Same, same but different

Lesbian couples undergoing sperm donation

CATRIN BORNESKOG
Abstract

Introduction: The desire to have children and form a family is for many people central for life fulfilment and the desire does not differ by sexual orientation. Due a series of societal changes during the last decade, today we see a lesbian baby boom. Planned lesbian families are a relatively new group of patients and parents in reproductive health care, yet little is known about psychological wellbeing during the transition to parenthood in these families.

Aim: The overall aim of this thesis was to fill a gap of knowledge about the psychological aspects of undergoing treatment with donated sperm, at the time of pregnancy and during early parenthood that affect lesbian couples forming a family.

Method: This is a multicentre study comprising all 7 university clinics that perform gamete donation. The study includes lesbian couples undergoing treatment with donated sperm and heterosexual couples undergoing IVF treatment with their own gametes. Participants were recruited consecutively during 2005 and 2008. 165 lesbian couples and 151 heterosexual couples participated in the study. Participants responded questionnaires at three time points (T); time point 1 (T1) at the commencement of treatment, (T2) after the first round of treatment, around 2 month after T1 and (T3) 12-18 months after first treatment when a presumptive child had reached 1 year. Data was analysed with statistical methodology.

Results: Lesbian couples reported an all over high satisfaction with relationship quality, good psychological wellbeing and low parenting stress. Heterosexual couples also reported good satisfaction with relationship quality, however somewhat lower than the lesbian couples. Parenting stress in the heterosexual couples was similar to the lesbian couples. A strong association was found between high relationship satisfaction and low parenting stress.

Conclusions: Lesbian couples forming a family through sperm donation treatment are satisfied with their relationships, they report a good psychological health and experiences of low parenting stress.

Keywords: Lesbian couples, sperm donation, assisted reproduction, relationship quality, symptoms of anxiety and depression, parenting stress

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ISSN 1651-6206
ISBN 978-91-554-8803-1
urn:nbn:se:uu:diva-209985 (http://urn.kb.se/resolve?urn=urn:nbn:se:uu:diva-209985)
To my family
List of papers

This work is based on the following papers, which are referred to in the text by their Roman numerals.

I. **Relationship quality in lesbian and heterosexual couples undergoing treatment with assisted reproduction.**
   Catrin Borneskog, Agneta Skoog Svanberg, Claudia Lampic and Gunilla Sydsjö

II. **Psychological health in lesbian and heterosexual couples undergoing assisted reproduction.**

III. **Parenting stress in – comparison between lesbian couples, IVF-couples and spontaneous pregnant couples.**
     Catrin Borneskog, Claudia Lampic, Gunilla Sydsjö, Marie Bladh, Agneta Skoog Svanberg. Accepted.

IV. **Relationship satisfaction in lesbian and heterosexual couples before and after assisted reproduction.**
    Catrin Borneskog, Claudia Lampic, Gunilla Sydsjö, Marie Bladh, Agneta Skoog Svanberg. Submitted.
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Theoretical concepts

Some of the theoretical concepts, the terminology and the use of language in this thesis might need clarification.

**Heteronormative** is the norm signifying that heterosexuality is the normal way to be, the fore given/granted taken and expected in a society. Consequently, every other sexual orientation like homosexuality or bisexuality will be regarded as abnormal. A value-scale which everything else will be compared to. Heteronormativity is so common that it is invisible to heterosexual individuals.

**Heterosexist** is a stronger, more loaded word than heteronormativity. Whilst heteronormativity is an unconscious assumption by heterosexual individuals, heterosexism is a conscious discrimination and rejection of homosexuals by heterosexual individuals.

From the gay-lesbian-bisexual-transgender organisations there are recommendations for the use of terminology. **Sexual orientation** can be defined by *identity* (whether an individual labels themselves as lesbian or heterosexual, for instance) or can focus on *behaviour* (for example people who define themselves as homosexual but engage in same-sex activity). The two do not necessarily have to be the same.

Sometimes **non-heterosexual** is used for same-sex attracted people aiming to emphasise that heterosexual is not the only sexual orientation. However, as in this thesis, when discussing people who claim an identity as gay or lesbian, these terms are employed.

Rather than focusing on sexual orientation, an appropriate, respectful and inclusive language would be to focus on the social relationship and to use for instance, same-sex attraction, same-sex couples and two-mother family (in Swedish *tjejpar* eller *kvinnopar* och *två-mamma* eller *två-mödra familj*). In the same way the non-birth mother needs to be named in an inclusive way to acknowledge her position in the couple and the family and recognise her equality as a parent. In the UK and in international literature the term social mother or non-birth mother are commonly used. In Sweden, Norway and Denmark, today and in the every-day-language the name **medmor** or **medmamma** is used. Furthermore, some argue that an inclusive language would be to use the term “the other parent” or “the second parent” to emphasise the equal parental roles between the two mothers. However, in this thesis I will use the term **co-mother**, which is my translation of the Scandinavian term into English.
## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ART</td>
<td>Assisted Reproduction Technology</td>
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<tr>
<td>PCA</td>
<td>Positive Couple Agreement</td>
</tr>
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<td>ENRICH</td>
<td>Evaluating and Nurturing Relationship Issues, Communication and Happiness</td>
</tr>
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<td>HADS</td>
<td>Hospital Anxiety and Depression scale</td>
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<td>IUI</td>
<td>Intra Uterine Insemination</td>
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<td>IVF</td>
<td>In Vitro Fertilisation</td>
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<td>NRT</td>
<td>New Reproductive Technologies</td>
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<td>SPSQ</td>
<td>Swedish Parenting Stress Questionnaire</td>
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<td>STI</td>
<td>Sexual Transmitted Infection</td>
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<td>T1</td>
<td>Time point 1</td>
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<td>T2</td>
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Introduction

Around 2-12 % of all individuals are estimated to have a non-heterosexual identity. However, the available statistics regarding prevalence of non-heterosexual identity vary widely between countries, mainly because of the private and delicate nature of questions about sexuality (1). During the last decades in Sweden, there have been a series of societal changes in order to provide people with the same rights and opportunities regardless of sexual orientation. For example, in 1986, the last remnants of homosexuality as a psychiatric diagnosis were removed from the DSM III (Diagnostic and Statistical Manual of Mental Disorders). In 1995 homosexual couples were given the right to enter registered partnership (SFS 1994:1117) (2), and in 2003, to adopt children. In July 2005 assisted reproduction with donated sperm become available to lesbian couples within the Swedish public health care system. Furthermore, in 2009 the gender-neutral legislation about same-sex marriage was introduced (SFS 2009:260) (3).

Lesbian women

In retrospect

The desire to have children is the same to all individuals. To some the desire is very strong; to some it is weaker. Like heterosexual women, many lesbian women have a strong desire for parenthood and want children (4-6). Lesbian women have had families and children before the opportunity to undergo assisted reproduction in a clinical setting existed (7).

In the past many women who were attracted to other women faced strong societal pressure to marry a man and have children. Same-sex feelings were often repressed or expressed in a highly secretive way (8). Gay liberation in the 1970s meant a radical change to homosexual individuals and their lives (7), and increasing numbers of homosexuals came out at that time and openly identified themselves as lesbian or gay.

Before the legislation of donor insemination treatment for women in same-sex relationships was introduced in 2005, donor insemination to non-heterosexual women was prohibited in Sweden. Lesbian women with parental ambitions had to find other ways to conceive. Some had conceived in
former heterosexual relationships (9). However, many were lesbian women who chose to self-inseminate in a private setting with fresh sperm from a known (i.e. friend) sperm donor (10, 11). Many were also Swedish women that went abroad, for example to the private midwife-led clinic in Denmark to have insemination with frozen semen from an anonymous donor (6, 9). Also Finland has been a host country for Swedish women requesting donor insemination (7).

Families in transition

Concurrently with the late modern societies growing individualization, families’ transform and the concept of family changes. The firm structure of the traditional nuclear family with a mother, a father and biological children is no longer the only way to shape intimate relationships and to build families. Sociologists argue that the challenging of the position of the patriarchal heterosexual nuclear family by the feminist movements has been decisive in the transformations of families (12). Until recently, a pragmatic view of the juridical, genetically, biological and social parent as being the one and same person has been a common convention (13). However, sociologists consider that rather than being dependent on biology, families are a social practice (6). The development of new reproduction technology as well as changes in attitudes towards homosexuals has further contributed to family transformations and homosexual families have been depicted as good examples of new families in which sexuality, sex and gender have been emancipated from the structures of the patriarchal nuclear family (12). Lately, modern family research has been inspired by qualitative oriented feminist research (14) and the interest has been addressed to ‘family practice’ and ‘doing family’ to emphasis practice rather than structure (15).

Planned lesbian families

A planned lesbian family is when two women have opted for motherhood within a lesbian relationship. Planned lesbian families differ from lesbian families with children originating from heterosexual relationships (14, 16). In the former families the parental composition has changed, and parent and child experienced divorce and the coming out of the mother (14, 16).

To plan a two-mother family, there are many issues to consider and many decisions to make. These decisions are often intertwined in a complex way and are not straightforward.

One of the first decisions is to decide what kind of donor to use. This decision has two consequences; one is the way the route of conception will take place, the other is what role or non-role the donor will have in the family and the child’s life. This is a decision that will have an important impact on the family and family relationships throughout life (6, 11, 14, 17, 18). An
anonymous donor will remain anonymous to the couple and the donor offspring. An identifiable or open identity donor is also anonymous to the couple, but can be identifiable to the donor offspring at maturity if requested. A known donor can be a person known to the couple, a male acquaintance for instance, however it is common that the couple have found the donor on the internet, sometimes called ‘a stranger-donor’ (11). Lately, a fourth kind of donor have emerged which in lesbian communities is called ‘a dedicated donor’ meaning that the lesbian couple will be the parents but the donor will be a person that is active, engaged and taking part in the child’s life (19).

When lesbian couples chose a non-clinical insemination with a known or ‘stranger-donor’, the reasons are often financial or a last try and way to conceive. A non-clinical insemination also carries legal uncertainties such as the issue of custody and parenthood (11). A non-clinical self-arrange insemination is logistically difficult to manage. The couple has to arrange to meet up with the donor for the handover, and the insemination often takes place in the couple’s homes. This type of inseminations uses fresh semen and since sperm are motile only one-two hours after ejaculating, insemination has to take place in a quick succession at a time when the woman is ovulating. Most women need to inseminate during several ovulation cycles to conceive. Serious risks are embedded in this arrangements, not at least the risk of contracting serious sexually transmittable infections (STI’s), but also the potential to encounter a donor who for instance is just seeking sexual stimulation (11).

Another way to access donor sperm is to turn to online sperm banks like www.cryointernational.com, which is a worldwide sperm bank network. According to their website they supply high quality, frozen, tested, donor semen to more than 70 countries all over the world. They offer a selection of more than 400 donors of different races and ethnicities. On this website you can choose if you want an anonymous or non-anonymous donor. There is also extended information about the donor profile such as eye and hair colour, body constitution-weight and height and also information about occupation and education. Moreover, statistics of pregnancy outcome from every donor are displayed. In addition there are quotas from the sperm bank staff about the donor and his personality. The price for one straw/vial of frozen washed insemination ready semen is €15. One sample often is enough for one insemination. The vial with frozen sperm will be delivered to the place the couple decide; it can be their home or a reproductive health clinic (www.cryointernational.com).

Clearly, there are many important reasons for lesbian couples to choose donor insemination in a clinical setting. Firstly, donors undergo medical and psychological investigation before being accepted as a donor. Secondly, the donor semen are sampled, screened, frozen, stored and prepared by the clinic and therefore ‘safe’ to use.
Thirdly, the logistics of timing the insemination to when the woman is ovulating is facilitated by the reproductive health clinic and their routines; the woman only needs to contact the clinic when ovulation is approaching. Fourthly, in the clinical setting, signing the donation form, both the birth mother and the co-mother will have full legal parental rights and obligations to the donor offspring (20). Finally, in Sweden, accordingly to being included in the national health care system, assisted reproduction is in most county councils free.

Co-mothers
The lesbian co-mother has a unique role in two-mother families, a parental role unlike any other (21). To tell the world around about the expected child, at the same time (if she has not done it before) the co-mother is disclosing her sexual orientation (because she is not pregnant), and as a reaction she might be asked private and intimate questions about the conception.

To be acknowledged as a family, and to include the co-mother in the family union and involve her as a parent is vital to lesbian mothers (21-24), not at least in the event of the child being ill and or in need of neonatal or paediatric care. Adequate knowledge is therefore essential to midwives and other health care professionals when encountering two-mother families. It has been reported that the co-mother may not be treated as a ‘true’ parent by health care professionals, friends and family (25, 26), and that ignorant questions about the ‘father’ arise. In a meta-ethnography of lesbian women’s experiences with healthcare providers in the birthing context, it was concluded that if a midwife is distressed by lesbian sexuality, the emotional involvement in the care will be affected (21).

A common misconception is that family constructions and parental roles in lesbian families are similar to those in heterosexual families. In contrast, when heterosexual families are largely depicted with an unambiguous gendered stereotyped structure; variation is a distinctive feature in descriptions of same sex families (27). Contrary to what is possible to heterosexual families, the lesbian co-mothers may also want to breastfeed the baby (5, 22). It is also common that the women in the lesbian couple, when they want the family to grow, take in turn to be inseminated and to carry the next pregnancy (18, 28). This is consciously planned decisions by the lesbian family that with great likelihood will impact on family life and challenge reproductive care and counselling.

The health of non-heterosexual women
A growing body of evidence documents non-heterosexual’s disadvantaged health status and health care access (29, 30). Lower levels of health service
use by non-heterosexual women is widely documented in the UK, Europe and the US (31, 32) as well as in Sweden (33).

These studies report that the experience of encounter heteronormative assumptions about sexuality and sexual practice from health care professionals (i.e. midwives, GP’s and obstetricians/gynaecologists) may explain lower attendance (34). To avoid being met by prejudice and ignorance, lesbian women may not always be open about sexual orientation and practice to care providers (5, 33). Notwithstanding, women may forgo a service or delay using it until the problem can no longer be avoided, and intensifying its severity (34).

Population-based data on the physical health of non-heterosexual women is relatively scarce; they also exhibit some variance, which may reflect methodological, conceptual and contextual differences. For instance, much of the research on non-heterosexual populations uses convenience samples, making generalisation problematic (29). Also Malterud (35) has described the methodological problems involved when researching marginalised groups. Moreover, some studies define sexual orientation by identity (whether an individual labels themselves as lesbian or heterosexual, for instance), while others focus on behaviour (for example, people who define themselves as heterosexual but engage in same-sex activity). Different findings may also reflect the social context in which study participants live. In some illiberal social environments, the discrimination directed towards non-heterosexuals may influence some health related behaviours that act as a mean of coping with stigma, alcohol consumption and tobacco smoking for example (29).

However, notwithstanding these incongruities, data suggest non-heterosexual women face greater risks to their health than their heterosexual counterparts. Higher rates of obesity are widely documented (31, 36). The data on tobacco use in non-heterosexual women is ambiguous, some report higher consumption (36) some surveys do not support this (29). These data also report of elevated risk of heart disease and some do document a higher prevalence (31).

Cancer registers in most countries do not include sexual and gender orientation, making it difficult to accurately assess differences in rates between women. However, non-heterosexual women face some distinctive risk factors for certain cancers. Lower rates of childbearing and oral contraceptive use, together with use of fertility drugs, heighten their risk for ovarian cancer (36). While the evidence about whether non-heterosexual women have higher rates of breast cancer is equivocal, they do face elevated risks, primarily due to lower rates of childbearing and higher alcohol intake (36).

Despite having equivalent or elevated risks, non-heterosexual women make less use of screening programmes such as cervical cancer screening, breast cancer screening with mammography, and screening for sexual transmitted infections (STI’s) (36).
Many non-heterosexuals would like their doctor to know about their sexuality, yet do not disclose it fearing it would compromise the quality of care they receive. From Sweden (33) it has been reported that very few physicians are aware of having lesbian patients and therefore do not ask women about their sexual orientation and sexual practise. In the UK, one study found that fifty percent of non-heterosexual women had not told their GP about their sexuality (37). Inversely, it has also been reported how non-heterosexual women are asked questions building on heterosexual assumptions. Common misconceptions are the assumption about non-heterosexual women having or having had heterosexual intercourse with men; some might have, however it has also been reported that they don’t (11).

Reproductive health in lesbian women

To become pregnant non-heterosexual women may need assisted reproduction. Although the primary cause of childlessness in non-heterosexual women is social, some may have an infertility factor and need to undergo infertility treatment in order to conceive (38).

Some lesbian women may have had sex with men, and if the intercourse was unprotected, this is connected with a risk of sexual infection transmission. Female-to-female transmission of sexual infections also do occur (39). Consequently, as in heterosexual women, common causes to infertility in lesbian women are tubal damage due to previous tubal infection. Other causes can be anovulation or endometriosis (40).

Childlessness and the desire to have a child

Most women and men have a strong desire for parenthood and want children, and the experience of parenthood is considered to be central to individual identity and to the life plan of most people in most societies (41). In a recent study from Sweden nearly all men and women planned to have children and parenthood was perceived as a challenge and a sacrifice but also to enrich life (42).

There are various interpretations of the meaning and reasons to desire parenthood. In the 70’s, desire of parenthood was explained as a biological drive (43, 44). Later motherhood was explained from a psychoanalytic view where motherhood is essential for women to develop a female identity (45). From a feminist view the desire to have a child has been seen as a consequence of social enforcement and motherhood has often been criticised as a barrier to personal development and freedom (46). More current research has studied the motives and desires of parenthood from a more general human perspective (47-49), and has identified a number of motives for parenthood, for example, happiness, parenthood and wellbeing referring to the expected
feelings of love, of affection and of happiness in the relationship with the child, being a mother or a father as a life fulfilment, and one which endows positive effects on the family relationship (49). Motives such as happiness and the desire of mother and fatherhood has in a number of studies been hierarchically ranked highest by lesbian couples (45) and heterosexual infertile couples (47, 49, 50). Similar motives were also found in the Swedish study of Eriksson et al (2012), where motives as being part of the future and settling down to build a family were mentioned as reasons for having children (42).

**Assisted reproduction**

Assisted reproduction technologies (ART) are the common name for the various existing methods to help childless lesbian couples and heterosexual couples to conceive. Assisted reproduction with donated eggs has been allowed in Sweden since January 2003, sperm donation with an identifiable donor since 1985, and from July 2005 lesbian couples also can conceive through assisted reproduction within the Swedish National Health Care system (51).

Infertility can be primary, were the couple does not achieve a pregnancy at all, or secondary, where couples have at least one child but fail in conceiving again. To set the medical diagnosis of infertility, the medical investigation takes place in a methodically, predetermined order. Both parties are subject for investigation. Female and male infertility are equally common and occur often as a combination (51). Common causes of infertility are tubal damage (15 %), anovulation (15 %), sperm factors i.e. low count or poor quality (30 %), cervix factor (5 %), oocyte factor i.e. poor oocyte reserve (15 %) and 20 % of infertility remains unexplained (52). Age is also important; after the age of 38 the woman has lost half of her ovarian reserve. Lifestyle factors such as obesity and smoking also affect fertility negative (40).

Sperm insemination is the less medically complicated form of assisted reproduction; the woman is inseminated directly into the uterus, with the male partner’s sperm or with donor sperm. Insemination can be performed in a so-called un-stimulated cycle, or to increase the production of oocytes, the woman can be treated with follicular stimulation hormone therapy before the insemination, so called stimulated cycle (53).

The oocyte can also be fertilized with sperm in a laboratory, through in-vitro-fertilization, (IVF). Conventional IVF means that the man’s own sperm are put together with the woman’s own oocyte in a Petri dish where the fertilization takes place. They are thereafter incubated for 2-3 days, depending on the embryological development. Couples then return to the clinic and the embryo is transferred into the woman’s uterus.
ICSI, intracytoplasmic sperm injection is a microinjection technique, where one single sperm is injected direct into the oocyte’s cytoplasm. Micro-injection technique is mainly used when there is a male infertility factor, e.g. low sperm count, poor swim-up test or when standard IVF fails (53).

One insemination treatment cycle often requires, from start to end, 4-5 weeks. It is common that the woman has to undergo more than one treatment to achieve a pregnancy (54). One cycle of in-vitro fertilisation typically requires nine to twelve days of self injection with follicular stimulation hormone (FSH) to stimulate the production of oocytes, retrieval of oocytes via trans-vaginal ultrasonography, fertilisation of oocytes in the laboratory with partner or donor sperm, and after 2-3 days transfer of the resulting embryo into the uterus (55). Couples then wait two to three weeks to find out whether implantation and a pregnancy have occurred. When there is a positive pregnancy test an ultrasound examination takes place (around five weeks after the embryo transfer) in order to verify the pregnancy (54).

In Sweden the number of insemination treatments offered differs between clinics, but includes commonly 6 inseminations. If 2-3 insemination treatments do not result in a pregnancy the couple is offered the opportunity to proceed with IVF-treatment instead. Due to the high risk of obstetric and neonatal complication at duplex pregnancies and births, in Sweden only one embryo is transferred. Abroad, this can be different. Moreover, in some county councils, lesbian couples without a medical indication (i.e. infertility factor) have to cover a small part of the cost for the treatment themselves.

The criteria to be accepted for assisted reproduction also differ between county councils in Sweden. For example, the age of the woman can not be more than 38 years in some county councils and not more than 40 in others; the man, not more than 50 in some and 55 years in others. The woman must have a BMI (body mass index) below 35, however most clinics recommend a preferable BMI <28. Additional treatment to have a sibling is not included in the Swedish national health care system, but is offered if the couple wants to cover the costs privately (54, 56).

| Fertility clinics in Sweden, university hospitals, 2013 |
|----------------|-------|------|-------|--------|--------|--------|--------|
|                | Sthlm | Gbg  | Malmö | Linköp | Uppsala | Umeå   | Örebro |
| age sperm donor| 20–<45| 45   | 23–<45| 20–<45 | 20–<47 | 18–<45 | 23–<45 |
| age treated woman | <40   | <40  | <39   | 25–<38 | <40   | 24–37 | 18–40  |
| BMI treated woman | <35   | <35  | <30, ej rökare | <30 | <35 | <30 | <35 |
Since multiple cycles of assisted reproductive treatments often are required to achieve a pregnancy, stress effects can be pronounced after repeated treatments (57). Around 30% of couples discontinue infertility treatment because of its psychological burden, (58, 59).

Donation treatment

In Sweden donation treatment with gametes is regulated in The Insemination Law (SFS 1984:1140), The Children and Parents Code (SFS 1984:1139) and Official Secrets Act (SFS 1984:1141). The Swedish law equals heterosexual and homosexual couples and since 2005 lesbian couples have had access to assisted reproduction treatment with donated sperm. The couple should be cohabiting or married and the relationship stable with a duration of at least two years. As couples that undergo IVF-treatment with their own gametes do, donation treatment couples also undergo a medical investigation. In addition, before being accepted for assisted reproduction, couples also undergo a thorough psychosocial investigation. According to Swedish law, all couples that request treatment with donated gametes must undergo a psychosocial and medical investigation by a counsellor, i.e. psychologist. A severe medical or psychiatric illness, alcohol and or substance use are causes to refuse a couple assisted reproduction. Another aim of the psychosocial investigation is to assess the stability of the couple’s relationship. This is necessary to ensure the welfare of the offspring’s. Both individuals in the couple are subjects for such investigation. As a part of the investigation and treatment the couple are given information about the legislation concerning identity-release of the donor/donation. The couples are also given advice and can discuss with the counsellor how and when to talk to the child about this (60).

Identity-release donation

The Swedish legislation that came into effect in 1985 about identity-release donors ensures the child has right to, at mature enough age, receive identifiable information about the donor. The Swedish legislation has been ground breaking for many countries around the world. Countries like Austria, Switzerland, the UK, Norway, the Netherlands, New Zealand, Finland as well as some states in Australia have since then changed their policies and practice (61). A donor has no emotional, financial or legal rights or obligations towards the becoming child. Furthermore, an identity release donor has no right to know the identity of the couple or a child conceived with his/hers gametes. Likewise, the parents of the child do not have the right to obtain identifying information about the donor (20).
The Donors

In Sweden, a man can be accepted as a sperm donor from his twenties until the age of 45-50 years. The presumptive donor has to be medically healthy and it is an additional advantage if he has previous biological children (as an indicator of fertility) (62).

By law, the psychosocial investigation is also a donor selection process where the clinics have the responsibility to assess, discuss and reflect on the donor’s personality, donation motives and thoughts about the future. The donor will be financially compensated for income loss and travel expenses due to the donation (62).

Until 2009, in Sweden a donor could be involved in the conception of 6 children (even more if treatment is offered for siblings). From 2010 this changed and there is now no such recommendations on number of children (20).

During the last few years a growing research interest has turned towards the donors. The motives to donate gametes, the psychological make-up and personality traits, as well as the long-term consequences of donating gametes, have been the focus of research (62-67). When the Swedish legislation about giving the donor offspring the right to identify their biological parent came into effect in 1985, it was argued that there would be a lack of sperm donors (63). The reason for this was the implications the identity-release donation could have in the future to the donor, the recipient couple and the donor offspring, if and when a donor offspring chose to contact the donor (63). After the introduction of the Swedish legislation, several studies have reported how donor personality characteristics and motives to donate seem to have changed (62, 64, 66-69). For example, Daniels (2007) studied the willingness to donate under different regimes, and found that an open non-anonymous donor system attracts a different kind of man than an anonymous system (70), and motives such as altruism or experiences of friends or relatives with infertility problems was in other studies found to be of greater importance (62, 66). Furthermore, in the study of Sydsjö et al (2012) sperm donors were reported to be mature, more often family-men than single and older than has been reported from previous studies (62).

Lately, research have also paid attention to the welfare and psychosocial needs of the donor (62, 63), and post donation psychosocial support have been suggested to be one improvement in future donor counselling (63, 71).
Psychological health

Anxiety
Anxiety disorder is a term covering several different forms of a type of mental illness characterized by abnormal and pathological fear and anxiety. Anxiety disorders can be divided into generalized anxiety disorder (GAD), panic disorder (PA), obsessive-compulsive disorder (OCD) and phobic disorder, each has its own characteristics and symptoms and they require different treatment. Unlike the relatively mild, brief anxiety caused by a stressful event (such as speaking in public), anxiety disorders last at least 6 months and can get worse if they are not treated. Anxiety disorders commonly occur along with other mental or physical illnesses, including alcohol or substance abuse, which may mask anxiety symptoms or make them worse. In some cases, these other illnesses need to be treated before a person will respond to treatment for the anxiety disorder (72).

The prevalence of anxiety disorders in the general population reported from the US is 18 % (72), and from Scandinavia the 12 month prevalence of anxiety disorders is reported to be approximately 23 % in women and 12 % in men (73, 74). Furthermore, there is a substantial co-morbidity between anxiety and depression in both females and males (75).

Depression
Major depression is a disorder of mood or affect: mood refers to the internal emotional state and affect to the external expression of emotional experiences (76). The two main symptoms of a major depression are depressed mood and the loss of interest or pleasure in nearly all activities. Additional symptoms are changes in appetite or weight, sleep and activity, decreased energy, feelings of worthlessness or guilt, difficulty thinking, concentration or making decisions. Recurrent thoughts of death and suicidal ideation, plans or attempts are also criteria for diagnosis (76).

Depression is a leading cause of global disability and the second leading cause of global disease burden among people between 15-44 years of age (77). Women are disproportionately affected, as they are almost twice as likely as men to report a lifetime history of major depressive episode (MDE) (76).

From the US it has recently been reported that depression affects 8-16 % of reproductive aged women (78). In a Scandinavian population the 12-month prevalence of major depression varies between 4.5 %–9.7 % in women and 3-4.1 % in men (73, 74).

How and what is the trigger to the first life-time onset of depression is still not clear, however, a number of consistently significant risk factors have
been found, including family history, childhood adversity, various aspects of personality, social isolation and exposure to stressful life experiences (79). Sex hormones have also been mentioned as contributing towards increased vulnerability for depression in women (80). The peak incidence of major depression in women occurs during the reproductive years, with a mean onset of 30 years (79).

Depression related to child bearing can occur during pregnancy (antenatal depression), after birth (postnatal depression) or both. The prevalence is estimated to be the same as for depression in the general population. The long-term consequences of perinatal depression (antenatal and postnatal depression) are far-reaching, affecting not only the mother but her infant and their relationship (81).

Leigh and Milgrom (2008) investigated previously identified risk factors for postnatal depression and which of them were the most predictive to antenatal depression, postnatal depression and parenting stress. They found that a history of antenatal anxiety and a history of depression are risk factors for antenatal depression. Low self-esteem, low social support, negative cognitive style, major life events and low income were other risk factors found. These findings are in accordance to previous studies (79, 82). Furthermore, antenatal depression and a history of depression have also been found to be predictors for postnatal depression, and antenatal depression has been identified as a mediator between several risk factors and postnatal depression. Postnatal depression was in this study identified as a predictor of parenting stress (81).

Heterosexual couples

Childlessness and infertility stress

According to The European Society of Human Reproduction and Embryology, ESHRE (83), around 84% of couples not using contraception and having regular intercourse will conceive in one year; another 8% will conceive in their second year of trying.

Inability to conceive within two years of exposure to pregnancy is the epidemiological definition of infertility recommended by the World Health Organisation WHO (84). Childlessness occurs in all cultures and the prevalence of infertility is increasing in developed countries (83). Postponement of pregnancy, greater prevalence of obesity and sexually transmitted infections are considered to contribute to the problem (83). International (85) as well as Swedish (51) estimates of infertility prevalence have been reported to affect 9% to 15% of the childbearing population.
Regardless of the cause of infertility, involuntary childlessness is not only a medical problem, it has also psychological and social implications for the couple (84). In women, the threat of a childless future can produce depressive symptoms (for example, sadness or feelings of loss), and undergoing fertility treatment with many unfamiliar procedures can cause anxiety (such as worry, tension and nervousness) (57). Increased risk of suicide has also been reported (86). Infertility treatment has been described as straining to the couple (87, 88), and can be a potential wearing factor to the couple relationship. In a study from Norway most women, 10 year post treatment, regarded the treatment period as a painful one, however, they also said that it now was in the past and no longer affected their life in a devastating way: they had found a way to cope with this difficult period in life (89). Also, from Sweden similar has been reported. Sydsjø et al (2002; 2005; 2011) have reported solid relationships in heterosexual couples having infertility treatment (90), after failed infertility treatment (91) and at a 20 year post treatment follow up (92). Furthermore, a study from Denmark of 2250 women and men in infertility treatment, suggests that high marital benefit is a consequence of infertility investigations and treatment, for both women and men (88). Finally, resilience (psychosocial stress-resistance) was in one study suggested to act as a protective factor against infertility specific distress and impaired quality of life for infertile couples (93).

Romantic relationships and parenthood

Research of aspects that influence intimate romantic relationships has previously mainly been conducted on heterosexual couples. However, the research on relationships in same-sex couples is growing. In general it seems that aspects that influence heterosexual relationships also influence same-sex relationships. In a review of empirical studies of same-sex couples in the United States, it was suggested that the similarities between same-sex and heterosexual couples far outweigh the differences, both in relationship quality and the processes that regulate satisfaction and commitment (94). Communication, management of conflict, provision of care and support to relationship partners and family members, family dynamics and attachment patterns are of importance to understand adult romantic relationships (95). A recent study suggests that in cases where the extended family is able to support the relationship as a whole, the quality of the relationship is bolstered. In cases where the family is unsupportive of the relationship as a whole, the relationship factor of family support and relationship is negated (96).

Attachment theory is a framework for understanding individual differences in close relationships (97). It has been stated that people with a secure attachment style have a more positive outlook on their romantic relationships, resolve conflict effectively and handle emotions in a healthy way (95),
and the inverse, people with a more insecure attachment style tend to have a more negative outlook and poorer relationship quality (97). Attachment insecurity can be summarized into attachment anxiety and attachment avoidance (95). Anxiety and avoidance are believed to be overly pronounced in times of stressful, challenging and novel situations and or situations that involve conflict or separation from one’s romantic partner (97).

In many countries around the globe marriage is not available to same-sex couples. To heterosexual couples legal marriage represents both a public sign of commitment and a legal status that affects many aspects of life (94). Even if some countries allow same-sex couples to register their partnership, it does not exert the same federal, legal, social benefits and emotional well-being to couples relationships, parenthood and quality of life as marriage does (98, 99). In a study from the US by Lannutti (2005), lesbian and gay men stated that legal marriage to same-sex oriented couples would be a sign that they had achieved first-class citizenship (100). In Sweden legal marriage is open to same-sex couples since 2009.

The transition to parenthood is the time and psychological process people and couples undergo during pregnancy and the first months after birth; a psychological process changing women and men into parents. According to Lewis (101), who describes the transition to parenthood, it seems that relationships which function well before pregnancy and birth – the ‘highly competent relationships’ – remain good during the baby’s first year. The relationships in which the spouses had problems with communication and emotional intimacy were the most vulnerable with regard to parenthood. A Swedish study report of first-time parents experiences of their intimate relationship and it was found that although parenthood was highly desired by the couples, they were unaware about and not prepared for the demands of parenthood and the strain on their relationship that the arrival of the new baby would bring (102).

One of the greatest sources of conflict between couples is the division of household and child-care labour. Research has shown that lesbian and gay couples often report dividing child-care labour relatively evenly, whereas heterosexual couples often report specialization (103). Another study examined division of labour among lesbian and heterosexual couples who had used donor insemination. It was found that among lesbian co-mothers who reported greater satisfaction with division of labour also reported greater couple relationship satisfaction (104). In a dissertation from Chicago, US it was stated that “a number of researchers have asserted that planned lesbian families undo gender by organizing family life in an egalitarian fashion independent of the specialised roles characteristics of heterosexual families”. It was also found that a higher level of couple gender role identity differentiation was associated with a less even division of child-care and domestic labour (105).
Parenting stress

Parenting stress has been defined as a notion of conflict between parental resources and the demands of the parental role (106) and parenting stress is considered to be one dimension of mental health. Social support has been pointed out to have a main (and not moderating) impact on parenting stress (96, 107) and, irrespective of sexual orientation, directly related to well being. Antenatal depression and postnatal depression are risk factors well known to have an affect on parenting stress (81). Mothers with lower educational attainment, increased number of children and both younger and older maternal age have been found to experience more stress (106). For fathers, other issues like lower economic status and low relationship satisfaction have been identified to increase parenting stress (108). Divorce and separation may add stress to the experience of parenting (109). Divorce and separation rates are high among new parents and many of the divorces take place during the first child’s first 18 months (102).

There is a consensus that there are some differences between lesbian parents and heterosexual parents. Compared to heterosexual fathers, lesbian co-mothers have been found to be more committed as parents, to spend more time with children and less on employment, to report higher levels of emotional involvement and to show lower levels on limit setting during observations of parent-child relationship (109). Nevertheless and as has been described in a previous paragraph above, to lesbian mothers and co-mothers, there are unique potential challenges to parenting; not at least arising from the common lack of recognition for two-mother families and the difficulties this may cause the co-mother (18, 21).

Worries about the lack of a genetic link to the offspring in assisted reproduction families and its effect on parent-child relationship have been expressed. In the UK, Susan Golombok and co-workers (2006) concluded that it appears that the absence of a genetic and or gestational link between parents and their child does not have a negative impact on parent-child relationships or the psychological well-being of mothers, fathers or children at age 3 (110).

Knowledge of how and if infertility treatment will later affect and spill over on parenting stress is not up to date. The psychological burden of undergoing infertility treatment is well researched and known to be stressful (57, 111, 112). However, in a review of empirical studies on families created by new reproduction technologies (NRT) in which only one parent has a genetic link to the child it was found that compared to natural-conception parents, parents in NRT families have better relationship with their children and their children are functioning well (109). In another literature review of the development of and adjustment of children who’s parents are the same gender, no relationship between parents sexual orientation and children’s emotional, psychosocial and behavioural development was found (99).
stead, poverty, parental depression, parental substance abuse, divorce, domestic violence as well as the support families benefit from public policy and programs were described as more likely to affect the psychosocial development and adjustment of children (99).

Problem statement

Many aspects affect individual’s psychological wellbeing and couples romantic relationships during the time of achieving a pregnancy, childbirth and early parenthood. The process of turning to assisted reproduction and fertility treatment is extraordinary stressful. Lesbian couples starting a family through sperm donation treatment are a new group of patients in obstetric and neonatal/paediatric care in Sweden. Little is known about lesbian couples planning a family together. Unique to lesbian couples is the fact that they are two women planning a family together where one of the parents will not have a biogenetic link to the offspring. Additionally lesbian couples are a largely stigmatized group and have previously been depicted as having many psychosocial problems. This thesis will fill a gap of knowledge about the psychological aspects of undergoing treatment with donated sperm, and the time of pregnancy and early parenthood that affect lesbian couples forming a family. This knowledge will help to improve the quality of care and encounters lesbian couples and families receive today. It will also help to inform health care personnel about the unique aspects of planned lesbian families in the reproductive period and in so doing hopefully increase lesbian couples trust in midwifery service and reproductive care.
Aims

The specific aims of the included papers were;

I
The aim of study I was to compare lesbian and heterosexual couples’ perceptions of their relationship at the commencement of assisted reproductive treatment. The study also aimed to relate relationship quality to background data such as educational level, having previous children and, for lesbian couples, the use of a known versus identity-release donor.

II
The aim of study II was to investigate symptoms of anxiety and depression in lesbian couples undergoing assisted reproductive treatment, and to study the relationship of demographic data, pregnancy outcome and future reproductive plans with symptoms of anxiety and depression.

III
Study III aimed to investigate parental stress among lesbian couples and to identify predictors for parental stress among lesbian donor conception parents, heterosexual IVF- parents and parents with a spontaneous pregnancy.

IV
Finally, study IV aimed to investigate lesbian and heterosexual couples’ relationship satisfaction at a two years follow-up after assisted reproduction treatment and relate the findings to demographic variables, perceptions of relationship quality at the commencement of treatment and to whether the outcome of treatment were successful or not.
Methods

Design

The four studies in this thesis are a part of The Swedish Study on Gamete Donation, a prospective longitudinal study of donors and recipients of donated gametes. An overview of the studies included in the thesis is presented in Table 1.

Table 1. Design, methods and participants of studies I-IV

<table>
<thead>
<tr>
<th>Study design</th>
<th>Study sample</th>
<th>Data collection</th>
<th>Analysis</th>
</tr>
</thead>
</table>
| I. Cross-sectional | 165 lesbian couples 151 heterosexual IVF-couples | ENRICH          | Chi$^2$-test  
t-test  
Multiple linear regression  
MANOVA |
| II. Longitudinal  | 165 lesbian couples                              | HADS            | Chi$^2$                            |
| III. Cross-sectional | 131 lesbian parents 83 heterosexual IVF-parents 118 spontaneous pregnancy parents | SPSQ            | Chi$^2$  
t-test  
Hierarchical multivariate linear regression |
| IV. Longitudinal  | 57 lesbian couples 63 heterosexual IVF-couples   | Questionnaire ENRICH | Chi$^2$  
Kolmogorov-Smirnov test  
Mann-Whitney U test |
The Swedish study on gamete donation

This is a multi-centre study that includes all fertility clinics performing gamete donation in Sweden. The participating clinics are located at the university hospitals in Stockholm, Göteborg, Uppsala, Umeå, Linköping, Örebro and Malmö. A group of heterosexual couples undergoing assisted reproductive treatment with their own gametes are included as a comparison group.

Data collection was performed consecutively during 2005-2011. The participants individually completed questionnaires at three time-points (T): at commencement of treatment (T1), two months after treatment (T2) and about three years after treatment (T3). The first (T1) and second (T2) questionnaire was handed out to the couple by staff at the fertility clinics. The third questionnaires were distributed by mail. Couples that did not complete at least one round of treatment (which included one sperm insemination treatment or one embryo transfer) were excluded from the study. Not speaking or reading Swedish was also a reason for not being included.

Samples

During 2005-2008, a consecutive cohort of lesbian and heterosexual couples at the commencement of assisted reproduction (ART), were approached for participation.

The studies present data from lesbian couples undergoing assisted reproduction using donor sperm to conceive. In study I, III and IV a group of heterosexual couples undergoing standard in-vitro fertilization (IVF), using their own gametes, is included for comparisons. In addition, in study III, also a group of couples with a spontaneous pregnancy were included.

Lesbian couples represent in terms of family construction a minority group. Both lesbian and heterosexual couples are seeking ART due to a strong desire to have a child and to establish a family. The vast majority of the lesbian couples used an identifiable donor to conceive. Accordingly they are autonomous in parenthood (lacking a third party [a known donor] in their relationship). The heterosexual couples used their own gametes when they underwent IVF-treatment to conceive and thus they have a biogenetic link to the offspring. Hence, the relationship of heterosexual IVF-couples is not either affected by a third party, nor is the couples with a spontaneous pregnancy in study III. Aiming to study psychological aspects of lesbian couples starting a family with children, we wanted to compare with parents that conceived with their own gametes, striving to create clean and as natural groups as possible. Before being accepted for assisted reproduction, couples undergo a thorough psychosocial and medical investigation. Severe psychiatric or medical illness as well as alcohol, drug and/or substance use are reasons to refuse the couple assisted reproduction. Accordingly, couples that are ac-
cepted for treatment are psychologically healthy. In addition, the desire to have a child and achieve parenthood is very strong among couples that turn to assisted reproduction for treatment. These aspects provide a solid foundation for comparisons between the couples.

Lesbian couples treated with donor insemination and/or IVF with donor sperm
A total of 214 lesbian couples (428 individuals) who started treatment with sperm donation were approached to participate in the study, 165 couples (330 individuals) agreed to participate, (77% response rate). Reasons for non-participation were: did not want to participate (n=54), treatment discontinuation (n=34), or not stated (n=10).

In this sample medical data was collected from 160 of the treated lesbian women. Twenty (12 %) of the treated women had a medical infertility factor; for the rest the reason to have assisted reproduction was social. However, 65.8 % of the treated women underwent IVF-treatment with donated sperm; the majority of these women had undergone IUI before proceeding to IVF-treatment.

Heterosexual couples undergoing IVF-treatment with own gametes
A total of 212 heterosexual couples (424 individuals) treated with standard IVF-treatment, using their own gametes, were approached for study participation. Of the eligible sample, 151 heterosexual couples (302 individuals) accepted participation, (71% response rate). Reasons for non-participation were: did not want to participate (n=72) treatment discontinuation (n=42), or not stated (n=8).

Couples with a spontaneous pregnancy
To make comparisons with ‘natural conception-couples’ possible, 700 spontaneous pregnant couples that gave birth at Uppsala University Hospital were approached for study participation in May 2008 when their child was approximately 1 year old. Of them, 261 parents chose to participate (135 mothers and 126 fathers) resulting in a response rate of 38 %. An analysis of the non-responders in this group showed now difference in age or parity in comparisons with responders. In study III, after exclusion of multipara parents, 118 parents (57 mothers and 61 fathers) participated.
Questionnaires

Socio-demographic background data

Background data such as gender, age, level of education, number and kind of previous children was collected at T1. At T3 additional data such as pregnancy outcome, current cohabiting situation and future reproductive plans were collected.

Study I and IV, Relationship quality, ENRICH

The ENRICH inventory; Evaluating and Nurturing Relationship Issues, Communication and Happiness, was developed by Olsson, Fournier and Druckman in 1983 (113). ENRICH assesses perceptions of partner relationship in 10 subareas comprising 10 items each. Items are expressed like;

“I have difficulties handling my partners mood” or “I believe adventure is more important than security” (personality).

“in our relationship it is easy to entrust/confide ones inner deepest desires, feelings and thoughts” or “we never talk about negative things in a constructive way” (communication).

“I find a well-thought through budget to be important” or “credit card and payments have become a problem to us” (financial management).

“I avoid as long as possible to deal with problems we have” or “in our relationship we try to understand each other instead of accuse when we have a problem” (conflict resolution).

“in our relationship there is an imbalance between work and leisure time” or “we have a good balance between time together and time to spend individually” (leisure activities).

“my partner fulfils my needs of love and affection” or “I suspect my partner wants to start a sexual relationship with someone else (sexual relationship).

“I worry about if our relationship will stand the strain parenthood entails” or “my partner and myself, we have the same view on child-rearing goals” (children and parenting).

“my partner don’t like when friends “pop by” without being invited” or “I believe our parents create some of the problems in our relationship” (family and friends).

“the most important in our relationship are equality and that we have equal opportunities rather than having the same interests” or “we make important decisions together” (egalitarian roles).

“we have the same conception of life” or “we have different religious believes” (conception of life).
There are six response alternatives for each item ranging from ‘in total agreement’ to ‘do not agree at all’. Each subscale score can vary between 10 and 50 points, 50 points being the most positive outcome. Summed, the subscale scores provide a global assessment of marital satisfaction varying between 100 and 500 points. The ENRICH inventory also includes a Positive Couples Agreement (PCA) score which is a measure of the couple’s congruence for each of the 10 relationship subareas. The partners’ responses are combined and the items that they agree on (within 1 point on a 1-5 scale) are summed and converted to a percentage score, which could range from 0 to 100%. PCA includes only those items where both see the issue as positive.

Study II, Symptoms of anxiety and depression, HADS
To assess anxiety and symptoms of depression The Hospital Anxiety and Depression Scale (HADS) was used. The HAD scale was developed by Zigmond and Snaith in 1983 (114). HADS comprises two subscales, one for symptoms of anxiety and one for symptoms of depression (114). Each subscale consists of seven items. Items are worded for example, “I feel tense” or “I feel happy” (Anxiety) or “I have lost interest in my appearance” or “I look forward to things with joy” (Depression). There are four possible responses for each item (scored 0-3). A total score ranging from 0 to 21 can be obtained. A score of 0–7 for either subscale is regarded as being in the ‘normal’ range or non-cases; a score of 8-10 is suggestive of the presence of moderate levels of anxiety or depression or ‘borderline-cases’, and a score of ≥ 11 indicates clinically significant cases, that is where the individual, when examined by an experienced mental health professional, would be highly likely to be diagnosed as suffering from an identifiable psychiatric disorder (115).

Study III, Parenting stress, SPSQ
To assess parenting stress The Swedish Parenting Stress Questionnaire was used. SPSQ is a standardised and validated inventory designed for Swedish conditions (106). The inventory is based on parts of the Parent Domain of the American Parenting Stress Index (PSI) (116). Items in SPSQ are divided into five sub-areas of parenting stress. General parenting stress is the mean of all sub-areas together. The sub-area Incompetence consists of 11 items, including for instance ‘More difficult than expected to be a parent’ and ‘Feeling comfortable being a parent’. Role restriction, with five items, is concerned with life restrictions because of parents’ responsibilities, with items such as ‘No private time’ and ‘Child takes all time’. Social isolation examines feeling of loneliness and availability of social contacts when needed with seven items: ‘More contact with other parents’ and ‘Feelings of loneliness’. Spouse relationship problems, with five items, concerns regard-
ing partnership issues: ‘More problems in relationship with spouse’ and ‘less support than expected from spouse’. Health problems measure parental physical health with four items including ‘More infections than before’ and ‘Feeling good physically’. The inventory consists of 34 items divided into five sub-areas. Five response alternatives were eligible ranging from disagree to agree. SPSQ-score range between 1-5; 1 indicating no/low stress to 5 indicating high stress.

Data analysis
In testing for group differences in background data Pearson’s Chi²-test (if each cell contained 5 or more observations) and Fisher’s exact test (if any cell had fewer than 5 observations in a cell) was used on categorical data (i.e. treated woman/partner or birth-mother/co-mother or father) (study I-IV). T-tests were performed to compare mean values (study III).

In addition, test including multiple linear regression and MANOVA was used in study I in order to investigate what effect previous children, educational level and known donation had on the ENRICH and PCA scores. These tests were chosen, even though the material was slightly skewed. The rationale behind this is that given the large sample size and using the central limit theorem claiming that as the sample size increases it approaches the normal distribution, parametric methods are appropriate. Hierarchical multivariate linear regression was used in study III, i.e. variables were entered in to the models in blocks in a predetermined order to enable an evaluation of, if and how the coefficients changed when adjusted for socio-demographic factors. In study IV, non-parametric statistical methods such as Kolmogorov-Smirnov-test and Mann-Whitney U-test were used due to the skewness in the data but also due to the reduced sample size compared to study 1 where parametric methods were the choice for analysis.

For analysis on the ENRICH scale (study I and IV), data from separated couples (study IV) or couples where only one part participated were excluded (lesbian n=19, heterosexual n=8). In all inventories (ENRICH, HADS, SPSQ) missing values were substituted with the mean of the participants responses on the subscale, provided at least half of the items had been answered. More than five missing values on a subscale resulted in exclusion of the subscale for that participant.

All statistical tests performed were two-sided with p<0.05 considered statistically significant. The IBM SPSS version 20 (IBM Corporation, Armonk, NY) was used for all analysis.
Ethical considerations

The World Medical Association (WMA) has developed the Declaration of Helsinki as a statement of ethical principles for medical research involving human subjects, including research on identifiable human material and data. Briefly, the Helsinki declaration states that medical research involving human subjects should only be conducted if the importance of the objective outweighs the inherent risks and burdens to the subject (117). In the present studies the risks and the burdens of the informants were considered to be without harm, and the importance of the studies outcome to be fruitful for the good of subjects and society. Furthermore, subjects should give an informed consent to participate in the study, and the study must be approved by an ethical review committee (117). For the present studies The Regional Ethical Review board in Linköping, Sweden approved the study. Participants individually gave their written consent to collect data relevant to this study from their medical record and that they agreed to, in the future, be contacted again on account of this research project. Participants were also informed that they could withdraw from participation at any time without giving any reason for this, and, that neither participation nor non-participation would have any effect on their care and treatment.
Results

The main finding in this thesis was that the lesbian couples reported good psychological health. When compared with heterosexual couples the lesbian couples reported better satisfaction with relationship quality and lower parenting stress.

Study I

The main findings in study I were that, in general, both lesbian and heterosexual couples reported high satisfaction with their relationship at the commencement of assisted reproduction treatment. The scores from the lesbian couples were higher on a number of the relationship dimensions; personality <0.001; family and friends 0.004, egalitarian roles <0.001, conception of life <0.001, communication <0.001, conflict resolution 0.004, financial management 0.015, and leisure activities <0.001. Also the total score was higher for the lesbian couples compared to the heterosexual IV-couples <0.001. There were more differences when comparing lesbian and heterosexual partners than when comparing the treated women, all but one subscale was statistically significant while three subscales showed differences between the treated women. Both the lesbian and heterosexual couples had previous children and the presence of previous biological children in the family decreased satisfaction with relationship quality for the treated lesbian women, for details see paper I. Higher educational level was associated with satisfaction with sexual relationship for lesbian treated women 0.045, satisfaction with conflict resolution for lesbian treated woman 0.033, and lesbian partners 0.021, and, satisfaction with communication for heterosexual treated woman 0.022.

Lesbian couples also reported higher positive couple agreement, PCA, including only items where both parties in the couples agreed, for all subareas but one, as well as for the total PCA score (lesbian couples 68.19, heterosexual couples 55.43, <0.001)
Study II

The longitudinal study II investigated symptoms of anxiety and depression in lesbian couples at three time points; at the commencement of treatment (T1), after the first treatment (T2) and about three years after treatment and when a presumptive child had reached 1 year. The vast majority reported low levels of symptoms of anxiety or depression throughout the study period, and the number of women with symptoms of anxiety or depression outside the normal range (HADs subscore ≥8) was low. At baseline 6.7 % (n=11) of treated women had symptoms of anxiety and 9.9 % (n=16) of partners. At time point 2, the number of treated women with symptoms of anxiety raised to 14 % (n=19), however the number of partners with symptoms of anxiety at time point 2 declined to 5.2 % (n=7) of responding partners reporting symptoms of anxiety. This difference in symptoms of anxiety at T1 and T2 amongst partners was statistically significant, 0.029. Time point 3 showed similar results as at T2, 16.3 % (n=17) treated women and 5.9 % (n=6) partners reported symptoms of anxiety. For treated women there were statistically significance between a number of cases at T1 and T3, 0.044.

Furthermore, a very low number of 5 treated women 3.7 % (T2) vs. 4.7 % (T3) reported symptoms of depression at time point 2 and 3. For partners, there were initially 2 women, 1.2 %, with symptoms of depression at time point 1. At time point 2 and 3 there were no partners that reported symptom of depression.

The pregnancy outcome was high and 77 couples (72.6 %) gave birth to a child after going through treatment with donated sperm. The couples were asked to respond to some questions about their future reproductive plans (T3). Around 48 % of the lesbian couples responded that they wanted to try a new treatment or try some other medical treatment. Around 21 % were considering to take a break from treatment or to discontinue treatment, and around 7 % had thoughts about adoption or to live without children, paper II.

Study III

Study III compared parenting stress in lesbian parents, heterosexual IVF-parents and parents with a spontaneous pregnancy. The main finding in this study was that there was a significant difference between the couples and the lowest parenting stress was reported from the lesbian parents (lesbian vs heterosexual p=0.001; lesbian vs spontaneous pregnancy p=0.015).

Diverse patterns were found when comparing between birthmothers and between co-mothers/fathers. General parenting stress and subareas Incompetence and Role Restriction revealed differences when comparing between both lesbian and heterosexual birthmothers as when comparing between
heterosexual birthmothers with spontaneous pregnancy birthmothers. No differences in parenting stress were found when comparing between co-mothers and heterosexual fathers and between heterosexual fathers and spontaneous pregnancy fathers. And finally, comparisons between lesbian birthmothers and spontaneous pregnancy mothers revealed higher level of parenting stress in the subarea social isolation in the spontaneous pregnancy mothers. Parenting stress reported by social isolation and health problems was also higher amongst spontaneous pregnancy fathers than compared with lesbian co-mothers.

The hierarchical linear regression analysis did not give any further information except that educational level and age had no impact on experiences of parenting stress.

Additional analyses of parenting stress

However, an additional linear regression analysis with data about relationship satisfaction at T1 (independent variable) and parenting stress at T3 (dependent variable) was performed. And, a strong association that high scores on ENRICH (relationship satisfaction) predicted lower experiences of parenting stress was found.

Study IV

The main finding in study IV was that the lesbian couples reported better relationship satisfaction than heterosexual couples at follow-up at 2-5 years after treatment (T3). The overall satisfaction with relationship quality decreased in both lesbian and heterosexual couples between T1 and T3. Total ENRICH scores were for the lesbian couples 436.3 (T1) and 414.3 (T3). For the heterosexual couples total score were 418.5 (T1) and 404.9 (T3). Subareas that were not affected by a decrease were in the lesbian couple’s sexual relationship.

An unsuccessful treatment was associated with lower scores on the subarea communication for treated lesbian women (p=0.018) and lesbian partners (p=0.001). Contrary to the lesbian couple, an unsuccessful treatment affected the heterosexual women and men differently. Whilst heterosexual partners not reported any influence on relationship satisfaction, it affected the heterosexual treated women even more. Heterosexual treated women with an unsuccessful treatment reported lower scores on a number of subareas; egalitarian roles (p=0.025), conception of life (p=0.038), communication (p=0.001), conflict resolution (p=0.046) and financial management (p=0.045).
When we dichotomized the couples into two groups, “no child after treatment” and “child after treatment” and compared between lesbian and heterosexual treated women and lesbian and heterosexual partners, it was interesting to note that in the group “no child after treatment” only the subarea communication was affected by lower scores from heterosexual partners (p=0.031). In the group “child after treatment” subareas communication (p=0.029) and conflict (p=0.023) and heterosexual treated women had the lower scores than lesbian treated women. A child after treatment also affected partners with lower scores from heterosexual partners on personality (p=0.035) and leisure (p=0.023).
Discussion

Methodological considerations

General aspects
The Swedish multi-centre study on gamete donation is the first of its kind in Scandinavia. The longitudinal and prospective study design made it possible to follow and compare couples during their trajectories through the vulnerable time of transition to parenthood. Participants were recruited from all university hospitals that perform gamete donation in Sweden, from Umeå in the north to Malmö in the south and allowed recruitment of a wide range of couples from both rural and urban areas as well and of differing age and levels of education.

The planning of the multi-centre study started in 2003 and in April 2005 the project was ready to launch. This is important because it allowed the research team the time to form good relationships with staff at the fertility clinics, support with information and administration routines and to all over ease the recruitment and data collection. During this recruitment and data collection period the legislation of lesbian couples access to assisted reproduction came into effect. This created a unique opportunity to include lesbian couples requesting assisted reproduction into the multicentre study. In hast, the questionnaires were adapted to fit lesbian couples conditions as well, for example, where individuals in the couples were worded as woman and man this was amended to treated woman and partner.

The questionnaires that are included in the questionnaires were chosen because they are all frequently used in international research, and they have shown to be reliable and valid to its purpose. There is of course a possibility that the included questionnaires consist of heteronormative assumptions; they are all developed out from heterosexual conditions. Although our findings are consistent with other findings that the similarities are greater than the differences are when comparing this type of aspects between lesbian and heterosexual couples, we cannot be certain about what our results would have been if our inventories had been designed out from lesbian couples conditions and different ways of family forming. It could be possible that important aspects unique to planned lesbian families have been ignored be-
cause of this, or that the results would have been more detailed and enriched. Unfortunately, as far as we know, there are no such inventories available.

Had it been known when the study was planned that the legislation about assisted reproduction to lesbian couples was coming into effect so soon, there would have been more time to formulate lesbian specific questions. For example, there is evidence that in the reproductive and parenthood plan of the lesbian two-mother unit it can included that both the women are going to breastfeed the baby (5, 22). There is also evidence that lesbian couples di-
vide household and child care more equitably than heterosexual couples. A few studies also found lesbian co-mothers to have a superior quality of par-
ent–child interaction compared to heterosexual fathers (118, 119). These are aspects very likely to impact on the experience of relationship quality and parenthood (94, 104, 120). Unfortunately the studies in this thesis did not ‘catch’ these aspects; it is nothing wrong with the questionnaires we choose, they are just not designed to catch this type of aspects.

During the time I have been working with this material and the four stud-
ies I have had many questions concerning the comparability of the lesbian couples and the heterosexual IVF couples. The concerns have included that these groups are not comparable because the reason for the heterosexual couples to request assisted reproduction is medical, and that one of the partners in the couple has a medical factor that impairs fertility, whilst only 10-
15 % of the lesbian couples had that kind of medical factor and that the rea-
son for the others is social. Another argument has been that the lesbian couples in our studies might have an influence of a third party (the donor) that affects their relationship and family which the heterosexual couple did not have because they use their own gametes in treatment. Indeed, the psycho-
logical distress of infertility and infertility treatment must not be ignored (112); however, I argue that in this context the psychological distress of inf-
fertility is overestimated and the medical aspects given too much importance whilst the psychological strain of ‘social infertility’ is underestimated and psychological aspects not given enough importance. I believe that the argu-
ment is an expression of a heteronormative view and ignores the psycho-
logical dilemmas experienced by the lesbian couples. I will clarify my reasoning. Firstly, both lesbian and heterosexual couples turn to assisted reproduction due to a very strong desire to conceive and to have children. Secondly, the psychological burden of both medical and social infertility, are maybe not of the same nature, but yet both have a great impact on psychological health. Thirdly, the third party argument (the donor) seems not to be an issue in lesbian couples, being two women there is no conflict of father-ship. In this matter the heterosexual and lesbian couples are similar. Fourthly, both cou-
ples undergo a thorough psychosocial investigation before being accepted for assisted reproduction, which means that the couples who proceed to as-
isted reproduction are psychologically healthy which is of importance when studying psychological health and changes during a period of assisted repro-
duction and transition to parenthood. Finally, in this material as much as 65% of the lesbian women turned to IVF-treatment after failed sperm insemination and it is likely to believe that the experience of the hard and trying time during IVF-treatment and FSH-stimulation do not differ between heterosexual and lesbian women and couples. So, to conclude on this section lesbian and heterosexual couples undergoing assisted reproduction are suitable groups to compare and investigate during the period of transition to parenthood.

The result of this thesis can only be generalised to couples of the same context and socioeconomic backgrounds. Our sample consists of a selected group of well-educated couples highly motivated towards parenthood. We do not know anything about the lesbian couples experiences of social stigmatisation. It might be that they have had very little experience of social stigmatisation and a good psychological development. Obviously, the psychosocial investigation works as a selection process as well, and in this thesis only psychological stable couples that were accepted for assisted reproduction are included.

Another aspect is the well-known phenomenon from international research that lesbian couples that participate in research are highly educated, mostly Caucasian and of middle class (94, 120). As this also was the case of the participants in the four present studies, the results must be limited to lesbian couples with similar backgrounds.

Finally, an interview study with a qualitative design and analysis method would further have illustrated the lesbian couples experiences of their journey through assisted reproduction and transition into parenthood. Unfortunately this was not possible within the framework of this thesis.

**Reflections on results**

The overall aim of the present thesis was to increase the knowledge and to fill the current knowledge gap about psychological aspects during the transition to parenthood in lesbian couples planning a family with children through sperm donation treatment.

The findings of the present thesis revealed a clear message; lesbian couples report very good relationships, good psychological health and low parenting stress.

This thesis also confirmed what have been previously stated: the similarities between lesbian and heterosexual couples far outweigh the differences, both in relationship quality and the processes that regulate satisfaction and commitment (94). In the following section I will discuss the results and the unique aspects of planned lesbian families. Finally, I will mention some of
aspects that were not explored in this thesis but that have importance to the field of knowledge about lesbian couples planning a family together.

Sweden—a gay friendly country

I suggest that the societal changes in legislation and attitudes towards homosexual rights that have taken place in the last decade play an important part in this context. Homosexual people in Sweden today have the same and equal rights as heterosexual couples, and to cite one of my references in this thesis (94) page 413, same-sex attracted people have achieved “first-class citizenship”. I believe the impact of these changes largely have improved people’s prospects and means to live fulfilled lives.

The Norwegian psychologist Erik Homburger Erikson’s theory of human development through the “8 ages”, suggests that a life consist of at least 8 periods of development, named development crisis. In every of them central aspects of personality are developed. The first four last from infancy to puberty. A positive development during this phase is characterised by security and trust, autonomy, initiative and ability to concentrate on work or studies. The fifth and the sixth age include puberty and adolescence. During this phase identity and intimacy are developing. The seventh age is about adult maturation through parenthood. The last age is called ego-integrity and entails an acceptance of the lived life and a forgiving attitude to their own destiny. In the same way Erikson illustrate how an unhappy development can be:

<table>
<thead>
<tr>
<th>The 8 ages</th>
<th>Positive development</th>
<th>Negative development</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>trust</td>
<td>distrust</td>
</tr>
<tr>
<td>2</td>
<td>autonomy</td>
<td>shame and doubt</td>
</tr>
<tr>
<td>3</td>
<td>initiative</td>
<td>blame</td>
</tr>
<tr>
<td>4</td>
<td>ability to work</td>
<td>low self-esteem</td>
</tr>
<tr>
<td>5</td>
<td>identity</td>
<td>identity confusion</td>
</tr>
<tr>
<td>6</td>
<td>intimacy</td>
<td>isolation</td>
</tr>
<tr>
<td>7</td>
<td>generativity</td>
<td>stagnation</td>
</tr>
<tr>
<td>8</td>
<td>egointegrity</td>
<td>despair (fear of death)</td>
</tr>
</tbody>
</table>

According to Erikson, the seventh phase, generativity, are the one that has an special importance to the psychology of pregnancy and birth. How this phase will develop is largely dependent on the development of the previous phases. Consequently, the development of fifth and the sixth phase of identity and intimacy play an important role to the transition to parenthood (121). If a persons identity and desires of intimacy during this phase is outside the heterosexual norm and if the person experiences identity and intimacy stigmatization, it is easy to understand how stressful this must be. It is also easy to
understand how the vulnerable transition to parenthood may be affected by previous experiences of homophobia and stigmatisation.

In Sweden, since 1986 when homosexuality was removed from DSM IV as a psychiatric diagnosis, a series of changes have come into effect; in 1995 homosexual partners could enter registered partnership, in 2003 homosexual couple were given the right to adopt children, in 2005 assisted reproduction with donated sperm became available to lesbian couples; in such cases the lesbian co-mother automatically receives parental status to the offspring and from 2009 homosexual couples can legally marry. I argue that all of these changes in legal rights for homosexual people work in a dualistic way. Firstly, by achieving “first-class citizenship” (94) through marriage and equal rights as heterosexuals, to form families with children, many aspects that impact on psychological health and wellbeing are promoted. Marriage is known from literature and research to clearly impact on health and psychological wellbeing. The health consequences marriage confers, reach far out from what one at first might imagine (122, 123). Secondly, these societal changes have worked to counteract people’s homophobia and offer increased acceptance of diverse lifestyles, relationships and family formations. In addition media has a strong impact on people’s attitudes; in Sweden today we see gay pride parades and more and more famous persons are ‘coming out’ as homosexuals, and there is a steady stream of television dramas, novels and biographies narrating stories about homosexual life.

In a meta-analysis by Lewis (2009) of mental health in sexual minorities in North America and Europe, it was asserted that policy regimes, health programming, and the ways in which sexual minorities are constructed in their societal context, all contribute to their mental health (124). Similarities were found in a study comparing the psychological wellbeing of lesbian and heterosexual mothers in Canada (where same-sex marriage is legal and there are a number of provisions protecting the rights of same-sex parents) and the United States (where, in most states, same-sex relationships receive little legal protection). The study stated that sexual orientation in itself does not contribute to poorer psychological health among lesbian mothers, but the legal and social context in which they parent do. The lesbian mothers in the US expressed more worries about their legal status as parent and showed more depressive symptoms than lesbian mothers in Canada (125). It is reasonable to believe that the societal changes in Sweden have had a bolstering effect on the psychological health of the women in this thesis.

As a result of the increasing tolerance of homosexuality, today we see an increasing number of lesbian women becoming parents and forming families with children (16), and planned lesbian families are now a new and growing group of patients in obstetric and neonatal/paediatric care. From America and the UK a lesbian baby boom has been reported, stating that this is an increasing phenomenon (24, 126).
A growing body of research suggest that attachment functions in a dyadic manner in romantic relationships and that peoples’ perceptions of their relationship are influenced by not only their own attachment style but also their partners attachment style (97). Attachment insecurity can be summarised by two dimensions, attachment anxiety and attachment avoidance. Thus a secure attachment is characterised by low attachment anxiety and avoidance.

In one of very few studies about attachment in same-sex couples the following was found; own anxiety was positively associated with both partner anxiety and avoidance and own avoidance was positively associated with partner anxiety; own anxiety was linked with poorer functioning on all relationship outcome variables and own avoidance was linked with poorer functioning for supportive discussion, trust, communication, apprehension and intensity of problems; partner anxiety was linked with poorer functioning on all relationship outcome variables and partner avoidance was negatively related to aversive communication, contrary to the hypothesis of the study. Furthermore, the study revealed interesting findings about sexual exclusivity. Sexual exclusivity was linked with lower satisfaction and commitment only for people whose own anxiety levels was moderate or high and sexual exclusivity was linked with lower satisfaction only for people whose partner’s anxiety levels were moderate or high. Finally, the study also found that attachment did not moderate between minority stressors and relationship functioning (97). In our sample the couples, both lesbian and heterosexual seemed to be satisfied with their sexual relationship and sexual relationship was the only subarea where satisfaction remained during the period of assisted reproduction. Low attachment anxiety can be one explanation of the satisfaction with sexual relationship, and possible to the overall high relationship satisfaction reported from the couples.

Finally, a last reflection on this section, it is very common to compare lesbian couples with heterosexual couples in this type of research, however, regarding experiences of minority stress and social stigma, I would like to make an inverse comparison. Given that the heterosexual couples largely base their relationship on traditional gender roles, in a heteronormative society, in a context where the traditional nuclear family is the norm, childlessness can be perceived as a social stigma by the heterosexual couples and cause psychological distress. One heteronormative expectation is that couples conceive and form families with children. Lesbian couples have indeed achieved social acceptance and ‘first-class citizenship’ by the recent changes in society and fit the heteronormative norm of family quite well. Without having studied this further, I suggest that the diverse results for the women and men in the heterosexual couples in the analysis of “no child after treatment” and “child after treatment” in study IV, may be an expression of the perceived importance of not fulfilling social expectations in forming a nuclear family.
Marital satisfaction has been identified as one of the most important predictors of the partners’ individual well being during the transition to parenthood (127). However, the transition to parenthood is a vulnerable time (121) and it is important to highlight that research findings indicate that relationship distress is both a predictor and an outcome of postpartum depression (128). When couples need to turn to assisted reproduction this process may be even more vulnerable and complex (127). Many heterosexual assisted reproduction couples report that their experiences of infertility treatment strengthen their marriage and brought them closer to each other, a phenomenon called marital benefit (88). When they achieved pregnancy one study reported that the couples also showed stronger feelings of cohesion compared to couples that conceived spontaneously (129). Our results from study IV where relationship satisfaction decreased between the time of commencement of treatment and the first time after the birth of the child, is consistent with other findings. For example, Gameiro and co-workers reported that assisted reproduction couples experienced a decreased and an overall lower agreement in their perceptions of their marital relationships than when compared to couples that conceive spontaneously (127). In a dissertation from Sweden it was shown that the desire to conceive a child increased marital happiness, but, a soon as that desire was fulfilled, the happiness decreased, especially among men (130). Furthermore, Ahlborg & Strandmark (2001) found that although parenthood was highly desired by couples, they were unaware of and not prepared for the demands of parenthood and the strain on the relationship that the arrival of the new baby would bring (102).

In this study lesbian couples reported well on all three variables; relationship satisfaction, psychological health indicated by symptoms of anxiety and depression and parenting stress. Although there were many statistical significant differences in subareas on the ENRICH and SPSQ inventories, the difference in the numerical value of mean were minor comparing between the couples. Indeed, heterosexual couples’ scores were in general significantly lower than the lesbian couples’ scores, however this does not mean that the heterosexual couples reported low relationship quality or very high parenting stress. Good stable relationships in IVF-couples have been reported before (90-92). Perhaps the differences we have found in this thesis can be explained by gender differences and that lesbian couples might benefit by the presence of two women in the couple. Some authors suggest that lesbian couples may be able to operate more easily in terms of equality because partners in lesbian couples create their relationships without reference to traditional roles and come to their relationships with a history of being socialised into same gender roles (131). It has been suggested that same-sex couples may be more effective than their heterosexual counterparts in their ability to navigate conflict (132) and to work harmoniously on joint tasks (133). Some suggest that women are better support providers than men, and
that female partners providing better support can also explain the lower level of conflict in lesbian couples (134).

The meta-ethnography of Dahl and colleges (2013) found co-mothers to be in a particularly vulnerable situation, as the transition to parenthood may be stressful to her because of the unique situation of mothering a baby whom she is not biologically related to (21). However, Golombok (1996) found that mothers of children conceived by assisted reproduction expressed greater warmth to the child and were more emotionally involved with their child, interacted more with their child and reported less stress associated with parenting than when compared to mothers that conceived naturally (119). Furthermore, from the same study it was found that lack of a genetic link between one or two parents did not have negative consequences for the parent-child relationship (119). Similar to our findings, a study from the Netherlands reported that the burden of parenting stress in lesbian parents was comparable to that of heterosexual parents (16).

In Sweden, 50% of those who enter into marriage will later divorce (135). It has been reported that many divorces take place during the first 18 month after the birth of the first child (102). Although not as yet further researched, there are indications that lesbian couples divorce more frequently. In our sample 15 lesbian couples and 2 heterosexual couples separated or divorced during the study period. Since we did not study divorce it is hard to speculate on the reasons for this. However one reasonable explanation can be that what we see in our sample is the phenomenon of “marital benefit” of the experiences of childlessness and infertility treatment in the heterosexual couples (88). The lesbian couples may just be a part of the 50 % that divorce anyway. If the separation and divorce rates are higher in lesbian couples, perhaps this is a result of being in a less socially accepted relationship and that a divorce in a lesbian couple does not have the same great impact on family relationships as it has in heterosexual families.
Conclusions

Lesbian couples creating a family through sperm donation treatment report high relationship satisfaction, good psychological wellbeing and low parenting stress. These findings confirm that rather than focus on sexual orientation per se when encounter lesbian women and their families, other factors like relationship quality and satisfaction, gender differences, psychological wellbeing symptoms such as anxiety as well as social support are of much greater importance to the understanding of psychological wellbeing in families with children.

The lesbian partner and co-mother must be included as a partner and a parent and her psychological needs in the period of transition to parenthood must also be acknowledged.
A midwifery perspective

In almost every encounter midwives ask women about their obstetric history. In the medical record we note the number of pregnancies, the number of childbirths, if there was a stillbirth and we also note if there has been a miscarriage. Considering the invisible position of the lesbian co-mother, I suggest that the obstetrical anamnesis would be improved and benefit if midwives talked and asked questions in terms of family and reproductive plans. For example, instead of asking “have you been pregnant” and because of the “no-answer” assume that this woman does not have children, a better, inclusive and open way of asking would be “can you tell me about your family” or “your reproductive plan, what does it look like”. As we know from this thesis many lesbian women will take it in turn to be the birthmother and some co-mothers might want to breastfeed. Lesbian couples and families are a growing group of patients and clients in reproductive health care and it is of the greatest importance that midwives is aware of these aspects to provide good and safe reproductive care.

The aspect of parental education and preparation for birth needs to be considered in relation to lesbian couples and families. As far as I know there is a private clinic Mama Mia in Stockholm and perhaps some other antenatal clinics in the bigger cities Malmö and Gothenburg that offer parental education and support to lesbian couples. Notwithstanding, lesbian couples in the transition to parenthood outside the bigger cities in Sweden also need this support. It has been mentioned that lesbian first-time parents prefer parental support addressed to lesbian couples, but that many consider it to be ok to mix with heterosexual couples at the second pregnancy. This is a call to midwives around Sweden to, if not done already, commence parental support to lesbian couples.
Research for the future

There are some areas in particularly need of research.

More studies need to investigate the reproductive plans of lesbian couples. These studies should be longitudinal and prospective. A mix of quantitative and qualitative data collection and analysis methods would enrich the findings.

More research is needed in the area of attachment in romantic relationships, aspects of sexual satisfaction and sexual exclusivity. Divorce and separation are also an area that is lacking information.

Social support, from partner, from family, from friends and from society, and how it is impacting lesbian families with children, are sparsely studied and more knowledge is needed in this area.

In the future prospective longitudinal studies of children growing up in planned lesbian families would contribute to the still small but growing body of research of family life in planned lesbian families.

Den lesbiska partnern, som ofta kallas medmamma i Sverige, måste godkänna donationen och med sitt namn underteckna ett donationsformulär. I och med detta så erhåller medmamman full status som förälder till det blivande barnet, med alla juridiska rättigheter och skyldigheter som föräldraskap innebär. I Sverige tillämpas donation med ”identifierbar donator”. Detta innebär att det blivande barnet har rätt att i mogen ålder erhålla identifierande information om donatorn. Föräldrarna till barnet har ingen laglig rätt att erhålla denna information, liksom att donatorn inte har rätt att erhålla information till vilket par donationen har gått till eller resultatet av donationen. Föräldrar som genomgår behandling med donerade spermier, både lesbiska och heterosexuella par, uppmanas och uppmuntras att tidigt börja prata och berätta för barnet om dess tillblivelse. Forskning har visat att det är särskilt traumatiskt att i t ex tonåren få sådan information om sitt ursprung.

I heterosexuella par utreds både kvinnan och mannen för att hitta orsaken till barnlöshet. I lesbiska par genomgår bara kvinnan som ska genomgå medicinsk utredning. Barnlöshet förekommer i alla delar av världen och ca 9-15 % av människor i den reproduktiva åldern drabbas. Infertilitet är lika vanlig hos kvinnor som hos män. Vanliga orsaker är äggledarskada (15 %), utebliven ägglossning (15 %) spermiefaktorer t ex lågt antal eller dålig kvalitet (30 %), orsaker från livmoderhalsen (5 %), dålig äggreserv (15 %) och ca 20 % av all infertilitet förblir oförklarad. Infertilitet ökar idag och framförallt hänger det samman med att barnafödande och familjebildning senareläggs. Övervikt är en annan faktor som starkt bidrar till nedsatt fertilitet.

Assisterad befruktning är medicinskt avancerad och högteknologisk. Att inseminera spermier är den mindre komplicerade av metoderna. Via en tunn

Syftet med denna avhandling var att studera och jämföra kvalitet i parrelationen, psykisk hälsa och föräldrastress hos lesbiska och heterosexuella par som genomgår assisterad befruktning. Man vet sedan tidigare att tiden från att man planerar att skaffa barn fram till det första året efter barnets födelse, ”the transition to parenthood”, är en särskilt skör tid. Att genomgå assisterad befruktning gör denna tid extra utsatt. Lesbiska par är dessutom en ny grupp av patienter och föräldrar i Sverige som vi hittills inte har mycket kunskap om. Vi ville därför bidra till att fylla denna kunskapslucka.


Studie I undersökte parens uppfattning om nöjdhet och kvalitet med sin relation vid behandlingens start. Lesbiska och heterosexuella IVF par ingick. Upplevelse av relationskvalitet var högre hos de lesbiska paren jämfört med de heterosexuella IVF-parern. I de lesbiska paren fanns det kvinnor som hade barn från tidigare, de kvinnorna upplevde lägre nöjdhet med sin relation än de som inte hade barn sedan tidigare.

Studie II undersökte symptom av ångest och depression vid alla tre mättilfällena. I denna studie ingick bara de lesbiska paren. Majoriteten av kvinnorna upprisade en god psykisk hälsa och väldigt få rapporterade symptom av ångest och depression.

Studie III jämförde föräldrastress hos lesbiska, heterosexuella IVF och en grupp med spontan gravida föräldrar. Denna grupp rekryterades vid ett särskilt tillfälle och från en av de ingående klinikerna. De lesbiska paren upprisade de lägsta nivåerna av föräldrastress och de lesbiskas föräldrastress var lägre än både de heterosexuella och de spontangravidas. Jämförer mellan heterosexuella IVF föräldrar och spontangravida föräldrar visade högre för-
äldrastress hos de heterosexuella IVF-föräldrarna. Resultatet visade också att mammor upplevde mer föräldrastress på skalan ”rollbegränsning” än vad medmammor och pappor gjorde. En utökad analys visade ett tydligt samband mellan hög nöjdhet med relationskvalitet och låg föräldrastress.

Studie IV upprepade undersökningen och jämförelsen av nöjdhet och kvalitet i parrelationen från första mättillfället, nu även vid sista mättillfället. Även vid denna jämförelse uppvisade de statistiska analyserna att de lesbiska paren upplevde högre nöjdhet med parrelationen än de heterosexuella paren. Detta betyder dock inte att de heterosexuella rapporterade dåliga relationer, tvärtom, deras skattringar var jämförbara med de lesbiska. Båda parren upplevde dock en sänkning av nöjdhet och kvalitet i relationen jämfört med det första mättillfället.

Sammanfattningsvis kan man säga att de lesbiska paren är nöjda och rapporterar goda relationer, god psykisk hälsa och välbefinnande samt låg föräldrastress.
Acknowledgments

First, I would like to thank all couples, mothers, co-mother and fathers around Sweden who participated in this research project. Thank you for your willingness to share your experiences and thank you for your time spent with responding to questionnaires during treatment, pregnancy and early parenthood.

Also, many thanks to staff at participating fertility clinics for invaluable help and assistance in recruitment of participants and data collection.

I want to express my deepest gratitude to my main-supervisor Agneta Skoog Svanberg. My admiration of your ability has no limits. You are strong, ambitious, hard working and resolute. I am especially grateful for all your trust and for giving me the freedom to develop as a researcher in my own way and at my own pace. Sometimes this might be challenging to a supervisor, but you have shown belief in me and my ability; my valuing of this cannot be expressed in words; to me this always works best! I am also very grateful for your generous hospitality at our research weeks in Mallorca. These are memories that will stay with me forever and especially embellish my time as a doctoral student.

Gunilla Sydsjö, my co-supervisor, I am deeply impressed by your profound knowledge in the field of assisted reproduction and childless couples. Thank you for endless support and encouragement. Because of your fast-response-style, I have felt very close to you. At any time I have been able to send small and bigger questions of variable quality and you have always responded with patience, interest, encouragement and support. You do not know how much your “men det var ju inte så mycket..”, “det här fixar du ju snabbt”, “BRA!!” and “SUPER!!” in e-mails means to a PhD student that after another major revision of a submitted paper, just temporarily of course, lost most of their self confidence. You are a true role model Gunilla and I am proud and grateful to have had you as supervisor!

Claudia Lampic, also my co-supervisor, you are such a brilliant researcher! Thank you for all your comments, difficult questions, your thorough nature that helped me improve my research, my writing and my understanding of the mysterious field of research. All the way through my time as a PhD
student you have shown a deep interest in my research and our work together, and also in my development. I am deeply grateful.

Marie Bladh, my statistician, my friend and my co-author. Thank you for all the days we have been talking on Skype, solving difficult statistical problems mixed with laughter and talk about other things. You have been my close work-mate during these four years. Thank you also for being such a generous hostess, for lovely dinners around your kitchen table together with your family. Thank you for letting me learn to know you, thank you for endless support and patience.

Inger Wallin-Lundell, my PhD fellow forever! We have shared the most remarkable things together! Amongst them was when we shared a 120 cm bed at our research seminar in Crete during a week in September 2012! A story more priceless than most stories! We have had such good times together Inger! And I am so deeply, deeply grateful because of this. I am also very thankful to you and your family and your enormous generosity to let me stay with you in your house for many weeks when we endured the 5 weeks “Introduction to Research Studies” in Uppsala during winter/spring 2011. To me it has been a pleasure to learn to know your humorous husband Kenneth and your lovely teenagers Elin and Martin. Thank you for being my friend Inger, for all our talks, for all travels and adventures we have shared.

Stina Isaksson, Berit Höglund, Eva-Lotta Funkqvist, Gunn Engvall, Marlene Makenzius, Magdalena Mattebo, Tina Murto, Helena Volgsten, Ylva Ternström Blomkvist, Annika Åhman, Helene Haines, Sarah Nordqvist, Maria Grandahl, Jenny Stern och Maria Gottwall; you are all PhD fellows, many of you already doctors, at the Department of Women and Children’s health at Uppsala University. Thank you so much for joyous fellowship, interesting discussions and sharing interests during this time. You are all brilliant researchers with important topics of reproductive health. Good luck in the future! I will miss all of you very much!

Margareta Johansson, thank you for nice fellowship-you belong here too!

Margareta Larsson, Christine Rubertsson, Ingegerd Hildingsson och Susanne Löberg at the Midwifery program at Uppsala University. Thank you for pleasant co-workship-it has been great to work with you!

I am also very grateful to all colleges at the Department of Women and Children’s health, and especially all you that participated at the seminar at Crete. Thank you for the sharing of your research and for your interest and valuable comments on mine. Also a big thanks to our excellent research leader professor Inger Sundström-Poroma for making all this possible!
I want to express gratitude to my previous supervisor Elisabet Häggström-Nordin and co-authors Tanja Tydén and Mats Eriksson for excellent supervision through my first paper, which also was my master thesis.

All colleges at the Women’s Clinic at the University Hospital in Örebro, thank you for all support during this journey.

Lotta Andréasson-Edman, midwife at Mamma Mia South in Stockholm, the only antenatal clinic in Sweden exclusively for lesbian mothers to-be. Thank you for your interest in my research, you friendly way in helping me to understand this complex area at the beginning of my studies.

Lilian Thykjær Jørgensen and midwives at the Storkkliniken in Copenhagen, you are such a role model in the way you encounter, care and concern for all your lesbian and single mothers to-be! Thank you Lilian for friendly and personal refutation and for all your time spent with all my questions and queries.

Dr Petra Nordqvist, sociologist, senior lecturer and researcher at the Morgan Centre for the study of relationships and personal life, The University of Manchester, UK, thank you for sharing your experiences in the field, for nice and friendly talks and “fika” at the café in the university campus in Manchester.

A special thank you to Anne-Lie Mård and all colleges at the Uppsala University Reproductions Centre in Uppsala. During two intense weeks you guided me and showed me the grounds of assisted reproduction. This has been invaluable to me! Your warmth, passion and profound knowledge for your work and also the excellent professional way you “do your job” have made a great impression in me.

Without my big, miscellaneous and wonderful family I would be lost! Lars and Barbro Borneskog you are my wonderful beloved parents, Linda Borneskog and Niclas Borneskog, my ‘little sister and brother’, your partners and daughters, you are all very dear to me! Thank you for endless love and support.

My English family, Heather and Steve Hann, Malcolm and Kim Sinclair, Marc and Raija Sinclair and Nikki, Barrie, Jay, Ellie and Nicole Marsh, nieces and nephews, thank you all for your warm welcoming of me into the Sinclair family and for introducing me to the beautiful landscape and coastline of North East England as well as the British-Scottish cultural context. I enjoy every minute!
Erik Nilsson, you are my best friend! I appreciate all your concerns, your support, your friendship and your helpful nature through out life.

My wonderful, beautiful, talented daughters Ida Borneskog and Linn Borneskog, thank you for shaping me as a young mother to the person I am today. It is great to be your mother!

To Rod Sinclair, my partner and my English proofreader😊! You fulfil all what I have learnt during this time about good quality relationships and partnership. Thank you for all your love.
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Acta Universitatis Upsaliensis

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