

## Desire for Parenthood, Beliefs about Masculinity, and Fertility Awareness among Young Danish Men

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### Abstract

Studies on fertility and family formation intentions among men are scarce. In the Nordic countries more than 90% of young, childless men desire children in the future. However, around one fifth of men remain permanently childless. The aim of this study was to gain insight into family formation intentions, fertility awareness, and beliefs about the link between fertility and masculinity among young Danish men. We conducted semi-structured qualitative interviews with nine young, childless men undergoing short-term or long-term further educational training. Data were analysed with a hermeneutic approach. All but one man wished to have children in the future. The men emphasized the importance of having genetically linked children and fatherhood was regarded as a central part of masculinity. We found no differences in family formation intentions or fertility awareness between men pursuing short or long term educational training. Only one man considered his own potential risk of male infertility while the remaining participants took their fertility for granted. Despite knowledge about the decline in female fertility with age, most participants preferred to have children beyond the age of optimal female fertility. Participants' knowledge of assisted reproduction was limited and they substantially over-estimated the chance of a live birth after assisted reproduction. Despite widespread public discussion in Denmark about declining semen quality in the Danish population, the increasing number of children born as a result of assisted reproduction, and the adverse effect on fertility of increasing female age, the young men in this study had considerable fertility-related knowledge gaps.

**Keywords:** Family formation; Fertility; Fertility awareness; Male infertility; Masculinity

### Introduction

The Nordic countries (Denmark, Finland, Iceland, Norway and Sweden) are social democratic welfare countries [1], where total fertility rates remains relatively high but below the replacement level of 2.1 children per woman. Among 40-years old women in the Nordic countries cohort total fertility rates were 1.80-2.05 children for women born between 1934 and 1963 [1]. Few studies have investigated fertility rates among men [2]. However, a national register-based study from Denmark found that 37-year old men on average had 1.4 children [3], and that 22.5% of all 44-year old men were childless [4]. Few population-based studies from the Nordic countries have investigated the desire for parenthood among men but existing evidence suggest that most men wish to become fathers. Among Swedish childless, cohabitating men aged 20-29 year 89% wanted to have children in the future [5]. Similarly, studies from Sweden and Finland investigating desire for parenthood among male university students found that 90-97% wanted children in the future [6-8]. In these studies the men's decision about timing of fatherhood was influenced by having a stable relationship, feeling mature, having completed education, and being employed. Most men wanted 2 or 3 children and 48-62% wanted to have their first child when they were aged 30-34 [6-8]. Between 18% and 27% hoped to have their last child after the age of 40 [6,7].

In the Nordic and other high-income countries the age of childbearing among women has increased over the last few decades. On average men are three years older than women when they have children [2,3]. The mean age of Danish fathers increased from 30 years in 1980 to 33 years in 2005, while the mean age of first time fathers in Sweden increased from 26.5 years in 1970 to 31.5 years in 2010 [Tomas Sobotka, Vienna Institute of Demography, computations based on official vital statistic publications]. Increasing age increases the risk of age-related infertility, chromosomal abnormalities in the offspring, miscarriage, fetal death, and preterm birth [2,9]. Furthermore, postponement of childbearing increases the risk of not achieving the desired family size despite access to Assisted Reproductive Technology (ART) treatment [10,11].

Around 20% of young, healthy Danish men have reduced semen quality to an extent where future infertility is expected [12]. Population-based studies show life-time prevalence of infertility of 16-26% among couples trying to achieve parenthood [13]. Around 40% of infertile couples have male factor infertility; reported both in population-based [14] and clinic-based samples [13].

Masculinity relates to the thoughts and practices of being a man and is characterised by a set of gender identities related to the biological sex. Hegemonic masculinity is ideal types characterised by masculine attributes such as wealth, attractiveness, potency, strength and heterosexuality. Hegemonic masculinity ideals can put pressure on men who cannot fulfil them [15]. Reinicke [16] argues that many men feel that they on the one hand are expected to live up to traditional manly virtues and on the other hand that they are expected to be reflecting on and even suppress their masculinity. The rapid financial, social and cultural changes in postmodern Western societies mean that men can no longer build their identity on being the breadwinner, and masculinity is not automatically linked to superiority [16].

For men who perceive fatherhood as an important part of their masculinity, male infertility can have significant negative effect on their sense of masculine identity. Not being able to impregnate a woman can be perceived as a threat to masculinity, closely related to the stigmatisation and the personal silence of male infertility [15]. Men who are infertile can be seen as weak and ineffective [17] and poor

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semen quality as “a bit unmanly, in a way” [18]. After failed infertility treatment, men with severe male factor infertility reported feelings of inadequacy and marginalization and stated that starting a family and belonging to a family was central to their lives [19]. Furthermore, for a subgroup of infertile men infertility can impact negatively on their intimate partner relationship and sexual satisfaction [20,21]. Thus, fertility and masculinity seem to be closely related and to play an important role in the development of male identity.

In this study the aim was to explore family formation intentions, the perceived relationship between fatherhood and masculinity, and knowledge of fertility and medically assisted reproduction treatment among young, childless Danish men.

## Materials and Methods

### Sampling and data collection

Participants were recruited by advertising the project at a national website informing about on-going research projects in Denmark ([www.forsogsperson.dk](http://www.forsogsperson.dk)). This website is used by scientific institutions conducting health-related research to seek participants for a range of clinical and other research projects. In addition, snowball sampling was used by asking those who were interviewed whether they knew somebody who would be appropriate to include in the study [22]. As family formation aspirations potentially could be influenced by level of education, purposeful, strategic sampling [22] was used by sampling participants undergoing short-term and long-term educational training, respectively. Short-term educational training was defined as vocational training with a year or less of theoretical content and long-term as four years or more of theoretical training at a university or similar institution. As men undergoing short-term further education on average finish their education at a younger age than those undergoing long-term further education, we recruited men in short-term training who were aged 22 to 23 years and men in long-term further educational training who were aged 25 to 26 years.

An interview guide focusing on family formation intentions and knowledge about fertility and assisted reproduction treatment was developed. The interview topics were informed by previous Nordic studies on family formation and fertility awareness [5,6,8]. To test the interview guide one pilot interview was conducted by the first author (RS) and analysed together with the last author (LS). Semi-structured interviews were then conducted with nine young, childless Danish men at a location chosen by the participant; six interviews took place in the participant's home and three in an office at the University of Copenhagen. Interviews lasted between 15 minutes and 1½ hour. All interviews were conducted by RS, supervised by LS, during February 2013. RS is trained in and LS has extensive teaching and research expertise in qualitative research methods. Interviews were recorded and transcribed verbatim and transcripts were re-checked against the recording. Transcripts were anonymised and participants undergoing short-term further education were assigned a code name starting with the letter “K” and code names for participants undergoing long-term further education started with the letter “L”.

### Analysis

Transcripts were analysed using an approach inspired by Gadamer's philosophical hermeneutics [23]. Each transcribed interview was analysed by means of the following structured process: First, a general impression was obtained by reading through the interview text several times and summarizing the men's history and characteristics. The interview text was then divided into meaning-bearing units. This

process was conducted independently of the interview guide with the purpose of being open to new themes emerging from the interview text. Subsequently the meaning-bearing units were clustered and structured into categories, after which the interview text was re-examined using the applied categories and the most prominent were identified. After repeating this procedure for all nine interviews, themes across interviews were identified and described. In order to see the issues within-context, the next step of the hermeneutic interpretation was to involve a broader analytical framework that included previous research, re-contextualization. All transcripts were read independently by RS and LS, an expert in qualitative research, and analytic themes were discussed. The analytic themes described in this paper are: 1) Family intentions, 2) Masculinity and fertility, and 3) Fertility awareness. For this paper the analyses were discussed among all authors. Quotations were chosen to represent the range of views for each theme. The quotations were translated from Danish to English by an English speaking person.

### Ethics

The study followed the principles of the Declaration of Helsinki for medical research. According to Danish law, interview studies require no approval from an Institutional Review Board.

## Results and Discussion

Table 1 presents the socio-demographic characteristics of the participants.

### Family intentions

All but one of the young men wanted to have children in the future.

For some of the men becoming a father was central to life:

*“It would be awful to be told that you could not be a father, because I feel a little, that's why we are put on earth. It's huge part of my life, that's becoming a father at some point, and I will too.”* (Ken)

*“[Having children] it is part of the meaning of life.”* (Laust)

*“It is a number one to be a father one day.”* (Kenneth)

Only one man stated explicitly that he did not want to become a father:

*“I don't think I need to have any [children]. I do not want to. I don't think it's one of the things I need to accomplish in my life. I'd rather do something else.”* (Kurt)

The finding, that the majority of participants desire parenthood supports findings from epidemiological Nordic studies among childless young men [5-8].

Name	Age (years)	Undergoing further educational education	Civic status	Living
Lars	26	Long	Relationship	College
Lasse	26	Long	Single	College
Leo	25	Long	Single	With parents
Laust	25	Long	Single	Apartment with friend
Klaus	22	Short	Single	Apartment
Karl	23	Short	Single	Apartment
Kurt	23	Short	Single	Apartment
Ken	22	Short	Relationship	Apartment with friend
Kenneth	23	Short	Relationship	Apartment with partner

Table 1: Socio-demographic characteristics of participants.

Participants realised that becoming a father would change their life:

*"I would still like to have the free time I have and be able to do things that suite me. It will be quite limiting to start a family and have children."* (Leo)

*"You don't have the time to do what you want, maybe some sport you need to cut down."* (Lasse)

The view of family formation both as enriching and as a burden due to loss of freedom was expressed.

Men varied in their views about whether being financially secured is as a prerequisite for parenthood. For some the emotional aspects of parenthood were more important than their financial situation.

*"But on the other hand, I also believe just from my parents that if you give love and time to the baby, so it can't go completely wrong. I really believe that, right. Then it bloody doesn't matter what education and economic background you have."* (Lars)

In contrast Leo said:

*"I think most men would like to have some kind of career before [having children]. They want to know that they have a good job and that they can support a family. I would also like that."* (Leo)

Leo's view supports findings from questionnaire-based studies among men undergoing university studies where around >50% state the importance of being financially secure, having a permanent job, and a job that can be combined with having children [6,8]. Several studies show that men are increasingly becoming aware that good fathers have emotional contact with their children and of the need for more equal distribution of domestic and paid work between the mother and the father [24]. Women are however still recognized as the primary caregivers, and most men see their own role in care giving as secondary. According to Miller [24] motherhood is perceived as a societal obligation while fatherhood is more personal and selectable. Changes in the meaning of fatherhood may be linked to changes in the conditions for women [25].

Most participants wanted to have their first child when they themselves were around 30 years.

*"I have an age at which I want to be a father. Thirty. About 30, I would like to start having children."* (Leo)

Participants' desired age for having their last child varied greatly from mid-thirties to early fifties. There were no differences in desired age at first and last child between the men in short- and long-term educational training. This is an unexpected finding as population studies show that postponement of parenthood is closely linked to higher levels of education [2]. The finding that the desired age for first child was around 30 years of age is similar to questionnaire-based studies among university students, where 48-62 % of childless, young men wanted a first child when they were 30-34 years old. Furthermore, 18-27 % desired their last child after the age of 40 [6,8].

### Masculinity and fertility

Most men had not reflected on the possibility that they might be unable to have children in the future. The thought of having children, in some cases many children, as a part of their male existence.

*"Such a little thing, that is very attached to boys, that you just assume that of course I can have children. It's also a little boy thing, that there with, that the more children you can have, the richer it is."* (Laust)

Participants also wanted their children to be their own genetically and desired their future family to be a continuation of themselves.

*"But you feel that you pass something of yourselves on, and in that way, so continue well also to exist and live on."* (Kenneth)

*"Being able to follow a little clone of yourself, I think that will certainly be a great feeling."* (Kurt)

They saw it as a matter of course that they would have their own genetically linked children and seemed to take fertility for granted.

*"I've always seen it as of course I would have a family at some day, and find a girl I want to start a family with. I didn't think that it would be any problem when the time came."* (Leo)

*"You just assume that you can have children. The greater the number the better."* (Laust)

Only one man discussed the possibility that it could be problematic to have the children you want.

*"You have heard of some who can't, and most people are always thinking that it won't happen to me, but it does sometimes. For some, the unlucky, right."* (Klaus)

None of the other participants reflected on the potential risk of being infertile.

*"I have never been nervous that [male infertility] should happen to me."* (Leo)

In relation to the wish for own genetic children, participants were hoping to avoid fertility treatment.

*"Of course I would like to make my own children."* (Leo)

However, another man would seek fertility treatment if needed:

*"I really want to have my own children, so I'll go really far with regard to fertility treatment. I prefer my own children. The thought of seeing yourself in your children. Nice idea to keep the family going."* (Kenneth)

One of the young men stated that he would probably rather live without children than using assisted reproduction treatment or adoption, because he only wanted his own genetic children. When he was asked 'If you couldn't have your own children, what would you do?' he said:

*"I probably wouldn't have children. Yes maybe. Most likely."* (Klaus)

The findings suggest that most men want to become fathers, want their children to be genetically linked to them and conceived without use of assisted reproduction treatment. For some not having children that was a genetically continuation of themselves would be deeply disappointing. To have genetically linked children seemed to be extremely important to participants and perceived as an integral part of their feeling of masculinity. Historically, a man's ability to have children confirmed his manliness, guaranteed his name and bloodline, and affirmed traditional family values [16]. The expectations of modern fathers are different. Men today are part of a family rather than *having* a family. When the fatherhood role changes the perceived importance of masculinity may change too. When masculinity and fatherhood are connected this encourages engagement and presence, rather than authority and discipline [16]. Our finding emphasizes findings from other studies showing that infertility has profound negative impact on masculinity [17,18,20] and is associated with infertility-specific anxiety and a state of lasting sadness among permanently involuntary



childless men [26]. During the last 10 years in Denmark, there has been on-going public debate about the risk of male factor infertility due to decreased semen quality among Danish men, and the environmental risk of endocrine disrupting substances further potentially threatening men's semen quality [27]. Despite this public attention only one of the participants reflected on the risk of being infertile.

### Fertility awareness

Most participants were aware of the impact of female age on fertility.

*"[Female] fertility starts to decline at the age of 30. Not so fast in the beginning, of course."* (Kenneth)

However, in spite of knowing this, they still preferred to have their last child at an age when female fertility is diminished. A Swedish study among highly educated men also reported that, although they were aware of the natural decline in fertility with age, they still felt they "could wait [for first childbirth] a couple of years" even when the female partner was close to her mid 30's [28]. In general, Nordic studies have shown that a majority of highly educated men significantly underestimate the impact of age on female fertility [6,8]. Few studies have explored men's awareness of the age-related decline in male fertility. Population-based studies among men report that only 9% of men know that men's age is an important factor in couple fertility [29] and that only about one third of men know that male fertility starts to decline by the age of 45 [30].

Overall participants had very limited knowledge of assisted reproduction.

*"To be honest, I really don't know what it [assisted reproduction] is."* (Leo)

Furthermore, they had poor knowledge about the chance of having a child with assisted reproduction treatment:

*"I will guess at a 60-70 % [success rate after one treatment cycle] without having any idea about this."* (Klaus)

*"I have no idea [success rate after one treatment cycle]. I assume everybody, so 100%."* (Karl)

All participants over-estimated success rates of one assisted reproduction treatment cycle where a live birth rate is around 20-25% among women younger than 40 years old [31]. Being too optimistic regarding success rates in assisted reproduction is in line with findings from epidemiological studies among highly educated men where more than 50% of men substantially over-estimate success rates [6,8].

### Study strength and limitations

Most research relating to fertility and family formation is focused on women. In particular, significant research interest has been devoted to exploring why women delay childbearing beyond their most fertile years [32]. However, childbearing is a couple endeavours and to understand fertility and childbearing trends the family formation aspirations, motivations, and attitudes of both men and women need to be investigated. The findings of this study add to the very limited existing evidence about men's aspirations for fatherhood and beliefs about how becoming a father is linked to their masculine identity. They also confirm the considerable fertility-related knowledge-gaps among men reported in other studies.

Participants knew the interview topics before agreeing to be interviewed, and it is possible that men who were not planning to have children in the near future were less motivated to participate. Although

all participants reported feeling comfortable during the interview, it was relatively difficult to get detailed reflections and statements from most of the men. We presume that this could be due to being interviewed about a potentially sensitive topic for childless men in their early to mid 20's of who only three were in a current relationship. Men at that age may not yet have reflected in detail about their future family formation desires. However, one of the participants definitely did not want to have children, which made him a very relevant informant as he had actually reflected on the issue of fatherhood.

In qualitative research an important indicator of validity is to make certain how results are applicable in other settings [33]. Thus, based on the theoretical framework of masculinity we think that the interviews did capture the essence of how young, childless Danish men think about family formation and fertility and hence the results are applicable also to young men not currently undergoing short-term or long-term educational training. Moreover, in accordance with the standards suggested by Stige et al. [34] analysis and interpretation has been continuously displayed and discussed among the researchers and communicated throughout the study.

### Conclusion

Parenthood was essential for the participating men. Although they were aware of women's fertility decreasing with age; they still desired to have children at an age beyond the age of optimal female fertility. Furthermore, participants grossly over-estimated success rates of assisted reproduction treatment. The young men in this study wanted their future children to be their own genetically. It was of great importance to them to have their own genetic children, because it affirmed their masculinity. Becoming a father to genetically linked children was a central and integrated aspect of being a man. The majority of participants took it for granted that they could father the children they wanted to have and had not reflected on the potential risk of being infertile. The findings of this study emphasize the need for public education about the risk of infertility with increasing male and female age and about the poor results of medically assisted reproduction in the treatment of age-related infertility.

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