

Undergoing fertility treatment in Denmark without getting a child: Consequences for the men and women in the couples.

Lone Toelboell Blenstrup, Lone Schmidt, Lisbeth B. Knudsen

In this paper we present the first results from a study on couples as well as the individuals in couples, who were enrolled in a five-year-follow-up study in Denmark when they initiated fertility treatment.

Background

Denmark is one of the leading countries in fertility treatment both regarding having begun at an early time to use and offer the treatment at no cost within the public health service system, and regarding the relatively large annual number of women being treated (Andersen et al. 2008). Fertility treatment has been estimated to account for 6 per cent of all births in Denmark 2003 (Sobotka et al. 2008), and the proportion is at present approaching 10 per cent (Andersen et al. 2009).

The 'Act no 460 from June 10, 1997 on assisted reproduction related to medical treatment, diagnosis and research etc.' gave for the first time a legal regulation of fertility treatment in Denmark. The act specified that the treatment could be offered to *couples*, consisting of a man and a woman¹. Similar possibilities became available for couples in a number of western countries during the 1980s. The act in Denmark gives equal access to the assistance, free of charge in public clinics, to all ethnic, income and social groups and thereby diminishes socio-economic selection.

There is a lack of analyses which from a demographic-sociological point of view deals with consequences of the treatment and persistent infertility for individuals and couples. Internationally, follow-up studies have focused on the success and the safety of the procedures and health among children born after fertility treatment, especially the more 'high technological methods' (e.g., Andersen et al. 2008; Helmerhorst et al., 2004; Jensen et al. 2009). Further, there has been a societal and medical interest in calculating and comparing the 'rate of success' of the various forms of treatment, that is, the probability that the woman is not just conceiving, but also give birth to a live born and viable baby, the so-called 'take-home baby rate'. A recently published analysis based on the COMPI-cohort data set² reported that 69 per cent of the 1,338 women whose reproduction was followed in the register data after treatment, had at least one delivery during the 4-6 year follow-up period while 6 per cent had adopted a child (Pinborg et al 2009). In this analysis, though, the authors were mostly interesting in evaluating the efficacy of modern fertility treatments and *did not* include information on the family forms and the persistence of the couple as we suggest in this collective project.

To our knowledge, no longitudinal approach has been used in analysing the relation between the situations during treatment and the subsequent family life.

Recent sociological and demographic studies in childlessness have often seen individual

¹ According to the present act, which includes a number of revisions of the act from 1997, this §3 has been annulled and childless single women, now have improved possibilities for being treated.

² The COMPI-dataset will be part of the data in the study presented here

childlessness in relation to societal fertility inhibiting factors, such as women's education and job situation and the difficulties of maintaining a balance between occupational and familial obligations (e.g., Andersson et al 2009). Further, demographic studies have studied the impact of the increasing use of assisted reproductive techniques (ART) on fertility and discussed whether these techniques might 'solve' the low fertility problem³ (e.g., Sobotka et al. 2008).

A family perspective was included in a Danish register based analysis comparing all couples, who initiated a high-technological fertility treatment at a public or private fertility clinic in 1995-1999⁴ with all couples in Denmark, having a child during the same period without fertility treatment (Blenstrup 2006). The results revealed that a higher proportion of the IVF-couples managed to maintain their relationship, especially if the treatment resulted in childbirth, which created the hypothesis that this might be a consequence of the couples' conscious and expressed wishes for having a child.

The purpose of the Project

The findings presented here will be part of a larger study which will use a combination of questionnaire data with register data on the population under treatment and a comparable population, not undergoing treatment. The study, which is primarily financed by The Danish Council for Independent Research | Social Sciences (FSE) will begin early 2010 and is scheduled to end 2012.

The purpose of the project is to analyse socio-demographic consequences of fertility treatment; a medical treatment to which great expectations are attached both from the couples who want to have a child and from the medical profession responsible for the treatment. We use the term 'fertility treatment' as including treatments aiming at achieving conception *in vivo*, ie the 'low-technological' forms (including e.g. insemination, hormone stimulation and fertility surgery) as well as the 'high-technological' forms (including e.g. in vitro fertilisation (IVF), micro insemination/intracytoplasmic sperm injection (ICSI), frozen embryo replacement (FER) and egg donation (ED)) where the egg is removed from the woman's body and conception is attempted in the laboratory, the so-called *in vitro* conception.

In the main project, we will analyse the couples' life histories as regards family forms, their way of establishing a daily life with or without children subsequent to the treatment, viewed in relation to the result of fertility treatment, the socio-demographic and psycho-social characteristics of the couples and their relationship and, further, the partners' feeling of infertility related stress, mutual communication strategies and coping before and after the treatment among those who do not have a child during the treatment.

The Data

The study will use a combination of questionnaire data (in 3 waves) with register data on both the population under treatment and a comparable population, not undergoing treatment.

The study population for the questionnaire study comprises couples, who initiated fertility treatment in one of four public and one private fertility clinic in Denmark in the period 1st January 2000 - 31st August 2001 (The COMPI-cohort). Of those invited, 2,250 individuals (80 per cent) completed the so-called *base-line questionnaire*, individually by both partners in 1,069 couples. Of those traceable 87.7 per cent (1,934 individuals) completed a *1 year follow-up questionnaire* and further, a *five-year follow-up questionnaire*, was completed by 69.4

³ It should be noted, that in demography the term 'fertility' means 'live births', while the term 'fecundity' is used to characterize the individual's ability to experience a pregnancy.

⁴ The women undergoing treatment were identified as being registered in the IVF-register of the National Board of Health

per cent of those traceable and alive at that time (Schmidt et al. 2008). The combination of both men and women in the couples having completed a questionnaire individually, the five-year-follow-up, use of infertility-specific scales for measuring stress and communication and the availability of national register data on individuals' subsequent family histories gives unique possibilities.

Findings

The findings presented will focus on those couples who did not get a child as a result of the treatment and elucidate similarities and differences in the partners' experience of infertility related stress and their mutual communication during the treatment period. The couples' socio-demographic characteristics and whether they deliberately choose to refrain from further treatment, even though they have no child, will be also be included. The options for subsequent family life with children will be briefly touched upon.

References:

- Andersen AN, Goossens V, Ferraretti AP, Bhattacharya S, Felberbaum R, de Mouzon J, Nygren KG; European IVF-monitoring (EIM) Consortium; European Society of Human Reproduction and Embryology (ESHRE) (2008). Assisted reproductive technology in Europe 2004: results generated from European registers by ESHRE. *Hum Reprod* 2008; 23: 756-71.
- Andersen AN, Goossens V, Bhattacharya S, Ferraretti AP, Kupka MS, de Mouzon J, Nygren KG; European IVF-monitoring (EIM) Consortium; European Society of Human Reproduction and Embryology (ESHRE) (2009). Assisted reproductive technology and inseminations in Europe, 2005: results generated from European registers by ESHRE. *Hum Reprod* 2009; 24: 1267-87
- Andersson G, Rønsen M, Knudsen LB, Lappegård T, Neyer G, Skrede K, Teschner K, Vikat A (2009). Cohort Fertility Patterns in the Nordic Countries. *Demographic Research* 2009; 20 (art 14): 313 - 52
- Blenstrup LT (2006). Fertilitet og familiehistorier før og efter IVF-behandling i Danmark. Aalborg: Eget forlag [Fertility and family histories before and after IVF-treatment in Denmark] Thesis
- Helmerhorst FM, Perquin DA, Donker D, Keirse MJ (2004) Perinatal outcome of singletons and twins after assisted conception: a systematic review of controlled studies. *BMJ* 2004; 328: 261-5.
- Jensen A, Sharif H, Frederiksen K, Krüger Kjær S (2009). Use of fertility drugs and risk of ovarian cancer: Danish population based cohort study. *BMJ* 2009;338;b249
- Pinborg A, Hougaard CO, Andersen AN, Molbo D, Schmidt L (2009). Prospective longitudinal cohort study on cumulative 5-year delivery and adoption rates among 1338 couples initiating infertility treatment. *Human Reproduction*, Vol.1, No.1 pp. 1-9, 2009
- Schmidt L, Holstein B, Hougaard CO, Lund R, Watt T (2008). *The Copenhagen Multi-centre Psychosocial Infertility (COMPI) Research Programme*. Copenhagen: Institute of Public Health
- Sobotka T, Hansen MA, Jensen TK, Pedersen AT, Lutz W, Skakkebak NE (2008). The contribution of assisted reproduction: An analysis of Danish data. *Population and Development Review* 2008; 34 (1): 79-101