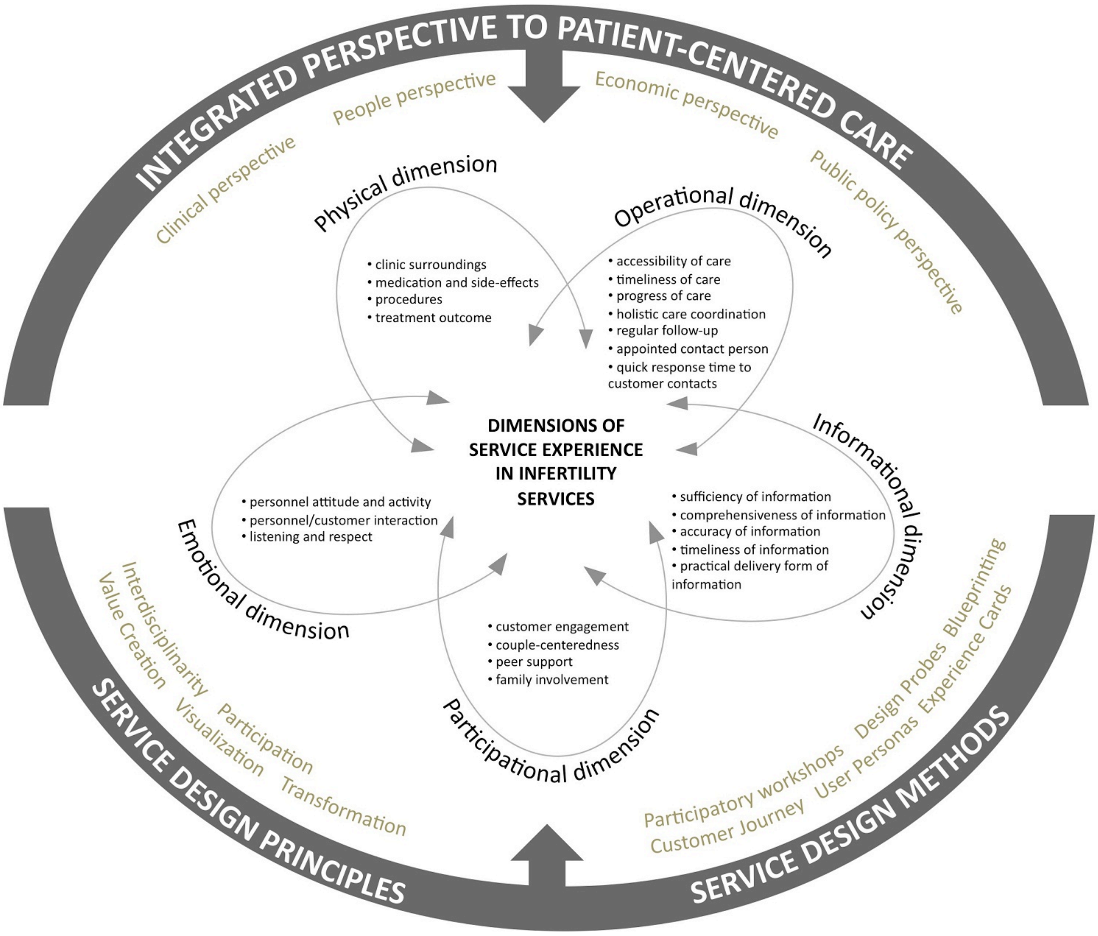
How can service design principles and methods be applied to service development in the context of infertility treatment services?

Based on the research, in the context of infertility service development, service design principles and methods can be applied to model and evaluate the current service process, to collect customer understanding and insight, to concretize and analyse the collected data, and to develop new service ideas and concepts. According to the empirical findings, due to the high subjectivity and sensitivity of the infertility service experience, service design principles and methods are well applicable for service development in this field.

As a summary, with regard to the service design in practice, some general observations can be made. Beginning the design process with a participatory workshop can function as a fruitful starting point for the prospective design collaboration with the company. In addition to the practical benefits of service process documentation, in this case, kicking off the project with a blueprinting workshop created a common understanding of the project goals, built a common language and shared terminology with the practitioners, and supported the preliminary evaluation of the service. Using design probe method in collecting understanding of the service experience supported the coverage of the sensitive research topic of infertility. Flexibility of the method made possible for the couples to reflect on their experiences and to discuss and highlight the issues that are most important for them. Involving the clinic personnel in designing the probe exercises can be beneficial in order to discuss and define the research focus and to validate the exercises and the used terminology. Furthermore, despite the existing risk of losing some part of the data (Mattelmäki, 2006), using service design methods such as User Personas and Customer Journey to condense the research material can be seen useful. This not only helps to manage and structure the amount of data but also makes it more vivid, concrete and communicable for the purposes of service development. Finally, in the end of the design process, a participatory workshop can function as a forum for creating a common understanding of the service experience and involving the practitioners in developing the service. Through discussions between the practitioners, the material is validated and given perspective. In the workshop, different service design tools and visualizations can be used to focus the discussion on the critical issues, elements and service steps from the customer’s viewpoint. Involving people from different levels of organization in the design process can be seen to support the transformation and the implementation of change (Moritz, 2005).

The revised framework of the study is presented in the Figure 9. Based on the empirical research findings discussed above, it specifies the service experience dimensions presented in the original theoretical framework. Furthermore, the revised framework re-summarizes the service design principles and methods applied during the research process.

Figure 9 Revised framework of the study



7.2 Managerial implications

On the basis of the previous research and the empirical study, there are four main recommendations for the management of the case company.

Firstly, there should be found ways to decrease the experience of ambiguity related to the oocyte donation treatment process. As pointed out in the research, in addition to the evident uncertainty related to the end result of the treatment, ambiguity is caused by long waiting time in the donor queue and uncertainty related to the progress of the treatment. According to the research, the clinic personnel has an important role in decreasing the ambiguity related to the treatment process. The research implies that the feeling of uncertainty can be decreased by providing more information concerning the process steps, treatment progress and the queuing logic and by regular contacting and follow-up during the service process.

Secondly, special attention should be paid to the information provision during the service process. According to the empirical findings, more information should be provided in written, easy-to-read form, for example using checklists and pictures. In addition to explaining the treatment process steps in detail, a holistic understanding of the treatment process as a whole should be provided for the customer. Furthermore, what it comes to serving foreign customers, the information need can also be highly practical, for example related to accommodation and travelling. Thus, it is important to be prepared for answering questions also outside the immediate treatment process and to be able to direct the customer to the appropriate information sources.

Thirdly, the personality of the customer should be taken into consideration when planning the communication during the treatment process. According to the research, the support expected and needed from the personnel varies between the couples. Some couples are naturally more active in asking, demanding and participating in the value creation and the service delivery, whereas the needs of more quiet and passive customers may easily be left with less attention. Thus, in order to support the customer-centered service delivery, it is important to understand the customer’s temperament in this respect and to identify the customers that need special attention and activity from the clinic.

Finally, supported by the research, the service experience is affected by the contribution of several persons working in different parts of the service process. Hence, in order to develop the service process as a whole, there should be created possibilities for these practitioners to be involved in designing and developing the service. In addition to sharing thoughts on the service development, the forum could be used for sharing the best practices inside the clinic.

7.3 Suggestions for further research

This study discussed the service experience in infertility services. Furthermore, an example case of applying service design principles and methods to health care service development was provided. Building on the characteristics of patient-centered care, a framework for understanding the dimensions of service experience in infertility services was created. In order to take a next step in analyzing the service experience, the development of the service experience during the service process could be further studied.

The customer research was targeted to Swedish and Norwegian couples that were under oocyte donation treatment in the clinic. Concentrating on the general formation of the service experience, the comparison between the nationalities was not in the focus of this research. However, due to the possibilities opening up through the increasing cross-border care demand, also the differences in service experience between different nationalities could be studied.

Finally, this research discussed the applicability of service design principles and methods to developing infertility services. The positive results from the empirical research indicate that the approach could be further studied also in other special areas of health care.

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Appendices

Appendix 1. Themes of the semi-structured interview

Theme 1: Background and objectives of the research

Theme 2: The stages of the oocyte donation service process

Theme 3: The role of the interviewee in the oocyte donation service process

Theme 4: Evaluation of the current oocyte donation service process

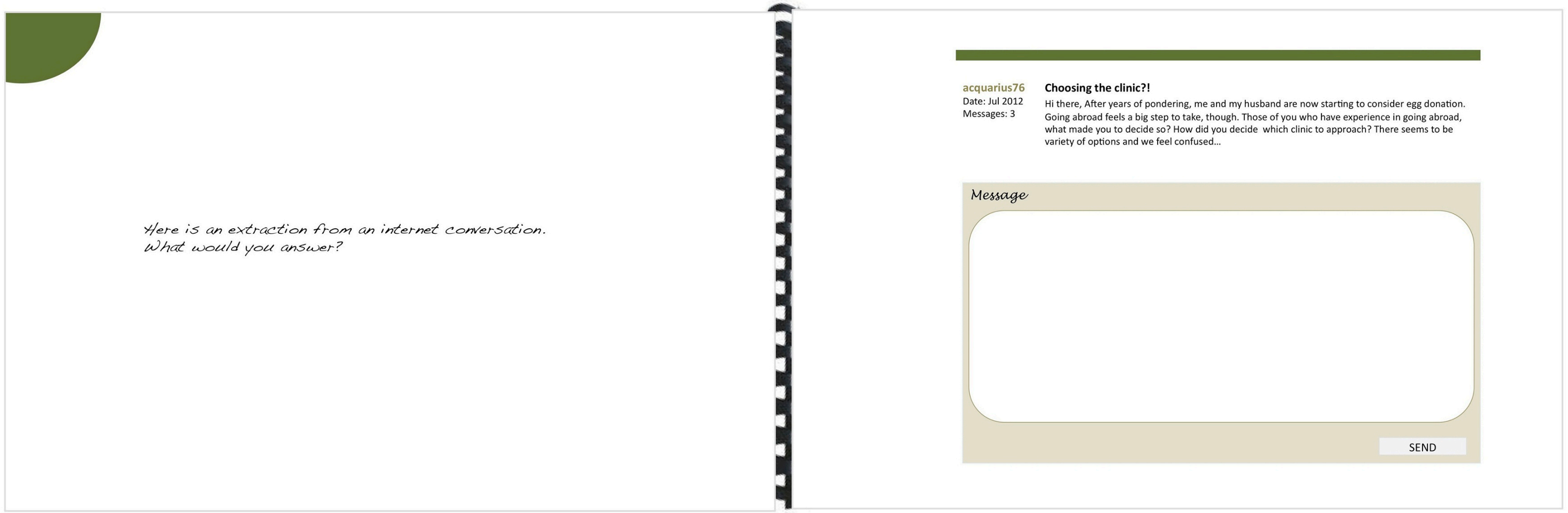
  - Customer’s viewpoint
  - Company’s viewpoint

Appendix 2. Design probe kit

Appendix 3. Design probes (Diary)

Take a look at the stickers attached. Both of you, choose a picture that best describes your feelings when you think about the egg donation process. Attach the pictures beside the characters (woman on left, man on right). Describe your feelings in the bubbles.

Build a support network around you of the people who know about the process.

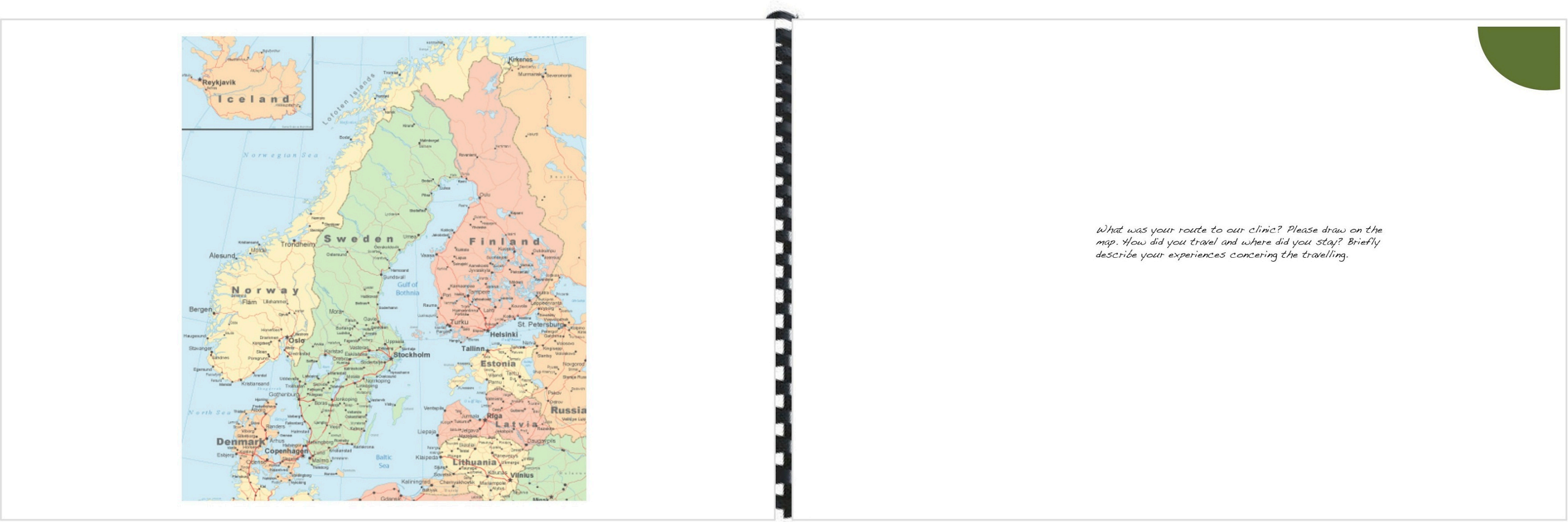


Here is an extraction from an internet conversation. What would you answer?

acquarius76
Date: Jul 2012
Messages: 3

Choosing the clinic?!

Hi there, After years of pondering, me and my husband are now starting to consider egg donation. Going abroad feels a big step to take, though. Those of you who have experience in going abroad, what made you to decide so? How did you decide which clinic to approach? There seems to be variety of options and we feel confused...



What was your route to our clinic? Please draw on the map. How did you travel and where did you stay? Briefly describe your experiences concering the travelling.

What kind of content and information do you want to find from the clinic website? What things have been important to you during the process? Describe the website that would be perfect for your needs.

Take a moment to think about the beginning of the egg donation process. What kind of information or material did you wish to have before the first visit to Finland?

Now, develop a "survival info package" for a couple in this stage. Write and draw. You can also utilize the pictures attached.

Continue with the sentences.

"The first contact with the clinic was...

"The decision to come to Finland ...

"It was a surprise for us that...

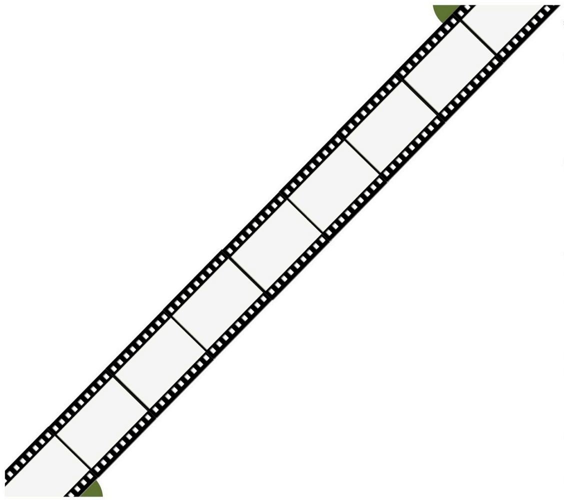
"For us, speaking foreign language is ...

"We wish that the clinic staff would...

"In the doctor appointment we felt that...

From your experience, what are the most challenging phases of the egg donation process? Describe on next page.

What kind of information or support could the clinic staff provide in these stages? Look at the pictures and choose also the way you wish the staff would be in contact in each stage.



Continue with the sentences.

” Before we begun this process we thought that ...

” Now we feel that....

” If we could change one thing in the clinic's way of doing things....

Appendix 4. Design probes (Journey Map)

1. Write down the activity/event on the map or use the existing stickers.

2. How did it go? Place an evaluative sticker.

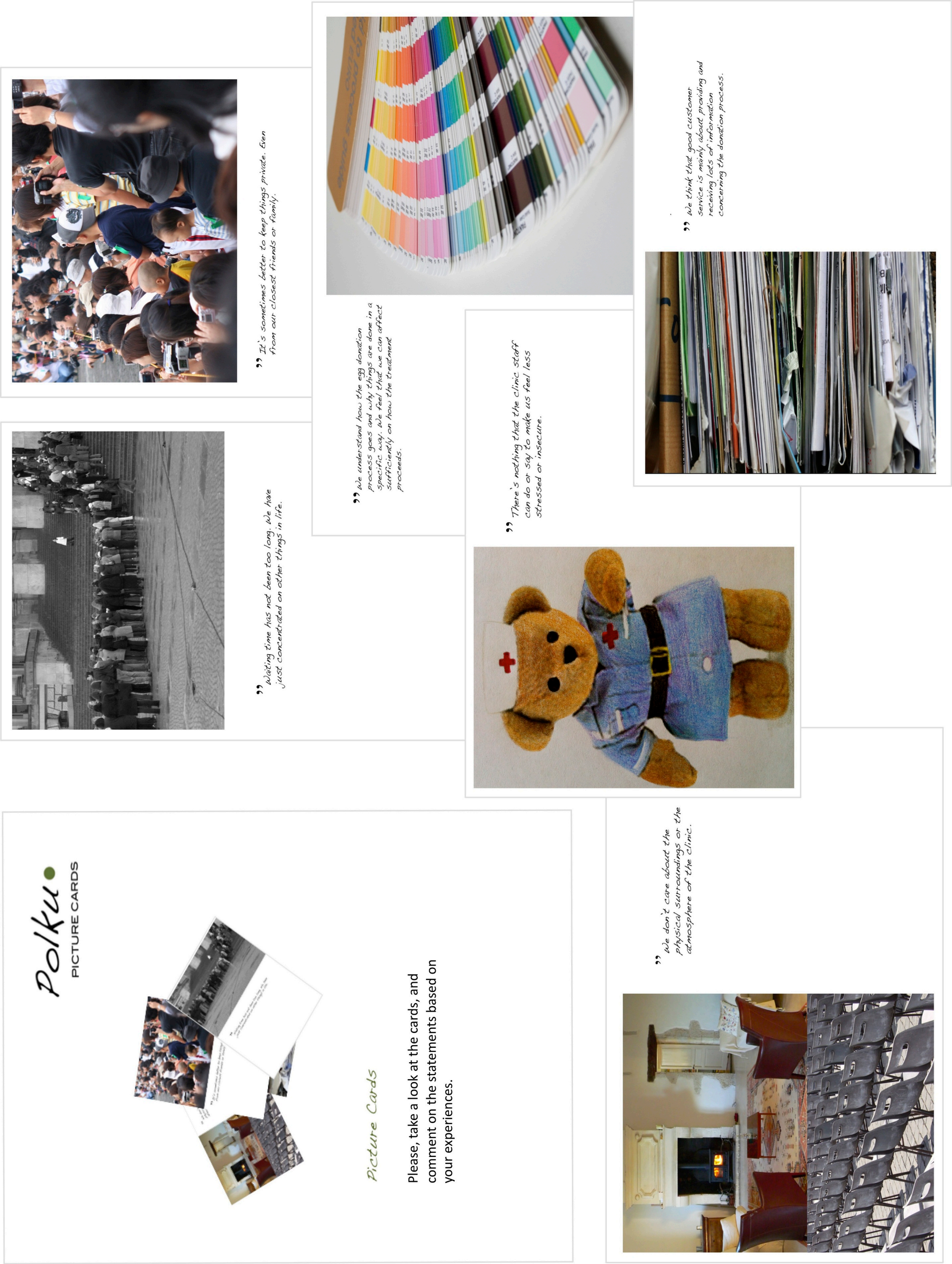
3. Briefly explain why did you choose that sticker.

Journey Map

This map illustrates your journey in the egg donation process. How did the journey begin and where do you see it ending? Where are you at the moment? Please specify to the picture.

After that, tell about your journey this far. What activities have you had in Finland and especially in your home country related to the process? Utilize the stickers you can find attached.

Appendix 5. Design probes (Picture Cards)



” It's sometimes better to keep things private. Even from our closest friends or family.

” We understand how the egg donation process goes and why things are done in a specific way. We feel that we can affect sufficiently on how the treatment proceeds.

” We think that good customer service is mainly about providing and receiving lots of information concerning the donation process.

” Waiting time has not been too long. We have just concentrated on other things in life.

” There's nothing that the clinic staff can do or say to make us feel less stressed or insecure.

” We don't care about the physical surroundings or the atmosphere of the clinic.

Polku
PICTURE CARDS

Picture Cards

Please, take a look at the cards, and comment on the statements based on your experiences.

Appendix 6. Design probes (Memo Pad)

Polku

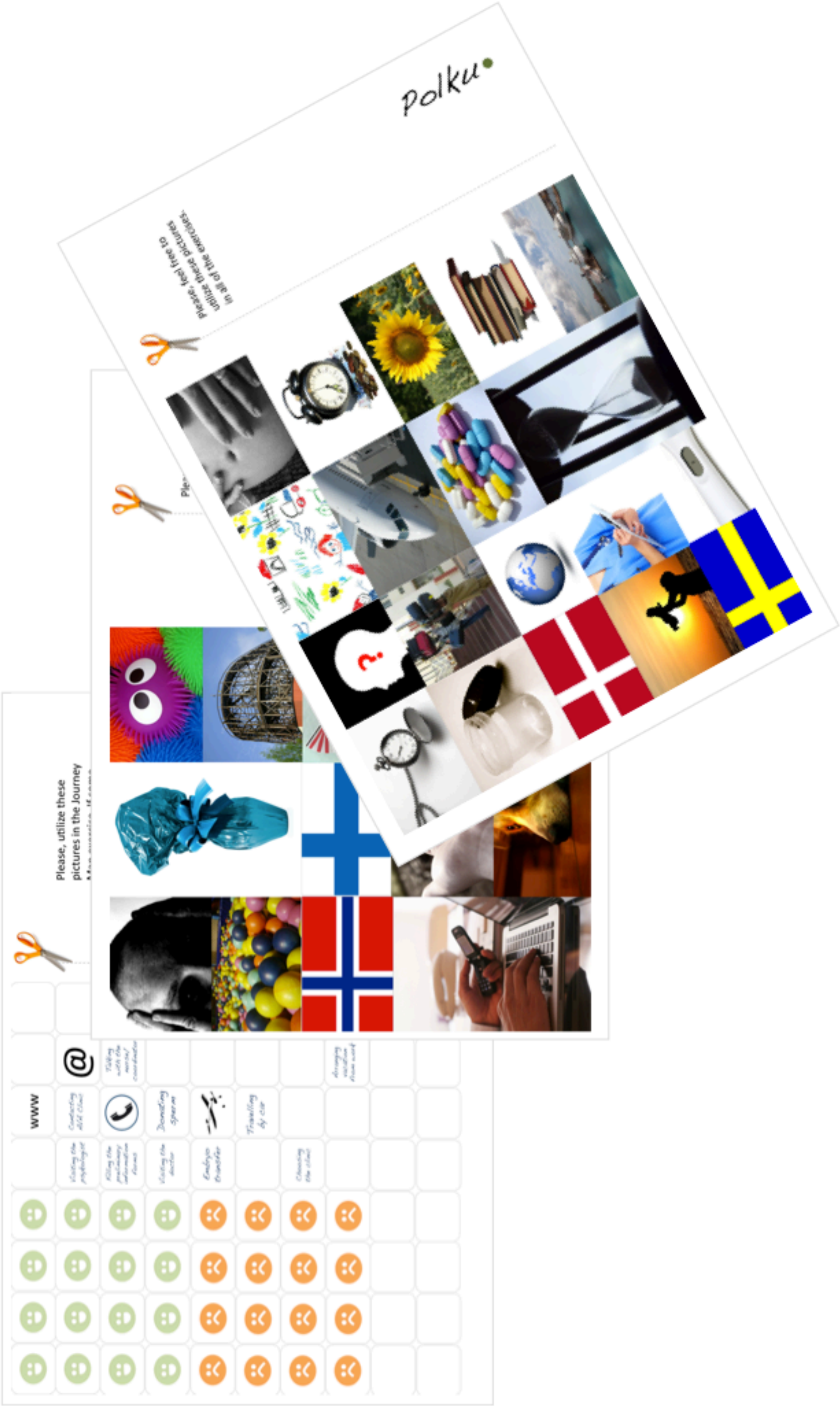
MEMO PAD

Memo pad

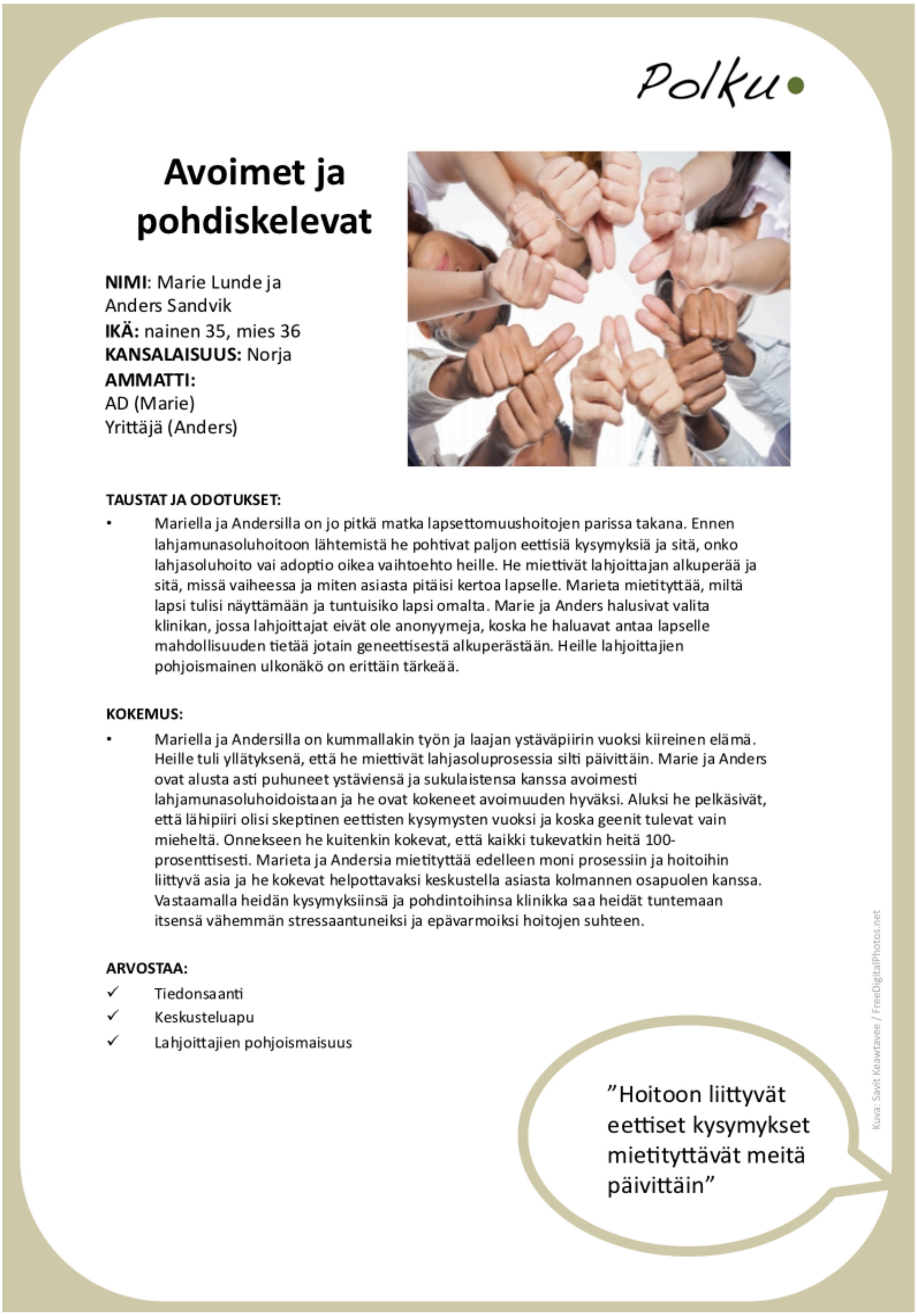
Place this memo pad in a central place at your home. Every time you have a question related to the egg donation process write this question down on the memo pad.

It can be something you would like to ask or something you just wonder (treatment, service, medication, travelling, expectations, etc).

Appendix 7. Design probes (stickers)



Appendix 8. User Personas



Polku

Avoimet ja pohdiskelevat

NIMI: Marie Lunde ja
Anders Sandvik
IKÄ: nainen 35, mies 36
KANSALAISUUS: Norja
AMMATTI:
AD (Marie)
Yrittäjä (Anders)

TAUSTAT JA ODOTUKSET:

- Mariella ja Andersilla on jo pitkä matka lapsettomuushoitojen parissa takana. Ennen lahjamunasoluhoitoon lähtemistä he pohtivat paljon eettisiä kysymyksiä ja sitä, onko lahjasoluhoito vai adoptio oikea vaihtoehto heille. He miettivät lahjoittajan alkuperää ja sitä, missä vaiheessa ja miten asiasta pitäisi kertoa lapselle. Marieta mietityttää, miltä lapsi tulisi näyttämään ja tuntuisiko lapsi omalta. Marie ja Anders halusivat valita klinikan, jossa lahjoittajat eivät ole anonyymeja, koska he haluavat antaa lapselle mahdollisuuden tietää jotain geneettisestä alkuperästään. Heille lahjoittajien pohjoismainen ulkonäkö on erittäin tärkeää.

KOKEMUS:

- Mariella ja Andersilla on kummallakin työn ja laajan ystäväpiirin vuoksi kiireinen elämä. Heille tuli yllätyksenä, että he miettivät lahjasoluprosessia silti päivittäin. Marie ja Anders ovat alusta asti puhuneet ystäviensä ja sukulaistensa kanssa avoimesti lahjamunasoluhoidoistaan ja he ovat kokeneet avoimuuden hyväksi. Aluksi he pelkäsivät, että lähipiiri olisi skeptinen eettisten kysymysten vuoksi ja koska geenit tulevat vain mieheltä. Onnekseen he kuitenkin kokevat, että kaikki tukevatkin heitä 100-prosenttisesti. Marieta ja Andersia mietityttää edelleen moni prosessiin ja hoitoihin liittyvä asia ja he kokevat helpottavaksi keskustella asiasta kolmannen osapuolen kanssa. Vastaamalla heidän kysymyksiinsä ja pohdintoihinsa klinikka saa heidät tuntemaan itsensä vähemmän stressaantuneiksi ja epävarmoiksi hoitojen suhteen.

ARVOSTAA:

- ✓ Tiedonsaanti
- ✓ Keskusteluapu
- ✓ Lahjoittajien pohjoismaisuus

”Hoitoon liittyvät eettiset kysymykset mietityttävät meitä päivittäin”

Kuva: Savit Keawtavee / FreeDigitalPhotos.net

Polku•

Yksinäiset ja eksyneet

NIMI: Margareta Magnusson ja Kjell Holm
IKÄ: nainen 30, mies 33
KANSALAISUUS: Ruotsi
AMMATTI:
Arkkitehti (Margareta)
Projektipäällikkö (Kjell)

TAUSTAT JA ODOTUKSET:

- Lapsettomuus tuli Margaretalle ja Kjellille yllätyksenä. Lääkäri antoi Margaretalle huonot ennusteet tulla raskaaksi omilla sukusoluillaan ja ilman ulkopuolisen apua, ja käytännössä tämä tarkoitti heidän kohdallaan lahjamunasoluhoitoja. Ulkomaille hakeutuminen tuli ajankohtaiseksi huomattavasti lyhyemmän jonotusajan vuoksi, ja Suomi tuntui läheiseltä vaihtoehdolta kätevän sijainnin ja yhteisen historiansakin takia. Tästä huolimatta he haluavat hoitaa mahdollisimman suuren osan prosessista kotimaastaan käsin.

KOKEMUS:

- Lahjamunasoluhoitoprosessi tuntuu etenkin Kjellistä pitkältä matkalta, joka herättää suuren määrän ajatuksia. Vaikka he ovat olleet kohtalaisen avoimia hoitoon hakeutumisestaan lähipiirinsä kanssa, he kokevat silti olevansa matkalla kahdestaan. Ennen prosessia Margareta ajatteli, että he olisivat klinikan kautta yhteydessä muiden samassa tilanteessa olevien pariskuntien kanssa, mutta he eivät ole olleet yhteydessä keneenkään. Heistä tuntuu, että klinikaltakaan kukaan ei ole kysynyt miten he voivat tai tarvitsevatko he jotain. He tuntevat itsensä yksinäiseksi.
- Odotusaikaa lahjamunasolujonossa Margareta ja Kjell kuvaavat tyhjiöksi. Oloa vaikeuttaa se, että ei tiedä kauanko odotus kestää ja missä kohti jonoa kulloinkin on. He kokevat olevansa sekaisin kokonaiskuvasta ja tuntevat, että ovat saaneet tietoa palasittain sieltä täältä. Margaretalle hoito on ollut myös fyysisesti rankka lääkkeiden sivuvaikutusten takia.

ARVOSTAA:

- ✓ Säännöllinen yhteydenpito
- ✓ Kokonaiskuvan konkretisoiminen
- ✓ Henkilökunnan tuki

”Tunnemme
itsemme
yksinäiseksi”

Kuva: BJWOK / FreeDigitalPhotos.net

Polku

Tyytyväiset ja toiveikkaat

NIMI: Anna ja Olav Hansen
IKÄ: nainen 43, mies 45
KANSALAISUUS: Norja
AMMATTI:
Sosiologi (Anna)
Agrologi (Olav)

TAUSTAT JA ODOTUKSET:

- Anna ja Olav tapasivat toisensa vasta hieman myöhemmällä iällä. Ajatus yhteisestä lapsesta kypsyi, mutta Annalle sanottiin, ettei hänellä ollut enää mahdollisuuksia tulla luonnollisesti äidiksi. Samalla kuitenkin lahjamunasoluhoito mainittiin vaihtoehtona. Aluksi lahjamunasoluhoito kuulosti kaukaiselta vaihtoehdolta. Etenkin Olav mietti, että kyseessä olisi kovin pitkä prosessi, joka sisältäisi vaikeasti ymmärrettäviä lääketieteellisiä askeleita ja epävarman tuloksen. Mutta uudelleen herännyt toivo siitä, että heillä oli vielä mahdollisuuksia tulla vanhemmiksi, antoi heille sysäyksen hakeutua hoitoon. He olisivat halunneet käydä hoidot kotimaassaan, mutta se ei ollut lain puitteissa mahdollista. Ulkomaisen klinikan valinnassa Annan gynekologin suosituksella oli suuri rooli.

KOKEMUS:

- Ainostaan Annan ja Olavin vanhemmat tietävät pariskunnan hakeutumisesta lahjamunasoluhoitoon. He haluavat pitää asian pienessä luotetussa piirissä, jotta lapsi saa tulevaisuudessa kuulla asiasta oikeaa kautta ja oikeaan aikaan. Anna ja Olav ovat valmistautuneita siihen, että lahjamunasoluhoitoprosessi vie aikansa ja he ajattelevat, että se on asiakkaan parhaaksi. Heistä on ihmeellistä, kuinka paljon lahjoittajat ovat valmiita käymään läpi auttaakseen toisia.
- Anna ja Olav kokevat olevansa herkässä asemassa, ja heistä henkilökunnan oikea asenne, ymmärrys ja ystävällisyys ovat tärkeämpää kuin mikään muu. He yllättyivät siitä, että lahjamunasoluhoitoon liittyvät asiat ovat niin luonnollisia aiheita henkilökunnalle. Klinikkakäynnit ja henkilökohtainen kontakti ovat heidän mielestään tiedon jakamisessa paljon tärkeämpiä kuin nettisivut, joiden merkitystä heidän mielestään ei pitäisi yliarvioida.

ARVOSTAA:

- ✓ Henkilökunnan ystävällisyys
- ✓ Henkilökohtainen kontakti
- ✓ Tiedonsaanti kasvokkain

”Henkilökunnan auttavainen asenne antaa meille voimaa”

Kuva: David Castillo Dominici / FreeDigitalPhotos.net

Polku

Aktiiviset ja tiedonjanoiset

Kuva: Ambro / FreeDigitalPhotos.net

NIMI: Karen ja Jens Helland
IKÄ: nainen 35, mies 41
KANSALAISUUS: Norja
AMMATTI:
Tuotepäällikkö (Karen)
Projekti-insinööri (Jens)

TAUSTAT JA ODOTUKSET:

- Karenin ja Jensin on ollut vaikea hyväksyä, että he eivät pysty saamaan lasta ilman ulkopuolisen apua. Lahjamunasoluhoito ulkomailla on heille iso taloudellinen panostus, mutta samalla he ovat hyvin kiitollisia hoidon mahdollisuudesta. Se tuntuu heistä paremmalta vaihtoehdolta kuin adoptio. Pariskunta vertaili klinikoita netissä, ja ensiyhteydenotolla oli suuri vaikutus lopulliseen valintaan. He ovat optimistisia hoidon suhteen ja uskovat, että heillä on hyvät mahdollisuudet onnistua. Lahjamunasoluprosessin aikana Karen ja Jens tekevät viimeisiä hoitoyrityksiä omilla sukusoluillaan kotimaassaan.

KOKEMUS:

- Karenista ja Jensistä on hyvä, että heillä on vapaus käydä IVF-hoitoja omin päin myös lahjamunasoluprosessin aikana. Heidän kotimaassaan lahjamunasoluhoidot ovat laittomia, ja tiedonsaanti hoitoihin liittyen on ollut heidän mielestään haastavaa. He lähestyivätkin klinikkaa suuren kysymysmäärän kanssa. Ennen ensikäyntiä heitä kiinnostaa tieto hoidon kulusta, hinnoista, ikärajoista, luovuttajista, onnistumisen todennäköisyydestä, klinikan kokemuksesta ja osaamisesta sekä hoitoihin liittyvistä säännöistä ja määräyksistä.
- Karen ja Jens arvostavat sitä, että klinikan henkilöstö on valmis vastaamaan kysymyksiin klinikkakäyntien lisäksi myös sähköpostitse ja puhelimessa. He etsivät tietoa paljon myös klinikan nettisivuilta. Kun he saavat vastaukset kysymyksiinsä, he tuntevat olonsa paremmaksi myös hoitojen suhteen. He toivoisivat että heidän kanssaan vietettäisiin ensikäynnillä vielä enemmän aikaa ja he haluaisivat päästä tutustumiskierrokselle klinikalla. He toivovat säännöllistä yhteydenpitoa klinikan puolelta, jotta he tuntisivat olonsa varmemmaksi siitä, että prosessi menee eteenpäin.

ARVOSTAA:

- ✓ Säännöllinen tiedonsaanti
- ✓ Kiireetön kohtaaminen
- ✓ Vapaus

”Tiedonsaanti on jaksamisemme kannalta kriittistä”

Polku

Alakuloiset ja turhautuneet

NIMI: Pernilla ja Ejnar Nordström
IKÄ: nainen 39, mies 37
KANSALAISUUS: Ruotsi
AMMATTI:
Opettaja (Pernilla)
Automaatiosuunnittelija (Ejnar)

TAUSTAT JA ODOTUKSET:

- Muutaman vuoden epäonnistuneiden IVF-yritysten jälkeen Pernillan gynekologi suositteli pariskunnalle lahjamunasoluhoitoa ja suomalaista klinikkaa. Pernilla ja Ejnar ovat matkalla kahdestaan ja vain lääkärit tietävät heidän hoidoistaan. He eivät uskalla olla kovin optimistisia hoitojen suhteen, mutta kokevat mahdollisuutensa kohtalaisiksi.

KOKEMUS:

- Pernillan olo on kuin vuoristoradalla. Joinain päivinä hän on todella surullinen ja turhautunut ettei ole hedelmällinen nainen. Kaikki muut tuntuvat onnistuvan ja se tuntuu hänestä epäreilulta. Ejnar tuntee itsensä miehenä riittämättömäksi. Hän kokee vain katsovansa vierestä kun hänen rakkaimpansa kärsii. Tällä hetkellä hän kokee voivansa olla vain fyysisenä tukena. Lääkärin vastaanotto oli heistä informatiivinen, mutta Ejnarista tuntui, että lääkäri puhui pääasiassa naiselle ja hän koki itsensä poissuljetuksi.
- Ennen hoitoon lähtemistä Pernilla ja Ejnar kuvittelivat, että prosessi olisi helpompi eikä se vaikuttaisi niin paljon jokapäiväiseen elämään. Haastavinta heistä on ollut odottaminen; kun ei ole kontrollia eikä tiedä tuleeko onnistumaan. Ajatustensa jäsentämiseksi ja käytännön prosessin helpottamiseksi he toivovat klinikalta kiteytettyä tietoa, muistilistoja ja käytännön vinkkejä esimerkiksi matkustamiseen liittyen.

ARVOSTAA:

- ✓ Henkilökunnan tuki (erit. miehen huomioiminen)
- ✓ Keskusteluapu
- ✓ Käytännön tieto ja vinkit

Kuva: David Castillo Dominici / FreeDigitalPhotos.net

”Olo on kuin vuoristoradalla”

Appendix 9. User Personas (additional)

Polku

Tuntemattomat

NIMI: Sofia ja Björn Gustafsson
IKÄ: Nainen 38, Mies 35
KANSALAISUUS: Ruotsi
KOULUTUS:
Optikko (Sofia)
LVI-asentaja (Björn)

TAUSTAT JA ODOTUKSET

- Sofialla ja Björnillä on muutaman vuoden tuloksettomat lapsettomuushoidot takana. Lääkärin suosituksesta he lähtivät kartoittamaan lahjamunasoluhoitomahdollisuutta kotimaassaan. Julkisen puolen jonot tuntuivat kuitenkin heistä liian pitkiltä, ja he päättivät lähteä tutustumaan ulkomaisiin klinikkavaihtoehtoihin. Oman lääkärin neuvomana he päätyivät ottamaan yhteyttä pariin eri klinikkaan.
- Sofia ja Björn miettivät pitkään, onko heillä taloudellisessa mielessä mahdollisuuksia aloittaa hoidot ulkomailla ja olisiko julkinen puoli omassa maassa sittenkin parempi vaihtoehto. Ulkomaisia klinikkoja lähestyessään he arvostivat lyhyen jonotusajan ja sijainnin lisäksi nopeaa sähköpostivastausaikaa ja hyviä nettisivuja. Hoitotulokset olivat heille myös hyvin tärkeitä asioita, ja he halusivat klinikalta lupauksen siitä, että kaikki tehdään parhaalla mahdollisella tavalla. Toiveistaan ja arvostuksistaan huolimatta lopullisen päätöksen he tekivät kuitenkin taloudellisten rajoitteiden pakottamana. He päättivät tällä erää sopeutua pitkään jonotukseen ja valita hoidot kotimaassaan julkisella puolella.

KOKEMUS:

-

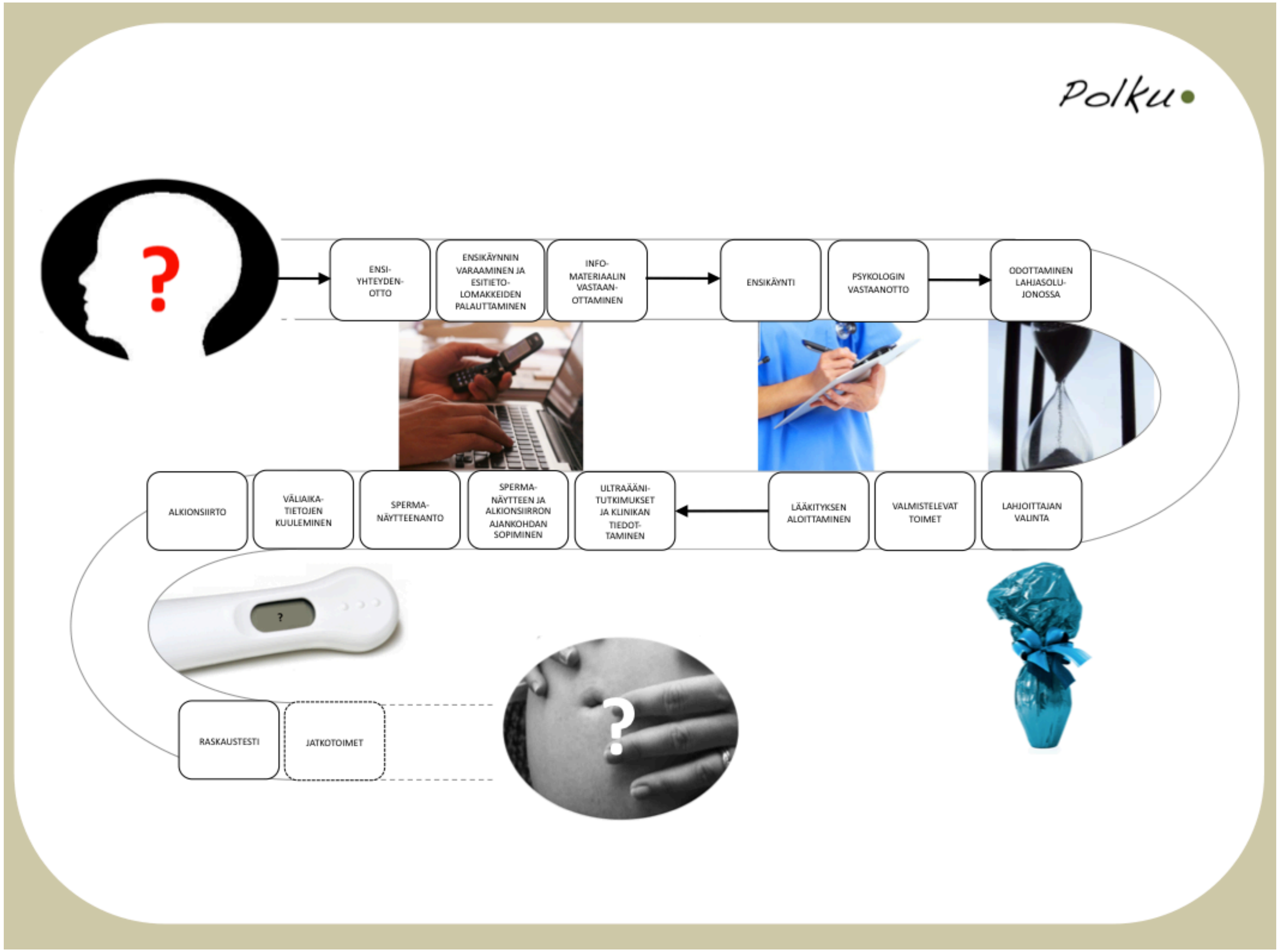
ARVOSTAA:

- ✓ Nopea apu
- ✓ Klinikan saavutettavuus
- ✓ Nettisivut
- ✓ Hoidon edullisuus

”Taloudelliset rajoitteet painavat päätöksenteossamme”

Kuva: Nuttakit / FreeDigitalPhotos.net

Appendix 10. Customer Journey



Appendix 11. Experience Cards

Nettisivuilta löytyy kaikki tarpeellinen tieto. Virtuaalinen matka klinikalla oli mukava lisä ennen ensikäyntiä.

Olisi kiva saada enemmän käy kuinka päästä Tampereelle. E tienneet, että olisimme voine Helsingistä.