

Schmidt L. Infertility and assisted reproduction in Denmark. *Epidemiology and psychosocial consequences*. Danish Medical Bulletin 2006, 53: 390-417.

Summary

Clinically a couple is considered to be infertile after at least one year without contraception and without pregnancy. There was scant knowledge about the prevalences of infertility, involuntary childlessness and seeking of fertility treatment and only few longitudinal studies about the psychosocial consequences of infertility and its treatment. This thesis is about the epidemiological aspects of infertility; the conceptualisation and measurement of important psychosocial aspects of infertility; and a medical sociological analysis of the associations between these psychosocial variables among Danish women and men in fertility treatment. The thesis is based on nine papers.

The three main purposes were: (i) to review critically, population-based studies of infertility and medical care seeking in industrialised countries. Further, to examine these prevalences and subsequent motherhood among women in former assisted reproduction in a Danish population. (ii) To develop measures of psychosocial consequences of infertility: fertility problem stress, marital benefit, communication, coping strategies, attitudes to and evaluation of fertility treatment. (iii) To examine these phenomena and to analyse their interrelations among Danish women and men in fertility treatment.

The thesis is based on four empirical studies: (i) The Women and Health Survey, a cross-sectional population-based study among 15-44-year-old women (n=1907, 25-44-year-old) in Copenhagen County, 1989. (ii) The Psychosocial Infertility Interview Study, a qualitative interview study among couples (n=32 participants) in fertility treatment at The Fertility Clinic, Herlev University Hospital, 1992. (iii) The Infertility Cohort, a longitudinal cohort study consecutively including all couples (n=2250 participants) beginning a new fertility treatment period at one of four public and one private fertility clinic, 2000-2002. (iv) The Communication and Stress Management Training Programme, an intervention study among couples (n=74 participants) in fertility treatment at The Fertility Clinic, The Juliane Marie Centre, Rigshospitalet, 2001-2003. Included is also a literature review of population-based infertility studies from industrialised countries. Data from (iii) and (iv) are studies from The Copenhagen Multi-centre Psychosocial Infertility (COMPI) Research Programme.

Epidemiological and demographic studies investigating the prevalences of infertility differed in how they defined the numerator (the infertile participants) and the denominator (the population at risk). It was important to calculate reliable estimates of the infertility prevalence by including only women who had tried to have at least one child in the population

at risk, as a notable proportion of women in the fertile ages had not attempted to become a mother. The life-time prevalence of infertility in the representative population-based study was 26.4%. In the age group 35 to 44 years 5.8% were primary involuntary infecund (involuntary childless). Even in a country with access to fertility treatment in a public health-care system without self-payment lower education was a predictor of lower treatment seeking. In the cohort study (2000-2002) of couples starting a new period of assisted reproduction treatment 62.6% reported a treatment-related pregnancy at the one-year follow-up. In total 32.4% reported a treatment-related delivery. In total 24.2% reported a current continuing pregnancy and spontaneous pregnancies accounted for 2.7% of these.

We developed means of measuring fertility problem stress, marital benefit (that infertility has brought the partners closer together and strengthened their marriage), partner communication, infertility-related communication, coping strategies, attitudes to fertility treatment and evaluation of care.

The medical sociological analyses showed that the variables of psychosocial consequences of infertility and treatment are interwoven with each others in a complex pattern, a pattern that both differed and was similar when comparing women and men. The infertility-related communication strategy (secrecy, formal, open-minded) identified in the qualitative interviews was later confirmed in the COMPI Infertility Cohort. Using the formal strategy and not talking about the emotional aspects of infertility and its treatment suggested high fertility problem stress. The coping strategies studied showed significant social differences and active-avoidance coping was a significant predictor of high fertility problem stress. A positive effect of infertility on the marriage, marital benefit was common. Men using the secrecy communication strategy had increased risk of low marital benefit. Difficult partner communication was a significant predictor of high fertility problem stress and among men, of low marital benefit. The intervention study showed that it was possible for the participants to change their communication with partner and other people close to them and that participants achieved an increased awareness of “what, how much and when” to discuss with others. High fertility problem stress and high marital benefit were associated with high importance ratings of patient-centred care and intentions to use professional psychosocial services. Among women, high fertility problem stress was a predictor of lower satisfaction ratings with fertility treatment. High marital benefit was a predictor of high satisfaction ratings of both medical and patient-centred care.

In conclusion, infertility is a common experience among couples attempting to become parents. Assisted reproduction in the public health-care system in Denmark has high

success rates, i.e. pregnancies, deliveries and high patient satisfaction. A large minority of people in fertility treatment experience high fertility problem stress, and some use communication and coping strategies that predicts high stress. Developing and evaluating different psychosocial interventions are necessary to offer the psychosocial support needed for this minority of fertility patients.

From: Department of Social Medicine, Institute of Public Health,
University of Copenhagen.

Opponents: Prof. Elina Hemminki, Finland; Prof. Svend Lindenberg, Denmark

Defense: The 22nd November 2006, Anneks A, Studiegården, University of
Copenhagen.